October 5, 2021

Ms. Christine Saunders, Director of Environmental Services
SAGECREST PLANNING + ENVIRONMENTAL
27128 Paseo Espada, Suite 1524
San Juan Capistrano, California 92675

RE: Sunrise Senior Living Long Beach Project Trip Generation and Distribution Analysis
Project No. 19431

Dear Ms. Saunders:

Ganddini Group, Inc. is pleased to provide this Trip Generation and Distribution Analysis for the proposed Sunrise Senior Living Long Beach Project. We trust the findings of this analysis will aid you and the City of Long Beach in assessing the project.

PROJECT DESCRIPTION

The 2.6-acre project site is located at 3340 North Los Coyotes Diagonal in the City of Long Beach, California. The project site is currently vacant. Figure 1 shows the project location map.

The proposed project involves construction of a two-story, 78,277 square foot senior assisted living and memory care facility with 86 units containing a total of 109 beds. Vehicular access is proposed for full access at Los Coyotes Diagonal sharing an existing project driveway. Figure 2 illustrates the project site plan.

PROJECT TRIP GENERATION

Table 1 shows the project trip generation based upon trip generation rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). Based on review of the ITE land use descriptions, trip generation rates for Assisted Living Facility (ITE Land Use Code 254) were determined to adequately represent the proposed project and were used for calculating the project trip generation forecast. The project trip generation forecast was determined by multiplying the trip generation rates by the land use quantity.

As shown in Table 1, the proposed project is forecast to generate approximately 284 daily vehicle trips, including 20 vehicle trips during the AM peak hour and 26 vehicle trips during the PM peak hour.

The City of Long Beach *Traffic Impact Analysis Guidelines* (June 2020) state that a traffic impact analysis may be required for any project that is expected to generate 500 or more net new daily trips. The Department of Public Works may also require that a traffic impact analysis be prepared for any project regardless of size, nature, or location, if there are concerns over safety or operational issues, or if the project is located in an area significantly impacted by traffic.

Assuming project design shall comply with applicable State, Federal, and local engineering standards to the satisfaction of the City of Long Beach Department of Public Works, there does not appear to be any specific

safety or operational issues that would be caused or substantially worsened by the project. Since the project is forecast to generate fewer than 500 daily trips, preparation of a traffic impact analysis does not appear to be warranted.

PROJECT TRIP DISTRIBUTION

Figure 3 shows the forecast directional distribution patterns for the project generated trips. The project trip distribution patterns are based on review of surrounding land uses and the local and regional roadway facilities in the project vicinity.

CONCLUSION

The proposed project is forecast to generate approximately 284 daily vehicle trips, including 20 vehicle trips during the AM peak hour and 26 vehicle trips during the PM peak hour.

We appreciate the opportunity to assist you on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 795-3100 x 103.

Sincerely,

GANDDINI GROUP, INC.
Bryan Crawford | Senior Associate
Giancarlo Ganddini, PE, PTP | Principal

Table 1
Project Trip Generation

Trip Generation Rates									
			AM Peak Hour			PM Peak Hour			Daily
Land Use	Source[1]	Units	% In	% Out	Rate	% In	% Out	Rate	Rate
Assisted Living Facility	ITE 254	Beds	60%	40%	0.18	39%	61%	0.24	2.60

Trips Generated									
			AM Peak Hour			PM Peak Hour			
Land Use	Quantity	Units	In	Out	Total	In	Out	Total	Daily
Assisted Living Facility	109	Beds	12	8	20	10	16	26	284

Notes:
(1) Source: ITE = Institute of Transportation Engineers *Trip Generation Manual* (11th Edition, September 2021); ### = Land Use Code.

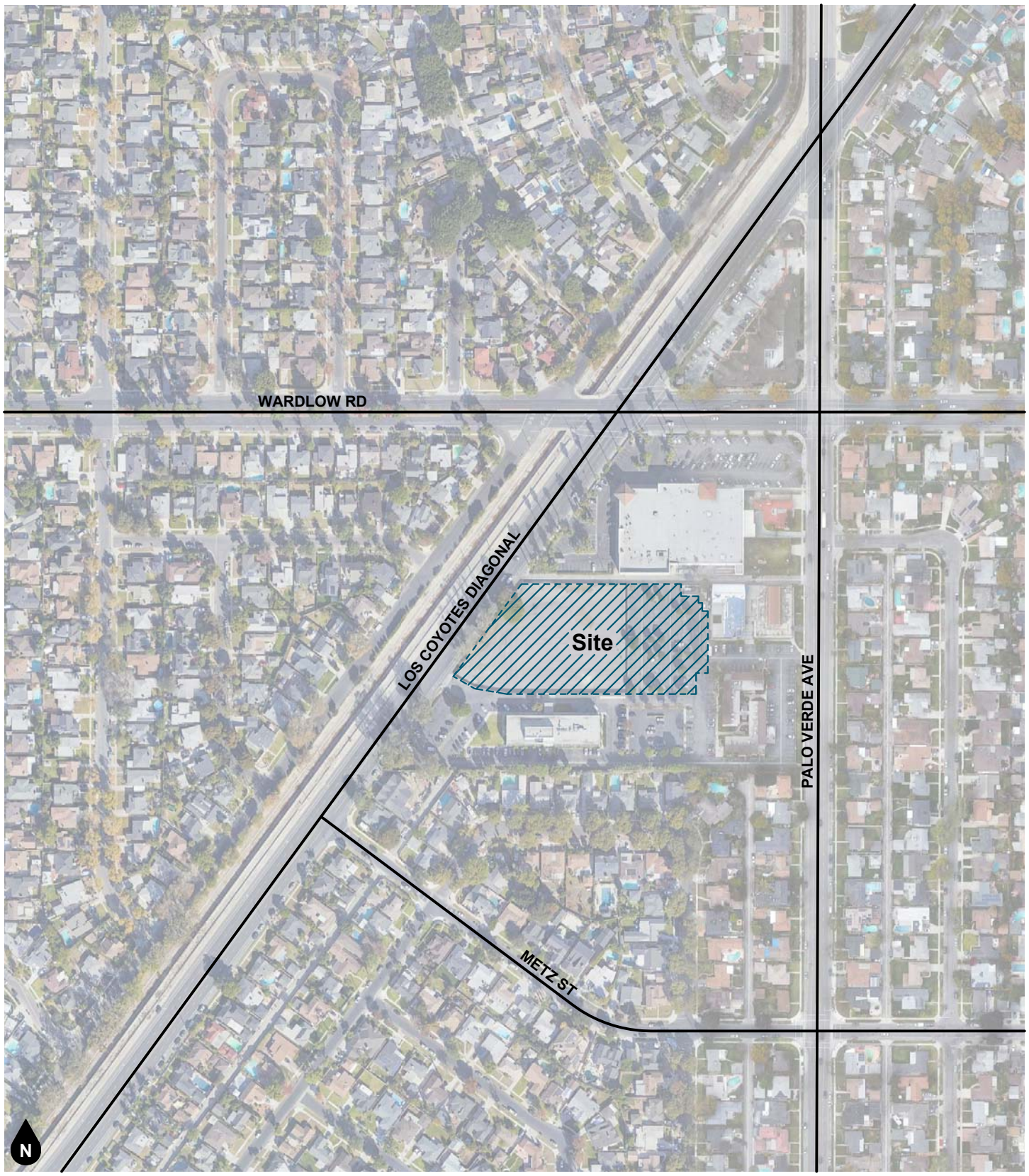


Figure 1
Project Location Map

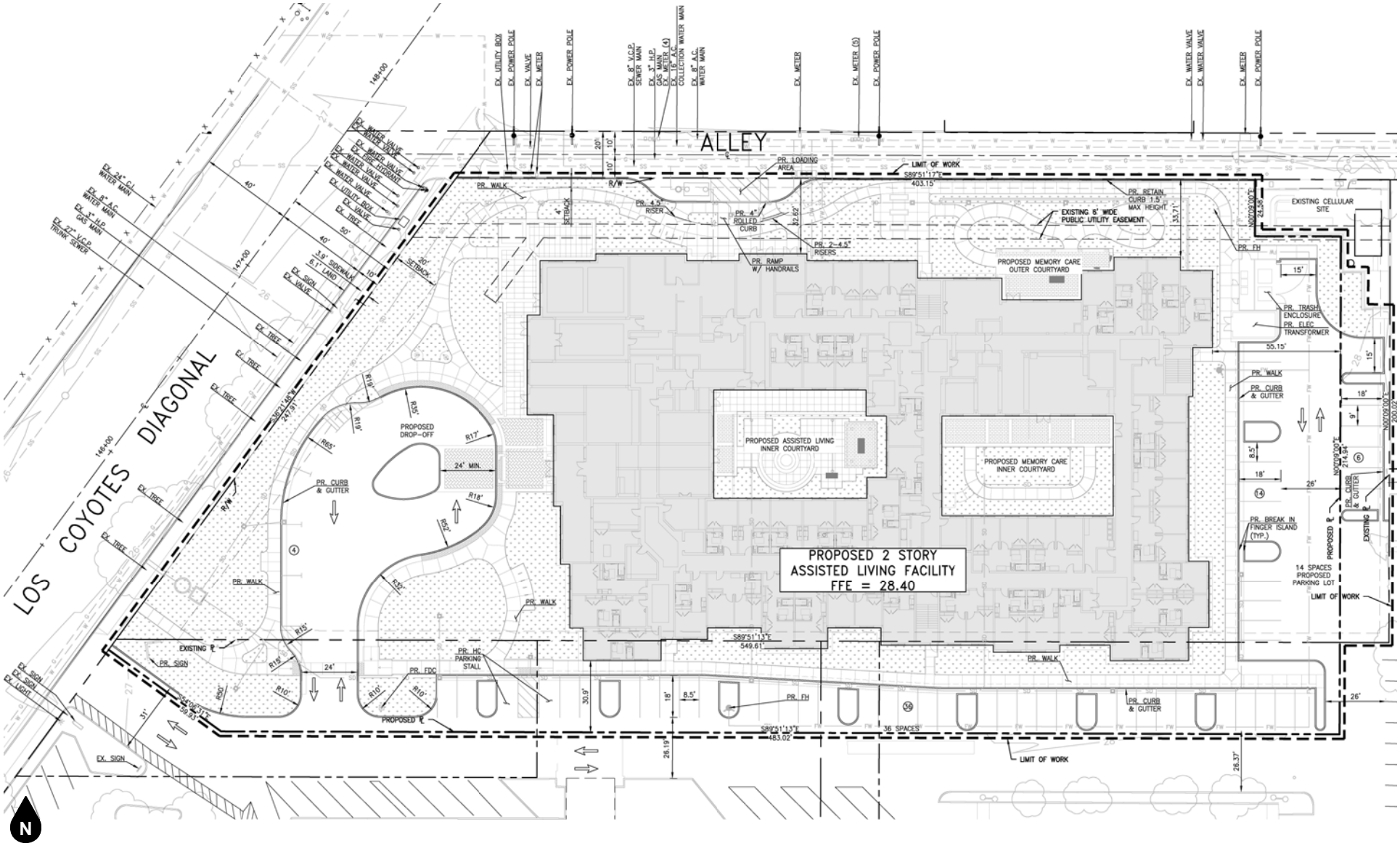
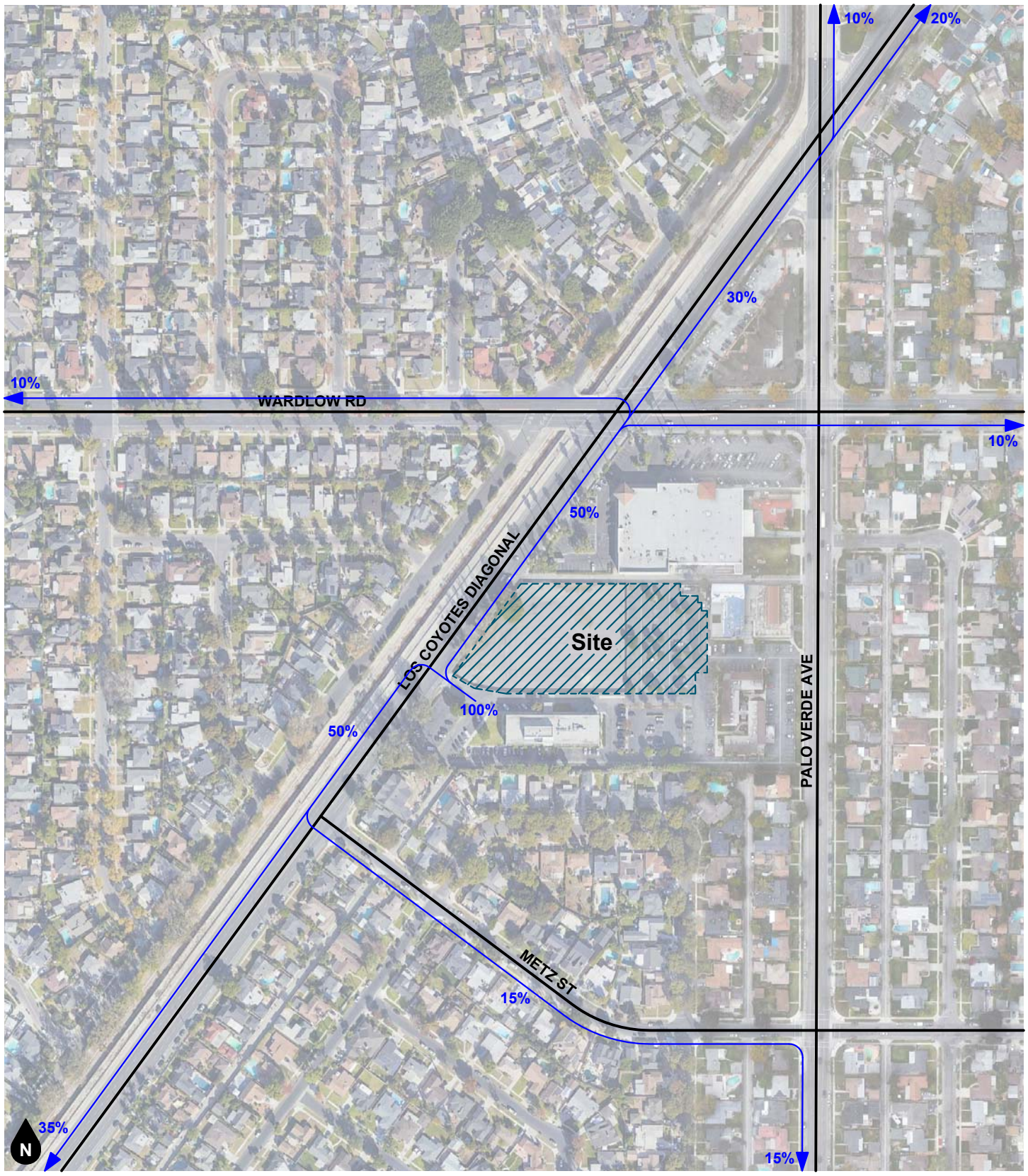


Figure 2
Site Plan



Legend

10% Percent To/From Project

Figure 3
Project Trip Distibution

October 5, 2021

Ms. Christine Saunders, Director of Environmental Services
SAGECREST PLANNING + ENVIRONMENTAL
27128 Paseo Espada, Suite 1524
San Juan Capistrano, California 92675

RE: Sunrise Senior Living Long Beach Project Vehicle Miles Traveled Screening Assessment
Project No. 19431

Dear Ms. Saunders:

Ganddini Group, Inc. is pleased to provide this Vehicle Miles Traveled Screening Assessment for the proposed Sunrise Senior Living Long Beach Project. We trust the findings of this analysis will aid you and the City of Long Beach in assessing the project.

PROJECT DESCRIPTION

The 2.6-acre project site is located at 3340 North Los Coyotes Diagonal in the City of Long Beach, California. The project site is currently vacant. Figure 1 shows the project location map.

The proposed project involves construction of a two-story, 78,277 square foot senior assisted living and memory care facility with 86 units containing a total of 109 beds. Vehicular access is proposed for full access at Los Coyotes Diagonal sharing an existing project driveway. Figure 2 illustrates the project site plan.

PROJECT TRIP GENERATION

Table 1 shows the project trip generation based upon trip generation rates obtained from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). Based on review of the ITE land use descriptions, trip generation rates for Assisted Living Facility (ITE Land Use Code 254) were determined to adequately represent the proposed project and were used for calculating the project trip generation forecast. The project trip generation forecast was determined by multiplying the trip generation rates by the land use quantity.

As shown in Table 1, the proposed project is forecast to generate approximately 284 daily vehicle trips, including 20 vehicle trips during the AM peak hour and 26 vehicle trips during the PM peak hour.

VEHICLE MILES TRAVELED (VMT) SCREENING ANALYSIS

According to the City of Long Beach *Traffic Impact Analysis Guidelines* (June 2020) ["the City TIA Guidelines"], certain types of projects, because of their size, nature, or location, are exempt from the requirement of preparing a vehicle miles traveled (VMT) analysis.

The project VMT impact has been assessed in accordance with the City TIA Guidelines. The City TIA Guidelines establish screening thresholds for certain types of projects that may be presumed to cause a less

than significant VMT impact based on substantial evidence provided in the Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018).

The City TIA Guidelines specify the following four screening steps: 1) Small Projects Screening; 2) Residential and Office Projects in Low-VMT Areas Screening; 3) Projects near Transit Stations; and 4) Screening and Thresholds for Other Land Uses.

Small Projects Screening

Some project types have been identified as having the presumption of a less than significant impact as they are local serving by nature, or they are small enough to not warrant assessment. The City of Long Beach has historically established a screening threshold of 50 peak hour trips for requiring a traffic impact analysis (TIA). For most land use types, approximately 10 percent of daily trips occur during the busiest peak hour. Therefore, a project generating fewer than 50 peak hour trips would generate approximately 500 average daily trips (ADT). Greenhouse gas emissions (GHG) resulting from this level of vehicle traffic would be less than comparable GHG thresholds. Therefore, this threshold of 500 ADT is being retained to screen small projects.

Since the proposed project is forecast to generate fewer than 500 daily trips, the proposed project satisfies the City-established screening criteria for small projects and may be presumed to result in a less than significant VMT impact.

Residential and Office Projects in Low-VMT Areas Screening

Residential and office projects that have similar density, mix of uses, and transit accessibility as surrounding similar uses will likely have similar VMT generation as those uses. Therefore, the City of Long Beach has produced maps that show VMT-efficient areas that can be used to screen residential and office projects from further analysis. The City of Long Beach has produced a map of VMT per capita for all existing Long Beach residential areas and a map of VMT per employee for all existing Long Beach office areas. This data was obtained from the 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) travel demand model. VMT per capita in each residential area is compared to the regional average VMT per capita for Los Angeles County to identify VMT-efficient areas for future residential development, where average VMT per capita is lower than the County average by 15 percent or more. VMT per employee in each office area is compared to the regional average VMT per employee for Los Angeles County to identify VMT-efficient areas for future office development, where average VMT per employee is lower than the County average by 15 percent or more.

Projects located in areas with average VMT lower than the County average by 15 percent or more and with similar characteristics to the surrounding development may be presumed to have a less than significant transportation impact. Projects located in areas with average VMT between 15 percent below and 15 percent above the County average may result in a less than significant impact with implementation of VMT-reducing project design features or mitigation. Projects located in areas with an average VMT 15 percent above the County average would likely have VMT impacts that will remain significant and cannot be fully mitigated.

For assisted living/memory care facilities, daily weekday VMT is primarily generated by employees since most, if not all residents, are no longer capable of driving personal vehicles and visitors primarily visit on weekends; therefore, the low screening was performed based on the VMT per employee map. The proposed project is located in an area with average VMT between 15 percent below and 15 percent above the County average and therefore cannot be presumed to result in a less than significant VMT impact based on the low VMT screening criteria.

Projects Near Transit Stations Screening

Projects located within a TPA (half mile area around an existing major transit stop or an existing stop along a high-quality transit corridor) may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption may not be appropriate if the project:

1. Has a Floor Area Ratio (FAR) of less than 0.75;
2. Includes more parking for use by residents, customers, or employees of the project than required (if parking minimums pertain to the site) or allowed without a conditional use permit (if minimums and/or maximums pertain to the site);
3. Is inconsistent with the Long Beach Land Use Element or the SCAG RTP/SCS: or
4. Replaces affordable residential units with a smaller number of moderate or high-income residential units.

According to the map for Long Beach Transit Priority Areas (TPA) contained with the City TIA Guidelines, the proposed project is not located in a TPA. Therefore, the proposed project does not satisfy the City-established screening criteria for projects near transit stations.

Screening and Thresholds for Other Land Uses

The following identifies screening criteria and thresholds of significance used to determine if other types of land uses reviewed by the City would result in significant impacts related to VMT. The following is presumed to be screened out result in a less than significant VMT impact:

- Retail development that is 50,000 square feet or less is likely to be local-serving and tends to shorten trips within Long Beach.

- Affordable residential development in areas with inadequate affordable housing. This includes residential projects (or the residential portion of mixed-use projects) with 100 percent affordable dwelling units.

- The development of institutional/government and public service uses that support community health, safety, and welfare. These facilities include police stations, fire stations, community centers, and refuse stations.

- Uses within the Harbor District would not be subject to VMT analysis of truck trips. The Harbor District is an area administered by the Port of Long Beach (Port). The Port has established a permitting process for projects within he Harbor District. Within this area, the Port may also be the lead agency under CEQA where the Port would be ultimately responsible for the analysis, review, and approval of land development projects. However, the City remains a responsible agency and will review project analysis for consistency with VMT procedures. Projects within the Harbor District will analyze automobile and light-duty VMT (including employee VMT) and intersection LOS as required in the TIA guidelines.

The proposed project does not satisfy the City-established screening criteria for other land uses and may not be presumed to result in a less than significant VMT impact under this criteria.

CONCLUSION

The proposed project is forecast to generate approximately 284 daily vehicle trips, including 20 vehicle trips during the AM peak hour and 26 vehicle trips during the PM peak hour.

Since the proposed project is forecast to generate fewer than 500 daily trips, the proposed project satisfies the City-established screening criteria for small projects and may be presumed to result in a less than significant VMT impact.

We appreciate the opportunity to assist you on this project. Should you have any questions or if we can be of further assistance, please do not hesitate to call at (714) 795-3100 x 103.

Sincerely,

GANDDINI GROUP, INC.
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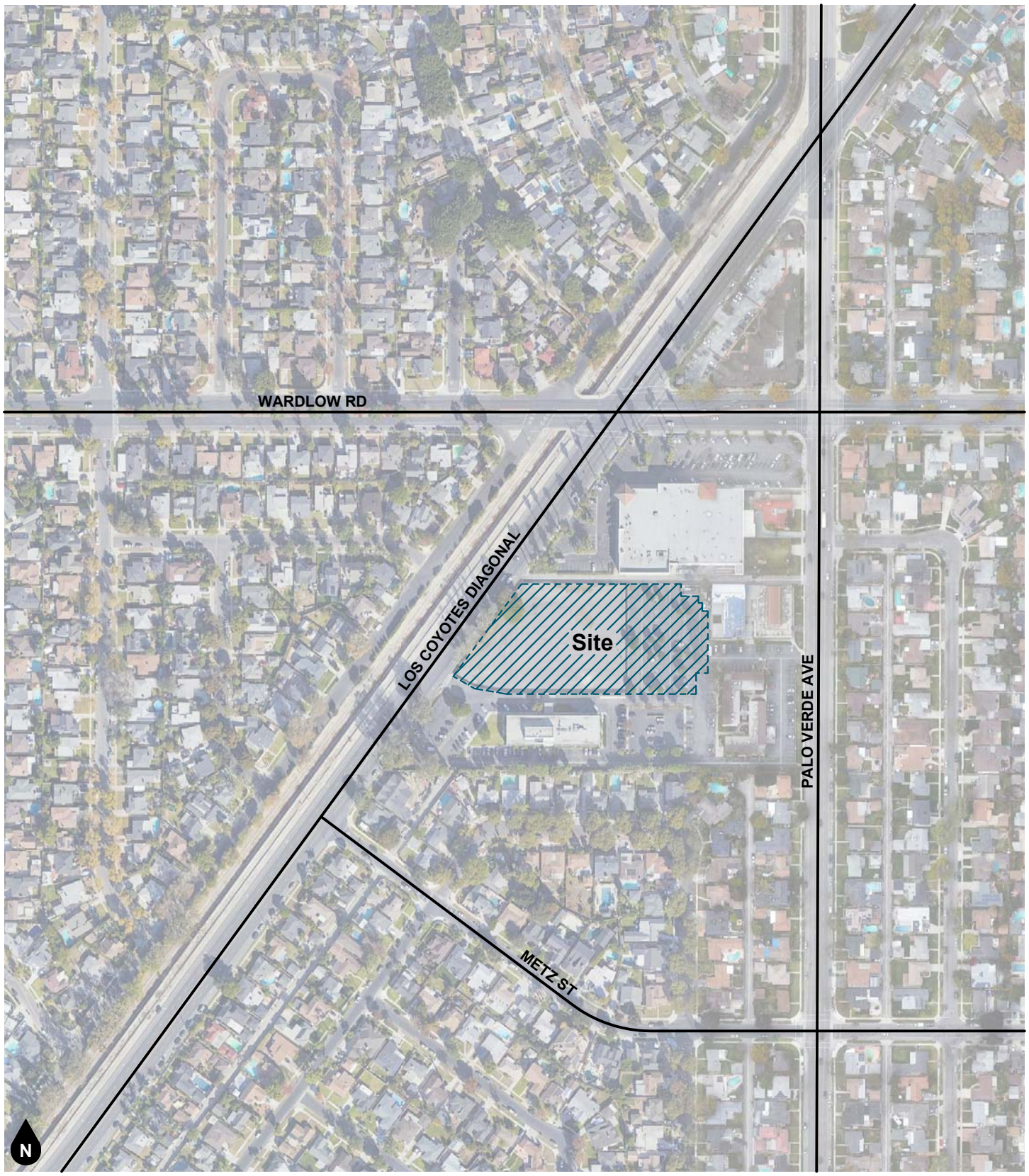

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Project Location Map

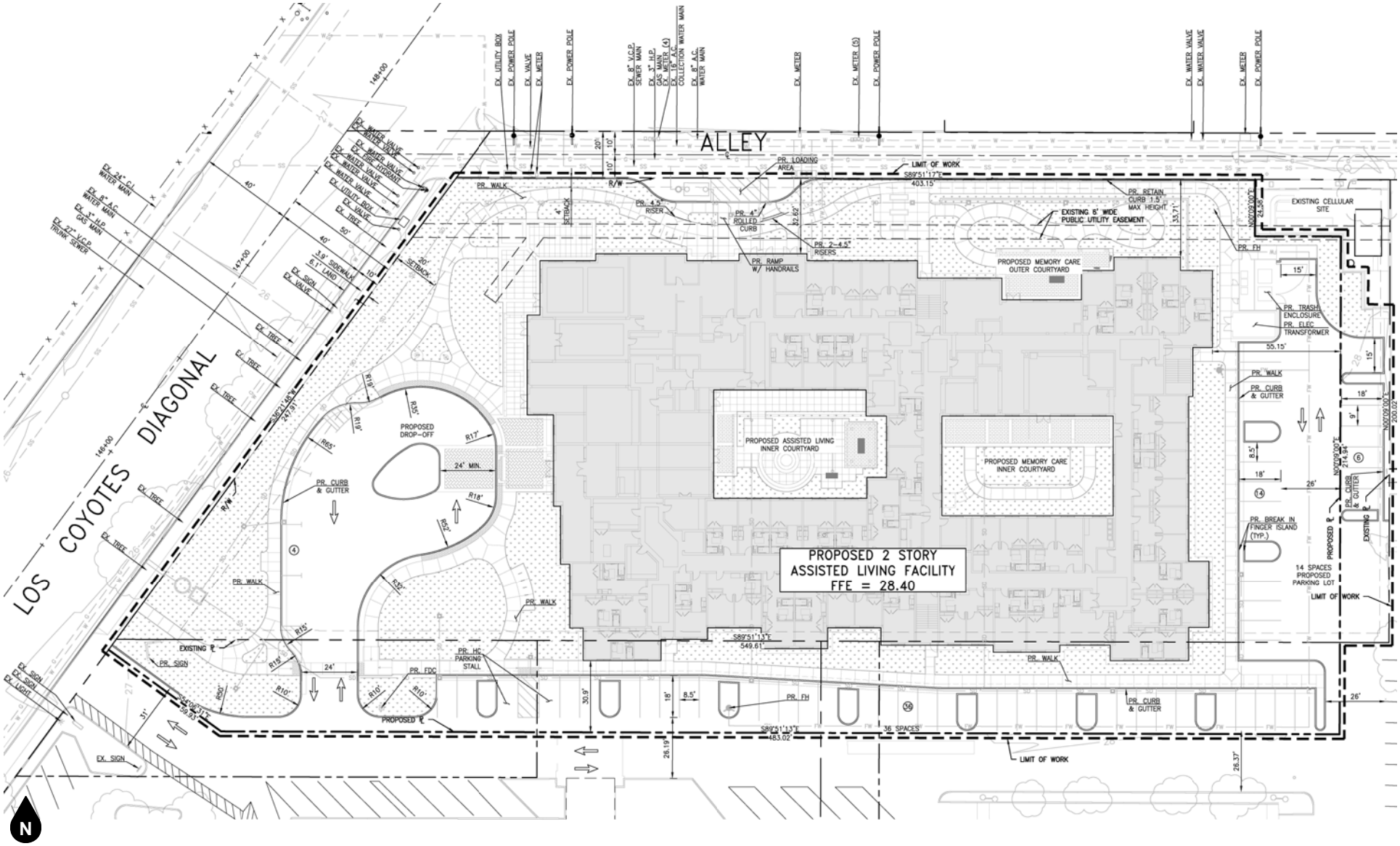

Figure 2
Site Plan

SUNRISE SENIOR LIVING LONG BEACH PROJECT NOISE IMPACT ANALYSIS

City of Long Beach

November 2, 2021

ganddini

Traffic Engineering ● Transportation Planning ● Parking ● Noise & Vibration
Air Quality ● Global Climate Change ● Health Risk Assessment

SUNRISE SENIOR LIVING LONG BEACH PROJECT NOISE IMPACT ANALYSIS

City of Long Beach

November 2, 2021

prepared by
Catherine Howe, MS
Roma Stromberg, MS

GANDDINI GROUP INC.
555 Parkcenter Drive, Suite 225
Santa Ana, California 92705
(714) 795-3100 | ganddini.com

Project No. 19431

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EXECUTIVE SUMMARY

The purpose of this report is to provide an assessment of the noise impacts associated with development and operation of the proposed Sunrise Senior Living Long Beach project and to identify mitigation measures that may be necessary to reduce those impacts. The noise issues related to the proposed land use and development have been evaluated in light of applicable federal, state and local policies, including those of the City of Long Beach.

Although this is a technical report, effort has been made to write the report clearly and concisely. A list of acronyms and glossary are provided in Appendix A and Appendix B of this report to assist the reader with technical terms related to noise analysis.

Project Location

The 2.65-acre project site is located at 3340 North Los Coyotes Diagonal in the City of Long Beach, California. The project site is currently vacant.

Project Description

The proposed project involves construction of a two-story, 78,277 square foot senior assisted living and memory care facility with 86 units containing a total of 109 beds. Vehicular access is proposed for full access at Los Coyotes Diagonal sharing an existing project driveway.

Construction Impacts

Modeled unmitigated construction noise levels reached up to 69.8 dBA L_{eq} at the nearest residential property line to the west, 67.6 dBA L_{eq} at the nearest residential property line to the east, 74.1 dBA L_{eq} at the nearest church property line to the east, and up to 72.9 dBA L_{eq} at the nearest residential property line to the south of the project site.

Construction noise sources are regulated within the City of Long Beach under Section 8.80.202 of the City's Municipal Code which prohibits construction activities between the hours of 7:00 PM and 7:00 AM on weekdays, between 7: 00 PM on Friday and 9:00 AM on Saturday and after 6:00 PM on Saturday, and anytime on Sundays. Construction of the proposed project is required to comply with the allowed times as specified in the City's Municipal Code.

Impacts would be less than significant, and no mitigation is required. However, impacts related to construction noise will be further minimized with adherence to applicable Municipal Ordinances and implementation of the recommended measures presented in Section 8 of this report.

Noise Impacts to Off-Site Receptors Due to Project Generated Trips

The Trip Generation and Distribution Analysis (Trip Generation Analysis) prepared for the proposed project by Ganddini Group (October 5, 2021) showed that the proposed project would generate approximately 284 vehicle trips per day. Typically, a doubling of traffic volumes is required to result in an increase of 3 dBA, which is considered to be a barely audible change. Project generated trips will not result in a doubling of traffic volumes along any affected road segment. This impact would be less than significant. No mitigation is required.

Traffic Noise Impacts to the Proposed Project

As shown in Figures 6 and 7, future traffic noise levels associated with Los Coyotes Diagonal are expected to range between 65.3 and 71.4 dBA CNEL at building facades affected by traffic noise, and between 63.2 and 72.3 are proposed outdoor use areas. Upgraded windows and/or sliding glass doors should be installed in wall

assemblies on the north and west sides of the proposed building. Specifically, the Sound Transmission Class (STC) of windows and sliding glass doors facing north and west should be at least 29. With implementation of this measure, interior noise levels due to traffic noise will be no greater than 45 dBA CNEL under a windows closed condition. To ensure that a windows closed condition is possible, the building shall be provided with air conditioning and/or an air circulation system. Impacts to the project will be less than significant with implementation of these measures.

Project Operational Noise Impacts

Peak hour project operational noise is not expected to exceed 50 dBA Leq at the property line. and is not expected to cause noise levels that exceed 50 dBA between the hours of 7:00 AM and 10:00 PM or exceed 45 dBA Leq between the hours of 10:00 PM and 7:00 AM at nearby sensitive receptors. Nor will the project cause a significant increase in ambient noise levels. Project operational noise levels would not be significant. No mitigation is required.

Groundborne Vibration Impacts

As a best management practice (bmp) (See General Plan Policy N 12-5), vibratory rollers will not be used within 20 feet, and large bulldozers will not be used within 12 feet of the commercial structures to the east. Groundborne vibration impacts, as they relate to potential structural impacts, would be less than significant. No mitigation is required.

The threshold for annoyance (72 VdB at offsite sensitive uses) would not be exceeded at the residential land uses to the south of the project site. This impact would be less than significant. No mitigation is required.

Recommended Construction Noise Reduction Measures

In addition to adherence to the City of Long Beach Municipal Code which limits the construction hours of operation, the following measures are recommended to further reduce construction noise, emanating from the proposed project:

1. During all project site excavation and grading on-site, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer standards.

2. The contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.

3. As applicable, all equipment shall be shut off and not left to idle when not in use.

4. The contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the project site during all project construction.

5. Jackhammers, pneumatic equipment and all other portable stationary noise sources shall be shielded, and noise shall be directed away from sensitive receptors.

6. The project proponent shall mandate that the construction contractor prohibit the use of music or sound amplification on the project site during construction.

7. The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment.

Vibration-Related Best Management Practice

1. As a best management practice (bmp) (See General Plan Policy N 12-5), vibratory rollers will not be used within 20 feet, and large bulldozers will not be used within 12 feet of the commercial structures to the east. Groundborne vibration impacts, as they relate to potential structural impacts, would be less than significant.

Operational Noise Reduction Measures

No operational noise mitigation measures are required

1. INTRODUCTION

This section describes the purpose of this noise impact analysis, project location, proposed development, and study area. Figure 1 shows the project location map and Figure 2 illustrates the project site plan.

PURPOSE AND OBJECTIVES

The purpose of this report is to provide an assessment of the noise impacts resulting from development of the proposed Living Stream Ministry project and to identify mitigation measures that may be necessary to reduce those impacts. The noise issues related to the proposed land use and development have been evaluated in light of applicable federal, state and local policies, including those of the City of Anaheim.

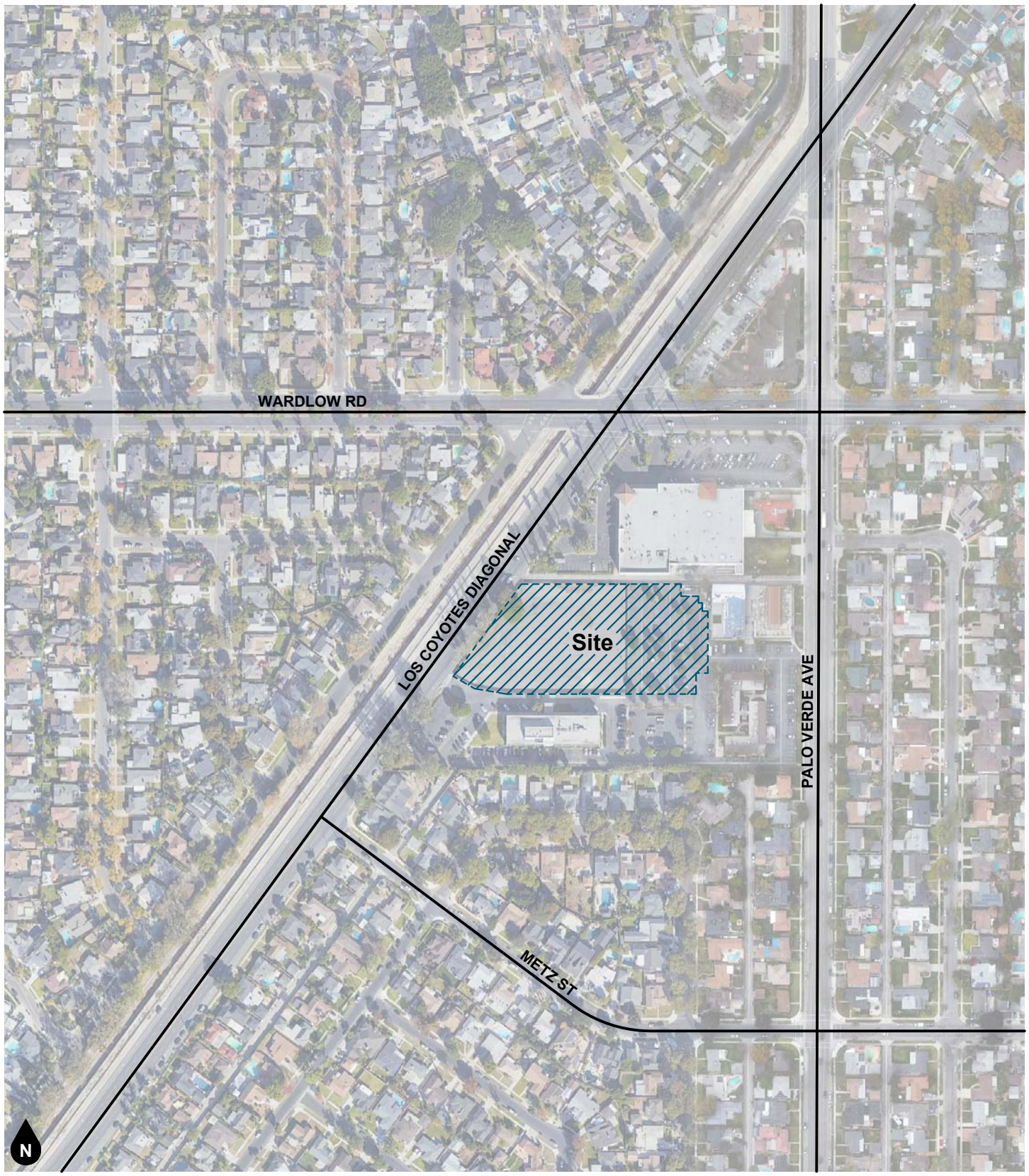
Although this is a technical report, effort has been made to write the report clearly and concisely. A list of acronyms and glossary are provided in Appendix A and Appendix B of this report to assist the reader with technical terms related to noise analysis.

PROJECT LOCATION

The 2.6-acre project site is located at 3340 North Los Coyotes Diagonal in the City of Long Beach, California. The project site is currently vacant. A vicinity map showing the project location is provided on Figure 1.

PROJECT DESCRIPTION

The proposed project involves construction of a two-story, 78,277 square foot senior assisted living and memory care facility with 86 units containing a total of 109 beds. Vehicular access is proposed for full access at Los Coyotes Diagonal sharing an existing project driveway. Figure 2 illustrates the project site plan.



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Project Location Map

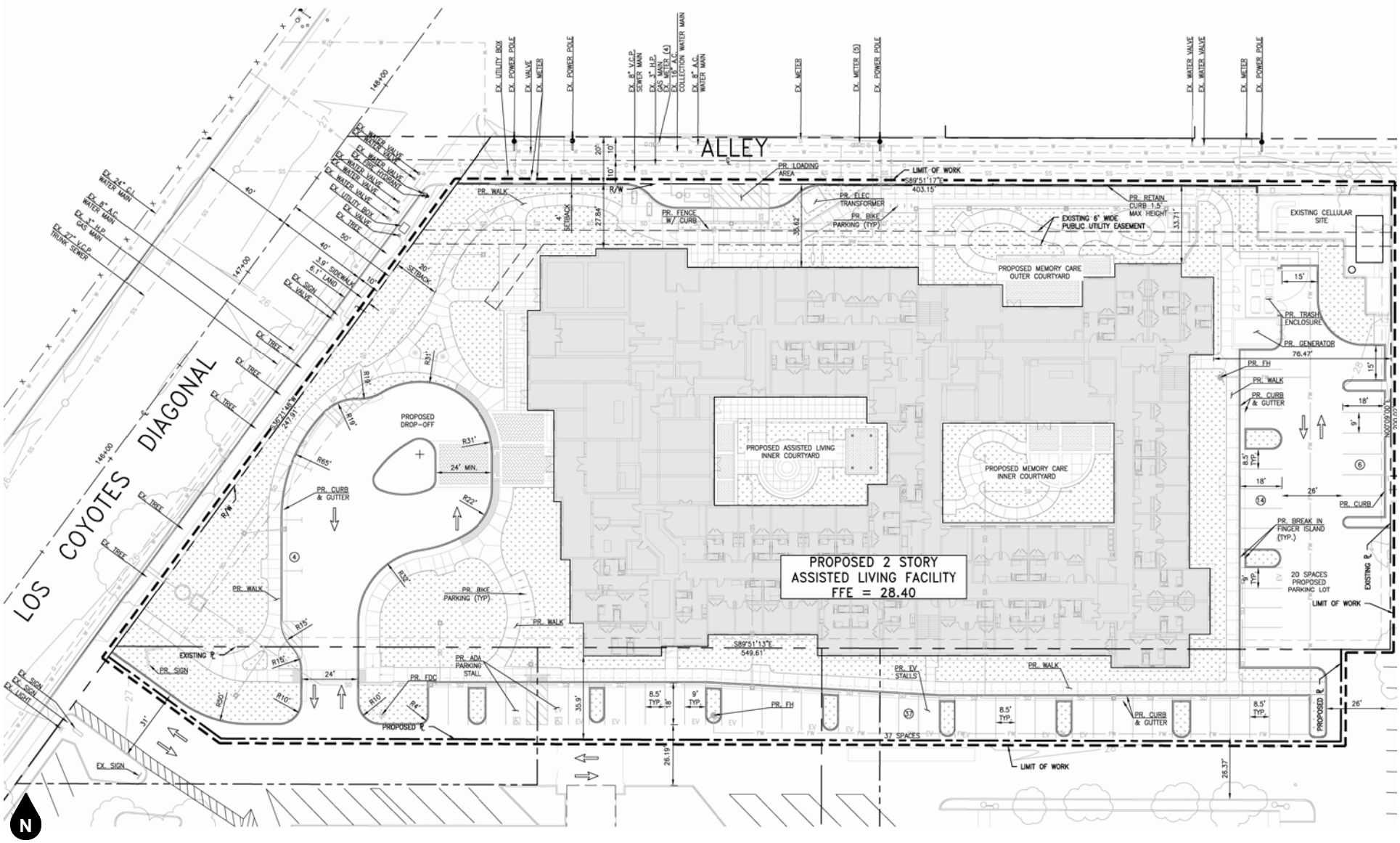


Figure 2
Site Plan

2. NOISE AND VIBRATION FUNDAMENTALS

NOISE FUNDAMENTALS

Sound is a pressure wave created by a moving or vibrating source that travels through an elastic medium such as air. Noise is defined as unwanted or objectionable sound. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and in extreme circumstances, hearing impairment.

Commonly used noise terms are presented in Appendix B. The unit of measurement used to describe a noise level is the decibel (dB). The human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, the "A-weighted" noise scale, which weights the frequencies to which humans are sensitive, is used for measurements. Noise levels using A-weighted measurements are written dB(A) or dBA.

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in noise as the distance from the source increases. The manner in which noise reduces with distance depends on whether the source is a point or line source as well as ground absorption, atmospheric effects and refraction, and shielding by natural and manmade features. Sound from point sources, such as air conditioning condensers, radiates uniformly outward as it travels away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD). Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

Decibels are measured on a logarithmic scale, which quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. Thus, a doubling of the energy of a noise source, such as a doubled traffic volume, would increase the noise levels by 3 dBA; halving of the energy would result in a 3 dBA decrease. Figure 3 shows the relationship of various noise levels to commonly experienced noise events.

Average noise levels over a period of minutes or hours are usually expressed as dBA L_{eq}, or the equivalent noise level for that period of time. For example, $L_{eq(3\text{-}hr)}$ would represent a 3-hour average. When no period is specified, a one-hour average is assumed.

Noise standards for land use compatibility are stated in terms of the Community Noise Equivalent Level (CNEL) and the Day-Night Average Noise Level (DNL). CNEL is a 24-hour weighted average measure of community noise. CNEL is obtained by adding five decibels to sound levels in the evening (7:00 PM to 10:00 PM), and by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the evening and nighttime hours. DNL is a very similar 24-hour average measure that weights only the nighttime hours.

It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA; that a change of 5 dBA is readily perceptible, and that an increase (decrease) of 10 dBA sounds twice (half) as loud. This definition is recommended by the California Department of Transportation's Technical Noise Supplement to the Traffic Noise Analysis Protocol (2013).

VIBRATION FUNDAMENTALS

The way in which vibration is transmitted through the earth is called propagation. Propagation of earthborn vibrations is complicated and difficult to predict because of the endless variations in the soil through which waves travel. There are three main types of vibration propagation: surface, compression and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water.

Compression waves, or P-waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. Shear waves, or S-waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or "side-to-side and perpendicular to the direction of propagation".

As vibration waves propagate from a source, the energy is spread over an ever-increasing area such that the energy level striking a given point is reduced with the distance from the energy source. This geometric spreading loss is inversely proportional to the square of the distance. Wave energy is also reduced with distance as a result of material damping in the form of internal friction, soil layering, and void spaces. The amount of attenuation provided by material damping varies with soil type and condition as well as the frequency of the wave.

Vibration amplitudes are usually expressed as either peak particle velocity (PPV) or the root mean square (RMS) velocity. The PPV is defined as the maximum instantaneous peak of the vibration signal in inches per second. The RMS of a signal is the average of the squared amplitude of the signal in vibration decibels (VdB), ref one micro-inch per second. The Federal Railroad Administration uses the abbreviation "VdB" for vibration decibels to reduce the potential for confusion with sound decibel.

PPV is appropriate for evaluating the potential of building damage and VdB is commonly used to evaluate human response. Decibel notation acts to compress the range of numbers required in measuring vibration. Similar to the noise descriptors, L_{eq} and L_{max} can be used to describe the average vibration and the maximum vibration level observed during a single vibration measurement interval. Figure 4 illustrates common vibration sources and the human and structural responses to ground-borne vibration. As shown in the figure, the threshold of perception for human response is approximately 65 VdB; however, human response to vibration is not usually substantial unless the vibration exceeds 70 VdB. Vibration tolerance limits for sensitive instruments such as magnetic resonance imaging (MRI) or electron microscopes could be much lower than the human vibration perception threshold.

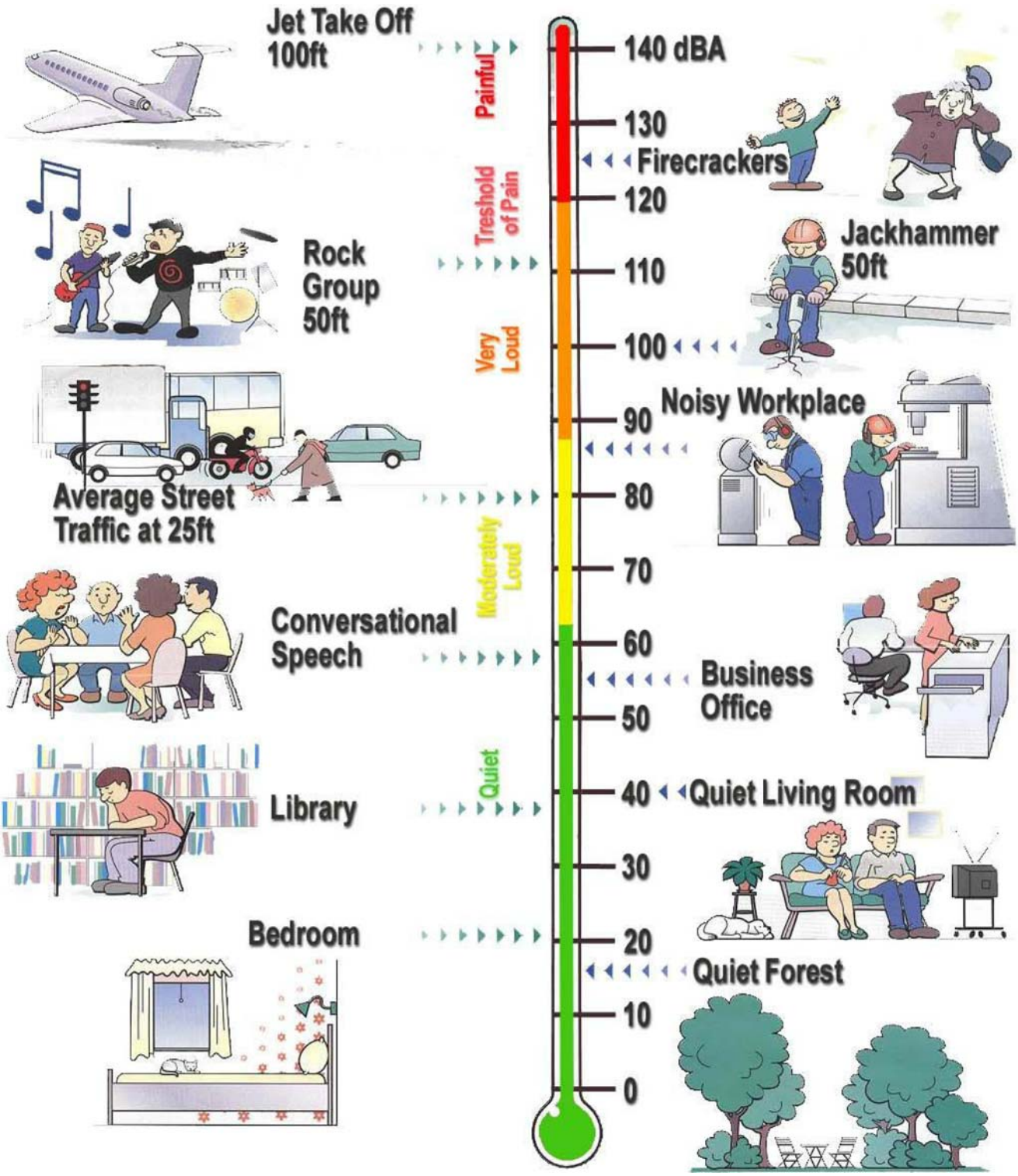
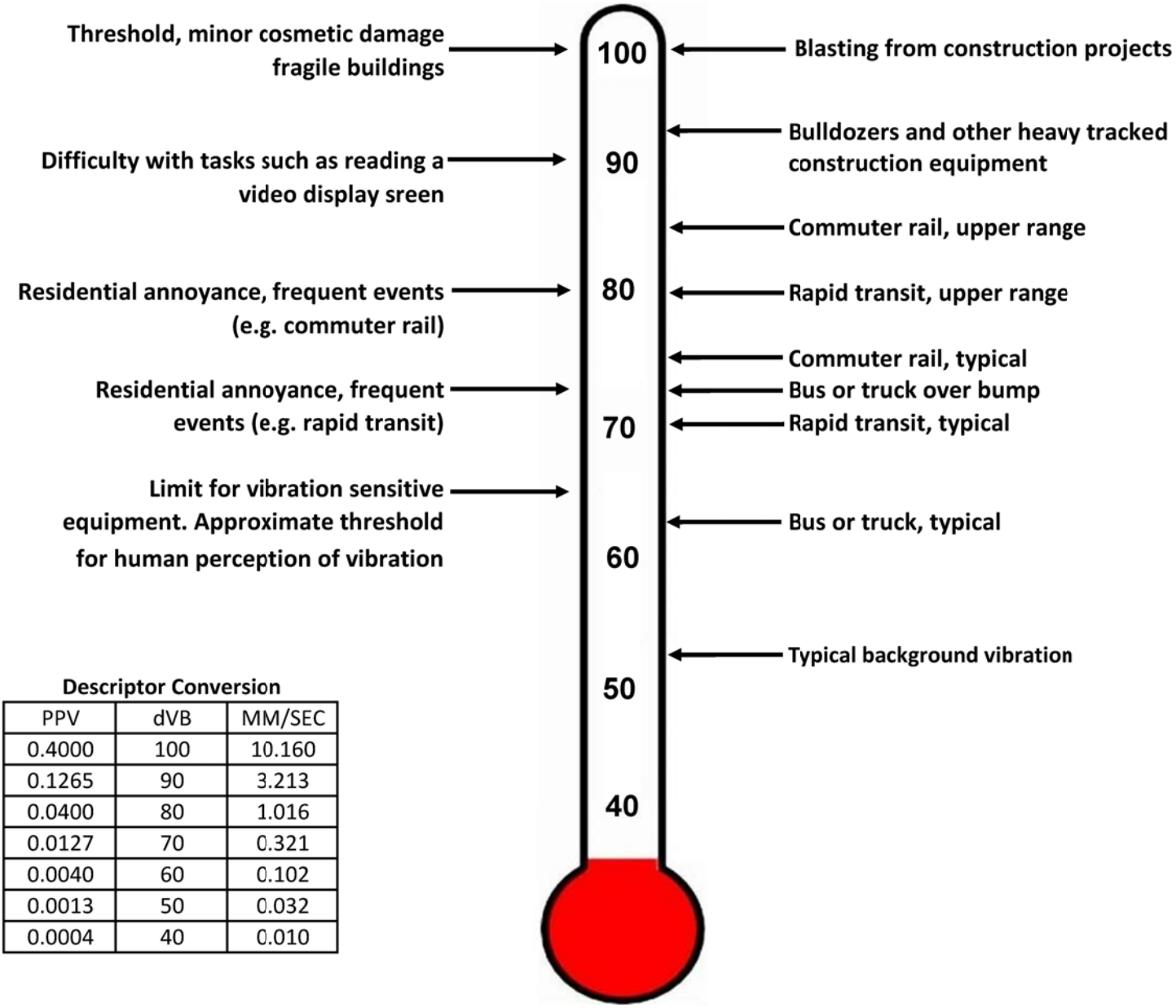


Figure 3
Weighted Sound Levels in Common Environments

Source: Bruel & Kjaer 2001



Descriptor Conversion

PPV	dVB	MM/SEC
0.4000	100	10.160
0.1265	90	3.213
0.0400	80	1.016
0.0127	70	0.321
0.0040	60	0.102
0.0013	50	0.032
0.0004	40	0.010

Source: FRA, 2012. Federal Railroad Administration High-Speed Ground Transportation Noise and Vibration Impact Assessment. Office of Railroad Policy Development, Washington, D.C. DOT/FRA/ORD-12/15. September.

Figure 4
Typical Levels of Groundborne Vibration

3. EXISTING NOISE ENVIRONMENT

EXISTING LAND USES AND SENSITIVE RECEPTORS

The project site is bordered by an alleyway and commercial uses to the north, a church and commercial medical office uses to the east, commercial medical office uses to the south, and Los Coyotes Diagonal to the west.

The State of California defines sensitive receptors as those land uses that require serenity or are otherwise adversely affected by noise events or conditions. Schools, libraries, churches, hospitals, single and multiple-family residential, including transient lodging, motels and hotel uses make up the majority of these areas. Sensitive land uses that may be affected by project noise include the existing church use located adjacent to the east and the single-family residential uses located approximately 165 feet to the south, 195 feet to the west, and 275 feet to the east of the project site.

AMBIENT NOISE MEASUREMENTS

An American National Standards Institute (ANSI Section S1.4 2014 Class 1) Larson Davis model LxT sound level meter was used to document existing ambient noise levels. In order to document existing ambient noise levels in the project area, three (3) 15-minute daytime noise measurements were taken between 12:38 PM and 1:33 PM on October 14, 2021. In addition, one (1) long-term 24-hour noise measurement was also taken from October 14, 2021 to October 15, 2021. Field worksheets and noise measurement output data are included in Appendix C.

As shown in Figure 5, the noise meter was placed at the following locations:

- STNM1: represents the existing noise environment of the single-family residences located to the west of the project site boundary along Coralite Street. The noise meter was placed at the southern boundary of the residence located at 6161 East Coralite Street, Long Beach just north of Coralite Street.

- STNM2: represents the existing noise environment of the church use and single-family residences located to the east of the project site boundary. The noise meter was placed near the eastern side of Palo Verde Avenue at the western boundary of the residence located at 3326 Palo Verde Avenue, Long Beach.

- STNM3: represents the existing noise environment of the single-family residences located to the south of the project site boundary. The noise meter was placed near the northern side of Killdee Street at the southern boundary of the residences located at 6259 and 6253 Killdee Street, Long Beach.LTNM1: represents the existing noise environment of the single-family residences located to the south of the project site boundary. The noise meter was placed along the southern side of the commercial parking lot located adjacent to the south of the project site, just north of the single-family residential neighborhood to the south.

Table 1 provides a summary of the short-term ambient noise data. Table 2 provides hourly interval ambient noise data from the long-term noise measurement. Short-term ambient noise levels were measured between 49.9 and 65.4 dBA L_{eq}. Long-term hourly noise measurement ambient noise levels ranged from 42.3 to 56 dBA L_{eq}. The dominant noise sources were vehicle traffic associated with Los Coyotes Diagonal, Palo Verde Avenue, Killdee Street and other surrounding roads, parking lot noise, and residential activity including the operation of leaf blowers and lawnmowers.

Table 1
Short-Term Noise Measurement Summary (dBA)

Daytime Measurements[1,2]								
Site Location	Time Started	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)
STNM1	12:38 PM	54.6	63.1	42.6	59.8	58.2	55.9	53.5
STNM2	2:46 PM	65.4	78.2	44.1	71.5	69.2	66.9	63.7
STNM3	1:18 PM	49.9	62.2	43.2	59.6	51.5	48.3	46.8

Notes:
(1) See Figure 5 for noise measurement locations. Each noise measurement was performed over a 15-minute duration.
(2) Noise measurements performed on October 14, 2021.

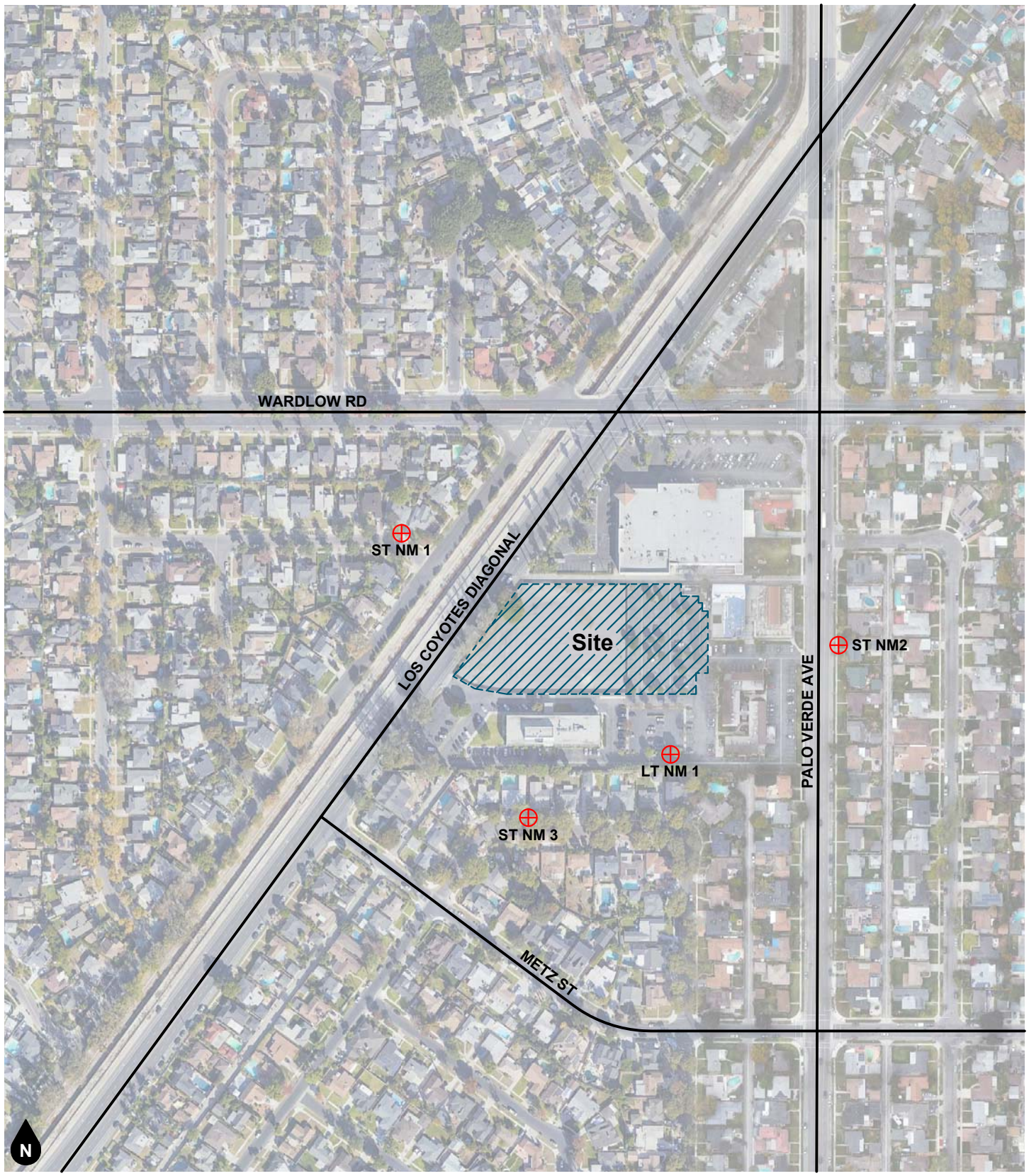
Table 2
Long-Term Noise Measurement Summary (dBA)

24-Hour Ambient Noise[1,2]								
Hourly Measurements	Time Started	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)
Overall Summary	5:00 PM	51.3	79.8		57.5	53.6	50.3	47.6
1	5:00 PM	55.7	78.0	45.5	61.0	54.5	51.0	49.5
2	6:00 PM	53.0	73.8	45.9	58.5	53.8	51.2	49.5
3	7:00 PM	49.3	65.0	45.2	54.7	51.5	49.2	48.1
4	8:00 PM	49.0	68.5	43.9	54.2	51.2	49.0	47.4
5	9:00 PM	49.5	68.1	43.6	55.4	51.1	48.9	47.7
6	10:00 PM	48.7	65.8	42.1	55.7	50.6	47.9	46.4
7	11:00 PM	48.2	68.9	39.4	57.4	48.6	45.4	44.1
8	12:00 AM	47.8	68.7	39.5	54.0	47.4	44.6	43.2
9	1:00 AM	42.3	52.7	38.6	47.0	44.8	42.7	41.3
10	2:00 AM	45.0	74.7	38.4	47.5	44.5	42.4	40.9
11	3:00 AM	43.0	58.1	39.0	46.6	44.6	43.3	42.3
12	4:00 AM	46.2	57.9	41.6	50.8	49.1	46.7	45.2
13	5:00 AM	56.0	79.8	42.3	65.6	53.2	50.1	48.5
14	6:00 AM	53.4	72.4	46.4	58.8	54.8	52.7	51.0
15	7:00 AM	54.7	68.2	50.0	58.7	56.4	55.1	54.2
16	8:00 AM	52.6	68.9	47.5	56.4	54.4	53.0	52.0
17	9:00 AM	51.0	70.4	46.8	54.9	52.8	50.9	49.7
18	10:00 AM	49.9	66.7	43.8	57.1	52.2	49.1	47.4
19	11:00 AM	52.4	70.8	43.5	62.0	55.0	49.8	47.7
20	12:00 PM	50.2	69.4	42.8	57.4	51.7	48.6	47.2
21	1:00 PM	51.0	69.8	42.4	60.5	53.3	49.7	47.2
22	2:00 PM	48.8	66.2	42.6	55.8	51.1	48.9	46.5
23	3:00 PM	51.4	74.7	43.1	58.6	52.2	48.7	46.6
24	4:00 PM	51.3	67.3	42.2	57.9	53.4	51.6	50.1

Notes:

(1) See Figure 5 for noise measurement locations. Noise measurement was performed over a 24-hour duration.

(2) Noise measurement performed from October 14, 2021 to October 15, 2021.



Legend

⊕ NM 1 Noise Measurement Location

ST NM Short-Term Noise Measurement

LT NM Long-Term Noise Measurement

Figure 5
Noise Measurement Location Map

4. REGULATORY SETTING

FEDERAL REGULATION

Federal Noise Control Act of 1972

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. After its inception, EPA's Office of Noise Abatement and Control issued the Federal Noise Control Act of 1972, establishing programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In response, the EPA published Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (Levels of Environmental Noise). The Levels of Environmental Noise recommended that the Ldn should not exceed 55 dBA outdoors or 45 dBA indoors to prevent significant activity interference and annoyance in noise-sensitive areas.

In addition, the Levels of Environmental Noise identified five (5) dBA as an "adequate margin of safety" for a noise level increase relative to a baseline noise exposure level of 55 dBA Ldn (i.e., there would not be a noticeable increase in adverse community reaction with an increase of five dBA or less from this baseline level). The EPA did not promote these findings as universal standards or regulatory goals with mandatory applicability to all communities, but rather as advisory exposure levels below which there would be no risk to a community from any health or welfare effect of noise.

In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at lower levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to State and local governments. However, noise control guidelines and regulations contained in EPA rulings in prior years remain in place by designated Federal agencies, allowing more individualized control for specific issues by designated Federal, State, and local government agencies.

STATE REGULATIONS

State of California General Plan Guidelines 2017

Though not adopted by law, the State of California General Plan Guidelines 2017, published by the California Governor's Office of Planning and Research (OPR) (OPR Guidelines), provides guidance for the compatibility of projects within areas of specific noise exposure. The OPR Guidelines identify the suitability of various types of construction relative to a range of outdoor noise levels and provide each local community some flexibility in setting local noise standards that allow for the variability in community preferences. Findings presented in the Levels of Environmental Noise Document (EPA 1974) influenced the recommendations of the OPR Guidelines, most importantly in the choice of noise exposure metrics (i.e., Ldn or CNEL) and in the upper limits for the normally acceptable outdoor exposure of noise-sensitive uses.

The OPR Guidelines include a Noise and Land Use Compatibility Matrix which identifies acceptable and unacceptable community noise exposure limits for various land use categories. Where the "normally acceptable" range is used, it is defined as the highest noise level that should be considered for the construction of the buildings which do not incorporate any special acoustical treatment or noise mitigation. The "conditionally acceptable" or "normally unacceptable" ranges include conditions calling for detailed acoustical study prior to the construction or operation of the proposed project.

California Environmental Quality Act

The California Environmental Quality Act Guidelines (Appendix G) establishes thresholds for noise impact analysis. This noise study includes analysis of noise and vibration impacts necessary to assess the project in light of the following Appendix G Checklist Thresholds.

Would the project result in:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Substantial increases in ambient noise levels are usually associated with project construction noise (temporary) and project operational noise (permanent).

Project Construction Noise: Construction noise sources are regulated within the City of Long Beach under Section 8.80.202 of the City's Municipal Code which prohibits construction activities between the hours of 7:00 PM and 7:00 AM Monday through Friday (including federal holidays) and before 9:00 AM or after 6:00 PM Saturdays that produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity. Construction is also prohibited on Sundays unless a permit has been issued.

Project Operational Noise (permanent): The proposed project has the potential to generate on-site and off-site noise. For on-site generated noise the City of Long Beach Municipal Code Sections 8.80.150 and 8.80.160 identify exterior noise limits at residential uses to be 50 dBA during the daytime (between 7:00 AM to 10:00 PM) and 45 dBA during the nighttime (10:00 PM to 7:00 AM). Section 8.80.170 of the City's Municipal Code identifies interior noise limits at residential uses to be 45 dBA during the daytime (between 7:00 AM to 10:00 PM) and 35 dBA during the nighttime (10:00 PM to 7:00 AM. Furthermore, noise level limits at commercial uses are 60 during the daytime and 55 during the nighttime.

For off-site project generated noise, the City of Long Beach General Plan Noise Element Final Environmental Impact Report (FIER) states that a significant impact would occur if a project would result in a substantial (3 dBA or greater) permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

b) Generate excessive groundborne vibration or groundborne noise levels?

Section 8.80.200 of the City of Long Beach Municipal Code prohibits the operating or permitting the operation of any device that creates vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at one hundred fifty feet from the source if on a public space or public right-of-way. Section 8.80.200 states that the "vibration perception threshold" means the minimum ground or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration by such directed means as, but not limited to, sensation by touch or visual observation of moving objects.

Ground-borne noise refers to the noise generated by ground-borne vibration. Ground-borne noise that accompanies the building vibration is usually perceptible only inside buildings and typically is only an issue at locations with subway or tunnel operations where there is no airborne noise path or for buildings with substantial sound insulation such as a recording studio.[1] As such, available guidelines from the Federal Transit Administration (FTA) are utilized to assess impacts due to ground-borne vibration. The FTA has adopted vibration standards that are used to evaluate potential building damage impacts related to construction activities. As shown in Table 3, the threshold at which there is a risk to "architectural" damage to reinforced-concrete, steel or timber (no plaster) buildings is a peak particle velocity (PPV) of 0.5, at engineered concrete and masonry (no plaster) buildings a PPV of 0.3, at non-engineered timber and masonry buildings a PPV of 0.2 and at buildings extremely susceptible to vibration damage a PPV of 0.1. The FTA has also adopted standards associated with human annoyance for groundborne vibration impacts for the following three land-use categories:

[1] Federal Transit Administration, Transit Noise and Vibration Impact Assessment, May 2018, pp 108, 112.

(1) Vibration Category 1 – High Sensitivity,
(2) Vibration Category 2 – Residential, and
(3) Vibration Category 3 – Institutional.

The FTA defines Category 1 as buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. Category 2 refers to all residential land uses and any buildings where people sleep, such as hotels and hospitals. Category 3 refers to institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference. The vibration criteria associated with human annoyance for these three land-use categories are shown in Table 4. Table 4 shows that 72 VdB is the threshold for annoyance from groundborne vibration at sensitive receptors.

Therefore, impacts related to building damage would be significant if construction activities result in groundborne vibration of 0.2 PPV or higher at residential structures and/or a PPV of 0.3 or higher at commercial structures. Impacts related to human annoyance would be significant if they result in groundborne vibration levels that exceed 72 VdB at sensitive receptor locations.

LOCAL REGULATIONS

City of Long Beach General Plan

General Plan Draft Noise Element (2019)

The Draft General Plan Noise Element utilizes the State of California's exterior noise and land use compatibility standards for land use development, as shown in Table 5. These Guidelines establish standards for outdoor noise levels that are acceptable, conditionally acceptable, and unacceptable for a variety of land uses. For nursing home uses noise levels of up to 70 dBA CNEL are considered "normally acceptable." These standards apply to the proposed project itself. In addition, the Noise Element also provides allowable noise exposure levels from transportation sources, as shown in Table 6.

The City of Long Beach General Plan Draft Noise Plan (2019) contains strategies and policies that address noise. The following strategies and policies are presented in the City's General Plan Draft Noise Element and are applicable to the proposed project:

Strategy 1 Apply site planning and other design strategies to reduce noise impacts, especially within the Founding and Contemporary Neighborhoods, Multifamily Residential—Low and Moderate, and Neighborhood Serving Centers and Corridors – Low and Moderate Place Types.

Policy N 1-3 Ensure development and redevelopment is considerate of the natural shape and contours of a site in order to reduce noise impacts.

Policy N 1-4 Encourage developers or landowners to incorporate noise reduction features in the site planning process.

Policy N 1-5 Incorporate urban design strategies such as courtyards, paseos, alleys, plazas and open space areas to provide a buffer to noise sensitive uses.

Policy N 1-6 Ensure that project site design and function minimize the potential adverse impacts of noise.

Policy N 1-7 Utilize noise barriers after all practical design-related noise measures have been integrated into the project. In instances where sound walls are necessary, they should be incorporated

into the architectural and site character of the development and pedestrian access should be integrated.

Strategy 4 Protect and buffer noise sensitive areas and uses through effective building design and material selection.

Policy N 4-1 Encourage developers to utilize noise absorbing building materials.

Policy N 4-5 Encourage building design that incorporates varying and/or angled wall articulation to disperse noise.

Policy N 4-6 Promote building design best practices such as staggering wall studs to minimize transmission of noise between rooms.

Policy N 4-7 Consider use of decorative walls and/ or dense landscaping to further buffer noise between uses

Strategy 6 Minimize vehicular traffic noise in residential areas and near noise-sensitive land uses.

Policy N 6-1 Ensure noise-compatible land uses along existing and future roadways, highways, and freeways.

Policy N 6-6 For future noise sensitive land uses proposed within the 65 dBA Ldn noise contours, a qualified acoustical consultant shall conduct a noise analysis to determine appropriate measures are implemented to meet the necessary exterior and interior noise standards.

Policy N 6-9 Encourage site planning and building design measures that minimize the effects of traffic noise in residential zones.

Strategy 12 Minimize construction noise and vibration levels in residential areas and in other locations near noise sensitive uses where possible

Policy N 12-1 Reduce construction, maintenance, and nuisance noise at the source, when possible, to reduce noise conflicts.

Policy N 12-2 Limit the allowable hours for construction activities and maintenance operations near sensitive uses.

Policy N 12-3 As part of the City's Municipal Code, establish noise levels standards based on Place Type and time of day, to which construction noise shall conform.

Policy N 12-5 Encourage the following construction best practices:

- Schedule high-noise and vibration-producing activities to a shorter window of time during the day outside early morning hours to minimize disruption to sensitive uses.
- Grading and construction contractors should use equipment that generates lower noise and vibration levels, such as rubber-tired equipment rather than metal-tracked equipment.
- Construction haul truck and materials delivery traffic should avoid residential areas whenever feasible.
- The construction contractor should place noise- and vibration-generating construction equipment and locate construction staging areas away from sensitive uses whenever feasible.
- The construction contractor should use on-site electrical sources to power equipment rather than diesel generators where feasible.

- All residential units located within 500 ft of a construction site should be sent a notice regarding the construction schedule. A sign legible at a distance of 50 ft should also be posted at the construction site. All notices and the signs should indicate the dates and durations of construction activities, as well as provide a telephone number for a "noise disturbance coordinator."
- A "noise disturbance coordinator" should be established. The disturbance coordinator should be responsible for responding to any local complaints about construction noise. The disturbance coordinator should determine the cause of the noise complaint (e.g., starting too early, bad muffler) and should be required to implement reasonable measures to reduce noise levels.

Policy N 12-6 Continue to provide information bulletins dispersing information on municipal code requirements and recommended best practices.

City of Long Beach Municipal Code

The City addresses noise in the noise ordinances of its Municipal Code. These ordinances are summarized below.

Section 8.80.150 Exterior noise limits – Sound levels by receiving land use district.

A. The noise standards for the various land use districts identified by the noise control office as presented in Section 8.80.160 (see Table 7) shall, unless otherwise specifically indicated, apply to all such property within a designated district.

B. No person shall operate or cause to be operated any source of sound at any location within the incorporated limits of the City or allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured from any other property, either incorporated or unincorporated, to exceed:

1. The noise standard for that land use district as specified in Section 8.80.160 (see Table 7).
2. for a cumulative period of more than thirty (30) minutes in any hour; or
3. The noise standard plus five (5) decibels for a cumulative period of more than fifteen (15) minutes in any hour; or
4. The noise standard plus ten (10) decibels for a cumulative period of more than five (5) minutes in any hour; or
5. The noise standard plus fifteen (15) decibels for a cumulative period of more than one (1) minute in any hour; or
6. The noise standard plus twenty (20) decibels or the maximum measured ambient, for any period of time.

C. If the measured ambient level exceeds that permissible within any of the first four (4) noise limit categories in Subsection B of this Section, the allowable noise exposure standard shall be increased in five (5) decibels increments in each category as appropriate to encompass or reflect the ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category in Subsection B of this Section, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

D. If the measurement location is on a boundary between two (2) different districts, the noise level limit applicable shall be the arithmetic mean of the two (2) districts.

E. If possible, the ambient noise shall be measured at the same location along the property line utilized in Subsection B of this Section, with the alleged offending noise source inoperative. If for any reason the alleged offending noise source cannot be shut down, then the ambient noise must be estimated by performing a measurement in the same general area of the source but at a sufficient distance such

that the offending noise from the source is inaudible. If the difference between the noise levels with noise source operating and not operating is six (6) decibels or greater, then the noise measurement of the alleged source can be considered valid with a small correction applied to account for the contribution of the ambient noise. The correction is to be applied in accordance with data shown in Table 7.

Section 8.80.160 Exterior noise limits- Correction for character of sound

In the event that alleged offensive noise contains a steady audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting or contains music or speech conveying informational content, the standard limits set forth in Table 7 shall be reduced by five (5) decibels.

Section 8.80.170 Interior noise limits- Maximum sound levels.

A. The interior noise standards for various land use districts as presented in Table 8 shall apply, unless otherwise specifically indicated, within structures located in designated zones with windows in their normal seasonal configuration.

B. No person shall operate, or cause to be operated, any source of sound indoors at any location within the incorporated limits of the City or allow the creation of any indoor noise which causes the noise level when measured inside the receiving dwelling unit to exceed:

    1. The noise standard for that land use district as specified in Table 8 for a cumulative period of more than five (5) minutes in any hour; or
    2. The noise standard plus five decibels (5 dB) for a cumulative period of more than one (1) minute in any hour; or
    3. The noise standard plus ten decibels (10 dB) or the maximum measured ambient, for any period of time.

C. If the measured indoor ambient level exceeds that permissible within any of the first two (2) noise limit categories in this Section, the allowable noise exposure standard shall be increased in five decibel (5 dB) increments in each category as appropriate to reflect the indoor ambient noise level. In the event the indoor ambient noise level exceeds the third noise limit category, the maximum allowable indoor noise level under said category shall be increased to reflect the maximum indoor ambient noise level.

Section 8.80.180 Interior noise limits- Correction for character of sound

In the event the alleged offensive noise contains a steady audible tone such as a whine, screech or hum, or is a repetitive noise such as hammering or riveting, or contains music or speech conveying information content, the standard limits set forth in Table 8 (Section 8.80.170) shall be reduced by five decibels (5 dB).

Section 8.80.200 Noise disturbances – Acts specified

The following acts, and the causing or permitting thereof, are declared to be in violation of the noise chapter:

E. Loading and unloading. Loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects between the hours of ten p.m. and seven a.m. the following day in such a manner as to cause a noise disturbance across a residential real property line or at any time to violate the provisions of Sections 8.80.150 and 8.80.170;

G. Vibration. Operating or permitting the operation of any device that creates vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at one hundred fifty feet (150') (forty-six (46) meters) from the source if on a public space or public right-of-way. For the purposes of this subsection, "vibration perception threshold" means the minimum ground or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration by such directed means as, but not limited to, sensation by touch or visual observation of moving objects. The perception threshold shall be presumed to be .001 g's in the frequency range 0—30 hertz and .003 g's in the frequency range between thirty and one hundred hertz;

L. Noise sensitive zones

1. Creating or causing the creation of any sound within any noise sensitive zone, so as to exceed the specified land use noise standards set forth in Sections 8.80.150 and 8.80.170, or
2. Creating or causing the creation of any sound within or adjacent to any noise sensitive zone containing a hospital, nursing home, school, court or other designated use so as to interfere with the functions of such activity or annoy the patients or participants of such activity.

M. Domestic power tools.

a. operating or permitting the operation of any mechanically powered saw, sander, drill, grinder, lawn or garden tool, or similar tool between ten p.m. and seven a.m. the following day so as to create a noise disturbance across a residential or commercial real property line,
b. Any motor, machinery, pump, etc., shall be sufficiently enclosed or muffled and maintained so as not to create a noise disturbance,
c. Operating leaf blowers, consisting of portable power equipment used in any landscape maintenance, construction, property repair or property maintenance for the purpose of blowing, dispersing or redistributing dust, dirt, leaves, grass clippings, cuttings, or trimmings from plants, trees or other debris is unlawful if operated within any residential area or in any nonresidential area within four hundred feet (400') of any residential area in the City between the hours after eight p.m. and before eight a.m. Monday through Friday, after five p.m. and before nine a.m. on Saturdays, and after five p.m. and before eleven a.m. on Sundays and legal holidays. Notwithstanding the provisions of Section 8.80.380, violations of this Subsection 8.80.200.M.3 shall be infractions except as specifically provided in this Section. The first violation in any one (1) year period shall be subject to a fine of fifty dollars ($50.00); a second violation in any one (1) year period shall be subject to a fine of seventy-five dollars ($75.00); a third violation in any one (1) year period shall be subject to a fine of one hundred dollars ($100.00). A fourth or subsequent violation of this Subsection in any one (1) year period may be filed as a misdemeanor. Notwithstanding the provisions of any other Section in this Chapter, the provisions of this subsection may be enforced by a Police Officer;

N. Air-conditioning or air refrigerating equipment. Operating or permitting the operation of any air-conditioning or air refrigerating equipment in such a manner as to exceed any of the following sound levels measured as specified in the American Society of Heating, Refrigeration and Air Conditioning Engineers Code of Recommended Practices. In case of conflict, the interior noise standards as specified in Section 8.80.170 shall nonetheless apply.

Measurement Location	Units Installed Before 1-1-80 dB (A)	Units Installed On Or After 1-1-80 dB (A)
Any point on neighboring property line, five feet above grade level, no closer than three feet from any wall	60	55
Center of neighboring patio five feet above grade level, no closer than three feet from any wall	55	50
Outside the neighboring living area window nearest the equipment location, not more than three feet from the window opening, but at least three feet from any other surface	55	50

Section 8.80.202 Construction Activity – Noise regulations

The following regulations shall apply only to construction activities where a building or other related permit is required or was issued by the Building Official and shall not apply to any construction activities within the Long Beach harbor district as established pursuant to Section 201 of the City Charter.

A. Weekdays and federal holidays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of 7:00 PM and 7:00 AM of the following day on weekdays, except for emergency work authorized by the Building Official. For purposes of this Section, a federal holiday shall be considered a weekday.
B. Saturdays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity which produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity between the hours of 7:00 PM on Friday and 9:00 AM on Saturday and after 6:00 PM on Saturday, except for emergency work authorized by the Building Official.
C. Sundays. No person shall operate or permit the operation of any tools or equipment used for construction, alteration, repair, remodeling, drilling, demolition or any other related building activity at any time on Sunday, except for emergency work authorized by the Building Official or except for work authorized by permit issued by the Noise Control Officer.
D. Owner's/employer's responsibility. It is unlawful for the landowner, construction company owner, contractor, subcontractor or employer of persons working, laboring, building, or assisting in construction to permit construction activities in violation of provisions in this Section.
E. Sunday work permits. Any person who wants to do construction work on a Sunday must apply for a work permit from the Noise Control Officer. The Noise Control Officer may issue a Sunday work permit if there is good cause shown; and in issuing such a permit, consideration will be given to the nature of the work and its proximity to residential areas. The permit may allow work on Sundays, only between 9:00 AM and 6:00 PM, and it shall designate the specific dates when it is allowed.
F. Enforcement. Notwithstanding the provisions of Sections 8.80.370 and 8.80.380, this Section may be enforced by a Police Officer.

Section 8.80.210 Refuse collection vehicles.

No person shall collect refuse with a refuse collection vehicle between the hours of 7:00 PM and 7:00 AM of the following day in a residential area or noise sensitive zone.

Table 3
Construction Vibration Damage Criteria

Building/Structural Category	PPV, in/sec	Approximate L_v[1]
I. Reinforced-concrete, steel or timber (no plaster)	0.5	102
II. Engineered concrete and masonry (no plaster)	0.3	98
III. Non-engineered timber and masonry buildings	0.2	94
IV. Buildings extremelly susceptible to vibration damage	0.1	90

Notes:

Source: Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment Manual (September 2018).

(1) RMS velocity in decibels, VdB re 1 micro-in/sec.

Table 4
Ground-Borne Vibration (GBV) Impact Criteria for General Vibration Assessment

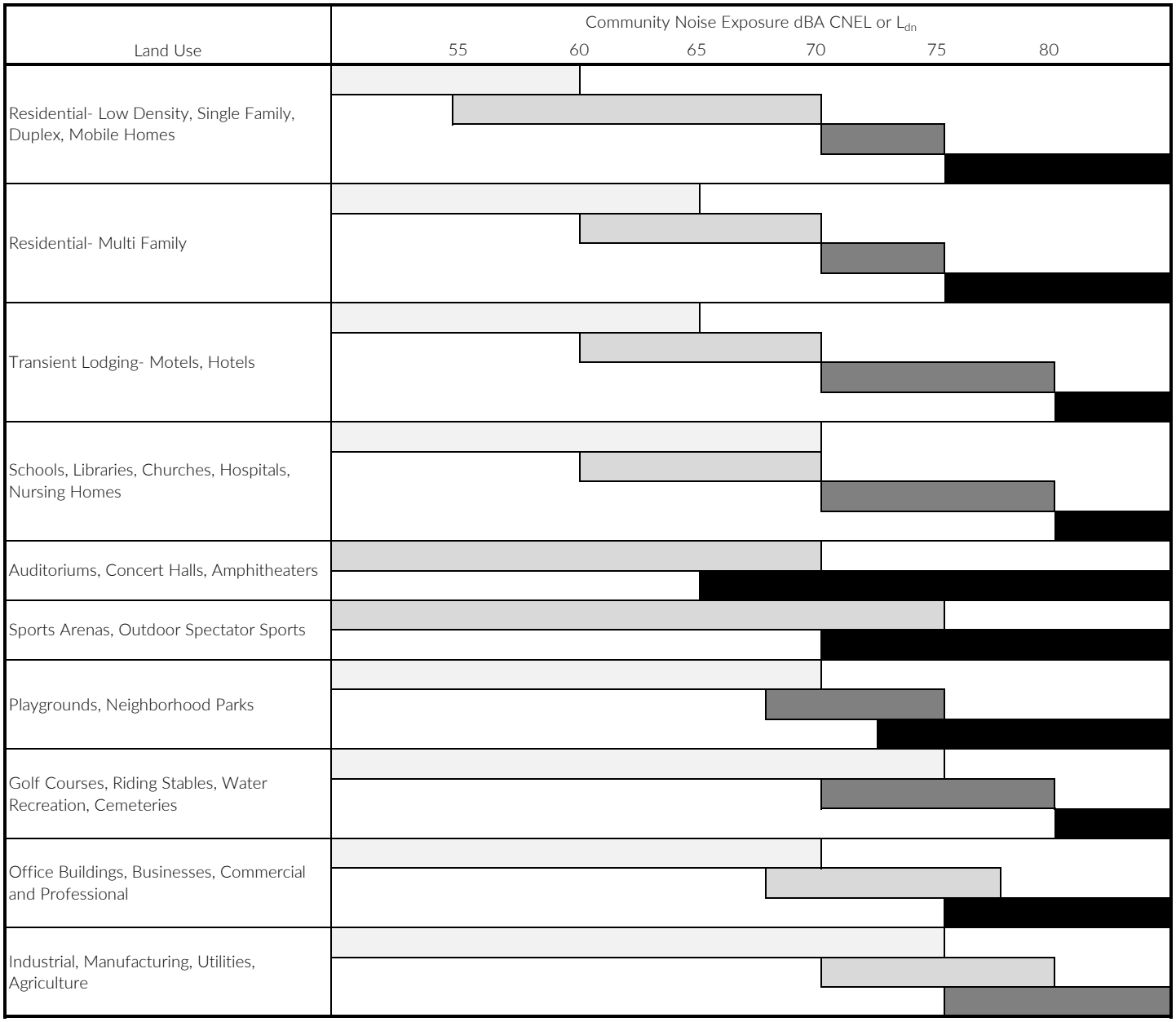
Land Use Category	GBV Impact Levels (VdB re 1 micro-inch/sec)		
	Frequent Events	Occasional Events	Infrequent Events
Category 1: Buildings where vibration would interfere with interior operations.	65 VdB*	65 VdB*	65 VdB*
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use.	75 VdB	78 VdB	83 VdB

Notes:

Source: Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment Manual (September 2018).

*This criterion limit is based on levels that are acceptable for most moderately sensitive equipment such as optical

Table 5
Land Use Compatibility for Community Noise Exposure



	Normally Acceptable:	Specified land use is satisfactory based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
	Conditionally Acceptable:	New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
	Normally Unacceptable:	New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design
	Clearly Unacceptable:	New construction or development should generally not be undertaken.

Notes:
(1) Source: Noise Element City of Long Beach General Plan Draft, December 2017 and California Office of Planning and Research, General Plan Guidelines (2017), Appendix D.

Table 6
City of Long Beach Allowable Noise Exposure from Transportation Sources

Land Use		Ldn (dBA)	
Placetypes	Uses	Interior[1,2]	Exterior[3]
Open Space Open Space (OS)	Playgrounds, neighborhood parks	N/A	70
	Golf Courses, riding stables, water recreation, cemeteries	N/A	N/A
Neighborhoods Founding and Contemporary Neighborhood (N) Multi-Family Residential-Low (MRF-L) Multi-Family Residential-Moderate (MRF-M)	Single-family, duplex and multiple-family	45	65
	Mobile home park	N/A	65
Mixed-Use Neighborhood-Serving Center or Corridor – Low (NC-L) Neighborhood-Serving Center or Corridor – Low (NC-M) Transit-Oriented Development – Low (TOD-L) Transit-Oriented Development – Moderate (TOD-M)	Single-family	45	65
	Mobile home park	N/A	65
	Multiple-family, mixed-use	45	65 [4]
	Transient lodging-motels, hotels	45	65
	Sports arenas, outdoor spectator sports	N/A	N/A
	Auditoriums, concert halls, amphitheaters	45	N/A
	Office buildings, business, commercial and professional	50	N/A
Employment Community Commercial (CC) Industrial (I) Neo-Industrial (NI)	Manufacturing, utilities, agriculture	N/A	N/A
	Office buildings, business, commercial and professional	50	N/A
Unique Regional Serving Facility (RSF) Downtown (DT) Waterfront (WF)	Schools, nursing homes, day care facilities, hospitals, convalescent facilities, dormitories	45	65
	Government Facilities – offices, fire stations, community buildings	45	N/A
	Places of Worship, churches	45	N/A
	Libraries	45	N/A
	Multiple-family, mixed-use	45	65 [4]
	Utilities	N/A	N/A
	Cemeteries	N/A	N/A

Notes:

Source: City of Long Beach General Plan Draft Noise Element(2019), Table N-5.

(1) Interior habitable environment excludes bathrooms, closets, and corridors.

(2) Interior noise standards shall be satisfied with windows in the closed position. Mechanical ventilation shall be provided per Uniform Building Code requirements.

(3) Exterior noise level standard to be applied at outdoor activity areas (e.g., private yards, private patio, or balcony of a multifamily residence). Where the location of an outdoor activity area is unknown or not applicable, the noise standard shall be applied inside the property line of the receiving land use.

(4) Within the NC-M, TOD-L, TOD-M, DT and WF PlaceType designations, exterior space standards apply only to common outdoor recreational areas.

Ldn = Day-Night Average Level
dBA = A-weighted decibels
N/A = Not Applicable

Table 7
City of Long Beach Exterior Noise Limits

Table A: Exterior Noise Limits		
Receiving Land Use District*	Time Period	Noise Level** (dBA)
District One	10:00 PM to 7:00 AM	45
	7:00 AM to 10:00 PM	50
District Two	10:00 PM to 7:00 AM	55
	7:00 AM to 10:00 PM	60
District Three	Any time	65
District Four	Any time	70
District Five	Regulated by other agencies and laws	

* District One: Predominantely residential with other land use types also present.

District Two: Predominantely commercial with other land use types also present.

District Three and Four: Predominantly industrial with other land use types also present.

District Five: Airport, freeways and other waterways regulated by other agencies.

** Districts Three and Four are intended primarily for use at their boundaries rather than for noise control within those districts.

Table B: Background Noise Correction	
Difference between total noise and background noise alone (decibels)	Amount to be subtracted from
6 to 8	1
9 to 10	0.5

Notes:

(1) Source: City of Long Beach Municipal Code Section 8.80.160.

Table 8
City of Long Beach Interior Noise Limits

Table C: Interior Noise Limits			
Receiving Land Use District	Type of Land Use	Time Interval	Allowable Interior Noise Level (dBA)
All	Residential	10:00 PM to 7:00 AM	35
		7:00 AM to 10:00 PM	45
All	School	7:00 AM to 10:00 PM (while school is in session)	45
Hospital, designated quiet zones and noise sensitive zones		Any time	40

Notes:

(1) Source: City of Long Beach Municipal Code Section 8.80.170.

5. ANALYTICAL METHODOLOGY AND MODEL PARAMETERS

This section discusses the analysis methodologies used to assess noise impacts.

CONSTRUCTION NOISE MODELING

Construction noise associated with the proposed project was calculated at the sensitive receptor locations, utilizing methodology presented in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (2018) together with several key construction parameters including: distance to each sensitive receiver, equipment usage, percent usage factor, and baseline parameters for the project site. Distances to receptors were based on the acoustical center of the project site. The equipment used to calculate the construction noise levels for each phase were based on the assumptions provided in the CalEEMod modeling in the Air Quality, Global Climate Change, and Energy Impact Analysis prepared for the proposed project (Ganddini Group, Inc., 2021). For construction noise purposes, the distance measured from the project site to sensitive receptors was assumed to be the acoustical center of the project site to the property line of residential properties with existing residential buildings. Construction noise worksheets are provided in Appendix D.

SOUNDPLAN

The SoundPLAN acoustical modeling software was utilized to model project operational worst-case stationary noise impacts from the proposed project to adjacent sensitive uses (e.g., church and residences) and future traffic noise levels at the proposed residential use. SoundPLAN is capable of evaluating stationary noise sources (e.g., vehicle noise, parking lots, drive-thru menus, car wash equipment, vacuums, etc.) and much more. The SoundPLAN software utilizes algorithms (based on the inverse square law) to calculate noise level projections. The software allows the user to input specific noise sources, spectral content, sound barriers, building placement, topography, and sensitive receptor locations. In addition to the information provided below, noise modeling input and outputs assumptions are provided in Appendix E.

Buildout Roadway Analysis

Roadways that may generate enough traffic noise under buildout conditions to affect the proposed project include Los Coyotes Diagonal. As stated previously, the City of Long Beach General Plan Mobility Element Context – Sensitive Street Classification System Map identifies Los Coyotes Diagonal as a Boulevard roadway in the vicinity of the project site. The City of Long Beach General Plan Mobility Element identifies a Boulevard roadway as having an 80 to 100-foot right-of-way. Per the County of Los Angeles General Plan Update Programmatic Traffic Impact Study, Los Coyotes Diagonal is expected to accommodate up to approximately 36,000 vehicles per day. Level of Service C, approximately 75% of these volumes was used to estimate future noise levels associated with these roadways at the project site. No vehicle mix data for use in noise studies has been published for these roadways by the City of Long Beach or County of Los Angeles, so published Riverside County vehicle mix requirements were utilized[2].

Operational Analysis

Peak hour operational noise levels were modeled utilizing representative sound levels in the SoundPLAN model. Modeled noise sources include parking lot movements and HVAC equipment. Although a generator, is proposed as part of the proposed project, it will be enclosed. Proposed outdoor courtyard/recreational areas will not result in noise levels that are readily noticeable over the existing noise environment.. All noise

[2] Riverside, County Department of Public Health, Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures, Steven Hinde, REHS, CIH, Senior Industrial Hygienist, November 23, 2009.

sources were modeled to be in full operation for an entire hour. This is a conservative modeling effort, given that, several of the noise sources are not in operation continuously for an entire hour.

Parking Lot Noise

Parking lot noise was calculated using SoundPLAN methodology. Specifically, the traffic volume of the parking lot is entered with the number of moves per parking, the hour and the number of parking bays. The user defines whether the parking lots are for automobiles, motorcycles, or trucks, and the emission level of a parking lot is automatically adjusted accordingly. The values for the number of parking moves for each time slice is the number of parking moves per reference unit (most often per parking bay), averaged for the hour[3].

SoundPLAN utilizes parking lot noise emission levels from the 6th revised edition of the parking lot study "Recommendations for the Calculation of Sound Emissions of Parking Areas, Motorcar Centers and Bus Stations as well as of Multi-Story Car Parks and Underground Car Parks" published by the Bavarian Landesamt für Umwelt provides calculation methods to determine the emissions of parking lots.

The parking lot emission table documents the reference level (Lw,ref) from the parking lot study.

Lw, ref = Lw0 + KPA + KI + KD + KStrO + 10 log(B) [dB(A)]

With the following parameters:

Lw0 = Basic sound power, sound power level of one motion / per hour on P+R areas = 63 dB(A)
KPA = Surcharge parking lot type
KI = Surcharge for impulse character
KD = Surcharge for the traffic passaging and searching for parking bays in the driving lanes 2,5 * lg (f * B - 9)
f = Parking bays per unit of the reference value
B = Reference value
KStrO = Surcharge for the road surface
B = Reference value

Mechanical Equipment (HVAC Units) Noise

A noise reference level of 67.7 dBA at 3 feet was utilized to represent rooftop 50 Ton Carrier HVAC units[4]. A rooftop HVAC plan is not available at the time of this analysis so the exact location and number of units per building were estimated. A total of 59 rooftop units were modeled on the proposed rooftops. The noise source height for each HVAC unit was assumed at 1 meter above the roof top. Roof top is assumed to be approximately 21.3 meters (~65 feet) above grade. It is assumed that no HVAC equipment will be stored at ground level outside of the proposed building.

[3] SoundPLAN Essential 4.0 Manual. SoundPLAN International, LLC. May 2016.

[4] MD Acoustics, LLC Noise Measurement Data for RTU –Carrier 50TFQ0006.

6. IMPACT ANALYSIS

This impact discussion analyzes the potential for noise and/or groundborne vibration impacts to cause the exposure of a person to, or generation of, noise levels in excess of established City of Long Beach standards related to: construction and transportation noise related impacts to, or from, the proposed project.

IMPACTS RELATED TO CONSTRUCTION NOISE

The existing church use located adjacent to the east and the single-family residential uses located to the south, west and east of the project site may be affected by short-term noise impacts associated with construction noise. Construction noise will vary depending on the construction process, type of equipment involved, location of the construction site with respect to sensitive receptors, the schedule proposed to carry out each task (e.g., hours and days of the week) and the duration of the construction work.

The construction phases for the proposed project are anticipated to include demolition, grading, building construction, paving and architectural coating. Construction activities are anticipated to begin no sooner than January 2023 and take approximately 15 months to complete. A summary of noise level data for a variety of construction equipment compiled by the U.S. Department of Transportation is presented in Table 9. Typical operating cycles for these types of construction equipment may involve one or two minutes of full power operation followed by three to four minutes at lower power settings.

Construction noise associated with the proposed project was calculated utilizing methodology presented in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (2018) together with several key construction parameters including: distance to each sensitive receiver, equipment usage, percent usage factor, and baseline parameters for the project site. Distances to receptors were based on the acoustical center of the proposed construction activity. Construction noise levels were calculated for each phase. Anticipated noise levels during each construction phase are presented in Table 10. Worksheets for each phase are included as Appendix D.

A comparison of existing noise levels and project construction noise levels are presented in Table 10. STNM1 was chosen to represent noise levels at the property line of the residential uses to the west, STNM2 was chosen to represent noise levels at the property lines of the residential and church uses to the east, and STNM3 was chosen to represent the property lines of the residential uses to the south of the project site.

Modeled unmitigated construction noise levels reached up to 69.8 dBA L_{eq} at the nearest residential property line to the west, 67.6 dBA L_{eq} at the nearest residential property line to the east, 74.1 dBA L_{eq} at the nearest church property line to the east, and up to 72.9 dBA L_{eq} at the nearest residential property line to the south of the project site.

As discussed earlier, construction noise sources are regulated within the City of Long Beach under Section 8.80.202 of the City's Municipal Code which prohibits construction activities between the hours of 7:00 PM and 7:00 AM on weekdays, between 7: 00 PM on Friday and 9:00 AM on Saturday and after 6:00 PM on Saturday, and anytime on Sundays. Construction of the proposed project is required to comply with the allowed times as specified in the City's Municipal Code.

Impacts would be less than significant, and no mitigation is required. However, impacts related to construction noise will be further minimized with adherence to the above Municipal Ordinances and implementation of the recommended measures presented in Section 8 of this report.

Off-Site Construction Activity

Construction truck trips would occur throughout the construction period. According to the FHWA, the traffic volumes need to be doubled in order to increase noise levels by 3 dBA CNEL.[5] As shown in the CalEEMod output files provided in the Air Quality, Global Climate Change, and Energy Impact Analysis prepared for the proposed project (Ganddini Group, Inc., 2021) including the greatest number of vehicle trips per day would be during building construction at up to 116 vehicle trips per day (94 for worker trips and 22 for vendor trips). Therefore, at a maximum of 116 daily vehicle trips, the addition of daily construction vehicle trips along off-site roadway segments associated with proposed project would not be anticipated to result in a doubling of traffic volumes. Off-site project generated construction vehicle trips would result in a negligible noise level increase and would not result in a substantial increase in ambient noise levels. Impacts would be less than significant. No mitigation measures are required.

Noise Impacts to Off-Site Receptors Due to Project Generated Trips

The proposed project is the development of the project site with a two-story 78,277 square foot senior assisted living and memory care facility with 86 units including 109 beds. Trip Generation and Distribution Analysis (Trip Generation Analysis) prepared for the proposed project by Ganddini Group (October 5, 2021) showed that the proposed project would generate approximately 284 vehicle trips per day. Typically, a doubling of traffic volumes is required to result in an increase of 3 dBA, which is considered to be a barely audible change. Project generated trips will not result in a doubling of traffic volumes along any affected road segment. This impact would be less than significant. No mitigation is required.

Traffic Noise Impacts to the Proposed Project

The City of Long Beach has identified exterior noise levels of up to 65 dBA L_{dn} and interior noise levels up to 45 dBA L_{dn} from transportation noise sources as acceptable for nursing home uses (see Table 6).

Roadways that may generate enough traffic noise under buildout conditions to affect the proposed project include Los Coyotes Diagonal. As stated previously, the City of Long Beach General Plan Mobility Element Context – Sensitive Street Classification System Map identifies Los Coyotes Diagonal as a Boulevard roadway in the vicinity of the project site. The City of Long Beach General Plan Mobility Element identifies a Boulevard roadway as having an 80 to 100-foot right-of-way. Per the County of Los Angeles General Plan Update Programmatic Traffic Impact Study, Los Coyotes Diagonal is expected to accommodate up to approximately 36,000 vehicles per day. Level of Service C, approximately 75% of these volumes was used to estimate future noise levels associated with these roadways at the project site. No vehicle mix data for use in noise studies has been published for these roadways by the City of Long Beach or County of Los Angeles, so published Riverside County vehicle mix requirements were utilized[6].

As shown in Figures 6 and 7, future traffic noise levels associated with Los Coyotes Diagonal are expected to range between 65.3 and 71.4 dBA CNEL at building facades affected by traffic noise, and between 63.2 and 72.3 are proposed outdoor use areas. Upgraded windows and/or sliding glass doors should be installed in wall assemblies on the north and west sides of the proposed building. Specifically, the Sound Transmission Class (STC) of windows and sliding glass doors facing north and west should be at least 29. With implementation of this measure, interior noise levels due to traffic noise will be no greater than 45 dBA CNEL under a windows closed condition. To ensure that a windows closed condition is possible, the building shall be provided with air conditioning and/or an air circulation system. Impacts to the project will be less than significant with implementation of these measures.

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[5] Federal Highway Administration, Highway Noise Prediction Model, December 1978.

[6] Riverside, County Department of Public Health, Requirements for Determining and Mitigating Traffic Noise Impacts to Residential Structures, Steven Hinde, REHS, CIH, Senior Industrial Hygienist, November 23, 2009.

Noise Impacts to Off-Site Receptors Due to On-Site Operational Noise

The nearest sensitive receptors to the project site are the existing church use located adjacent to the east and the single-family residential uses located as close as approximately 165 feet to the south, 195 feet to the west, and 275 feet to the east of the project site.

The City of Long Beach Municipal Code Sections 8.80.150 and 8.80.160 identifies exterior noise limits at residential uses to be 50 dBA during the daytime (between 7:00 AM to 10:00 PM) and 45 dBA during the nighttime (10:00 PM to 7:00 AM). Section 8.80.170 of the City's Municipal Code also states that interior noise limits at residential uses are 45 dBA during the daytime (between 7:00 AM to 10:00 PM) and 35 dBA during the nighttime (10:00 PM to 7:00 AM. Furthermore, noise level limits at commercial uses are 60 dBA during the daytime and 55 dBA during the nighttime.

As shown on Figure 8, peak hour project operational noise is not expected to exceed 50 dBA Leq at the property line. and is not expected to cause noise levels that exceed 50 dBA between the hours of 7:00 AM and 10:00 PM or exceed 45 dBA Leq between the hours of 10:00 PM and 7:00 AM at nearby sensitive receptors. Nor will the project cause a significant increase in ambient noise levels. Project operational noise levels would not be significant. No mitigation is required.

Groundborne Vibration Impacts

Construction Vibration

There are several types of construction equipment that can cause vibration levels high enough to annoy persons in the vicinity and/or result in architectural or structural damage to nearby structures and improvements. For example, as shown in Table 11, a vibratory roller could generate up to 0.21 PPV at a distance of 25 feet; and operation of a large bulldozer (0.089 PPV) at a distance of 25 feet (two of the most vibratory pieces of construction equipment). Groundborne vibration at sensitive receptors associated with this equipment would drop off as the equipment moves away. For example, as the vibratory roller moves further than 100 feet from the sensitive receptors, the vibration associated with it would drop below 0.0026 PPV. It should be noted that these vibration levels are reference levels and may vary slightly depending upon soil type and specific usage of each piece of equipment.

Architectural Damage

Vibration generated by construction activity generally has the potential to damage structures. This damage could be structural damage, such as cracking of floor slabs, foundations, columns, beams, or wells, or cosmetic architectural damage, such as cracked plaster, stucco, or tile. (California Department of Transportation, 2020).

Table 3 identifies the threshold at which there is a risk to "architectural" damage to reinforced-concrete, steel or timber (no plaster) buildings as a peak particle velocity (PPV) of 0.5, at engineered concrete and masonry (no plaster) buildings as a PPV of 0.3, at non-engineered timber and masonry buildings as a PPV of 0.2 and at buildings extremely susceptible to vibration damage as a PPV of 0.1. Therefore, impacts would be significant if construction activities result in groundborne vibration of 0.2 PPV or higher at residential structures and/or a PPV of 0.3 or higher at commercial structures. Calculated project generated construction vibration levels are shown in Table 12.

The nearest off-site building is the commercial (church) building located approximately eight feet from the project's eastern property line. As shown in Table 12, at eight feet, use of a vibratory roller would be expected to generate a PPV of 1.16 in/sec and a bulldozer would be expected to generate a PPV of 0.492 in/sec. Therefore, use of either a vibratory roller or a bulldozer could result in architectural damage to these commercial structures to the east. However, implementation of a best management practice prohibiting the use of vibratory rollers, or other similar vibratory equipment, within 20 feet of the existing commercial

structures; and prohibiting the use of large bulldozers within 12 feet of the commercial structures east of the project site will avoid significant impacts related to groundborne vibration.

The next nearest off-site buildings are commercial uses located 22 feet south, 25 feet north, and 35 feet southeast and the residential uses located as close as approximately 170 feet south of the project site property lines. As shown in Table 12, use of a vibratory roller and/or large bulldozer would not result in architectural damage to the commercial receptors to the south, north, and southeast or the residential receptors to the south.

With implementation of this best management practice, as shown in Table 12, impacts from vibration generated damage would be less than significant. Vibration worksheets are provided in Appendix F. The best management practice is presented in Section 8 of this report.

Annoyance to Persons

The primary effect of perceptible vibration is often a concern. However, secondary effects, such as the rattling of a china cabinet, can also occur, even when vibration levels are well below perception. Any effect (primary perceptible vibration, secondary effects, or a combination of the two) can lead to annoyance. The degree to which a person is annoyed depends on the activity in which they are participating at the time of the disturbance. For example, someone sleeping, or reading will be more sensitive than someone who is running on a treadmill. Reoccurring primary and secondary vibration effects often lead people to believe that the vibration is damaging their home, although vibration levels are well below minimum thresholds for damage potential. (California Department of Transportation, 2020).

As shown in Table 4, vibration becomes strongly perceptible to sensitive receptors at a level of 72 VdB. A vibratory roller could generate up to 72 VdB at a distance of 136 feet from the source and a large bulldozer could generate 72 VdB at a distance of 80 feet from the source. Calculated project generated construction vibration levels are shown in Table 12.

The closest buildings to the project site are the commercial buildings located between eight and 35 feet from the project property lines. The FTA adopted standards associated with human annoyance for groundborne vibration impacts for three land-use categories: Vibration Category 1 – High Sensitivity, Vibration Category 2 – Residential, and Vibration Category 3 – Institutional. The FTA defines Category 1 as buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. Category 2 refers to all residential land uses and any buildings where people sleep, such as hotels and hospitals. Category 3 refers to institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference. Therefore, as commercial uses are not considered a vibration-sensitive land use, no further analysis in regard to annoyance is necessary.

The closest residential buildings to the project site are the single-family residential dwelling units located as close as approximately 170 feet south of the project's southern property line. Therefore, as structures associated with sensitive receptors are located at least 170 feet from the project property lines, annoyance from construction related vibration would not occur. Furthermore, annoyance is expected to be short-term, occurring only during site grading.

As shown in Table 12, impacts from vibration related annoyance would be less than significant. Vibration worksheets are provided in Appendix F.

Table 9
CA/T Equipment Noise Emissions and Acoustical Usage Factor Database

Equipment Description	Impact Device?	Acoustical Use Factor (%)	Spec. Lmax @ 50ft (dBA, slow)	Actual Measured Lmax @ 50ft (dBA, slow)	No. of Actual Data Samples (Count)
All Other Equipment > 5 HP	No	50	85	-N/A-	0
Backhoe	No	40	80	78	372
Compressor (air)	No	40	80	78	18
Concrete Mixer Truck	No	40	85	79	40
Concrete Pump Truck	No	20	82	81	30
Concrete Saw	No	20	90	90	55
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
Dump Truck	No	40	84	76	31
Excavator	No	40	85	81	170
Flat Bed Truck	No	40	84	74	4
Forklift[2,3]	No	50	n/a	61	n/a
Front End Loader	No	40	80	79	96
Generator	No	50	82	81	19
Generator (<25KVA, VMS signs)	No	50	70	73	74
Grader	No	40	85	-N/A-	0
Jackhammer	Yes	20	85	89	133
Paver	No	50	85	77	9
Pickup Truck	No	50	85	77	9
Paving Equipment	No	50	85	77	9
Pneumatic Tools	No	50	85	85	90
Roller	No	20	85	80	16
Scraper	No	40	85	84	12
Tractor	No	40	84	-N/A-	0
Vibratory Concrete Mixer	No	20	80	80	1
Vibratory Pile Driver	No	20	95	101	44

Notes:

(1) Source: FHWA Roadway Construction Noise Model User's Guide January 2006.

(2) Warehouse & Forklift Noise Exposure - NoiseTesting.info Carl Stautins, November 4, 2014
http://www.noisetesting.info/blog/carl-strautins/page-3/

(3) Data provided Leq as measured at the operator. Sound Level at 50 feet is calculated using Inverse Square Law.

Table 10
Construction Noise Levels (L_{eq})

Phase	Receptor Location	Existing Ambient Noise Levels (dBA Leq)[2]	Construction Noise Levels (dBA Leq)
Demolition	Residential to West	54.6	69.8
	Residential to East	65.4	67.6
	Church to East	65.4	74.1
	Residential to South	49.9	72.9
Grading	Residential to West	54.6	68.4
	Residential to East	65.4	66.1
	Church to East	65.4	72.7
	Residential to South	49.9	71.5
Building Construction	Residential to West	54.6	65.4
	Residential to East	65.4	63.1
	Church to East	65.4	69.7
	Residential to South	49.9	68.4
Paving	Residential to West	54.6	66.0
	Residential to East	65.4	63.7
	Church to East	65.4	70.3
	Residential to South	49.9	69.1
Architectural Coating	Residential to West	54.6	57.9
	Residential to East	65.4	55.6
	Church to East	65.4	62.1
	Residential to South	49.9	60.9

Notes:

(1) Construction noise worksheets are provided in Appendix D.

(2) Per measured existing ambient noise levels. STNM1 used for residential receptors to the west, STNM2 was used for residential and church receptors to the east, and STNM3 was used for residential receptors to the south.

Table 11
Construction Equipment Vibration Source Levels

Equipment		PPV at 25 ft, in/sec	Approximate Lv* at 25 ft
Pile Driver (impact)	upper range	1.518	112
	typical	0.644	104
Pile Driver (sonic)	upper range	0.734	105
	typical	0.170	93
clam shovel drop (slurry wall)		0.202	94
Hydromill (slurry wall)	in soil	0.008	66
	in rock	0.017	75
Vibratory Roller		0.210	94
Hoe Ram		0.089	87
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

Source: Federal Transit Administration: Transit Noise and Vibration Impact Assessment Manual, 2018.
*RMS velocity in decibels, VdB re 1 micro-in/sec

Table 12
Construction Vibration Levels at the Nearest Receptors

Receptor Location	Distance from Property Line to Nearest Structure (feet)	Equipment	Vibration Level[1]	Vibration Level with Best Management Practicesl[1,2,3]	Threshold Exceeded?[3]
Architectural Damage Analysis					
Commercial to North	25	Vibratory Roller	0.210	-	No
	25	Large Bulldozer	0.089	-	No
Commercial to East (Church)	8	Vibratory Roller	1.160	0.293	No
	8	Large Bulldozer	0.492	0.268	No
Commercial to Southeast	40	Vibratory Roller	0.127	-	No
	40	Large Bulldozer	0.054	-	No
Commercial to South	22	Vibratory Roller	0.254	-	No
	22	Large Bulldozer	0.108	-	No
Residential to South	170	Vibratory Roller	0.012	-	No
	170	Large Bulldozer	0.005	-	No
Annoyance Analysis					
Residential to South	170	Vibratory Roller	62.00	-	No
	170	Large Bulldozer	62.00	-	No

Notes:

(1) Vibration levels are provided in PPV in/sec for architectural damage and VdB for annoyance.

(2) Project best management practices for architectural damage includes prohibiting the use of vibratory rollers, or other similar vibratory equipment, within 20 feet and large bulldozers within 12 feet of commercial structures to the east of the project property lines.

(3) The FTA identifies the threshold at which there is a risk to "architectural" damage to reinforced-concrete, steel or timber (no plaster) buildings as a peak particle velocity (PPV) of 0.5 in/sec, at engineered concrete and masonry (no plaster) buildings as a PPV of 0.3 in/sec, at non-engineered timber and masonry buildings as a PPV of 0.2 in/sec and at buildings extremely susceptible to vibration damage as a PPV of 0.1 in/sec. Therefore, vibration impacts related to architectural damage would be significant if construction activities result in groundborne vibration of 0.2 PPV or higher at residential structures and/or a PPV of 0.3 or higher at commercial structures (see Table 2). In addition, the FTA identifies a vibration annoyance threshold of 72 VdB for residential uses (see Table 3). Per the FTA Transit Noise and VIbration Impact Assessment Manual (September 2018), commercial uses are not considered vibration-sensitive land uses; therefore, the annoyance threshold does not apply to commercial uses.

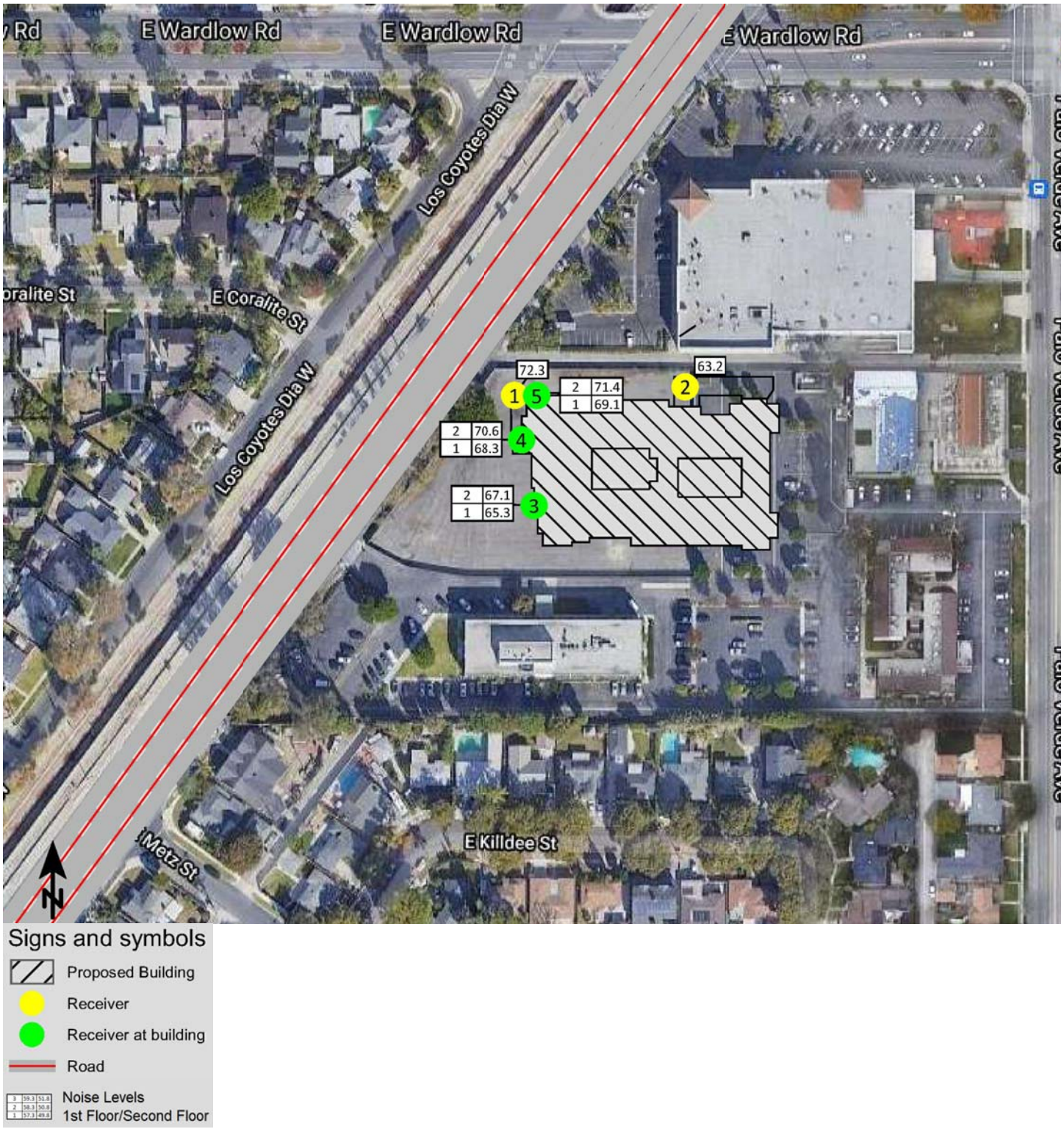

Figure 6
Future Traffic Noise Levels

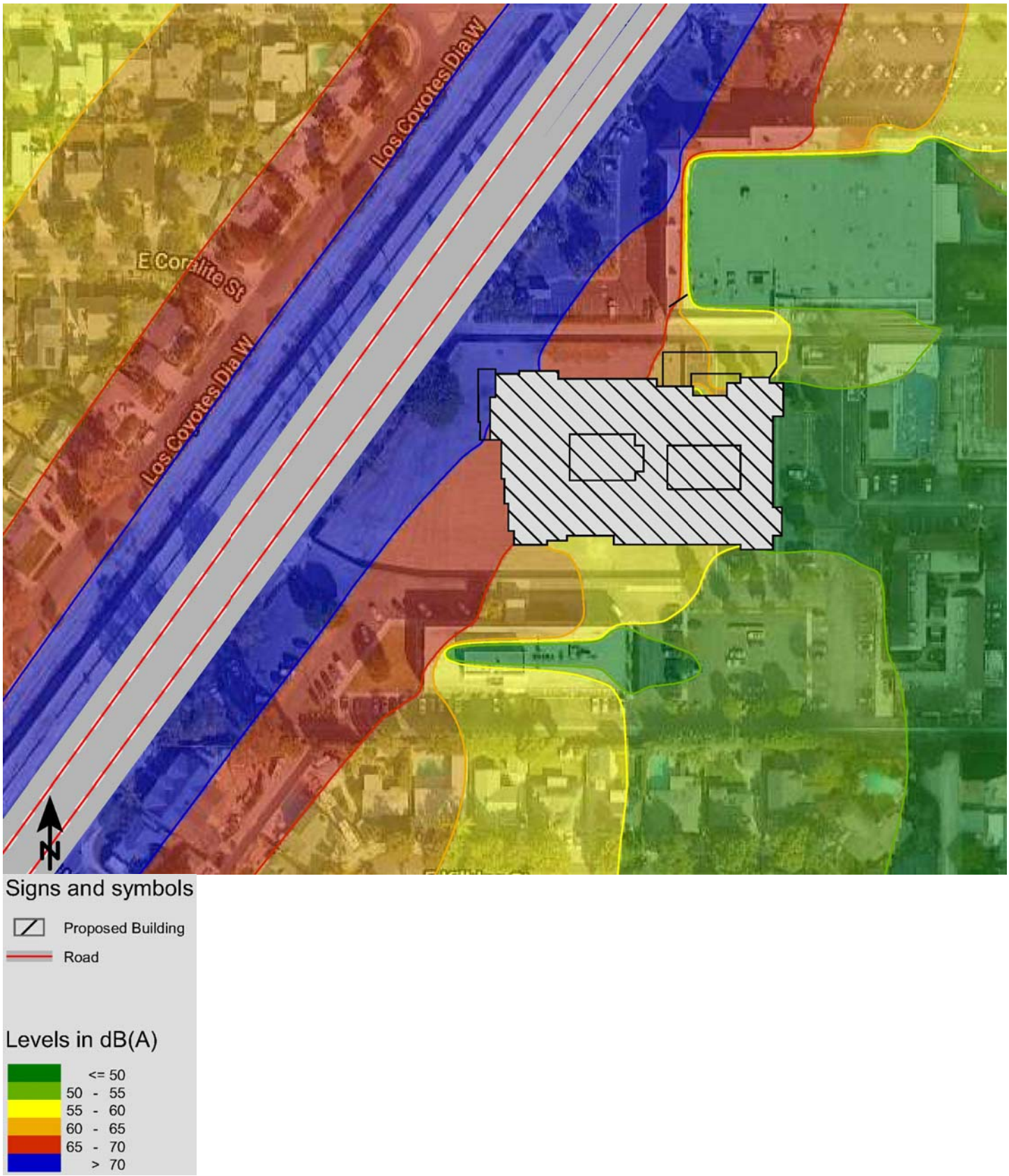

Figure 7
Operational Noise Contours

7. CEQA THRESHOLDS & IMPACTS EVALUATION

Will the project result in the:

a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact:

The City of Long Beach has established strategies and policies in the Noise Element of the City's General Plan as well as Ordinances that regulate noise emission in the City that apply to the proposed project.

The project is expected to result in construction noise levels that range between 67.6 to 74.1 dBA L_{eq} at the nearest residential and church property lines. Section 8.80.202 of the City's Municipal Code prohibits construction activities between the hours of 7:00 PM and 7:00 AM on weekdays, between 7:00 PM on Friday and 9:00 AM on Saturday and after 6:00 PM on Saturday, and anytime on Sundays. Construction of the proposed project is required to comply with the allowed times as specified in the City's Municipal Code. Impacts would be less than significant, and no mitigation is required. However, impacts related to construction noise will be further minimized with implementation of the recommended measures presented in Section 8 of this report.

The City of Long Beach Municipal Code Sections 8.80.150 and 8.80.160 identify exterior noise limits at residential uses to be 50 dBA during the daytime (between 7:00 AM to 10:00 PM) and 45 dBA during the nighttime (10:00 PM to 7:00 AM). Section 8.80.170 of the City's Municipal Code identifies interior noise limits at residential uses to be 45 dBA during the daytime (between 7:00 AM to 10:00 PM) and 35 dBA during the nighttime (10:00 PM to 7:00 AM). Furthermore, noise level limits at commercial uses are 60 dBA during the daytime and 55 dBA during the nighttime.

Existing sensitive land uses that may be affected by on-site project operational noise include the existing church use located adjacent to the east and the single-family residential uses located as close as approximately 165 feet to the south, 195 feet to the west, and 275 feet to the east of the project site. The SoundPLAN noise model was utilized to estimate project operational noise levels in order to determine if it is likely to exceed the City's exterior noise thresholds at these sensitive land uses (50 dBA between the hours of 7:00 AM and 10:00 PM and 45 dBA between the hours of 10:00 PM and 7:00 AM). A description of each noise source and model parameters are discussed in Section 5 of this report. As shown on Figures 6 and 7, peak hour project operation is not expected to exceed 50 dBA Leq at the property line and is not expected to exceed either the City's exterior noise thresholds presented in Sections 8.80.150 and 8.80.160 of the City of Long Beach Municipal Code. Noise associated with project on-site operational noise would be less than significant. No mitigation is required.

b) Generation of excessive groundborne vibration of groundborne noise levels?

Less Than Significant Impact:

There are several types of construction equipment that can cause vibration levels high enough to cause architectural damage and/or annoyance to persons in the vicinity. For example, as shown in Table 11, a vibratory roller could generate up to 0.21 PPV at a distance of 25 feet; and operation of a large bulldozer (0.089 PPV) at a distance of 25 feet (two of the most vibratory pieces of construction equipment).

Available guidelines from the Federal Transit Administration (FTA) are utilized to assess impacts due to ground-borne vibration. The FTA has adopted vibration standards that are used to evaluate potential building damage impacts related to construction activities. As shown in Table 3, the threshold at which there is a risk to

"architectural" damage to reinforced-concrete, steel or timber (no plaster) buildings is a peak particle velocity (PPV) of 0.5, at engineered concrete and masonry (no plaster) buildings a PPV of 0.3, at non-engineered timber and masonry buildings a PPV of 0.2 and at buildings extremely susceptible to vibration damage a PPV of 0.1. The FTA has also adopted standards associated with human annoyance for groundborne vibration impacts for the following three land-use categories:

(1) Vibration Category 1 – High Sensitivity,
(2) Vibration Category 2 – Residential, and
(3) Vibration Category 3 – Institutional.

The FTA defines Category 1 as buildings where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, hospitals with vibration-sensitive equipment, and university research operations. Vibration-sensitive equipment includes, but is not limited to, electron microscopes, high-resolution lithographic equipment, and normal optical microscopes. Category 2 refers to all residential land uses and any buildings where people sleep, such as hotels and hospitals. Category 3 refers to institutional land uses such as schools, churches, other institutions, and quiet offices that do not have vibration-sensitive equipment, but still have the potential for activity interference. The vibration criteria associated with human annoyance for these three land-use categories are shown in Table 4. Table 4 shows that 72 VdB is the threshold for annoyance from groundborne vibration at sensitive receptors.

Furthermore, Section 8.80.200 of the City of Long Beach Municipal Code prohibits the operating or permitting the operation of any device that creates vibration which is above the vibration perception threshold of an individual at or beyond the property boundary of the source if on private property or at one hundred fifty feet from the source if on a public space or public right-of-way. Section 8.80.200 states that the "vibration perception threshold" means the minimum ground or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration by such directed means as, but not limited to, sensation by touch or visual observation of moving objects.

Existing structures in the immediate vicinity of the project site include the structures associated with the church use located approximately eight feet east, structures associated with the commercial uses located approximately 22 feet south, 25 feet north, and 35 feet southeast and the residential dwelling units located approximately 170 feet south of the project site. Impacts would be significant if construction activities result in groundborne vibration of 0.2 PPV in/sec or higher at residential structures and/or a PPV of 0.3 in/sec or higher at commercial structures. Groundborne vibration associated with project construction may reach up to 0.012 at the nearest residential structure located south of the project site and will not exceed the 0.2 PPV (in./sec.) damage potential threshold for residential structures. Groundborne vibration may reach up to 1.16 PPV (in./sec.) at the nearest commercial structure and will exceed the 0.3 PPV (in./sec.) damage potential threshold for commercia structures. As a best management practice (bmp) (See General Plan Policy N 12-5), vibratory rollers will not be used within 20 feet, and large bulldozers will not be used within 12 feet of the commercial structures to the east. Groundborne vibration impacts, as they relate to potential structural impacts, would be less than significant.

As shown in Table 4, vibration becomes strongly perceptible to sensitive receptors at a level of 72 VdB. A vibratory roller could generate up to 72 VdB at a distance of 136 feet from the source and a large bulldozer could generate 72 VdB at a distance of 80 feet from the source. The closest buildings to the project site are the commercial buildings located between eight and 35 feet from the project property lines; however, commercial uses are not considered a vibration-sensitive land use. Therefore, per the FTA, no further analysis in regard to annoyance is necessary. The closest residential buildings to the project site are the single-family residential dwelling units located as close as approximately 170 feet south of the project's southern property line. As structures associated with sensitive receptors are located at least 170 feet from the project property lines, annoyance from construction related vibration would not occur. Furthermore, annoyance associated with potential vibration will be temporary, during the use of vibratory rollers, and will occur only during daytime hours. This impact would be less than significant. No mitigation is required.

Operation of the proposed project will involve the movement of passenger vehicles and trucks. Driving surfaces associated with the project will be paved and will generally be smooth. Loaded trucks generally have a PPV of 0.076 at a distance of 25 feet (Caltrans 2020). Groundborne vibration levels associated with passenger vehicles is much lower. The movement of vehicles on the project site would not result in the generation of excessive groundborne vibration or groundborne noise. Impacts would be less than significant. No mitigation is required.

c) *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the area to excessive noise levels?*

Less Than Significant Impact:

The project site is located as close as approximately 1.73 miles east of the runways associated with the Long Beach Airport. Per the Los Angeles County Airport Land Use Commission Site, the proposed project is well outside the Long Beach Airport's Influence Area and the airport's 65 CNEL noise contour.[7] Therefore, although the proposed project is located within two miles of a public airport, the proposed project would not exposed people residing or working in the area to excessive noise levels. This impact would be less than significant. No mitigation is required.

[7] https://lacounty.maps.arcgis.com/apps/webappviewer/index.html?id=acf2e87194a54af9b266bf07547f240a

8. MEASURES TO REDUCE IMPACTS

RECOMMENDED CONSTRUCTION NOISE REDUCTION MEASURES

In addition to adherence to the City of Long Beach Municipal Code which limits the construction hours of operation, the following measures are recommended to reduce construction noise, emanating from the proposed project:

1. During all project site excavation and grading on-site, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer standards.

2. The contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.

3. Equipment shall be shut off and not left to idle when not in use.

4. The contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the project site during all project construction.

5. Jackhammers, pneumatic equipment and all other portable stationary noise sources shall be shielded and noise shall be directed away from sensitive receptors.

6. The project proponent shall mandate that the construction contractor prohibit the use of music or sound amplification on the project site during construction.

7. The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment.

VIBRATION-RELATED BEST MANAGEMENT PRACTICE

1. The Project Applicant shall require that all construction contractors prohibit the use of vibratory rollers, or other similar vibratory equipment, within 20 feet and large bulldozers within 12 feet of any commercial structure to the east of the project site. If construction activity must occur within these distances, it would need to be performed with smaller equipment types that do not exceed the vibration thresholds applied herein.

9. REFERENCES

California Department of Transportation

2002 Transportation Related Earthborne Vibrations (California Department of Transportation Experiences), Technical Advisory, Vibration TAV-02-01-R9601. February 20.

Environmental Protection Agency

1974 "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," EPA/ONAC 550/9-74-004, March, 1974.

Federal Transit Administration

2006 Transit Noise and Vibration Impact Assessment. Typical Construction Equipment Vibration Emissions. FTAVA-90-1003-06.

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Ganddini Group, Inc.

2021 Trip Generation and Distribution Analysis. October 5.

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2021 Lincoln Colony Apartments Trip Generation Memorandum. February 12.

Long Beach, City of

1975 Noise Element Long Beach General Plan. March 25

2013 Mobility Element City of Long Beach General Plan. October.

2019 Noise Element City of Long Beach General Plan Draft. December.

2021 City of Long Beach Municipal Code. September 1.

Office of Planning and Research

2017 State of California General Plan Guidelines

Riverside, County of

2001 General Plan, Chapter 4, Figure C-3 "Link Volume Capacities/Level of Service for Riverside County Roadways".

2009 County of Riverside Industrial Hygiene Guidelines for Determining and Mitigating Traffic Noise Impacts to Residential Structures and County.

U.S. Department of Transportation

2006 FHWA Roadway Construction Noise Model User's Guide. January.

APPENDICES

Appendix A List of Acronyms
Appendix B Glossary
Appendix C Noise Measurement Field Worksheets
Appendix D Construction Noise Modeling
Appendix E SoundPLAN Inputs and Outputs
Appendix F Vibration Worksheets

Appendix A

List of Acronyms

Term	Definition
ADT	Average Daily Traffic
ANSI	American National Standard Institute
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
D/E/N	Day / Evening / Night
dB	Decibel
dBA or dB(A)	Decibel "A-Weighted"
dBA/DD	Decibel per Double Distance
dBA L_{eq}	Average Noise Level over a Period of Time
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
L_{02},L_{08},L_{50},L_{90}	A-weighted Noise Levels at 2 percent, 8 percent, 50 percent, and 90 percent, respectively, of the time period
DNL	Day-Night Average Noise Level
$L_{eq(x)}$	Equivalent Noise Level for '"x" period of time
L_{eq}	Equivalent Noise Level
L_{max}	Maximum Level of Noise (measured using a sound level meter)
L_{min}	Minimum Level of Noise (measured using a sound level meter)
Lp	Sound Pressure Level
LOS C	Level of Service C
Lw	Sound Power Level
OPR	California Governor's Office of Planning and Research
PPV	Peak Particle Velocities
RCNM	Road Construction Noise Model
REMEL	Reference Energy Mean Emission Level
RMS	Root Mean Square

APPENDIX B

GLOSSARY

Term	Definition
Ambient Noise Level	The all-encompassing noise environment associated with a given environment, at a specified time, usually a composite of sound from many sources, at many directions, near and far, in which usually no particular sound is dominant.
A-Weighted Sound Level, dBA	The sound level obtained by use of A-weighting. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear.
CNEL	Community Noise Equivalent Level. CNEL is a weighted 24-hour noise level that is obtained by adding five decibels to sound levels in the evening (7:00 PM to 10:00 PM), and by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the evening and nighttime hours.
Decibel, dB	A logarithmic unit of noise level measurement that relates the energy of a noise source to that of a constant reference level; the number of decibels is 10 times the logarithm (to the base 10) of this ratio.
DNL, Ldn	Day Night Level. The DNL, or Ldn is a weighted 24-hour noise level that is obtained by adding ten decibels to sound levels at night (10:00 PM to 7:00 AM). This weighting accounts for the increased human sensitivity to noise during the nighttime hours.
Equivalent Continuous Noise Level, L_{eq}	A level of steady state sound that in a stated time period, and a stated location, has the same A-weighted sound energy as the time-varying sound.
Fast/Slow Meter Response	The fast and slow meter responses are different settings on a sound level meter. The fast response setting takes a measurement every 100 milliseconds, while a slow setting takes one every second.
Frequency, Hertz	In a function periodic in time, the number of times that the quantity repeats itself in one second (i.e., the number of cycles per second).
L_{02}, L_{08}, L_{50}, L_{90}	The A-weighted noise levels that are equaled or exceeded by a fluctuating sound level, 2 percent, 8 percent, 50 percent, and 90 percent of a stated time period, respectively.
L_{max}, L_{min}	Lmax is the RMS (root mean squared) maximum level of a noise source or environment measured on a sound level meter, during a designated time interval, using fast meter response. Lmin is the minimum level.
Lp	Sound pressure level. The sound pressure level is a measure for the effect of the energy of an acoustic source (or a collection of sources) and depends on the distance to the source(s) and acoustic properties of the surroundings of the source. Given a well defined operation condition, the sound power level of a machine is a fixed value, were the sound pressure level always depends on position and environment.
Lw	Sound power level. The sound power level indicates the total acoustic energy that a machine, or piece of equipment, radiates to its environment.

Term	Definition
Offensive/ Offending/Intrusive Noise	The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of sound depends on its amplitude, duration, frequency, and time of occurrence, and tonal information content as well as the prevailing ambient noise level.
Root Mean Square (RMS)	A measure of the magnitude of a varying noise source quantity. The name derives from the calculation of the square root of the mean of the squares of the values. It can be calculated from either a series of lone values or a continuous varying function.

APPENDIX C

NOISE MEASUREMENT FIELD WORKSHEETS

Noise Measurement
Field Data

Project Name: Sunrise Senior Living, City of Long Beach. **Date:** October 14, 2021

Project #: 19431

Noise Measurement #: STNM1 Run Time: 15 minutes (1 x 15 minutes) **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 6161 East Coralite Street, Long Beach, CA 90808

Site Description (Type of Existing Land Use and any other notable features): Project Site: Site asphalt/parking lot w/ alley to north w/ grocery store further north, church/commercial uses to east, parking lot & commercial medical uses to south, & Los Coyotes Diagonal to west. Noise Measurement Location: Single-family residential to north/south/west, with Coralite St to south & Los Coyotes Diagonal W to east.

Weather: Clear skies, sunny. **Settings:** SLOW FAST

Temperature: 74 deg F **Wind:** 7 mph **Humidity:** 23% **Terrain:** Flat

Start Time: 12:38 PM **End Time:** 12:53 PM **Run Time:**

Leq: 54.6 dB

Lmax 63.1 dB

L2 59.8 dB

L8 58.2 dB

L25 55.9 dB

L50 53.5 dB

Primary Noise Source: Vehicles traveling along Los Coyotes Diagonal & other roads. Distant leaf blower in operation (to the south).

Secondary Noise Sources: Residential ambiance, distant dogs barking. Leaf rustle due to 7 mph breeze, bird song. Occassional overhead air traffic. Wind chime.

NOISE METER:	SoundTrack LXT Class 2	**CALIBRATOR:**	Larson Davis CAL200
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	Cal 200
SERIAL NUMBER:	1152	**SERIAL NUMBER:**	15741
FACTORY CALIBRATION DATE:	3/31/2021	**FACTORY CALIBRATION DATE:**	7/23/2020
FIELD CALIBRATION DATE:	10/14/2021		

Noise Measurement
Field Data

PHOTOS:

STNM1 looking N across sidewalk and front yard of residence 6161 E Coralite Street, Long Beach.

STNM1 looking SE across E Coralite Street towards intersection with Los Coyotes Dia W.

Summary	
File Name on Meter	LxT_Data.161.s
File Name on PC	LxT_0001152-20211014 123801-LxT_Data
Serial Number	0001152
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	STNM1 33°49'5.08"N 118° 6'39.25"W
Job Description	15 minute noise measurement (1 x 15 minutes)
Note	Ganddini 19431 Sunrise Senior Living, Long Beach

Measurement	
Start	2021-10-14 12:38:01
Stop	2021-10-14 12:53:01
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2021-10-14 12:36:04
Post-Calibration	None

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamplifier	PRMLxT1
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	145.0 dB

Results			
LAeq	54.6		
LAE	84.2		
EA	28.944 µPa²h		
EA8	926.215 µPa²h		
EA40	4.631 mPa²h		
LZpeak (max)	2021-10-14 12:50:12	91.4 dB	
LASmax	2021-10-14 12:42:25	63.1 dB	
LASmin	2021-10-14 12:39:30	42.6 dB	
LCeq	63.2 dB		Statistics
LAeq	54.6 dB		**LA2.00** 59.8 dB
LCeq - LAeq	8.6 dB		**LA8.00** 58.2 dB
LAIeq	55.4 dB		**LA25.00** 55.9 dB
LAeq	54.6 dB		**LA50.00** 53.5 dB
LAIeq - LAeq	0.8 dB		**LA66.60** 51.8 dB
OBA Overload Count	0		**LA90.00** 47.2 dB

Noise Measurement
Field Data

Project Name: Sunrise Senior Living, City of Long Beach. **Date:** October 14, 2021

Project #: 19431

Noise Measurement #: STNM2 Run Time: 15 minutes (1 x 15 minutes) **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 3326 Palo Verde Avenue, Long Beach, CA 90808

Site Description (Type of Existing Land Use and any other notable features): Project Site: Site asphalt/parking lot w/ alley to north w/ grocery store further north, church/commercial uses to east, parking lot & commercial medical uses to south, & Los Coyotes Diagonal to west. Noise Measurement Location: Single-family residential to east, Palo Verde Ave to west with church and commercial uses further west.

Weather: Clear skies, sunny. **Settings:** SLOW FAST

Temperature: 74 deg F **Wind:** 7 mph **Humidity:** 23% **Terrain:** Flat

Start Time: 2:46 PM **End Time:** 3:01 PM **Run Time:**

Leq: 65.4 dB

Lmax 78.2 dB

L2 71.5 dB

L8 69.2 dB

L25 66.9 dB

L50 63.7 dB

Primary Noise Source: Traffic noise from 340 vehicles passing microphone, traveling along Palo Verde Avenue during 15 minute measurement.

Secondary Noise Sources: Residential ambiance, distant dogs barking. Leaf rustle due to 7 mph breeze, bird song. Pedestrians, joggers, skateboarders & cyclists. Overhead air traffic.

NOISE METER:	SoundTrack LXT Class 2	**CALIBRATOR:**	Larson Davis CAL200
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	Cal 200
SERIAL NUMBER:	1152	**SERIAL NUMBER:**	15741
FACTORY CALIBRATION DATE:	3/31/2021	**FACTORY CALIBRATION DATE:**	7/23/2020
FIELD CALIBRATION DATE:	10/14/2021		

Noise Measurement
Field Data

PHOTOS:

STNM2 looking E from sidewalk along Palo Verde Avenue across front yard of residence 3326 Palo Verde Avenue, Long Beach

STNM2 looking WNW from sidewalk, across Palo Verde Avenue towards church building 3331 Palo Verde Avenue, Long Beach.

Summary	
File Name on Meter	LxT_Data.163.s
File Name on PC	LxT_0001152-20211014 144617-LxT_Dat
Serial Number	0001152
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	STNM2 33°49'2.75"N 118° 6'27.90"W
Job Description	15 minute noise measurement (1 x 15 minutes)
Note	Ganddini 19431 Sunrise Senior Living, Long Beach

Measurement	
Start	2021-10-14 14:46:17
Stop	2021-10-14 15:01:17
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2021-10-14 14:43:59
Post-Calibration	None

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamplifier	PRMLxT1
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	145.0 dB

Results			
LAeq	65.4		
LAE	95.0		
EA	347.627 µPa²h		
EA8	11.124 mPa²h		
EA40	55.620 mPa²h		
LZpeak (max)	2021-10-14 14:54:16	100.0 dB	
LASmax	2021-10-14 14:54:16	78.2 dB	
LASmin	2021-10-14 14:57:41	44.1 dB	
LCeq	72.8 dB		Statistics
LAeq	65.4 dB		**LA2.00** 71.5 dB
LCeq - LAeq	7.4 dB		**LA8.00** 69.2 dB
LAIeq	67.2 dB		**LA25.00** 66.9 dB
LAeq	65.4 dB		**LA50.00** 63.7 dB
LAIeq - LAeq	1.8 dB		**LA66.60** 60.7 dB
OBA Overload Count	0		**LA90.00** 53.4 dB

Noise Measurement
Field Data

Project Name: Sunrise Senior Living, City of Long Beach. **Date:** October 14, 2021

Project #: 19431

Noise Measurement #: STNM3 Run Time: 15 minutes (1 x 15 minutes) **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 6253 E Killdee Street, Long Beach, CA 90808

Site Description (Type of Existing Land Use and any other notable features): Project Site: Site asphalt/parking lot w/ alley to north w/ grocery store further north, church/commercial uses to east, parking lot & commercial medical uses to south, & Los Coyotes Diagonal to west. Noise Measurement Location: Single-family residential neighborhood surrouding measurement site with E Killdee St to south, commercial uses & project site are located to north of neighborhood.

Weather: Clear skies, sunny. **Settings:** SLOW FAST

Temperature: 74 deg F **Wind:** 7 mph **Humidity:** 23% **Terrain:** Flat

Start Time: 1:18 PM **End Time:** 1:33 PM **Run Time:**

Leq: 49.9 dB

Lmax 62.2 dB

L2 59.6 dB

L8 51.5 dB

L25 48.3 dB

L50 46.8 dB

Primary Noise Source: One vehicle passed microphone traveling along Killdee Street at 1:26 PM. Electric lawnmower/mulcher in operation, front yard of 6272 Killdee Street.

Secondary Noise Sources: Residential ambiance, distant dogs barking. Leaf rustle due to 7 mph breeze, bird song. Overhead air traffic. Residential wind chime audible.

NOISE METER:	SoundTrack LXT Class 2	**CALIBRATOR:**	Larson Davis CAL200
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	Cal 200
SERIAL NUMBER:	1152	**SERIAL NUMBER:**	15741
FACTORY CALIBRATION DATE:	3/31/2021	**FACTORY CALIBRATION DATE:**	7/23/2020
FIELD CALIBRATION DATE:	10/14/2021		

Noise Measurement
Field Data

PHOTOS:

STNM3 looking NE from Killdee Street sidewalk across front yard of residence 6259 E Kildee Street, Long Beach.

STNM3 looking W down E Killdee Street towards left turn bend in street where it turns to intersect with E Metz Street.

Summary	
File Name on Meter	LxT_Data.162.s
File Name on PC	LxT_0001152-20211014 131834-LxT_Da
Serial Number	0001152
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallaghe
Location	STNM3 33°48'59.04"N 118° 6'35.86"W
Job Description	15 minute noise measurement (1 x 15 minutes)
Note	Ganddini 19431 Sunrise Senior Living, Long Beach

Measurement	
Start	2021-10-14 13:18:34
Stop	2021-10-14 13:33:34
Duration	00:15:00.0
Run Time	00:15:00.0
Pause	00:00:00.0
Pre-Calibration	2021-10-14 13:18:01
Post-Calibration	None

Overall Settings	
RMS Weight	A Weighting
Peak Weight	Z Weighting
Detector	Slow
Preamplifier	PRMLxT1
Microphone Correction	Off
Integration Method	Linear
OBA Range	Low
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	Z Weighting
OBA Max Spectrum	Bin Max
Overload	145.1 dB

Results			
LAeq	49.9		
LAE	79.4		
EA	9.747 µPa²h		
EA8	311.889 µPa²h		
EA40	1.559 mPa²h		
LZpeak (max)	2021-10-14 13:20:29	96.3 dB	
LASmax	2021-10-14 13:25:30	62.2 dB	
LASmin	2021-10-14 13:24:33	43.2 dB	
LCeq	61.5 dB		
LAeq	49.9 dB		
LCeq - LAeq	11.6 dB		
LAIeq	51.9 dB		
LAeq	49.9 dB		
LAIeq - LAeq	2.1 dB		

Statistics	
LA2.00	59.6 dB
LA8.00	51.5 dB
LA25.00	48.3 dB
LA50.00	46.8 dB
LA66.60	46.2 dB
LA90.00	45.0 dB

Noise Measurement
Field Data

Project Name: Sunrise Senior Living, City of Long Beach. **Date:** October 14-15, 2021

Project #: 19431

Noise Measurement #: LTNM1 Run Time: 24 hours (24 x 1 hours) **Technician:** Ian Edward Gallagher

Nearest Address or Cross Street: 6289 E Killdee Street, Long Beach, CA 90808

Site Description (Type of Existing Land Use and any other notable features): Project Site: Site asphalt/parking lot w/ alley to north w/ grocery store further north, church/commercial uses to east, parking lot & commercial medical uses to south, & Los Coyotes Diagonal to west. Noise Measurement Location: Commercial parking lot to north & single-family residential to south.

Weather: Clear skies, sunny by day. Sunset/rise 6:19PM/6:57AM **Settings:** SLOW FAST

Temperature: 58-88 deg F **Wind:** 0-8 mph **Humidity:** 23-50% **Terrain:** Flat

Start Time: 5:00 PM **End Time:** 5:00 PM **Run Time:**

Leq: 51.3 dB **Primary Noise Source:** Parking lot ambiance, people arriving / departing in vehicles. Residential activity.

Lmax 79.8 dB

L2 57.4 dB **Secondary Noise Sources:** Residential ambiance, distant dogs barking. Leaf rustle due to breeze, bird song.

L8 53.6 dB Overhead air traffic. Air conditioning units from nearby residences.

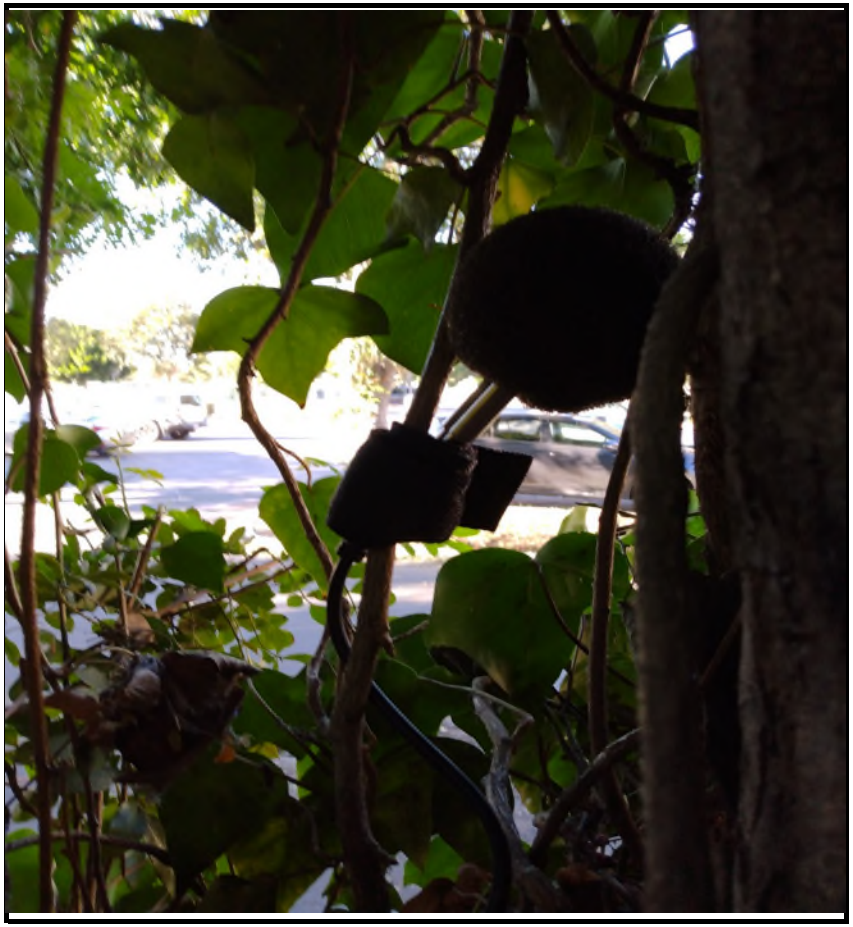
L25 50.3 dB

L50 47.6 dB

NOISE METER:	SoundTrack LXT Class 2	**CALIBRATOR:**	Larson Davis CAL200
MAKE:	Larson Davis	**MAKE:**	Larson Davis
MODEL:	LXT1	**MODEL:**	Cal 200
SERIAL NUMBER:	1152	**SERIAL NUMBER:**	15741
FACTORY CALIBRATION DATE:	3/31/2021	**FACTORY CALIBRATION DATE:**	7/23/2020
FIELD CALIBRATION DATE:	10/14/2021		

Noise Measurement
Field Data

PHOTOS:



LTNM1 looking N at microphone through vegetation across parking lot towards project site. Building, 3325 Palo Verde Avenue, is on the right & building, 3320 N Los Coyotes Diagonal, Long Beach is on the left. Microphone about 7 feet above asphalt paved parking lot.

LTNM1 looking down showing location of microphone relative to surrounding area during 24 hour noise measurement.

Summary	
File Name on Meter	LxT_Data.164.s
File Name on PC	LxT_0001152-20211014 170000-LxT_Data.1
Serial Number	0001152
Model	SoundTrack LxT®
Firmware Version	2.404
User	Ian Edward Gallagher
Location	LTNM1 33°49'0.19"N 118° 6'32.17"W
Job Description	24 hour noise measurement (24 x 1 hours)
Note	Ganddini 19431 Sunrise Senior Living, Long Beach

Measurement	
Start	2021-10-14 17:00:00
Stop	2021-10-15 17:00:00
Duration	24:00:00.0
Run Time	24:00:00.0
Pause	00:00:00.0
Pre-Calibration	2021-10-14 16:00:56
Post-Calibration	None

Overall Settings	
RMS Weight	A Weighting
Peak Weight	A Weighting
Detector	Slow
Preamplifier	PRMLxT1
Microphone Correction	Off
Integration Method	Linear
OBA Range	Normal
OBA Bandwidth	1/1 and 1/3
OBA Frequency Weighting	A Weighting
OBA Max Spectrum	Bin Max
Overload	145.0 dB

Results			
LAeq	51.3		
LAE	100.6		
EA	1.281 mPa²h		
EA8	427.105 µPa²h		
EA40	2.136 mPa²h		
LApeak (max)	2021-10-15 02:25:36	105.1 dB	
LASmax	2021-10-15 05:28:33	79.8 dB	
LASmin	2021-10-15 02:41:04	38.4 dB	
LCeq	62.9 dB		
LAeq	51.3 dB		
LCeq - LAeq	11.6 dB		
LAIeq	54.0 dB		
LAeq	51.3 dB		
LAIeq - LAeq	2.7 dB		
OBA Overload Count	0		

Statistics	
LA2.00	57.4 dB
LA8.00	53.6 dB
LA25.00	50.3 dB
LA50.00	47.6 dB
LA90.00	42.3 dB
LA99.00	39.6 dB

Record #	Date	Time	Run Duration	Run Time	Pause	LAeq	LASmin	LASmin Time	LASmax	LASmax Time	LAS2.00	LAS8.00	LAS25.00	LAS50.00	LAS90.00	LAS99.00
1	2021-10-14	17:00:00	01:00:00.0	01:00:00.0	00:00:00.0	55.7	45.5	17:29:54	78.0	17:43:07	61.0	54.5	51.0	49.5	47.4	46.3
2	2021-10-14	18:00:00	01:00:00.0	01:00:00.0	00:00:00.0	53.0	45.9	18:07:24	73.8	18:51:30	58.5	53.8	51.2	49.5	47.5	46.6
3	2021-10-14	19:00:00	01:00:00.0	01:00:00.0	00:00:00.0	49.3	45.2	19:30:16	65.0	19:53:25	54.7	51.5	49.2	48.1	46.6	45.8
4	2021-10-14	20:00:00	01:00:00.0	01:00:00.0	00:00:00.0	49.0	43.9	20:51:21	68.5	20:59:48	54.2	51.2	49.0	47.4	45.7	44.6
5	2021-10-14	21:00:00	01:00:00.0	01:00:00.0	00:00:00.0	49.5	43.6	21:11:16	68.1	21:09:24	55.4	51.1	48.9	47.7	46.1	45.2
6	2021-10-14	22:00:00	01:00:00.0	01:00:00.0	00:00:00.0	48.7	42.1	22:55:52	65.8	22:02:28	55.7	50.6	47.9	46.4	44.5	42.9
7	2021-10-14	23:00:00	01:00:00.0	01:00:00.0	00:00:00.0	48.2	39.4	23:57:56	68.9	23:08:51	57.4	48.6	45.4	44.1	42.3	40.2
8	2021-10-15	00:00:00	01:00:00.0	01:00:00.0	00:00:00.0	47.8	39.5	00:41:17	68.7	00:01:34	54.0	47.4	44.6	43.2	41.0	40.0
9	2021-10-15	01:00:00	01:00:00.0	01:00:00.0	00:00:00.0	42.3	38.6	01:45:53	52.7	01:23:09	47.0	44.8	42.7	41.3	39.7	39.1
10	2021-10-15	02:00:00	01:00:00.0	01:00:00.0	00:00:00.0	45.0	38.4	02:41:04	74.7	02:25:36	47.5	44.5	42.4	40.9	39.5	38.9
11	2021-10-15	03:00:00	01:00:00.0	01:00:00.0	00:00:00.0	43.0	39.0	03:00:18	58.1	03:15:24	46.6	44.6	43.3	42.3	40.6	39.9
12	2021-10-15	04:00:00	01:00:00.0	01:00:00.0	00:00:00.0	46.2	41.6	04:11:16	57.9	04:41:49	50.8	49.1	46.7	45.2	43.2	42.0
13	2021-10-15	05:00:00	01:00:00.0	01:00:00.0	00:00:00.0	56.0	42.3	05:06:39	79.8	05:28:33	65.6	53.2	50.1	48.5	45.5	43.5
14	2021-10-15	06:00:00	01:00:00.0	01:00:00.0	00:00:00.0	53.4	46.4	06:16:47	72.4	06:31:10	58.8	54.8	52.7	51.0	48.5	47.1
15	2021-10-15	07:00:00	01:00:00.0	01:00:00.0	00:00:00.0	54.7	50.0	07:56:21	68.2	07:23:18	58.7	56.4	55.1	54.2	52.5	51.0
16	2021-10-15	08:00:00	01:00:00.0	01:00:00.0	00:00:00.0	52.6	47.5	08:59:27	68.9	08:16:27	56.4	54.4	53.0	52.0	50.3	49.2
17	2021-10-15	09:00:00	01:00:00.0	01:00:00.0	00:00:00.0	51.0	46.8	09:56:09	70.4	09:48:42	54.9	52.8	50.9	49.7	48.3	47.4
18	2021-10-15	10:00:00	01:00:00.0	01:00:00.0	00:00:00.0	49.9	43.8	10:17:53	66.7	10:13:00	57.1	52.2	49.1	47.4	45.3	44.4
19	2021-10-15	11:00:00	01:00:00.0	01:00:00.0	00:00:00.0	52.4	43.5	11:46:37	70.8	11:42:39	62.0	55.0	49.8	47.7	45.7	44.6
20	2021-10-15	12:00:00	01:00:00.0	01:00:00.0	00:00:00.0	50.2	42.8	12:21:52	69.4	12:33:49	57.4	51.7	48.6	47.2	45.3	44.1
21	2021-10-15	13:00:00	01:00:00.0	01:00:00.0	00:00:00.0	51.0	42.4	13:47:12	69.8	13:12:12	60.5	53.3	49.7	47.2	44.1	43.1
22	2021-10-15	14:00:00	01:00:00.0	01:00:00.0	00:00:00.0	48.8	42.6	14:06:20	66.2	14:39:16	55.8	51.1	48.9	46.5	44.4	43.4
23	2021-10-15	15:00:00	01:00:00.0	01:00:00.0	00:00:00.0	51.4	43.1	15:44:44	74.7	15:04:10	58.6	52.2	48.7	46.6	44.7	43.8
24	2021-10-15	16:00:00	01:00:00.0	01:00:00.0	00:00:00.0	51.3	42.2	16:20:04	67.3	16:16:16	57.9	53.4	51.6	50.1	45.1	43.8

APPENDIX D

CONSTRUCTION NOISE MODELING

Receptor - Residential to West

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Concrete/Industrial Saws	1	90	405	20	0.20	-18.2	-7.0	71.8	64.8
Rubber Tired Dozers	1	85	405	40	0.40	-18.2	-4.0	66.8	62.9
Tractors/Loaders/Backhoes	3	84	405	40	1.20	-18.2	0.8	65.8	66.6
								Log Sum	69.8
Grading									
Rubber Tired Dozers	1	85	405	40	0.40	-18.2	-4.0	66.8	62.9
Tractors/Loaders/Backhoes	2	84	405	40	0.80	-18.2	-1.0	65.8	64.9
Graders	1	85	405	40	0.40	-18.2	-4.0	66.8	62.9
								Log Sum	68.4
Building Construction									
Cranes	1	83	405	16	0.16	-18.2	-8.0	64.8	56.9
Forklifts[2]	2	48	405	40	0.80	-18.2	-1.0	29.8	28.9
Generator Sets	1	81	405	50	0.50	-18.2	-3.0	62.8	59.8
Welders	3	74	405	40	1.20	-18.2	0.8	55.8	56.6
Tractors/Loaders/Backhoes	1	84	405	40	0.40	-18.2	-4.0	65.8	61.9
								Log Sum	65.4
Paving									
Cement and Mortar Mixers	1	79	405	40	0.40	-18.2	-4.0	60.8	56.9
Pavers	1	77	405	50	0.50	-18.2	-3.0	58.8	55.8
Paving Equipment	1	85	405	20	0.20	-18.2	-7.0	66.8	59.8
Rollers	2	80	405	20	0.40	-18.2	-4.0	61.8	57.9
Tractors/Loaders/Backhoes	1	84	405	40	0.40	-18.2	-4.0	65.8	61.9
								Log Sum	66.0
Architectural Coating									
Air Compressors	1	80	405	40	0.40	-18.2	-4.0	61.8	57.9
								Log Sum	57.9

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construciton Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptor - Residential to East

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Concrete/Industrial Saws	1	90	525	20	0.20	-20.4	-7.0	69.6	62.6
Rubber Tired Dozers	1	85	525	40	0.40	-20.4	-4.0	64.6	60.6
Tractors/Loaders/Backhoes	3	84	525	40	1.20	-20.4	0.8	63.6	64.4
								Log Sum	67.6
Grading									
Rubber Tired Dozers	1	85	525	40	0.40	-20.4	-4.0	64.6	60.6
Tractors/Loaders/Backhoes	2	84	525	40	0.80	-20.4	-1.0	63.6	62.6
Graders	1	85	525	40	0.40	-20.4	-4.0	64.6	60.6
								Log Sum	66.1
Building Construction									
Cranes	1	83	525	16	0.16	-20.4	-8.0	62.6	54.6
Forklifts[2]	2	48	525	40	0.80	-20.4	-1.0	27.6	26.6
Generator Sets	1	81	525	50	0.50	-20.4	-3.0	60.6	57.6
Welders	3	74	525	40	1.20	-20.4	0.8	53.6	54.4
Tractors/Loaders/Backhoes	1	84	525	40	0.40	-20.4	-4.0	63.6	59.6
								Log Sum	63.1
Paving									
Cement and Mortar Mixers	1	79	525	40	0.40	-20.4	-4.0	58.6	54.6
Pavers	1	77	525	50	0.50	-20.4	-3.0	56.6	53.6
Paving Equipment	1	85	525	20	0.20	-20.4	-7.0	64.6	57.6
Rollers	2	80	525	20	0.40	-20.4	-4.0	59.6	55.6
Tractors/Loaders/Backhoes	1	84	525	40	0.40	-20.4	-4.0	63.6	59.6
								Log Sum	63.7
Architectural Coating									
Air Compressors	1	80	525	40	0.40	-20.4	-4.0	59.6	55.6
								Log Sum	55.6

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construciton Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptor - Church to East

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Concrete/Industrial Saws	1	90	247	20	0.20	-13.9	-7.0	76.1	69.1
Rubber Tired Dozers	1	85	247	40	0.40	-13.9	-4.0	71.1	67.1
Tractors/Loaders/Backhoes	3	84	247	40	1.20	-13.9	0.8	70.1	70.9
								Log Sum	74.1
Grading									
Rubber Tired Dozers	1	85	247	40	0.40	-13.9	-4.0	71.1	67.1
Tractors/Loaders/Backhoes	2	84	247	40	0.80	-13.9	-1.0	70.1	69.2
Graders	1	85	247	40	0.40	-13.9	-4.0	71.1	67.1
								Log Sum	72.7
Building Construction									
Cranes	1	83	247	16	0.16	-13.9	-8.0	69.1	61.2
Forklifts[2]	2	48	247	40	0.80	-13.9	-1.0	34.1	33.2
Generator Sets	1	81	247	50	0.50	-13.9	-3.0	67.1	64.1
Welders	3	74	247	40	1.20	-13.9	0.8	60.1	60.9
Tractors/Loaders/Backhoes	1	84	247	40	0.40	-13.9	-4.0	70.1	66.1
								Log Sum	69.7
Paving									
Cement and Mortar Mixers	1	79	247	40	0.40	-13.9	-4.0	65.1	61.1
Pavers	1	77	247	50	0.50	-13.9	-3.0	63.1	60.1
Paving Equipment	1	85	247	20	0.20	-13.9	-7.0	71.1	64.1
Rollers	2	80	247	20	0.40	-13.9	-4.0	66.1	62.1
Tractors/Loaders/Backhoes	1	84	247	40	0.40	-13.9	-4.0	70.1	66.1
								Log Sum	70.3
Architectural Coating									
Air Compressors	1	80	247	40	0.40	-13.9	-4.0	66.1	62.1
								Log Sum	62.1

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construciton Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

Receptor - Residential to South

Construction Phase Equipment Item	# of Items	Item Lmax at 50 feet, dBA[1]	Distance to Receptor[3]	Item Usage Percent	Usage Factor	Dist. Correction dB	Usage Adj. dB	Receptor Item Lmax, dBA	Receptor Item Leq, dBA
Demolition									
Concrete/Industrial Saws	1	90	284	20	0.20	-15.1	-7.0	74.9	67.9
Rubber Tired Dozers	1	85	284	40	0.40	-15.1	-4.0	69.9	65.9
Tractors/Loaders/Backhoes	3	84	284	40	1.20	-15.1	0.8	68.9	69.7
								Log Sum	72.9
Grading									
Rubber Tired Dozers	1	85	284	40	0.40	-15.1	-4.0	69.9	65.9
Tractors/Loaders/Backhoes	2	84	284	40	0.80	-15.1	-1.0	68.9	67.9
Graders	1	85	284	40	0.40	-15.1	-4.0	69.9	65.9
								Log Sum	71.5
Building Construction									
Cranes	1	83	284	16	0.16	-15.1	-8.0	67.9	60.0
Forklifts[2]	2	48	284	40	0.80	-15.1	-1.0	32.9	31.9
Generator Sets	1	81	284	50	0.50	-15.1	-3.0	65.9	62.9
Welders	3	74	284	40	1.20	-15.1	0.8	58.9	59.7
Tractors/Loaders/Backhoes	1	84	284	40	0.40	-15.1	-4.0	68.9	64.9
								Log Sum	68.4
Paving									
Cement and Mortar Mixers	1	79	284	40	0.40	-15.1	-4.0	63.9	59.9
Pavers	1	77	284	50	0.50	-15.1	-3.0	61.9	58.9
Paving Equipment	1	85	284	20	0.20	-15.1	-7.0	69.9	62.9
Rollers	2	80	284	20	0.40	-15.1	-4.0	64.9	60.9
Tractors/Loaders/Backhoes	1	84	284	40	0.40	-15.1	-4.0	68.9	64.9
								Log Sum	69.1
Architectural Coating									
Air Compressors	1	80	284	40	0.40	-15.1	-4.0	64.9	60.9
								Log Sum	60.9

Notes:

(1) Source: Referenced noise levels from the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (September 2018) and the FHWA Roadway Construciton Noise Model User's Guide (January 2006)

(2) Source: SoundPLAN reference list.

(3) Distance to receptor calculated from center of site. Construction noise projected from the center of the project site to nearest sensitive use (property line).

APPENDIX E

SOUNDPLAN INPUTS AND OUTPUTS

Noise emissions of road traffic

Statio km	ADT Veh/24	Vehicles type	Traffic values Vehicle name	day Veh/h	evening Veh/h	night Veh/h	Speed km/h	Contr devic	Cons Spee km/h	Affec veh. %	Road surface	Gradie Min / M %
Los Coyotes 1						Traffic direction: In entry direction						
0+00	27000	Total	-	1650	1175	408	-	none	-	-	Average (of DGAC a	0.0
		Automobiles	-	1564	1161	288	64					
		Medium trucks	-	32	5	45	64					
		Heavy trucks	-	54	9	75	64					
		Buses	-	-	-	-	-					
		Motorcycles	-	-	-	-	-					
		Auxiliary vehicle	-	-	-	-	-					
0+46	-							-	-	-	-	-
Los Coyotes 2						Traffic direction: In entry direction						
0+00	27000	Total	-	1650	1175	408	-	none	-	-	Average (of DGAC a	0.0
		Automobiles	-	1564	1161	288	64					
		Medium trucks	-	32	5	45	64					
		Heavy trucks	-	54	9	75	64					
		Buses	-	-	-	-	-					
		Motorcycles	-	-	-	-	-					
		Auxiliary vehicle	-	-	-	-	-					
0+46	-							-	-	-	-	-

Receiver list

No.	Receiver name	Building side	Floor	Limit Lden dB(A)	Level Lden dB(A)	Conflict Lden dB
1	1	-	1.Fl	-	72.3	-
2	2	-	1.Fl	-	63.2	-
3	3	West	1.Fl	-	65.3	-
			2.Fl	-	67.1	-
4	4	West	1.Fl	-	68.3	-
			2.Fl	-	70.6	-
5	5	North	1.Fl	-	69.1	-
			2.Fl	-	71.4	-

Contribution levels of the receivers

Source name			Traffic lane	Level Lden dB(A)
1	1.Fl	72.3		
Los Coyotes 1			-	69.7
Los Coyotes 2			-	68.9
2	1.Fl	63.2		
Los Coyotes 1			-	60.4
Los Coyotes 2			-	60.0
3	1.Fl	65.3		
Los Coyotes 1			-	62.4
Los Coyotes 2			-	62.1
3	2.Fl	67.1		
Los Coyotes 1			-	64.1
Los Coyotes 2			-	64.1
4	1.Fl	68.3		
Los Coyotes 1			-	65.5
Los Coyotes 2			-	65.1
4	2.Fl	70.6		
Los Coyotes 1			-	67.9
Los Coyotes 2			-	67.2
5	1.Fl	69.1		
Los Coyotes 1			-	66.4
Los Coyotes 2			-	65.8
5	2.Fl	71.4		
Los Coyotes 1			-	68.9
Los Coyotes 2			-	67.8

Noise emissions of industry sources

Source n	Referen	Level		Frequency spectrum [dB(A)]																															Correctio		
				20	25	31	40	50	63	80	100	125	160	200	250	315	400	500	630	800	1	1.3	1.6	2	2.5	3.2	4	5	6.3	8	10	12.5	16	20	Cwa	C	CT
			dB(A	Hz	Hz	Hz	Hz	Hz	Hz	Hz	Hz	Hz	Hz	Hz	Hz	Hz	Hz	Hz	Hz	Hz	kHz	kHz	kHz	kHz	kHz	kHz	kHz	kHz	kHz	kHz	kHz	kHz	kHz	kHz	dB	dB	dB
2	Lw/unit	Day	67.3	-39	-30	-19	-10	6.	15.	13.	27.	32.	34.	39.	41.	45.	48.	50.	56.	58.	55.	57.	59.	57.	58.	55.	56.	53.	52.	46.	40.	36.	30.	21.	-	-	-
		Even	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Night	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Lw/unit	Day	67.3	-39	-30	-19	-10	6.	15.	13.	27.	32.	34.	39.	41.	45.	48.	50.	56.	58.	55.	57.	59.	57.	58.	55.	56.	53.	52.	46.	40.	36.	30.	21.	-	-	-
		Even	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Night	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Lw/unit	Day	67.3	-39	-30	-19	-10	6.	15.	13.	27.	32.	34.	39.	41.	45.	48.	50.	56.	58.	55.	57.	59.	57.	58.	55.	56.	53.	52.	46.	40.	36.	30.	21.	-	-	-
		Even	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Night	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	Lw/unit	Day	67.3	-39	-30	-19	-10	6.	15.	13.	27.	32.	34.	39.	41.	45.	48.	50.	56.	58.	55.	57.	59.	57.	58.	55.	56.	53.	52.	46.	40.	36.	30.	21.	-	-	-
		Even	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Night	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Lw/unit	Day	67.3	-39	-30	-19	-10	6.	15.	13.	27.	32.	34.	39.	41.	45.	48.	50.	56.	58.	55.	57.	59.	57.	58.	55.	56.	53.	52.	46.	40.	36.	30.	21.	-	-	-
		Even	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Night	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Lw/unit	Day	67.3	-39	-30	-19	-10	6.	15.	13.	27.	32.	34.	39.	41.	45.	48.	50.	56.	58.	55.	57.	59.	57.	58.	55.	56.	53.	52.	46.	40.	36.	30.	21.	-	-	-
		Even	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Night	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Lw/unit	Day	67.3	-39	-30	-19	-10	6.	15.	13.	27.	32.	34.	39.	41.	45.	48.	50.	56.	58.	55.	57.	59.	57.	58.	55.	56.	53.	52.	46.	40.	36.	30.	21.	-	-	-
		Even	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Night	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Lw/unit	Day	67.3	-39	-30	-19	-10	6.	15.	13.	27.	32.	34.	39.	41.	45.	48.	50.	56.	58.	55.	57.	59.	57.	58.	55.	56.	53.	52.	46.	40.	36.	30.	21.	-	-	-
		Even	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Night	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Lw/unit	Day	67.3	-39	-30	-19	-10	6.	15.	13.	27.	32.	34.	39.	41.	45.	48.	50.	56.	58.	55.	57.	59.	57.	58.	55.	56.	53.	52.	46.	40.	36.	30.	21.	-	-	-
		Even	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Night	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10	Lw/unit	Day	67.3	-39	-30	-19	-10	6.	15.	13.	27.	32.	34.	39.	41.	45.	48.	50.	56.	58.	55.	57.	59.	57.	58.	55.	56.	53.	52.	46.	40.	36.	30.	21.	-	-	-
		Even	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		Night	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Noise emissions of parking lot traffic

Name	Parking lot type	Size	Movements per hour			Road surface	Separated method	Lw,ref
			Day	Evening	Night			dB(A)
1	Visitors and staff	36 Parking bays	0.300	0.000	0.000	Asphaltic driving lanes	no	82.1
2	Visitors and staff	14 Parking bays	0.300	0.000	0.000	Asphaltic driving lanes	no	76.2
1	Visitors and staff	6 Parking bays	0.300	0.000	0.000	Asphaltic driving lanes	no	70.8

APPENDIX F

VIBRATION WORKSHEETS

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19431 Sunrise Senior Living Long Beach Project		Date: 10/13/21
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Commercial to North		
Address:			
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment = Type	1	Vibratory Roller	INPUT SECTION IN GREEN
PPVref =	0.21	Reference PPV (in/sec) at 25 ft.	
D =	25.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.			
RESULTS			
PPV =	0.210	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19431 Sunrise Senior Living Long Beach Project	Date:	10/13/21
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Commercial to North		
Address:			
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment = Type	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	25.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.			
RESULTS			
PPV =	0.089	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19431 Sunrise Senior Living Long Beach Project		Date: 10/13/21
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Commercial to East (Church)		
Address:			
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment Type =	1	Vibratory Roller	INPUT SECTION IN GREEN
PPVref =	0.21	Reference PPV (in/sec) at 25 ft.	
D =	8.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.			
RESULTS			
PPV =	1.160	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19431 Sunrise Senior Living Long Beach Project		Date: 10/13/21
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Commercial to East (Church)		
Address:			
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment = Type	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	8.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.			
RESULTS			
PPV =	0.492	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19431 Sunrise Senior Living Long Beach Project		Date: 10/13/21
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Commercial to Southeast		
Address:			
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment Type =	1	Vibratory Roller	INPUT SECTION IN GREEN
PPVref =	0.21	Reference PPV (in/sec) at 25 ft.	
D =	35.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.			
RESULTS			
PPV =	0.127	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19431 Sunrise Senior Living Long Beach Project		Date: 10/13/21
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Commercial to Southeast		
Address:			
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment Type =	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	35.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.			
RESULTS			
PPV =	0.054	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19431 Sunrise Senior Living Long Beach Project		Date: 10/13/21
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Commercial to South		
Address:			
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment Type =	1	Vibratory Roller	INPUT SECTION IN GREEN
PPVref =	0.21	Reference PPV (in/sec) at 25 ft.	
D =	22.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.			
RESULTS			
PPV =	0.254	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19431 Sunrise Senior Living Long Beach Project		Date: 10/13/21
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Commercial to South		
Address:			
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment = Type	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	22.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.			
RESULTS			
PPV =	0.108	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19431 Sunrise Senior Living Long Beach Project		Date: 10/13/21
Source:	Vibratory Roller		
Scenario:	Unmitigated		
Location:	Residential to South		
Address:			
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment Type =	1	Vibratory Roller	INPUT SECTION IN GREEN
PPVref =	0.21	Reference PPV (in/sec) at 25 ft.	
D =	170.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.			
RESULTS			
PPV =	0.012	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19431 Sunrise Senior Living Long Beach Project		Date: 10/13/21
Source:	Large Bulldozer		
Scenario:	Unmitigated		
Location:	Residential to South		
Address:			
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment = Type	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	170.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.			
RESULTS			
PPV =	0.005	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19431 Sunrise Senior Living Long Beach Project		Date: 10/13/21
Source:	Vibratory Roller		
Scenario:	Mitigated		
Location:	Commercial to East (Church)		
Address:			
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment Type =	1	Vibratory Roller	INPUT SECTION IN GREEN
PPVref =	0.21	Reference PPV (in/sec) at 25 ft.	
D =	20.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.			
RESULTS			
PPV =	0.293	IN/SEC	OUTPUT IN BLUE

GROUNDBORNE VIBRATION ANALYSIS			
Project:	19431 Sunrise Senior Living Long Beach Project		Date: 10/13/21
Source:	Large Bulldozer		
Scenario:	Mitigated		
Location:	Commercial to East (Church)		
Address:			
PPV = PPVref(25/D)^n (in/sec)			
INPUT			
Equipment Type =	2	Large Bulldozer	INPUT SECTION IN GREEN
PPVref =	0.089	Reference PPV (in/sec) at 25 ft.	
D =	12.00	Distance from Equipment to Receiver (ft)	
n =	1.50	Vibration attenuation rate through the ground	
Note: Based on reference equations from Vibration Guidance Manual, California Department of Transportation, 2006, pgs 38-43.			
RESULTS			
PPV =	0.268	IN/SEC	OUTPUT IN BLUE

Construction Annoyance Vibration Calculations

Source: Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment Manual (September 2018).

Eq. 7-3: Lvdistance = Lvref - 30log (D/25)

Lvdistance = the rms velocity level adjsuted for distance, VdB
Lvref = the source reference vibration level at 25 feet, VdB
D = distance from the equipment to th receiver, ft.

Large Bulldozer:

Residential to South: Lvdistance = 87 - 30 log (170/25) = 62.02 VdB

Under Threshold Mitigation Distance: 87 - 30 log (80/25) = 71.85 VdB

Vibratory Roller:

Residential to South: Lvdistance = 94 - 30 log (170/25) = 69.02 VdB

Under Threshold Mitigation Distance: 94 - 30 log (136/25) = 71.93 VdB

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SUNRISE SENIOR LIVING LONG BEACH PROJECT AIR QUALITY, GLOBAL CLIMATE CHANGE, AND ENERGY IMPACT ANALYSIS

City of Long Beach

October 18, 2021

ganddini

Traffic Engineering ● Transportation Planning ● Parking ● Noise & Vibration
Air Quality ● Global Climate Change ● Health Risk Assessment

SUNRISE SENIOR LIVING LONG BEACH PROJECT
AIR QUALITY, GLOBAL CLIMATE CHANGE, AND ENERGY IMPACT ANALYSIS

City of Long Beach

October 18, 2021

prepared by
Katie Wilson, MS
Catherine Howe, MS

GANDDINI GROUP INC.
555 Park Center Drive, Suite 225
Santa Ana, California 92705
(714) 795-3100 | ganddini.com

Project No. 19431

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EXECUTIVE SUMMARY

The purpose of this air quality, global climate change, and energy impact analysis is to provide an assessment of the impacts resulting from development of the proposed Sunrise Senior Living Long Beach project and to identify measures that may be necessary to reduce potentially significant impacts.

Construction-Source Emissions

Project construction-source emissions would not exceed applicable regional thresholds of significance established by the South Coast Air Quality Management District (SCAQMD). For localized emissions, the project will not exceed applicable Localized Significance Thresholds (LSTs) established by the SCAQMD.

Project construction-source emissions would not conflict with the Basin Air Quality Management Plan (AQMP). As discussed herein, the project will comply with all applicable SCAQMD construction-source emission reduction rules and guidelines. Project construction source emissions would not cause or substantively contribute to violation of the California Ambient Air Quality Standards (CAAQS) or National Ambient Air Quality Standards (NAAQS).

Given the temporary and short-term construction schedule, the project would not result in a long-term (i.e., lifetime or 30-year) exposure to TACs as a result of project construction. Furthermore, construction-based particulate matter (PM) emissions (including diesel exhaust emissions) do not exceed any local or regional thresholds. Therefore, impacts from TACs during construction would be less than significant.

Established requirements addressing construction equipment operations, and construction material use, storage, and disposal requirements act to minimize odor impacts that may result from construction activities. Moreover, construction-source odor emissions would be temporary, short-term, and intermittent in nature and would not result in persistent impacts that would affect substantial numbers of people. Potential construction-source odor impacts are therefore considered less than significant.

Operational-Source Emissions

Project operational-sourced emissions would not exceed applicable regional thresholds of significance established by the SCAQMD. Project operational-source emissions would not result in or cause a significant localized air quality or toxic air contaminant (TAC) impacts as discussed in the Operations-Related Local Air Quality Impacts section of this report. Additionally, project-related trips will not cause or result in CO concentrations exceeding applicable state and/or federal standards (CO "hotspots). Project operational-source emissions would therefore not adversely affect sensitive receptors within the vicinity of the project.

Project operational-source emissions would not conflict with the Basin Air Quality Management Plan (AQMP). The project's emissions meet SCAQMD regional thresholds and will not result in a significant cumulative impact. The project does not propose any such uses or activities that would result in potentially significant operational-source odor impacts. Potential operational-source odor impacts are therefore considered less than significant.

Greenhouse Gases

Project-related GHG emissions would not exceed the SCAQMD draft screening threshold of 3,000 MTCO2e per year for all land uses or the City's Climate Action and Adaptation Plan (CAAP) 2030 Threshold of 3.04 MTCO2e/SP/year.

Furthermore, the project's GHG emissions would not exceed the SCAQMD screening threshold (based on EO S-3-05). The project would not conflict with the goals of the City of Long Beach CAAP, AB-32, SB-32, or the CARB Scoping Plan; therefore, the project would not conflict with an applicable plan, policy or

regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases and impacts are considered to be less than significant.

Energy

For new development such as that proposed by the Sunrise Senior Living Long Beach project, compliance with California Building Standards Code Title 24 energy efficiency requirements (CalGreen), are considered demonstrable evidence of efficient use of energy. As discussed below, the project would provide for, and promote, energy efficiencies required under other applicable federal and State of California standards and regulations, and in so doing would meet or exceed all California Building Standards Code Title 24 standards. Moreover, energy consumed by the project's operation is calculated to be comparable to, or less than, energy consumed by other senior assisted living uses of similar scale and intensity that are constructed and operating in California. On this basis, the project would not result in the inefficient, wasteful, or unnecessary consumption of energy. Impacts are considered to be less than significant.

1. INTRODUCTION

This section describes the purpose of this air quality, global climate change, and energy impact analysis, project location, proposed development, and study area. Figure 1 shows the project location map and Figure 2 illustrates the project site plan.

PURPOSE AND OBJECTIVES

This study was performed to address the possibility of regional/local air quality impacts and global climate change impacts, from project related air emissions. The objectives of the study include:

- documentation of the atmospheric setting
- discussion of criteria pollutants and greenhouse gases
- discussion of the air quality and global climate change regulatory framework
- analysis of the construction related air quality and greenhouse gas emissions
- analysis of the operations related air quality and greenhouse gas emissions
- analysis of the conformity of the proposed project with the SCAQMD AQMP
- analysis of the project's energy use during construction and operation
- recommendations for mitigation measures

The City of Long Beach is the lead agency for this air quality and greenhouse gas analysis, in accordance with the California Environmental Quality Act authorizing legislation. Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with terms unique to air quality and global climate change, a definition of terms has been provided in Appendix A.

PROJECT LOCATION

The 2.65-acre project site is located at 3340 North Los Coyotes Diagonal in the City of Long Beach, California. The project site is currently vacant. A vicinity map showing the project location is provided on Figure 1.

PROJECT DESCRIPTION

The proposed project involves construction of a two-story, 78,277 square foot senior assisted living and memory care facility with 86 units containing a total of 109 beds. Vehicular access is proposed for full access at Los Coyotes Diagonal sharing an existing project driveway. Figure 2 illustrates the proposed site plan.

PHASING AND TIMING

The proposed project is anticipated to be operational in 2024. The project is anticipated to be built in one phase with project construction to start no sooner than the first quarter of 2023, taking approximately 15 months to complete.

SENSITIVE RECEPTORS IN PROJECT VICINITY

Those who are sensitive to air pollution include children, the elderly, and persons with preexisting respiratory or cardiovascular illness. For purposes of CEQA, the SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours, such as residences, hospitals, or convalescent facilities (South Coast Air Quality Management District 2008). Commercial and industrial facilities are not included in the definition because employees do not typically remain on-site for 24 hours.

The nearest sensitive receptors to the project site include the single-family residential uses located approximately 165 feet (~50 meters) to the south, 195 feet (~59 meters) to the west, and 275 feet (~84 meters) to the east of the project site.

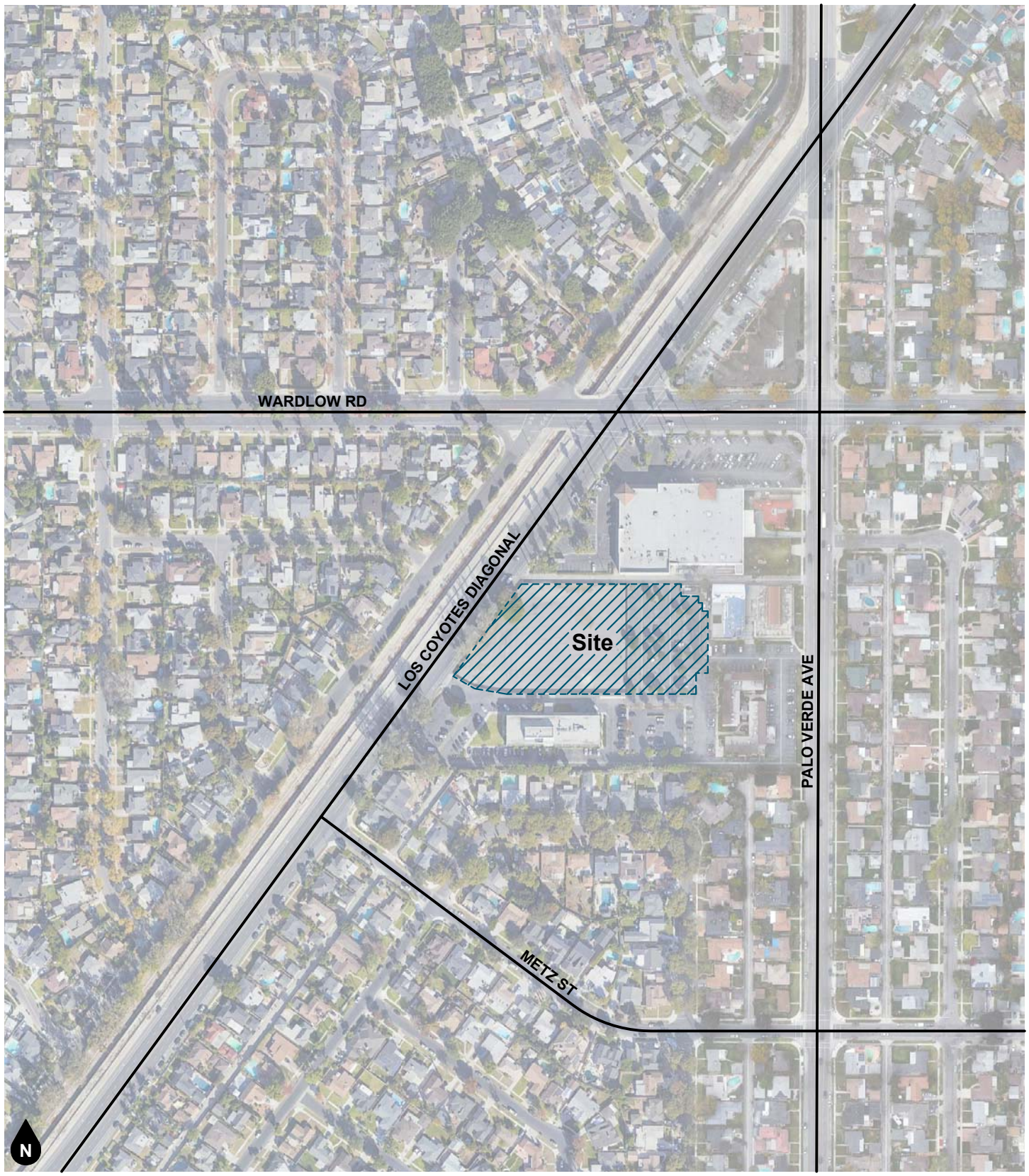

Figure 1
Project Location Map

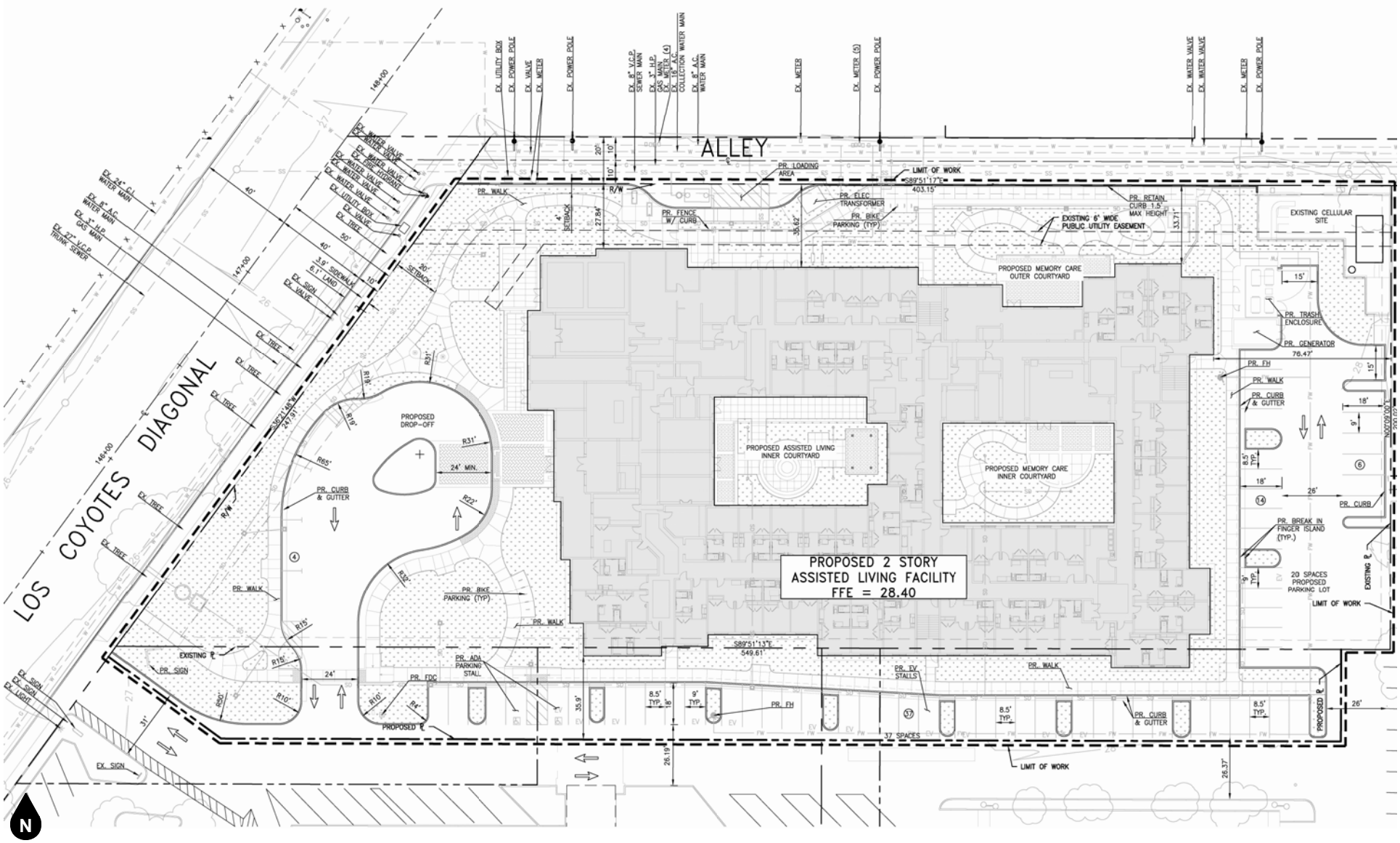

Figure 2
Site Plan

2. AIR QUALITY ANALYSIS

EXISTING AIR QUALITY CONDITIONS

Local Air Quality

The project site is located within the City of Long Beach, in the southern portion of Los Angeles County, which is part of the South Coast Air Basin (SCAB) that includes all of Orange County as well as the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The South Coast Air Basin is located on a coastal plain with connecting broad valleys and low hills to the east. Regionally, the South Coast Air Basin is bounded by the Pacific Ocean to the southwest and high mountains to the east forming the inland perimeter.

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the region form natural horizontal barriers to the dispersion of air contaminants. Air pollution created in the coastal areas and around the Los Angeles area is transported inland until it reaches the mountains where the combination of mountains and inversion layers generally prevent further dispersion. This poor ventilation results in a gradual degradation of air quality from the coastal areas to inland areas. Air stagnation may occur during the early evening and early morning periods of transition between day and nighttime flows. The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. If the Santa Ana winds are strong, they can surpass the sea breeze, which blows from the ocean to the land, and carry the suspended dust and pollutants out to the ocean. If the winds are weak, they are opposed by the sea breeze and cause stagnation, resulting in high pollution events.

The annual average temperature varies little throughout much of the basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With more pronounced oceanic influence, coastal areas, where the project site is located, show less variability in annual minimum and maximum temperatures than inland areas. The majority of the annual rainfall in the basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thunderstorms in the coastal regions and slightly heavier showers in the eastern portion of the basin along the coastal side of the mountains. Year-to-year patterns in rainfall are unpredictable because of fluctuations in the weather.

Temperature inversions limit the vertical depth through which pollution can be mixed. Among the most common temperature inversions in the basin are radiation inversions, which form on clear winter nights when cold air off mountains sink to the valley floor while the air aloft over the valley remains warm. These inversions, in conjunction with calm winds, trap pollutants near the source. Other types of temperature inversions that affect the basin include marine, subsidence, and high-pressure inversions.

Summers are often periods of hazy visibility and occasionally unhealthful air. Strong temperature inversions may occur that limit the vertical depth through which air pollution can be dispersed. Air pollutants concentrate because they cannot rise through the inversion layer and disperse. These inversions are more common and persistent during the summer months. Over time, sunlight produces photochemical reactions within this inversion layer that creates ozone, a particularly harmful air pollutant. Occasionally, strong thermal convections occur which allows the air pollutants to rise high enough to pass over the mountains and ultimately dilute the smog cloud. Table 1 shows the monthly climate data of the City of Long Beach.

Table 1
Local Monthly Climate Data

Descriptor	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Avg. Max. Temperature	67.2	67.1	68.7	71.8	73.8	76.9	81.9	83.7	81.9	77.4	69.7	67.3
Avg. Min. Temperature	46.1	48.1	50.6	53.5	57.7	61.1	64.3	65	63.1	58.2	49.4	46.1
Avg. Total Precipitation (in.)	2.51	2.95	1.89	0.71	0.22	0.08	0.02	0.03	0.17	0.59	1.01	2.13

Source: https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5085
Data from the Long Beach Daugherty Field, CA station (045085).

Pollutants

Pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal ambient air quality standards have been established for criteria pollutants, whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). A summary of federal and state ambient air quality standards is provided in the Regulatory Framework section.

Criteria Pollutants

The criteria pollutants consist of: ozone, nitrogen dioxide, carbon monoxide, sulfur dioxide, lead, and particulate matter. These pollutants can harm your health and the environment, and cause property damage. The Environmental Protection Agency (EPA) calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria for setting permissible levels. The following provides descriptions of each of the criteria pollutants.

Nitrogen Dioxides

Nitrogen Oxides (NOx) is the generic term for a group of highly reactive gases which contain nitrogen and oxygen. While most NOx are colorless and odorless, concentrations of nitrogen dioxide (NO_2) can often be seen as a reddish-brown layer over many urban areas. NOx form when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of NOx are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuel. NOx reacts with other pollutants to form, ground-level ozone, nitrate particles, acid aerosols, as well as NO_2, which cause respiratory problems. NOx and the pollutants formed from NOx can be transported over long distances, following the patterns of prevailing winds. Therefore, controlling NOx is often most effective if done from a regional perspective, rather than focusing on the nearest sources.

Ozone

Ozone (O_3) is not usually emitted directly into the air but at ground-level is created by a chemical reaction between NOx and volatile organic compounds (VOC) in the presence of sunlight. Motor vehicle exhaust, industrial emissions, gasoline vapors, chemical solvents as well as natural sources emit NOx and VOC that help form ozone. Ground-level ozone is the primary constituent of smog. Sunlight and hot weather cause ground-level ozone to form with the greatest concentrations usually occurring downwind from urban areas. Ozone is subsequently considered a regional pollutant. Ground-level ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Because NOx and VOC are ozone precursors, the health effects associated with ozone are also indirect health effects associated with significant levels of NOx and VOC emissions.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are indoor sources of CO. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air. CO is described as having only a local influence because it dissipates quickly. Since CO concentrations are strongly associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of

roadways with high traffic volumes and traffic congestion, active parking lots, and in automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. The health threat from lower levels of CO is most serious for those who suffer from heart disease such as angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. High levels of CO can affect even healthy people. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

Sulfur Dioxide

Sulfur Oxide (SOx) gases (including sulfur dioxide [SO2]) are formed when fuel containing sulfur, such as coal and oil is burned, and from the refining of gasoline. SOx dissolves easily in water vapor to form acid and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and the environment.

Lead

Lead (Pb) is a metal found naturally in the environment as well as manufactured products. The major sources of lead emissions have historically been motor vehicles and industrial sources. Due to the phase out of leaded gasoline, metal processing is now the primary source of lead emissions to the air. High levels of lead in the air are typically only found near lead smelters, waste incinerators, utilities, and lead-acid battery manufacturers. Exposure of fetuses, infants and children to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure.

Particulate Matter

Particulate matter (PM) is the term for a mixture of solid particles and liquid droplets found in the air. Particulate matter is made up of a number of components including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. Particles that are less than 10 micrometers in diameter (PM10) are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Particles that are less than 2.5 micrometers in diameter (PM2.5) have been designated as a subset of PM10 due to their increased negative health impacts and its ability to remain suspended in the air longer and travel further.

Reactive Organic Gases (ROG)

Although not a criteria pollutant, reactive organic gases (ROGs), or volatile organic compounds (VOCs), are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably. Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM10 and lower visibility.

Other Pollutants of Concern

Toxic Air Contaminants

In addition to the above-listed criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern. Sources of toxic air contaminants include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least forty different toxic air contaminants. The most important of these toxic air contaminants, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Public exposure to toxic air contaminants can result from emissions from normal operations as well as from accidental releases. Health effects of toxic air contaminants include cancer, birth defects, neurological damage, and death.

Toxic air contaminants are less pervasive in the urban atmosphere than criteria air pollutants, however they are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of toxic air contaminants with varying degrees of toxicity. Sources of toxic air contaminants include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

According to the 2013 California Almanac of Emissions and Air Quality, the majority of the estimated health risk from toxic air contaminants can be attributed to relatively few compounds, the most important of which is diesel particulate matter (DPM). Diesel particulate matter is a subset of PM2.5 because the size of diesel particles are typically 2.5 microns and smaller. The identification of diesel particulate matter as a toxic air contaminant in 1998 led the California Air Resources Board (CARB) to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles in September 2000. The plan's goals are a 75-percent reduction in diesel particulate matter by 2010 and an 85-percent reduction by 2020 from the 2000 baseline. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot". Diesel exhaust also contains a variety of harmful gases and over 40 other cancer-causing substances. California's identification of diesel particulate matter as a toxic air contaminant was based on its potential to cause cancer, premature deaths, and other health problems. Exposure to diesel particulate matter is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's potential airborne cancer risk from combustion sources.

Asbestos

Asbestos is listed as a TAC by the ARB and as a Hazardous Air Pollutant by the EPA. Asbestos occurs naturally in mineral formations and crushing or breaking these rocks, through construction or other means, can release asbestiform fibers into the air. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. Naturally occurring asbestos is not present in Los Angeles County. The nearest likely location of naturally occurring asbestos, as identified in the General Location Guide for Ultramafic Rocks in California prepared by the California Division of Mines and Geology, is located at Asbestos Mountain, in the San Jacinto mountain range, approximately 96 miles east of the site. Due to the distance to the nearest natural occurrences of asbestos, the project site is not likely to contain asbestos.

Regulatory Setting

The proposed project is addressed through the efforts of various international, federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through

legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality are discussed below.

Federal – United States Environmental Protection Agency

The United States Environmental Protection Agency (EPA) is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The National Ambient Air Quality Standards (NAAQS) pollutants were identified using medical evidence and are shown below in Table 2.

The EPA and the California Air Resource Board (CARB) designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Each standard has a different definition, or 'form' of what constitutes attainment, based on specific air quality statistics. For example, the Federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the Federal annual PM2.5 standard is met if the three-year average of the annual average PM2.5 concentration is less than or equal to the standard. Attainment status is shown in Table 3.

As part of its enforcement responsibilities, the EPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The State Implementation Plan (SIP) must integrate federal, state, and local components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the State Implementation Plan (SIP).

As indicated below in Table 3, the Basin has been designated by the EPA as a non-attainment area for ozone (O_3) and suspended particulates (PM10 and PM2.5). Currently, the Basin is in attainment with the ambient air quality standards for carbon monoxide (CO), lead, sulfur dioxide (SO_2), suspended particulate matter (PM-2.5), and nitrogen dioxide (NO_2).

State – California Air Resources Board

The California Air Resources Board (CARB), which is a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the State Implementation Plan (SIP). The California Ambient Air Quality Standards (CAAQS) for criteria pollutants are shown in Table 2. In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g., hairspray, aerosol paints, and barbeque lighter fluid), and various types of commercial equipment. Furthermore, the motor vehicle emission standards established by CARB include compliance with the Safer Affordable Fuel-Efficient Vehicles (SAFE) Rule, issued by NHTSA and EPA in March 2020 (published on April 30, 2020 and effective after June 29, 2020). The SAFE Rule sets fuel economy and carbon dioxide standards that increase 1.5 percent in stringency each year from model years 2021 through 2026, and apply to both passenger cars and light trucks. CARB. It also sets fuel specifications to further reduce vehicular emissions.

The South Coast Air Basin has been designated by the CARB as a nonattainment area for ozone, PM10 and PM2.5. Currently, the South Coast Air Basin is in attainment with the ambient air quality standards for CO, lead, SO2, NO2, and sulfates and is unclassified for visibility reducing particles and Hydrogen Sulfide.

On June 20, 2002, the CARB revised the PM10 annual average standard to 20 µg/m3 and established an annual average standard for PM2.5 of 12 µg/m3. These standards were approved by the Office of Administrative Law in June 2003 and are now effective. On September 27, 2007 CARB approved the South Coast Air Basin and the Coachella Valley 2007 Air Quality Management Plan for Attaining the Federal 8-hour Ozone and PM2.5 Standards. The plan projected attainment for the 8-hour Ozone standard by 2024 and the PM2.5 standard by 2015.

On December 12, 2008 the CARB adopted Resolution 08-43, which limits NOx, PM10 and PM2.5 emissions from on-road diesel truck fleets that operate in California. On October 12, 2009 Executive Order R-09-010 was adopted that codified Resolution 08-43 into Section 2025, Title 13 of the California Code of Regulations. This regulation requires that by the year 2023 all commercial diesel trucks that operate in California shall meet model year 2010 (Tier 4) or latter emission standards. In the interim period, this regulation provides annual interim targets for fleet owners to meet. This regulation also provides a few exemptions including a onetime per year 3-day pass for trucks registered outside of California.

The CARB is also responsible for regulations pertaining to toxic air contaminants. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. AB 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release into the South Coast Air Basin. The data is ranked by high, intermediate, and low categories, which are determined by: the potency, toxicity, quantity, volume, and proximity of the facility to nearby receptors.

AB 617 Nonvehicular air pollution: criteria air pollutants and toxic air contaminants

This bill requires the state board to develop a uniform statewide system of annual reporting of emissions of criteria air pollutants and toxic air contaminants for use by certain categories of stationary sources. The bill requires those stationary sources to report their annual emissions of criteria air pollutants and toxic air contaminants, as specified. This bill required the state board, by October 1, 2018, to prepare a monitoring plan regarding technologies for monitoring criteria air pollutants and toxic air contaminants and the need for and benefits of additional community air monitoring systems, as defined. The bill requires the state board to select, based on the monitoring plan, the highest priority locations in the state for the deployment of community air monitoring systems. The bill requires an air district containing a selected location, by July 1, 2019, to deploy a system in the selected location. The bill would authorize the air district to require a stationary source that emits air pollutants in, or that materially affect, the selected location to deploy a fence-line monitoring system, as defined, or other specified real-time, on-site monitoring. The bill authorizes the state board, by January 1, 2020, and annually thereafter, to select additional locations for the deployment of the systems. The bill would require air districts that have deployed a system to provide to the state board air quality data produced by the system. By increasing the duties of air districts, this bill would impose a state-mandated local program. The bill requires the state board to publish the data on its Internet Web site.

Regional

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin. To that end, as a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments and cooperates actively with all federal and state agencies.

South Coast Air Quality Management District

The SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emission sources, and enforces such measures through educational programs or fines, when

necessary. The SCAQMD is directly responsible for reducing emissions from stationary, mobile, and indirect sources. It has responded to this requirement by preparing a sequence of AQMPs. On June 30, 2016, the SCAQMD released its Draft 2016 AQMP. The 2016 AQMP is a regional blueprint for achieving the federal air quality standards and healthful air.

Air Quality Management Plan

The 2016 AQMP includes both stationary and mobile source strategies to ensure that rapidly approaching attainment deadlines are met, that public health is protected to the maximum extent feasible, and that the region is not faced with burdensome sanctions if the Plan is not approved or if the NAAQS are not met on time. As with every AQMP, a comprehensive analysis of emissions, meteorology, atmospheric chemistry, regional growth projections, and the impact of existing control measures is updated with the latest data and methods. The most significant air quality challenge in the Basin is to reduce nitrogen oxide (NOx) emissions sufficiently to meet the upcoming ozone standard deadlines. On March 23, 2017 the CARB approved the 2016 AQMP. The primary goal of this Air Quality Management Plan is to meet clean air standards and protect public health, including ensuring benefits to environmental justice and disadvantaged communities. Now that the Plan has been approved by the CARB, it has been forwarded to the U.S. EPA for its review. The Plan was approved by the EPA on June 15, 2017.

South Coast AQMD has initiated the development of the 2022 AQMP to address the attainment of the 2015 8-hour ozone standard (70 ppb) for South Coast Air Basin and Coachella Valley. To support the development of mobile source strategies for the 2022 AQMP, South Coast AQMD, in conjunction with California Air Resources Board, has established Mobile Source Working Groups which are open to all interested parties.

SCAQMD Rules and Regulations

During construction and operation, the project must comply with applicable rules and regulations. The following are rules that the project may be required to comply with, either directly, or indirectly:

SCAQMD Rule 402

Prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

SCAQMD Rule 403

Governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through application of standard Best Management Practices, such as application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

Rule 403 requires that fugitive dust be controlled with best available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Applicable dust suppression techniques from Rule 403 are summarized below. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and thus the PM_{10} component). Compliance with these rules would reduce impacts on nearby sensitive receptors. Rule 403 measures may include but are not limited to the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least three times daily. (Locations where grading is to occur will be thoroughly watered prior to earthmoving.)
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 0.6 meters (2 feet) of freeboard (vertical space between the top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code section 23114.
- Reduce traffic speeds on all unpaved roads to 15 miles per hour (mph) or less.
- Suspension of all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
- Bumper strips or similar best management practices shall be provided where vehicles enter and exit the construction site onto paved roads or wash off trucks and any equipment leaving the site each trip.
- Replanting disturbed areas as soon as practical.
- During all construction activities, construction contractors shall sweep on-site and off-site streets if silt is carried to adjacent public thoroughfares, to reduce the amount of particulate matter on public streets. All sweepers shall be compliant with SCAQMD Rule 1186.1, Less Polluting Sweepers.

SCAQMD Rule 445

Prohibits permanently installed wood burning devices into any new development. A wood burning device means any fireplace, wood burning heater, or pellet-fueled wood heater, or any similarly enclosed, permanently installed, indoor or outdoor device burning any solid fuel for aesthetic or space-heating purposes, which has a heat input of less than one million British thermal units per hour.

SCAQMD Rule 481

Applies to all spray painting and spray coating operations and equipment. The rule states that a person shall not use or operate any spray painting or spray coating equipment unless one of the following conditions is met:

(1) The spray coating equipment is operated inside a control enclosure, which is approved by the Executive Officer. Any control enclosure for which an application for permit for new construction, alteration, or change of ownership or location is submitted after the date of adoption of this rule shall be exhausted only through filters at a design face velocity not less than 100 feet per minute nor greater than 300 feet per minute, or through a water wash system designed to be equally effective for the purpose of air pollution control.
(2) Coatings are applied with high-volume low-pressure, electrostatic and/or airless spray equipment.
(3) An alternative method of coating application or control is used which has effectiveness equal to or greater than the equipment specified in the rule.

SCAQMD Rule 1108

Governs the sale, use, and manufacturing of asphalt and limits the volatile organic compound (VOC) content in asphalt used in the South Coast Air Basin. This rule would regulate the VOC content of asphalt used during construction. Therefore, all asphalt used during construction of the project must comply with SCAQMD Rule 1108.

SCAQMD Rule 1113

Governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents. This rule regulates the VOC content of paints available during construction. Therefore, all paints and solvents used during construction and operation of the project must comply with SCAQMD Rule 1113.

SCAQMD Rule 1143

Governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment, and other solvent cleaning operations by limiting their VOC content. This rule regulates the VOC content of solvents used during construction. Solvents used during the construction phase must comply with this rule.

SCAQMD Rule 1186

Limits the presence of fugitive dust on paved and unpaved roads and sets certification protocols and requirements for street sweepers that are under contract to provide sweeping services to any federal, state, county, agency or special district such as water, air, sanitation, transit, or school district.

SCAQMD Rule 1303

Governs the permitting of re-located or new major emission sources, requiring Best Available Control Measures and setting significance limits for PM_{10} among other pollutants.

SCAQMD Rule 1401

New Source Review of Toxic Air Contaminants, specifies limits for maximum individual cancer risk, cancer burden, and non-cancer acute and chronic hazard index from new permit units, relocations, or modifications to existing permit units, which emit toxic air contaminants.

SCAQMD Rule 1403

Asbestos Emissions from Demolition/Renovation Activities, specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials (ACM).

SCAQMD Rule 2202

On-Road Motor Vehicle Mitigation Options, is to provide employers with a menu of options to reduce mobile source emissions generated from employee commutes, to comply with federal and state Clean Air Act requirements, Health & Safety Code Section 40458, and Section 182(d)(1)(B) of the federal Clean Air Act. It applies to any employer who employs 250 or more employees on a full or part-time basis at a worksite for a consecutive six-month period calculated as a monthly average.

SCAQMD Rule 2305

The Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program aims to reduce nitrogen oxide and diesel emissions associated with warehouses, help meet federal standards and improve public health. The WAIRE Program is an indirect source rule that regulates warehouse facilities to reduce emissions from the goods movement industry. Owners and operators of warehouses that have 100,000 square feet or more of indoor floor space in a single building must comply with the WAIRE Program. WAIRE is a menu-based point system in which warehouse operators are required to earn a specific number of points every year. The yearly number of points required is based on the number of trucks trips made to and from the warehouse each year, with larger trucks such as tractors or tractor-trailers multiplied by 2.5. Warehouse operators may be exempt from parts of the rule if they operate less than 50,000 square feet of warehousing activities, if the number of points required is less than 10, or if the WAIRE menu action chosen under performs due to circumstances beyond the operator's control, such as a manufacturer defect. SCAQMD Rule 316 establishes fees to fund Rule 2305 compliance activities.

Air Quality Guidance Documents

SCAQMD CEQA Handbook

Although the SCAQMD is responsible for regional air quality planning efforts, it does not have the authority to directly regulate air quality issues associated with plans and new development projects throughout the South Coast Air Basin. Instead, this is controlled through local jurisdictions in accordance with the California Environmental Quality Act (CEQA). In order to assist local jurisdictions with air quality compliance issues the CEQA Air Quality Handbook (SCAQMD CEQA Handbook) prepared by the SCAQMD (1993) with the most current updates found at http://www.aqmd.gov/ceqa/hdbk.html, was developed in accordance with the projections and programs of the AQMP. The purpose of the SCAQMD CEQA Handbook is to assist Lead Agencies, as well as consultants, project proponents, and other interested parties in evaluating a proposed project's potential air quality impacts. Specifically, the SCAQMD CEQA Handbook explains the procedures that the SCAQMD recommends be followed for the environmental review process required by CEQA. The SCAQMD CEQA Handbook provides direction on how to evaluate potential air quality impacts, how to determine whether these impacts are significant, and how to mitigate these impacts. SCAQMD is in the process of developing an "Air Quality Analysis Guidance Handbook" to replace the CEQA Air Quality Handbook approved by the AQMD Governing Board in 1993. The 1993 CEQA Air Quality Handbook is still available but not online. In addition, there are sections of the 1993 Handbook that are obsolete. In order to assist the CEQA practitioner in conducting an air quality analysis while the new Handbook is being prepared, supplemental information regarding: significance thresholds and analysis, emissions factors, cumulative impacts emissions analysis, and other useful subjects, are available at the SCAQMD website.[1] The SCAQMD CEQA Handbook and supplemental information is used in this analysis.

Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the Federally designated MPO for the majority of the southern California region and is the largest MPO in the nation. With respect to air quality planning, SCAG has prepared the Regional Transportation Plan and Regional Transportation Improvement Plan (RTIP), which addresses regional development and growth forecasts. These plans form the basis for the land use and transportation components of the AQMP, which are utilized in the preparation of air quality forecasts and in the consistency analysis included in the AQMP. The Regional Transportation Plan, Regional Transportation Improvement Plan, and AQMP are based on projections originating within the City and County General Plans.

On April 7, 2016, SCAG's Regional Council adopted the 2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy (2016 RTP/SCS or Plan). The Plan is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The Plan charts a course for closely integrating land use and transportation – so that the region can grow smartly and sustainably. It outlines more than $556.5 billion in transportation system investments through 2040. The Plan was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura. In June 2016, SCAG received its conformity determination from the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) indicating that all air quality conformity requirements for the 2016 RTP/SCS and associated 2015 FTIP Consistency Amendment through Amendment 15-12 have been met.

[1] http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook.

On May 7, 2020, SCAG's Regional Council adopted Connect SoCal (2020 - 2045 Regional Transportation Plan/Sustainable Communities Strategy) for federal transportation conformity purposes only. In light of the COVID-19 pandemic, the Regional Council will consider approval of Connect SoCal in its entirety and for all other purposes within 120 days from May 7, 2020. Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. Connect SoCal outlines more than $638 billion in transportation system investments through 2045. It was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura.

Local – City of Long Beach

Local jurisdictions, such as the City of Long Beach, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The City is also responsible for the implementation of transportation control measures as outlined in the 2016 AQMP. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation.

The City relies on the expertise of the SCAQMD and utilizes the SCAQMD CEQA Air Quality Handbook as the guidance document for the environmental review of plans and development proposals within its jurisdiction.

The Air Quality Element of the City of Long Beach General Plan establishes goals and policies to promote healthful air for all residents in the City. Applicable goals and policies include:

Goal 1: Effective coordination of air quality improvement efforts in the South Coast Air Basin, the Southeast Los Angeles County (SELAC) subregion of SCAG, and other agencies.

Policy 1.1 Establish a Coordinated Approach. Coordinate with other jurisdictions in the Air Basin a continuation of the consortium to establish air quality plans and implementation programs where practical.

Policy 1.2 Encourage Community Participation. Involve environmental groups, the business community, special interests and the general public in the formulation and implementation of programs that effectively reduce airborne pollutants.

Goal 2: A Diverse and efficient ground transportation system that minimizes air pollutant emissions.

Policy 2.1.1 Reduce Vehicle Trips. Use incentives, regulations, and transportation demand management techniques, in cooperation with other jurisdictions in the South Coast Air Basin to eliminate vehicle trips that would otherwise occur.

Policy 2.1.2 Reduce Vehicle Miles Traveled. Use incentives, regulations, transportation demand management in cooperation with other jurisdiction in the South Coast Air Basin, to reduce vehicle miles traveled.

Policy 2.1.3 Increase Cost-Effectiveness of Transportation and Parking Systems. Make cost-effective improvements to the transportation and parking systems that will reduce traffic congestion and resulting emissions.

Policy 2.2,1 Modify Work Schedules. Promote and establish modified work schedules that reduce peak period auto travel.

Policy 2.4,1 Promote Non-Motorized Transportation. Promote convenient and continuous bicycle paths and pleasant pedestrian environments that will encourage non-motorize travel within the City.

Policy 2.5,1 Manage the Parking Supply. Manage the City's parking supply to inhibit auto use, while ensuring that economic development goals are not sacrificed.

Goal 5: A pattern of land uses that can be efficiently served by a diversified transportation system and that directly, and indirectly, minimizes air pollutants.

Policy 5.1 Manage Growth. Regulate land uses and promote development in a manner that will support established transit services and reduce the need for the automobile.

Policy 5.2 Balance Growth. Improve the balance between jobs and housing to create a more efficient urban form.

Goal 6: Minimize particulate emissions from the construction and operation of roads and buildings, from mobile sources, and from the transportation, handling, and storage of materials.

Policy 6.1 Control Dust. Further reduce particulate emission from roads, parking lots, construction sites, unpaved alleys, and port operations and related uses.

Goal 7: Reduce emissions through reduced energy consumption.

Policy 7.1 Energy Conservation. Reduce energy consumption through conservation improvements and requirements.

Policy 7.2 Recycle Wastes. Promote local recycling of wastes and the use of recycled materials.

Table 2
State and Federal Criteria Pollutant Standards

Air Pollutant	Concentration / Averaging Time		Most Relevant Effects
	California Standards	Federal Primary Standards	
Ozone (O_3)	0.09 ppm/1-hour 0.07 ppm/8-hour	0.070 ppm/8-hour	(a) Decline in pulmonary function and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; and (f) Property damage.
Carbon Monoxide (CO)	20.0 ppm/1-hour 9.0 ppm/8-hour	35.0 ppm/1-hour 9.0 ppm/8-hour	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses.
Nitrogen Dioxide (NO_2)	0.18 ppm/1-hour 0.03 ppm/annual	100 ppb/1-hour 0.053 ppm/annual	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration.
Sulfur Dioxide (SO_2)	0.25 ppm/1-hour 0.04 ppm/24-hour	75 ppb/1-hour 0.14 ppm/annual	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM_{10})	50 µg/m^3/24-hour 20 µg/m^3/annual	150 µg/m^3/24-hour	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; (c) Increased risk of premature death from heart or lung diseases in elderly.
Suspended Particulate Matter ($PM_{2.5}$)	12 µg/m^3 / annual	35 µg/m^3/24-hour 12 µg/m^3/annual	
Sulfates	25 µg/m^3/24-hour	No Federal Standards	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) property damage.
Lead	1.5 µg/m^3/30-day	0.15 µg/m^3/3-month rolling	(a) Learning disabilities; (b) Impairment of blood formation and nerve conduction.
Visibility Reducing Particles	Extinction coefficient of 0.23 per kilometer-visibility of 10 miles or more due to particles when humidity is less than 70 percent.	No Federal Standards	Visibility impairment on days when relative humidity is less than 70 percent.

Source: https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf

Table 3
South Coast Air Basin Attainment Status

Pollutant	State Status	National Status
Ozone	Nonattainment	Nonattainment (Extreme)
Carbon monoxide	Attainment	Maintenance (Serious)
Nitrogen dioxide	Attainment	Maintenance (Primary)
Sulfur dioxide	Attainment	Attainment/Unclassified
PM10	Nonattainment	Maintenance (Serious)
PM2.5	Nonattainment	Nonattainment (Moderate)

Source (Federal and State Status): California Air Resources Board (2020) https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations & US EPA (2020) https://www.epa.gov/green-book.

MONITORED AIR QUALITY

The air quality at any site is dependent on the regional air quality and local pollutant sources. Regional air quality is determined by the release of pollutants throughout the air basin. Estimates of the existing emissions in the Basin provided in the Final 2016 Air Quality Management Plan prepared by SCAQMD (March 2017) indicate that collectively, mobile sources account for 60 percent of the VOC, 90 percent of the NOx emissions, 95 percent of the CO emissions and 34 percent of directly emitted PM2.5, with another 13 percent of PM2.5 from road dust.

The SCAQMD has divided the South Coast Air Basin into 38 air-monitoring areas with a designated ambient air monitoring station representative of each area. The project site is located in the South Coastal Los Angeles County Air Monitoring Area (Area 4). The nearest air monitoring station with data relative to the project site is the Long Beach – 2425 Webster Street Monitoring Station (Long Beach Station). The Long Beach Station is located approximately 6.41 miles southwest of the project site at 2425 Webster Street, Long Beach. As not all monitoring stations monitor all pollutants, data was also taken from the South Long Beach Monitoring Station (South Long Beach Station) located approximately 4.09 miles southwest of the project site at 1305 E Pacific Coast Highway, Long Beach was also utilized. However, it should be noted that due to the air monitoring stations distances from the project site, recorded air pollution levels at the air monitoring station reflect, with varying degrees of accuracy, local air quality conditions at the project site. Table 4 presents the monitored pollutant levels from the Long Beach and South Long Beach Stations.

Table 4 summarizes 2018 through 2020 published monitoring data, which is the most recent 3-year period available. The data shows that during the past few years, the project area has exceeded the ozone standards.

Ozone

During the 2018 to 2020 monitoring period, the State 1-hour concentration standard for ozone was not exceeded at the Long Beach Station. The State 8-hour ozone standard has not been exceeded over the past three years at the Long Beach Station. The Federal 8-hour ozone standard was not exceeded over the past three years at the Long Beach Station.

Ozone is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO_2, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in the area. Many areas of the SCAQMD contribute to the ozone levels experienced at the monitoring station, with the more significant areas being those directly upwind.

Carbon Monoxide

CO is another important pollutant that is due mainly to motor vehicles. The Long Beach Station did not record an exceedance of the state or federal 8-hour CO standard for the last three years.

Nitrogen Dioxide

The Long Beach Station did not record an exceedance of the State or Federal NO_2 standards for the last three years.

Particulate Matter

The State 24-hour concentration standards for PM10 were exceeded between three and four days each year over the last three years at the Long Beach Station. Over the past three years, the Federal 24-hour standards for PM10 were exceeded for only one day in 2019 at the Long Beach Station.

Over the last three years, the Federal 24-hour standard for PM2.5 was exceeded for seven days in 2018 and ten days in 2020 at the South Long Beach Station.

According to the EPA, some people are much more sensitive than others to breathing fine particles (PM10 and PM2.5). People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM10 and PM2.5. Other groups considered sensitive are smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive, because many breathe through their mouths during exercise.

Table 4
Air Quality Monitoring Summary

Pollutant (Standard)[1]		Year		
		2018	2019	2020
Ozone:	Maximum 1-Hour Concentration (ppm)	0.074	0.075	*
	Days > CAAQS (0.09 ppm)	0	0	*
	Maximum 8-Hour Concentration (ppm)	0.064	0.065	*
	Days > NAAQS (0.070 ppm)	0	0	*
	Days > CAAQS (0.070 ppm)	0	0	*
Carbon Monoxide:[2]	Maximum 8-Hour Concentration (ppm)	*	*	*
	Days > CAAQS (9 ppm)	0	0	0
	Days > NAAQS (9 ppm)	0	0	0
Nitrogen Dioxide:[2]	Maximum 1-Hour Concentration (ppm)	0.085	0.072	*
	Days > CAAQS (0.18 ppm)	0	0	0
Inhalable Particulates (PM10):	Maximum 24-Hour Concentration (µg/m^3)	84.0	155.8	61.6
	Days > NAAQS (150 µg/m3)	0	**1**	0
	Days > CAAQS (50 µg/m3)	**4**	**4**	**3**
	Annual Average (µg/m3)	32.7	29.7	31.8
Ultra-Fine Particulates (PM2.5):[2]	Maximum 24-Hour Concentration (µg/m3)	77.3	31.2	72.6
	Days > NAAQS (35 µg/m3)	**7**	0	**10**
	Annual Average (µg/m3)	11.6	9.2	12.2

Notes:
Source: http://www.arb.ca.gov/adam/topfour/topfour1.php. Data from theLong Beach - 2425 Webster Street Monitoring Station, unless otherwise noted.

(1) CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million
* Means there was insufficient data available to determine value.

(2) Data taken from the Banning Airport Monitoring Station.

AIR QUALITY STANDARDS

Significance Thresholds

Appendix G of the State CEQA Guidelines

Appendix G of the State CEQA Guidelines states that, where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make a significance determination. Pursuant to Appendix G, the project would result in a significant impact related to air quality if it would:

- Conflict with or obstruct the implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

The CEQA Guidelines Section 15064.7 provides the significance criteria established by the applicable air quality management district or air pollution control district, when available, may be relied upon to make determinations of significance. The potential air quality impacts of the project are, therefore, evaluated according to thresholds developed by SCAQMD in their CEQA Air Quality Handbook, Air Quality Analysis Guidance Handbook, and subsequent guidance, which are listed below.[2] Therefore, the project would result in a potentially significant impact to air quality if it would:

AIR-1: Conflict with or obstruct the implementation of the applicable air quality plan;

AIR-2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation as a result of:

- Criteria pollutant emissions during construction (direct and indirect) in excess of the SCAQMD's regional significance thresholds,
- Criteria pollutant emissions during operation (direct and indirect) in excess of the SCAQMD's regional significance thresholds.

AIR-3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

AIR-4: Expose sensitive receptors to substantial pollutant concentrations that would:

- Exceed SCAQMD's localized significance thresholds,
- Cause or contribute to the formation of CO hotspots.

AIR-5: Create objectionable odors affecting a substantial number of people.

The SCAQMD is in the process of developing an Air Quality Analysis Guidance Handbook to replace the CEQA Air Quality Handbook. In the interim, supplemental guidance has been adopted by the SCAQMD. The

[2] While the SCAQMD CEQA Air Quality Handbook contains significance thresholds for lead, Project construction and operation would not include sources of lead emissions and would not exceed the established thresholds for lead. Unleaded fuel and unleaded paints have virtually eliminated lead emissions from residential land use projects such as the Project. As a result, lead emissions are not further evaluated herein.

potential air quality impacts of the project are, therefore, evaluated according to numeric indicators developed by the SCAQMD in the CEQA Air Quality Handbook and supplemental guidance from the SCAQMD.[3]

Regional Air Quality

Many air quality impacts that derive from dispersed mobile sources, which are the dominate pollution generators in the basin, often occur hours later and miles away after photochemical processes have converted primary exhaust pollutants into secondary contaminants such as ozone. The incremental regional air quality impact of an individual project is generally very small and difficult to measure. Therefore, the SCAQMD has developed significance thresholds based on the volume of pollution emitted rather than on actual ambient air quality because the direct air quality impact of a project is not quantifiable on a regional scale. The SCAQMD CEQA Handbook states that any project in the South Coast Air Basin with daily emissions that exceed any of the identified significance thresholds should be considered as having an individually and cumulatively significant air quality impact. For the purposes to this air quality impact analysis, a regional air quality impact would be considered significant if emissions exceed the SCAQMD significance thresholds identified in Table 5.

Local Air Quality

Project-related construction air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the South Coast Air Basin. In order to assess local air quality impacts the SCAQMD has developed Localized Significant Thresholds (LSTs) to assess the project-related air emissions in the project vicinity. The SCAQMD has also provided Final Localized Significant Threshold Methodology (LST Methodology), June 2003, which details the methodology to analyze local air emission impacts. The Localized Significant Threshold Methodology found that the primary emissions of concern are NO_2, CO, PM10, and PM2.5.

The significance thresholds for the local emissions of NO_2 and CO are determined by subtracting the highest background concentration from the last three years of these pollutants from Table 4 above, from the most restrictive ambient air quality standards for these pollutants that are outlined in the Localized Significant Thresholds. Table 5 shows the ambient air quality standards for NO_2, CO, and PM10 and PM2.5.

Toxic Air Contaminants

Construction

Temporary TAC emissions associated with DPM emissions from heavy construction equipment would occur during the construction phase of the Project. According to the Office of Environmental Health Hazard Assessment (OEHHA)[4] and the SCAQMD *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis* (August 2003),[5] health effects from TACs are described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 30-year lifetime will contract cancer based on the use of standard risk-assessment methodology. Additionally, the SCAQMD CEQA guidance does not require a HRA for short-

[3] While the SCAQMD CEQA Air Quality Handbook contains significance thresholds for lead, Project construction and operation would not include sources of lead emissions and would not exceed the established thresholds for lead. Unleaded fuel and unleaded paints have virtually eliminated lead emissions from residential land use projects such as the Project. As a result, lead emissions are not further evaluated herein.

[4] Office of Environmental Health Hazard Assessment, Air Toxic Hot Spots Program Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessment, February 2015, https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

[5] South Coast Air Quality Management District, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, August 2003,http://www.aqmd.gov/docs/default-source/ceqa/handbook/mobile-source-toxics-analysis.doc?sfvrsn=2.

term construction emissions. Construction activities associated with the project would be sporadic, transitory, and short-term in nature (approximately 15 months). Thus, construction of the project would not result in a substantial, long-term (i.e., 30-year) source of TAC emissions. Nonetheless, a qualitative assessment of TAC emissions associated with short-term construction TAC emissions is provided in the analysis section below.

Operation

The project proposes to develop the site with residential senior assisted living and memory care land uses. Therefore, the project is not anticipated be a source of toxic air contaminants and sensitive receptors would not be exposed to toxic sources of air pollution.

Odor Impacts

The SCAQMD CEQA Handbook states that an odor impact would occur if the proposed project creates an odor nuisance pursuant to SCAQMD Rule 402, which states:

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

If the proposed project results in a violation of Rule 402 with regards to odor impacts, then the proposed project would create a significant odor impact.

Table 5
SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds		
Pollutant	Construction (lbs/day)	Operation (lbs/day)
NOx	100	55
VOC	75	55
PM10	150	150
PM2.5	55	55
SOx	150	150
CO	550	550
Lead	3	3

Toxic Air Contaminants, Odor and GHG Thresholds	
TACs	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index > 1.0 (project increment)
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402
GHG	10,000 MT/yr CO2e for industrial projects

Ambient Air Quality Standards	
Pollutant	SCAQMD Standards
NO2 -1-hour average	0.18 ppm (338 µg/m^3)
PM10 -24-hour average Construction Operations	 10.4 µg/m^3 2.5 ug/m^3
PM2.5 -24-hour average Construction Operations	 10.4 µg/m^3 2.5 µg/m^3
SO2 1-hour average 24-hour average	 0.25 ppm 0.04 ppm
CO 1-hour average 8-hour average	 20 ppm (23,000 µg/m^3) 9 ppm (10,000 µg/m^3)
Lead 30-day average Rolling 3-month average Quarterly average	 1.5 µg/m^3 0.15 µg/m^3 1.5 µg/m^3

Source: http://www.aqmd.gov/ceqa/handbook/signthres.pdf

SHORT-TERM CONSTRUCTION EMISSIONS

Construction activities associated with the proposed project would have the potential to generate air emissions, toxic air contaminant emissions, and odor impacts. Assumptions for the phasing, duration, and required equipment for the construction of the proposed project were obtained from the project applicant. The construction activities for the proposed project are anticipated to include: demolition of 110,800 square feet of existing paving; grading of approximately 2.65 acres; construction of a two-story 78,277 square foot senior assisted living and memory care facility with 86 units and 109 beds (with a building footprint of approximately 39,474 square feet or 0.91 acres); paving of a parking lot with 55 parking spaces; and application of architectural coatings. The grading phase is anticipated to have approximately 340 cubic yards of import. See Appendix B for more details.

The proposed project is anticipated to start construction no sooner than the beginning of January 2023 and being completed by end of March 2024. The project is anticipated to be operational in 2024.

Methodology

The following provides a discussion of the methodology used to calculate regional construction air emissions and an analysis of the proposed project's short-term construction emissions for the criteria pollutants. The construction-related regional air quality impacts have been analyzed for both criteria pollutants and GHGs.

Emissions are estimated using the CalEEMod (Version 2020.4.0) software, which is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California. Regional data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is considered to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California and is recommended by the SCAQMD.[6]

Daily regional emissions during construction are forecasted by assuming a conservative estimate of construction activities (i.e., assuming all construction occurs at the earliest feasible date) and applying the mobile source and fugitive dust emissions factors. The input values used in this analysis were adjusted to be project-specific for the construction schedule and the equipment used was based on CalEEMod defaults. The CalEEMod program uses the EMFAC2017 computer program to calculate the emission rates specific for the southwestern portion of Riverside County for construction-related employee vehicle trips and the OFFROAD2011 computer program to calculate emission rates for heavy truck operations. EMFAC2017 and OFFROAD2011 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour. Daily truck trips and CalEEMod default trip length data were used to assess roadway emissions from truck exhaust. The maximum daily emissions are estimated values for the worst-case day and do not represent the emissions that would occur for every day of project construction. The maximum daily emissions are compared to the SCAQMD daily regional numeric indicators. Detailed construction equipment lists, construction scheduling, and emission calculations are provided in Appendix B.

The project will be required to comply with existing SCAQMD rules for the reduction of fugitive dust emissions. SCAQMD Rule 403 establishes these procedures. Compliance with this rule is achieved through application of standard best management practices in construction and operation activities, such as application of water or chemical stabilizers to disturbed soils, managing haul road dust by application of water, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 mph, sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph and establishing a permanent, stabilizing ground cover on finished sites. In addition, projects that disturb 50

[6] South Coast Air Quality Management District, California Emissions Estimator Model, http://www.aqmd.gov/caleemod/.

acres or more of soil or move 5,000 cubic yards of materials per day are required to submit a Fugitive Dust Control Plan or a Large Operation Notification Form to SCAQMD. Based on the size of the Project area (approximately 2.65 acres) a Fugitive Dust Control Plan or Large Operation Notification would not be required.

SCAQMD's Rule 403 minimum requirements require that the application of the best available dust control measures is used for all grading operations and include the application of water or other soil stabilizers in sufficient quantity to prevent the generation of visible dust plumes. Compliance with Rule 403 would require the use of water trucks during all phases where earth moving operations would occur. Compliance with Rule 403 has been included in the CalEEMod modeling for the proposed project.

Per SCAQMD Rule 1113 as amended on June 3, 2011, the architectural coatings that would be applied after January 1, 2014 will be limited to an average of 50 grams per liter or less of VOCs for building coatings and 100 grams per liter or less of VOCs for traffic coatings.

The phases of the construction activities which have been analyzed below for each phase are: (1) demolition, (2) grading, (3) building construction, (4) paving, and (5) application of architectural coatings. Details pertaining to the project's construction timing and the type of equipment modeled for each construction phase are available in the CalEEMod output in Appendix B.

Construction-Related Regional Impacts

The construction-related criteria pollutant emissions for each phase are shown below in Table 6. Table 6 shows that none of the project's emissions will exceed regional thresholds. Therefore, a less than significant regional air quality impact would occur from construction of the proposed project.

Construction-Related Local Impacts

Construction-related air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the South Coast Air Basin. The proposed project has been analyzed for the potential local air quality impacts created from: construction-related fugitive dust and diesel emissions; from toxic air contaminants; and from construction-related odor impacts.

Local Air Quality Impacts from Construction

The SCAQMD has published a "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds" (South Coast Air Quality Management District 2011b). CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily disturbance activity possible for each piece of equipment. In order to compare CalEEMod reported emissions against the localized significance threshold lookup tables, the CEQA document should contain the following parameters:

(1) The off-road equipment list (including type of equipment, horsepower, and hours of operation) assumed for the day of construction activity with maximum emissions.
(2) The maximum number of acres disturbed on the peak day.
(3) Any emission control devices added onto off-road equipment.
(4) Specific dust suppression techniques used on the day of construction activity with maximum emissions.

The CalEEMod output in Appendix B show the equipment used for this analysis.

As shown in Table 7, the maximum number of acres disturbed in a day would be 2 acres during demolition and grading. The local air quality emissions from construction were analyzed using the SCAQMD's Mass Rate Localized Significant Threshold Look-up Tables and the methodology described in Localized

Significance Threshold Methodology prepared by SCAQMD (revised July 2008). The Look-up Tables were developed by the SCAQMD in order to readily determine if the daily emissions of CO, NOx, PM10, and PM2.5 from the proposed project could result in a significant impact to the local air quality. The emission thresholds were calculated based on the South Coastal Los Angeles County source receptor area (SRA) 4 and a disturbance value of two acres per day. According to LST Methodology, any receptor located closer than 25 meters (82 feet) shall be based on the 25-meter thresholds. The nearest sensitive receptors to the project site are the single-family residential uses located approximately 165 feet (~50 meters) to the south, 195 feet (~59 meters) to the west, and 275 feet (~84 meters) to the east of the project site.; therefore, the SCAQMD Look-up Tables for 50 meters was used. Table 8 shows the on-site emissions from the CalEEMod model for the different construction phases and the LST emissions thresholds.

The data provided in Table 8 shows that none of the analyzed criteria pollutants would exceed the local emissions thresholds at the nearest sensitive receptors. Therefore, a less than significant local air quality impact would occur from construction of the proposed project.

Construction-Related Human Health Impacts

Regarding health effects related to criteria pollutant emissions, the applicable significance thresholds are established for regional compliance with the state and federal ambient air quality standards, which are intended to protect public health from both acute and long-term health impacts, depending on the potential effects of the pollutant. Because regional and local emissions of criteria pollutants during construction of the project would be below the applicable thresholds, it would not contribute to long-term health impacts related to nonattainment of the ambient air quality standards. Therefore, significant adverse acute health impacts as a result of project construction are not anticipated.

Construction-Related Toxic Air Contaminant Impacts

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed project. According to the Office of Environmental Health Hazard Assessment (OEHHA)[7] and the SCAQMD *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis* (August 2003),[8] health effects from TACs are described in terms of individual cancer risk based on a lifetime (i.e., 30-year) resident exposure duration. Given the temporary and short-term construction schedule (approximately 15 months), the project would not result in a long-term (i.e., lifetime or 30-year) exposure as a result of project construction. Furthermore, construction-based particulate matter (PM) emissions (including diesel exhaust emissions) do not exceed any local or regional thresholds.

The project would comply with the CARB Air Toxics Control Measure that limits diesel powered equipment and vehicle idling to no more than five minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle Regulation; compliance with these would minimize emissions of TACs during construction. The project would also comply with the requirements of SCAQMD Rule 1403 if asbestos is found during the renovation and construction activities. Therefore, impacts from TACs during construction would be less than significant.

Construction-Related Odor Impacts

Potential sources that may emit odors during construction activities include the application of materials such as asphalt pavement. The objectionable odors that may be produced during the construction process are of short-term in nature and the odor emissions are expected to cease upon the drying or hardening of the odor

[7] Office of Environmental Health Hazard Assessment, Air Toxic Hot Spots Program Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessment, February 2015, https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf.

[8] South Coast Air Quality Management District, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, August 2003,http://www.aqmd.gov/docs/default-source/ceqa/handbook/mobile-source-toxics-analysis.doc?sfvrsn=2.

producing materials. Due to the short-term nature and limited amounts of odor producing materials being utilized, no significant impact related to odors would occur during construction of the proposed project. Diesel exhaust and VOCs would be emitted during construction of the project, which are objectionable to some; however, emissions would disperse rapidly from the project site and therefore should not reach an objectionable level at the nearest sensitive receptors.

Table 6
Construction-Related Regional Pollutant Emissions

Activity		Pollutant Emissions (pounds/day)					
		ROG	NOx	CO	SO_2	PM10	PM2.5
Demolition	On-Site[1]	1.47	14.32	13.46	0.02	0.95	0.67
	Off-Site[2]	0.05	0.47	0.58	0.00	0.21	0.06
	Subtotal	1.52	14.79	14.04	0.03	1.15	0.73
Grading	On-Site[1]	1.33	14.47	8.70	0.02	3.37	1.89
	Off-Site[2]	0.04	0.69	0.53	0.00	0.20	0.06
	Subtotal	1.38	15.15	9.24	0.02	3.57	1.95
Building Construction	On-Site[1]	1.71	13.62	14.21	0.03	0.61	0.59
	Off-Site[2]	0.35	1.12	3.73	0.01	1.20	0.33
	Subtotal	2.06	14.74	17.95	0.04	1.82	0.92
Paving	On-Site[1]	0.94	8.10	11.71	0.02	0.40	0.37
	Off-Site[2]	0.05	0.03	0.51	0.00	0.17	0.05
	Subtotal	0.99	8.14	12.21	0.02	0.56	0.41
Architectural Coating	On-Site[1]	39.49	1.22	1.81	0.00	0.06	0.06
	Off-Site[2]	0.06	0.04	0.64	0.00	0.21	0.06
	Subtotal	39.55	1.26	2.45	0.00	0.27	0.12
Total for overlapping phases[3]		42.61	24.14	32.61	0.06	2.65	1.45
SCAQMD Thresholds		75	100	550	150	150	55
Exceeds Thresholds?		No	No	No	No	No	No

Notes:
Source: CalEEMod Version 2020.4.0
(1) On-site emissions from equipment operated on-site that is not operated on public roads. Demolition and on-site grading PM-10 and PM-2.5 emissions show mitigated values for fugitive dust for compliance with SCAQMD Rule 403.
(2) Off-site emissions from equipment operated on public roads.
(3) Construction, painting and paving phases may overlap.

Table 7
Maximum Number of Acres Disturbed Per Day

Activity	Equipment	Number	Acres/8hr-day	Total Acres
Demolition	Rubber Tired Dozers	1	0.5	0.5
	Crawler Tractors1	3	0.5	1.5
Total for phase		-	-	2
Grading	Rubber Tired Dozers	1	0.5	0.5
	Graders	1	0.5	0.5
	Crawler Tractors[1]	2	0.5	1
Total for phase		-	-	2

Notes:
Source: South Coast AQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds, 2011b.
(1) Tractor/loader/backhoe is a suitable surrogate for a crawler tractor per SCAQMD staff.

Table 8
Local Construction Emissions at the Nearest Receptors

Activity	On-Site Pollutant Emissions (pounds/day)			
	NOx	CO	PM10	PM2.5
Demolition	14.32	13.46	0.95	0.67
Grading	14.47	8.70	3.37	1.89
Building Construction	13.62	14.21	0.61	0.59
Paving	8.10	11.71	0.40	0.37
Architectural Coating	1.22	1.81	0.06	0.06
SCAQMD Thresholds[1]	80	1,158	21	7
Exceeds Threshold?	No	No	No	No

Notes:
Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for 2 acres, to be conservative, at a distance of 50 m in SRA 4 South Los Angeles County Coastal.

(1) The nearest sensitive receptors are the single-family residential uses located approximately 165 feet (~50 meters) south, 195 feet (~59 meters) west, and 275 feet (~84 meters) east of the project site; therefore, the 50 meter threshold was used.

Note: The project will disturb up to a maximum of 2 acres a day during demolition and grading (see Table 7).

LONG-TERM OPERATIONAL EMISSIONS

The on-going operation of the proposed project would result in a long-term increase in air quality emissions. This increase would be due to emissions from the project-generated vehicle trips and through operational emissions from the on-going use of the proposed project. The following section provides an analysis of potential long-term air quality impacts due to: regional air quality and local air quality impacts with the on-going operations of the proposed project.

Operations-Related Regional Air Quality Impacts

The potential operations-related air emissions have been analyzed below for the criteria pollutants and cumulative impacts.

Operations-Related Criteria Pollutants Analysis

The operations-related criteria air quality impacts created by the proposed project have been analyzed through the use of the CalEEMod model. The operating emissions were based on the year 2024, which is the anticipated opening for the proposed project. The operations daily emissions printouts from the CalEEMod model are provided in Appendix B. The CalEEMod analyzes operational emissions from area sources, energy usage, and mobile sources, which are discussed below.

Mobile Sources

Mobile sources include emissions from the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project have been analyzed by inputting the project-generated vehicular trips (trip generation rate) from the Sunrise Senior Living Long Beach Project Trip Generation and Distribution Analysis (Trip Generation Analysis) prepared by Ganddini Group, Inc. (October 5, 2021) into the CalEEMod Model. The Trip Generation Analysis found that the proposed project would create approximately 284 vehicle trips per day with a trip generation rate of 2.6 trips per bed per day. As the Assisted Living land use in CalEEMod is only available per dwelling unit, the trip generation rate was converted to 3.3 trips per dwelling unit per day for use in the CalEEMod modeling. The program then applies the emission factors for each trip which is provided by the EMFAC2017 model to determine the vehicular traffic pollutant emissions.

Area Sources

Per the CAPCOA Appendix A Calculation Details for CalEEMod, area sources include emissions from consumer products, landscape equipment and architectural coatings. Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chain saws, and hedge trimmers, as well as air compressors, generators, and pumps. As specifics were not known about the landscaping equipment fleet, CalEEMod defaults were used to estimate emissions from landscaping equipment. No changes were made to the default area source parameters.

Energy Usage

Energy usage includes emissions from the generation of electricity and natural gas used on-site. No changes were made to the default energy usage parameters.

Project Impacts

The worst-case summer or winter criteria pollutant emissions created from the proposed project's long-term operations have been calculated and are shown below in Table 9. The results show that none of the SCAQMD regional thresholds would be exceeded. Therefore, a less than significant regional air quality impact would occur from operation of the proposed project.

Operations-Related Local Air Quality Impacts

Project-related air emissions may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant emissions may not be significant enough to create a regional impact to the South Coast Air Basin. The proposed project has been analyzed for the potential local CO emission impacts from the project-generated vehicular trips and from the potential local air quality impacts from on-site operations. The following analysis analyzes the vehicular CO emissions, local impacts from on-site operations per SCAQMD LST methodology, and odor impacts.

Local CO Emission Impacts from Project-Generated Vehicular Trips

CO is the pollutant of major concern along roadways because the most notable source of CO is motor vehicles. For this reason, CO concentrations are usually indicative of the local air quality generated by a roadway network and are used as an indicator of potential local air quality impacts. Local air quality impacts can be assessed by comparing future without and with project CO levels to the State and Federal CO standards which were presented above.

To determine if the proposed project could cause emission levels in excess of the CO standards discussed above, a sensitivity analysis is typically conducted to determine the potential for CO "hot spots" at a number of intersections in the general project vicinity. Because of reduced speeds and vehicle queuing, "hot spots" potentially can occur at high traffic volume intersections with a Level of Service E or worse.

The analysis prepared for CO attainment in the South Coast Air Basin by the SCAQMD can be used to assist in evaluating the potential for CO exceedances in the South Coast Air Basin. CO attainment was thoroughly analyzed as part of the SCAQMD's 2003 Air Quality Management Plan (2003 AQMP) and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan). As discussed in the 1992 CO Plan, peak carbon monoxide concentrations in the South Coast Air Basin are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections. Considering the region's unique meteorological conditions and the increasingly stringent CO emissions standards, CO modeling was performed as part of 1992 CO Plan and subsequent plan updates and air quality management plans. In the 1992 CO Plan, a CO hot spot analysis was conducted for four busy intersections in Los Angeles at the peak morning and afternoon time periods. The intersections evaluated included: South Long Beach Boulevard and Imperial Highway (Lynwood); Wilshire Boulevard and Veteran Avenue (Westwood); Sunset Boulevard and Highland Avenue (Hollywood); and La Cienega Boulevard and Century Boulevard (Inglewood). These analyses did not predict a violation of CO standards. The busiest intersection evaluated was that at Wilshire Boulevard and Veteran Avenue, which has a daily traffic volume of approximately 100,000 vehicles per day. The Los Angeles County Metropolitan Transportation Authority evaluated the Level of Service in the vicinity of the Wilshire Boulevard/Veteran Avenue intersection and found it to be Level of Service E during the morning peak hour and Level of Service F during the afternoon peak hour.

The Trip Generation Analysis showed that the proposed project would generate a maximum of approximately 284 total daily vehicle trips. The 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan) showed that an intersection which has a daily traffic volume of approximately 100,000 vehicles per day would not violate the CO standard. Therefore, as the project is to generate only 284 daily vehicle trips, intersections would fall short of 100,000 vehicles per day, no CO "hot spot" modeling was performed and no significant long-term air quality impact is anticipated to local air quality with the on-going use of the proposed project.

Local Air Quality Impacts from On-Site Operations

Project-related air emissions from on-site sources such as architectural coatings, landscaping equipment, on-site usage of natural gas appliances as well as the operation of vehicles on-site may have the potential to exceed the State and Federal air quality standards in the project vicinity, even though these pollutant

emissions may not be significant enough to create a regional impact to the Air Basin. The nearest sensitive receptors include the single-family residential uses located approximately 165 feet (~50 meters) to the south, 195 feet (~59 meters) to the west, and 275 feet (~84 meters) to the east of the project site.

According to SCAQMD LST methodology, LSTs would apply to the operational phase of a project, if the project includes stationary sources, or attracts mobile sources (such as heavy-duty trucks) that may spend long periods queuing and idling at the site; such as industrial warehouse/transfer facilities. The proposed project consists of the development of the site with senior assisted living and memory care uses and does not include such uses. Therefore, due the lack of stationary source emissions, no long-term localized significance threshold analysis is warranted.

Operations-Related Human Health Impacts

Regarding health effects related to criteria pollutant emissions, the applicable significance thresholds are established for regional compliance with the state and federal ambient air quality standards, which are intended to protect public health from both acute and long-term health impacts, depending on the potential effects of the pollutant. Because regional and local emissions of criteria pollutants during operation of the project would be below the applicable thresholds, it would not contribute to long-term health impacts related to nonattainment of the ambient air quality standards. Therefore, significant adverse acute health impacts as a result of project operation are not anticipated.

Operations-Related Odor Impacts

Potential sources that may emit odors during the on-going operations of the proposed project would include odor emissions from the intermittent diesel delivery truck emissions and trash storage areas. Due to the distance of the nearest receptors from the project site and through compliance with SCAQMD's Rule 402 no significant impact related to odors would occur during the on-going operations of the proposed project.

Table 9
Regional Operational Pollutant Emissions

Activity	Pollutant Emissions (pounds/day)					
	ROG	NOx	CO	SO2	PM10	PM2.5
Area Sources[1]	2.08	1.37	7.64	0.01	0.14	0.14
Energy Usage[2]	0.03	0.28	0.12	0.00	0.02	0.02
Mobile Sources[3]	0.86	0.94	8.77	0.02	2.06	0.56
Total Emissions	2.97	2.59	16.54	0.03	2.22	0.72
SCAQMD Thresholds	55	55	550	150	150	55
Exceeds Threshold?	No	No	No	No	No	No

Notes:
Source: CalEEMod Version 2020.4.0; the higher of either summer or winter emissions.
(1) Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.
(2) Energy usage consists of emissions from generation of electricity and on-site natural gas usage.
(3) Mobile sources consist of emissions from vehicles and road dust.

CUMULATIVE AIR QUALITY IMPACTS

There are a number of cumulative projects in the project area that have not yet been built or are currently under construction. Since the timing or sequencing of the cumulative projects is unknown, any quantitative analysis to ascertain daily construction emissions that assumes multiple, concurrent construction projects would be speculative. Further, cumulative projects include local development as well as general growth within the project area. However, as with most development, the greatest source of emissions is from mobile sources, which travel well out of the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and when wind patterns are considered would cover an even larger area. The SCAQMD recommends using two different methodologies: (1) that project-specific air quality impacts be used to determine the potential cumulative impacts to regional air quality;[9] and (2) that a project's consistency with the current AQMP be used to determine its potential cumulative impacts.

Project Specific Impacts

The project area is out of attainment for ozone, PM10, and PM2.5. Construction and operation of cumulative projects will further degrade the local air quality, as well as the air quality of the South Coast Air Basin. The greatest cumulative impact on the quality of regional air cell will be the incremental addition of pollutants mainly from increased traffic volumes from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. Air quality will be temporarily degraded during construction activities that occur separately or simultaneously. However, in accordance with the SCAQMD methodology, projects that do not exceed the SCAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant.

Project operations would generate emissions of NOx, ROG, CO, PM10, and PM2.5, which, would not exceed the SCAQMD regional or local thresholds and would not be expected to result in ground level concentrations that exceed the NAAQS or CAAQS. Since the project would not introduce any substantial stationary sources of emissions, CO is the benchmark pollutant for assessing local area air quality impacts from post-construction motor vehicle operations. As indicated earlier, no violations of the state and federal CO standards are projected to occur for the project, based on the magnitude of traffic the project is anticipated to create. Therefore, operation of the project would not result in a cumulatively considerable net increase for non-attainment of criteria pollutants or ozone precursors. As a result, the project would result in a less than significant cumulative impact for operational emissions.

Air Quality Compliance

The California Environmental Quality Act (CEQA) requires a discussion of any inconsistencies between a proposed project and applicable General Plans and Regional Plans (CEQA Guidelines Section 15125). The regional plan that applies to the proposed project includes the SCAQMD Air Quality Management Plan (AQMP). Therefore, this section discusses any potential inconsistencies of the proposed project with the AQMP.

The purpose of this discussion is to set forth the issues regarding consistency with the assumptions and objectives of the AQMP and discuss whether the proposed project would interfere with the region's ability to comply with Federal and State air quality standards. If the decision-makers determine that the proposed project is inconsistent, the lead agency may consider project modifications or inclusion of mitigation to eliminate the inconsistency.

[9] South Coast Air Quality Management District, Potential Control Strategies to Address Cumulative Impacts from Air Pollution White Paper, 1993, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook.

The SCAQMD CEQA Handbook states that "New or amended General Plan Elements (including land use zoning and density amendments), Specific Plans, and significant projects must be analyzed for consistency with the AQMP". Strict consistency with all aspects of the plan is usually not required. A proposed project should be considered to be consistent with the AQMP if it furthers one or more policies and does not obstruct other policies. The SCAQMD CEQA Handbook identifies two key indicators of consistency:

(1) Whether the project will result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.
(2) Whether the project will exceed the assumptions in the AQMP in 2016 or increments based on the year of project buildout and phase.

Both of these criteria are evaluated in the following sections.

Criteria 1 – Increase in the Frequency or Severity of Violations

Based on the air quality modeling analysis contained in this Air Analysis, short-term construction impacts will not result in significant impacts based on the SCAQMD regional and local thresholds of significance. This Air Analysis also found that, long-term operations impacts will not result in significant impacts based on the SCAQMD local and regional thresholds of significance.

Therefore, the proposed project is not projected to contribute to the exceedance of any air pollutant concentration standards and is found to be consistent with the AQMP for the first criterion.

Criteria 2 – Exceed Assumptions in the AQMP?

Consistency with the AQMP assumptions is determined by performing an analysis of the proposed project with the assumptions in the AQMP. The emphasis of this criterion is to ensure that the analyses conducted for the proposed project are based on the same forecasts as the AQMP. The 2016-2040 Regional Transportation/Sustainable Communities Strategy prepared by SCAG (2016) includes chapters on: the challenges in a changing region, creating a plan for our future, and the road to greater mobility and sustainable growth. These chapters currently respond directly to federal and state requirements placed on SCAG. Local governments are required to use these as the basis of their plans for purposes of consistency with applicable regional plans under CEQA. For this project, the City of Long Beach Land Use Plan defines the assumptions that are represented in the AQMP.

The project site is currently designated as Community Commercial (CC) and zoned as Institutional (I) n the City of Long Beach General Plan and Zoning Code. The proposed project involves construction of an 86-unit senior assisted living and memory care facility with 109 beds. As shown in Table LU-6 of the General Plan Land Use Element, the proposed uses are consistent with the Institutional zoning. Therefore, the proposed project is consistent with the City's land use designation. The proposed project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the second criterion.

Based on the above, the proposed project will not result in an inconsistency with the SCAQMD AQMP. Therefore, a less than significant impact will occur.

3. GLOBAL CLIMATE CHANGE ANALYSIS

EXISTING GREENHOUSE GAS ENVIRONMENT

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHG), play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO_2), methane (CH_4), ozone, water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions, followed by electricity generation. Emissions of CO_2 and nitrous oxide (NOx) are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO_2, where CO_2 is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. The following provides a description of each of the greenhouse gases and their global warming potential.

Water Vapor

Water vapor is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. The feedback loop in which water is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to "hold" more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop". The extent to which this positive feedback loop will continue is unknown as there is also dynamics that put the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the Earth's surface and heat it up).

Carbon Dioxide (CO_2)

The natural production and absorption of CO_2 is achieved through the terrestrial biosphere and the ocean. However, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid-1700s. Each of these activities has increased in scale and distribution. CO_2 was the first GHG demonstrated to be increasing in atmospheric concentration with the first conclusive measurements being made in the last half of the 20th century. Prior to the industrial revolution, concentrations were fairly stable at 280 parts per million (ppm). The International Panel on Climate Change (IPCC Fifth Assessment Report, 2014) Emissions of CO_2 from fossil fuel combustion and industrial processes contributed about 78% of the total GHG emissions increase from 1970 to 2010, with a similar percentage contribution for the increase during the period 2000 to 2010. Globally, economic and population growth continued to be the most important drivers of increases in CO_2 emissions from fossil fuel combustion. The contribution of population growth between 2000 and 2010 remained roughly identical to the previous three decades, while the contribution of economic growth has risen sharply.

Methane (CH_4)

CH_4 is an extremely effective absorber of radiation, although its atmospheric concentration is less than that of CO_2. Its lifetime in the atmosphere is brief (10 to 12 years), compared to some other GHGs (such as CO_2, N_2O, and Chlorofluorocarbons (CFCs). CH_4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide (N_2O)

Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration of this GHG was documented at 314 parts per billion (ppb). N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is also commonly used as an aerosol spray propellant, (i.e., in whipped cream bottles, in potato chip bags to keep chips fresh, and in rocket engines and in race cars).

Chlorofluorocarbons (CFC)

CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source, but were first synthesized in 1928. It was used for refrigerants, aerosol propellants, and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and in 1989 the European Community agreed to ban CFCs by 2000 and subsequent treaties banned CFCs worldwide by 2010. This effort was extremely successful, and the levels of the major CFCs are now remaining level or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

Hydrofluorocarbons (HFC)

HFCs are synthetic man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF_3), HFC-134a (CF_3CH_2F), and HFC-152a (CH_3CHF_2). Prior to 1990, the only significant emissions were HFC-23. HFC-134a use is increasing due to its use as a refrigerant. Concentrations of HFC-23 and HFC-134a in the atmosphere are now about 10 parts per trillion (ppt) each. Concentrations of HFC-152a are about 1 ppt. HFCs are manmade for applications such as automobile air conditioners and refrigerants.

Perfluorocarbons (PFC)

PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). Concentrations of CF_4 in the atmosphere are over 70 ppt. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.

Sulfur Hexafluoride (SF_6)

SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 has the highest global warming potential of any gas evaluated; 23,900 times that of CO_2. Concentrations in the 1990s were about 4 ppt. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Aerosols

Aerosols are particles emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Cloud formation can also be affected by aerosols. Sulfate aerosols are emitted when fuel containing sulfur is burned. Black carbon (or soot) is emitted during biomass burning due to the incomplete combustion of fossil fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

Global Warming Potential

The Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of carbon dioxide (CO_2). The larger the GWP, the more that a given gas warms the Earth compared to CO_2 over that time period. The time period usually used for GWPs is 100 years. GWPs provide a common unit of measure, which allows analysts to add up emissions estimates of different gases (e.g., to compile a national GHG inventory), and allows policymakers to compare emissions reduction opportunities across sectors and gases. A summary of the atmospheric lifetime and the global warming potential of selected gases are summarized in Table 10. As shown in Table 10, the global warming potential of GHGs ranges from 1 to 22,800.

Table 10
Global Warming Potentials and Atmospheric Lifetimes

Gas	Atmospheric Lifetime	(100 Year Horizon)
Carbon Dioxide (CO_2)	-- [2]	-- [1]
Methane (CH_4)	12	28-36
Nitrous Oxide (NO)	114	298
Hydrofluorocarbons (HFCs)	1-270	12-14,800
Perfluorocarbons (PFCs)	2,600-50,000	7,390-12,200
Nitrogen trifluoride (NF_3)	740	17,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

Notes:
Source: http://www3.epa.gov/climatechange/ghgemissions/gases.html
(1) Compared to the same quantity of CO_2 emissions.
(2) Carbon dioxide's lifetime is poorly defined because the gas is not destroyed over time, but instead moves among different parts of the ocean–atmosphere–land system. Some of the excess carbon dioxide will be absorbed quickly (for example, by the ocean surface), but some will remain in the atmosphere for thousands of years, due in part to the very slow process by which carbon is transferred to ocean sediments.

GREENHOUSE GAS STANDARDS AND REGULATION

International

Montreal Protocol

In 1988, the United Nations established the Intergovernmental Panel on Climate Change (IPCC) to evaluate the impacts of global climate change and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling GHG emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The plan consists of more than 50 voluntary programs.

Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere—CFCs, halons, carbon tetrachloride, and methyl chloroform—were to be phased out, with the first three by the year 2000 and methyl chloroform by 2005.

The Paris Agreement

The Paris Agreement became effective on November 4, 2016. Thirty days after this date at least 55 Parties to the United Nations Framework Convention on Climate Change (Convention), accounting in total for at least an estimated 55 % of the total global greenhouse gas emissions, had deposited their instruments of ratification, acceptance, approval or accession with the Depositary.

The Paris Agreement built upon the Convention and – for the first time – attempted to bring all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort.

The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. To reach these ambitious goals, appropriate financial flows, a new technology framework and an enhanced capacity building framework will be put in place, thus supporting action by developing countries and the most vulnerable countries, in line with their own national objectives. The Agreement also provides for enhanced transparency of action and support through a more robust transparency framework.

Federal

The United States Environmental Protection Agency (USEPA) is responsible for implementing federal policy to address GHGs. The federal government administers a wide array of public-private partnerships to reduce the GHG intensity generated in the United States. These programs focus on energy efficiency, renewable energy, methane and other non-CO2 gases, agricultural practices, and implementation of technologies to achieve GHG reductions. The USEPA implements numerous voluntary programs that contribute to the reduction of GHG emissions. These programs (e.g., the ENERGY STAR labeling system for energy-efficient products) play a significant role in encouraging voluntary reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

In Massachusetts v. Environmental Protection Agency (Docket No. 05–1120), argued November 29, 2006 and decided April 2, 2007, the U.S. Supreme Court held that not only did the EPA have authority to regulate greenhouse gases, but the EPA's reasons for not regulating this area did not fit the statutory requirements.

As such, the U.S. Supreme Court ruled that the EPA should be required to regulate CO_2 and other greenhouse gases as pollutants under the federal Clean Air Act (CAA).

In response to the FY2008 Consolidations Appropriations Act (H.R. 2764; Public Law 110-161), EPA proposed a rule on March 10, 2009 that requires mandatory reporting of GHG emissions from large sources in the United States. On September 22, 2009, the Final Mandatory Reporting of GHG Rule was signed and published in the Federal Register on October 30, 2009. The rule became effective on December 29, 2009. This rule requires suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions to submit annual reports to EPA.

On December 7, 2009, the EPA Administrator signed two distinct findings under section 202(a) of the Clean Air Act. One is an endangerment finding that finds concentrations of the six GHGs in the atmosphere threaten the public health and welfare of current and future generations. The other is a cause or contribute finding, that finds emissions from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare. These actions will not themselves impose any requirements on industry or other entities. However, it is a prerequisite to finalizing the EPA's proposed GHG emission standards for light-duty vehicles, which were jointly proposed by the EPA and Department of Transportation on September 15, 2009.

Clean Air Act

In Massachusetts v. Environmental Protection Agency (Docket No. 05–1120), the U.S. Supreme Court held in April of 2007 that the USEPA has statutory authority under Section 202 of the federal Clean Air Act (CAA) to regulate GHGs. The court did not hold that the USEPA was required to regulate GHG emissions; however, it indicated that the agency must decide whether GHGs cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare. On December 7, 2009, the USEPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA. The USEPA adopted a Final Endangerment Finding for the six defined GHGs (CO2, CH4, N2O, HFCs, PFCs, and SF6) on December 7, 2009. The Endangerment Finding is required before USEPA can regulate GHG emissions under Section 202(a)(1) of the CAA consistently with the United States Supreme Court decision. The USEPA also adopted a Cause or Contribute Finding in which the USEPA Administrator found that GHG emissions from new motor vehicle and motor vehicle engines are contributing to air pollution, which is endangering public health and welfare. These findings do not, by themselves, impose any requirements on industry or other entities. However, these actions were a prerequisite for implementing GHG emissions standards for vehicles.

Energy Independence Security Act

The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and
- While superseded by the USEPA and NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks and (ii) directing the NHTSA to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of green jobs.[10]

Executive Order 13432

In response to the Massachusetts v. Environmental Protection Agency ruling, the President signed Executive Order 13432 on May 14, 2007, directing the USEPA, along with the Departments of Transportation, Energy, and Agriculture, to initiate a regulatory process that responds to the Supreme Court's decision. Executive Order 13432 was codified into law by the 2009 Omnibus Appropriations Law signed on February 17, 2009. The order sets goals in the areas of energy efficiency, acquisition, renewable energy, toxics reductions, recycling, sustainable buildings, electronics stewardship, fleets, and water conservation. Light-Duty Vehicle Greenhouse Gas and Corporate Average Fuel Economy Standards.

On May 19, 2009, President Obama announced a national policy for fuel efficiency and emissions standards in the United States auto industry. The adopted federal standard applies to passenger cars and light-duty trucks for model years 2012 through 2016. The rule surpasses the prior Corporate Average Fuel Economy standards (CAFE)[11] and requires an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO2 per mile by model year 2016, based on USEPA calculation methods. These standards were formally adopted on April 1, 2010. In August 2012, standards were adopted for model year 2017 through 2025 for passenger cars and light-duty trucks. By 2025, vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO2 per mile. According to the USEPA, a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010 vehicle.[12] In 2017, the USEPA recommended no change to the GHG standards for light-duty vehicles for model years 2022-2025.

Issued by NHTSA and EPA in March 2020 (published on April 30, 2020 and effective after June 29, 2020), the Safer Affordable Fuel-Efficient Vehicles Rule would maintain the CAFE and CO2 standards applicable in model year 2020 for model years 2021 through 2026. The estimated CAFE and CO2 standards for model year 2020 are 43.7 mpg and 204 grams of CO2 per mile for passenger cars and 31.3 mpg and 284 grams of CO2 per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012. This Rule also excludes CO2- equivalent emission improvements associated with air conditioning refrigerants and leakage (and, optionally, offsets for nitrous oxide and methane emissions) after model year 2020.[13]

On May 12, 2021, the National Highway Traffic Safety Administration (NHTSA) published a notice of proposed rulemaking in the Federal Register, proposing to repeal "The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program," published Sept. 27, 2019 (SAFE I Rule), in which NHTSA codified regulatory text and made additional pronouncements regarding the preemption of state and local laws related to fuel economy standards. Specifically, this document proposes to fully repeal the regulatory text and appendices promulgated in the SAFE I Rule. In addition, this document proposes to repeal and

[10] A green job, as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.

[11] The Corporate Average Fuel Economy standards are regulations in the United States, first enacted by Congress in 1975, to improve the average fuel economy of cars and light trucks. The U.S Department of Transportation has delegated the National Highway Traffic Safety Administration as the regulatory agency for the Corporate Average Fuel Economy standards.

[12] United States Environmental Protection Agency, EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks, August 2012, https://nepis.epa.gov/Exe/ZyPDF.cgi/P100EZ7C.PDF?Dockey=P100EZ7C.PDF.

[13] National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA), 2018. Federal Register / Vol. 83, No. 165 / Friday, August 24, 2018 / Proposed Rules, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks 2018. Available at: https://www.gpo.gov/fdsys/pkg/FR-2018-08-24/pdf/2018-16820.pdf.

withdraw the interpretative statements made by the Agency in the SAFE I Rule preamble, including those regarding the preemption of particular state Greenhouse Gas (GHG) Emissions standards or Zero Emissions Vehicle (ZEV) mandates. As such, this document proposes to establish a clean slate with respect to NHTSA's regulations and interpretations concerning preemption under the Energy Policy and Conservation Act (EPCA).[14]

State of California

California Air Resources Board

CARB, a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets state ambient air quality standards (California Ambient Air Quality Standards [CAAQS]), compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

In 2004, the California Air Resources Board (CARB) adopted an Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other toxic air contaminants (Title 13 California Code of Regulations [CCR], Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure generally does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given location with certain exemptions for equipment in which idling is a necessary function such as concrete trucks. While this measure primarily targets diesel particulate matter emissions, it has co-benefits of minimizing GHG emissions from unnecessary truck idling.

In 2008, CARB approved the Truck and Bus regulation to reduce particulate matter and nitrogen oxide emissions from existing diesel vehicles operating in California (13 CCR, Section 2025, subsection (h)). CARB has also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation, adopted by the CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models. While these regulations primarily target reductions in criteria air pollutant emission, they have co-benefits of minimizing GHG emissions due to improved engine efficiencies.

The State currently has no regulations that establish ambient air quality standards for GHGs. However, the State has passed laws directing CARB to develop actions to reduce GHG emissions, which are listed below.

Assembly Bill 1493

California Assembly Bill 1493 enacted on July 22, 2002, required the CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In 2005, the CARB submitted a "waiver" request to the EPA from a portion of the federal Clean Air Act in order to allow the State to set more stringent tailpipe emission standards for CO_2 and other GHG emissions from passenger vehicles and light duty trucks. On December 19, 2007 the EPA announced that it denied the "waiver" request. On January 21, 2009, CARB submitted a letter to the EPA administrator regarding the State's request to reconsider the waiver denial. The EPA approved the waiver on June 30, 2009. After adopting these initial greenhouse gas standards for passenger vehicles, CARB adopted continuing standards for future model years.

[14] https://www.federalregister.gov/documents/2021/05/12/2021-08758/corporate-average-fuel-economy-cafe-preemption.

Executive Order S-3-05

The California Governor issued Executive Order S-3-05, GHG Emission, in June 2005, which established the following reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels;
- By 2020, California shall reduce GHG emissions to 1990 levels; and
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

The Executive Order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. To comply with the Executive Order, the secretary of CalEPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of businesses, local governments, and communities and through State incentive and regulatory programs.

Assembly Bill 32 (California Health and Safety Code, Division 25.5 – California Global Warming Solutions Act of 2006)

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (codified in the California Health and Safety Code [HSC], Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. HSC Division 25.5 defines GHGs as CO2, CH4, N2O, HFCs, PFCs, and SF6 and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under HSC Division 25.5, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing state actions that would achieve GHG emissions reductions equivalent to 1990 statewide levels by 2020.

Senate Bill 32 and Assembly Bill 197

In 2016, the California State Legislature adopted Senate Bill (SB) 32 and its companion bill AB 197, and both were signed by Governor Brown. SB 32 and AB 197 amends HSC Division 25.5 and establishes a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and includes provisions to ensure the benefits of state climate policies reach into disadvantaged communities.

Climate Change Scoping Plan (2008)

A specific requirement of AB 32 was to prepare a Climate Change Scoping Plan for achieving the maximum technologically feasible and cost-effective GHG emission reduction by 2020 (Health and Safety Code section 38561 (h)). CARB developed an AB 32 Scoping Plan that contains strategies to achieve the 2020 emissions cap. The initial Scoping Plan was approved in 2008, and contains a mix of recommended strategies that combined direct regulations, market-based approaches, voluntary measures, policies, and other emission reduction programs calculated to meet the 2020 statewide GHG emission limit and initiate the transformations needed to achieve the State's long-range climate objectives.

As required by HSC Division 25.5, CARB approved the 1990 GHG emissions inventory, thereby establishing the emissions limit for 2020. The 2020 emissions limit was originally set at 427 MMTCO2e using the GWP values from the IPCC SAR. CARB also projected the state's 2020 GHG emissions under no-action-taken (NAT) conditions – that is, emissions that would occur without any plans, policies, or regulations to reduce GHG emissions. CARB originally used an average of the state's GHG emissions from 2002 through 2004 and projected the 2020 levels at approximately 596 MMTCO2e (using GWP values from the IPCC SAR).

Therefore, under the original projections, the state must reduce its 2020 NAT emissions by 28.4 percent in order to meet the 1990 target of 427 MMTCO2e.

First Update to the Climate Change Scoping Plan (2014)

The First Update to the Scoping Plan was approved by CARB in May 2014 and builds upon the initial Scoping Plan with new strategies and recommendations. In 2014, CARB revised the target using the GWP values from the IPCC AR4 and determined that the 1990 GHG emissions inventory and 2020 GHG emissions limit is 431 MMTCO2e. CARB also updated the State's 2020 NAT emissions estimate to account for the effect of the 2007–2009 economic recession, new estimates for future fuel and energy demand, and the reductions required by regulation that were recently adopted for motor vehicles and renewable energy. CARB's projected statewide 2020 emissions estimate using the GWP values from the IPCC AR4 is 509.4 MMTCO2e.

2017 Climate Change Scoping Plan

In response to the 2030 GHG reduction target, CARB adopted the 2017 Climate Change Scoping Plan at a public meeting held in December 2017. The 2017 Scoping Plan outlines the strategies the State will implement to achieve the 2030 GHG reduction target of 40 percent below 1990 levels. The 2017 Scoping Plan also addresses GHG emissions from natural and working lands of California, including the agriculture and forestry sectors. The 2017 Scoping Plan considered the Scoping Plan Scenario and four alternatives for achieving the required GHG reductions but ultimately selected the Scoping Plan Scenario.

CARB states that the Scoping Plan Scenario "is the best choice to achieve the State's climate and clean air goals."[15] Under the Scoping Plan Scenario, the majority of the reductions would result from the continuation of the Cap-and-Trade regulation. Additional reductions are achieved from electricity sector standards (i.e., utility providers to supply at least 50 percent renewable electricity by 2030), doubling the energy efficiency savings at end uses, additional reductions from the LCFS, implementing the short-lived GHG strategy (e.g., hydrofluorocarbons), and implementing the mobile source strategy and sustainable freight action plan. The alternatives were designed to consider various combinations of these programs, as well as consideration of a carbon tax in the event the Cap-and-Trade regulation is not continued. However, in July 2017, the California Legislature voted to extend the Cap-and-Trade regulation to 2030. Implementing this Scoping Plan will ensure that California's climate actions continue to promote innovation, drive the generation of new jobs, and achieve continued reductions of smog and air toxics. The ambitious approach draws on a decade of successful programs that address the major sources of climate-changing gases in every sector of the economy:

- More Clean Cars and Trucks: The plan sets out far-reaching programs to incentivize the sale of millions of zero-emission vehicles, drive the deployment of zero-emission trucks, and shift to a cleaner system of handling freight statewide.
- Increased Renewable Energy: California's electric utilities are ahead of schedule meeting the requirement that 33 percent of electricity come from renewable sources by 2020. The Scoping Plan guides utilities to 50 percent renewables, as required under SB 350.
- Slashing Super-Pollutants: The plan calls for a significant cut in super-pollutants such as methane and HFC refrigerants, which are responsible for as much as 40 percent of global warming.
- Cleaner Industry and Electricity: California's renewed cap-and-trade program extends the declining cap on emissions from utilities and industries and the carbon allowance auctions. The auctions will continue to fund investments in clean energy and efficiency, particularly in disadvantaged communities.

[15] California Air Resources Board, California's 2017 Climate Change Scoping Plan, November 2017, https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

- Cleaner Fuels: The Low Carbon Fuel Standard will drive further development of cleaner, renewable transportation fuels to replace fossil fuels.
- Smart Community Planning: Local communities will continue developing plans which will further link transportation and housing policies to create sustainable communities.
- Improved Agriculture and Forests: The Scoping Plan also outlines innovative programs to account for and reduce emissions from agriculture, as well as forests and other natural lands.

The 2017 Scoping Plan also evaluates reductions of smog-causing pollutants through California's climate programs.

SB 32, Pavley. California Global Warming Solutions Act of 2006

(1) The California Global Warming Solutions Act of 2006 designates the State Air Resources Board as the state agency charged with monitoring and regulating sources of emissions of greenhouse gases. The state board is required to approve a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions level in 1990 to be achieved by 2020 and to adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective greenhouse gas emissions reductions. This bill would require the state board to ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030.
(2) This bill would become operative only if AB 197 of the 2015–16 Regular Session is enacted and becomes effective on or before January 1, 2017. AB 197 requires that the California Air Resources Board, which directs implementation of emission-reduction programs, should target direct reductions at both stationary and mobile sources. AB 197 of the 2015-2016 Regular Session was approved on September 8, 2016.

Executive Order S-1-07

Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs the CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009 CARB approved the proposed regulation to implement the low carbon fuel standard and began implementation on January 1, 2011. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. CARB approved some amendments to the LCFS in December 2011, which were implemented on January 1, 2013. In September 2015, the Board approved the re-adoption of the LCFS, which became effective on January 1, 2016, to address procedural deficiencies in the way the original regulation was adopted. In 2018, the Board approved amendments to the regulation, which included strengthening and smoothing the carbon intensity benchmarks through 2030 in-line with California's 2030 GHG emission reduction target enacted through SB 32, adding new crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector.

The LCFS is designed to encourage the use of cleaner low-carbon transportation fuels in California, encourage the production of those fuels, and therefore, reduce GHG emissions and decrease petroleum dependence in the transportation sector. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are "back-loaded", with more reductions required in the last five years, than during the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that

compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

Senate Bill 97

Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to the CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Natural Resources Agency was required to certify and adopt those guidelines by January 1, 2010.

Pursuant to the requirements of SB 97 as stated above, on December 30, 2009, the Natural Resources Agency adopted amendments to the state CEQA guidelines that address GHG emissions. The CEQA Guidelines Amendments changed 14 sections of the CEQA Guidelines and incorporate GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance were provided and no specific mitigation measures were identified. The GHG emission reduction amendments went into effect on March 18, 2010, and are summarized below:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that "to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation".
- OPR's emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.
- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

Senate Bill 100

Senate Bill 100 (SB 100) requires 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. SB 100 was adopted September 2018.

The interim thresholds from prior Senate Bills and Executive Orders would also remain in effect. These include Senate Bill 1078 (SB 1078), which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) which changed the target date to 2010. Executive Order S-14-08, which was signed on November 2008 and expanded the State's Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed the CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

Senate Bill 375

Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). The CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. The CARB is also charged with reviewing each MPO's sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

The proposed project is located within the Southern California Association of Governments (SCAG) jurisdiction, which has authority to develop the SCS or APS. For the SCAG region, the targets set by the CARB are at eight percent below 2005 per capita GHG emissions levels by 2020 and 19 percent below 2005 per capita GHG emissions levels by 2035. These reduction targets became effective October 2018.

Senate Bill X7-7

Senate Bill X7-7 (SB X7-7), enacted on November 9, 2009, mandates water conservation targets and efficiency improvements for urban and agricultural water suppliers. SB X7-7 requires the Department of Water Resources (DWR) to develop a task force and technical panel to develop alternative best management practices for the water sector. In addition, SB X7-7 required the DWR to develop criteria for baseline uses for residential, commercial, and industrial uses for both indoor and landscaped area uses. The DWR was also required to develop targets and regulations that achieve a statewide 20 percent reduction in water usage.

Assembly Bill 939 and Senate Bill 1374

Assembly Bill 939 (AB 939) requires that each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. Senate Bill 1374 (SB 1374) requires the California Integrated Waste Management Board to adopt a model ordinance by March 1, 2004, suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills.

California Code of Regulations (CCR) Title 24, Part 6

CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The Energy Commission adopted 2008 Standards on April 23, 2008, and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. CalEEMod modeling defaults to 2008 standards. 2013 Standards were approved and have been effective since July 1, 2014. 2016 Standards were adopted January 1, 2017. 2019 standards were published July 1, 2019 and became effective January 1, 2020. All buildings for which an application for a building permit is submitted on or after January 1, 2020 must follow the 2019 standards. The 2016 residential standards were estimated to be approximately 28 percent more efficient than the 2013 standards, whereas the 2019 residential standards are estimated to be approximately 7 percent more efficient than the 2016 standards. Furthermore, once rooftop solar electricity generation is factored in, 2019 residential standards are estimated to be approximately 53 percent more efficient than the 2016 standards. Under the 2019 standards, nonresidential buildings are estimated to be approximately 30 percent more efficient than the 2016 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

Per Section 100 Scope, the 2019 Title 24, Part 6 Building Code now requires healthcare facilities, such as assisted living facilities, hospitals, and nursing homes, to meet documentation requirements of Title 24, Part 1 Chapter 7 – Safety Standards for Health Facilities. A healthcare facility is defined as any building or portion thereof licensed pursuant to California Health and Safety Code Division 2, Chapter 1, Section 1204 or Chapter 2, Section 1250.

Section 120.1 Ventilation and Indoor Air Quality included both additions and revisions in the 2019 Code. This section now requires nonresidential and hotel/motel buildings to have air filtration systems that use forced air ducts to supply air to occupiable spaces to have air filters. Further, the air filter efficiency must be either MERV 13 or use a particle size efficiency rating specific in the Energy Code AND be equipped with air filters with a minimum 2-inch depth or minimum 1-inch depth if sized according to the equation 120.1-A. If natural ventilation is to be used the space must also use mechanical unless ventilation openings are either permanently open or controlled to stay open during occupied times. The 2019 version of the Code also completely revised the minimum ventilation requirements including DVC airflow rates within Section 120.1 Table 120.1–A. Table 120.1-A now includes air classification and recirculation limitations, these are based on either the number of occupants or the CFM/ft^2 (cubic feet per minute per square foot), whichever is greater.

Section 120.1 Ventilation and Indoor Air Quality also included additions for high-rise residential buildings. Requirements include that mechanical systems must provide air filters that and that air filters must be MERV 13 or use a particle size efficiency rating specified in the Energy Code. Window operation is no longer a method allowed to meet ventilation requirements, continuous operation of central forced air system handlers used in central fan integrated ventilation system is not a permissible method of providing the dwelling unit ventilation airflow, and central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow to each dwelling unit. In addition, requirements for kitchen range hoods were also provided in the updated Section 120.1.

Per Section 120.1(a) healthcare facilities must be ventilated in accordance with Chapter 4 of the California Mechanical Code and are NOT required to meet the ventilations requirements of Title 24, Part 6.

Section 140.4 Space Conditioning Systems included both additions and revisions within the 2019 Code. The changes provided new requirements for cooling tower efficiency, new chilled water-cooling system requirements, as well as new formulas for calculating allowed fan power. Section 140.4(n) also provide a new exception for mechanical system shut-offs for high-rise multifamily dwelling units, while Section 140.4(o) added new requirements for conditioned supply air being delivered to space with mechanical exhaust.

Section 120.6 Covered Processes added information in regards to adiabatic chiller requirements that included that all condenser fans for air-cooled converseness, evaporative-cooled condensers, adiabatic condensers, gas coolers, air or water fluid coolers or cooling towers must be continuously variable speed,

with the speed of all fans serving a common condenser high side controlled in unison .Further, the mid-condensing setpoint must be 70 degrees Fahrenheit for all of the above mentioned systems.

New regulations were also adopted under Section 130.1 Indoor Lighting Controls. These included new exceptions being added for restrooms, the exception for classrooms being removed, as well as exceptions in regard to sunlight provided through skylights and overhangs.

Section 130.2 Outdoor Lighting Controls and Equipment added automatic scheduling controls which included that outdoor lighting power must be reduced by 50 to 90 percent, turn the lighting off during unoccupied times and have at least two scheduling options for each luminaire independent from each other and with a 2-hour override function. Furthermore, motion sensing controls must have the ability to reduce power within 15 minutes of area being vacant and be able to come back on again when occupied. An exception allows for lighting subject to a health or life safety statute, ordinance, or regulation may have a minimum time-out period longer than 15 minutes or a minimum dimming level above 50% when necessary to comply with the applicable law.

California Code of Regulations (CCR) Title 24, Part 11 (California Green Building Standards)

On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011.

2016 CALGreen Code: The 2016 residential standards were estimated to be approximately 28 percent more efficient than the 2013 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions. During the 2016-2017 fiscal year, the Department of Housing and Community Development (HCD) updated CALGreen through the 2015 Triennial Code Adoption Cycle.

HCD also increased the required construction waste reduction from 50 percent to 65 percent of the total building site waste. This increase aids in meeting CalRecycle's statewide solid waste recycling goal of 75 percent for 2020 as stated in Chapter 476, Statutes of 2011 (AB 341). HCD adopted new regulations requiring recycling areas for multifamily projects of five or more dwelling units. This regulation requires developers to provide readily accessible areas adequate in size to accommodate containers for depositing, storage and collection of non-hazardous materials (including organic waste) for recycling. This requirement assists businesses that were required as of April 1, 2016, to meet the requirements of Chapter 727, Statutes of 2014 (AB 1826).

HCD adopted new regulations to require information on photovoltaic systems and electric vehicle chargers to be included in operation and maintenance manuals. Currently, CALGreen section 4.410.1 Item 2(a) requires operation and maintenance instructions for equipment and appliances. Photovoltaic systems and electric vehicle chargers are systems that play an important role in many households in California, and their importance is increasing every day. HCD incorporated these two terms in the existing language in order to provide clarity to code users as to additional systems requiring operation and maintenance instructions.

HCD updated the reference to Clean Air Standards of the United States Environmental Protection Agency applicable to woodstoves and pellet stoves. HCD also adopted a new requirement for woodstoves and pellet stoves to have a permanent label indicating they are certified to meet the emission limits. This requirement provides clarity to the code user and is consistent with the United States Environmental Protection Agency's New Source Performance Standards. HCD updated the list of standards which can be used for verification of compliance for exterior grade composite wood products. This list now includes four standards from the Canadian Standards Association (CSA): CSA O121, CSA O151, CSA O153 and CSA O325. HCD updated heating and air-conditioning system design references to the ANSI/ACCA 2 Manual J, ANSI/ACCA 1 Manual D, and ANSI/ACCA 3 Manual S to the most recent versions approved by ANSI. HCD adopted a new elective measure for hot water recirculation systems for water conservation. The United

States Department of Energy estimates that 3,600 to 12,000 gallons of water per year can be saved by the typical household (with four points of hot water use) if a hot water recirculation system is installed.

2019 CALGreen Code: During the 2019-2020 fiscal year, the Department of Housing and Community Development (HCD) updated CALGreen through the 2019 Triennial Code Adoption Cycle.

HCD modified the best management practices for stormwater pollution prevention adding Section 5.106.2 for projects that disturb one or more acres of land. This section requires projects that disturb one acre or more of land or less than one acre of land but are part of a larger common plan of development or sale must comply with the postconstruction requirement detailed in the applicable National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities issued by the State Water Resources Control Board. The NPDES permits require postconstruction runoff (post-project hydrology) to match the preconstruction runoff pre-project hydrology) with installation of postconstruction stormwater management measures.

HCD added sections 5.106.4.1.3 and 5.106.4.1.5 in regard to bicycle parking. Section 5.106.4.1.3 requires new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility. In addition, Section 5.106.4.1.5 states that acceptable bicycle parking facility for Sections 5.106.4.1.2 through 5.106.4.1.4 shall be convenient from the street and shall meeting one of the following: (1) covered, lockable enclosures with permanently anchored racks for bicycles; (2) lockable bicycle rooms with permanently anchored racks; or (3) lockable, permanently anchored bicycle lockers.

HCD amended section 5.106.5.3.5 allowing future charging spaces to qualify as designated parking for clean air vehicles.

HCD updated section 5.303.3.3 in regard to showerhead flow rates. This update reduced the flow rate to 1.8 GPM.

HCD amended section 5.304.1 for outdoor potable water use in landscape areas and repealed sections 5.304.2 and 5.304.3. The update requires nonresidential developments to comply with a local water efficient landscape ordinance or the current California Department of Water Resource's' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent. Some updates were also made in regard to the outdoor potable water use in landscape areas for public schools and community colleges.

HCD updated Section 5.504.5.3 in regard to the use of MERV filters in mechanically ventilated buildings. This update changed the filter use from MERV 8 to MERV 13. MERV 13 filters are to be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.

Executive Order B-30-15

On April 29, 2015, Governor Brown issued Executive Order B-30-15. Therein, the Governor directed the following:

- Established a new interim statewide reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030.
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

Executive Order B-29-15

Executive Order B-29-15, mandates a statewide 25 percent reduction in potable water usage. EO B-29-15 signed into law on April 1, 2015.

Executive Order B-37-16

Executive Order B-37-16, continuing the State's adopted water reductions, was signed into law on May 9, 2016. The water reductions build off the mandatory 25 percent reduction called for in EO B-29-15.

Executive Order N-79-20

Executive Order N-79-20 Signed in September 2020, Executive Order N-79-20 establishes as a goal that where feasible, all new passenger cars and trucks, as well as all drayage/cargo trucks and off-road vehicles and equipment, sold in California, will be zero-emission by 2035. The executive order sets a similar goal requiring that all medium and heavy-duty vehicles will be zero-emission by 2045 where feasible. It also directs CARB to develop and propose rulemaking for passenger vehicles and trucks, medium-and heavy-duty fleets where feasible, drayage trucks, and off-road vehicles and equipment "requiring increasing volumes" of new zero emission vehicles (ZEVs) "towards the target of 100 percent." The executive order directs the California Environmental Protection Agency, the California Geologic Energy Management Division (CalGEM), and the California Natural Resources Agency to transition and repurpose oil production facilities with a goal toward meeting carbon neutrality by 2045. Executive Order N-79-20 builds upon the CARB Advanced Clean Trucks regulation, which was adopted by CARB in July 2020.

SBX1 2

Signed into law in April 2011, SBX1 2, requires one-third of the State's electricity to come from renewable sources. The legislation increases California's current 20 percent renewables portfolio standard target in 2010 to a 33 percent renewables portfolio standard by December 31, 2020.

Senate Bill 350

Signed into law October 7, 2015, SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of Renewables Portfolio Standard (RPS) eligible resources, including solar, wind, biomass, geothermal, and others. In addition, SB 350 requires the state to double statewide energy efficiency savings in electricity and natural gas end uses by 2030. To help ensure these goals are met and the greenhouse gas emission reductions are realized, large utilities will be required to develop and submit Integrated Resource Plans (IRPs). These IRPs will detail how each entity will meet their customers resource needs, reduce greenhouse gas emissions and ramp up the deployment of clean energy resources.

Energy Sector and CEQA Guidelines Appendix F

The CEC first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically (typically every three years) to allow for the consideration and inclusion of new energy efficiency technologies and methods. The 2016 update to the Energy Efficiency Standards for Residential and Nonresidential Buildings focuses on several key areas to improve the energy efficiency of renovations and addition to existing buildings as well as newly constructed buildings and renovations and additions to existing buildings. The major efficiency improvements to the residential Standards involve improvements for attics, walls, water heating, and lighting, whereas the major efficiency improvements to the nonresidential Standards include alignment with

the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) 90.1-2013 national standards. Furthermore, the 2016 update required that enforcement agencies determine compliance with CCR, Title 24, Part 6 before issuing building permits for any construction.[16]

Part 11 of the Title 24 Building Energy Efficiency Standards is referred to as the California Green Building Standards (CALGreen) Code. The purpose of the CALGreen Code is to "improve public health, safety and general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories: (1) Planning and design; (2) Energy efficiency; (3) Water efficiency and conservation; (4) Material conservation and resource efficiency; and (5) Environmental air quality."[17] As of January 1, 2011, the CALGreen Code is mandatory for all new buildings constructed in the state. The CALGreen Code establishes mandatory measures for new residential and non-residential buildings. Such mandatory measures include energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code was most recently updated in 2019 to include new mandatory measures for residential and nonresidential uses; the new measures took effect on January 1, 2020.

Regional – South Coast Air Quality Management District

The project is within the South Coast Air Basin, which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

SCAQMD Regulation XXVII, Climate Change

SCAQMD Regulation XXVII currently includes three rules:

- The purpose of Rule 2700 is to define terms and post global warming potentials.
- The purpose of Rule 2701, SoCal Climate Solutions Exchange, is to establish a voluntary program to encourage, quantify, and certify voluntary, high quality certified greenhouse gas emission reductions in the SCAQMD.
- Rule 2702, Greenhouse Gas Reduction Program, was adopted on February 6, 2009. The purpose of this rule is to create a Greenhouse Gas Reduction Program for greenhouse gas emission reductions in the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

A variety of agencies have developed greenhouse gas emission thresholds and/or have made recommendations for how to identify a threshold. However, the thresholds for projects in the jurisdiction of the SCAQMD remain in flux. The California Air Pollution Control Officers Association explored a variety of threshold approaches but did not recommend one approach (2008). The ARB recommended approaches for setting interim significance thresholds (California Air Resources Board 2008b), in which a draft industrial project threshold suggests that non-transportation related emissions under 7,000 MTCO2e per year would be less than significant; however, the ARB has not approved those thresholds and has not published anything since then. The SCAQMD is in the process of developing thresholds, as discussed below.

SCAQMD Threshold Development

On December 5, 2008, the SCAQMD Governing Board adopted an interim greenhouse gas significance threshold for stationary sources, rules, and plans where the SCAQMD is lead agency (SCAQMD permit threshold). The SCAQMD permit threshold consists of five tiers. However, the SCAQMD is not the lead agency for this project. Therefore, the five permit threshold tiers do not apply to the proposed project.

[16] California Energy Commission, 2016 Building Energy Efficiency Standards, June 2015, http://www.energy.ca.gov/2015publications/CEC-400-2015-037/CEC-400-2015-037-CMF.pdf.

[17] California Building Standards Commission, 2010 California Green Building Standards Code, (2010).

The SCAQMD is in the process of preparing recommended significance thresholds for greenhouse gases for local lead agency consideration ("SCAQMD draft local agency threshold"); however, the SCAQMD Board has not approved the thresholds as of the date of the Notice of Preparation. The current draft thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a greenhouse gas reduction plan. If a project is consistent with a qualifying local greenhouse gas reduction plan, it does not have significant greenhouse gas emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to a project's operational emissions. If a project's emissions are under one of the following screening thresholds, then the project is less than significant:
  - All land use types: 3,000 MTCO2e per year
  - Based on land use type: residential: 3,500 MTCO2e per year; commercial: 1,400 MTCO2e per year; or mixed use: 3,000 MTCO2e per year.
  - Based on land type: Industrial (where SCAQMD is the lead agency), 10,000 MTCO2e per year.
- Tier 4 has the following options:
  - Option 1: Reduce emissions from business as usual (BAU) by a certain percentage; this percentage is currently undefined.
  - Option 2: Early implementation of applicable AB 32 Scoping Plan measures.
  - Option 3: 2020 target for service populations (SP), which includes residents and employees: 4.8 MTCO2e/SP/year for projects and 6.6 MTCO2e/SP/year for plans;
  - Option 3: 2035 target: 3.0 MTCO2e/SP/year for projects and 4.1 MTCO2e/SP/year for plans.
- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD's draft threshold uses the Executive Order S-3-05 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap carbon dioxide concentrations at 450 ppm, thus stabilizing global climate. Specifically, the Tier 3 screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects. A 90 percent emission capture rate means that 90 percent of total emissions from all new or modified stationary source projects would be subject to a CEQA analysis, including a negative declaration, a mitigated negative declaration, or an environmental impact report, which includes analyzing feasible alternatives and imposing feasible mitigation measures. A GHG significance threshold based on a 90 percent emission capture rate may be more appropriate to address the long-term adverse impacts associated with global climate change because most projects will be required to implement GHG reduction measures. Further, a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. This assertion is based on the fact that staff estimates that these GHG emissions would account for slightly less than one percent of future 2050 statewide GHG emissions target (85 MMTCO2eq/year). In addition, these small projects may be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory. Finally, these small sources are already subject to BACT for criteria pollutants and are more likely to be single-permit facilities, so they are more likely to have few opportunities readily available to reduce GHG emissions from other parts of their facility.

SCAQMD Working Group

Since neither the CARB nor the OPR has developed GHG emissions threshold, the SCAQMD formed a Working Group to develop significance thresholds related to GHG emissions. At the September 28, 2010

Working Group meeting, the SCAQMD released its most current version of the draft GHG emissions thresholds, which recommends a tiered approach that provides a quantitative annual threshold of 10,000 MTCO2e for industrial uses.

In order to assist local agencies with direction on GHG emissions, the SCAQMD organized a working group and adopted Rules 2700, 2701, 2702, and 3002 which are described below.

SCAQMD Rules 2700 and 2701

The SCAQMD adopted Rules 2700 and 2701 on December 5, 2008, which establishes the administrative structure for a voluntary program designed to quantify GHG emission reductions. Rule 2700 establishes definitions for the various terms used in Regulation XXVII – Global Climate Change. Rule 2701 provides specific protocols for private parties to follow to generate certified GHG emission reductions for projects within the district. Approved protocols include forest projects, urban tree planting, and manure management. The SCAQMD is currently developing additional protocols for other reduction measures. For a GHG emission reduction project to qualify, it must be verified and certified by the SCAQMD Executive Officer, who has 60 days to approve or deny the Plan to reduce GHG emissions. Upon approval of the Plan, the Executive Officer issues required to issue a certified receipt of the GHG emission reductions within 90 days.

SCAQMD Rule 2702

The SCAQMD adopted Rule 2702 on February 6, 2009, which establishes a voluntary air quality investment program from which SCAQMD can collect funds from parties that desire certified GHG emission reductions, pool those funds, and use them to purchase or fund GHG emission reduction projects within two years, unless extended by the Governing Board. Priority will be given to projects that result in co-benefit emission reductions of GHG emissions and criteria or toxic air pollutants within environmental justice areas. Further, this voluntary program may compete with the cap-and-trade program identified for implementation in CARB's Scoping Plan, or a Federal cap and trade program.

SCAQMD Rule 3002

The SCAQMD amended Rule 3002 on November 5, 2010 to include facilities that emit greater than 100,000 tons per year of CO_2e are required to apply for a Title V permit by July 1, 2011. A Title V permit is for facilities that are considered major sources of emissions.

Local – City of Long Beach

City of Long Beach Climate Action and Adaptation Plan (CAAP)

The City released the proposed Climate Action and Adaptation Plan (CAAP) in November of 2020. The proposed plan was to be considered by the Long Beach City Council, on January 5, 2021, following with the CEQA review process. Final adoption is anticipated Fall 2021, after completion of the environmental review.

The vision of the Long Beach CAAP is to create a more sustainable, resilient and equitable city by addressing climate change in a way that remedies existing environmental health disparities while also improving healthy quality of life, and enhancing economic vitality throughout Long Beach. The implementation of the Long Beach CAAP will help Long Beach realize low carbon, climate resilient buildings and neighborhoods; safe and adaptable infrastructure; protected and enhanced natural systems; a healthy, resilient and ready population; and residents and businesses with minimized carbon footprints. The City, in conjunction with relevant partners, will implement a range of actions to reduce greenhouse gas (GHG) emissions and adapt to climate change impacts. The actions the City will take are organized overleaf by desired outcomes that represent the underlying values of the CAAP. The reduction of GHG emissions is one of the primary objectives of the CAAP, and the goal is net zero emissions by 2045. An interim target for 2030 has been identified to help

the City achieve this goal. The City's near-term 2030 target was selected based on guidance provided in CARB's 2017 California Climate Change Scoping Plan and was developed to demonstrate consistency with the statewide 2030 target if 40 percent below 1990 levels by 2030. The City's 2030 target is established on a per service population (SP) basis and aims to achieve emissions rates of 3.04 MT CO2e/SP. This compares to the City's 2030 business-as-usual forecast of 3.34 MT CO2e/SP.

SIGNIFICANCE THRESHOLDS

Appendix G of State CEQA Guidelines

The CEQA Guidelines recommend that a lead agency consider the following when assessing the significance of impacts from GHG emissions on the environment:

- The extent to which the project may increase (or reduce) GHG emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;
- The extent to which the project complies with regulations or requirements adopted to implement an adopted statewide, regional, or local plan for the reduction or mitigation of GHG emissions.[18]

Thresholds of Significance for this Project

To determine whether the project's GHG emissions are significant, this analysis uses the SCAQMD draft screening threshold of 3,000 MTCO2e per year for all land uses. As stated above, the City of Long Beach CAAP has not yet been fully adopted; however, to be conservative, this analysis also uses the Draft City CAAP's 2030 target of 3.04 MT CO2e/SP.

METHODOLOGY

The proposed project is anticipated to generate GHG emissions from area sources, energy usage, mobile sources, waste, water, and construction equipment. The following provides the methodology used to calculate the project-related GHG emissions and the project impacts.

CalEEMod Version 2020.4.0 was used to calculate the GHG emissions from the proposed project. The CalEEMod Annual Output for year 2024 is available in Appendix C. The project's service population of 246 was obtained from the CalEEMod default population calculation (available in Appendix B and C). Each source of GHG emissions is described in greater detail below.

Area Sources

Area sources include emissions from consumer products, landscape equipment and architectural coatings. No changes were made to the default area source emissions.

Energy Usage

Energy usage includes emissions from the generation of electricity and natural gas used on-site. No changes were made to the default energy usage parameters.

[18] The Governor's Office of Planning and Research recommendations include a requirement that such a plan must be adopted through a public review process and include specific requirements that reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable, notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

Mobile Sources

Mobile sources include emissions from the additional vehicle miles generated from the proposed project. The vehicle trips associated with the proposed project have been analyzed by inputting the project-generated vehicular trips from the Trip Generation Analysis into the CalEEMod Model. The program then applies the emission factors for each trip which is provided by the EMFAC2017 model to determine the vehicular traffic pollutant emissions. See Section 2 for details.

Waste

Waste includes the GHG emissions generated from the processing of waste from the proposed project as well as the GHG emissions from the waste once it is interred into a landfill. AB 341 requires that 75 percent of waste be diverted from landfills by 2020, reductions for this are shown in the mitigated CalEEMod output values. No other changes were made to the default waste parameters.

Water

Water includes the water used for the interior of the building as well as for landscaping and is based on the GHG emissions associated with the energy used to transport and filter the water. No changes were made to the default water usage parameters.

Construction

The construction-related GHG emissions were also included in the analysis and were based on a 30-year amortization rate as recommended in the SCAQMD GHG Working Group meeting on November 19, 2009. The construction-related GHG emissions were calculated by CalEEMod and in the manner detailed above in Section 2.

PROJECT GREENHOUSE GAS EMISSIONS

The GHG emissions have been calculated based on the parameters described above. A summary of the results is shown below in Table 11 and the CalEEMod Model run for the proposed project is provided in Appendix C. Table 11 shows that the total for the proposed project's emissions (without credit for any reductions from sustainable design and/or regulatory requirements) would be 552.92 MTCO2e per year with 2.2 MTCO2e/SP/year. According to the thresholds of significance established above, a cumulative global climate change impact would occur if the GHG emissions created from the on-going operations of the proposed project would exceed the SCAQMD draft threshold of 3,000 $MTCO_2e$ per year for all land uses or if the project's emissions exceeded the City CAAP 2030 3.04 MTCO2e/SP/year. Therefore, as neither threshold has been exceeded, the operation of the proposed project would not create a significant cumulative impact to global climate change. No mitigation is required.

Table 11
Project-Related Greenhouse Gas Emissions

Category	Greenhouse Gas Emissions (Metric Tons/Year)					
	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e
Area Sources[1]	0.00	20.04	20.04	0.00	0.00	20.18
Energy Usage[2]	0.00	120.04	120.04	0.01	0.00	120.71
Mobile Sources[3]	0.00	323.67	323.67	0.02	0.01	328.32
Waste[4]	15.93	0.00	15.93	0.94	0.00	39.46
Water[5]	1.78	19.90	21.68	0.18	0.00	27.63
Construction[6]	0.00	16.78	16.78	0.00	0.00	16.61
Total Emissions	17.71	500.42	518.13	1.16	0.02	552.92
SCAQMD Draft Screening Threshold						3,000
Exceeds Threshold?						No
GHG Emissions per Service Population[7]						2.2
Exceeds City CAAP 2030 3.04 MTCO2e/SP/year Threshold?						No

Notes:
Source: CalEEMod Version 2020.4.0 for Opening Year 2024.
(1) Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.
(2) Energy usage consist of GHG emissions from electricity and natural gas usage.
(3) Mobile sources consist of GHG emissions from vehicles.
(4) Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.
(5) Water includes GHG emissions from electricity used for transport of water and processing of wastewater.
(6) Construction GHG emissions CO2e based on a 30 year amortization rate.
(7) Service population based on the default population calculation of 246 from the CalEEMod Output (Appendix B and C).

Consistency With Applicable Greenhouse Gas Reduction Plans and Policies

The proposed project could have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

City of Long Beach CAAP

As stated previously, the applicable plan for the proposed project is the City of Long Beach CAAP; however, the City's CAAP has not yet been fully adopted and the final adoption of the Long Beach CAAP is anticipated to take place in Fall 2021.

However, as stated above, to be conservative, the project's emissions were compared to the draft City CAAP 2030 3.04 MTCO2e/SP/year.[19] The project's emissions of 2.2 MTCO2e/SP/year do not exceed the draft City CAAP's threshold. Therefore, the project would not conflict with the draft City CAAP.

The CAAP's near-term 2030 target was selected based on guidance provided in CARB's 2017 California Climate Change Scoping Plan and was developed to demonstrate consistency with the statewide 2030 target of 40 percent below 1990 levels by 2030. As the City's CAAP targets are based on the CARB's 2017 California Climate Change Scoping Plan the project's emission have been compared to the CARB Scoping Plan, see below.

Scoping Plan

Emission reductions in California alone would not be able to stabilize the concentration of greenhouse gases in the earth's atmosphere. However, California's actions set an example and drive progress towards a reduction in greenhouse gases elsewhere. If other states and countries were to follow California's emission reduction targets, this could avoid medium or higher ranges of global temperature increases. Thus, severe consequences of climate change could also be avoided.

The ARB Board approved a Climate Change Scoping Plan in December 2008. The Scoping Plan outlines the State's strategy to achieve the 2020 greenhouse gas emissions limit. The Scoping Plan "proposes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health" (California Air Resources Board 2008). The measures in the Scoping Plan have been in place since 2012.

This Scoping Plan calls for an "ambitious but achievable" reduction in California's greenhouse gas emissions, cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 10 percent from today's levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman and child in California down to about 10 tons per person by 2020.

In May 2014, CARB released its *First Update to the Climate Change Scoping Plan* (CARB 2014). This *Update* identifies the next steps for California's leadership on climate change. While California continues on its path to meet the near-term 2020 greenhouse gas limit, it must also set a clear path toward long-term, deep GHG emission reductions. This report highlights California's success to date in reducing its GHG emissions and lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050.

In November 2017, CARB release the 2017 Scoping Plan. This Scoping Plan incorporates, coordinates, and leverages many existing and ongoing efforts and identifies new policies and actions to accomplish the State's climate goals, and includes a description of a suite of specific actions to meet the State's 2030 GHG limit. In

[19] Based on a Service Population of 246 obtained from the population calculation in the CalEEMod Output (See Appendix A and B).

addition, Chapter 4 provides a broader description of the many actions and proposals being explored across the sectors, including the natural resources sector, to achieve the State's mid and long-term climate goals.

Guided by legislative direction, the actions identified in the 2017 Scoping Plan reduce overall GHG emissions in California and deliver policy signals that will continue to drive investment and certainty in a low carbon economy. The 2017 Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Plan includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and Trade Program, which constrains and reduces emissions at covered sources.

As the latest, 2017 Scoping Plan builds upon previous versions, project consistency with applicable strategies of both the 2008 and 2017 Plan are assessed in Table 12. As shown in Table 12, the project is consistent with the applicable strategies and would result in a less than significant impact.

Table 12 (1 of 2)
Project Consistency with CARB Scoping Plan Policies and Measures

2008 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
California Light-Duty Vehicle Greenhouse Gas Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Energy Efficiency – Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	Consistent. The project will be compliant with the current Title 24 standards. In addition, the project is required to comply with the City's Municipal Code Green Building Standards (Section requiring LEED compliance.
Low Carbon Fuel Standard – Develop and adopt the Low Carbon Fuel Standard.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Vehicle Efficiency Measures – Implement light-duty vehicle efficiency measures.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Medium/Heavy-Duty Vehicles – Adopt medium and heavy-duty vehicle efficiency measures.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Green Building Strategy – Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	Consistent. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards, that are mandatory in the 2019 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The project will be subject to these mandatory standards.In addition, the project is required to comply with the City's Municipal Code Green Building Standards (Section requiring LEED compliance.
High Global Warming Potential Gases – Adopt measures to reduce high global warming potential gases.	Consistent. CARB identified five measures that reduce HFC emissions from vehicular and commercial refrigeration systems; vehicles that access the project that are required to comply with the measures will comply with the strategy.
Recycling and Waste – Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	Consistent. The state is currently developing a regulation to reduce methane emissions from municipal solid waste landfills. The project will be required to comply with City programs, such as any City recycling and waste reduction programs, which comply, with the 75 percent reduction required by 2020 per AB 341.
Water – Continue efficiency programs and use cleaner energy sources to move and treat water.	Consistent. The project will comply with all applicable City ordinances and CAL Green requirements.

Table 12 (2 of 2)
Project Consistency with CARB Scoping Plan Policies and Measures

2017 Scoping Plan Recommended Actions to Reduce Greenhouse Gas Emissions	Project Compliance with Recommended Action
Implement Mobile Source Strategy: Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Car regulations.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025 and at least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NOX standard.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: Last Mile Delivery: New regulation that would result in the use of low NOX or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement SB 350 by 2030: Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.	Consistent. The project will be compliant with the current Title 24 standards. In addition, the project is required to comply with the City's Municipal Code Green Building Standards (Section requiring LEED compliance.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	Consistent. The project will be required to comply with City programs, such as any City recycling and waste reduction programs, which comply, with the 75 percent reduction required by 2020 per AB 341.

CUMULATIVE GREENHOUSE GAS IMPACTS

Although the project is expected to emit GHGs, the emission of GHGs by a single project into the atmosphere is not itself necessarily an adverse environmental effect. Rather, it is the increased accumulation of GHG from more than one project and many sources in the atmosphere that may result in global climate change. Therefore, in the case of global climate change, the proximity of the project to other GHG emission generating activities is not directly relevant to the determination of a cumulative impact because climate change is a global condition. According to CAPCOA, "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective."[20] The resultant consequences of that climate change can cause adverse environmental effects. A project's GHG emissions typically would be very small in comparison to state or global GHG emissions and, consequently, they would, in isolation, have no significant direct impact on climate change.

The state has mandated a goal of reducing statewide emissions to 1990 levels by 2020, even though statewide population and commerce are predicted to continue to expand. In order to achieve this goal, CARB is in the process of establishing and implementing regulations to reduce statewide GHG emissions. Consistent with CEQA Guidelines Section 15064h(3),[21] the City, as lead agency, has determined that the project's contribution to cumulative GHG emissions and global climate change would be less than significant if the project is consistent with the applicable regulatory plans and policies to reduce GHG emissions.

As discussed in the Consistency With Applicable Greenhouse Gas Reduction Plans and Policies section above, the project is consistent with the goals and objectives of the City of Long Beach CAAP and the CARB Scoping Plan.

Thus, given the project's consistency with the City's CAAP, CARB Scoping Plan, and SCAQMD's 3,000 MTCO2e per year threshold for all land uses, the project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. Given this consistency, it is concluded that the project's incremental contribution to greenhouse gas emissions and their effects on climate change would not be cumulatively considerable.

[20] Source: California Air Pollution Control Officers Association, CEQA & Climate change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, (2008).

[21] The State CEQA Guidelines were amended in response to SB 97. In particular, the State CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction program renders a cumulative impact insignificant. Per State CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project will comply with an approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of the project. To qualify, such a plan or program must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plan, [and] plans or regulations for the reduction of greenhouse gas emissions."

4. ENERGY ANALYSIS

EXISTING CONDITIONS

This section provides an overview of the existing energy conditions in the project area and region.

Overview

California's estimated annual energy use as of 2019 included:

- Approximately 277,704 gigawatt hours of electricity;[22]
- Approximately 2,154,030 million cubic feet of natural gas per year;[23] and
- Approximately 23.2 billion gallons of transportation fuel (for the year 2015).[24]

As of 2018, the year of most recent data currently available by the United States Energy Information Administration (EIA), energy use in California by demand sector was:

- Approximately 39.1 percent transportation;
- Approximately 23.5 percent industrial;
- Approximately 18.3 percent residential; and
- Approximately 19.2 percent commercial.[25]

California's electricity in-state generation system generates approximately 200,475 gigawatt-hours each year. In 2019, California produced approximately 72 percent of the electricity it uses; the rest was imported from the Pacific Northwest (approximately 9 percent) and the U.S. Southwest (approximately 19 percent). Natural gas is the main source for electricity generation at approximately 42.97 percent of the total in-state electric generation system power as shown in Table 13.

A summary of and context for energy consumption and energy demands within the State is presented in "U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts" excerpted below:

- California was the seventh-largest producer of crude oil among the 50 states in 2018, and, as of January 2019, it ranked third in oil refining capacity.
- California is the largest consumer of jet fuel among the 50 states and accounted for one-fifth of the nation's jet fuel consumption in 2018.
- California's total energy consumption is the second-highest in the nation, but, in 2018, the State's per capita energy consumption ranked the fourth-lowest, due in part to its mild climate and its energy efficiency programs.
- In 2018, California ranked first in the nation as a producer of electricity from solar, geothermal, and biomass resources and fourth in the nation in conventional hydroelectric power generation.
- In 2018, large- and small-scale solar PV and solar thermal installations provided 19% of California's net electricity generation.[26]

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[22] California Energy Commission. Energy Almanac. Total Electric Generation. [Online] 2020. https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2019-total-system-electric-generation.

[23] Natural Gas Consumption by End Use. U.S. Energy Information Administration. [Online] August 31, 20020. https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_SCA_a.htm.

[24] California Energy Commission. Revised Transportation Energy Demand Forecast 2018-2030. [Online] April 19, 2018. https://www.energy.ca.gov/assessments/

[25] U.S. Energy Information Administration. California Energy Consumption by End-Use Sector. California State Profile and Energy Estimates.[Online] January 16, 2020 https://www.eia.gov/state/?sid=CA#tabs-2

As indicated above, California is one of the nation's leading energy-producing states, and California per capita energy use is among the nation's most efficient. Given the nature of the proposed project, the remainder of this discussion will focus on the three sources of energy that are most relevant to the project—namely, electricity and natural gas, and transportation fuel for vehicle trips associated with the proposed project.

Electricity

Electricity would be provided to the project by Southern California Edison (SCE). SCE provides electric power to more than 15 million persons, within a service area encompassing approximately 50,000 square miles.[27] SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. SCE also purchases from independent power producers and utilities, including out-of-state suppliers.[28]

Table 14 identifies SCE's specific proportional shares of electricity sources in 2019. As shown in Table 14, the 2019 SCE Power Mix has renewable energy at 35 percent of the overall energy resources, of which biomass and waste is at 1 percent, geothermal is at 8 percent, eligible hydroelectric is at 1 percent, solar energy is at 16 percent, and wind power is at 12 percent; other energy sources include large hydroelectric at 8 percent, natural gas at 16 percent, nuclear at 8 percent and unspecified sources at 33 percent.

Natural Gas

Natural gas would be provided to the project by Long Beach Gas & Oil. The following summary of natural gas resources and service providers, delivery systems, and associated regulation is excerpted from information provided by the California Public Utilities Commission (CPUC).

The CPUC regulates natural gas utility service for approximately 11 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller investor-owned natural gas utilities. The CPUC also regulates independent storage operators Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.

The vast majority of California's natural gas customers are residential and small commercial customers, referred to as "core" customers. Larger volume gas customers, like electric generators and industrial customers, are called "noncore" customers. Although very small in number relative to core customers, noncore customers consume about 65% of the natural gas delivered by the state's natural gas utilities, while core customers consume about 35%.

The PUC regulates the California utilities' natural gas rates and natural gas services, including in-state transportation over the utilities' transmission and distribution pipeline systems, storage, procurement, metering and billing.

Most of the natural gas used in California comes from out-of-state natural gas basins. In 2017, for example, California utility customers received 38% of their natural gas supply from basins located in the U.S. Southwest, 27% from Canada, 27% from the U.S. Rocky Mountain area, and 8% from production located in California."[29]

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[26] State Profile and Energy Estimates. Independent Statistics and Analysis. [Online] [Cited: January 16, 2020.] http://www.eia.gov/state/?sid=CA#tabs2.

[27] https://www.sce.com/about-us/who-we-are/leadership/our-service-territory.

[28] California Energy Commission. Utility Energy Supply plans from 2015. https://www.energy.ca.gov/almanac/electricity_data/supply_forms.html.

[29] California Public Utilities Commission. Natural Gas and California. https://www.cpuc.ca.gov/industries-and-topics/natural-gas/natural-gas-and-california.

Transportation Energy Resources

The project would attract additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. Gasoline (and other vehicle fuels) are commercially provided commodities and would be available to the project patrons and employees via commercial outlets.

The most recent data available shows the transportation sector emits 40 percent of the total greenhouse gases in the state and about 84 percent of smog-forming oxides of nitrogen (NOx).[30,31] About 28 percent of total United States energy consumption in 2019 was for transporting people and goods from one place to another. In 2019, petroleum comprised about 91 percent of all transportation energy use, excluding fuel consumed for aviation and most marine vessels.[32] In 2020, about 123.49 billion gallons (or about 2.94 billion barrels) of finished motor gasoline were consumed in the United States, an average of about 337 million gallons (or about 8.03 million barrels) per day.[33]

REGULATORY BACKGROUND

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. On the state level, the PUC and the California Energy Commissions (CEC) are two agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below.

Federal Regulations

Corporate Average Fuel Economy (CAFE) Standards

First established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduce energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA) jointly administer the CAFE standards. The U.S. Congress has specified that CAFE standards must be set at the "maximum feasible level" with consideration given for: (1) technological feasibility; (2) economic practicality; (3) effect of other standards on fuel economy; and (4) need for the nation to conserve energy.[34]

Issued by NHTSA and EPA in March 2020 (published on April 30, 2020 and effective after June 29, 2020), the Safer Affordable Fuel-Efficient Vehicles Rule would maintain the CAFE and CO2 standards applicable in model year 2020 for model years 2021 through 2026. The estimated CAFE and CO2 standards for model year 2020 are 43.7 mpg and 204 grams of CO2 per mile for passenger cars and 31.3 mpg and 284 grams of CO2 per mile for light trucks, projecting an overall industry average of 37 mpg, as compared to 46.7 mpg under the standards issued in 2012.[35]

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[30] CARB. California Greenhouse Gas Emissions Inventory – 2020 Edition. https://www.arb.ca.gov/cc/inventory/data/data.htm.

[31] CARB. 2016 SIP Emission Projection Data. https://www.arb.ca.gov/app/emsinv/2017/emseic1_query.php?F_DIV=-4&F_YR=2012&F_SEASON=A&SP=SIP105ADJ&F_AREA=CA.

[32] US Energy Information Administration. Use of Energy in the United States Explained: Energy Use for Transportation. https://www.eia.gov/energyexplained/?page=us_energy_transportation.

[33] https://www.eia.gov/tools/faqs/faq.php?id=23&t=10.

[34] https://www.nhtsa.gov/lawsregulations/corporate-average-fuel-economy.

[35] National Highway Traffic Safety Administration (NHTSA) and U.S. Environmental Protection Agency (USEPA), 2018. Federal Register / Vol. 83, No. 165 / Friday, August 24, 2018 / Proposed Rules, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks 2018. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/safer-affordable-fuel-efficient-safe-vehicles-final-rule.

Intermodal Surface transportation Efficiency Act of 1991 (ISTEA)

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions.

The Transportation Equity Act of the 21st Century (TEA-21)

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety.

State Regulations

Integrated Energy Policy Report (IEPR)

Senate Bill 1389 requires the California Energy Commission (CEC) to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the State's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety. The Energy Commission prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2019 Integrated Energy Policy Report (2019 IEPR) was adopted February 20, 2020, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2019 IEPR focuses on a variety of topics such as decarbonizing buildings, integrating renewables, energy efficiency, energy equity, integrating renewable energy, updates on Southern California electricity reliability, climate adaptation activities for the energy sector, natural gas assessment, transportation energy demand forecast, and the California Energy Demand Forecast.[36]

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce vehicle miles traveled and accommodate pedestrian and bicycle access.

[36] California Energy Commission. Final 2019 Integrated Energy Policy Report. February 20, 2020. https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2019-integrated-energy-policy-report.

California Building Standards Code (Title 24)

The California Building Standards Code Title 24 was previously discussed in Section 3 of this report.

California Building Energy Efficiency Standards (Title 24, Part 6)

The California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations, Title 24, Part 6) were adopted to ensure that building construction and system design and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. The current California Building Energy Efficiency Standards (Title 24 standards) are the 2019 Title 24 standards, which became effective on January 1, 2020. The 2019 Title 24 standards include efficiency improvements to the lighting and efficiency improvements to the non-residential standards include alignment with the American Society of Heating and Air-Conditioning Engineers. For example, window operation is no longer a method allowed to meet ventilation requirements, continuous operation of central forced air system handlers used in central fan integrated ventilation system is not a permissible method of providing the dwelling unit ventilation airflow, and central ventilation systems that serve multiple dwelling units must be balanced to provide ventilation airflow to each dwelling unit. In addition, requirements for kitchen range hoods were also provided in the updated Section 120.1. Ventilation and Indoor Air Quality included both additions and revisions in the 2019 Code. This section now requires nonresidential and hotel/motel buildings to have air filtration systems that use forced air ducts to supply air to occupiable spaces to have air filters. Further, the air filter efficiency must be either MERV 13 or use a particle size efficiency rating specific in the Energy Code AND be equipped with air filters with a minimum 2-inch depth or minimum 1-inch depth if sized according to the equation 120.1-A. If natural ventilation is to be used the space must also use mechanical unless ventilation openings are either permanently open or controlled to stay open during occupied times.

New regulations were also adopted under Section 130.1 Indoor Lighting Controls. These included new exceptions being added for restrooms, the exception for classrooms being removed, as well as exceptions in regard to sunlight provided through skylights and overhangs.

All buildings for which an application for a building permit is submitted on or after January 1, 2020 must follow the 2019 standards. The 2016 residential standards were estimated to be approximately 28 percent more efficient than the 2013 standards, whereas the 2019 residential standards are estimated to be approximately 7 percent more efficient than the 2016 standards. Furthermore, once rooftop solar electricity generation is factored in, 2019 residential standards are estimated to be approximately 53 percent more efficient than the 2016 standards. Under the 2019 standards, nonresidential buildings are estimated to be approximately 30 percent more efficient than the 2016 standards. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

California Building Energy Efficiency Standards (Title 24, Part 11)

The 2019 California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), commonly referred to as the CALGreen Code, went into effect on January 1, 2020. The 2019 CALGreen Code includes mandatory measures for non-residential development related to site development; energy efficiency; water efficiency and conservation; material conservation and resource efficiency; and environmental quality.

As previously discussed in Section 3 of this report, the Department of Housing and Community Development (HCD) updated CALGreen through the 2019 Triennial Code Adoption Cycle. HCD modified the best management practices for stormwater pollution prevention adding Section 5.106.2 for projects that disturb one or more acres of land. This section requires projects that disturb one acre or more of land or less than one acre of land but are part of a larger common plan of development or sale must comply with the postconstruction requirement detailed in the applicable National Pollutant Discharge Elimination System

(NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities issued by the State Water Resources Control Board. The NPDES permits require postconstruction runoff (post-project hydrology) to match the preconstruction runoff pre-project hydrology) with installation of postconstruction stormwater management measures.

HCD added sections 5.106.4.1.3 and 5.106.4.1.5 in regard to bicycle parking. Section 5.106.4.1.3 requires new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility. In addition, Section 5.106.4.1.5 states that acceptable bicycle parking facility for Sections 5.106.4.1.2 through 5.106.4.1.4 shall be convenient from the street and shall meeting one of the following: (1) covered, lockable enclosures with permanently anchored racks for bicycles; (2) lockable bicycle rooms with permanently anchored racks; or (3) lockable, permanently anchored bicycle lockers.

HCD amended section 5.106.5.3.5 allowing future charging spaces to qualify as designated parking for clean air vehicles.

HCD updated section 5.303.3.3 in regard to showerhead flow rates. This update reduced the flow rate to 1.8 GPM.

HCD amended section 5.304.1 for outdoor potable water use in landscape areas and repealed sections 5.304.2 and 5.304.3. The update requires nonresidential developments to comply with a local water efficient landscape ordinance or the current California Department of Water Resource's' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent. Some updates were also made in regard to the outdoor potable water use in landscape areas for public schools and community colleges.

HCD updated Section 5.504.5.3 in regard to the use of MERV filters in mechanically ventilated buildings. This update changed the filter use from MERV 8 to MERV 13. MERV 13 filters are to be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.

Senate Bill 100

Senate Bill 100 (SB 100) requires 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. SB 100 was adopted September 2018.

The interim thresholds from prior Senate Bills and Executive Orders would also remain in effect. These include Senate Bill 1078 (SB 1078), which requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) which changed the target date to 2010. Executive Order S-14-08, which was signed on November 2008 and expanded the State's Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed the CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

Senate Bill 350

As previously discussed in Section 3 of this report, Senate Bill 350 (SB 350) was signed into law October 7, 2015, SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of Renewables Portfolio Standard (RPS) eligible resources, including solar, wind, biomass, geothermal, and others. In addition, SB 350 requires the state to double statewide energy efficiency savings in electricity and natural gas end uses by 2030. To help ensure these goals are met and the greenhouse gas emission reductions are realized, large utilities will be required to develop and submit Integrated Resource Plans (IRPs). These IRPs will detail how each entity will meet their

customers resource needs, reduce greenhouse gas emissions and ramp up the deployment of clean energy resources.

Assembly Bill 32

As discussed in Section 3 of this report, in 2006 the California State Legislature adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006. AB 32 requires CARB, to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020 through an enforceable statewide emission cap which will be phased in starting in 2012. Emission reductions shall include carbon sequestration projects that would remove carbon from the atmosphere and best management practices that are technologically feasible and cost effective. Please see Section 3 for further detail on AB 32.

Assembly Bill 1493/Pavley Regulations

As discussed in Section 3 of this report, California Assembly Bill 1493 enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In 2005, the CARB submitted a "waiver" request to the EPA from a portion of the federal Clean Air Act in order to allow the State to set more stringent tailpipe emission standards for CO_2 and other GHG emissions from passenger vehicles and light duty trucks. On December 19, 2007 the EPA announced that it denied the "waiver" request. On January 21, 2009, CARB submitted a letter to the EPA administrator regarding the State's request to reconsider the waiver denial. The EPA approved the waiver on June 30, 2009.

Executive Order S-1-07/Low Carbon Fuel Standard

As discussed in Section 3 of this report, Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009 CARB approved the proposed regulation to implement the low carbon fuel standard. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. The low carbon fuel standard is designed to provide a framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet each year beginning in 2011. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are "back-loaded", with more reductions required in the last five years, than during the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

California Air Resources Board

CARB's Advanced Clean Cars Program

Closely associated with the Pavley regulations, the Advanced Clean Cars emissions control program was approved by CARB in 2012. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles for model years 2015–2025.15 The components of the Advanced Clean Cars program include the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years.[37]

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

The Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling (Title 13, California Code of Regulations, Division 3, Chapter 10, Section 2435) was adopted to reduce public exposure to diesel particulate matter and other air contaminants by limiting the idling of diesel-fueled commercial motor vehicles. This section applies to diesel-fueled commercial motor vehicles with gross vehicular weight ratings of greater than 10,000 pounds that are or must be licensed for operation on highways. Reducing idling of diesel-fueled commercial motor vehicles reduces the amount of petroleum-based fuel used by the vehicle.

Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen, and other Criteria Pollutants, form In-Use Heavy-Duty Diesel-Fueled Vehicles

The Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and other Criteria Pollutants, from In-Use Heavy-Duty Diesel-Fueled Vehicles (Title 13, California Code of Regulations, Division 3, Chapter 1, Section 2025) was adopted to reduce emissions of diesel particulate matter, oxides of nitrogen (NOX) and other criteria pollutants from in-use diesel-fueled vehicles. This regulation is phased, with full implementation by 2023. The regulation aims to reduce emissions by requiring the installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models. The newer emission-controlled models would use petroleum-based fuel in a more efficient manner.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or Senate Bill 375 (SB 375), coordinates land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction mandates established in AB 32.

As previously stated in Section 3 of this report, Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

[37] California Air Resources Board, California's Advanced Clean Cars Program, January 18, 2017. www.arb.ca.gov/msprog/acc/acc.htm.

The proposed project is located within the Southern California Association of Governments (SCAG) jurisdiction, which has authority to develop the SCS or APS. For the SCAG region, the targets set by CARB are at eight percent below 2005 per capita GHG emissions levels by 2020 and 19 percent below 2005 per capita GHG emissions levels by 2035. These reduction targets became effective October 2018.

Local Regulations

City of Long Beach General Plan

The Air Quality Element of the City of Long Beach General Plan establishes goals and policies related to energy conservation as it applies to air quality emissions in the City. Applicable goals and policies include:

Goal 7: Reduce emissions through reduced energy consumption.

Policy 7.1 Energy Conservation. Reduce energy consumption through conservation improvements and requirements.

PROJECT ENERGY DEMANDS AND ENERGY EFFICIENCY MEASURES

Evaluation Criteria

In compliance with Appendix G of the State CEQA Guidelines, this report analyzes the project's anticipated energy use to determine if the project would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

In addition, Appendix F of the State CEQA Guidelines states that the means of achieving the goal of energy conservation includes the following:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas and oil; and
- Increasing reliance on renewable energy sources.

Methodology

Information from the CalEEMod 2020.4.0 Daily and Annual Outputs contained in Appendix B and C, utilized for air quality and greenhouse gas analyses in Sections 2 and 3 of this report, were also utilized for this analysis. The CalEEMod outputs detail project related construction equipment, transportation energy demands, and facility energy demands.

Construction Energy Demands

The construction schedule is anticipated to occur no sooner than the beginning of January 2023 through the end of March 2024 and be completed in one phase. Staging of construction vehicles and equipment will occur on-site. The approximately fifteen-month schedule is relatively short and the project site is approximately 2.65 acres.

Construction Equipment Electricity Usage Estimates

As stated previously, Electrical service will be provided by Southern California Edison. The focus within this section is the energy implications of the construction process, specifically the power cost from on-site

electricity consumption during construction of the proposed project. Based on the 2017 National Construction Estimator, Richard Pray (2017)[38], the typical power cost per 1,000 square feet of building construction per month is estimated to be $2.32. The project plans to develop the site with a two-story 78,277 square foot senior assisted living and memory care facility with 86 units containing a total of 109 beds. Based on Table 15, the total power cost of the on-site electricity usage during the construction of the proposed project is estimated to be approximately $2,724.04. Furthermore, as of May 14, 2021, SCE's general service rate schedule (GS-1) is approximately $0.11 per kWh of electricity.[39] As shown in Table 24, the total electricity usage from project construction related activities is estimated to be approximately 24,764 kWh.

Construction Equipment Fuel Estimates

Fuel consumed by construction equipment would be the primary energy resource expended over the course of project construction. Fuel consumed by construction equipment was evaluated with the following assumptions:

- Construction schedule of 15 months
- All construction equipment was assumed to run on diesel fuel
- Typical daily use of 8 hours, with some equipment operating from ~6-7 hours
- Aggregate fuel consumption rate for all equipment was estimated at 18.5 hp-hr/gallon (from CARB's 2017 Emissions Factors Tables and fuel consumption rate factors as shown in Table D-21 of the Moyer Guidelines: (https://www.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017_gl_appendix_d.pdf).
- Diesel fuel would be the responsibility of the equipment operators/contractors and would be sources within the region.
- Project construction represents a "single-event" for diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources during long term operation.

Using the CalEEMod data input for the air quality and greenhouse gas analyses (Sections 2 and 3 of this report), the project's construction phase would consume electricity and fossil fuels as a single energy demand, that is, once construction is completed their use would cease. CARB's 2017 Emissions Factors Tables show that on average, aggregate fuel consumption (gasoline and diesel fuel) would be approximately 18.5 hp-hr-gal. Table 16 shows the results of the analysis of construction equipment.

As presented in Table 16, project construction activities would consume an estimated 36,473 gallons of diesel fuel. As stated previously, project construction would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

Construction Worker Fuel Estimates

It is assumed that construction worker trips are from light duty autos (LDA), light duty truck 1 (LDT1), and light duty truck 2 9LDT2) at a mix of 50 percent/25 percent/25 percent, respectively, along area roadways.[40] With respect to estimated VMT, the construction worker trips would generate an estimated 383,626 VMT. Data regarding project related construction worker trips were based on CalEEMod 2020.4.0 model defaults.

Vehicle fuel efficiencies for construction workers were estimated in the air quality and greenhouse gas analyses (Sections 2 and 3 of this report) using information generated using CARB's 2021 EMFAC model

[38] Pray, Richard. 2017 National Construction Estimator. Carlsbad : Craftsman Book Company, 2017.

[39] Southern California Edison (SCE). Rates & Pricing Choices: General Service/Industrial Rates. https://library.sce.com/content/dam/sce-doclib/public/regulatory/tariff/electric/schedules/general-service-&-industrial-rates/ELECTRIC_SCHEDULES_GS-1.pdf

[40] CalEEMod User's Guide (May 2021) states that the CalEEMod default fleet mix for worker trips includes light duty autos and light duty trucks, LDA, LDT1, LDT2, at a mix of 50%/25%/25%, respectively.

(see Appendix C for details). An aggregate fuel efficiency of 27.7 miles per gallon (mpg) was used to calculate vehicle miles traveled for construction worker trips. Table 17 shows that an estimated 13,849 gallons of fuel would be consumed for construction worker trips.

Construction Vendor/Hauling Fuel Estimates

Table 18 and Table 19 show the estimated fuel consumption for vendor and hauling during building construction and architectural coating. With respect to estimated VMT, the vendor and hauling trips would generate an estimated 79,634 VMT. Data regarding project related construction worker trips were based on CalEEMod 2020.4.0 model defaults.

For the architectural coatings it is assumed that the contractors would be responsible for bringing coatings and equipment with them in their light duty vehicles. Therefore, vendors delivering construction material or hauling debris from the site during grading would use medium to heavy duty vehicles with an average fuel consumption of 7.69 mpg for medium heavy-duty trucks and 5.97 for heavy heavy-duty trucks (see Appendix C for details).[41] Tables 18 and 19 show that an estimated 12,478 gallons of fuel would be consumed for vendor and hauling trips.

Construction Energy Efficiency/Conservation Measures

Construction equipment used over the approximately fifteen-month construction phase would conform to CARB regulations and California emissions standards and is evidence of related fuel efficiencies. There are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

The project would utilize construction contractors which practice compliance with applicable CARB regulation regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. Compliance with these measures would result in a more efficient use of construction-related energy and would minimize or eliminate wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption.

Additionally, as required by California Code of Regulations Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby minimizing or eliminating unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Enforcement of idling limitations is realized through periodic site inspections conducted by County building officials, and/or in response to citizen complaints.

Operational Energy Demands

Energy consumption in support of or related to project operations would include transportation energy demands (energy consumed by employee and patron vehicles accessing the project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

Transportation Fuel Consumption

Using the CalEEMod output from the air quality and greenhouse gas analyses (Sections 2 and 3 of this report), it is assumed that an average trip for autos and light trucks was assumed to be 8.7 miles and 3- 4-

[41] CalEEMod User's Guide (May 2021) states that the CalEEMod default fleet mix for vendor trips includes medium-heavy duty and heavy-heavy duty trucks, MHDT and HHDT, at a mix of 50%/50%.

axle trucks were assumed to travel an average of 14.7 miles.[42] The project includes the development of the site with senior assisted living uses; therefore, in order to present a worst-case scenario it was assumed that vehicles would operate 365 days per year. Table 20 shows the estimated annual fuel consumption for all classes of vehicles from autos to heavy-heavy trucks.[43]

The proposed project would generate 284 trips per day. The vehicle fleet mix was used from the CalEEMod output. Table 20 shows that an estimated 36,652 gallons of fuel would be consumed per year for the operation of the proposed project.

Trip generation and VMT generated by the proposed project are consistent with other similar assisted living uses of similar scale and configuration as reflected respectively in the Institute of Transportation Engineers (ITE) Trip Generation Manual (20th Edition, 2017). That is, the proposed project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips and VMT, nor associated excess and wasteful vehicle energy consumption. Furthermore, the state of California consumed approximately 4.2 billion gallons of diesel and 15.1 billion gallons of gasoline in 2015.[44,45] Therefore, the increase in fuel consumption from the proposed project is insignificant in comparison to the State's demand. Therefore, project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

Facility Energy Demands (Electricity and Natural Gas)

Building operation and site maintenance (including landscape maintenance) would result in the consumption of electricity (provided by Southern California Edison) and natural gas (provided by Long Beach Gas & Oil). The annual natural gas and electricity demands were provided per the CalEEMod output from the air quality and greenhouse gas analyses (Sections 2 and 3 of this report) and are provided in Table 21.

As shown in Table 21, the estimated electricity demand for the proposed project is approximately 338,744 kWh per year. In 2019, the residential sector of the County of Los Angeles consumed approximately 19,563 million kWh of electricity.[46] In addition, the estimated natural gas consumption for the proposed project is approximately 1,123,730 kBTU per year. In 2019, the residential sector of the County of Los Angeles consumed approximately 1,236 million therms of gas.[47] Therefore, the increase in both electricity and natural gas demand from the proposed project is insignificant compared to the County's 2019 residential sector demand.

Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building such as in plug-in appliances. In California, the California Building Standards Code Title 24 governs energy consumed by the built environment, mechanical systems, and some types of fixed lighting. Non-building energy use, or "plug-in" energy use can be further subdivided by specific end-use (refrigeration, cooking, appliances, etc.).

Furthermore, the proposed project energy demands in total would be comparable to other residential projects of similar scale and configuration. Therefore, the project facilities' energy demands and energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

[42] CalEEMod default distance for H-W (home-work) or C-W (commercial-work) is 14.7 miles; 8.7 miles for H-O (home-other) or C-O (commercial-other).

[43] Average fuel economy based on aggregate mileage calculated in EMFAC 2021 for opening year (2024). See Appendix C for EMFAC output.

[44] https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/california-gasoline-data-facts-and-statistics.

[45] https://www.energy.ca.gov/data-reports/energy-almanac/transportation-energy/diesel-fuel-data-facts-and-statistics.

[46] California Energy Commission, Electricity Consumption by County. https://ecdms.energy.ca.gov/elecbycounty.aspx.

[47] California Energy Commission, Gas Consumption by County. http://ecdms.energy.ca.gov/gasbycounty.aspx.

Renewable Energy and Energy Efficiency Plan Consistency

Regarding federal transportation regulations, the project site is located in an already developed area. Access to/from the project site is from existing roads. These roads are already in place so the project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be proposed pursuant to the ISTEA because SCAG is not planning for intermodal facilities in the project area.

Regarding the State's Energy Plan and compliance with Title 24 CCR energy efficiency standards, the applicant is required to comply with the California Green Building Standard Code requirements for energy efficient buildings and appliances as well as utility energy efficiency programs implemented by Southern California Edison and Southern California Gas Company.

Regarding Pavley (AB 1493) regulations, an individual project does not have the ability to comply or conflict with these regulations because they are intended for agencies and their adoption of procedures and protocols for reporting and certifying GHG emission reductions from mobile sources. However, the vehicles associated with the proposed project would be required to comply with federal and state fuel efficiency standards.

Regarding the State's Renewable Energy Portfolio Standards, the project would be required to meet or exceed the energy standards established in the California Green Building Standards Code, Title 24, Part 11 (CALGreen). CALGreen Standards require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials.

As shown in Section 3 above, the proposed project would be consistent with the applicable goals of the City of Long Beach CAAP and CARB Scoping Plan.

Conclusions

As supported by the preceding analyses, project construction and operations would not result in the inefficient, wasteful or unnecessary consumption of energy. The proposed project does not include any unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities and is a senior assisted living project that is not proposing any additional features that would require a larger energy demand than other senior assisted living projects of similar scale and configuration. The energy demands of the project are anticipated to be accommodated within the context of available resources and energy delivery systems. The project would therefore not cause or result in the need for additional energy producing or transmission facilities. The project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California. Notwithstanding, the project proposes senior assisted living uses and will not have any long-term effects on an energy provider's future energy development or future energy conservation strategies.

Table 13
Total Electricity System Power (California 2019)

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	Total Imports (GWh)	Percent of Imports	Total California Energy Mix (GWh)	Total California Power Mix
Coal	248	0.12%	219	7,765	7,985	10.34%	8,233	2.96%
Natural Gas	86,136	42.97%	62	8,859	8,921	11.55%	95,057	34.23%
Nuclear	16,163	8.06%	39	8,743	8,782	11.37%	24,945	8.98%
Oil	36	0.02%	0	0	0	0.00%	36	0.01%
Other (Petroleum Coke/Waste Heat)	411	0.20%	0	11	11	0.01%	422	0.15%
Large Hydro	33,145	16.53%	6,387	1,071	7,458	9.66%	40,603	14.62%
Unspecified Sources of Power	0	0.00%	6,609	13,767	20,376	26.38%	20,376	7.34%
Renewables	64,336	32.09%	10,615	13,081	23,696	30.68%	88,032	31.70%
Biomass	5,851	2.92%	903	33	936	1.21%	6,787	2.44%
Geothermal	10,943	5.46%	99	2,218	2,318	3.00%	13,260	4.77%
Somall Hydro	5,349	2.67%	292	4	296	0.38%	5,646	2.03%
Solar	28,513	14.22%	282	5,295	5,577	7.22%	34,090	12.28%
Wind	13,680	6.82%	9,038	5,531	14,569	18.87%	28,249	10.17%
Total	200,475	100.00%	23,930	53,299	77,229	100.00%	277,704	100.00%

Source: California Energy Commission. 2019 Total System electric Generation. https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2019-total-system-electric-generation

Table 14
SCE 2019 Power Content Mix

Energy Resources	2019 SCE Power Mix
Eligible Renewable	35%
Biomass & Biowaste	1%
Geothermal	6%
Eligible Hydroelectric	1%
Solar	16%
Wind	12%
Coal	0%
Large Hydroelectric	8%
Natural Gas	16%
Nuclear	8%
Other	0%
Unspecified Sources of power*	33%
Total	100%

Notes:

(1) https://www.sce.com/sites/default/files/inline-files/SCE_2019PowerContentLabel.pdf

* Unspecified sources of power means electricity from transactions that are not traceable to specific generation sources.

Table 15
Project Construction Power Cost and Electricity Usage

Power Cost (per 1,000 square foot of building per month of construction)	Total Building Size (1,000 Square Foot)[1]	Construction Duration (months)	Total Project Construction Power Cost
$2.32	78.277	15	$2,724.04

Cost per kWh	Total Project Construction Electricity Usage (kWh)
$0.11	24,764

*Assumes the project will be under the GS-1 General Service rate under SCE.

Table 16
Construction Equipment Fuel Consumption Estimates

Phase	Number of Days	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	HP hrs/day	Total Fuel Consumption (gal diesel fuel)[1]
Demolition	23	Concrete/Industrial Saws	1	8	81	0.73	473	588
	23	Tractors/Loaders/Backhoes	3	8	97	0.37	861	1,071
	23	Rubber Tired Dozers	1	8	247	0.4	790	983
Grading	7	Graders	1	8	187	0.41	613	232
	7	Rubber Tired Dozers	1	8	247	0.4	790	299
	7	Tractors/Loaders/Backhoes	2	7	97	0.37	502	190
Building Construction	269	Cranes	1	8	231	0.29	536	7,793
	269	Forklifts	2	7	89	0.2	249	3,624
	269	Generator Sets	1	8	84	0.74	497	7,231
	269	Tractors/Loaders/Backhoes	1	6	97	0.37	215	3,131
	269	Welders	3	8	46	0.45	497	7,224
Paving	13	Cement and Mortar Mixers	1	8	9	56	4,032	2,833
	13	Pavers	1	8	130	0.42	437	307
	13	Paving Equipment	1	8	132	0.36	380	267
	13	Rollers	2	8	80	0.38	486	342
	13	Tractors/Loaders/Backhoes	1	8	97	0.37	287	202
Architectural Coating	13	Air Compressors	1	6	78	0.48	225	158
CONSTRUCTION FUEL DEMAND (gallons of diesel fuel)								36,473

Notes:

(1) Using Carl Moyer Guidelines Table D-21 Fuel consumption rate factors (bhp-hr/gal) for engines less than 750 hp. (Source: https://www.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017_gl_appendix_d.pdf)

Table 17
Construction Worker Fuel Consumption Estimates

Phase	Number of Days	Worker Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Demolition	23	13	14.7	4395.3	27.7	159
Grading	7	10	14.7	1,029	27.7	37
Building Construction	269	94	14.7	371,704	27.7	13,419
Paving	13	15	14.7	2,867	27.7	103
Architectural Coating	13	19	14.7	3,631	27.7	131
Total Construction Worker Fuel Consumption						13,849

Notes:

(1) Assumptions for the worker trip length and vehicle miles traveled are consistent with CalEEMod 2020.4.0 defaults.

(2) CalEEMod worker vehicle class is based on an LD_Mix, which, per CalEEMod User's Guide (May 2021), inlcudes LDA, LDT1, and LDT2 at a mix of 50%/25%/25%, respectively.

Table 18
Construction Vendor Fuel Consumption Estimates (MHD & HHD Trucks)[1]

Phase	Number of Days	Vendor Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Demolition	23	0	6.9	0	6.83	0
Grading	7	0	6.9	0	6.83	0
Building Construction	269	22	6.9	40,834	6.83	5,979
Paving	13	0	6.9	0	6.83	0
Architectural Coating	13	0	6.9	0	6.83	0
Total Construction Vendor Fuel Consumption						5,979

Notes:

(1) Assumptions for the vendor trip length and vehicle miles traveled are consistent with CalEEMod 2020.4.0 defaults.

(2) CalEEMod vendor vehicle class is based on an HDT_Mix, which, per CalEEMod User's Guide (May 2021), inlcudes HHDT and MHDT at a mix of 50%/50%.

Table 19
Construction Hauling Fuel Consumption Estimates (HHD Trucks)

Phase	Number of Days	Total Hauling Trips	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Demolition	23	74	20	34,040	5.97	5,702
Grading	7	34	20	4,760	5.97	797
Building Construction	269	0	20	0	5.97	0
Paving	13	0	20	0	5.97	0
Architectural Coating	13	0	20	0	5.97	0
Total Construction Hauling Fuel Consumption						6,499

Notes:

Assumptions for the hauling trip length and vehicle miles traveled are consistent with CalEEMod 2020.4.0 defaults.

Table 20
Estimated Vehicle Operations Fuel Consumption

Vehicle Type	Vehicle Mix	Number of Vehicles[2]	Average Trip (miles)[1]	Daily VMT	Average Fuel Economy (mpg)	Total Gallons per Day	Total Annual Fuel Consumption (gallons)
Light Auto	Automobile	154	8.7	1340	31.35	42.74	15,599
Light Truck	Automobile	18	8.7	157	24.4	6.42	2,343
Light Truck	Automobile	54	8.7	470	23.91	19.65	7,172
Medium Truck	Automobile	36	8.7	313	19.6	15.98	5,833
Light Heavy Truck	2-Axle Truck	7	8.7	61	15.57	3.91	1,428
Light Heavy Truck 10,000 lbs +	2-Axle Truck	2	8.7	17	14.86	1.17	427
Medium Heavy Truck	3-Axle Truck	3	14.7	44	7.75	5.69	2,077
Heavy Heavy Truck	4-Axle Truck	2	14.7	29	6.05	4.86	1,774
Total		284	--	2,431	-	100.42	--
Total Annual Fuel Consumption							36,652

Notes:

(1) Based on the size of the site and relative location, trips were assumed to be local rather than regional.

Table 21
Project Annual Operational Energy Demand Summary

Natural Gas Demand	kBTU/year[1,2]
Congregate Care (Assisted Living)	1,123,730
Total	1,123,730

Electricity Demand	kWh/year
Congregate Care (Assisted Living)	331,044
Parking Lot	7,700
Total	338,744

Notes:

(1) Taken from the CalEEMod 2020.4.0 annual output (Appendix C of this report).

5. EMISSIONS REDUCTION MEASURES

Construction Measures

Adherence to SCAQMD Rule 403 is required.

No construction mitigation is required.

Operational Measures

No operational mitigation is required.

6. REFERENCES

California Air Resources Board

2008 Resolution 08-43

2008 Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act

2008 ARB Recommended Interim Risk Management Policy for Inhalation-Based Residential Cancer Risk – Frequently Asked Questions

2008 Climate Change Scoping Plan, a framework for change.

2011 Supplement to the AB 32 Scoping Plan Functional Equivalent Document

2013 Almanac of Emissions and Air Quality.
Source: https://www.arb.ca.gov/aqd/almanac/almanac13/almanac13.htm

2014 First Update to the Climate Change Scoping Plan, Building on the Framework Pursuant to AB32, the California Global Warming Solutions Act of 2006. May.

2017 California's 2017 Climate Change Scoping Plan. November.

2021 Historical Air Quality, Top 4 Summary

City of Long Beach

1996 City of Long Beach Air Quality Element. December.

2020 City of Long Beach Climate Action and Adaptation Plan. November.

Ganddini Group, Inc.

2021 Sunrise Senior Living Long Beach Project Trip Generation and Distribution Analysis. October 5.

2021 Sunrise Senior Living Long Beach Project Vehicle Miles Traveled Screening Assessment. October 5.

Governor's Office of Planning and Research

2008 CEQA and Climate: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review

2018 CEQA Guideline Sections to be Added or Amended

Intergovernmental Panel on Climate Change (IPCC).

2014 IPCC Fifth Assessment Report, Climate Change 2014: Synthesis Report

South Coast Air Quality Management District

1993 CEQA Air Quality Handbook

2005 Rule 403 Fugitive Dust

2007 2007 Air Quality Management Plan

2008 Final Localized Significance Threshold Methodology, Revised

2012 Final 2012 Air Quality Management Plan

2016 2016 Air Quality Management Plan

2021 Historical Data by Year. 2013, 2014 and 2015 Air Quality Data Tables.
Source: http://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year

Southern California Association of Governments

2016 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy

U.S. Environmental Protection Agency (EPA)

2017 Understanding Global Warming Potentials
(Source: https://www.epa.gov/ghgemissions/understanding-global-warming-potentials)

U.S. Geological Survey

2011 Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California

APPENDICES

Appendix A Glossary

Appendix B CalEEMod Model Daily Emissions Printouts

Appendix C CalEEMod Model Annual Emissions Printouts and EMFAC Data

APPENDIX A

GLOSSARY

AQMP	Air Quality Management Plan
BACT	Best Available Control Technologies
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH_4	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DPM	Diesel particulate matter
EPA	U.S. Environmental Protection Agency
GHG	Greenhouse gas
GWP	Global warming potential
HIDPM	Hazard Index Diesel Particulate Matter
HFCs	Hydrofluorocarbons
IPCC	International Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LST	Localized Significant Thresholds
$MTCO_2e$	Metric tons of carbon dioxide equivalent
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NOx	Nitrogen Oxides
NO_2	Nitrogen dioxide
N_2O	Nitrous oxide
O_3	Ozone
OPR	Governor's Office of Planning and Research
PFCs	Perfluorocarbons
PM	Particle matter
PM10	Particles that are less than 10 micrometers in diameter
PM2.5	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact
PPM	Parts per million
PPB	Parts per billion
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SANBAG	San Bernardino Association of Governments
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SSAB	Salton Sea Air Basin
SF_6	Sulfur hexafluoride
SIP	State Implementation Plan
SOx	Sulfur Oxides
TAC	Toxic air contaminants
VOC	Volatile organic compounds

APPENDIX B

CALEEMOD MODEL DAILY EMISSIONS PRINTOUTS

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

19431 Sunrise Senior Living Long Beach

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Congregate Care (Assisted Living)	86.00	Dwelling Unit	0.91	78,277.00	246
Parking Lot	55.00	Space	0.49	22,000.00	0
Other Non-Asphalt Surfaces	1.25	Acre	1.25	54,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is ~2.65 ac w/ a 78,277 sf 2-story assisted living facility (bldg footprint is ~39,474 sf or 0.91 ac) with 86 units & 109 beds, paving of a parking lot w/ 55 spaces, & remainder site (~1.25 ac) hardscape/landsape.

Construction Phase - Construction anticipated to start no sooner than 1st Q 2023 and last ~15 months. Modeled as beginning January 2023 to end March 2024.

Grading - Grading to include ~340 CY import.

Demolition - ~110,800 sf existing paving to be removed (110,800 sf x 0.3 in = 33,240 c ft x 45 lbs/cf2 = 1,495,800 lbs = ~748 tons of debris to be removed).

Vehicle Trips - Per Trip Gen 2.6 trips/bed per day for a total of 284 trips (109 beds). 284 trips/86 units = 3.3 trips/unit per day.

Woodstoves - SCAQMD Rule 445 prohibits the installation of wood burning devices in new developments.

Sequestration - ~73 new trees to be planted.

Construction Off-road Equipment Mitigation -

19431 Sunrise Senior Living Long Beach - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mobile Land Use Mitigation - Site is ~0.06 miles SW of LB Transit Rte 172 Stop Palo Verde & Wardlow SW & ~5.67 miles NE of downtown portion of Long Beach. Sidewalks provided on/off-site.

Water Mitigation - 20% indoor water reduction per CalGreen Standards. Water-efficient irrigation systems. Water-efficient irrigation systems.

Waste Mitigation - AB 341 requires each jurisdiction in CA to divert at least 75% of their waste away from landfills by 2020.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	13.00
tblConstructionPhase	NumDays	220.00	269.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	6.00	7.00
tblConstructionPhase	NumDays	10.00	13.00
tblConstructionPhase	PhaseEndDate	1/11/2024	3/31/2024
tblConstructionPhase	PhaseEndDate	12/14/2023	2/22/2024
tblConstructionPhase	PhaseEndDate	1/27/2023	2/1/2023
tblConstructionPhase	PhaseEndDate	2/9/2023	2/10/2023
tblConstructionPhase	PhaseEndDate	12/28/2023	3/12/2024
tblConstructionPhase	PhaseStartDate	12/29/2023	3/13/2024
tblConstructionPhase	PhaseStartDate	2/10/2023	2/11/2023
tblConstructionPhase	PhaseStartDate	12/15/2023	2/23/2024
tblFireplaces	NumberGas	73.10	77.40
tblFireplaces	NumberWood	4.30	0.00
tblGrading	MaterialImported	0.00	340.00
tblLandUse	LandUseSquareFeet	86,000.00	78,277.00
tblLandUse	LotAcreage	5.38	0.91
tblSequestration	NumberOfNewTrees	0.00	73.00
tblVehicleTrips	ST_TR	2.93	3.30
tblVehicleTrips	SU_TR	3.15	3.30
tblVehicleTrips	WD_TR	2.60	3.30
tblWoodstoves	NumberCatalytic	4.30	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblWoodstoves	NumberNoncatalytic	4.30	0.00

2.0 Emissions Summary

19431 Sunrise Senior Living Long Beach - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.0400	15.1238	17.9479	0.0384	7.2794	0.6802	7.8884	3.4777	0.6361	4.0381	0.0000	3,682.0008	3,682.0008	0.6651	0.0850	3,719.1299
2024	39.5498	13.8570	17.5909	0.0381	1.1916	0.5484	1.7400	0.3192	0.5249	0.8442	0.0000	3,655.8929	3,655.8929	0.5454	0.0826	3,692.0872
Maximum	**39.5498**	**15.1238**	**17.9479**	**0.0384**	**7.2794**	**0.6802**	**7.8884**	**3.4777**	**0.6361**	**4.0381**	**0.0000**	**3,682.0008**	**3,682.0008**	**0.6651**	**0.0850**	**3,719.1299**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.0400	15.1238	17.9479	0.0384	2.9590	0.6802	3.5680	1.3886	0.6361	1.9491	0.0000	3,682.0008	3,682.0008	0.6651	0.0850	3,719.1299
2024	39.5498	13.8570	17.5909	0.0381	1.1916	0.5484	1.7400	0.3192	0.5249	0.8442	0.0000	3,655.8929	3,655.8929	0.5454	0.0826	3,692.0872
Maximum	**39.5498**	**15.1238**	**17.9479**	**0.0384**	**2.9590**	**0.6802**	**3.5680**	**1.3886**	**0.6361**	**1.9491**	**0.0000**	**3,682.0008**	**3,682.0008**	**0.6651**	**0.0850**	**3,719.1299**

19431 Sunrise Senior Living Long Beach - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	51.00	0.00	44.87	55.02	0.00	42.79	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0810	1.3657	7.6442	8.5700e-003		0.1431	0.1431		0.1431	0.1431	0.0000	1,651.8466	1,651.8466	0.0437	0.0301	1,661.8940
Energy	0.0332	0.2837	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.2004	362.2004	6.9400e-003	6.6400e-003	364.3528
Mobile	0.8567	0.8701	8.7747	0.0195	2.0418	0.0139	2.0556	0.5439	0.0129	0.5568		2,025.7132	2,025.7132	0.1292	0.0796	2,052.6516
Total	**2.9709**	**2.5195**	**16.5396**	**0.0299**	**2.0418**	**0.1800**	**2.2217**	**0.5439**	**0.1790**	**0.7228**	**0.0000**	**4,039.7603**	**4,039.7603**	**0.1798**	**0.1163**	**4,078.8984**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0810	1.3657	7.6442	8.5700e-003		0.1431	0.1431		0.1431	0.1431	0.0000	1,651.8466	1,651.8466	0.0437	0.0301	1,661.8940
Energy	0.0332	0.2837	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.2004	362.2004	6.9400e-003	6.6400e-003	364.3528
Mobile	0.7091	0.6451	6.3626	0.0134	1.3857	9.7800e-003	1.3955	0.3691	9.0800e-003	0.3782		1,387.9497	1,387.9497	0.0973	0.0590	1,407.9672
Total	**2.8233**	**2.2945**	**14.1275**	**0.0238**	**1.3857**	**0.1759**	**1.5616**	**0.3691**	**0.1752**	**0.5443**	**0.0000**	**3,401.9967**	**3,401.9967**	**0.1479**	**0.0957**	**3,434.2140**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**4.97**	**8.93**	**14.58**	**20.56**	**32.13**	**2.28**	**29.71**	**32.13**	**2.13**	**24.70**	**0.00**	**15.79**	**15.79**	**17.74**	**17.68**	**15.81**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2023	2/1/2023	5	23	
2	Grading	Grading	2/2/2023	2/10/2023	5	7	
3	Building Construction	Building Construction	2/11/2023	2/22/2024	5	269	
4	Paving	Paving	2/23/2024	3/12/2024	5	13	
5	Architectural Coating	Architectural Coating	3/13/2024	3/31/2024	5	13	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7

Acres of Paving: 1.74

Residential Indoor: 158,511; Residential Outdoor: 52,837; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 4,587 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	74.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	34.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	94.00	22.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	19.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6959	0.0000	0.6959	0.1054	0.0000	0.1054			0.0000			0.0000
Off-Road	1.4725	14.3184	13.4577	0.0241		0.6766	0.6766		0.6328	0.6328		2,324.3959	2,324.3959	0.5893		2,339.1278
Total	**1.4725**	**14.3184**	**13.4577**	**0.0241**	**0.6959**	**0.6766**	**1.3726**	**0.1054**	**0.6328**	**0.7381**		**2,324.3959**	**2,324.3959**	**0.5893**		**2,339.1278**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.9800e-003	0.4198	0.1121	1.8800e-003	0.0563	2.6500e-003	0.0590	0.0154	2.5300e-003	0.0180		206.7689	206.7689	0.0114	0.0328	216.8385
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0416	0.0290	0.4711	1.2900e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0393		131.6397	131.6397	3.2800e-003	3.0000e-003	132.6157
Total	**0.0486**	**0.4489**	**0.5831**	**3.1700e-003**	**0.2016**	**3.5300e-003**	**0.2052**	**0.0540**	**3.3400e-003**	**0.0573**		**338.4086**	**338.4086**	**0.0147**	**0.0358**	**349.4542**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2714	0.0000	0.2714	0.0411	0.0000	0.0411			0.0000			0.0000
Off-Road	1.4725	14.3184	13.4577	0.0241		0.6766	0.6766		0.6328	0.6328	0.0000	2,324.3959	2,324.3959	0.5893		2,339.1278
Total	**1.4725**	**14.3184**	**13.4577**	**0.0241**	**0.2714**	**0.6766**	**0.9481**	**0.0411**	**0.6328**	**0.6739**	**0.0000**	**2,324.3959**	**2,324.3959**	**0.5893**		**2,339.1278**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.9800e-003	0.4198	0.1121	1.8800e-003	0.0563	2.6500e-003	0.0590	0.0154	2.5300e-003	0.0180		206.7689	206.7689	0.0114	0.0328	216.8385
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0416	0.0290	0.4711	1.2900e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0393		131.6397	131.6397	3.2800e-003	3.0000e-003	132.6157
Total	**0.0486**	**0.4489**	**0.5831**	**3.1700e-003**	**0.2016**	**3.5300e-003**	**0.2052**	**0.0540**	**3.3400e-003**	**0.0573**		**338.4086**	**338.4086**	**0.0147**	**0.0358**	**349.4542**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560		1,995.6147	1,995.6147	0.6454		2,011.7503
Total	**1.3330**	**14.4676**	**8.7038**	**0.0206**	**7.0826**	**0.6044**	**7.6869**	**3.4247**	**0.5560**	**3.9807**		**1,995.6147**	**1,995.6147**	**0.6454**		**2,011.7503**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0105	0.6338	0.1692	2.8400e-003	0.0850	4.0000e-003	0.0890	0.0233	3.8200e-003	0.0271		312.1492	312.1492	0.0172	0.0496	327.3508
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0320	0.0223	0.3624	9.9000e-004	0.1118	6.7000e-004	0.1125	0.0296	6.2000e-004	0.0303		101.2613	101.2613	2.5200e-003	2.3100e-003	102.0121
Total	**0.0426**	**0.6561**	**0.5315**	**3.8300e-003**	**0.1968**	**4.6700e-003**	**0.2015**	**0.0530**	**4.4400e-003**	**0.0574**		**413.4105**	**413.4105**	**0.0197**	**0.0519**	**429.3629**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7622	0.0000	2.7622	1.3357	0.0000	1.3357			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503
Total	**1.3330**	**14.4676**	**8.7038**	**0.0206**	**2.7622**	**0.6044**	**3.3666**	**1.3357**	**0.5560**	**1.8917**	**0.0000**	**1,995.6147**	**1,995.6147**	**0.6454**		**2,011.7503**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0105	0.6338	0.1692	2.8400e-003	0.0850	4.0000e-003	0.0890	0.0233	3.8200e-003	0.0271		312.1492	312.1492	0.0172	0.0496	327.3508
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0320	0.0223	0.3624	9.9000e-004	0.1118	6.7000e-004	0.1125	0.0296	6.2000e-004	0.0303		101.2613	101.2613	2.5200e-003	2.3100e-003	102.0121
Total	**0.0426**	**0.6561**	**0.5315**	**3.8300e-003**	**0.1968**	**4.6700e-003**	**0.2015**	**0.0530**	**4.4400e-003**	**0.0574**		**413.4105**	**413.4105**	**0.0197**	**0.0519**	**429.3629**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**		**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0253	0.8444	0.3271	4.0900e-003	0.1409	4.2500e-003	0.1452	0.0406	4.0600e-003	0.0446		440.6214	440.6214	0.0148	0.0634	459.8684
Worker	0.3010	0.2099	3.4063	9.3000e-003	1.0507	6.3400e-003	1.0570	0.2787	5.8400e-003	0.2845		951.8560	951.8560	0.0237	0.0217	958.9136
Total	**0.3263**	**1.0543**	**3.7335**	**0.0134**	**1.1916**	**0.0106**	**1.2022**	**0.3192**	**9.9000e-003**	**0.3291**		**1,392.4775**	**1,392.4775**	**0.0385**	**0.0850**	**1,418.7820**

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**	**0.0000**	**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0253	0.8444	0.3271	4.0900e-003	0.1409	4.2500e-003	0.1452	0.0406	4.0600e-003	0.0446		440.6214	440.6214	0.0148	0.0634	459.8684
Worker	0.3010	0.2099	3.4063	9.3000e-003	1.0507	6.3400e-003	1.0570	0.2787	5.8400e-003	0.2845		951.8560	951.8560	0.0237	0.0217	958.9136
Total	**0.3263**	**1.0543**	**3.7335**	**0.0134**	**1.1916**	**0.0106**	**1.2022**	**0.3192**	**9.9000e-003**	**0.3291**		**1,392.4775**	**1,392.4775**	**0.0385**	**0.0850**	**1,418.7820**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5971	12.8235	14.1002	0.0250		0.5381	0.5381		0.5153	0.5153		2,289.6541	2,289.6541	0.4265		2,300.3154
Total	**1.5971**	**12.8235**	**14.1002**	**0.0250**		**0.5381**	**0.5381**		**0.5153**	**0.5153**		**2,289.6541**	**2,289.6541**	**0.4265**		**2,300.3154**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0246	0.8462	0.3202	4.0300e-003	0.1409	4.2700e-003	0.1452	0.0406	4.0900e-003	0.0447		434.0041	434.0041	0.0148	0.0625	452.9888
Worker	0.2806	0.1874	3.1706	9.0400e-003	1.0507	6.0800e-003	1.0568	0.2787	5.6000e-003	0.2843		932.2346	932.2346	0.0215	0.0202	938.7830
Total	**0.3051**	**1.0336**	**3.4908**	**0.0131**	**1.1916**	**0.0104**	**1.2020**	**0.3192**	**9.6900e-003**	**0.3289**		**1,366.2388**	**1,366.2388**	**0.0363**	**0.0826**	**1,391.7718**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5971	12.8235	14.1002	0.0250		0.5381	0.5381		0.5153	0.5153	0.0000	2,289.6541	2,289.6541	0.4265		2,300.3154
Total	**1.5971**	**12.8235**	**14.1002**	**0.0250**		**0.5381**	**0.5381**		**0.5153**	**0.5153**	**0.0000**	**2,289.6541**	**2,289.6541**	**0.4265**		**2,300.3154**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0246	0.8462	0.3202	4.0300e-003	0.1409	4.2700e-003	0.1452	0.0406	4.0900e-003	0.0447		434.0041	434.0041	0.0148	0.0625	452.9888
Worker	0.2806	0.1874	3.1706	9.0400e-003	1.0507	6.0800e-003	1.0568	0.2787	5.6000e-003	0.2843		932.2346	932.2346	0.0215	0.0202	938.7830
Total	**0.3051**	**1.0336**	**3.4908**	**0.0131**	**1.1916**	**0.0104**	**1.2020**	**0.3192**	**9.6900e-003**	**0.3289**		**1,366.2388**	**1,366.2388**	**0.0363**	**0.0826**	**1,391.7718**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8425	8.1030	11.7069	0.0179		0.3957	0.3957		0.3652	0.3652		1,710.2024	1,710.2024	0.5420		1,723.7529
Paving	0.0988					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9412**	**8.1030**	**11.7069**	**0.0179**		**0.3957**	**0.3957**		**0.3652**	**0.3652**		**1,710.2024**	**1,710.2024**	**0.5420**		**1,723.7529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0448	0.0299	0.5060	1.4400e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		148.7609	148.7609	3.4200e-003	3.2200e-003	149.8058
Total	**0.0448**	**0.0299**	**0.5060**	**1.4400e-003**	**0.1677**	**9.7000e-004**	**0.1686**	**0.0445**	**8.9000e-004**	**0.0454**		**148.7609**	**148.7609**	**3.4200e-003**	**3.2200e-003**	**149.8058**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8425	8.1030	11.7069	0.0179		0.3957	0.3957		0.3652	0.3652	0.0000	1,710.2024	1,710.2024	0.5420		1,723.7529
Paving	0.0988					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9412**	**8.1030**	**11.7069**	**0.0179**		**0.3957**	**0.3957**		**0.3652**	**0.3652**	**0.0000**	**1,710.2024**	**1,710.2024**	**0.5420**		**1,723.7529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0448	0.0299	0.5060	1.4400e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		148.7609	148.7609	3.4200e-003	3.2200e-003	149.8058
Total	**0.0448**	**0.0299**	**0.5060**	**1.4400e-003**	**0.1677**	**9.7000e-004**	**0.1686**	**0.0445**	**8.9000e-004**	**0.0454**		**148.7609**	**148.7609**	**3.4200e-003**	**3.2200e-003**	**149.8058**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	39.3123					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**39.4931**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0567	0.0379	0.6409	1.8300e-003	0.2124	1.2300e-003	0.2136	0.0563	1.1300e-003	0.0575		188.4304	188.4304	4.3400e-003	4.0800e-003	189.7540
Total	**0.0567**	**0.0379**	**0.6409**	**1.8300e-003**	**0.2124**	**1.2300e-003**	**0.2136**	**0.0563**	**1.1300e-003**	**0.0575**		**188.4304**	**188.4304**	**4.3400e-003**	**4.0800e-003**	**189.7540**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	39.3123					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**39.4931**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0567	0.0379	0.6409	1.8300e-003	0.2124	1.2300e-003	0.2136	0.0563	1.1300e-003	0.0575		188.4304	188.4304	4.3400e-003	4.0800e-003	189.7540
Total	**0.0567**	**0.0379**	**0.6409**	**1.8300e-003**	**0.2124**	**1.2300e-003**	**0.2136**	**0.0563**	**1.1300e-003**	**0.0575**		**188.4304**	**188.4304**	**4.3400e-003**	**4.0800e-003**	**189.7540**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.7091	0.6451	6.3626	0.0134	1.3857	9.7800e-003	1.3955	0.3691	9.0800e-003	0.3782		1,387.9497	1,387.9497	0.0973	0.0590	1,407.9672
Unmitigated	0.8567	0.8701	8.7747	0.0195	2.0418	0.0139	2.0556	0.5439	0.0129	0.5568		2,025.7132	2,025.7132	0.1292	0.0796	2,052.6516

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	283.80	283.80	283.80	969,788	658,176
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	283.80	283.80	283.80	969,788	658,176

4.3 Trip Type Information

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Other Non-Asphalt Surfaces	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Parking Lot	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0332	0.2837	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.2004	362.2004	6.9400e-003	6.6400e-003	364.3528
NaturalGas Unmitigated	0.0332	0.2837	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.2004	362.2004	6.9400e-003	6.6400e-003	364.3528

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	3078.7	0.0332	0.2837	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.2004	362.2004	6.9400e-003	6.6400e-003	364.3528
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0332**	**0.2837**	**0.1207**	**1.8100e-003**		**0.0229**	**0.0229**		**0.0229**	**0.0229**		**362.2004**	**362.2004**	**6.9400e-003**	**6.6400e-003**	**364.3528**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	3.0787	0.0332	0.2837	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.2004	362.2004	6.9400e-003	6.6400e-003	364.3528
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0332**	**0.2837**	**0.1207**	**1.8100e-003**		**0.0229**	**0.0229**		**0.0229**	**0.0229**		**362.2004**	**362.2004**	**6.9400e-003**	**6.6400e-003**	**364.3528**

6.0 Area Detail

6.1 Mitigation Measures Area

19431 Sunrise Senior Living Long Beach - Los Angeles-South Coast County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0810	1.3657	7.6442	8.5700e-003		0.1431	0.1431		0.1431	0.1431	0.0000	1,651.8466	1,651.8466	0.0437	0.0301	1,661.8940
Unmitigated	2.0810	1.3657	7.6442	8.5700e-003		0.1431	0.1431		0.1431	0.1431	0.0000	1,651.8466	1,651.8466	0.0437	0.0301	1,661.8940

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1400					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1503	1.2839	0.5464	8.2000e-003		0.1038	0.1038		0.1038	0.1038	0.0000	1,639.0588	1,639.0588	0.0314	0.0301	1,648.7989
Landscaping	0.2138	0.0818	7.0979	3.8000e-004		0.0393	0.0393		0.0393	0.0393		12.7878	12.7878	0.0123		13.0951
Total	**2.0810**	**1.3657**	**7.6442**	**8.5800e-003**		**0.1431**	**0.1431**		**0.1431**	**0.1431**	**0.0000**	**1,651.8466**	**1,651.8466**	**0.0437**	**0.0301**	**1,661.8940**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1400					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1503	1.2839	0.5464	8.2000e-003		0.1038	0.1038		0.1038	0.1038	0.0000	1,639.0588	1,639.0588	0.0314	0.0301	1,648.7989
Landscaping	0.2138	0.0818	7.0979	3.8000e-004		0.0393	0.0393		0.0393	0.0393		12.7878	12.7878	0.0123		13.0951
Total	**2.0810**	**1.3657**	**7.6442**	**8.5800e-003**		**0.1431**	**0.1431**		**0.1431**	**0.1431**	**0.0000**	**1,651.8466**	**1,651.8466**	**0.0437**	**0.0301**	**1,661.8940**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

19431 Sunrise Senior Living Long Beach

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Congregate Care (Assisted Living)	86.00	Dwelling Unit	0.91	78,277.00	246
Parking Lot	55.00	Space	0.49	22,000.00	0
Other Non-Asphalt Surfaces	1.25	Acre	1.25	54,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is ~2.65 ac w/ a 78,277 sf 2-story assisted living facility (bldg footprint is ~39,474 sf or 0.91 ac) with 86 units & 109 beds, paving of a parking lot w/ 55 spaces, & remainder site (~1.25 ac) hardscape/landsape.

Construction Phase - Construction anticipated to start no sooner than 1st Q 2023 and last ~15 months. Modeled as beginning January 2023 to end March 2024.

Grading - Grading to include ~340 CY import.

Demolition - ~110,800 sf existing paving to be removed (110,800 sf x 0.3 in = 33,240 c ft x 45 lbs/cf2 = 1,495,800 lbs = ~748 tons of debris to be removed).

Vehicle Trips - Per Trip Gen 2.6 trips/bed per day for a total of 284 trips (109 beds). 284 trips/86 units = 3.3 trips/unit per day.

Woodstoves - SCAQMD Rule 445 prohibits the installation of wood burning devices in new developments.

Sequestration - ~73 new trees to be planted.

Construction Off-road Equipment Mitigation -

19431 Sunrise Senior Living Long Beach - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mobile Land Use Mitigation - Site is ~0.06 miles SW of LB Transit Rte 172 Stop Palo Verde & Wardlow SW & ~5.67 miles NE of downtown portion of Long Beach. Sidewalks provided on/off-site.

Water Mitigation - 20% indoor water reduction per CalGreen Standards. Water-efficient irrigation systems. Water-efficient irrigation systems.

Waste Mitigation - AB 341 requires each jurisdiction in CA to divert at least 75% of their waste away from landfills by 2020.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	13.00
tblConstructionPhase	NumDays	220.00	269.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	6.00	7.00
tblConstructionPhase	NumDays	10.00	13.00
tblConstructionPhase	PhaseEndDate	1/11/2024	3/31/2024
tblConstructionPhase	PhaseEndDate	12/14/2023	2/22/2024
tblConstructionPhase	PhaseEndDate	1/27/2023	2/1/2023
tblConstructionPhase	PhaseEndDate	2/9/2023	2/10/2023
tblConstructionPhase	PhaseEndDate	12/28/2023	3/12/2024
tblConstructionPhase	PhaseStartDate	12/29/2023	3/13/2024
tblConstructionPhase	PhaseStartDate	2/10/2023	2/11/2023
tblConstructionPhase	PhaseStartDate	12/15/2023	2/23/2024
tblFireplaces	NumberGas	73.10	77.40
tblFireplaces	NumberWood	4.30	0.00
tblGrading	MaterialImported	0.00	340.00
tblLandUse	LandUseSquareFeet	86,000.00	78,277.00
tblLandUse	LotAcreage	5.38	0.91
tblSequestration	NumberOfNewTrees	0.00	73.00
tblVehicleTrips	ST_TR	2.93	3.30
tblVehicleTrips	SU_TR	3.15	3.30
tblVehicleTrips	WD_TR	2.60	3.30
tblWoodstoves	NumberCatalytic	4.30	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblWoodstoves	NumberNoncatalytic	4.30	0.00

2.0 Emissions Summary

19431 Sunrise Senior Living Long Beach - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.0615	15.1540	17.6828	0.0379	7.2794	0.6802	7.8884	3.4777	0.6361	4.0382	0.0000	3,632.5611	3,632.5611	0.6652	0.0867	3,670.1877
2024	39.5542	13.9163	17.3474	0.0376	1.1916	0.5484	1.7401	0.3192	0.5250	0.8442	0.0000	3,607.5731	3,607.5731	0.5455	0.0842	3,644.2302
Maximum	**39.5542**	**15.1540**	**17.6828**	**0.0379**	**7.2794**	**0.6802**	**7.8884**	**3.4777**	**0.6361**	**4.0382**	**0.0000**	**3,632.5611**	**3,632.5611**	**0.6652**	**0.0867**	**3,670.1877**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	2.0615	15.1540	17.6828	0.0379	2.9590	0.6802	3.5680	1.3886	0.6361	1.9491	0.0000	3,632.5611	3,632.5611	0.6652	0.0867	3,670.1877
2024	39.5542	13.9163	17.3474	0.0376	1.1916	0.5484	1.7401	0.3192	0.5250	0.8442	0.0000	3,607.5731	3,607.5731	0.5455	0.0842	3,644.2302
Maximum	**39.5542**	**15.1540**	**17.6828**	**0.0379**	**2.9590**	**0.6802**	**3.5680**	**1.3886**	**0.6361**	**1.9491**	**0.0000**	**3,632.5611**	**3,632.5611**	**0.6652**	**0.0867**	**3,670.1877**

19431 Sunrise Senior Living Long Beach - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	51.00	0.00	44.87	55.02	0.00	42.79	0.00	0.00	0.00	0.00	0.00	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0810	1.3657	7.6442	8.5700e-003		0.1431	0.1431		0.1431	0.1431	0.0000	1,651.8466	1,651.8466	0.0437	0.0301	1,661.8940
Energy	0.0332	0.2837	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.2004	362.2004	6.9400e-003	6.6400e-003	364.3528
Mobile	0.8418	0.9396	8.5771	0.0187	2.0418	0.0139	2.0557	0.5439	0.0129	0.5568		1,939.5931	1,939.5931	0.1327	0.0831	1,967.6629
Total	**2.9560**	**2.5890**	**16.3420**	**0.0291**	**2.0418**	**0.1800**	**2.2217**	**0.5439**	**0.1790**	**0.7228**	**0.0000**	**3,953.6402**	**3,953.6402**	**0.1834**	**0.1198**	**3,993.9097**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0810	1.3657	7.6442	8.5700e-003		0.1431	0.1431		0.1431	0.1431	0.0000	1,651.8466	1,651.8466	0.0437	0.0301	1,661.8940
Energy	0.0332	0.2837	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.2004	362.2004	6.9400e-003	6.6400e-003	364.3528
Mobile	0.6929	0.6967	6.3075	0.0128	1.3857	9.7900e-003	1.3955	0.3691	9.0900e-003	0.3782		1,329.6990	1,329.6990	0.1010	0.0617	1,350.6092
Total	**2.8071**	**2.3462**	**14.0724**	**0.0232**	**1.3857**	**0.1759**	**1.5616**	**0.3691**	**0.1752**	**0.5443**	**0.0000**	**3,343.7460**	**3,343.7460**	**0.1516**	**0.0984**	**3,376.8559**

19431 Sunrise Senior Living Long Beach - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**5.04**	**9.38**	**13.89**	**20.22**	**32.13**	**2.28**	**29.71**	**32.13**	**2.13**	**24.70**	**0.00**	**15.43**	**15.43**	**17.32**	**17.84**	**15.45**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2023	2/1/2023	5	23	
2	Grading	Grading	2/2/2023	2/10/2023	5	7	
3	Building Construction	Building Construction	2/11/2023	2/22/2024	5	269	
4	Paving	Paving	2/23/2024	3/12/2024	5	13	
5	Architectural Coating	Architectural Coating	3/13/2024	3/31/2024	5	13	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7

Acres of Paving: 1.74

Residential Indoor: 158,511; Residential Outdoor: 52,837; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 4,587 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	74.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	34.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	94.00	22.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	19.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6959	0.0000	0.6959	0.1054	0.0000	0.1054			0.0000			0.0000
Off-Road	1.4725	14.3184	13.4577	0.0241		0.6766	0.6766		0.6328	0.6328		2,324.3959	2,324.3959	0.5893		2,339.1278
Total	**1.4725**	**14.3184**	**13.4577**	**0.0241**	**0.6959**	**0.6766**	**1.3726**	**0.1054**	**0.6328**	**0.7381**		**2,324.3959**	**2,324.3959**	**0.5893**		**2,339.1278**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.5300e-003	0.4384	0.1136	1.8800e-003	0.0563	2.6600e-003	0.0590	0.0154	2.5400e-003	0.0180		206.9869	206.9869	0.0114	0.0329	217.0664
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0447	0.0321	0.4330	1.2200e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0393		124.6995	124.6995	3.3200e-003	3.2000e-003	125.7376
Total	**0.0513**	**0.4704**	**0.5466**	**3.1000e-003**	**0.2016**	**3.5400e-003**	**0.2052**	**0.0540**	**3.3500e-003**	**0.0573**		**331.6863**	**331.6863**	**0.0147**	**0.0361**	**342.8040**

19431 Sunrise Senior Living Long Beach - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2714	0.0000	0.2714	0.0411	0.0000	0.0411			0.0000			0.0000
Off-Road	1.4725	14.3184	13.4577	0.0241		0.6766	0.6766		0.6328	0.6328	0.0000	2,324.3959	2,324.3959	0.5893		2,339.1278
Total	**1.4725**	**14.3184**	**13.4577**	**0.0241**	**0.2714**	**0.6766**	**0.9481**	**0.0411**	**0.6328**	**0.6739**	**0.0000**	**2,324.3959**	**2,324.3959**	**0.5893**		**2,339.1278**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	6.5300e-003	0.4384	0.1136	1.8800e-003	0.0563	2.6600e-003	0.0590	0.0154	2.5400e-003	0.0180		206.9869	206.9869	0.0114	0.0329	217.0664
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0447	0.0321	0.4330	1.2200e-003	0.1453	8.8000e-004	0.1462	0.0385	8.1000e-004	0.0393		124.6995	124.6995	3.3200e-003	3.2000e-003	125.7376
Total	**0.0513**	**0.4704**	**0.5466**	**3.1000e-003**	**0.2016**	**3.5400e-003**	**0.2052**	**0.0540**	**3.3500e-003**	**0.0573**		**331.6863**	**331.6863**	**0.0147**	**0.0361**	**342.8040**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560		1,995.6147	1,995.6147	0.6454		2,011.7503
Total	**1.3330**	**14.4676**	**8.7038**	**0.0206**	**7.0826**	**0.6044**	**7.6869**	**3.4247**	**0.5560**	**3.9807**		**1,995.6147**	**1,995.6147**	**0.6454**		**2,011.7503**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.8500e-003	0.6618	0.1715	2.8400e-003	0.0850	4.0100e-003	0.0890	0.0233	3.8300e-003	0.0272		312.4782	312.4782	0.0172	0.0496	327.6949
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0344	0.0247	0.3331	9.4000e-004	0.1118	6.7000e-004	0.1125	0.0296	6.2000e-004	0.0303		95.9227	95.9227	2.5600e-003	2.4700e-003	96.7212
Total	**0.0443**	**0.6864**	**0.5046**	**3.7800e-003**	**0.1968**	**4.6800e-003**	**0.2015**	**0.0530**	**4.4500e-003**	**0.0574**		**408.4009**	**408.4009**	**0.0197**	**0.0521**	**424.4161**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7622	0.0000	2.7622	1.3357	0.0000	1.3357			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503
Total	**1.3330**	**14.4676**	**8.7038**	**0.0206**	**2.7622**	**0.6044**	**3.3666**	**1.3357**	**0.5560**	**1.8917**	**0.0000**	**1,995.6147**	**1,995.6147**	**0.6454**		**2,011.7503**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.8500e-003	0.6618	0.1715	2.8400e-003	0.0850	4.0100e-003	0.0890	0.0233	3.8300e-003	0.0272		312.4782	312.4782	0.0172	0.0496	327.6949
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0344	0.0247	0.3331	9.4000e-004	0.1118	6.7000e-004	0.1125	0.0296	6.2000e-004	0.0303		95.9227	95.9227	2.5600e-003	2.4700e-003	96.7212
Total	**0.0443**	**0.6864**	**0.5046**	**3.7800e-003**	**0.1968**	**4.6800e-003**	**0.2015**	**0.0530**	**4.4500e-003**	**0.0574**		**408.4009**	**408.4009**	**0.0197**	**0.0521**	**424.4161**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**		**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0245	0.8841	0.3374	4.1000e-003	0.1409	4.2700e-003	0.1452	0.0406	4.0900e-003	0.0447		441.3647	441.3647	0.0147	0.0635	460.6604
Worker	0.3234	0.2318	3.1310	8.8100e-003	1.0507	6.3400e-003	1.0570	0.2787	5.8400e-003	0.2845		901.6731	901.6731	0.0240	0.0232	909.1794
Total	**0.3479**	**1.1159**	**3.4684**	**0.0129**	**1.1916**	**0.0106**	**1.2022**	**0.3192**	**9.9300e-003**	**0.3292**		**1,343.0378**	**1,343.0378**	**0.0387**	**0.0867**	**1,369.8398**

19431 Sunrise Senior Living Long Beach - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	**1.7136**	**13.6239**	**14.2145**	**0.0250**		**0.6136**	**0.6136**		**0.5880**	**0.5880**	**0.0000**	**2,289.5233**	**2,289.5233**	**0.4330**		**2,300.3479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0245	0.8841	0.3374	4.1000e-003	0.1409	4.2700e-003	0.1452	0.0406	4.0900e-003	0.0447		441.3647	441.3647	0.0147	0.0635	460.6604
Worker	0.3234	0.2318	3.1310	8.8100e-003	1.0507	6.3400e-003	1.0570	0.2787	5.8400e-003	0.2845		901.6731	901.6731	0.0240	0.0232	909.1794
Total	**0.3479**	**1.1159**	**3.4684**	**0.0129**	**1.1916**	**0.0106**	**1.2022**	**0.3192**	**9.9300e-003**	**0.3292**		**1,343.0378**	**1,343.0378**	**0.0387**	**0.0867**	**1,369.8398**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5971	12.8235	14.1002	0.0250		0.5381	0.5381		0.5153	0.5153		2,289.6541	2,289.6541	0.4265		2,300.3154
Total	**1.5971**	**12.8235**	**14.1002**	**0.0250**		**0.5381**	**0.5381**		**0.5153**	**0.5153**		**2,289.6541**	**2,289.6541**	**0.4265**		**2,300.3154**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0236	0.8859	0.3303	4.0400e-003	0.1409	4.3000e-003	0.1452	0.0406	4.1100e-003	0.0447		434.7515	434.7515	0.0148	0.0626	453.7835
Worker	0.3024	0.2070	2.9169	8.5600e-003	1.0507	6.0800e-003	1.0568	0.2787	5.6000e-003	0.2843		883.1675	883.1675	0.0218	0.0215	890.1313
Total	**0.3261**	**1.0929**	**3.2472**	**0.0126**	**1.1916**	**0.0104**	**1.2020**	**0.3192**	**9.7100e-003**	**0.3289**		**1,317.9190**	**1,317.9190**	**0.0365**	**0.0842**	**1,343.9148**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5971	12.8235	14.1002	0.0250		0.5381	0.5381		0.5153	0.5153	0.0000	2,289.6541	2,289.6541	0.4265		2,300.3154
Total	**1.5971**	**12.8235**	**14.1002**	**0.0250**		**0.5381**	**0.5381**		**0.5153**	**0.5153**	**0.0000**	**2,289.6541**	**2,289.6541**	**0.4265**		**2,300.3154**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0236	0.8859	0.3303	4.0400e-003	0.1409	4.3000e-003	0.1452	0.0406	4.1100e-003	0.0447		434.7515	434.7515	0.0148	0.0626	453.7835
Worker	0.3024	0.2070	2.9169	8.5600e-003	1.0507	6.0800e-003	1.0568	0.2787	5.6000e-003	0.2843		883.1675	883.1675	0.0218	0.0215	890.1313
Total	**0.3261**	**1.0929**	**3.2472**	**0.0126**	**1.1916**	**0.0104**	**1.2020**	**0.3192**	**9.7100e-003**	**0.3289**		**1,317.9190**	**1,317.9190**	**0.0365**	**0.0842**	**1,343.9148**

19431 Sunrise Senior Living Long Beach - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8425	8.1030	11.7069	0.0179		0.3957	0.3957		0.3652	0.3652		1,710.2024	1,710.2024	0.5420		1,723.7529
Paving	0.0988					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9412**	**8.1030**	**11.7069**	**0.0179**		**0.3957**	**0.3957**		**0.3652**	**0.3652**		**1,710.2024**	**1,710.2024**	**0.5420**		**1,723.7529**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0483	0.0330	0.4655	1.3700e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		140.9310	140.9310	3.4700e-003	3.4400e-003	142.0422
Total	**0.0483**	**0.0330**	**0.4655**	**1.3700e-003**	**0.1677**	**9.7000e-004**	**0.1686**	**0.0445**	**8.9000e-004**	**0.0454**		**140.9310**	**140.9310**	**3.4700e-003**	**3.4400e-003**	**142.0422**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8425	8.1030	11.7069	0.0179		0.3957	0.3957		0.3652	0.3652	0.0000	1,710.2024	1,710.2024	0.5420		1,723.7529
Paving	0.0988					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9412**	**8.1030**	**11.7069**	**0.0179**		**0.3957**	**0.3957**		**0.3652**	**0.3652**	**0.0000**	**1,710.2024**	**1,710.2024**	**0.5420**		**1,723.7529**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0483	0.0330	0.4655	1.3700e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		140.9310	140.9310	3.4700e-003	3.4400e-003	142.0422
Total	**0.0483**	**0.0330**	**0.4655**	**1.3700e-003**	**0.1677**	**9.7000e-004**	**0.1686**	**0.0445**	**8.9000e-004**	**0.0454**		**140.9310**	**140.9310**	**3.4700e-003**	**3.4400e-003**	**142.0422**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	39.3123					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**39.4931**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0611	0.0418	0.5896	1.7300e-003	0.2124	1.2300e-003	0.2136	0.0563	1.1300e-003	0.0575		178.5126	178.5126	4.4000e-003	4.3500e-003	179.9202
Total	**0.0611**	**0.0418**	**0.5896**	**1.7300e-003**	**0.2124**	**1.2300e-003**	**0.2136**	**0.0563**	**1.1300e-003**	**0.0575**		**178.5126**	**178.5126**	**4.4000e-003**	**4.3500e-003**	**179.9202**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	39.3123					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**39.4931**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0611	0.0418	0.5896	1.7300e-003	0.2124	1.2300e-003	0.2136	0.0563	1.1300e-003	0.0575		178.5126	178.5126	4.4000e-003	4.3500e-003	179.9202
Total	**0.0611**	**0.0418**	**0.5896**	**1.7300e-003**	**0.2124**	**1.2300e-003**	**0.2136**	**0.0563**	**1.1300e-003**	**0.0575**		**178.5126**	**178.5126**	**4.4000e-003**	**4.3500e-003**	**179.9202**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6929	0.6967	6.3075	0.0128	1.3857	9.7900e-003	1.3955	0.3691	9.0900e-003	0.3782		1,329.6990	1,329.6990	0.1010	0.0617	1,350.6092
Unmitigated	0.8418	0.9396	8.5771	0.0187	2.0418	0.0139	2.0557	0.5439	0.0129	0.5568		1,939.5931	1,939.5931	0.1327	0.0831	1,967.6629

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	283.80	283.80	283.80	969,788	658,176
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	283.80	283.80	283.80	969,788	658,176

4.3 Trip Type Information

19431 Sunrise Senior Living Long Beach - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Other Non-Asphalt Surfaces	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Parking Lot	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0332	0.2837	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.2004	362.2004	6.9400e-003	6.6400e-003	364.3528
NaturalGas Unmitigated	0.0332	0.2837	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.2004	362.2004	6.9400e-003	6.6400e-003	364.3528

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	3078.7	0.0332	0.2837	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.2004	362.2004	6.9400e-003	6.6400e-003	364.3528
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0332**	**0.2837**	**0.1207**	**1.8100e-003**		**0.0229**	**0.0229**		**0.0229**	**0.0229**		**362.2004**	**362.2004**	**6.9400e-003**	**6.6400e-003**	**364.3528**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Congregate Care (Assisted Living)	3.0787	0.0332	0.2837	0.1207	1.8100e-003		0.0229	0.0229		0.0229	0.0229		362.2004	362.2004	6.9400e-003	6.6400e-003	364.3528
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0332**	**0.2837**	**0.1207**	**1.8100e-003**		**0.0229**	**0.0229**		**0.0229**	**0.0229**		**362.2004**	**362.2004**	**6.9400e-003**	**6.6400e-003**	**364.3528**

6.0 Area Detail

6.1 Mitigation Measures Area

19431 Sunrise Senior Living Long Beach - Los Angeles-South Coast County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0810	1.3657	7.6442	8.5700e-003		0.1431	0.1431		0.1431	0.1431	0.0000	1,651.8466	1,651.8466	0.0437	0.0301	1,661.8940
Unmitigated	2.0810	1.3657	7.6442	8.5700e-003		0.1431	0.1431		0.1431	0.1431	0.0000	1,651.8466	1,651.8466	0.0437	0.0301	1,661.8940

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1400					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1503	1.2839	0.5464	8.2000e-003		0.1038	0.1038		0.1038	0.1038	0.0000	1,639.0588	1,639.0588	0.0314	0.0301	1,648.7989
Landscaping	0.2138	0.0818	7.0979	3.8000e-004		0.0393	0.0393		0.0393	0.0393		12.7878	12.7878	0.0123		13.0951
Total	**2.0810**	**1.3657**	**7.6442**	**8.5800e-003**		**0.1431**	**0.1431**		**0.1431**	**0.1431**	**0.0000**	**1,651.8466**	**1,651.8466**	**0.0437**	**0.0301**	**1,661.8940**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1400					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5770					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.1503	1.2839	0.5464	8.2000e-003		0.1038	0.1038		0.1038	0.1038	0.0000	1,639.0588	1,639.0588	0.0314	0.0301	1,648.7989
Landscaping	0.2138	0.0818	7.0979	3.8000e-004		0.0393	0.0393		0.0393	0.0393		12.7878	12.7878	0.0123		13.0951
Total	**2.0810**	**1.3657**	**7.6442**	**8.5800e-003**		**0.1431**	**0.1431**		**0.1431**	**0.1431**	**0.0000**	**1,651.8466**	**1,651.8466**	**0.0437**	**0.0301**	**1,661.8940**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX C

CALEEMOD MODEL ANNUAL EMISSIONS PRINTOUTS AND EMFAC DATA

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

19431 Sunrise Senior Living Long Beach

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Congregate Care (Assisted Living)	86.00	Dwelling Unit	0.91	78,277.00	246
Parking Lot	55.00	Space	0.49	22,000.00	0
Other Non-Asphalt Surfaces	1.25	Acre	1.25	54,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is ~2.65 ac w/ a 78,277 sf 2-story assisted living facility (bldg footprint is ~39,474 sf or 0.91 ac) with 86 units & 109 beds, paving of a parking lot w/ 55 spaces, & remainder site (~1.25 ac) hardscape/landsape.

Construction Phase - Construction anticipated to start no sooner than 1st Q 2023 and last ~15 months. Modeled as beginning January 2023 to end March 2024.

Grading - Grading to include ~340 CY import.

Demolition - ~110,800 sf existing paving to be removed (110,800 sf x 0.3 in = 33,240 c ft x 45 lbs/cf2 = 1,495,800 lbs = ~748 tons of debris to be removed).

Vehicle Trips - Per Trip Gen 2.6 trips/bed per day for a total of 284 trips (109 beds). 284 trips/86 units = 3.3 trips/unit per day.

Woodstoves - SCAQMD Rule 445 prohibits the installation of wood burning devices in new developments.

Sequestration - ~73 new trees to be planted.

Construction Off-road Equipment Mitigation -

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Mobile Land Use Mitigation - Site is ~0.06 miles SW of LB Transit Rte 172 Stop Palo Verde & Wardlow SW & ~5.67 miles NE of downtown portion of Long Beach. Sidewalks provided on/off-site.

Water Mitigation - 20% indoor water reduction per CalGreen Standards. Water-efficient irrigation systems. Water-efficient irrigation systems.

Waste Mitigation - AB 341 requires each jurisdiction in CA to divert at least 75% of their waste away from landfills by 2020.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	13.00
tblConstructionPhase	NumDays	220.00	269.00
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	6.00	7.00
tblConstructionPhase	NumDays	10.00	13.00
tblConstructionPhase	PhaseEndDate	1/11/2024	3/31/2024
tblConstructionPhase	PhaseEndDate	12/14/2023	2/22/2024
tblConstructionPhase	PhaseEndDate	1/27/2023	2/1/2023
tblConstructionPhase	PhaseEndDate	2/9/2023	2/10/2023
tblConstructionPhase	PhaseEndDate	12/28/2023	3/12/2024
tblConstructionPhase	PhaseStartDate	12/29/2023	3/13/2024
tblConstructionPhase	PhaseStartDate	2/10/2023	2/11/2023
tblConstructionPhase	PhaseStartDate	12/15/2023	2/23/2024
tblFireplaces	NumberGas	73.10	77.40
tblFireplaces	NumberWood	4.30	0.00
tblGrading	MaterialImported	0.00	340.00
tblLandUse	LandUseSquareFeet	86,000.00	78,277.00
tblLandUse	LotAcreage	5.38	0.91
tblSequestration	NumberOfNewTrees	0.00	73.00
tblVehicleTrips	ST_TR	2.93	3.30
tblVehicleTrips	SU_TR	3.15	3.30
tblVehicleTrips	WD_TR	2.60	3.30
tblWoodstoves	NumberCatalytic	4.30	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblWoodstoves	NumberNoncatalytic	4.30	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2566	1.9192	2.2356	4.7800e-003	0.1701	0.0817	0.2519	0.0501	0.0780	0.1281	0.0000	415.6948	415.6948	0.0576	9.6200e-003	420.0013
2024	0.3005	0.3326	0.4345	8.9000e-004	0.0252	0.0137	0.0389	6.7600e-003	0.0130	0.0198	0.0000	77.6992	77.6992	0.0115	1.5400e-003	78.4464
Maximum	**0.3005**	**1.9192**	**2.2356**	**4.7800e-003**	**0.1701**	**0.0817**	**0.2519**	**0.0501**	**0.0780**	**0.1281**	**0.0000**	**415.6948**	**415.6948**	**0.0576**	**9.6200e-003**	**420.0013**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.2566	1.9192	2.2355	4.7800e-003	0.1501	0.0817	0.2319	0.0420	0.0780	0.1200	0.0000	415.6945	415.6945	0.0576	9.6200e-003	420.0010
2024	0.3005	0.3326	0.4345	8.9000e-004	0.0252	0.0137	0.0389	6.7600e-003	0.0130	0.0198	0.0000	77.6992	77.6992	0.0115	1.5400e-003	78.4464
Maximum	**0.3005**	**1.9192**	**2.2355**	**4.7800e-003**	**0.1501**	**0.0817**	**0.2319**	**0.0420**	**0.0780**	**0.1200**	**0.0000**	**415.6945**	**415.6945**	**0.0576**	**9.6200e-003**	**420.0010**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**10.24**	**0.00**	**6.88**	**14.17**	**0.00**	**5.44**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2023**	**3-31-2023**	0.5336	0.5336
2	**4-1-2023**	**6-30-2023**	0.5433	0.5433
3	**7-1-2023**	**9-30-2023**	0.5493	0.5493
4	**10-1-2023**	**12-31-2023**	0.5520	0.5520
5	**1-1-2024**	**3-31-2024**	0.6387	0.6387
		Highest	0.6387	0.6387

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3420	0.0263	0.8941	1.5000e-004		6.2100e-003	6.2100e-003		6.2100e-003	6.2100e-003	0.0000	20.0367	20.0367	1.7500e-003	3.4000e-004	20.1820
Energy	6.0600e-003	0.0518	0.0220	3.3000e-004		4.1900e-003	4.1900e-003		4.1900e-003	4.1900e-003	0.0000	120.0411	120.0411	6.2200e-003	1.7100e-003	120.7074
Mobile	0.1507	0.1734	1.5753	3.4400e-003	0.3644	2.5300e-003	0.3669	0.0972	2.3500e-003	0.0996	0.0000	323.6662	323.6662	0.0218	0.0138	328.3235
Waste						0.0000	0.0000		0.0000	0.0000	15.9287	0.0000	15.9287	0.9414	0.0000	39.4627
Water						0.0000	0.0000		0.0000	0.0000	1.7777	19.8992	21.6768	0.1843	4.5100e-003	27.6288
Total	**0.4987**	**0.2515**	**2.4914**	**3.9200e-003**	**0.3644**	**0.0129**	**0.3773**	**0.0972**	**0.0128**	**0.1100**	**17.7064**	**483.6432**	**501.3496**	**1.1554**	**0.0204**	**536.3043**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3420	0.0263	0.8941	1.5000e-004		6.2100e-003	6.2100e-003		6.2100e-003	6.2100e-003	0.0000	20.0367	20.0367	1.7500e-003	3.4000e-004	20.1820
Energy	6.0600e-003	0.0518	0.0220	3.3000e-004		4.1900e-003	4.1900e-003		4.1900e-003	4.1900e-003	0.0000	120.0411	120.0411	6.2200e-003	1.7100e-003	120.7074
Mobile	0.1236	0.1282	1.1549	2.3600e-003	0.2473	1.7800e-003	0.2491	0.0660	1.6500e-003	0.0676	0.0000	221.8561	221.8561	0.0166	0.0102	225.3179
Waste						0.0000	0.0000		0.0000	0.0000	3.9822	0.0000	3.9822	0.2353	0.0000	9.8657
Water						0.0000	0.0000		0.0000	0.0000	1.4221	17.3114	18.7335	0.1475	3.6300e-003	23.5022
Total	**0.4716**	**0.2063**	**2.0710**	**2.8400e-003**	**0.2473**	**0.0122**	**0.2595**	**0.0660**	**0.0121**	**0.0780**	**5.4043**	**379.2453**	**384.6496**	**0.4074**	**0.0159**	**399.5751**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**5.44**	**17.98**	**16.87**	**27.55**	**32.13**	**5.80**	**31.23**	**32.13**	**5.49**	**29.04**	**69.48**	**21.59**	**23.28**	**64.74**	**21.86**	**25.49**

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	51.6840
Total	**51.6840**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2023	2/1/2023	5	23	
2	Grading	Grading	2/2/2023	2/10/2023	5	7	
3	Building Construction	Building Construction	2/11/2023	2/22/2024	5	269	
4	Paving	Paving	2/23/2024	3/12/2024	5	13	
5	Architectural Coating	Architectural Coating	3/13/2024	3/31/2024	5	13	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7

Acres of Paving: 1.74

Residential Indoor: 158,511; Residential Outdoor: 52,837; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 4,587 (Architectural Coating – sqft)

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	74.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	34.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	94.00	22.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	19.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.0000e-003	0.0000	8.0000e-003	1.2100e-003	0.0000	1.2100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1647	0.1548	2.8000e-004		7.7800e-003	7.7800e-003		7.2800e-003	7.2800e-003	0.0000	24.2496	24.2496	6.1500e-003	0.0000	24.4032
Total	**0.0169**	**0.1647**	**0.1548**	**2.8000e-004**	**8.0000e-003**	**7.7800e-003**	**0.0158**	**1.2100e-003**	**7.2800e-003**	**8.4900e-003**	**0.0000**	**24.2496**	**24.2496**	**6.1500e-003**	**0.0000**	**24.4032**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	5.0900e-003	1.3000e-003	2.0000e-005	6.4000e-004	3.0000e-005	6.7000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	2.1581	2.1581	1.2000e-004	3.4000e-004	2.2632
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.8000e-004	5.1100e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.4000e-004	0.0000	1.3204	1.3204	3.0000e-005	3.0000e-005	1.3313
Total	**5.5000e-004**	**5.4700e-003**	**6.4100e-003**	**3.0000e-005**	**2.2800e-003**	**4.0000e-005**	**2.3200e-003**	**6.1000e-004**	**4.0000e-005**	**6.4000e-004**	**0.0000**	**3.4785**	**3.4785**	**1.5000e-004**	**3.7000e-004**	**3.5945**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.1200e-003	0.0000	3.1200e-003	4.7000e-004	0.0000	4.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0169	0.1647	0.1548	2.8000e-004		7.7800e-003	7.7800e-003		7.2800e-003	7.2800e-003	0.0000	24.2495	24.2495	6.1500e-003	0.0000	24.4032
Total	**0.0169**	**0.1647**	**0.1548**	**2.8000e-004**	**3.1200e-003**	**7.7800e-003**	**0.0109**	**4.7000e-004**	**7.2800e-003**	**7.7500e-003**	**0.0000**	**24.2495**	**24.2495**	**6.1500e-003**	**0.0000**	**24.4032**

3.2 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	8.0000e-005	5.0900e-003	1.3000e-003	2.0000e-005	6.4000e-004	3.0000e-005	6.7000e-004	1.7000e-004	3.0000e-005	2.0000e-004	0.0000	2.1581	2.1581	1.2000e-004	3.4000e-004	2.2632
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.7000e-004	3.8000e-004	5.1100e-003	1.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.4000e-004	0.0000	1.3204	1.3204	3.0000e-005	3.0000e-005	1.3313
Total	**5.5000e-004**	**5.4700e-003**	**6.4100e-003**	**3.0000e-005**	**2.2800e-003**	**4.0000e-005**	**2.3200e-003**	**6.1000e-004**	**4.0000e-005**	**6.4000e-004**	**0.0000**	**3.4785**	**3.4785**	**1.5000e-004**	**3.7000e-004**	**3.5945**

3.3 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0248	0.0000	0.0248	0.0120	0.0000	0.0120	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6700e-003	0.0506	0.0305	7.0000e-005		2.1200e-003	2.1200e-003		1.9500e-003	1.9500e-003	0.0000	6.3364	6.3364	2.0500e-003	0.0000	6.3876
Total	**4.6700e-003**	**0.0506**	**0.0305**	**7.0000e-005**	**0.0248**	**2.1200e-003**	**0.0269**	**0.0120**	**1.9500e-003**	**0.0139**	**0.0000**	**6.3364**	**6.3364**	**2.0500e-003**	**0.0000**	**6.3876**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	2.3400e-003	6.0000e-004	1.0000e-005	2.9000e-004	1.0000e-005	3.1000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.9916	0.9916	5.0000e-005	1.6000e-004	1.0399
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	9.0000e-005	1.2000e-003	0.0000	3.8000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3091	0.3091	1.0000e-005	1.0000e-005	0.3117
Total	**1.5000e-004**	**2.4300e-003**	**1.8000e-003**	**1.0000e-005**	**6.7000e-004**	**1.0000e-005**	**7.0000e-004**	**1.8000e-004**	**1.0000e-005**	**1.9000e-004**	**0.0000**	**1.3007**	**1.3007**	**6.0000e-005**	**1.7000e-004**	**1.3515**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.6700e-003	0.0000	9.6700e-003	4.6700e-003	0.0000	4.6700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6700e-003	0.0506	0.0305	7.0000e-005		2.1200e-003	2.1200e-003		1.9500e-003	1.9500e-003	0.0000	6.3364	6.3364	2.0500e-003	0.0000	6.3876
Total	**4.6700e-003**	**0.0506**	**0.0305**	**7.0000e-005**	**9.6700e-003**	**2.1200e-003**	**0.0118**	**4.6700e-003**	**1.9500e-003**	**6.6200e-003**	**0.0000**	**6.3364**	**6.3364**	**2.0500e-003**	**0.0000**	**6.3876**

3.3 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	2.3400e-003	6.0000e-004	1.0000e-005	2.9000e-004	1.0000e-005	3.1000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.9916	0.9916	5.0000e-005	1.6000e-004	1.0399
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.1000e-004	9.0000e-005	1.2000e-003	0.0000	3.8000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3091	0.3091	1.0000e-005	1.0000e-005	0.3117
Total	**1.5000e-004**	**2.4300e-003**	**1.8000e-003**	**1.0000e-005**	**6.7000e-004**	**1.0000e-005**	**7.0000e-004**	**1.8000e-004**	**1.0000e-005**	**1.9000e-004**	**0.0000**	**1.3007**	**1.3007**	**6.0000e-005**	**1.7000e-004**	**1.3515**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1971	1.5668	1.6347	2.8800e-003		0.0706	0.0706		0.0676	0.0676	0.0000	238.8574	238.8574	0.0452	0.0000	239.9867
Total	**0.1971**	**1.5668**	**1.6347**	**2.8800e-003**		**0.0706**	**0.0706**		**0.0676**	**0.0676**	**0.0000**	**238.8574**	**238.8574**	**0.0452**	**0.0000**	**239.9867**

3.4 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8600e-003	0.1020	0.0382	4.7000e-004	0.0159	4.9000e-004	0.0164	4.6000e-003	4.7000e-004	5.0700e-003	0.0000	46.0010	46.0010	1.5400e-003	6.6200e-003	48.0123
Worker	0.0343	0.0273	0.3693	1.0300e-003	0.1185	7.3000e-004	0.1192	0.0315	6.7000e-004	0.0321	0.0000	95.4714	95.4714	2.5100e-003	2.4500e-003	96.2655
Total	**0.0372**	**0.1292**	**0.4075**	**1.5000e-003**	**0.1344**	**1.2200e-003**	**0.1356**	**0.0361**	**1.1400e-003**	**0.0372**	**0.0000**	**141.4724**	**141.4724**	**4.0500e-003**	**9.0700e-003**	**144.2778**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1971	1.5668	1.6347	2.8800e-003		0.0706	0.0706		0.0676	0.0676	0.0000	238.8571	238.8571	0.0452	0.0000	239.9864
Total	**0.1971**	**1.5668**	**1.6347**	**2.8800e-003**		**0.0706**	**0.0706**		**0.0676**	**0.0676**	**0.0000**	**238.8571**	**238.8571**	**0.0452**	**0.0000**	**239.9864**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.8600e-003	0.1020	0.0382	4.7000e-004	0.0159	4.9000e-004	0.0164	4.6000e-003	4.7000e-004	5.0700e-003	0.0000	46.0010	46.0010	1.5400e-003	6.6200e-003	48.0123
Worker	0.0343	0.0273	0.3693	1.0300e-003	0.1185	7.3000e-004	0.1192	0.0315	6.7000e-004	0.0321	0.0000	95.4714	95.4714	2.5100e-003	2.4500e-003	96.2655
Total	**0.0372**	**0.1292**	**0.4075**	**1.5000e-003**	**0.1344**	**1.2200e-003**	**0.1356**	**0.0361**	**1.1400e-003**	**0.0372**	**0.0000**	**141.4724**	**141.4724**	**4.0500e-003**	**9.0700e-003**	**144.2778**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0311	0.2501	0.2750	4.9000e-004		0.0105	0.0105		0.0101	0.0101	0.0000	40.5042	40.5042	7.5400e-003	0.0000	40.6928
Total	**0.0311**	**0.2501**	**0.2750**	**4.9000e-004**		**0.0105**	**0.0105**		**0.0101**	**0.0101**	**0.0000**	**40.5042**	**40.5042**	**7.5400e-003**	**0.0000**	**40.6928**

3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.7000e-004	0.0173	6.3300e-003	8.0000e-005	2.7000e-003	8.0000e-005	2.7900e-003	7.8000e-004	8.0000e-005	8.6000e-004	0.0000	7.6831	7.6831	2.6000e-004	1.1100e-003	8.0195
Worker	5.4300e-003	4.1200e-003	0.0583	1.7000e-004	0.0201	1.2000e-004	0.0202	5.3300e-003	1.1000e-004	5.4400e-003	0.0000	15.8560	15.8560	3.9000e-004	3.9000e-004	15.9809
Total	**5.9000e-003**	**0.0214**	**0.0647**	**2.5000e-004**	**0.0228**	**2.0000e-004**	**0.0230**	**6.1100e-003**	**1.9000e-004**	**6.3000e-003**	**0.0000**	**23.5391**	**23.5391**	**6.5000e-004**	**1.5000e-003**	**24.0004**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0311	0.2501	0.2750	4.9000e-004		0.0105	0.0105		0.0101	0.0101	0.0000	40.5042	40.5042	7.5400e-003	0.0000	40.6928
Total	**0.0311**	**0.2501**	**0.2750**	**4.9000e-004**		**0.0105**	**0.0105**		**0.0101**	**0.0101**	**0.0000**	**40.5042**	**40.5042**	**7.5400e-003**	**0.0000**	**40.6928**

3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.7000e-004	0.0173	6.3300e-003	8.0000e-005	2.7000e-003	8.0000e-005	2.7900e-003	7.8000e-004	8.0000e-005	8.6000e-004	0.0000	7.6831	7.6831	2.6000e-004	1.1100e-003	8.0195
Worker	5.4300e-003	4.1200e-003	0.0583	1.7000e-004	0.0201	1.2000e-004	0.0202	5.3300e-003	1.1000e-004	5.4400e-003	0.0000	15.8560	15.8560	3.9000e-004	3.9000e-004	15.9809
Total	**5.9000e-003**	**0.0214**	**0.0647**	**2.5000e-004**	**0.0228**	**2.0000e-004**	**0.0230**	**6.1100e-003**	**1.9000e-004**	**6.3000e-003**	**0.0000**	**23.5391**	**23.5391**	**6.5000e-004**	**1.5000e-003**	**24.0004**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.4800e-003	0.0527	0.0761	1.2000e-004		2.5700e-003	2.5700e-003		2.3700e-003	2.3700e-003	0.0000	10.0846	10.0846	3.2000e-003	0.0000	10.1645
Paving	6.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.1200e-003**	**0.0527**	**0.0761**	**1.2000e-004**		**2.5700e-003**	**2.5700e-003**		**2.3700e-003**	**2.3700e-003**	**0.0000**	**10.0846**	**10.0846**	**3.2000e-003**	**0.0000**	**10.1645**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	2.2000e-004	3.1000e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0700e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.8434	0.8434	2.0000e-005	2.0000e-005	0.8501
Total	**2.9000e-004**	**2.2000e-004**	**3.1000e-003**	**1.0000e-005**	**1.0700e-003**	**1.0000e-005**	**1.0700e-003**	**2.8000e-004**	**1.0000e-005**	**2.9000e-004**	**0.0000**	**0.8434**	**0.8434**	**2.0000e-005**	**2.0000e-005**	**0.8501**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.4800e-003	0.0527	0.0761	1.2000e-004		2.5700e-003	2.5700e-003		2.3700e-003	2.3700e-003	0.0000	10.0845	10.0845	3.2000e-003	0.0000	10.1644
Paving	6.4000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.1200e-003**	**0.0527**	**0.0761**	**1.2000e-004**		**2.5700e-003**	**2.5700e-003**		**2.3700e-003**	**2.3700e-003**	**0.0000**	**10.0845**	**10.0845**	**3.2000e-003**	**0.0000**	**10.1644**

3.5 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	2.2000e-004	3.1000e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0700e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.8434	0.8434	2.0000e-005	2.0000e-005	0.8501
Total	**2.9000e-004**	**2.2000e-004**	**3.1000e-003**	**1.0000e-005**	**1.0700e-003**	**1.0000e-005**	**1.0700e-003**	**2.8000e-004**	**1.0000e-005**	**2.9000e-004**	**0.0000**	**0.8434**	**0.8434**	**2.0000e-005**	**2.0000e-005**	**0.8501**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2555					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1700e-003	7.9200e-003	0.0118	2.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	1.6596	1.6596	9.0000e-005	0.0000	1.6620
Total	**0.2567**	**7.9200e-003**	**0.0118**	**2.0000e-005**		**4.0000e-004**	**4.0000e-004**		**4.0000e-004**	**4.0000e-004**	**0.0000**	**1.6596**	**1.6596**	**9.0000e-005**	**0.0000**	**1.6620**

3.6 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.8000e-004	3.9300e-003	1.0000e-005	1.3500e-003	1.0000e-005	1.3600e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.0683	1.0683	3.0000e-005	3.0000e-005	1.0767
Total	**3.7000e-004**	**2.8000e-004**	**3.9300e-003**	**1.0000e-005**	**1.3500e-003**	**1.0000e-005**	**1.3600e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**	**0.0000**	**1.0683**	**1.0683**	**3.0000e-005**	**3.0000e-005**	**1.0767**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2555					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1700e-003	7.9200e-003	0.0118	2.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	1.6596	1.6596	9.0000e-005	0.0000	1.6620
Total	**0.2567**	**7.9200e-003**	**0.0118**	**2.0000e-005**		**4.0000e-004**	**4.0000e-004**		**4.0000e-004**	**4.0000e-004**	**0.0000**	**1.6596**	**1.6596**	**9.0000e-005**	**0.0000**	**1.6620**

3.6 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.8000e-004	3.9300e-003	1.0000e-005	1.3500e-003	1.0000e-005	1.3600e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.0683	1.0683	3.0000e-005	3.0000e-005	1.0767
Total	**3.7000e-004**	**2.8000e-004**	**3.9300e-003**	**1.0000e-005**	**1.3500e-003**	**1.0000e-005**	**1.3600e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**	**0.0000**	**1.0683**	**1.0683**	**3.0000e-005**	**3.0000e-005**	**1.0767**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Destination Accessibility

Increase Transit Accessibility

Improve Pedestrian Network

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1236	0.1282	1.1549	2.3600e-003	0.2473	1.7800e-003	0.2491	0.0660	1.6500e-003	0.0676	0.0000	221.8561	221.8561	0.0166	0.0102	225.3179
Unmitigated	0.1507	0.1734	1.5753	3.4400e-003	0.3644	2.5300e-003	0.3669	0.0972	2.3500e-003	0.0996	0.0000	323.6662	323.6662	0.0218	0.0138	328.3235

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	283.80	283.80	283.80	969,788	658,176
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	283.80	283.80	283.80	969,788	658,176

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352
Other Non-Asphalt Surfaces	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Parking Lot	0.542464	0.063735	0.188241	0.126899	0.023249	0.006239	0.010717	0.008079	0.000923	0.000604	0.024795	0.000702	0.003352

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	60.0748	60.0748	5.0700e-003	6.1000e-004	60.3847
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	60.0748	60.0748	5.0700e-003	6.1000e-004	60.3847
NaturalGas Mitigated	6.0600e-003	0.0518	0.0220	3.3000e-004		4.1900e-003	4.1900e-003		4.1900e-003	4.1900e-003	0.0000	59.9663	59.9663	1.1500e-003	1.1000e-003	60.3227
NaturalGas Unmitigated	6.0600e-003	0.0518	0.0220	3.3000e-004		4.1900e-003	4.1900e-003		4.1900e-003	4.1900e-003	0.0000	59.9663	59.9663	1.1500e-003	1.1000e-003	60.3227

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Congregate Care (Assisted Living)	1.12373e+006	6.0600e-003	0.0518	0.0220	3.3000e-004		4.1900e-003	4.1900e-003		4.1900e-003	4.1900e-003	0.0000	59.9663	59.9663	1.1500e-003	1.1000e-003	60.3227
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.0600e-003**	**0.0518**	**0.0220**	**3.3000e-004**		**4.1900e-003**	**4.1900e-003**		**4.1900e-003**	**4.1900e-003**	**0.0000**	**59.9663**	**59.9663**	**1.1500e-003**	**1.1000e-003**	**60.3227**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Congregate Care (Assisted Living)	1.12373e+006	6.0600e-003	0.0518	0.0220	3.3000e-004		4.1900e-003	4.1900e-003		4.1900e-003	4.1900e-003	0.0000	59.9663	59.9663	1.1500e-003	1.1000e-003	60.3227
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**6.0600e-003**	**0.0518**	**0.0220**	**3.3000e-004**		**4.1900e-003**	**4.1900e-003**		**4.1900e-003**	**4.1900e-003**	**0.0000**	**59.9663**	**59.9663**	**1.1500e-003**	**1.1000e-003**	**60.3227**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	331044	58.7092	4.9600e-003	6.0000e-004	59.0121
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	7700	1.3656	1.2000e-004	1.0000e-005	1.3726
Total		**60.0748**	**5.0800e-003**	**6.1000e-004**	**60.3847**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	331044	58.7092	4.9600e-003	6.0000e-004	59.0121
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	7700	1.3656	1.2000e-004	1.0000e-005	1.3726
Total		**60.0748**	**5.0800e-003**	**6.1000e-004**	**60.3847**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3420	0.0263	0.8941	1.5000e-004		6.2100e-003	6.2100e-003		6.2100e-003	6.2100e-003	0.0000	20.0367	20.0367	1.7500e-003	3.4000e-004	20.1820
Unmitigated	0.3420	0.0263	0.8941	1.5000e-004		6.2100e-003	6.2100e-003		6.2100e-003	6.2100e-003	0.0000	20.0367	20.0367	1.7500e-003	3.4000e-004	20.1820

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0256					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2878					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.8800e-003	0.0161	6.8300e-003	1.0000e-004		1.3000e-003	1.3000e-003		1.3000e-003	1.3000e-003	0.0000	18.5866	18.5866	3.6000e-004	3.4000e-004	18.6971
Landscaping	0.0267	0.0102	0.8872	5.0000e-005		4.9200e-003	4.9200e-003		4.9200e-003	4.9200e-003	0.0000	1.4501	1.4501	1.3900e-003	0.0000	1.4850
Total	**0.3420**	**0.0263**	**0.8941**	**1.5000e-004**		**6.2200e-003**	**6.2200e-003**		**6.2200e-003**	**6.2200e-003**	**0.0000**	**20.0367**	**20.0367**	**1.7500e-003**	**3.4000e-004**	**20.1820**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0256					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2878					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.8800e-003	0.0161	6.8300e-003	1.0000e-004		1.3000e-003	1.3000e-003		1.3000e-003	1.3000e-003	0.0000	18.5866	18.5866	3.6000e-004	3.4000e-004	18.6971
Landscaping	0.0267	0.0102	0.8872	5.0000e-005		4.9200e-003	4.9200e-003		4.9200e-003	4.9200e-003	0.0000	1.4501	1.4501	1.3900e-003	0.0000	1.4850
Total	**0.3420**	**0.0263**	**0.8941**	**1.5000e-004**		**6.2200e-003**	**6.2200e-003**		**6.2200e-003**	**6.2200e-003**	**0.0000**	**20.0367**	**20.0367**	**1.7500e-003**	**3.4000e-004**	**20.1820**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	18.7335	0.1475	3.6300e-003	23.5022
Unmitigated	21.6768	0.1843	4.5100e-003	27.6288

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	5.60325 / 3.53248	21.6768	0.1843	4.5100e-003	27.6288
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**21.6768**	**0.1843**	**4.5100e-003**	**27.6288**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	4.4826 / 3.53248	18.7335	0.1475	3.6300e-003	23.5022
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**18.7335**	**0.1475**	**3.6300e-003**	**23.5022**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	3.9822	0.2353	0.0000	9.8657
Unmitigated	15.9287	0.9414	0.0000	39.4627

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	78.47	15.9287	0.9414	0.0000	39.4627
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**15.9287**	**0.9414**	**0.0000**	**39.4627**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	19.6175	3.9822	0.2353	0.0000	9.8657
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**3.9822**	**0.2353**	**0.0000**	**9.8657**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	51.6840	0.0000	0.0000	51.6840

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	73	51.6840	0.0000	0.0000	51.6840
Total		**51.6840**	**0.0000**	**0.0000**	**51.6840**

Source: EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: Air Basin
Region: South Coast
Calendar Year: 2023
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Trips	Energy Consumption	Fuel Consumption	Fuel Consumption	Total Fuel Consumption	Total VMT	Total VMT	Miles Per Gallon	Vehicle Class
South Coast	2023	HHDT	Aggregate	Aggregate	Gasoline	77.76705152	1555.963167	0	1.13577086	1135.77086	1902570.073	4463.059823	11350616.67	**5.97**	**HHDT**
South Coast	2023	HHDT	Aggregate	Aggregate	Diesel	88939.48335	1354183.938	0	1901.434302	1901434.302		11341687.62			
South Coast	2023	HHDT	Aggregate	Aggregate	Electricity	69.55210742	1090.269168	7969.44745	0	0		4465.990707			
South Coast	2023	HHDT	Aggregate	Aggregate	Natural Gas	9734.51825	62334.09461	0	108.4243363	108424.3363	7680508.917	635905.4264	228542169.3	**29.76**	**LDA**
South Coast	2023	LDA	Aggregate	Aggregate	Gasoline	5370115.979	25014254.84	0	7560.140191	7560140.191		216250190.4			
South Coast	2023	LDA	Aggregate	Aggregate	Diesel	15648.45784	65526.69936	0	11.94439033	11944.39033		486634.8854			
South Coast	2023	LDA	Aggregate	Aggregate	Electricity	241152.5368	1208859.723	4312325.17	0	0		11169438.62			
South Coast	2023	LDA	Aggregate	Aggregate	Plug-in Hybrid	136333.5236	563739.1202	971420.6342	116.5989322	116598.9322	870253.2499	6496196.814	24547955.06	**28.21**	**LDT1**
South Coast	2023	LDT1	Aggregate	Aggregate	Gasoline	499113.9009	2195668.394	0	753.4930394	753493.0394		18009866.74			
South Coast	2023	LDT1	Aggregate	Aggregate	Diesel	197.6298759	575.4909742	0	0.161278255	161.278255		3756.265001			
South Coast	2023	LDT1	Aggregate	Aggregate	Electricity	1012.723437	4715.252993	14723.34847	0	0		38135.23576			
South Coast	2023	LDT1	Aggregate	Aggregate	Plug-in Hybrid	463.9603347	1918.475984	3964.563568	0.400339089	400.3390888	4351441.574	24314.99018	100316975.8	**23.05**	**LDT2**
South Coast	2023	LDT2	Aggregate	Aggregate	Gasoline	2429950.117	11422828.59	0	4340.074795	4340074.795		100292660.9			
South Coast	2023	LDT2	Aggregate	Aggregate	Diesel	7734.815855	37335.71589	0	10.96643985	10966.43985		337920.5463			
South Coast	2023	LDT2	Aggregate	Aggregate	Electricity	11160.73812	57317.98395	159502.5609	0	0		413130.7341			
South Coast	2023	LDT2	Aggregate	Aggregate	Plug-in Hybrid	17128.65814	70827.00142	136848.0138	14.88755019	14887.55019	604831.9262	867992.1123	8688662.767	**14.37**	**LHDT1**
South Coast	2023	LHDT1	Aggregate	Aggregate	Gasoline	200398.3929	2985637.46	0	589.944376	589944.376		7820670.654			
South Coast	2023	LHDT1	Aggregate	Aggregate	Diesel	99896.36028	1256570.543	0	206.0356758	206035.6758	305180.3742	4194656.56	5351327.632	**17.53**	**LHDT2**
South Coast	2023	LHDT2	Aggregate	Aggregate	Gasoline	31213.47663	465034.2937	0	99.14469838	99144.69838		1156671.072			
South Coast	2023	LHDT2	Aggregate	Aggregate	Diesel	43691.53059	549584.4908	0	107.1632097	107163.2097	107163.2097	1828609.129	1828609.129	**17.06**	**MCY**
South Coast	2023	MCY	Aggregate	Aggregate	Gasoline	237586.076	475172.1521	0	36.88140998	36881.40998	3258846.142	1522726.619	62822547.87	**19.28**	**MDV**
South Coast	2023	MDV	Aggregate	Aggregate	Gasoline	1559902.035	7210563.701	0	3188.051046	3188051.046		60070040.07			
South Coast	2023	MDV	Aggregate	Aggregate	Diesel	19613.50466	92462.53217	0	33.91368569	33913.68569		784655.9403			
South Coast	2023	MDV	Aggregate	Aggregate	Electricity	12017.75416	61732.39119	171855.0799	0	0		445125.2375			
South Coast	2023	MDV	Aggregate	Aggregate	Plug-in Hybrid	10053.44096	41570.97836	70940.44124	8.322835871	8322.835871	67468.7074	464374.4805	752062.2021	**11.15**	**MH**
South Coast	2023	MH	Aggregate	Aggregate	Gasoline	30468.55432	3048.074174	0	59.14587153	59145.87153		287687.7216			
South Coast	2023	MH	Aggregate	Aggregate	Diesel	11533.11741	1153.311741	0	11.30112611	11301.12611	819648.6117	114141.8155	6302753.398	**7.69**	**MHDT**
South Coast	2023	MHDT	Aggregate	Aggregate	Gasoline	25436.77287	508938.9517	0	266.1846594	266184.6594		1361855.942			
South Coast	2023	MHDT	Aggregate	Aggregate	Diesel	112753.1691	1384256.954	0	542.1628262	542162.8262		4826755.64			
South Coast	2023	MHDT	Aggregate	Aggregate	Electricity	60.14211345	769.7741807	1354.591964	0	0	52048.54694	1295.841104	289973.7428	**5.57**	**OBUS**
South Coast	2023	MHDT	Aggregate	Aggregate	Natural Gas	1405.746156	12603.45034	0	8.268140472	8268.140472		68507.0989			
South Coast	2023	OBUS	Aggregate	Aggregate	Gasoline	5457.340752	109190.4738	0	43.78040647	43780.40647		220170.8028			
South Coast	2023	OBUS	Aggregate	Aggregate	Diesel	2949.128306	37294.91051	0	33.32983706	33329.83706	50038.16004	233227.1381	381057.5339	**7.62**	**SBUS**
South Coast	2023	OBUS	Aggregate	Aggregate	Natural Gas	467.0036657	4156.332625	0	3.280062265	3280.062265		28665.48863			
South Coast	2023	SBUS	Aggregate	Aggregate	Gasoline	2711.533402	10846.13361	0	13.42826072	13428.26072		119164.9071			
South Coast	2023	SBUS	Aggregate	Aggregate	Diesel	3377.128927	48900.82686	0	9.464602039	9464.602039	41441.52119	69271.73995	241028.6401	**5.82**	**UBUS**
South Coast	2023	SBUS	Aggregate	Aggregate	Electricity	3.674682915	53.20940862	49.36713892	0	0		42.69400814			
South Coast	2023	SBUS	Aggregate	Aggregate	Natural Gas	2976.329163	43097.24627	0	17.80624767	17806.24767		74753.64709			
South Coast	2023	UBUS	Aggregate	Aggregate	Gasoline	894.3697717	3577.479087	0	14.17067148	14170.67148		96960.55907			
South Coast	2023	UBUS	Aggregate	Aggregate	Diesel	14.61165815	58.44663261	0	0.262644403			1749.021883			
South Coast	2023	UBUS	Aggregate	Aggregate	Electricity	58.03212573	232.1285029	5326.224873	0			2539.586791			
South Coast	2023	UBUS	Aggregate	Aggregate	Natural Gas	4957.576963	19830.30785	0	190.2775974			593592.4153			

Source: EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: Air Basin
Region: South Coast
Calendar Year: 2024
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Trips	Energy Consumption	Fuel Consumption	Fuel Consumption	Total Fuel Consumption	Total VMT	Total VMT	Miles Per Gallon	Vehicle Class
South Coast	2024	HHDT	Aggregate	Aggregate	Gasoline	64.44258918	1289.367324	0	1.014953313	1014.953313	2024777.341	4089.563798	12241163.02	**6.05**	**HHDT**
South Coast	2024	HHDT	Aggregate	Aggregate	Diesel	92441.35478	1412165.896	0	1913.394963	1913394.963		11547992.76			
South Coast	2024	HHDT	Aggregate	Aggregate	Electricity	291.6455699	3957.931048	53675.68637	0	0		29968.60823			
South Coast	2024	HHDT	Aggregate	Aggregate	Natural Gas	10239.41118	65591.6649	0	110.3674239	110367.4239		659112.0885			
South Coast	2024	LDA	Aggregate	Aggregate	Gasoline	5306414.643	24694249.92	0	7344.088111	7344088.111	7477826.02	213709568	234427100.1	**31.35**	**LDA**
South Coast	2024	LDA	Aggregate	Aggregate	Diesel	14576.24539	60769.87324	0	10.8801639	10880.1639		447477.6987			
South Coast	2024	LDA	Aggregate	Aggregate	Electricity	278128.8376	1389682.584	5111363.117	0	0		13239042.59			
South Coast	2024	LDA	Aggregate	Aggregate	Plug-in Hybrid	148523.7719	614145.7966	1077276.451	122.8577446	122857.7446		7031011.891			
South Coast	2024	LDT1	Aggregate	Aggregate	Gasoline	490973.66	2160511.155	0	732.0519082	732051.9082	732790.8073	17788975.08	17880208.77	**24.40**	**LDT1**
South Coast	2024	LDT1	Aggregate	Aggregate	Diesel	178.9755587	511.7069897	0	0.143610092	143.6100917		3350.970633			
South Coast	2024	LDT1	Aggregate	Aggregate	Electricity	1222.38175	5792.038269	19502.00434	0	0		50512.52673			
South Coast	2024	LDT1	Aggregate	Aggregate	Plug-in Hybrid	719.1459798	2973.668627	6252.19918	0.595288961	595.288961		37370.18633			
South Coast	2024	LDT2	Aggregate	Aggregate	Gasoline	2478766.891	11657788.42	0	4349.789244	4349789.244	4378677.328	102696789.3	104694804	**23.91**	**LDT2**
South Coast	2024	LDT2	Aggregate	Aggregate	Diesel	8144.015434	39238.54602	0	11.30594953	11305.94953		354089.2658			
South Coast	2024	LDT2	Aggregate	Aggregate	Electricity	16093.72479	82313.84321	227422.9885	0	0		589052.7755			
South Coast	2024	LDT2	Aggregate	Aggregate	Plug-in Hybrid	21096.29549	87233.18184	170348.4264	17.58213479	17582.13479		1054872.659			
South Coast	2024	LHDT1	Aggregate	Aggregate	Gasoline	200171.2476	2982253.334	0	578.7247685	578724.7685	792458.1109	7891021.12	12336952.39	**15.57**	**LHDT1**
South Coast	2024	LHDT1	Aggregate	Aggregate	Diesel	103884.7559	1306739.542	0	213.7333424	213733.3424		4387648.579			
South Coast	2024	LHDT1	Aggregate	Aggregate	Electricity	772.5188678	10791.59936	32624.15974	0	0		58282.68619			
South Coast	2024	LHDT2	Aggregate	Aggregate	Gasoline	31062.46526	462784.4493	0	96.72139231	96721.39231	208303.4828	1155378.828	3095264.249	**14.86**	**LHDT2**
South Coast	2024	LHDT2	Aggregate	Aggregate	Diesel	45926.82058	577701.627	0	111.5820905	111582.0905		1925592.444			
South Coast	2024	LHDT2	Aggregate	Aggregate	Electricity	199.9520404	2646.759351	8006.869611	0	0		14292.97674			
South Coast	2024	MCY	Aggregate	Aggregate	Gasoline	242059.9929	484119.9858	0	37.44895514	37448.95514	37448.95514	1554780.429	1554780.429	**41.52**	**MCY**
South Coast	2024	MDV	Aggregate	Aggregate	Gasoline	1571312.1	7270009.961	0	3162.700535	3162700.535	3206338.183	60817091.34	62832018.9	**19.60**	**MDV**
South Coast	2024	MDV	Aggregate	Aggregate	Diesel	19826.89781	93051.64962	0	33.54860069	33548.60069		786624.2122			
South Coast	2024	MDV	Aggregate	Aggregate	Electricity	17569.44798	89870.84023	248334.7848	0	0		643216.8322			
South Coast	2024	MDV	Aggregate	Aggregate	Plug-in Hybrid	12690.57185	52475.51459	92596.30611	10.08904803	10089.04803		585086.5214			
South Coast	2024	MH	Aggregate	Aggregate	Gasoline	29244.94397	2925.664195	0	57.51222476	57512.22476	68984.14797	279544.6577	395398.9997	**5.73**	**MH**
South Coast	2024	MH	Aggregate	Aggregate	Diesel	11703.55798	1170.355798	0	11.47192321	11471.92321		115854.342			
South Coast	2024	MHDT	Aggregate	Aggregate	Gasoline	24845.17438	497102.249	0	256.9342026	256934.2026	812250.5213	1326417.556	6295601.951	**7.75**	**MHDT**
South Coast	2024	MHDT	Aggregate	Aggregate	Diesel	114693.757	1409921.86	0	546.7152883	546715.2883		4878223.739			
South Coast	2024	MHDT	Aggregate	Aggregate	Electricity	355.3876422	4781.870526	20310.12518	0	0		19393.49808			
South Coast	2024	MHDT	Aggregate	Aggregate	Natural Gas	1491.278079	13281.28453	0	8.601030453	8601.030453		71567.15805			
South Coast	2024	OBUS	Aggregate	Aggregate	Gasoline	5296.379398	105969.959	0	41.44060197	41440.60197	78066.51924	209991.62	473651.4166	**6.07**	**OBUS**
South Coast	2024	OBUS	Aggregate	Aggregate	Diesel	2997.3176	37996.11149	0	33.30106375	33301.06375		233646.4445			
South Coast	2024	OBUS	Aggregate	Aggregate	Electricity	11.86106715	237.3162316	941.3362619	0	0		895.192351			
South Coast	2024	OBUS	Aggregate	Aggregate	Natural Gas	480.7769521	4278.914873	0	3.324853528	3324.853528		29118.15975			
South Coast	2024	SBUS	Aggregate	Aggregate	Gasoline	2763.091965	11052.36786	0	13.6568139	13656.8139	40972.05843	121721.653	266076.6289	**6.49**	**SBUS**
South Coast	2024	SBUS	Aggregate	Aggregate	Diesel	3283.370627	47543.20668	0	9.104107226	9104.107226		66807.29386			
South Coast	2024	SBUS	Aggregate	Aggregate	Electricity	21.89425828	248.8609268	740.8107178	0	0		640.6727128			
South Coast	2024	SBUS	Aggregate	Aggregate	Natural Gas	3093.465789	44793.38463	0	18.21113731	18211.13731		76907.00926			
South Coast	2024	UBUS	Aggregate	Aggregate	Gasoline	894.3284655	3577.313862	0	13.89822542	13898.22542	201736.9577	96953.45183	218542.299	**1.08**	**UBUS**
South Coast	2024	UBUS	Aggregate	Aggregate	Diesel	14.32857314	57.31429256	0	0.259550733	259.5507326		1721.679298			
South Coast	2024	UBUS	Aggregate	Aggregate	Electricity	109.3235246	437.2940985	19519.17282	0	0		9364.629999			
South Coast	2024	UBUS	Aggregate	Aggregate	Natural Gas	4918.59249	19674.36996	0	187.5791815	187579.1815		588192.4297			

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Wastewater Flow Monitoring Services

For

Fuscoe Engineering, Inc.

3340 Los Coyotes Diagonal

Long Beach, CA 90808

July 13, 2021 through July 21, 2021

Leaders in Sewer Flow Monitoring Services

601 N. Parkcenter Dr., Suite 209
Santa Ana, CA 92705

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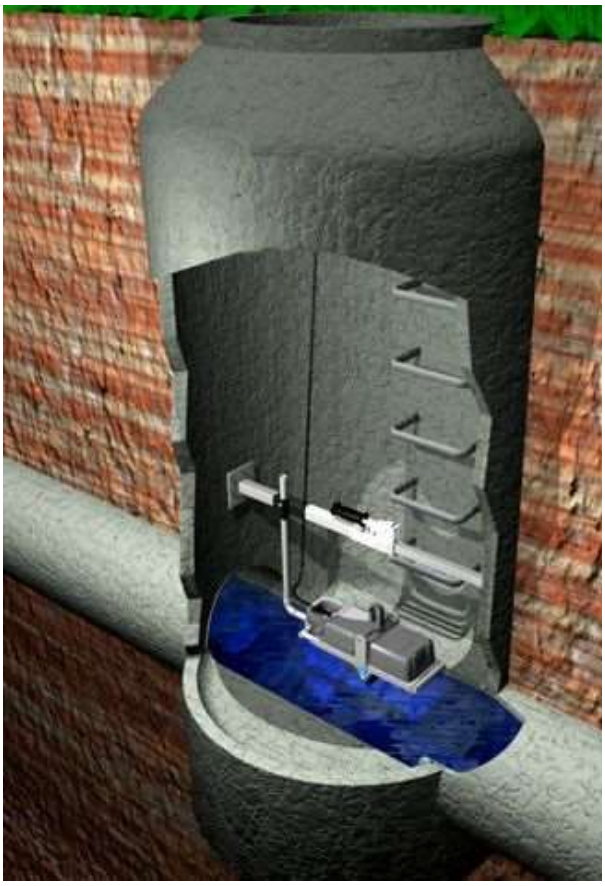

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Tab 1: Overview & Site-Specific Information

1.1 Overview

In February 1988, the Long Beach Water Department (LBWD) assumed the responsibility of the various functions of the City's sanitary sewer system, including operations and maintenance. The LBWD has made considerable progress since 1988 in addressing the substantial challenges posed by an aging infrastructure, much of which is between 60 and 80 years old. The LBWD operates and maintains nearly 765 miles of sanitary sewer lines, safely and expeditiously delivering over 40 million gallons per day to Los Angeles County Sanitation District facilities located on the north and south sides of Long Beach.

Since the City of Long Beach (City) is responsible for properly managing, operating, and maintaining all portions of their wastewater collection system, as well as providing adequate capacity to carry peak capacity flows, sewer flow monitoring is required as a condition of development whenever a project proposes to construct 10 or more residential dwelling units. This requirement not only helps to ensure adequate capacity, but continually updates their databases with the most current information, allowing the City to improve the condition and performance of its wastewater collection system, reducing the occurrences of sanitary sewer overflows, and ensuring the health and safety of the community.

1.2 Project Description

Utility Systems Science & Software, Inc. (US^3) was contracted by Fuscoe Engineering to perform seven full days of continuous sewer flow monitoring at two sewer manholes. The site locations and sewer lines are shown on maps in Section 1.3 of this report. This sewer system assessment was developed under conditions existing between 7/13/2021 and 7/21/2021 to analyze for potential capacity limitations in the monitored lines downstream from the property at 3340 Los Coyotes Diagonal in Long Beach. The flow monitoring conducted for this assessment is discussed in Sections 1.4 and 1.5 of this report. The capacity of the monitored lines is discussed in Section 1.6.

US^3 performed an initial site inspection to evaluate the site hydraulics at the selected monitoring sites. **Note:** Each wastewater collection system is different, and some of the differences that affect flow monitoring include: slope of sewer line; age, condition and material of sewer line; number and type of connections; and sewer design, specifically the proximity of baffles, drop structures, pumps, siphons, and weirs. None of these structures were found within the selected manholes. In addition, since the hydraulics within the selected manholes were deemed acceptable for flow monitoring during the inspection, it

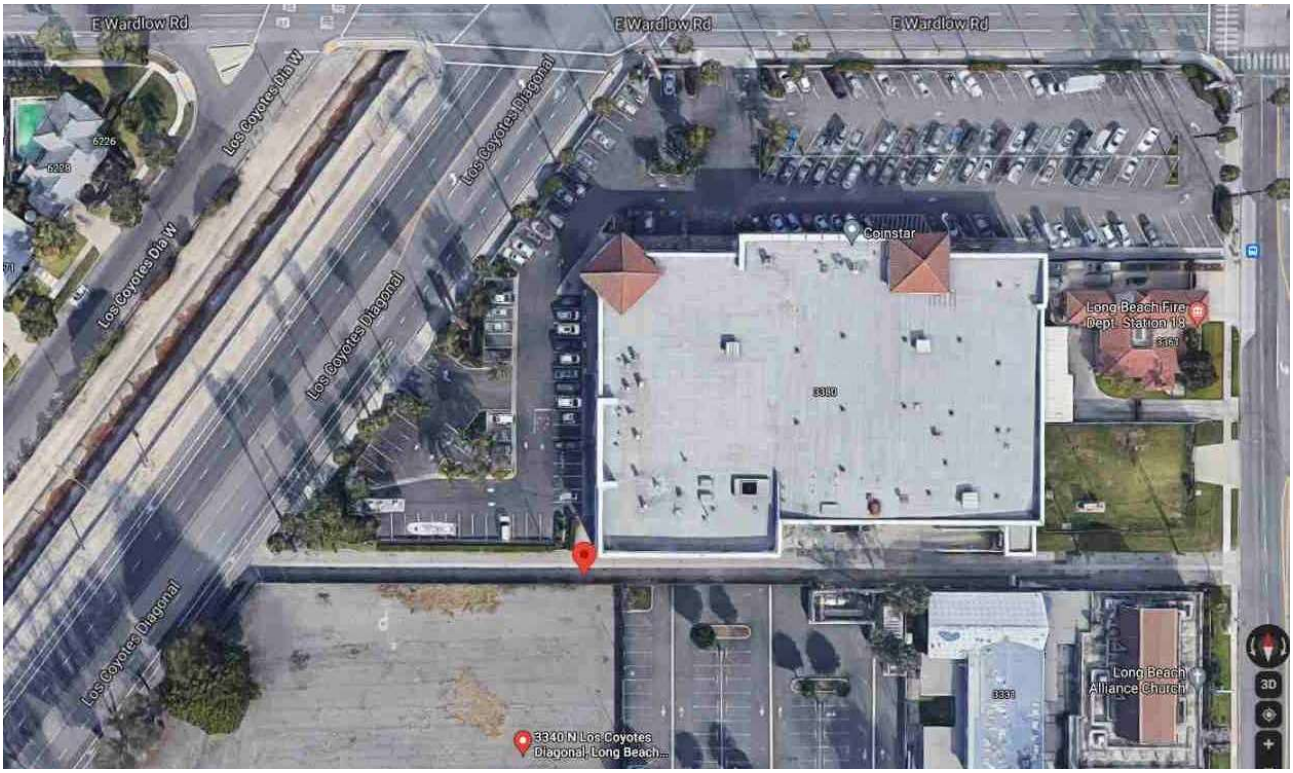
was determined that the sites should provide an accurate representation of flow patterns during the study. Therefore, installation at the sites occurred on 7/13/2021.

The manholes were equipped with Hach Marsh-McBirney Flo-Dar® AV Sensors and Loggers. With the installation and removal of the equipment, the manholes were opened and confined space entry was limited to crossing the plane with hands and arms, but not actually entering the manholes. Even though US^3 personnel did not enter the manholes during equipment installation or removal, they were fully trained and certified in Confined Space Entry and CPR, and in accordance with safety standards, gas readings were taken and recorded throughout the duration of the installation and removal process.

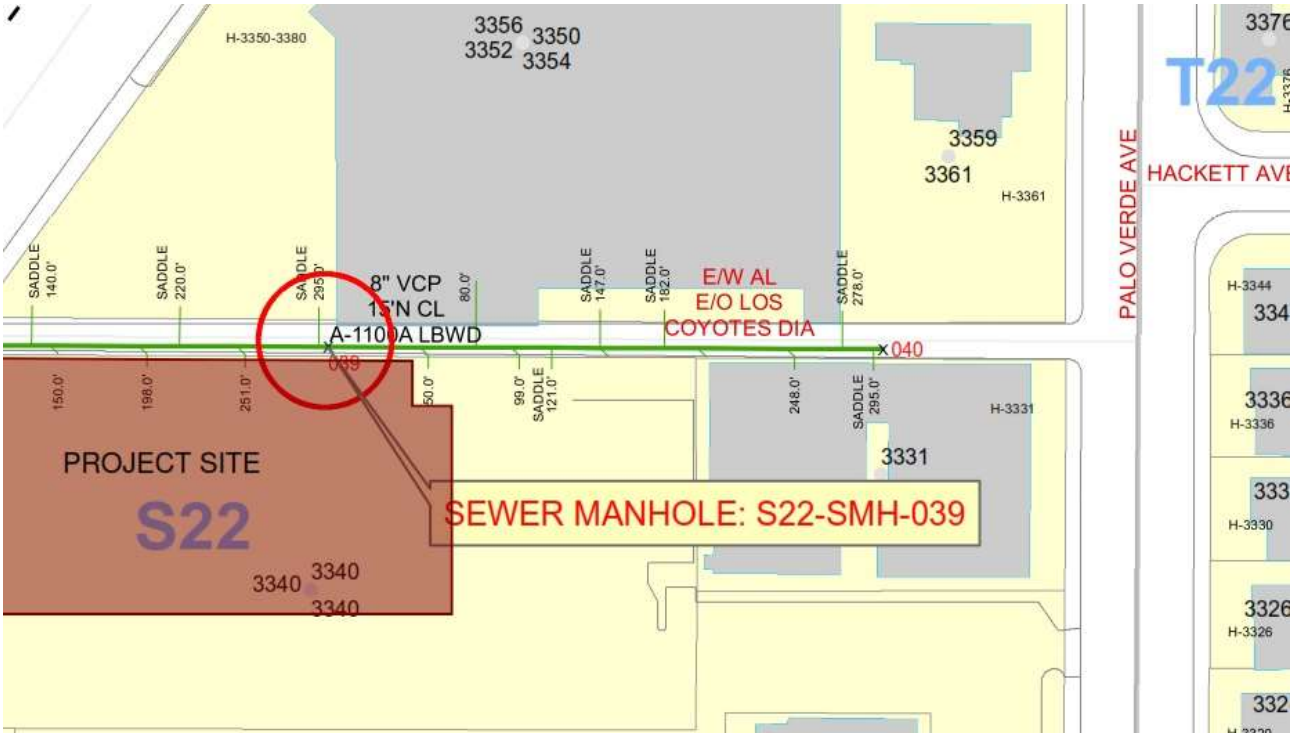
In summary, US^3 performed the following services for this project:

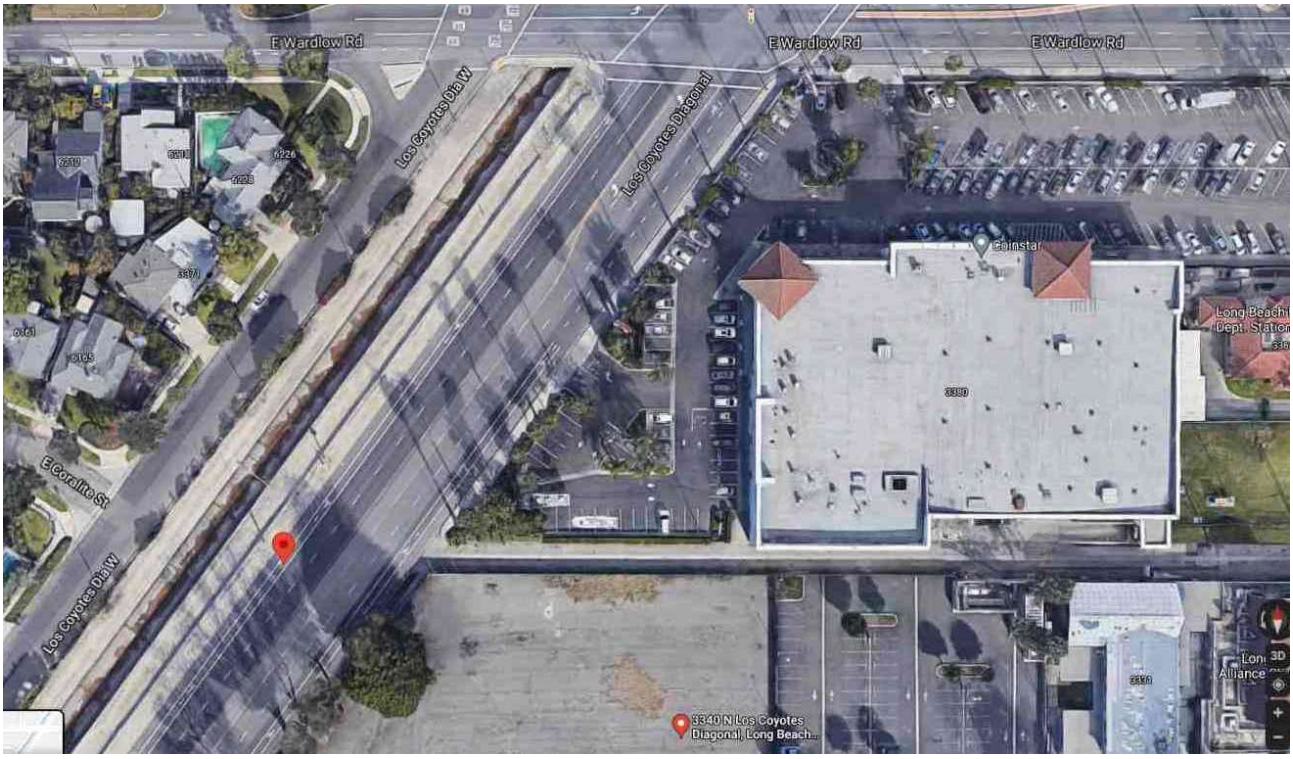
- Sewer Flow Monitoring
    - Detailed preliminary investigation
        - Assessment of permitting and traffic control requirements
        - Inspection and evaluation of the selected sites
    - Installation of Marsh-McBirney Flo-Dar® AV Sensors and Loggers
        - Validation of hydraulic suitability
        - Calibration of flow monitoring equipment
        - Documentation of installation and calibration
    - Flow monitoring between 7/13/2021 and 7/21/2021
    - Removal of flow monitoring equipment
    - Validation of flow monitoring data
- Evaluation of the sanitary sewer at the monitored sites
- Development of a report to discuss the flow monitoring data, including system statistics and graphs

1.3 Site Maps



Figures 1 & 2: The vicinity map (above) shows the Alley flow monitoring site (S22-SMH-039) with regard to the project site. The manhole is at latitude 33.817821 and longitude -118.109306. A plan view of the monitored sewer line is shown below.





Figures 3 & 4: The vicinity map (above) shows the Los Coyotes Diagonal flow monitoring site (S22-SMH-038) with regard to the proposed project site. The manhole is at latitude 33.817825 and longitude -118.110291. A plan view of the monitored sewer line is shown below.

1.4 Monitoring Site Installations

Figure 5 at right: The photo shows Alley S22-SMH-039 in the alley north of the project site and south of 3380 Los Coyotes Diagonal. This is looking east in the quiet commercial alley. The field team used cones to designate the work zone. Surface conditions were dry. A flagger was available, but not needed. No issues were encountered.

Figure 6 above: The manhole provided access to an 8-in sewer line, which entered from the east and discharged to the west. Gas levels were within Occupational Safety and Health Administration (OSHA) permissible exposure limits (O_2=20.9%; LEL, H_2S & CO=0). The flow monitoring equipment was set to monitor the downstream pipe as it provided the best hydraulics. Follow up on this installation confirmed equipment calibration.

Figures 7 & 8 at right & below: The photos show Los Coyotes Diagonal S22-SMH-038 in the middle of the southbound bike lane, west of the alley. This is a commercial area with no bike traffic during install or removal. The field team used cones and signs during installation and removal of the monitoring equipment. Surface conditions were dry. A flagger was available, but not needed. No issues were encountered.

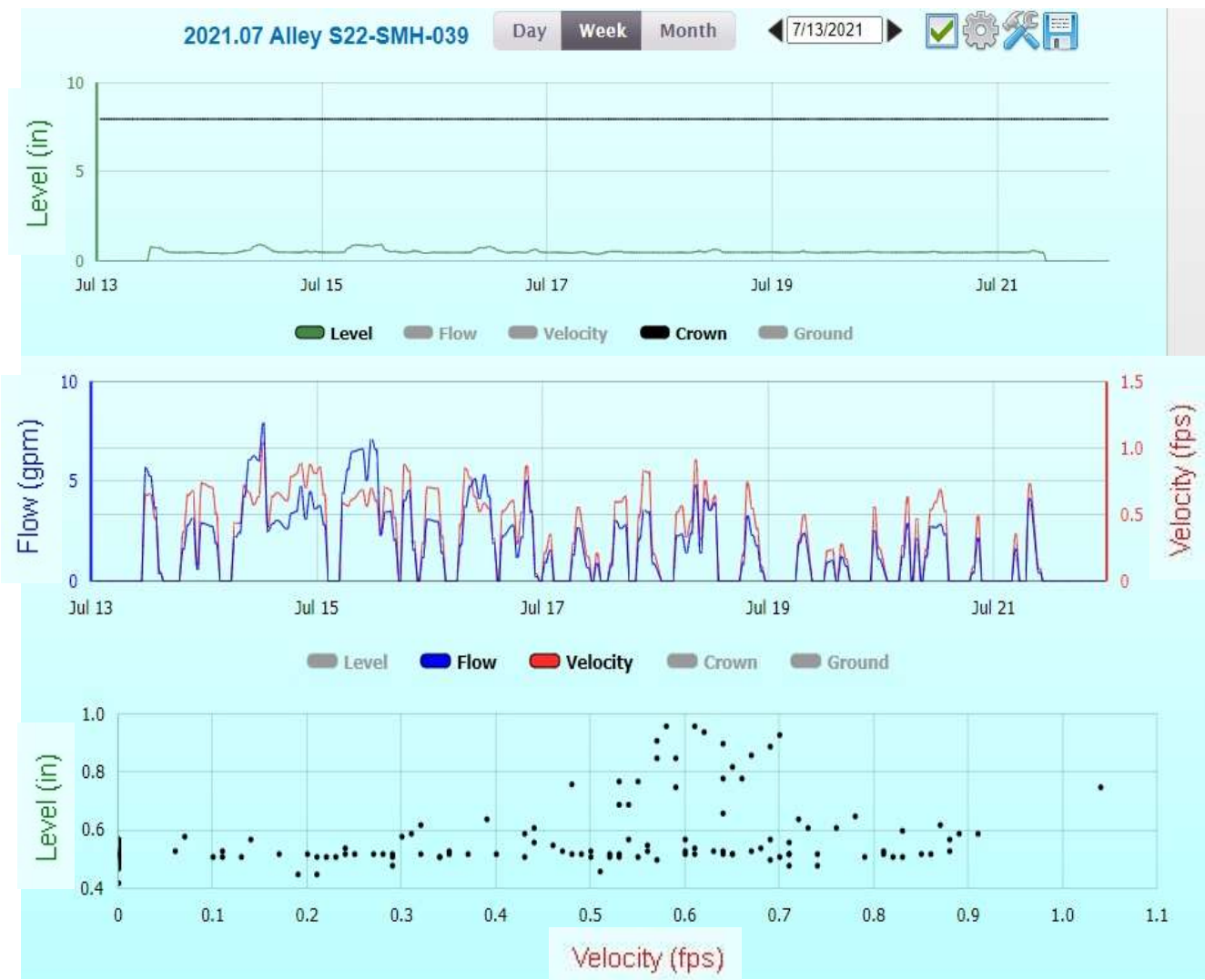
Figure 9 at left: The manhole provided access to a 27-in sewer line, which entered from the NE and discharged to the SW. The 8-in lateral entering from the east had a slight lip at the downstream end of its trough, which then had a slight drop into the mainline. Gas levels were within OSHA permissible exposure limits. The flow monitoring equipment was set to monitor the upstream east line from the project site. Follow up on this installation noted debris partially blocking the lateral's trough causing an artificial increase in both the velocities and the levels within the line.

1.5 Existing Capacity Analysis

The capacity evaluation method conformed to the following process:

1. Collect 15-minute (min) interval depth and velocity data points at each site over the entire monitoring period and determine the depth versus (vs) velocity relationship or pipe curve based on Manning's equation.
2. Determine statistically the minimum, maximum and average depths and flow rates at each site during the monitoring period.
3. Calculate the maximum theoretical unobstructed flow rate at each site.
4. Determine remaining capacity under peak flow conditions at each site, using the ratios of monitored daily flow depths to pipe diameter.

Figure 10 below: 2021.07 Alley S22-SMH-039 graphs of level, flow & velocity, and scatter plot of level in relation to velocity from US^3 Flow Monitoring Website (http://us3.uscubed.com/)



The scatter plot (bottom graph in Figure 10) shows an averaged representation of the depth vs. velocity data points for the monitored pipe from 7/13/2021 through 7/21/2021. The data was divided into 200 time periods and each period was then averaged and graphed. The pattern of velocity and depth data points for a sewer operating in free-flow conditions over an extended period of time should conform to the depth vs velocity relationship of the Manning Equation, which is the basis for evaluating flow monitoring data. This equation (shown below) defines a commonly used theoretical relationship between depth and velocity in pipes operating under free flow conditions:

$$v = 1.486/n \times R^{2/3} \times S^{1/2}$$

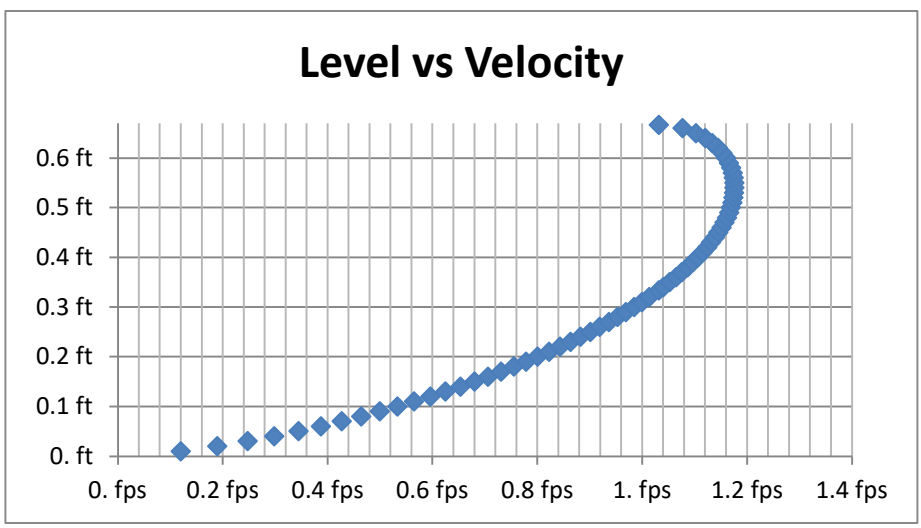
Where,

- v = velocity in feet (ft) per second (fps)
- n = pipe roughness, defined as the Manning's Roughness Coefficient (0.013 was selected in accordance with the minimum value for a vitrified clay sewer pipe (VCP), Chow 1959)
- R = hydraulic radius, defined as the wetted area (ft^2) divided by the wetted perimeter (ft)
- S = hydraulic slope

The scatter plot from Alley S22-SMH-039 (bottom graph in Figure 10) shows the depth vs. velocity data points for the 8-inch upstream pipe, which should resemble a theoretical hydraulic operating curve based on the site-specific characteristics of the pipe. Using velocities (v) from this study in conjunction with the associated cross-sectional areas (A) computed using the monitored levels, the flow (Q) was calculated (Q=vA).

In order to derive the slope, the average level from the study was put into Manning's Equation ($v = 1.486/n \times R^{2/3} \times S^{1/2}$) and the slope was changed until the resulting velocity equaled the average velocity from the study. So, the calculated slope is based on the average flow data observed during the study, which at Alley S22-SMH-039 correlated with a theoretical hydraulic operating curve with a slope of ~0.09% (S= 0.000888055).

Figure 11 at right: This theoretical pipe curve was generated for an 8-in (0.67-ft) pipe with a slope of ~0.09%.



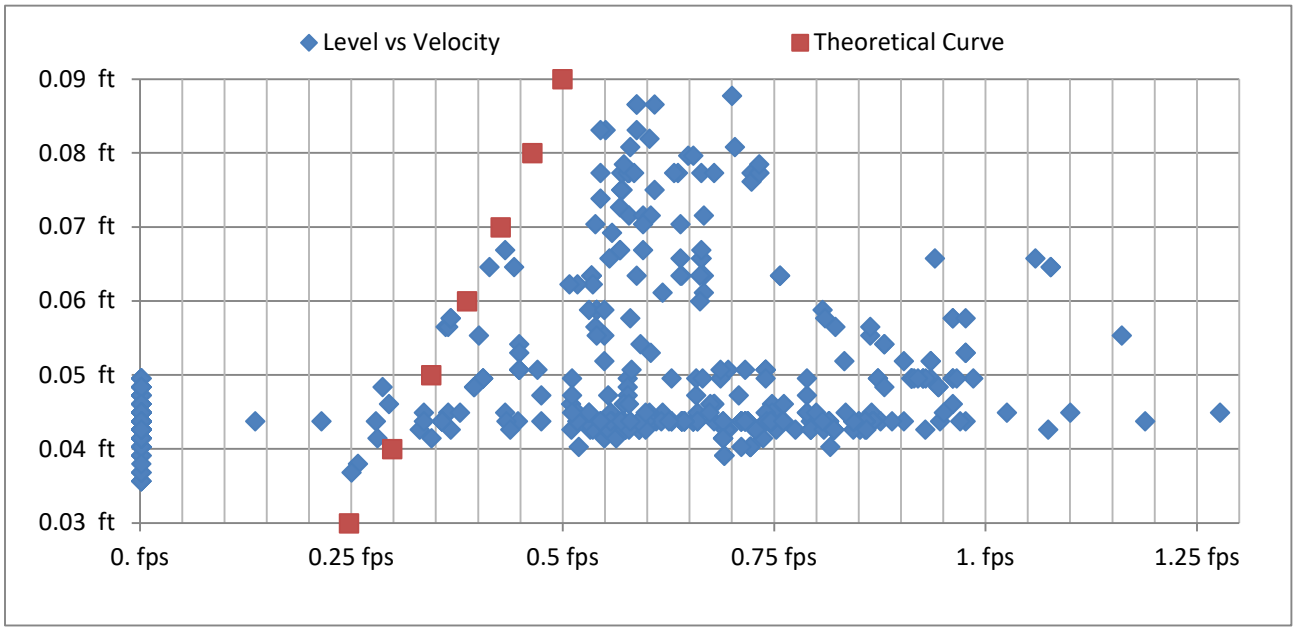


Figure 12 above: The scatter plot contains all of the data points collected at a 15-min collection interval over the entirety of the study. Since the flows at Alley S22-SMH-039 utilized ~5% to ~13% of the pipe depth during the study, that portion of its theoretical curve has been overlaid onto its scatter plot.

As shown in the scatter plot above, the expected relationship between level and velocity is not prevalent. While some of the data falls into an acceptable area along the theoretical curve, this data set is more of a cloud formation, which is indicative of processed or non-conforming flow. This is flow that does not conform to the theoretical level-velocity relationship expected under free-flow conditions, such as what occurs during dumping, jetting, pumping, etc. This type of flow is more common in commercial and industrial areas because they are more likely to generate processed flows. There could also be multiple flow patterns present.

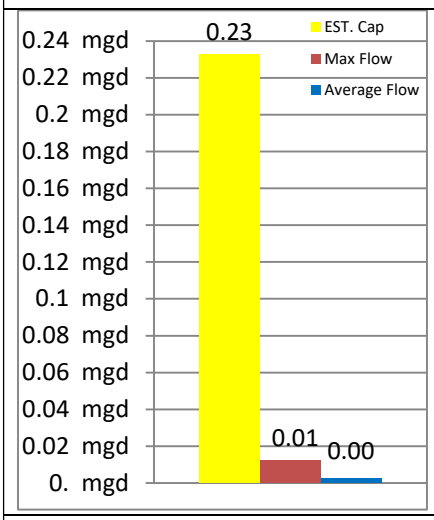
To summarize the site statistics from the data analysis at Alley S22-SMH-039:

- During peak flows (Q_{PF}), 0.0123 million gallons per day (mgd) or ~8.5 gallons per minute (gpm) utilized ~5% of the pipe's capacity.
- During average flows (Q_{AF}), 0.0027 mgd or ~2 gpm utilized ~1% of the pipe's capacity.
- According to common practice in sewer system design, velocities need to exceed 2.0 fps a minimum (min) of once per day to provide sufficient scouring action for self-cleaning. The maximum velocity at S22-SMH-039 was 1.28 fps with an average velocity of 0.33 fps. Therefore, this site is likely to have issues due to settlement of normal system solids.

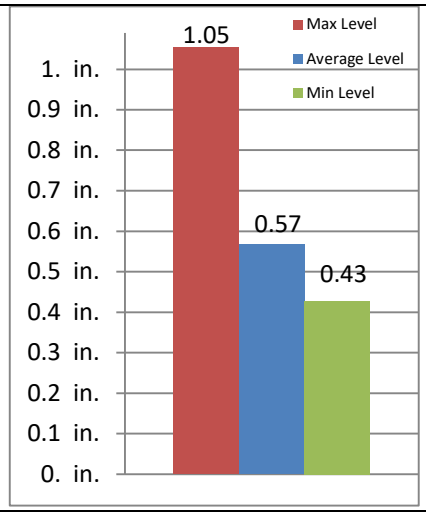
- According to common practice in sewer system design, the depth versus diameter (d/D) ratio for gravity drains of 15 inches in diameter or less should be no greater than 0.50 for the ultimate peak flow condition. The average d/D ratio for the site during this study was ~0.07 and the maximum was ~0.13. Therefore, this 8-in pipe had capacity available during the observed peak flow.

The following is a graphical representation of site statistics (stats) from the data analysis:

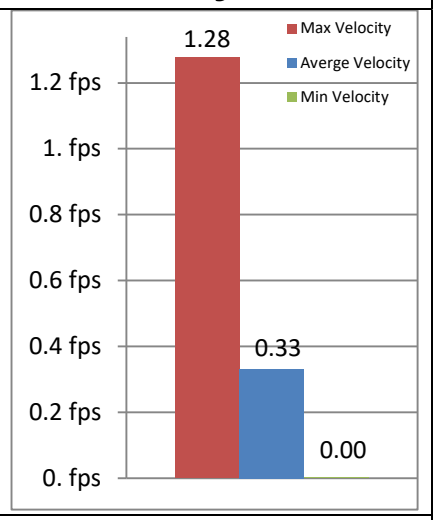
Flow Stats



Level Stats



Velocity Stats



The pipe capacity was estimated using a Manning's Circular Pipe Flow Capacity chart, where n=0.013. From the theoretical hydraulic operating curve for an 8-in pipe with a slope of ~0.09% (S=0.000888055), with the pipe completely full, the velocity is expected to be ~1.0317 fps. When this velocity is input into the Flo-Ware program from Alley S22-SMH-039, a maximum capacity of ~0.2328 mgd is produced. This is an extremely conservative assumption based on the levels and velocities observed during this study.

Alley S22-SMH-039 Level (depth) vs Pipe Diameter

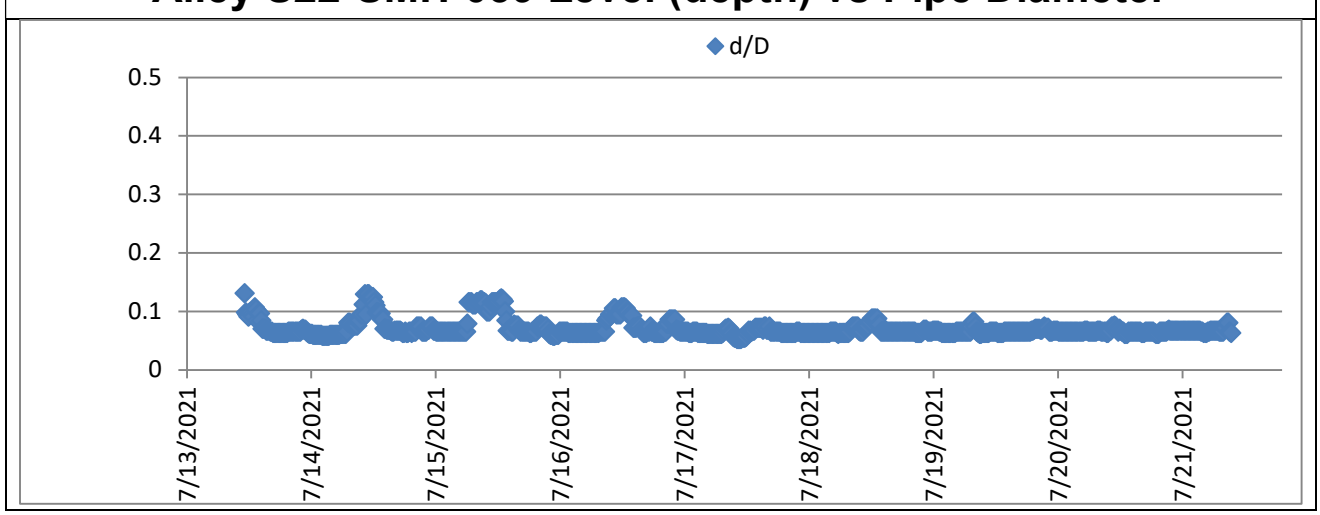
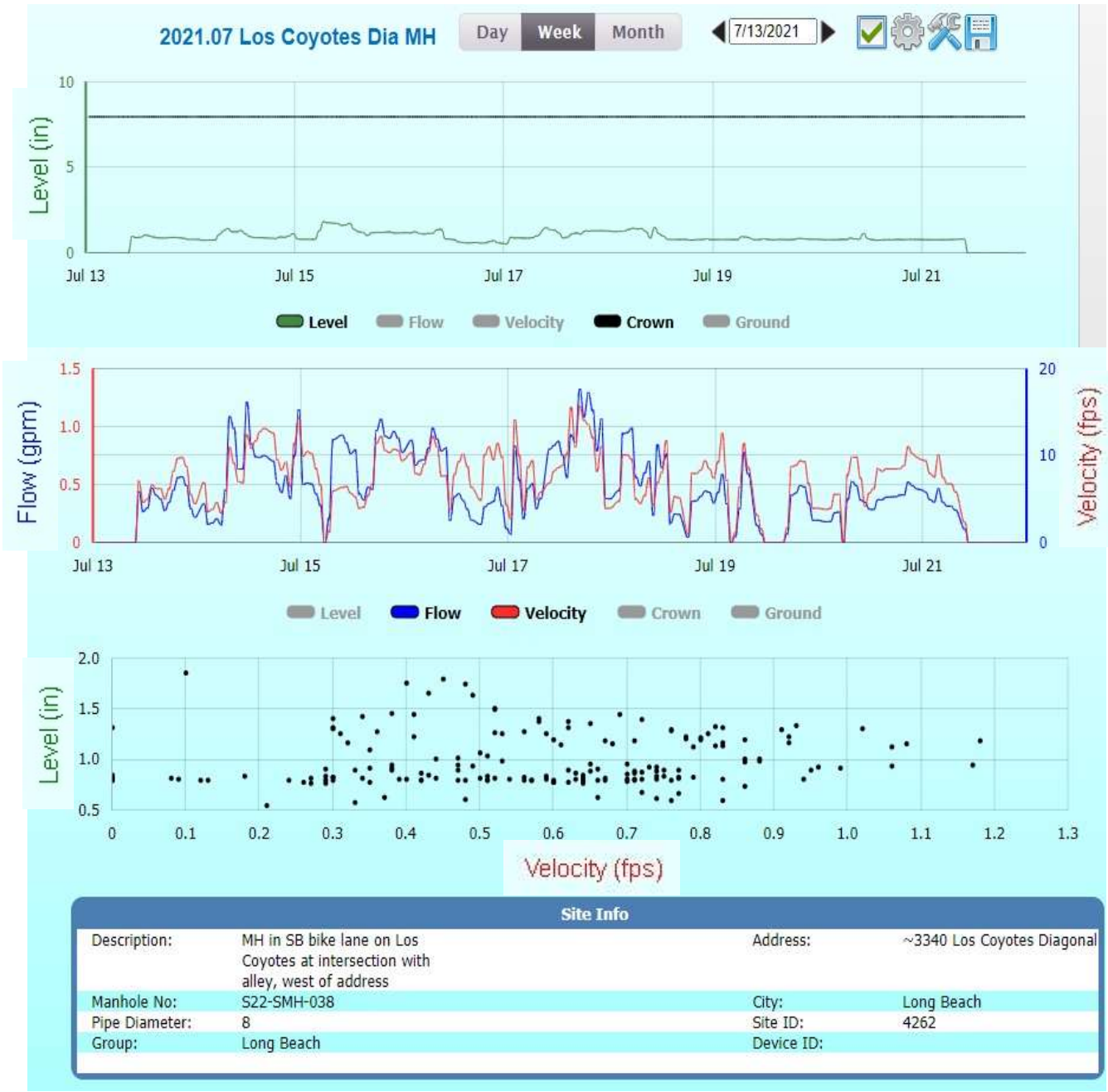


Figure 13 below: 2021.07 Los Coyotes Dia MH graphs of level, flow & velocity, and scatter plot of level in relation to velocity from US[3] Flow Monitoring Website (http://us3.uscubed.com/)



The scatter plot above shows the depth vs velocity data points for the 8-in upstream eastern line, which should resemble a theoretical hydraulic operating curve based on the site-specific characteristics of the pipe. Monitored velocities and levels were compared to theoretical hydraulic operating curves at different slopes, which led to the conclusion that the data best resembled a curve with the slope of ~0.13% (S=0.001294925) at Los Coyotes Dia MH.

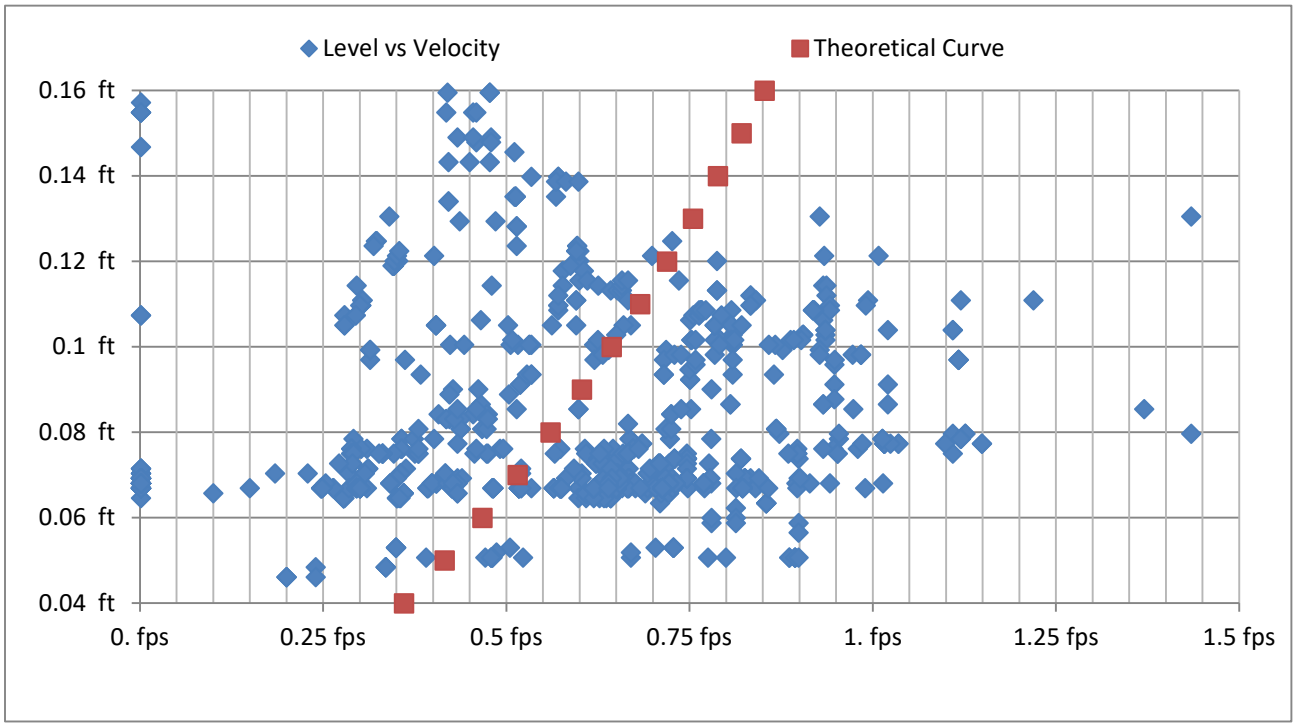


Figure 14 above: The scatter plot contains all of the data points collected at a 15-min collection interval over the entirety of the study. Since the flows at Los Coyotes Dia MH utilized ~7% to ~24% of the pipe depth during the study, that portion of its theoretical curve has been overlaid onto its scatter plot.

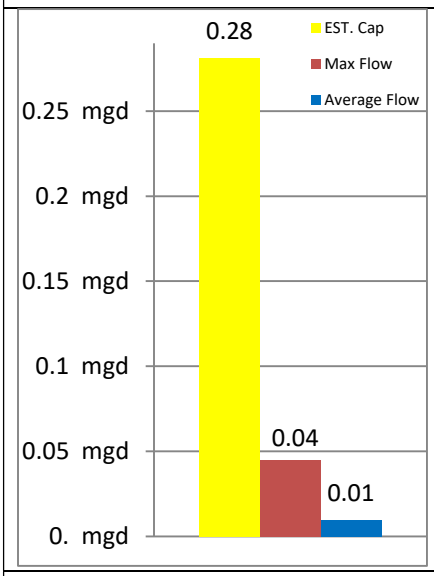
As shown in the scatter plot above, the expected relationship between level and velocity is not prevalent. While some of the data falls into an acceptable area along the theoretical curve, this data set is more of a cloud formation, which is indicative of processed or non-conforming flow. This site also experienced some blockage at the confluence point with the mainline, which caused some artificial elevation in levels and channelization, which caused some artificial increase in velocities.

To summarize the site statistics from the data analysis at Los Coyotes Dia MH:

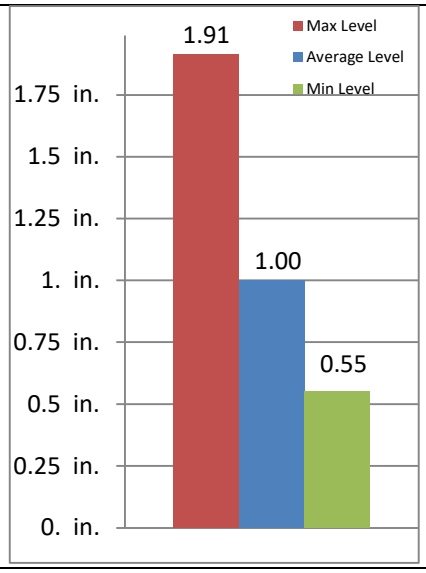
- During Q_{PF}, 0.0447 mgd or ~31 gpm utilized ~16% of the pipe's capacity.
- During Q_{AF}, 0.0097 mgd or ~7 gpm utilized ~3% of the pipe's capacity.
- The maximum velocity at Los Coyotes Dia MH was 1.43 fps with an average velocity of 0.57 fps. Therefore, as was seen during this study, S22-SMH-038 had issues with regard to blockage due to settlement of normal system solids.
- The average d/D ratio for the site during this study was ~0.12 and the maximum was ~0.24. Therefore, this 8-in pipe had capacity available during the observed peak flow.

The following is a graphical representation of the site statistics from the data analysis:

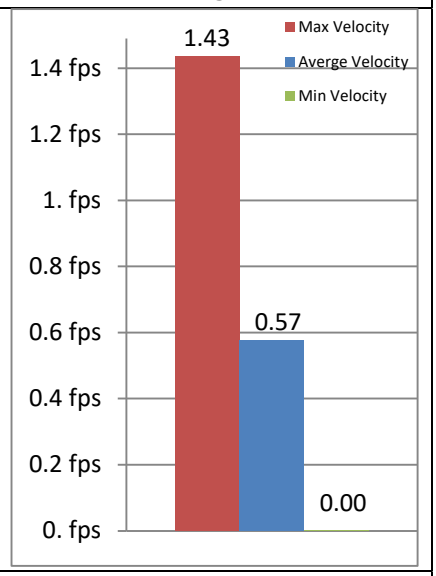
Flow Stats



Level Stats

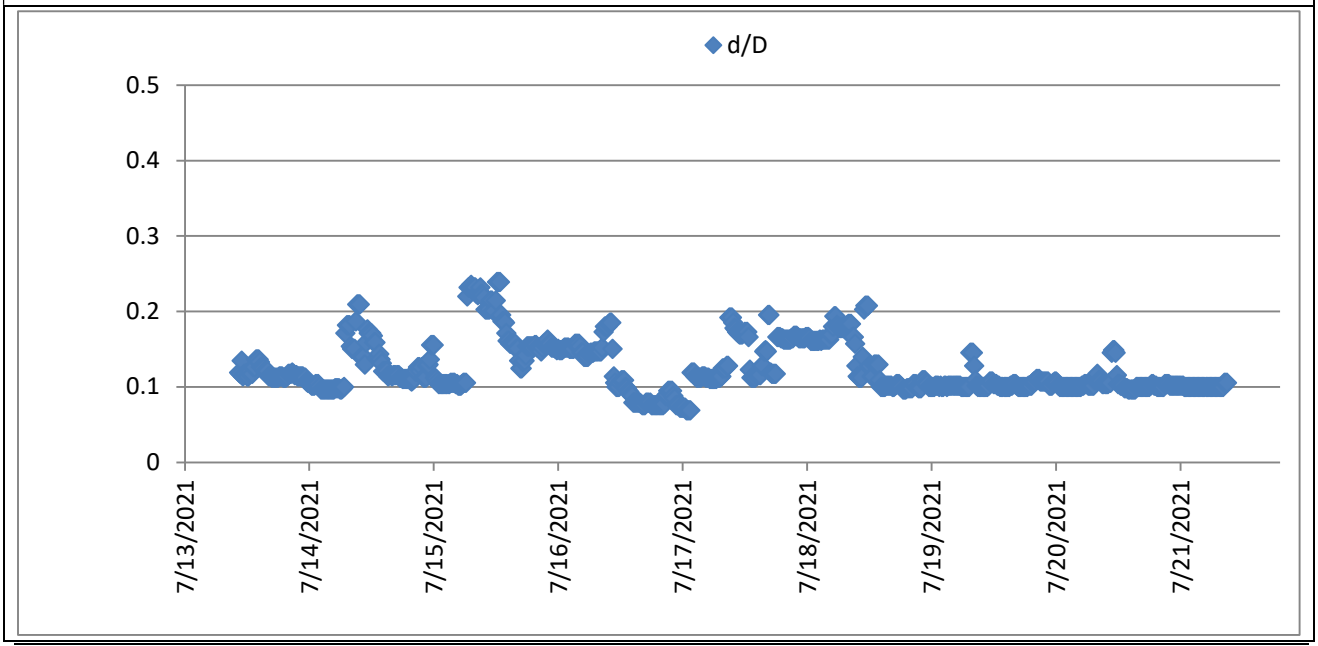


Velocity Stats



The pipe capacity was estimated using a Manning's Circular Pipe Flow Capacity chart, where n=0.013 (in accordance with the minimum value for a VCP with manholes, inlets, etc., Chow 1959). From the theoretical hydraulic operating curve for an 8-in pipe with a slope of ~0.13% (S=0.001294925), with the pipe completely full, the velocity should be ~1.2458 fps, which when input into the Flo-Ware program from Los Coyotes Dia MH produced a maximum capacity of ~0.2811 mgd. This is an extremely conservative assumption based on the levels and velocities observed during this study.

Los Coyotes Dia MH Level (depth) vs Pipe Diameter



1.6 Conclusions

Calculations in this report are based on steady uniform flow with steady flow defined as the discharge being constant with time, and uniform flow defined as the slope of the water surface and cross-sectional flow area being constant in the length of pipe analyzed. Using velocities from this study in conjunction with the associated cross-sectional areas depicted by the monitored levels, the flow was calculated using the Continuity Equation, and the slope was derived using Manning's Equation. Therefore, the capacity of each monitored 8-inch pipe is different because the calculated slopes were different based on the average levels and velocities observed during this study.

Field crews installed the equipment on 7/13/2021. Gas levels at both sites were well within safety limits throughout the installation and removal of equipment, typically with O_2 at 20.9% and no detectable traces of LEL, H_2S or CO. Flow monitoring equipment at each site was calibrated using site-specific characteristics and manual level and velocity readings for adjustment and verification.

Follow-up on the installations confirmed equipment was reading properly at both sites. However, when the final field calibration check was performed at Los Coyotes Dia MH prior to removing the equipment on 7/21/2021, a minor blockage at the point of confluence with the mainline was causing the flow to back up in the monitored line, artificially raising the levels by ~0.25 inches and the channelization around the blockage was artificially raising the velocities slightly. It is unknown how long or how much this condition affected the study; however, the minimum level of 0.55 inches occurred on 7/17/2021 and after that, the minimum level was ~0.8 inches.

All of the equipment went through diagnostic testing before and after the study with less than a 1% deviation between manual and meter level readings and less than a 5% deviation between manual and meter velocity readings. Therefore, equipment calibration was verified in accord with manufacturer specifications.

2021.07 Alley S22-SMH-039: The graphs for this site showed an erratic daily flow pattern with no observable level to velocity relationship. In addition, velocities did not meet the minimum requirements to provide sufficient scouring action for self-cleaning; however, no evidence of blockages was observed in this manhole during the study.

In order to determine the maximum allowable flow within the monitored pipe, the calculated slope based on the average flow data observed during the study (~0.09%) was used to generate a theoretical hydraulic operating curve for an 8-in pipe. At half pipe (4 inches), the velocity from the theoretical curve was ~1.0316 fps, which when input into the Flo-Ware program from S22-SMH039 produced an expected capacity of ~0.1164 mgd. Since peak flow was 0.0123 mgd, there should be capacity available for an additional 0.1041

mgd before the pipe exceeds its d/D limit of 0.50 at peak flow. This is an extremely conservative assumption since the average maximum velocity from the study (1.07 fps) coincided with an average level of ~0.6551 inches, and according to the theoretical curve, the velocity at 0.6551 inches should be ~0.3644 fps, which is a difference of ~66.0%.

2021.07 Los Coyotes Dia MH: The graphs for this site showed an erratic daily flow pattern with no observable level to velocity relationship. In addition, velocities did not meet the minimum requirements to provide sufficient scouring action for self-cleaning, which resulted in the deposition of normal system solids in the trough of the monitored line during the study.

In order to determine the maximum allowable flow within the monitored pipe, the calculated slope based on the average flow data observed during the study (~0.13%) was used to generate a theoretical hydraulic operating curve for an 8-in pipe. At half pipe (4 inches), the velocity from the theoretical curve was ~1.2457 fps, which when input into the Flo-Ware program from S22-SMH038 produced an expected capacity of ~0.1405 mgd. Since peak flow was 0.0447 mgd, there should be capacity available for an additional 0.0958 mgd before the pipe exceeds its d/D limit of 0.50 at peak flow. This is an extremely conservative assumption since the average maximum velocity from the study (1.04 fps) coincided with an average level of ~0.9677 inches, and according to the theoretical curve, the velocity at 0.9677 inches should be ~0.5634 fps, which is a difference of ~45.8%.

Note: Since the data was skewed on the conservative side, the data tends toward greater velocities at higher levels than the theoretical curve.

The table below is a summary of the flow data with regard to the d/D capacity limit of 0.50.

Existing Flow Information	Q_{AF} (mgd)	Q_{PF} (mgd)	Estimated d/D Pipe Capacity (mgd)	Available Capacity (mgd)	Max d/D
Alley S22-SMH-039	0.0027	0.0123	0.1164	0.1041	0.13
Los Coyotes Dia MH	0.0097	0.0447	0.1405	0.0958	0.24

Whether or not the available capacity is sufficient is dependent upon the proposed flow generation from the proposed project. Since the capacity of a system is contingent upon its most limited segment, Los Coyotes Dia MH is the limiting factor, most likely due to the minor blockage in the trough during the study. Additional flow could help in keeping the line clear or the trough may need to be smoothed to reduce the chances of blockages forming prior to discharging into the mainline in S22-SMH-038.

Tab 2: Calibration Site Sheets & Flo-Ware Graphs

Site Report 7/26/2021

Confidential Proprietary Information

Fuscoe

2021.07 Alley S22-SMH-039

MH at ~3380 Los Coyotes Diagonal
Long Beach, CA 90808
MH # S22-SMH-039

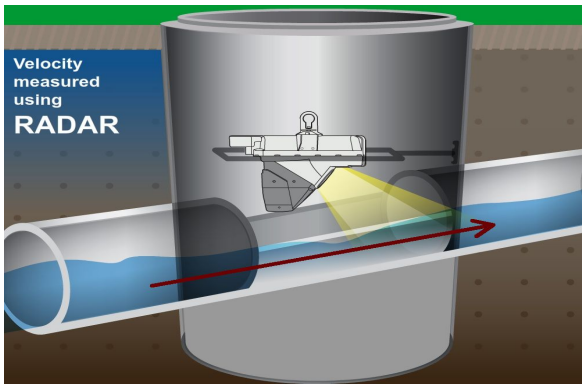
Access:
MH in alley, south of address

System Type:
Sanitary [X] Storm [ ]

Install Date: 7/13/2021

Map

Technology



Sewer Plan

Flow Meter			
Meter Depth: 93"			
MH Coordinates: 33.817821, -118.109306			
Laminar open channel hydraulics			
Avg Velocity	Avg Measured Level		Multiplier
0.33 fps	0.6"		1.0
Gas			
O2	H2S	CO	LEL
20.9	0	0	0
Notes			
No laterals; monitored the downstream line as it provided the best hydraulics.			
Traffic Safety			
No formal TCP required; used cones & signs per site-specific CATTCH requirements.			
Land Use			
Residential	Commercial	Industrial	Trunk
	X		

Manhole Depth	107"
Monitored Pipe Size	8"
Inner Pipe Size (In/Out)	8"/8"
Pipe Shape	Round
Pipe Condition	Good VCP
Manhole Material	Brick
Silt	None observed
Velocity Profile Data	Passed
Velocity Profile Taken	0.4 2-D
Sensor Offset	14.0"
Sensor Dist. to Crown	6.0"
Sensor Direction	Downstream
Flow Heading	West

Meter Site Document

2021.07 Alley S22-SMH-039

MH at ~3380 Los Coyotes Diagonal

Long Beach, CA 90808

Site

Manhole Before Install

Installation Process

Installed

Downstream Pipe Size

Downstream

Temporary Flow Study

Fuscoe

2021.07 Alley S22-SMH-039

Meter Start Date		From	7/13/2021
Meter Stop Date		To	7/21/2021
Velocity (fps)		Level (in)	Flow (mgd)
Average	0.343	0.569	0.003
Maximum	1.277	1.053	0.012
Minimum	0.002	0.428	0.000
Pipe Size		8.000	
Estimated Capacity (mgd)		Not Calculated	
Capacity Used		Not Calculated	
Sensor Type		Hach - Flodar	

Utility Systems, Science and Software

9314 Bond Av, Suite A
El Cajon, CA 92021

601 N. Parkcenter Dr, Suite 209
Santa Ana, CA 92705

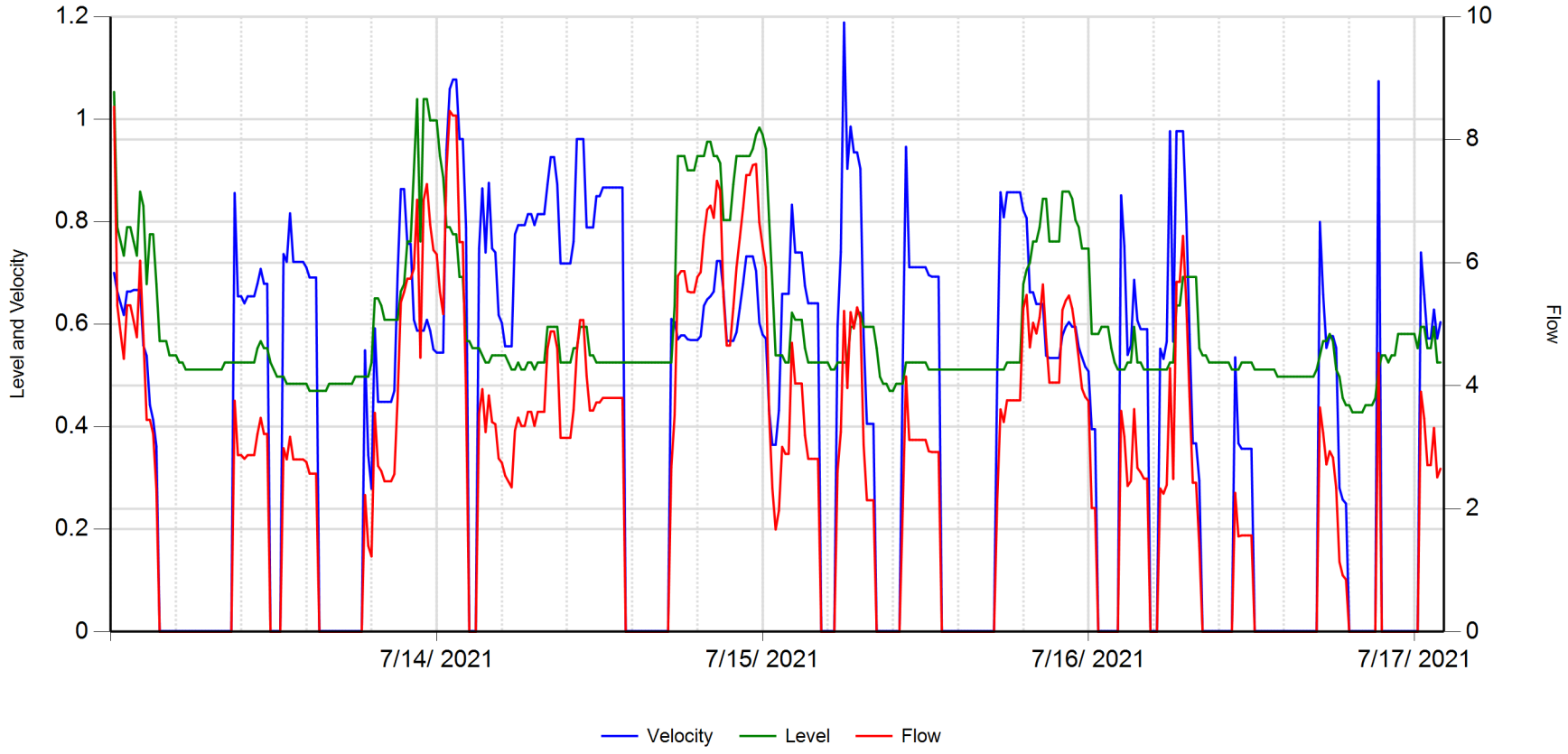
Utility Systems Science and Software

Report Date: 07/26/2021
Customer: Fuscoe
Group: Long Beach
Site: 2021.07 Alley S22-SMH-039

Statistics for 2021.07 Alley S22-SMH-039: 07/13/2021 thru 07/21/2021

	Flow (GPM)			Flow (MGD)			Velocity (FPS)			Level (inches)				
Date	**Avg**	**Max**	**Min**	**Avg**	**Max**	**Min**	**Avg**	**Max**	**Min**	**Avg**	**Max**	**Min**	**Total Gal**	**Rain**
7/13/21	1.94	8.54	0.00	0.00	0.01	0.00	0.30	0.86	0.00	0.60	1.05	0.50	2,795	
7/14/21	3.35	8.47	0.00	0.00	0.01	0.00	0.60	1.08	0.00	0.60	1.04	0.47	4,819	
7/15/21	3.29	7.60	0.00	0.00	0.01	0.00	0.49	1.19	0.00	0.65	0.98	0.47	4,745	
7/16/21	2.44	6.44	0.00	0.00	0.01	0.00	0.43	0.98	0.00	0.59	0.86	0.51	3,510	
7/17/21	1.18	4.53	0.00	0.00	0.01	0.00	0.27	1.07	0.00	0.52	0.60	0.43	1,704	
7/18/21	1.61	5.83	0.00	0.00	0.01	0.00	0.33	1.28	0.00	0.54	0.71	0.50	2,318	
Week:	**2.30**	**8.54**	**0.00**	**0.00**	**0.01**	**0.00**	**0.40**	**1.28**	**0.00**	**0.58**	**1.05**	**0.43**	**19,891**	
7/19/21	0.50	7.20	0.00	0.00	0.01	0.00	0.11	1.16	0.00	0.53	0.66	0.50	725	
7/20/21	0.95	5.09	0.00	0.00	0.01	0.00	0.21	1.10	0.00	0.53	0.61	0.50	1,372	
7/21/21	0.63	5.30	0.00	0.00	0.01	0.00	0.12	0.88	0.00	0.54	0.65	0.51	905	
Week:	**0.69**	**7.20**	**0.00**	**0.00**	**0.01**	**0.00**	**0.15**	**1.16**	**0.00**	**0.53**	**0.66**	**0.50**	**3,002**	
Totals:	**1.77**	**8.54**	**0.00**	**0.00**	**0.01**	**0.00**	**0.32**	**1.28**	**0.00**	**0.57**	**1.05**	**0.43**	**22,894**	

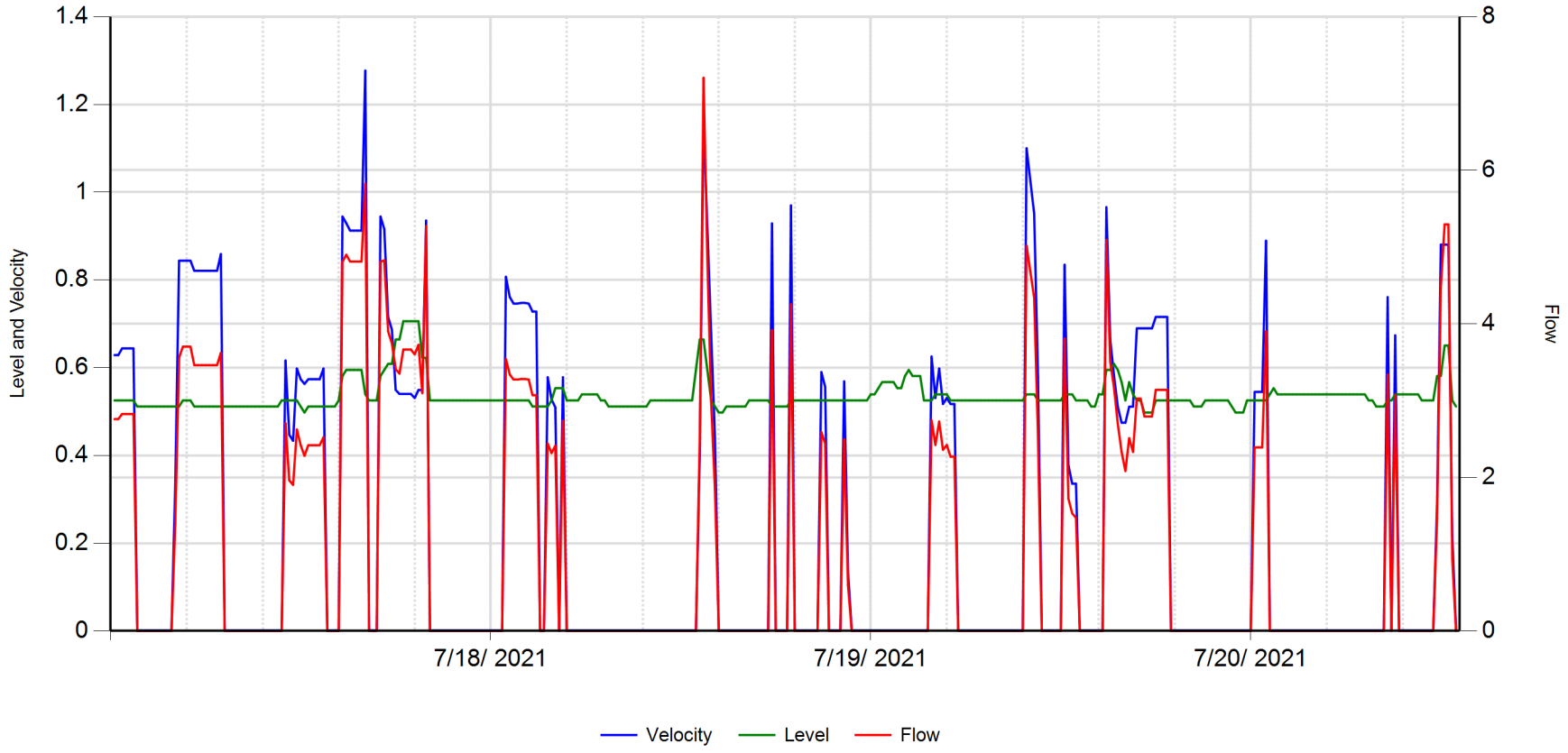
2021.07 Alley S22-SMH-039



	Velocity (fps)	Level (in)	Flow (gpm)		
Average	0.425	0.596	2.522	**RainFall**	Inches
Maximum	1.189	1.053	8.538		
Minimum	0.002	0.428	0.000		

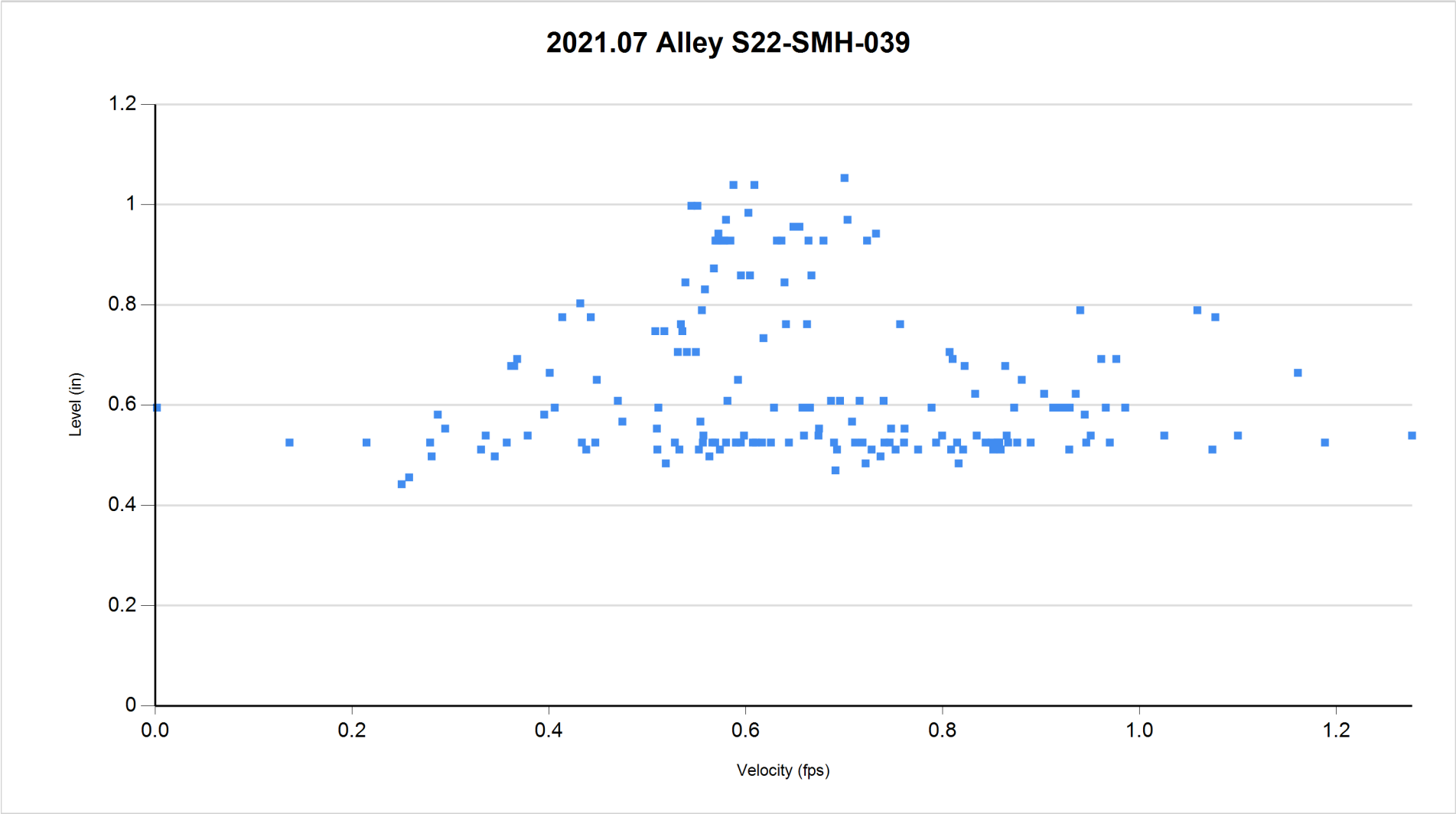
7/26/2021

2021.07 Alley S22-SMH-039



	Velocity (fps)	Level (in)	Flow (gpm)		
Average	0.225	0.535	1.060	**RainFall**	Inches
Maximum	1.277	0.706	7.205		
Minimum	0.002	0.498	0.000		

7/26/2021



7/13/2021 thru 7/21/2021

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Site Report 7/26/2021

Confidential Proprietary Information

Fuscoe

2021.07 Los Coyotes Dia MH

MH at ~3340 Los Coyotes Diagonal
Long Beach, CA 90808
MH # S22-SMH-038

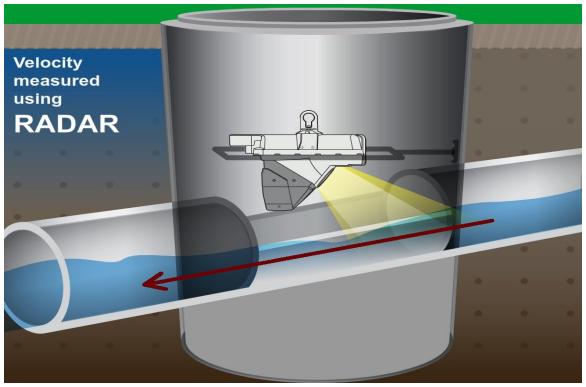
Access:
MH in SB bike lane on Los Coyotes at intersection with alley, west of address

System Type:
Sanitary [X] Storm [ ]

Install Date: 7/13/2021

Map

Technology



Sewer Plan

Flow Meter			
Meter Depth: 103"			
MH Coordinates: 33.817825, -118.110291			
Laminar open channel hydraulics with minor lip & drop from lateral trough into mainline.			
Avg Velocity	Avg Measured Level		Multiplier
0.6 fps	1.0"		1.0
Gas			
O2	H2S	CO	LEL
20.9	0	0	0
Notes			
Two inlets from east & north; monitored the eastern lateral from Project Site. Normal system solids were partially blocking trough at removal.			
Traffic Safety			
No formal TCP required; used cones & signs per site-specific CATTCH requirements.			
Land Use			
Residential	Commercial	Industrial	Trunk
	X		

Manhole Depth	115"
Monitored Pipe Size	8"
Inner Pipe Size (In/Out)	8"/8"
Pipe Shape	Round
Pipe Condition	Good VCP
Manhole Material	Brick
Silt	Debris in trough
Velocity Profile Data	Passed
Velocity Profile Taken	0.4 2-D
Sensor Offset	11.9"
Sensor Dist. to Crown	3.9"
Sensor Direction	Upstream
Flow Heading	South

Meter Site Document

2021.07 Los Coyotes Dia MH

MH at ~3340 Los Coyotes Diagonal

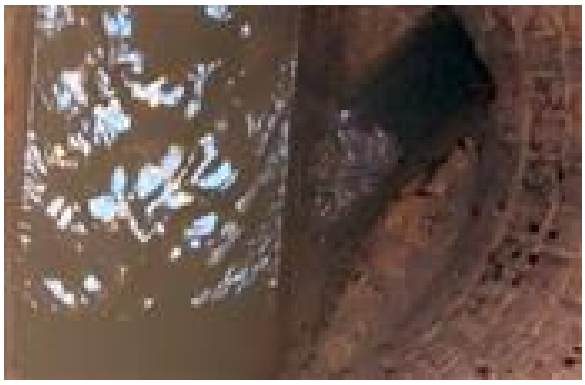
Long Beach, CA 90808

Site

Manhole Before Install

Installation Process

Partial Blockage In Trough At Removal



Upstream East

Upstream Pipe Size

Temporary Flow Study

Fuscoe

2021.07 Los Coyotes Dia MH

Meter Start Date		From	7/13/2021
Meter Stop Date		To	7/21/2021
Velocity (fps)		Level (in)	Flow (mgd)
Average	0.574	1.007	0.010
Maximum	1.434	1.914	0.045
Minimum	0.002	0.553	0.000
Pipe Size		8.000	
Estimated Capacity (mgd)		Not Calculated	
Capacity Used		Not Calculated	
Sensor Type		Hach - Flodar	

Utility Systems, Science and Software

9314 Bond Av, Suite A
El Cajon, CA 92021

601 N. Parkcenter Dr, Suite 209
Santa Ana, CA 92705

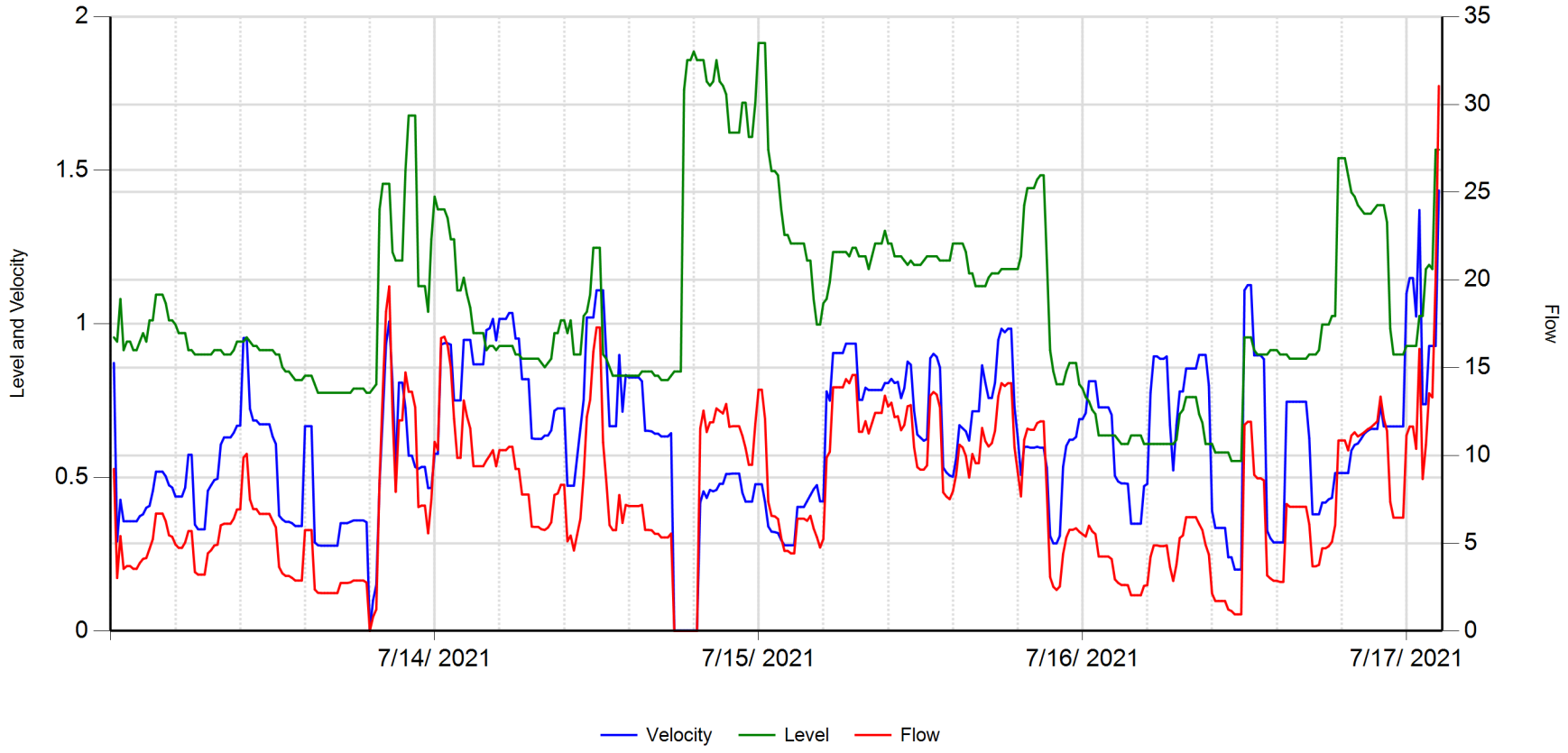
Utility Systems Science and Software

Report Date: 07/26/2021
Customer: Fuscoe
Group: Long Beach
Site: 2021.07 Los Coyotes Dia MH

Statistics for 2021.07 Los Coyotes Dia MH: 07/13/2021 thru 07/21/2021

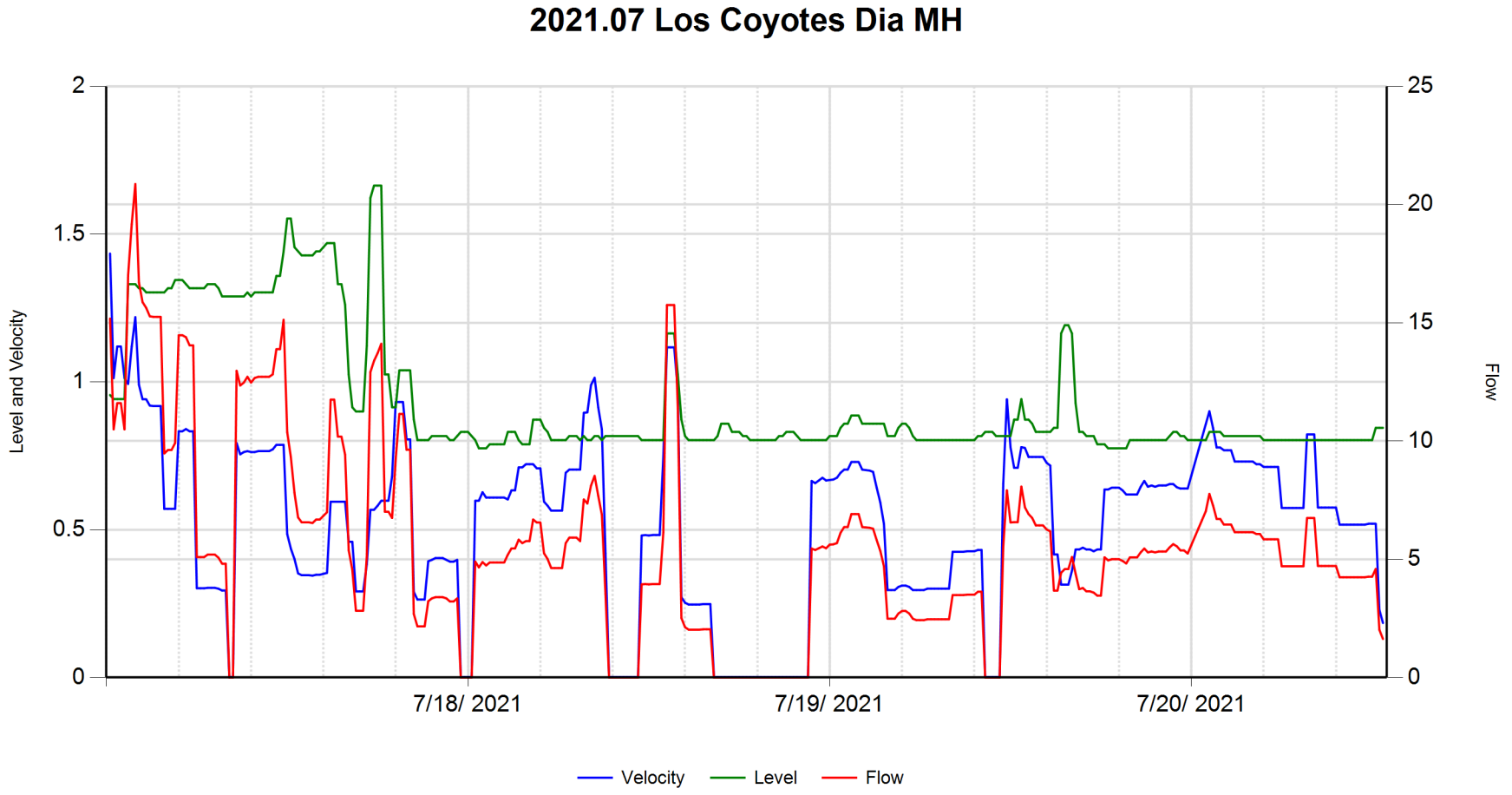
	Flow (GPM)			Flow (MGD)			Velocity (FPS)			Level (inches)				
Date	**Avg**	**Max**	**Min**	**Avg**	**Max**	**Min**	**Avg**	**Max**	**Min**	**Avg**	**Max**	**Min**	**Total Gal**	**Rain**
7/13/21	5.42	10.09	3.02	0.01	0.01	0.00	0.52	0.95	0.29	0.94	1.09	0.84	7,798	
7/14/21	7.95	19.64	0.00	0.01	0.03	0.00	0.65	1.11	0.00	1.01	1.68	0.78	11,455	
7/15/21	8.75	17.29	0.00	0.01	0.02	0.00	0.58	1.11	0.00	1.28	1.91	0.82	12,603	
7/16/21	7.13	14.12	1.71	0.01	0.02	0.00	0.67	0.98	0.29	0.93	1.48	0.58	10,273	
7/17/21	9.57	31.06	0.95	0.01	0.04	0.00	0.70	1.43	0.20	1.10	1.57	0.55	13,784	
7/18/21	6.86	15.13	0.00	0.01	0.02	0.00	0.52	0.93	0.00	1.09	1.66	0.78	9,882	
Week:	**7.62**	**31.06**	**0.00**	**0.01**	**0.04**	**0.00**	**0.61**	**1.43**	**0.00**	**1.06**	**1.91**	**0.55**	**65,795**	
7/19/21	3.48	15.75	0.00	0.01	0.02	0.00	0.38	1.12	0.00	0.83	1.16	0.80	5,004	
7/20/21	4.68	8.08	0.00	0.01	0.01	0.00	0.55	0.94	0.00	0.83	1.19	0.78	6,744	
7/21/21	4.86	6.75	1.63	0.01	0.01	0.00	0.59	0.82	0.18	0.81	0.84	0.80	6,995	
Week:	**4.34**	**15.75**	**0.00**	**0.01**	**0.02**	**0.00**	**0.51**	**1.12**	**0.00**	**0.82**	**1.19**	**0.78**	**18,743**	
Totals:	**6.52**	**31.06**	**0.00**	**0.01**	**0.04**	**0.00**	**0.57**	**1.43**	**0.00**	**0.98**	**1.91**	**0.55**	**84,538**	

2021.07 Los Coyotes Dia MH



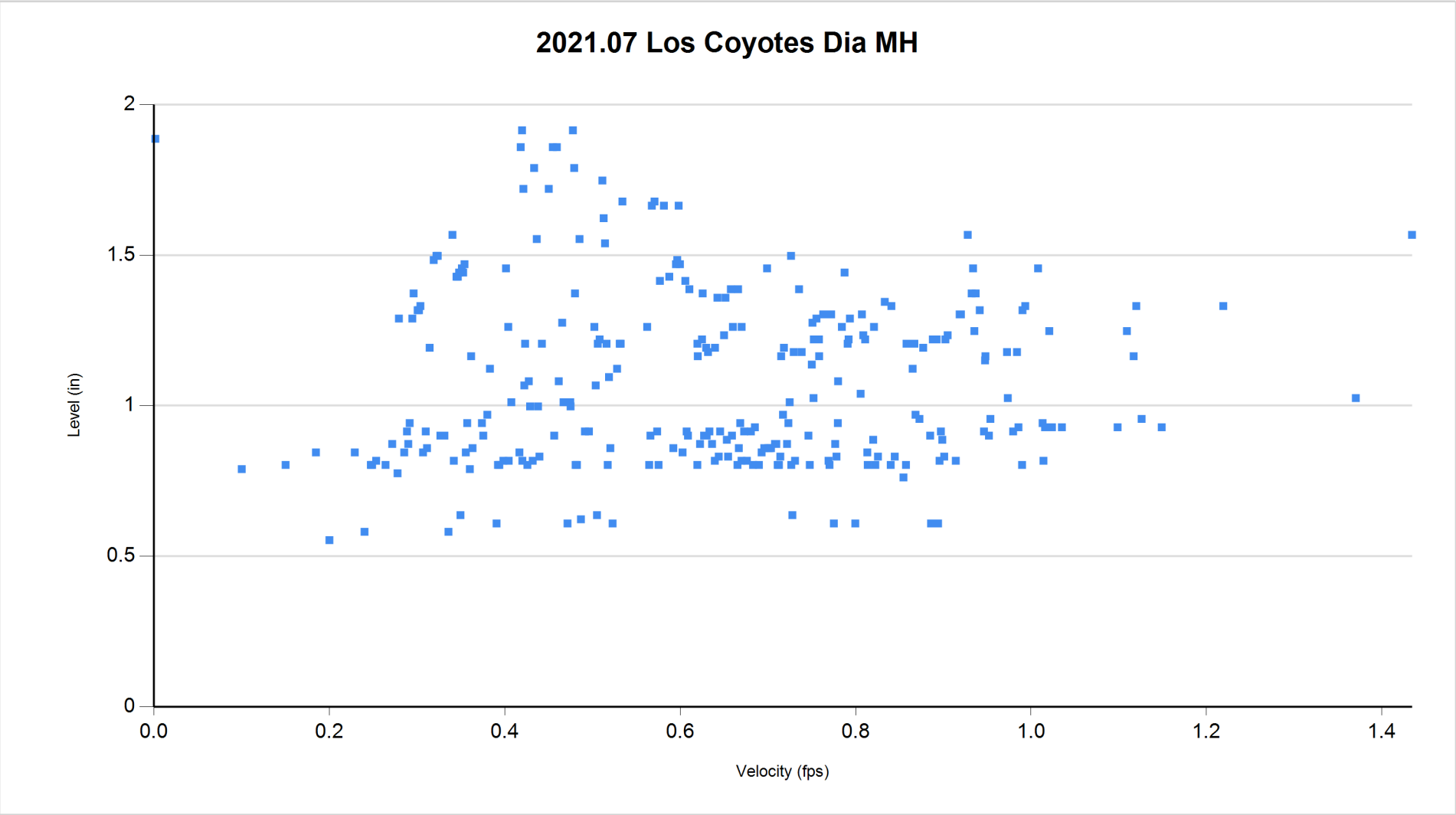
	Velocity (fps)	Level (in)	Flow (gpm)		
Average	0.620	1.052	7.668	**RainFall**	Inches
Maximum	1.434	1.914	31.055		
Minimum	0.002	0.553	0.000		

7/26/2021



	Velocity (fps)	Level (in)	Flow (gpm)		
Average	0.521	0.935	5.603	**RainFall**	Inches
Maximum	1.434	1.664	20.871		
Minimum	0.002	0.775	0.000		

7/26/2021



7/13/2021 thru 7/21/2021

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Tab 3: Methods & Procedures & Equipment

3.1 Methods and Procedures

Utility Systems Science & Software provided Fuscoe Engineering with an off the shelf, non-proprietary flow monitoring solution that included two state of the art Hach Flo-Dar® AV Sensor systems. The project course of action is listed below. The US^3 team:

- Assessed permitting and traffic control at the monitoring sites on Los Coyotes Diagonal and in the alley in Long Beach, CA.
- Validated the sites for suitability for sewer flow monitoring.
- Installed and removed traffic control in accord with site-specific CATTCH requirements for both the installation and removal of equipment.
- Installed and calibrated the flow monitoring equipment per manufacturer recommendations.
- Removed the equipment, validated the data and prepared the report.

3.2 Equipment

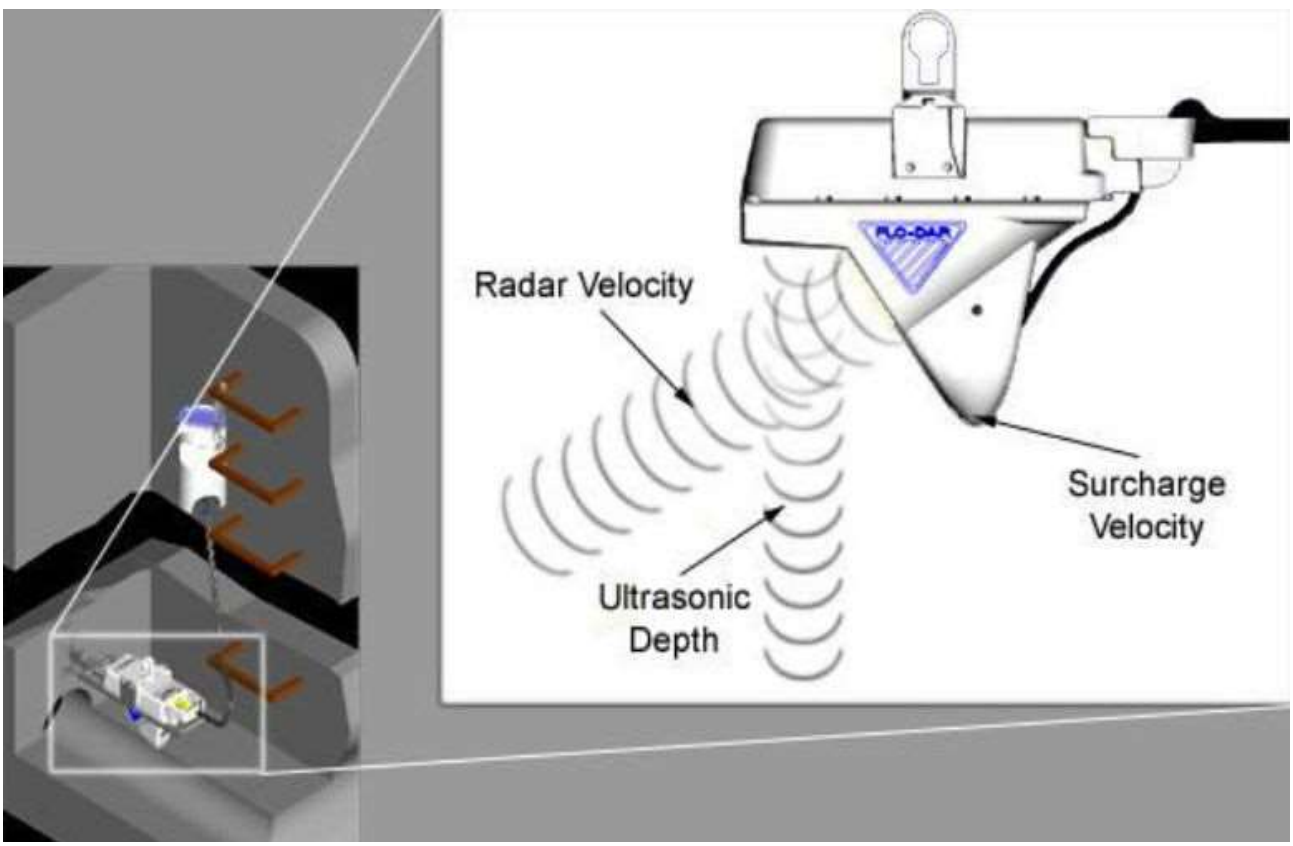


Figure: Equipment installed as part of the Sewer Flow Monitoring Study

Figure: Web-Enabled Flo-Dar® AV Sensor, Radar-Based Velocity/Area Flow Meter

3.2.1 SPECIFICATIONS

- **Enclosure**
  - IP68 Waterproof rating, Polystyrene
- **Dimensions**
  - 160.5 W x 432.2 L x 297 D mm (6.32 x 16.66 x 11.7 in.),
  - With SVS, D = 387 mm (15.2 in.)
- **Weight**
  - 4.8 kg (10.5 lbs.)
- **Operating Temperature**
  - -10 to 50°C (14 to 122°F)
- **Storage Temperature**
  - -40 to 60°C (-40 to 140°F)
- **Power Requirements**
  - Supplied by FL900 Flow Logger, Flo-Logger, or Flo-Station

- **Interconnecting Cable**
  - Disconnect available at both sensor and logger or Flo-Station
  - Polyurethane, 0.400 (±0.015) in. diameter; IP68
  - Standard length 9 m (30 ft), maximum 305 m (1000 ft)
- **Cables – available in two styles:**
  - Connectors at both ends
  - Connector from sensor with open leads to desiccant hub, desiccant hub with connector to logger. A potting/sealant kit will be included. This can be used to run the cable through conduit.
- **Certification**
  - Certified to: FCC Part 15.245: FCC ID: VIC-FLODAR24
  - Industry Canada Spec. RSS210. v7: IC No.: 6149A-FLODAR24

SURCHARGE DEPTH MEASUREMENT

  - Auto zero function maintains zero error below 0.5 cm (0.2 in.)
- **Method**
  - Piezo-resistive pressure transducer with stainless steel diaphragm
- **Range**
  - 3.5 m (138 in.), overpressure rating 2.5 x full scale

VELOCITY MEASUREMENT

- **Method**
  - Radar
- **Range**
  - 0.23 to 6.10 m/s (0.75 to 20 ft/s)
- **Frequency Range**
  - 24.075 to 24.175 GHz, 15.2 mW (max.)
- **Accuracy**
  - ±0.5%; ±0.03 m/s (±0.1 ft/s)

DEPTH MEASUREMENT

- **Method**
  - Ultrasonic
- **Standard Operating Range from Flo-Dar® Housing to Liquid**
  - 0 to 152.4 cm (0 to 60 in.)
- **Optional Extended Level Operating Range from Transducer Face to Liquid**
  - 0 to 6.1 m (0 to 20 ft.) with 43.18 cm (17 in.) dead band, temperature compensated.
- **Accuracy**
  - ±1%; ±0.25 cm (±0.1 in.)

FLOW MEASUREMENT

- **Method**
  - Based on Continuity Equation
- **Accuracy**
  - ±5% of reading typical where flow is in a channel with uniform flow conditions and is not surcharged, ±1% full scale max.

SURCHARGE CONDITIONS DEPTH/VELOCITY DEPTH (Std with Flo-Dar® Sensor)

- **Surcharge depth supplied by Flo-Dar® sensor.**

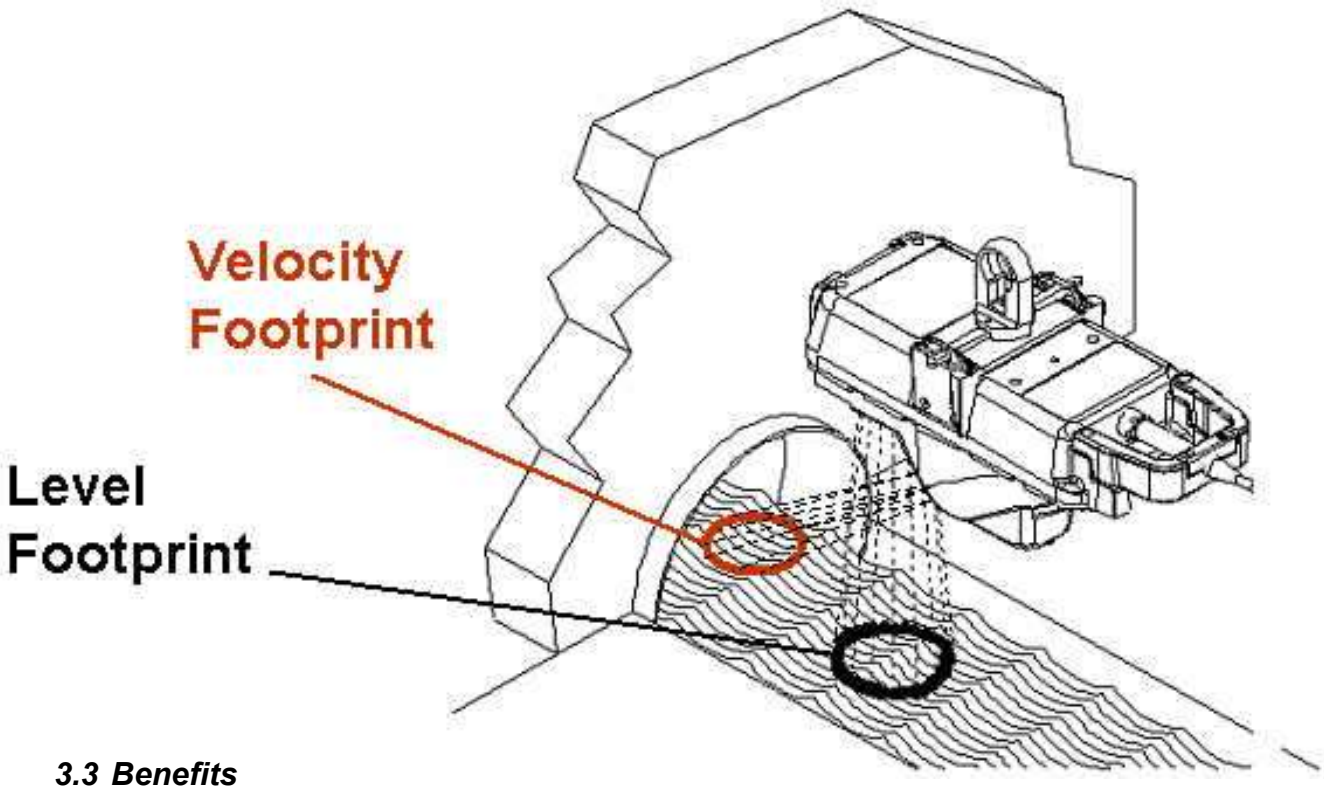
VELOCITY (Optional Surcharge Velocity Sensor)

- **Method**
  - Electromagnetic
- **Range**
  - ±4.8 m/s (±16 ft/s)
- **Accuracy**
  - ±0.15 ft/s or 4% of reading, whichever is greater.
- **Zero Stability**
  - ±0.05 ft/s

The Flo-Dar® Open Channel Flow Meters provide an innovative approach to open channel flow monitoring. Combining digital Doppler radar velocity sensing with ultrasonic pulse echo level sensing, Flo-Dar® provides accurate open channel flow monitoring without the fouling problems associated with submerged sensors.

3.2.2 Perfect Solution for Difficult Flow Conditions:

- Flows with High Solids Content
- High Temperature Flows
- Caustic Flows
- Large Man-Made Channel
- High Velocities
- Shallow Flows



3.3 Benefits

3.3.1 Personnel have no contact with the flow during installation.
3.3.2 Maintenance caused by sensor fouling is eliminated.
3.3.3 Field Replaceable / Interchangeable Sensors and Monitors

3.4 How It Works

Flo-Dar® transmits a digital Doppler radar beam that interacts with the fluid and reflects back signals at a different frequency than that which was transmitted. These reflected signals are compared with the transmitted frequency. The resulting frequency shift provides an accurate measure of the velocity. Level is detected by ultrasonic pulse echo. Flow is then calculated based on the Continuity Equation:

Q = V x A, Where Q = Flow, V = Average Velocity and A = Area

3.5 Accurate Flow Measurements

Flo-Dar® provides the user with highly accurate flow measurements under a wide range of flows and site conditions. By measuring the velocity of the fluid from above, Flo-Dar® eliminates accuracy problems inherent with submerged sensors including sensor disturbances, high solids content and distribution of reflectors.

Understanding the Flo-Dar™ Flow Measuring System

Independent tests verify non-contact flowmeter is highly accurate under both open channel and surcharge conditions

Flo-Dar is the only non-contact open channel velocity/area type flow meter available for measurement of flows in municipal wastewater and storm water sewers. Flo-Dar consists of a radar-based velocity measurement system and an ultrasonic-based pulse echo depth measurement system.

Flo-Dar has an optional surcharge velocity sensor (electromagnetic type) and depth sensor (pressure transducer) that provides the continuation of accurate flow data where intermittent, surcharged flow conditions are experienced.

Flo-Dar combines the information from the velocity and depth systems along with site specific data (pipe size, pipe shape, velocity profile) and provides the user with highly accurate, reliable flow data under a wide range of flow velocities and depths. Since the radar velocity sensor and the ultrasonic depth sensor cease to provide useful data when submerged, Flo-Dar has an optional surcharge velocity sensor (electromagnetic type) and depth sensor (pressure transducer) that provides for the continuous measurement of accurate flow data where intermittent, surcharged flow conditions are experienced.

The data system merges the data from these two independent flow systems and provides the user with a single flow signal that accurately represents flow over a range from a dry pipe to extreme surcharge conditions. Accuracy tests performed at Alden Research Labs have shown that the Flo-Dar is highly accurate under both open channel and surcharge (submerged) conditions.

Accuracy tests performed at Alden Research Labs have shown that the Flo-Dar is highly accurate under both open channel and surcharge (submerged) conditions.

Measurement of Flow Under Free Flow, Non-submerged Conditions

Open Channel Velocity

Open channel flow is any flow in a channel that has a free surface. Flo-Dar measures open channel flow as depicted in Figure 1. The radar velocity sensor measures flow in a manner similar to how radar guns measure the velocity of a baseball or an automobile.

A radar "horn" contained inside of the watertight housing transmits a microwave beam through the housing at a defined angle to the flow surface. Disturbances on the surface reflect some of the microwaves back to the horn. The frequency of these returning microwave signals have been shifted (the Doppler effect) by an amount directly proportional to the speed of the moving surface. This frequency shift is detected and measured by the Flo-Dar flow meter and the data is stored as a measure of the surface velocity.

Marsh-McBirney has developed and patented a process that yields an accurate determination of the average velocity from the measurement of the surface velocity at a known point on the flow surface.

Since the accurate measurement of open channel flow requires the accurate determination of the average velocity of the flow stream, the measured surface velocity must be dynamically modified to obtain an accurate average velocity for use in the Continuity Equation, Q= Vav x A). Marsh-McBirney has developed and patented a process that yields an accurate determination of the average velocity from the measurement of the surface velocity at a known point on the flow surface.

Factors that influence the accuracy and stability of the measured surface velocity signal:

1. *Transmitted Frequency*
2. *Speed of Microwaves in Air*
3. *Angle of Microwave Beam*
4. *Calculation of Mean Velocity*

If one analyzes each of the four factors that influence the accuracy and stability of the measured surface velocity signal, it becomes obvious that a Doppler Radar based velocity sensor is very accurate and stable:

1. Transmitted Frequency - The transmitted frequency of 24.175 GHz is controlled to an accuracy of +/- 0.065%
2. Speed of Microwaves in Air - Essentially constant at the speed of light
3. Angle of Microwave Beam - The sensor is placed in a rigid mount that is positioned parallel to the water surface (i.e. nearly level). The sensor can be removed from the mount and reinstalled while easily maintaining its original mounting location.
4. Calculation of Average Velocity—The relationship between the sensed (surface) velocity and the average velocity varies with pipe size and water depth.

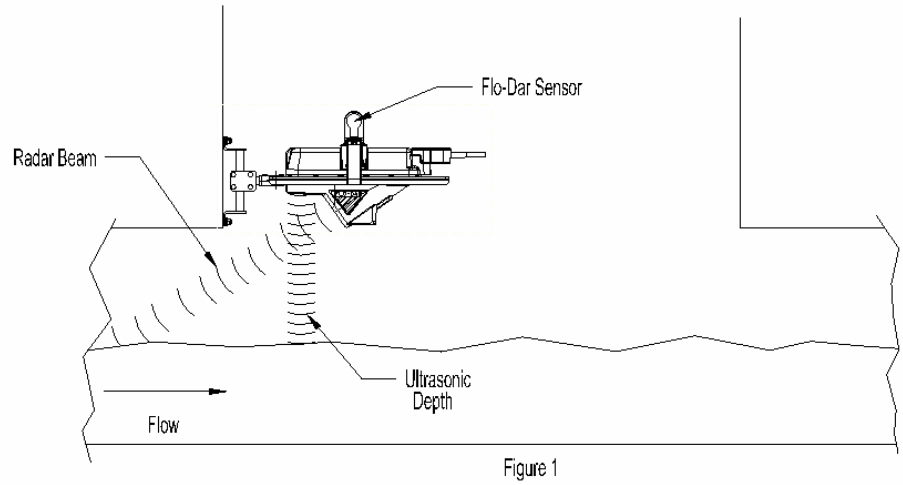


Figure 1

By applying algorithms developed through basic hydraulic principles and from actual flow data taken at Alden Labs and at various customer sites, the surface velocity is transformed into an accurate representation of the mean velocity.

Since the location of the sensing region on the flow surface is known, the repeatability of the surface velocity measurement is excellent and its relationship to the mean velocity is very predictable.

Since the location of the sensing region on the flow surface is known, the repeatability of the surface velocity measurement is excellent and its relationship to the mean velocity is predictable.

Figures 2a, 2b, 2c and 2d depict the relationship that exists between various velocity contours and the mean velocity at different **d**epth/**D**iameter ratios. Note that the velocity gradients that exist throughout the flow cross section are generally represented at the flow's surface - essentially creating a "finger-print" of the velocity contours that exist beneath the surface.

As one might expect, the velocities near the wall are less than the mean velocity and those near the surface are greater than the mean velocity. Since a) the radar sensor measures surface velocity at a know location on the flow surface, and b) these various surface velocities have known relationships to the mean velocity, then the mean velocity can be reliably and accurately calculated.

The accuracy of the calculated average velocity, after correction, is typically between 2% to 5%.

Note that the velocities present on the surface are typically within 10% of the average velocity. The accuracy of the calculated mean velocity, after correction, is typically between 2% to 5%. (See Note 1.)

Ultrasonic Pulse Echo Depth Measurement

Ultrasonic pulse echo depth sensors operate by energizing a piezoelectric transducer with an electronic pulse. This pulse creates an ultrasonic pulse of energy that travels to the flow surface where a portion of the energy returns to the transducer.

The transit time to the flow surface and back is recorded and the distance calculated by knowing the speed of sound at the site which has been corrected by an embedded temperature sensor. The accuracy of the depth measurement is 1%, +/- 0.1 inch .

Measurement of Flow Under Submerged Conditions

Electromagnetic (EM) Surcharge Velocity Sensor

As stated previously, the radar based velocity sensor measures the surface velocity of the flowing stream by detecting the average speed of the surface irregularities. When the radar sensor becomes totally submerged, it becomes "blind" and is no longer capable of measuring the fluid velocity.

*Figures 2a, 2b, 2c and 2d depict the relationship that exists between various velocity contours and the mean velocity at different **d**epth/**D**iameter ratios. Note that the velocity gradients that exist throughout the flow cross section are generally represented at the flow's surface—essentially creating a "finger-print" of the velocity contours that exist beneath the surface.*

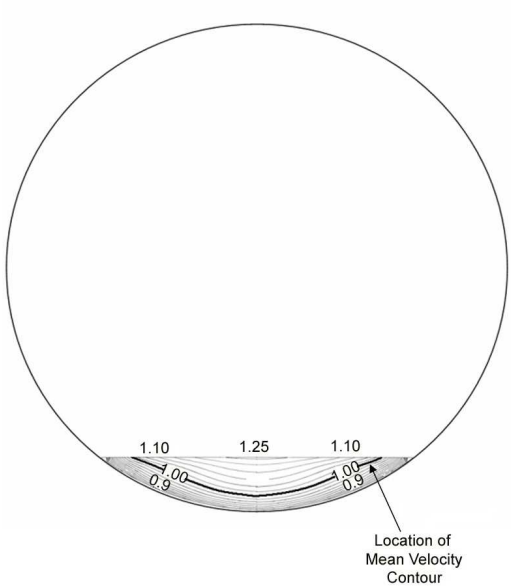


Figure 2a:
d/D= 0.10

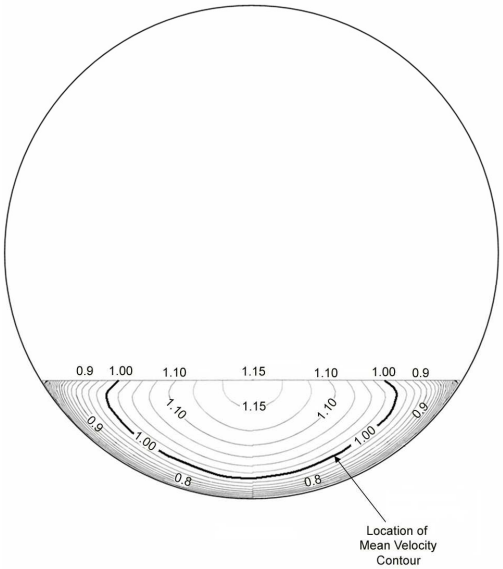


Figure 2b:
d/D= 0.25

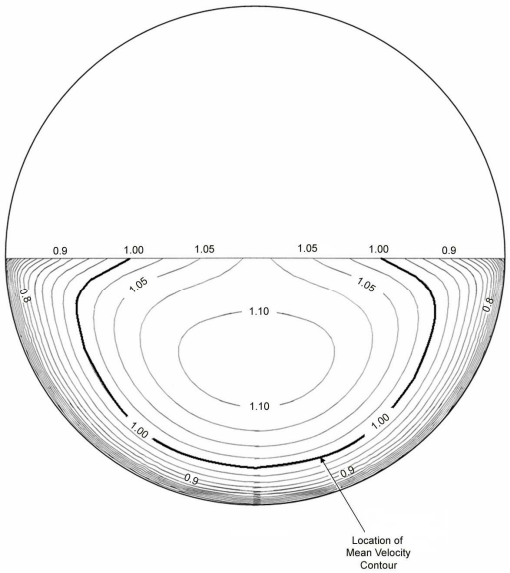


Figure 2c:
d/D= 0.50

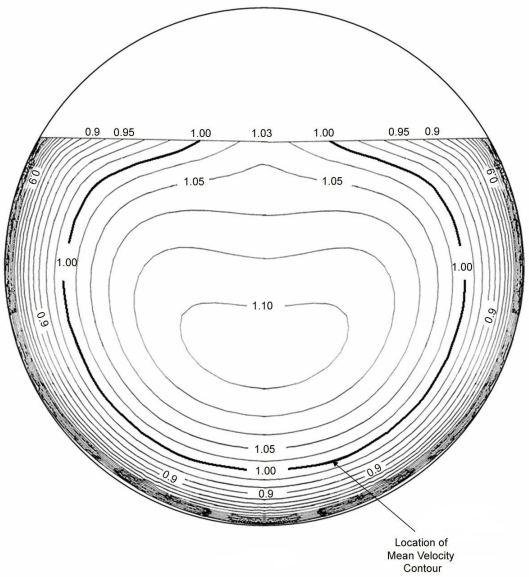


Figure 2d:
d/D= 0.75

To allow for the uninterrupted measurement of flow under conditions that change from open channel flow to submerged flow as experienced in sewers that surcharge, Marsh-McBirney has added an additional surcharge velocity sensor. Placed on the underside of the standard Flo-Dar sensor, this electromagnetic sensor becomes active when the flow level rises to within four inches of the Radar horn and remains activated until the flow once again falls beneath that depth.

To allow for the uninterrupted measurement of flow under conditions that change from open channel flow to submerged flow as experienced in sewers that surcharge, Marsh-McBirney has added an additional surcharge velocity sensor.

Placed on the underside of the standard Flo-Dar sensor, this electromagnetic sensor becomes active when the flow level rises to within 4 inches of the Radar horn and remains activated until the flow once again falls beneath that depth.

The optional surcharge velocity sensor is based on the Faraday Principle of Electromagnetic Induction. This is the same well-proven principle that "full bore" or "spool-piece" magmeters utilize, the most widely used method of measuring wastewater flow in full pipes.

In the Marsh-McBirney design, an electromagnet embedded within the streamlined sensor generates a magnetic field in the flowing stream. The flow of the water passing through this magnetic field generates voltages in the water that are directly proportional to the speed of the water passing the sensor. Marsh-McBirney uses an in-house 120 foot long towing basin for calibration of electromagnetic sensors. Tow carriage accuracy is better than +/- 0.5%.

Surcharge Depth Sensor

Once submerged conditions exist, the ultrasonic depth sensor ceases to provide useful depth information. To measure depth of the flow during surcharge conditions, a pressure transducer embedded in the Flo-Dar sensor is used in the system.

The location of the surcharge velocity sensor relative to the crown of the pipe is shown in Figure 3. This location provides sensing of the velocity stream just below the crown of the pipe where the flow exits the upstream piping. Empirical data, verified by independent tests at Alden Labs in Holden, Massachusetts indicate that the velocity measured at this location, when multiplied by 0.9, is typically equal to the average velocity.

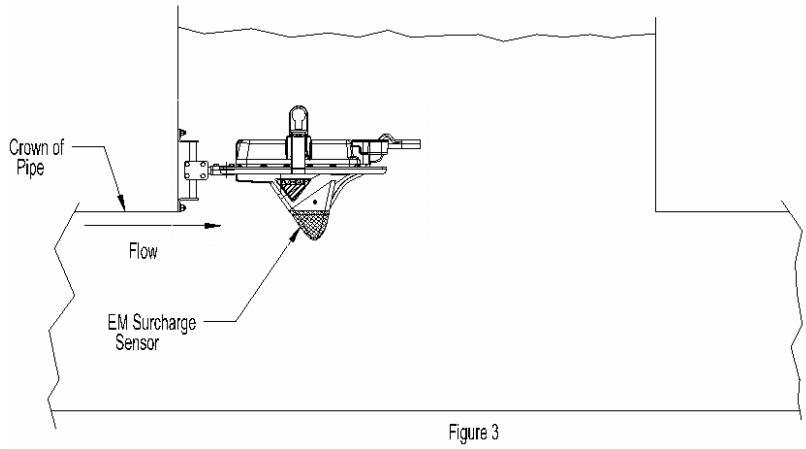


Figure 3

Laboratory Tests

In September 2002 Marsh-McBirney contracted Alden Research Labs of Holden, Massachusetts to perform flow accuracy tests on the Flo-Dar sensor with an electromagnetic surcharge sensor. The Flo-Dar was subjected to a flow range of 400 gpm to over 9000 gpm in a pipe size of 23.5 inches. The pipe had a slope of approximately zero. The test results are shown in Figure 4, Figure 5, Figure 6 and Figure 7.

The flow tests showed that the Flo-Dar compared very favorably with the Alden flow standard (weigh tank) over a wide range of flows where the open channel flow ranged from 400 gpm to 6000 gpm, and the surcharge (submerged) flow ranged from 6000 gpm to 9000 gpm.

The flow tests showed that the Flo-Dar compared very favorably with the Alden flow standard (weigh tank) over a wide range of flows where the open channel flow ranged from 400 gpm to 6000 gpm, and the surcharge (submerged) flow ranged from 6000 gpm to 9000 gpm.

Tests were also run to depict how Flo-Dar performs under transition conditions where the flow goes from an open channel condition to a surcharge (submerged) condition.

Test results show that the data from the open channel radar sensor and surcharge electromagnetic sensor overlay each other and the Alden Standard. Tests were run under both free flow conditions as well as where the pipe outlet was partially blocked so as to create an entirely different velocity/depth relationship.

Additional flow accuracy tests were run on a 36” pipe at Alden on July 17, 2003. All of the data points were shown to be within 3.5% of the Alden Standard.

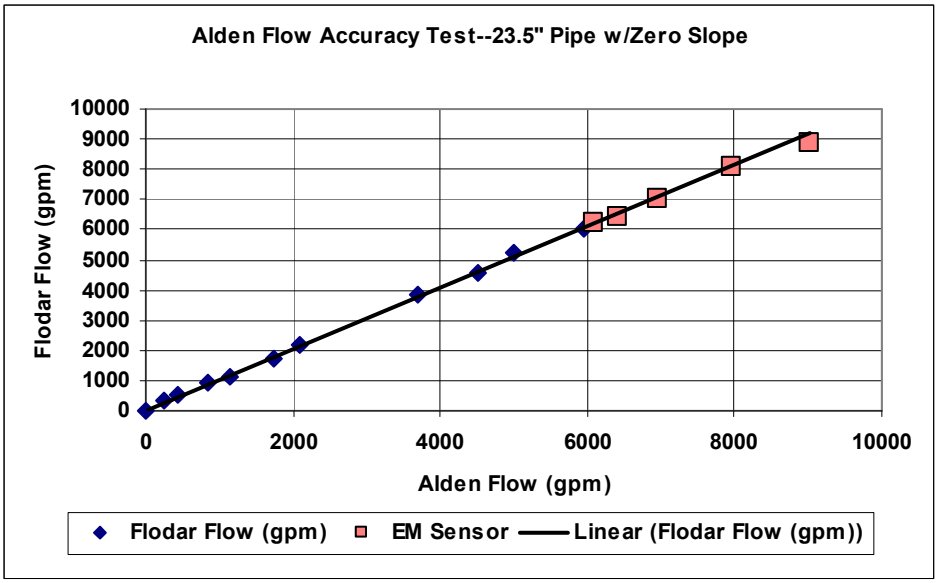
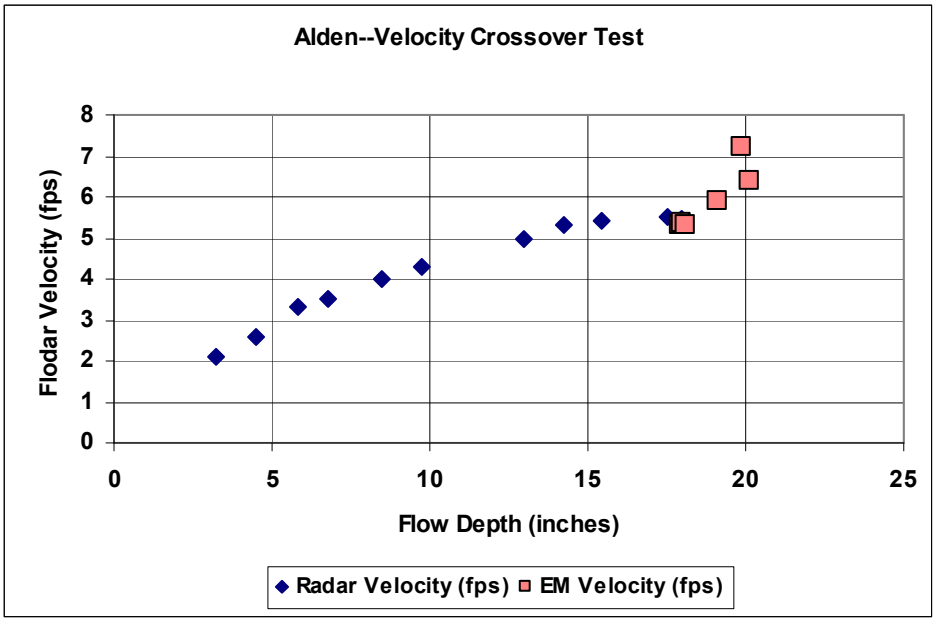


Figure 4 compares the Flo-Dar flow vs. the Alden Standard (weigh tank). The flow condition for this test was both open channel flow and surcharge (submerged) flow.



Test results show that the data from the open channel radar sensor and surcharge electromagnetic sensor overlay each other and the Alden Standard.

Figure 5 compares the velocity measured by the Radar sensor plotted against flow depth. Note that when the depth reaches approximately 18 inches the EM surcharge sensor has been activated. There is one data point where both sensors are active and then the EM surcharge sensor continues to measure after the radar sensor has become submerged and inoperative.

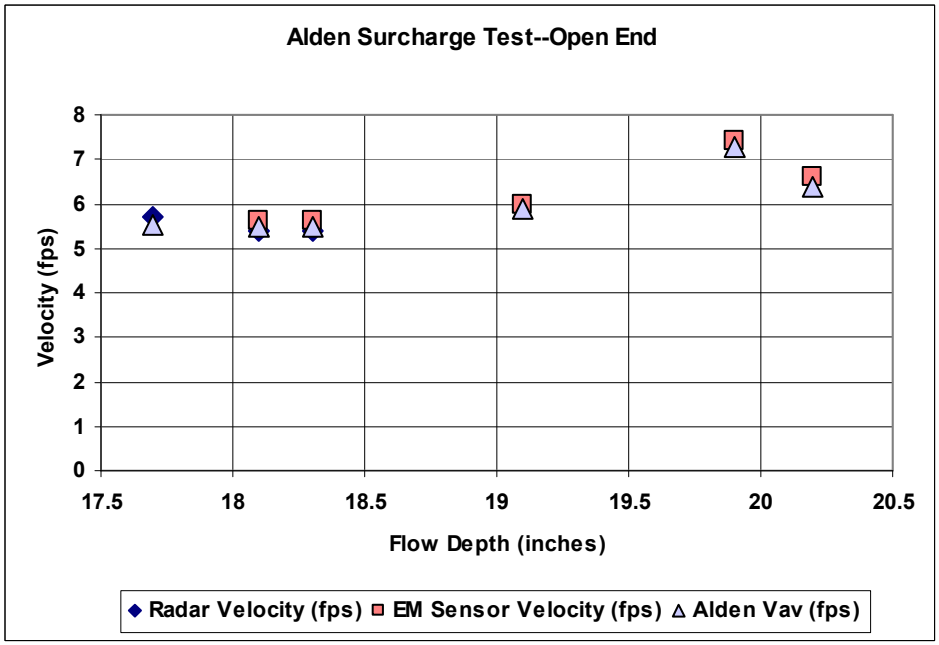


Figure 6 depicts a second surcharge test where the flow was incremented more slowly in order to achieve additional data points in the area where both the Radar sensor and the EM surcharge sensors are active simultaneously. Note that both the Radar sensor and the EM sensor are active between flow depths of 18 inches and 18.5 inches. Also, note how both the Radar and EM data points overlay each other and the Alden standard.

The accuracy of Flo-Dar under both open channel conditions as well as surcharge (submerged) conditions is more than adequate for the most demanding of metering applications including open channel billing applications.

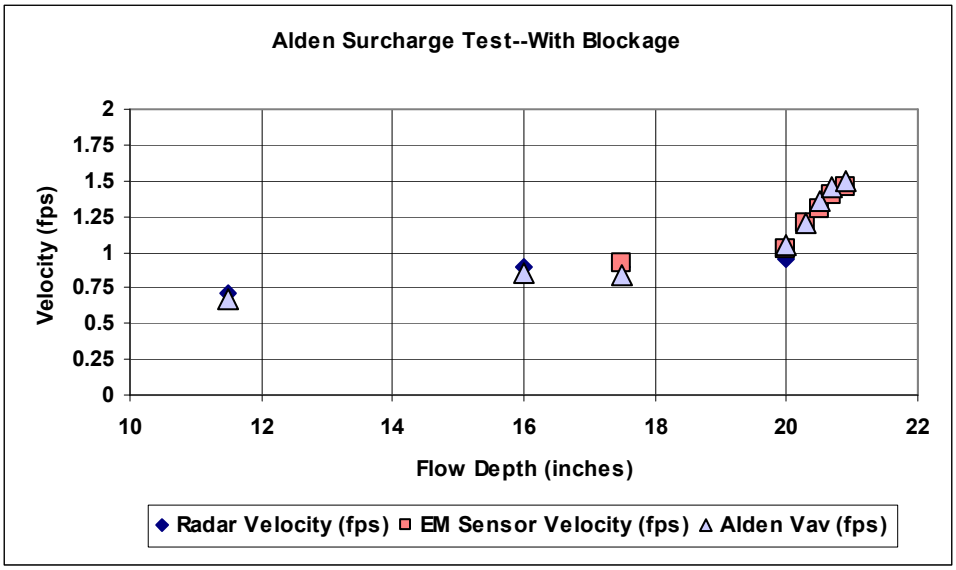


Figure 7 depicts the result of a surcharge test at a lower flow rate. In this test, a round plate with multiple holes was placed at the outlet of the test pipe so as to achieve submerged flow at a lower velocity. Note the consistency of both the Radar velocity data and the EM velocity data as compared to the Alden standard.

Additional tests performed at Alden in 2003 on a 36" pipe again validated Flo-Dar's accuracy under open channel and surcharge flow.

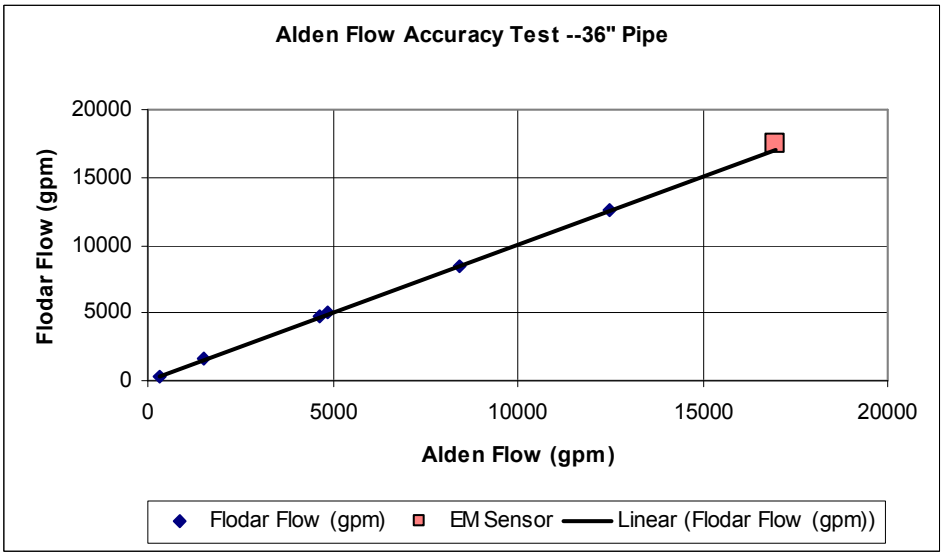


Figure 8 compares the Flo-Dar flow vs. the Alden Standard (weigh tank) for flow accuracy tests in a 36" pipe. These tests were performed on July 17, 2003. Note that at 17,000 gpm the sensor was under surcharge conditions. All of the data points were shown to be within 3.5% of the Alden Standard.

The Flo-Dar data logger records all four of the flow parameters - open channel surface velocity and depth, and surcharged velocity and depth. When the water depth is below the bottom of the Flo-Dar sensor, only the surface velocity and the flow depth of the open channel flow are used in the flow calculation.

Flo-Dar measures open channel velocity and depth by non-contact means virtually eliminating the need to periodically clean the sensors as required by all submerged type sensors.

Once the flow depth is such that both the surcharge depth sensor is activated and a conductivity switch is activated, then flow is calculated using the full pipe dimensions for area and the surcharge velocity sensor for velocity.

Conclusions

Flo-Dar is a rugged, general purpose flow meter for use in most open channels such as sanitary sewers, storm water sewers and other man-made channels such as aqueducts as well as certain natural channels such as small streams. Flo-Dar measures open channel velocity and depth by non-contact means virtually eliminating the need to periodically clean the sensors as required by all submerged type sensors. Data recovery from Flo-Dar deployments ranges between 98% to 100% even under site conditions that render most submerged sensors inoperable.

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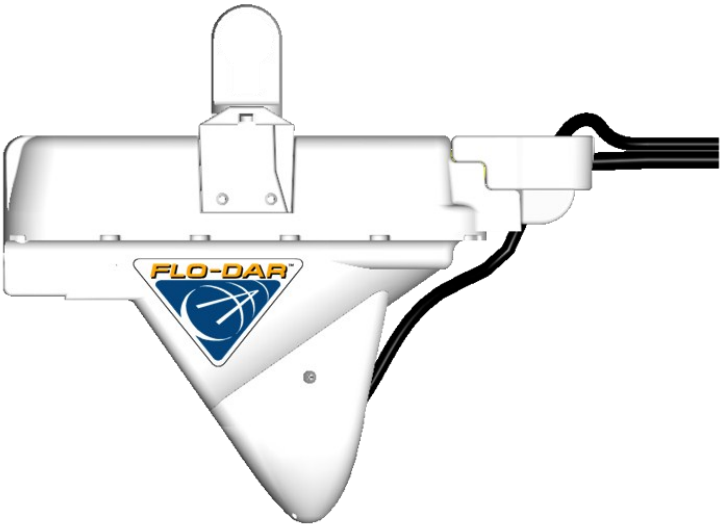
The accuracy of Flo-Dar under both open channel conditions as well as surcharge (submerged) conditions is more than adequate for the most demanding of metering applications including open channel billing applications.

Note 1. The accuracy of open channel flow meters can be affected by adverse conditions present at any metering site. The accuracy specifications of most manufacturers are generally stated under ideal conditions.

Open Channel Flow Monitoring Study



Utility Systems Science & Software
601 N. Parkcenter Drive Suite 209
Santa Ana, CA 92705
714-564-3494

P/N 105006001

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1) Locate the following parts (See Figure 1):

1) Flo-Dar Sensor
2) Flo-Dar Logger
3) Flo-Dar Communication Cable
4) Flo-Ware Software CD
5) Sensor Mounting Frame
6) Jack-Bar Assembly
7) Extension Pipe, Tee Fitting, and Bushing
8) Clamp Set with qty. (8) ¼-20 Bolts
9) Desiccant Capsule
10) Laser-Alignment Tool
11) Installation & Operations Manual
12) Start-Up Guide (not pictured)

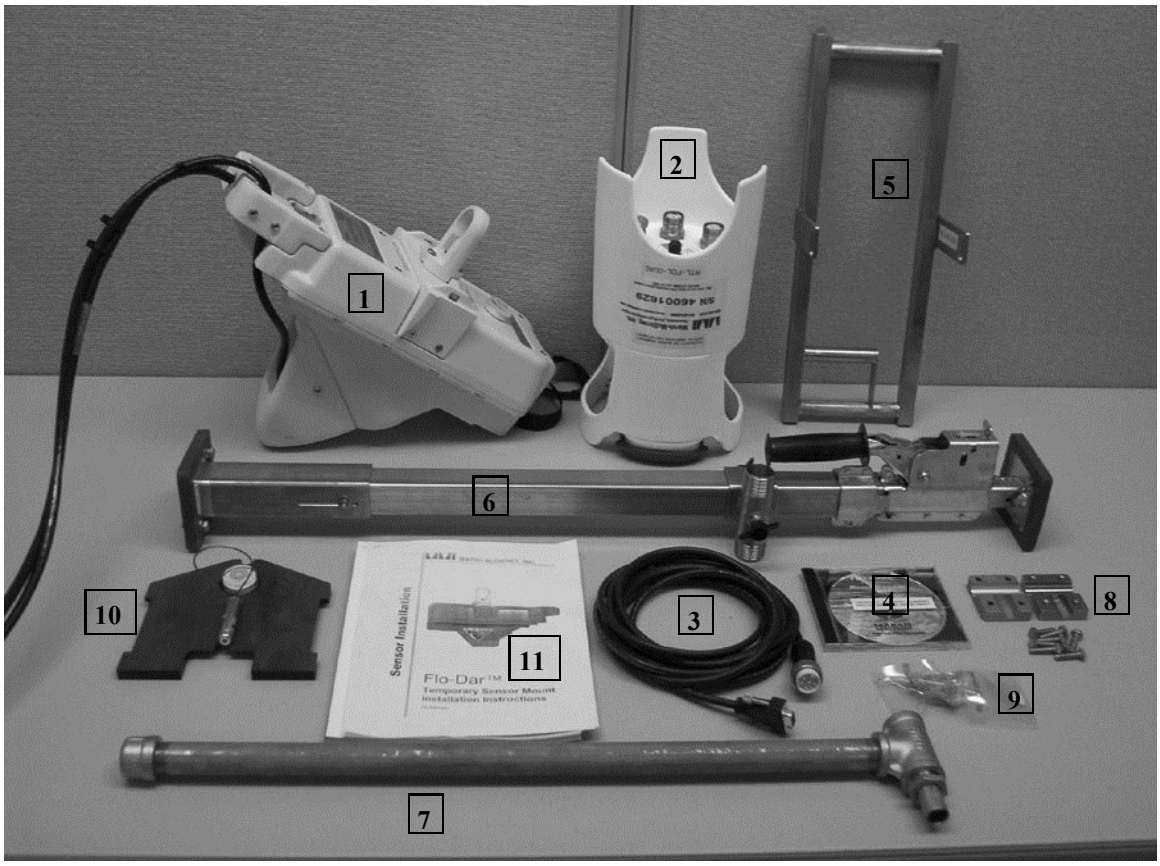


Figure 1

Methods & Procedures

2) Flo-Ware Software Configuration.

1. Insert the “Flo-Ware For Windows Resources CD” into your drive.
2. Select (single-click) “floware4.exe” from the “Software” box on your screen.
3. Select “Save” from the “File Download—Security Warning” screen.
4. Select “Save” from the “Save As” screen.
5. Select “Run” from the “Download Complete” screen.
6. Select “Run” from the “Internet Explorer—Security Warning” screen.
7. An installation wizard will initiate and load the files onto your hard drive.
8. Select the language you want to use from the “Select Language” screen.
9. Select “Next” from the “Welcome” screen.
10. Select “Next” from the “Choose Destination Location” screen.
11. Select “Next” from the “Select Components” screen.
12. Select “Next” from the “Start Installation” screen.
13. Select “Finish” from the “Installation Complete” screen.
14. Scroll down the screen and find “Flo-Dar / SVS” on the left side of the screen. Select (single-click) “flodar.exe” from that box on your screen
15. Select “Run” from the “File Download—Security Warning” screen.
16. Select “Run” from the “Internet Explorer—Security Warning” screen.
17. An installation wizard will initiate and install the files onto your hard drive.
18. Select “Finish” from the “Flo-Dar / SVS File Driver Installation” screen.

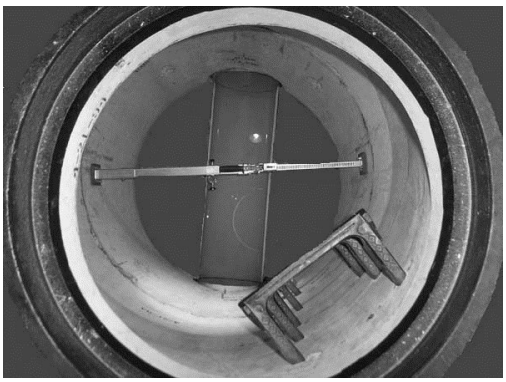
NOTE: There are ample help files on the “Flo-Ware for Windows Resources CD”

3) Set up the mounting frame and jack-bar assembly.

A) Install the jack-bar assembly in the manhole. As a general rule, the jack-bar should be approximately 20” to 24” above the crown (top) of the pipe. In order to reduce movement of the jack-bar due to the cantilever action of the sensor, the jack-bar should be located as parallel to the pipe and invert of the manhole as possible.

MOST Desirable Jack-Bar Mount

LEAST Desirable Jack-Bar Mount



B) Assemble the frame, clamp-set, bushing, tee, and extension as shown in figure 2. Position the frame as close as possible to the lip of the pipe by sliding the assembly along the jack-bar with the slide. Be sure to secure the set-screw.

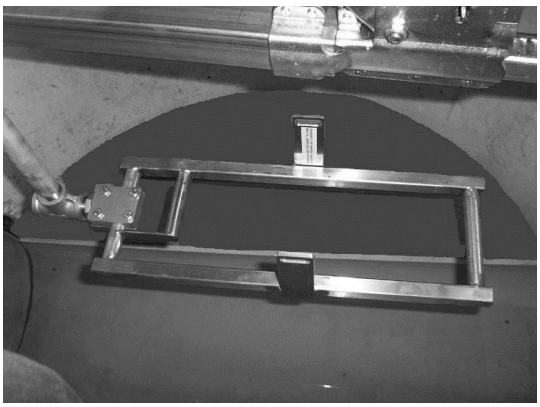


Figure 2

C) Set the elevation of the frame (measured to the top of the frame tubes) to be 6" above the inside crown of the pipe (for pipe I.D. under 25") or 5" above the inside crown of the pipe (for pipe I.D. of 25" and greater). An easy way to set the frame elevation is to measure the distance from the bottom of the manhole invert to the top of the mounting frame tubes. (This assumes that there is no drop or hydraulic jump from the lip of the pipe to the invert) Set the dimension to equal the pipe I.D. plus 6" (for pipe I.D. under 25") or the pipe I.D. plus 5" (for pipe I.D. of 25" or greater).

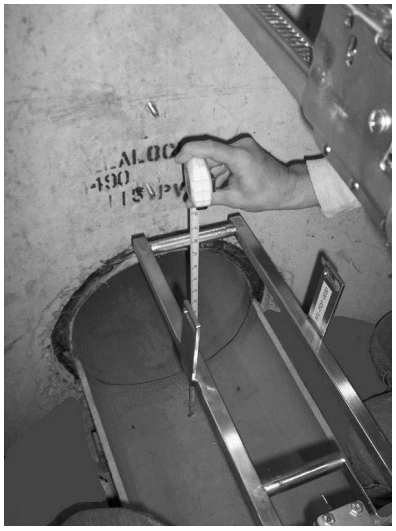


Figure 3

D) If you are not interested in measuring flow under surcharge conditions, or if you are sure the site will not surcharge, you can mount the sensor at any elevation above the surface of the water as long as the frame is within 60" of the water surface. When the sensor is mounted at higher elevations than those shown in Figure 3, it will still read normal velocity and level readings. Surcharge level will still be recorded properly, but surcharge velocity readings will not be possible. If you are mounting the sensor at higher elevations, it is still necessary to confirm the location of the velocity radar beam as described on pages 5 & 6 of this guide.

E) Align and level the frame by placing the laser alignment tool in the frame as shown in figure 4. Utilize the bubble-level on the tool to level the frame.

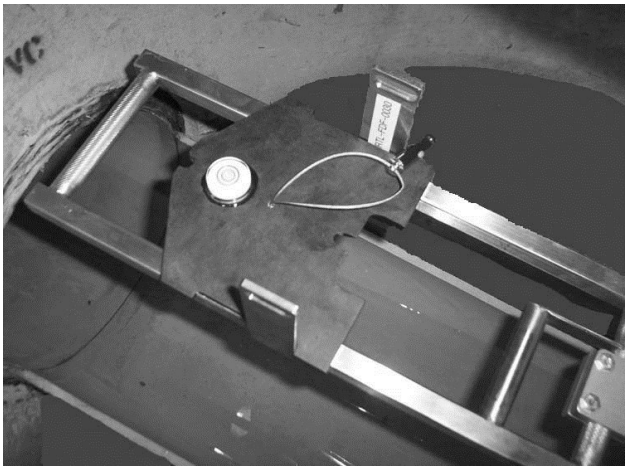


Figure 4

F) Snap the laser-pointer into the laser alignment tool as shown below in figure 5. It is a tight fit. Make sure the pointer is firmly and evenly seated in its slot as shown.

Figure 5

G) With the laser-pointer snapped into the tool, as shown, place the alignment tool back into the frame. The laser is now set up to duplicate the velocity radar beam angle. Use the laser-pointer to shine the beam onto the surface of the water. Ideally, the beam should be aligned so that it lands in the middle of the surface of the water inside the pipe.

NOTE: There are numerous adjustment points on the frame and jack-bar assembly.

H) Remove the laser-pointer from the tool and re-install it into the tool as shown below in figure 6. With the laser-pointer in the position shown, it is now set up to duplicate the ultra-sonic level transducer beam location.

I) Align the beam so that it lands in the middle of the channel you are measuring.

NOTE: You may have to check level, velocity laser alignment, and level laser alignment several times to ensure all three are correct. Adjusting one or more of the alignments will often affect one or more of the other adjustments! It is critical to remember to tighten all bolts on the jack-bar and clamp set to assure that the sensor frame does not move, once positioned correctly.

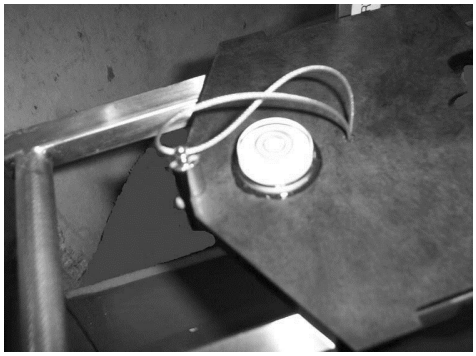


Figure 6

4) Install the Sensor.

A) Gently lower the sensor into the mounting frame and lock it in place by rotating the bail assembly (located on top of the sensor) 90 degrees. The two locking arms will extend out to engage the slots in the vertical side webs of the frame ensuring that the sensor will not dislodge from the frame, particularly if the manhole surcharges.

NOTE: Make sure the sensor is placed in the frame so that the cables are exiting the sensor on the downstream (manhole effluent) side. (see Figure 7 below)

5) Connect the Data Logger.

A) Connect the sensor cables to the data logger. Make sure the grey cable-end connects to the connector marked grey. Connect the yellow cable-end to the connector marked yellow. Tighten the threaded cable connector-ends securely to the data logger connectors.

B) Remove the desiccant capsule from the vacuum-sealed bag and plug it onto the brass A.P.R. fitting (located next to the yellow cable connector) on the data logger. See Figure 8 below.

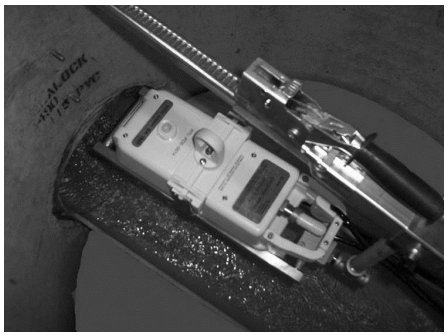


Figure 7

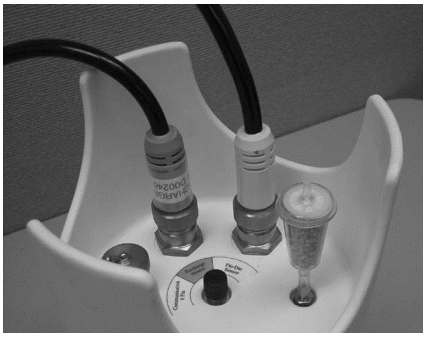


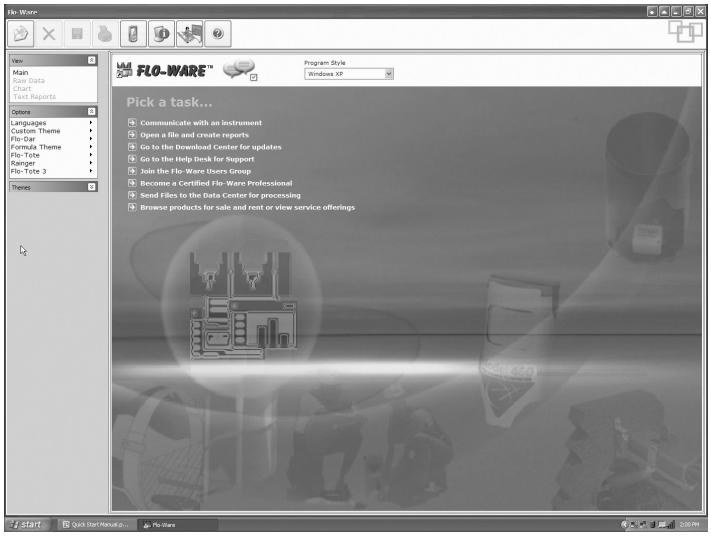
Figure 8

6) Configure the Data Logger using Flo-Ware Software.

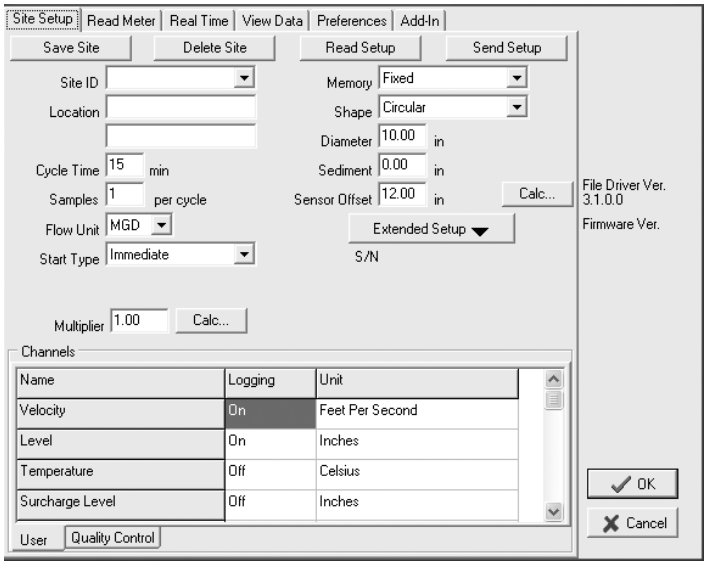
A) Connect the interface cable from the data logger to the laptop's 9-pin serial port.

NOTE: If your laptop does not have a 9-pin serial port, you will have to use a USB port with a USB-to-serial port adapter (not provided by Marsh-McBirney).

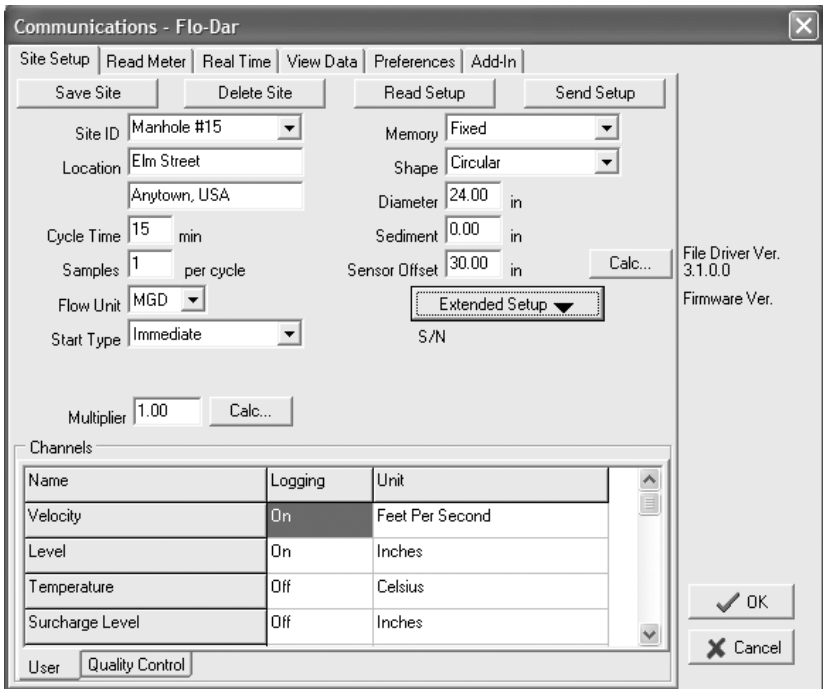
B) Double-click the "Flo-Ware" icon on your computer's desktop.
C) When Flo-Ware opens, you will see the screen shown below.



D) Place your cursor on the line that says "Communicate with an instrument" and single-click. A small pop-up window will open. Place your cursor over the "Flo-Dar" line and single-click. A second pop-up window will appear. Single-click on the word "communications". The site set-up screen will appear as shown below.

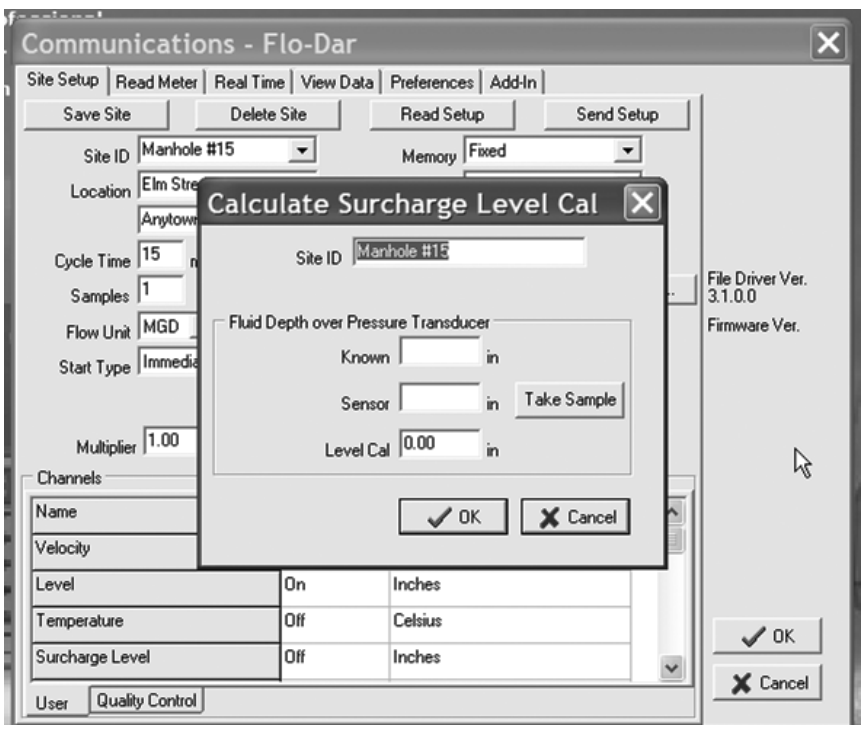


E) Proceed to enter your specific site information into the appropriate boxes in the site set-up screen. An example of a typical set-up is shown below, along with explanations-actions of the input required from the user.



- Site I.D. and Location are self-explanatory. You MUST enter something in the site I.D. box in order for the program to work.
- Cycle time is the time interval between the start of each sample.
- Number of samples is the number of 1-minute samples that the instrument will take at the beginning of each cycle.
- Flow Units can be selected by using the pull-down arrow to view the available choices.
- Start Type is either immediate or delayed. If you choose a delayed start, you can use the pull -down arrow to reveal a calendar box and time box. You can use the pull down arrow on the calendar box to view convenient calendars which allow you to click on the date you desire. When using a delayed start, the instrument will "sleep" until the desired start-up date and time are reached. It will then "wake up" and start sampling.
- Multiplier should be left at 1.00 for most applications in round pipes. If you have a round pipe greater than 54" in diameter, or you are using the instrument in a square/rectangular channel, or an odd-shaped channel, contact the Customer Support Department at 714-542-1004 for instructions about the multiplier.
- Memory can be either "Fixed" or "Wrapped". If you choose "Fixed", the instrument will stop collecting data once the memory is full. In 'Wrapped" mode, when the memory becomes full, the instrument will continue collecting data and will over-write the first data point, then the second, etc., with new data. This will continue indefinitely until a new set-up is downloaded to the instrument.

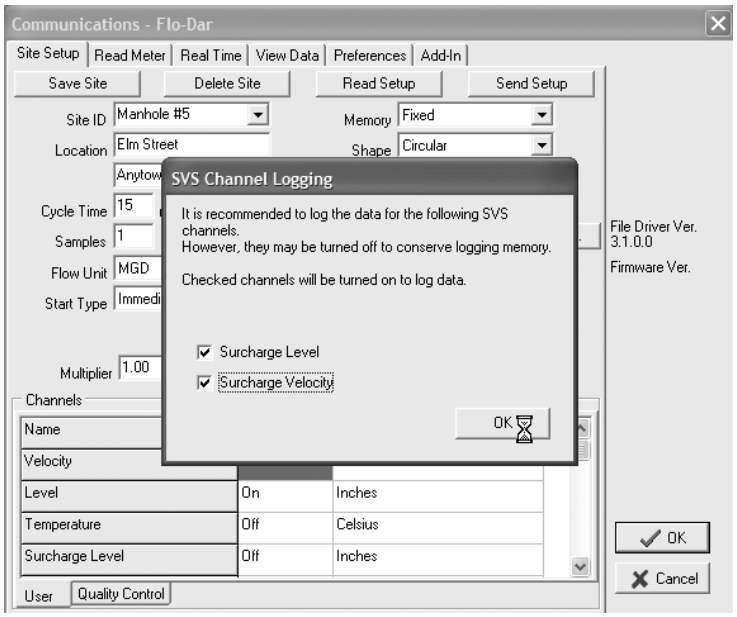
- Shape is self-explanatory. If you are measuring flow in an odd-shaped conduit, please call the US3 at 714-542-1004 for detailed instructions.
- Diameter is the INSIDE diameter of the pipe. This dimension should be measured in the field. Often, the pipe diameter is not what one assumes from the specs on a given pipe. Always measure the inside diameter to be sure of the dimension.
- Sediment is the amount of non-flowing sediment that may be in the bottom of the pipe. The software will take sediment into account when calculating cross-sectional area for the flow calculation. If there is no sediment, leave the number at 0.00.
- Sensor offset is the dimension from the top surface of the horizontal sensor mounting frame tubing, to the bottom of the invert or cannel. (see Figure 3, page 4) If you want to measure flow in a surcharge condition, or if you want to set the instrument up to measure flow in case the manhole surcharges, then the mounting frame should be located so that the sensor offset dimension is equal to the pipe diameter plus 6 inches for pipe diameters up to 24", or equal to the pipe diameter plus 5 inches for pipe diameters greater than 24".
- Single-click on the "Extended Setup" button.
- Single-click on "Surcharge Level Cal"
- A window marked "Calculate Surcharge Level Cal will appear as shown below.



- Type 0.00 in the box marked "known".
- Single-click on the "Take Sample" box.
- Allow the unit to perform a real time sample of the surcharge pressure transducer. This will take approx. 45 seconds. The software will fill in the box marked "Sensor" and the box marked "Level Cal" with the proper values automatically.

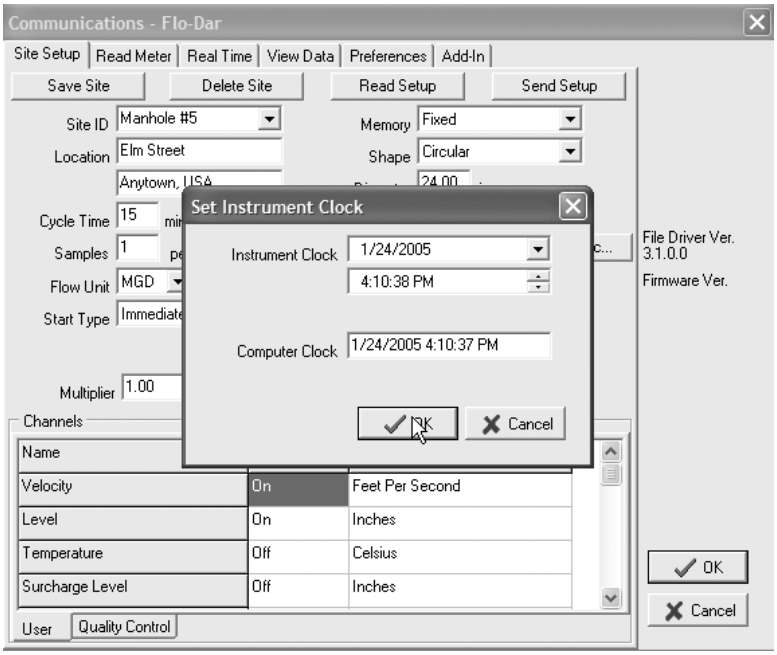
7)Save the site information to your hard drive by clicking on the "Save Site" button near the upper left-hand corner of the set-up screen.

8) Download the site information to the data logger by clicking on the "Send Setup" button near the upper right-hand corner of the site set-up screen.

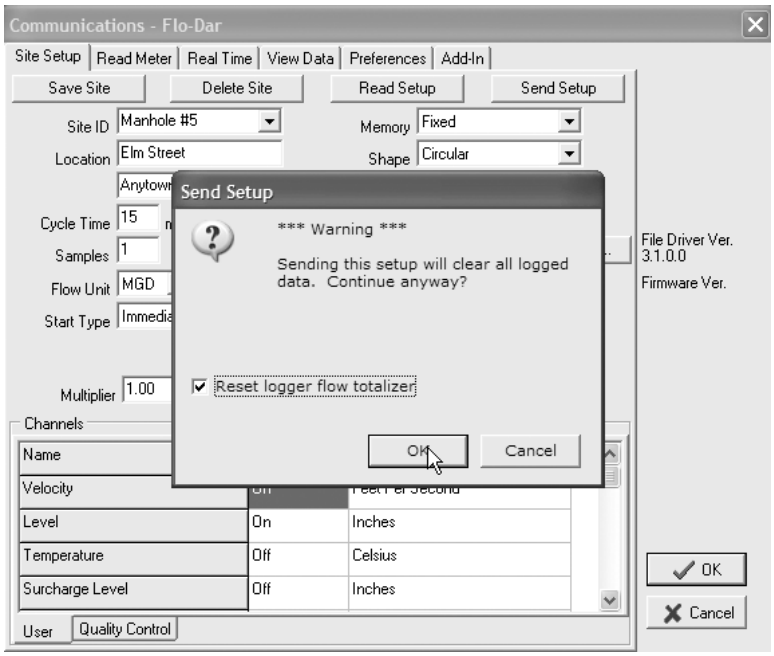


9) Turn on (check the boxes) both of the SVS channels as shown above.

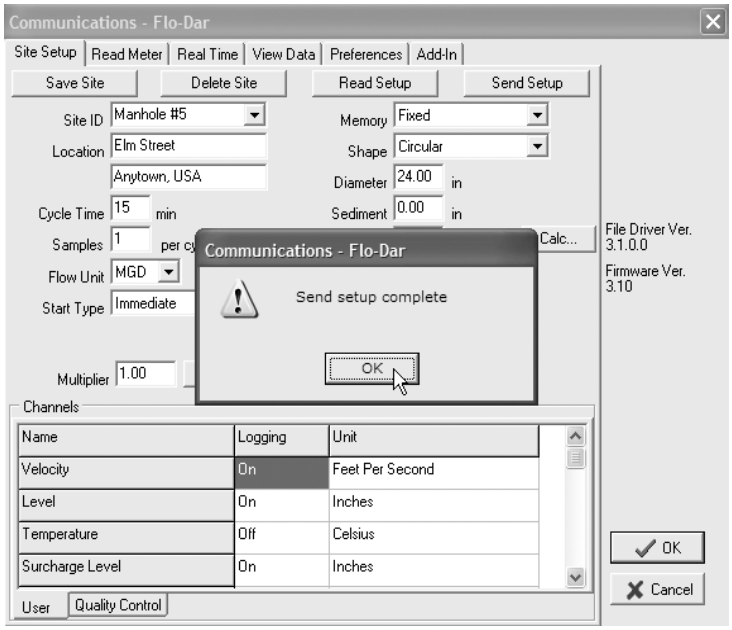
10) Adjust the instrument clock to match your laptop computer clock as shown below. Use the pull-downs next to the date and time to help you set the instrument clock time. Click OK.



11) A warning screen will appear as shown below. Select whether or not you want to reset the logger flow totalizer, then click OK.

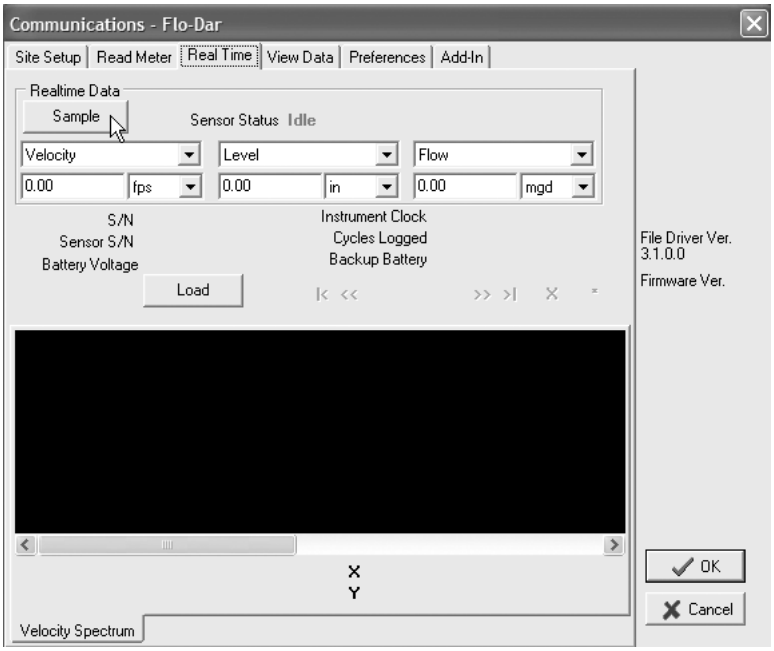


12) The "Send setup complete" screen (shown below) will appear, indicating that you have successfully sent the setup data to the instrument. The instrument will now begin collecting data.

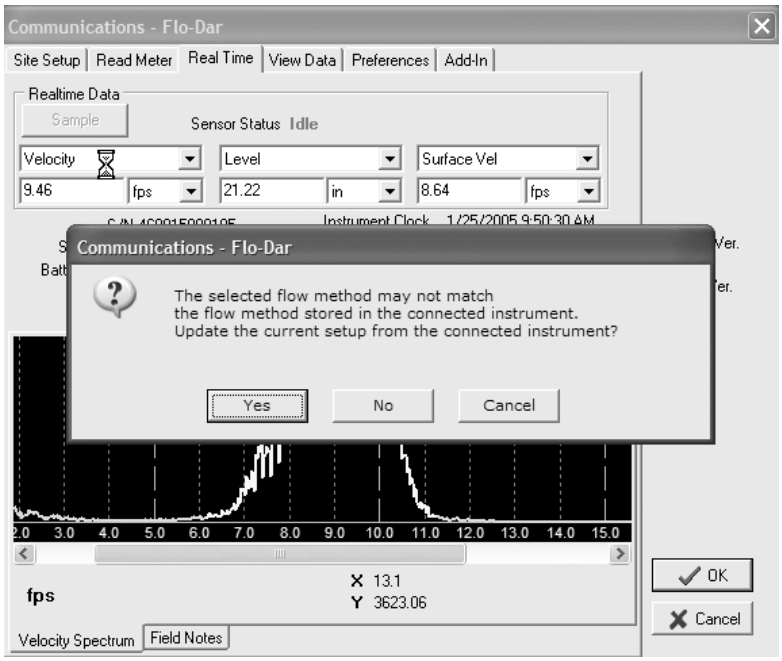


13) Collect real-time readings to confirm proper operation of the instrument before leaving the metering site.

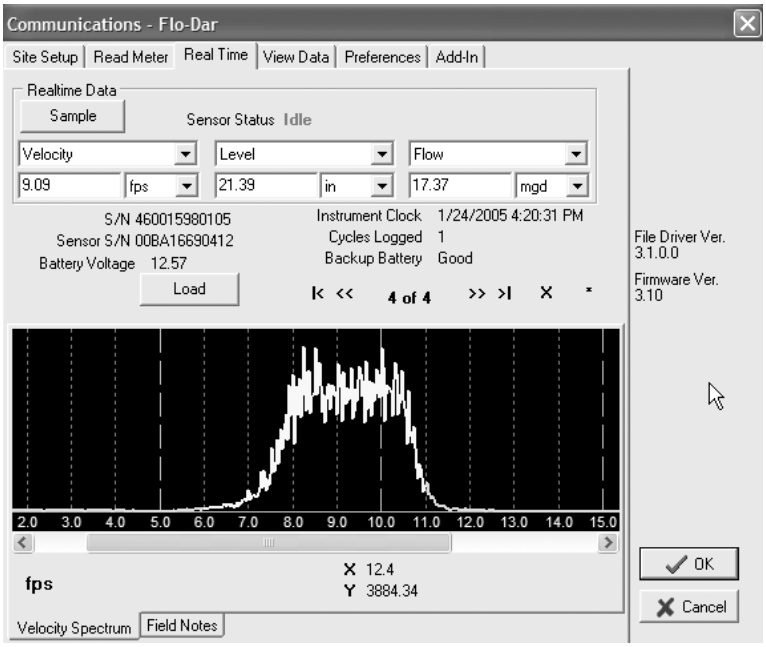
A) Single-click on the "Real Time" tab on the Communications Screen. The real time screen will appear as shown below.



B) Single-click on the "Sample" button. You may or may not see the following pop up window appear.



C) Single-click the "Sample" button. It will take about 45 to 60 seconds for the meter to sample velocity, level, and send the data packet to the data logger. It will then display the real time sample on the screen (see below).



D) Confirm the level reading on the screen matches the actual water level in the pipe. Confirm that the velocity reading on the screen matches the velocity you approximate in the pipe.

14) Close the real time window and Flo-Ware main screen.

15) Disconnect the communications cable from your laptop to the data logger.

16) Screw the protective metal cap onto the communications port connector. in order to protect the connector from damage due to water or dirt.

17) Coil the sensor cables and secure them to the top ladder rung. Hang the data logger from the top ladder rung. (See Figure 9 next page.)

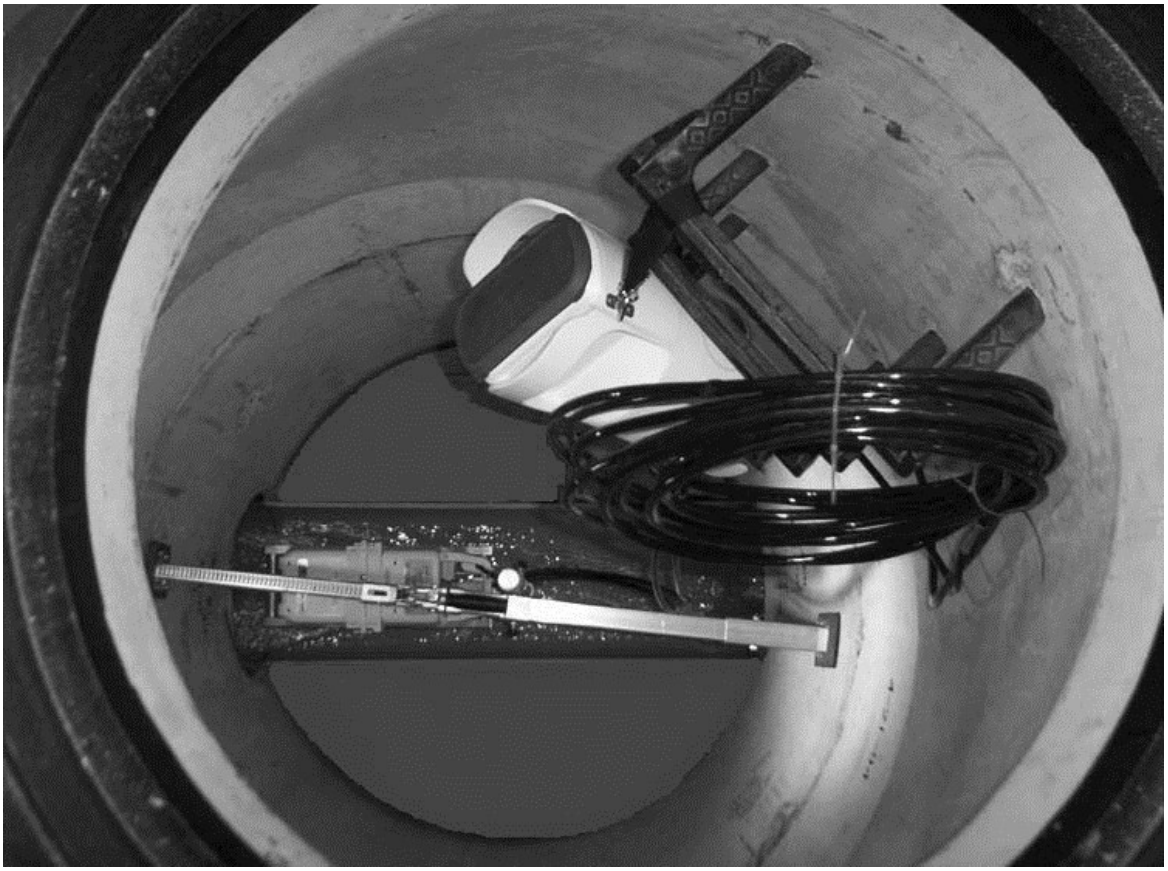


Figure 9

You have successfully installed the Flo-Dar Flowmeter. Please remember to secure the manhole lid prior to leaving the site.

If you have any questions regarding this flowmeter, please contact US3. Please note that telephone support is available Monday through Friday between 9:00 AM and 5:00 PM U.S. Pacific Standard Time.

Marsh-McBirney FLO-DAR® Area/Velocity Radar Flow Meter Sensor

The Flo-Dar Sensor provides an ideal solution for non-contact, maintenance-free portable or permanent sewer flow monitoring.

Features and Benefits

The Flo-Dar Area/Velocity Radar Flow Meter provides a revolutionary approach to open channel flow monitoring. The sensor combines advanced Digital Doppler Radar velocity sensing technology with ultrasonic pulse echo depth sensing to remotely measure open channel flow. Use with FL900 Series Flow Logger or Flo-Logger/Logger XT for portable monitoring; for permanent monitoring sites, the Flo-Dar can be connected to the Flo-Station which displays flow rate, velocity, and level. (See Lit. No. 2709 [standard] or Lit. No. 2711 [wireless] for Flow Logger product information, or Lit. No. 2616 for Flo-Station product information). Intrinsically safe models available.

Accurate Flow Measurement

Flo-Dar provides the user with highly accurate flow measurements under a wide range of flows and site conditions. By measuring the velocity of the fluid from above, Flo-Dar eliminates accuracy problems inherent with submerged sensors including sensor disturbances, high solids content and distribution of reflectors.

Non-Contact Sensor Eliminates Lost Data

No lost data with non-contact, above the flow sensor that is unaffected by fouling due to debris and grease.

Easy Installation and Maintenance

As the sensor is mounted above the flow, personnel have little or no contact with the flow during installation. Future sensor removal can be done without the need for confined space entry.

Independent Accuracy / Long-Term Stability Verification

Flo-Dar sensor accuracy and long-term stability (up to 3 years without need for site calibration) from low flow depths up to surcharge conditions has been independently verified many times over the years including a formal evaluation by the Alden Research Laboratory, Inc. and recent field evaluations done by municipalities and consulting engineering firms.

Perfect Solution for Difficult Flow Conditions

Operates in the most difficult conditions including flows with high solids content, high temperature, shallow and caustic flows, large man-made channels, and high velocities up to 20 ft/s.

Optional Surcharge Velocity Sensor

During surcharge events Flo-Dar's optional electromagnetic sensor will continue to provide uninterrupted and accurate flow monitoring through dry and wet weather flows without the need for routine sensor cleaning or maintenance.

Applications

Municipal

- *Sanitary Sewer Evaluation Studies*
- *Collection Systems*
- *Capacity Studies*
- *Combined Sewer Overflows*
- *Inflow and Infiltration (I&I) Studies*
- *Billing / Custody Transfer*
- *Plant Influent and Effluent*

Industrial

- *Process Waste*
- *Plant Influent*
- *Plant Effluent*
- *Non-contact Cooling Water*
- *Stormwater Monitoring and Compliance*

Specifications*

FLO-DAR SENSOR

Enclosure
IP68 Waterproof rating, Polystyrene

Dimensions
160.5 W x 432.2 L x 297 D mm (6.32 x 16.66 x 11.7 in.), with SVS, D = 387 mm (15.2 in.)

Weight
4.8 kg (10.5 lbs.)

Operating Temperature
-10 to 50°C (14 to 122°F)

Storage Temperature
-40 to 60°C (-40 to 140°F)

Power Requirements
Suppied by FL900 Flow Logger, Flo-Logger, or Flo-Station

Interconnecting Cable
–Disconnectable at both sensor and logger or Flo-Station
Polyurethane, 0.400 (±0.015) in. diameter; IP68
Standard length 9M (30 ft), maximum 305 m (1000 ft)

Cables are available in two styles:
–connectors both ends
–connector from sensor with open leads to desiccant hub, desiccant hub with connector to logger. A potting/sealant kit will be included. This can be used to run the cable through conduit.

Important Note: The sensor cable assembly with desiccant hub is compatible with either the Marsh-McBirney Flo-Logger/Logger XT or the Hach FL900 Series Flow Loggers. When using this cable assembly with the Marsh-McBirney Flo-Logger, do not disconnect the desiccant cartridge that is attached to the Flo-Logger itself. It is important to keep the air tube plugged.

If using Flo-Dar cable with Flo-Station, the cable will have bare leads to the Flo-Station (30 to 1000 ft. lengths) and there will be no desiccant hub, as the air tube terminates inside of the Flo-Station housing.

Warranty
1 year

Set-up/Data Retrieval
Flo-Ware for Windows software is the user on-site set-up, data management, and report generation software. It is compatible with desktop/laptop computers utilizing Windows operating system.

Certification
The Flo-Dar Transmitter is certified to the following requirements:
- Transmitter type: Field Disturbance Sensor
- Frequency: 24.125 GHz - Doppler pulse
- Maximum rated power output: 128 dbuV (ave) @ 3 meters

Certified to: FCC Part 15.245: FCC ID: VIC-FLODAR24
Industry Canada Spec. RSS210. v7: IC No.: 6149A-FLODAR24

Use of this device is subject to the following conditions:
1. There are no used serviceable items inside this device.
2. The user must install this device in accordance with the supplied installation instructions and must not modify the device in any manner whatsoever.
3. Any service involving the transmitter must only be performed by Hach Company.
4. The user must ensure that no one is within 20 cm of the face of the transmitter when operating.

SURCHARGE DEPTH MEASUREMENT

Auto zero function maintains zero error below 0.5 cm (0.2 in.)

Method
Piezo-resistive pressure transducer with stainless steel diaphragm

Range
3.5 m (138 in.), overpressure rating 2.5 x full scale

VELOCITY MEASUREMENT

Method
Radar

Range
0.23 to 6.10 m/s (0.75 to 20 ft/s)

Frequency Range
24.075 to 24.175 G-Hz, 15.2mW (max.)

Accuracy
±0.5%; ±0.03 m/s (±0.1 ft/s)

DEPTH MEASUREMENT

Method
Ultrasonic

Standard Operating Range from Flo-Dar Housing to Liquid
0 to 152.4 cm (0 to 60 in.)

Optional Extended Level Operating Range from Transducer Face to Liquid
0 to 6.1 m (0 to 20 ft.) with 43.18 cm (17 in.) dead band, temperature compensated.

Accuracy
±1%; ±0.25 cm (±0.1 in.)

FLOW MEASUREMENT

Method
Based on Continuity Equation

Accuracy
±5% of reading typical where flow is in a channel with uniform flow conditions and is not surcharged, ±1% full scale max.

SURCHARGE CONDITIONS DEPTH/VELOCITY

DEPTH (Std with Flo-Dar Sensor)
Surcharge depth supplied by Flo-Dar sensor.

VELOCITY (Optional Surcharge Velocity Sensor)

Method
Electromagnetic

Range
±4.8 m/s (±16 ft/s)

Accuracy
±0.15 ft/s or 4% of reading, whichever is greater.

Zero Stability
> ±0.05 ft/s

CERTIFICATION INTRINSICALLY SAFE

The Flo-Dar and Surcharge Velocity Sensors are certified to Class I, Zone 1 Standards. They conform to ANSI/UL 60079-11 and are certified to CAN/CSA E60079-11 and EN 60079-11 standards.

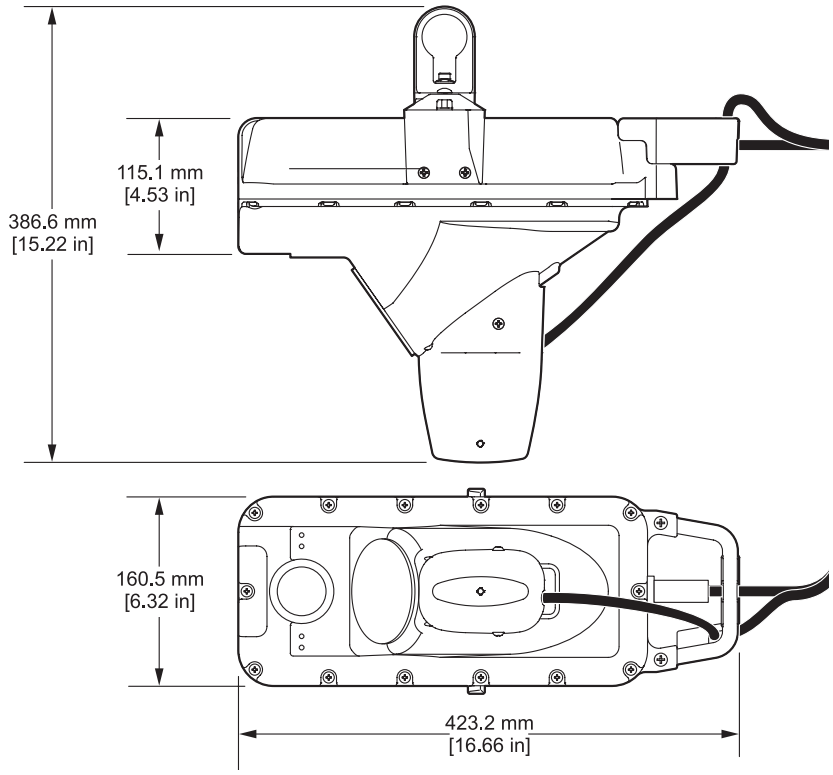
CE The Flo-Dar sensor meets CE requirements.

**Specifications subject to change without notice.*

Engineering Specifications

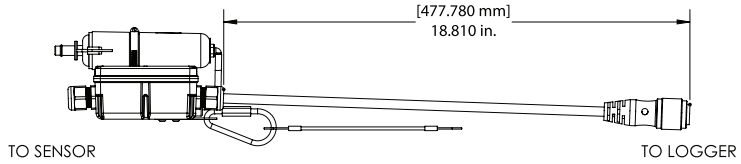
1. The flow meter shall be capable of measuring level, average velocity and surcharge depth.
2. The method of velocity measurement shall be Doppler radar.
3. The sensor shall combine advanced Doppler Radar velocity sensing technology with ultrasonic pulse echo depth sensing to remotely measure open channel flow.
4. Flow shall be calculated based on the Continuity Equation (Q=V x A), where Q=Flow, V=Average Velocity and A=Area.
5. The range of velocity measurement shall be 0.23 to 6.10 m/s (0.75 to 20 ft/s).
6. The method of depth measurement shall be ultrasonic.
7. The standard operating range for depth measurement shall be 0 to 152.4 cm (0 to 60 in.) with an optional operating range of 0 to 6.1 m (0 to 20 ft.) with 43.18 cm (17 in.) deadband, temperature compensated.
8. The flow meter shall have a surcharge condition velocity sensor option.
9. Exterior dimensions of the sensor shall not exceed 160.5 W x 432.2 L x 297 D mm (6.32 W x 16.66 L x 11.7 D in.) or 160.5 W x 432.2 L x 387 D mm (6.32 W x 16.66 L x 15.2 D in.) with Surcharge Velocity option.
10. The sensor shall be able to measure bi-directional surcharge flow.
11. Optional Intrinsically Safe models available for flow monitoring in hazardous locations.
12. The model shall be the Marsh-McBirney Flo-Dar Open Channel Flow Meter Sensor.

Dimensions

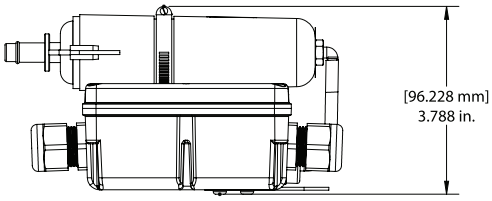


Flo-Dar Area/Velocity Radar Flow Meter

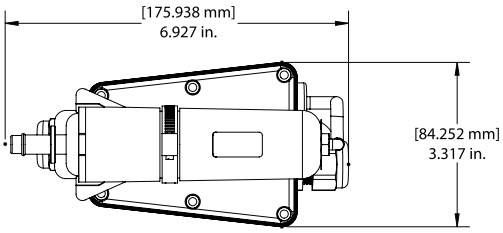
The desiccant hub assembly includes a junction box to connect sensor cable to the desiccant and subsequently to the FL900 Logger. The desiccant can easily be replaced without need to purchase a separate desiccant module.



Side View



Top View



Desiccant Hub Assemblies for use with portable FL900 Series Loggers and Flo-Logger.
(Sensor cable for use with Flo-Station will not contain a desiccant hub and will have bare wires on cable end.)

Ordering Information

Configure FLO-DAR Sensor to Logger (Portable)

Flo-Dar Sensor	Model 4000	–	4	X	X
Flo-Dar Sensor with specified cable length (need to add cable as separate line item)			4		
Non Intrinsically Safe				0	
Surcharge Velocity Sensor Option (IMPORTANT NOTE: SVS cable length MUST MATCH FloDar Sensor Cable length)				3	
Non Extended Range					0
Extended Range Option–Allows use in flow depths up to 18 feet. Allow for 18" deadband. Standard unit max depth is 60". SVS Option requires Remote Extended Range below.					1
Remote Extended Range Option with 6' sensor cable–Flow depths up to 18 feet. Allow for 18" deadband. Standard unit max depth is 60".					2

Configure FLO-DAR Sensor to Flo-Station (Permanent)

Flo-Dar Sensor	Model 4000	–	9	X	X
Flo-Dar Sensor with specified cable length (need to add cable as separate line item)			9		
Non Intrinsically Safe				0	
Surcharge Velocity Sensor Option (IMPORTANT NOTE: SVS cable length MUST MATCH Flo-Dar Sensor Cable length)				3	
Non Extended Range					0
Extended Range Option–Allows use in flow depths up to 18 feet. Allow for 18" deadband. Standard unit max depth is 60". SVS Option requires Remote Extended Range below.					1
Remote Extended Range Option with 6' sensor cable–Flow depths up to 18 feet. Allow for 18" deadband. Standard unit max depth is 60".					2

Cables

FD9000CBL-XXX* FL900 Series Logger to Flo-Dar sensor. Cable w/two connectors.

FDJCTBOXCBL-XXX* FL900 Series Logger to Flo-Dar sensor. Cable with connector to sensor, open end to desiccant hub, desiccant hub with connector to sensor. Includes finishing kit for potting/sealing desiccant hub. For use with conduit.

6000062XX* SVS Sensor with connector for use with FL900 Series Logger.

570011800-XXX* Model 4000-9 Flo-Station to Flo-Dar sensor Cable with one connector and bare leads.

6000059XX* SVS Sensor with bare leads for use with Flo-Station.

**Contact customer service for product numbers.*

Available Cable Lengths (in feet)

30	125	225	400	700
60	150	250	450	800
75	175	300	500	900
100	200	350	600	1000

See Lit. No. 2709 (standard models) and Lit. No. 2711 (wireless models) for FL900 Series Flow Logger ordering information. See Lit. No. 2616 for Flo-Station ordering information.

Mounting Hardware

800016701 Permanent Sensor Mount-Includes sensor frame & all mounting hardware. Portable Sensor Mounts Available (Sizes 34-107") Contact Sales.

Accessories & Spares

245000501 Sensor Retrieval Pole - Used to place and retrieve sensor from mounting bracket. Pole extends to 7.3 m (21 ft.)

510012701 Sensor Retrieval Hook - Used with Sensor Retrieval Pole

570011401 Grounding Strap (required with Retrieval Pole and Hook when used with IS units

8755500 Bulk desiccant beads (1.5 pounds)

Lit. No. 2708 Rev 2
K11 Printed in U.S.A.
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At Hach, it's about learning from our customers and providing the right answers. It's more than ensuring the quality of water—it's about ensuring the quality of life. When it comes to the things that touch our lives...

Keep it pure.

Make it simple.

Be right.

For current price information, technical support, and ordering assistance, contact the Hach office or distributor serving your area.

In the United States and all other countries except Europe, contact:

HACH COMPANY
4539 Metropolitan Court
Frederick, MD 21704-9452, U.S.A.
Telephone: 800-368-2723
Fax: 301-874-8459
E-mail: hachflowsales@hach.com
www.hachflow.com

In Europe contact:

Flow-Tronic
Rue J.H. Cool 19a
B-4840 Welkenraedt Belgium
Telephone: +32-87-899799
Fax: +32-87-899790
E-mail: site@flow-tronic.com
www.flow-tronic.com

HACH®

Be Right™

Hach FL900 Series Cellular Wireless Flow Logger

NEW!

When combined with the Flo-Dar or Flo-Tote 3 sensor, the Hach FL900 Series Wireless Flow Logger takes flow monitoring to a whole new level. With features that reduce site time and increase crew safety, the wireless flow monitoring system allows you to easily manage your flow data 24/7, as well as your budget.

Features and Benefits

The FL900 Wireless Flow Logger provides users with a reliable, budget saving open channel wireless flow monitoring solution for open portable flow monitoring applications. Flow data is accessible 24/7 with Hach FSDATA web-based software. When combined with the Flo-Dar or Flo-Tote 3 sensor, the system will drastically reduce site time and increase safety for monitoring crews.

Increase Monitoring Crew Safety

With the time saving features designed into the FL900 Wireless Flow Loggers, crews spend less time in the manhole and less time on site to decrease monitoring costs while increasing the safety of flow monitoring crews.

Plug and Play Sensor Ports

The FL900 Series Flow Logger is available with 1, 2 or 4 sensor ports. The sensor ports are “plug and play”; the logger auto-detects the type of sensor connected (Flo-Dar, Surcharge Velocity Sensor or Flo-Tote 3) to allow customers maximum flexibility for their Hach flow sensor inventories.

Flow Monitoring Data at Your Fingertips with FSDATA™ Web-Based Software

Hach FSDATA web-based flow meter software is the ideal time-saving and economical solution for the management of your Hach wireless flow meters and data 24/7. With FSDATA routine site visits to collect flow data are eliminated keeping flow monitoring crews safe. (See Lit. No. 2707 for additional information on FSDATA.)

Easy Installation/Versatile Mounting Options

The logger can be quickly attached to a wall, pole or manhole ladder in minutes. Users can choose to hang logger from standard carabiner or optional 4-bolt wall mount for pole, horizontal or vertical wall mount or ladder rung mount.

LED Gives Quick Confirmation of Logger Status

Get peace of mind the logger is ready to capture the next flow event, before you leave the site. The rugged FL900 Wireless Flow Logger includes a status LED panel. The indicator light on the top of the logger shows the status of the instrument and modem (if equipped with wireless option). The user can manually send a call to the server to make sure the network connection is good by simply swiping the magnet over the call initiation target.

Specifications*

FL900 SERIES FLOW LOGGER PORTABLE DC POWERED ELECTRONICS (Includes Models FL901, FL902 & FL904)

Dimensions (W x D x H)
25.4 x 22 x 40 cm (10.0 x 8.7 x 16.0 in.)

Enclosure
PC/ABS structural foam

Environmental Rating
NEMA 6P (IP68)

Weight (Using Model FL900)
4.5 kg (10 lb)—no batteries; 6.3 kg (14 lb)—2 batteries; 8.2 kg (18 lb)—4 batteries

Operating Temperature
–18 to 60ºC (0 to 140ºF) at 95% RH

Storage Temperature
–40 to 60ºC (–40 to 140ºF)

Power Requirements
8 to18 Vdc from batteries or external power source, 2.5W max.

Battery Life at 15 minute logging intervals (at room temperature)
185 days with 4 lantern batteries and a Flo-Dar sensor, 306 days with 4 lantern batteries and a Flo-Tote sensor

The optional long life alkaline battery pack can be used to extend battery life, if the Flow Logger is ordered with the external power option connector.

LED Status Indicator
– Green Flashes every 3 seconds during normal operation. Flashes every 15 seconds during sleep mode.

– Red Flashes when an attached sensor does not agree with the logger program, when an expected sensor is not found or the sensor is not working properly.

LED Modem Indicator
– Stays green during a call to the server. Goes blank after the call is successfully completed and terminated.

– Flashes red if the call to the server failed.

Sensor Ports
1, 2 or 4 ports

Connectors
Stainless steel connectors

Datalog Channels
16 maximum

Alarms
Maximum of 16 channel alarms including high/high, high, low, low/low and system alarms including low battery, low RTC battery, low slate memory, slate memory full.

Alarm Actions
Trigger sampler, change logging interval, change call interval, send an e-mail, or send text message (SMS).

Logging Intervals
1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 or 60 minutes
Primary and secondary intervals for dynamic logging.

Data Storage
Event Log: 1,000 events maximum in non-volatile flash memory
Sample History: 2,000 sample events maximum in non-volatile flash memory
Datalog: 325,000 data points; 1128 days for 3 channels at 15-minute log intervals

Local Communication
USB
RS232 (Baud rates: 9600, 19200, 38400, 57600, 115200)

Remote Communication (optional)
Wireless modem; CDMA or GPRS technology with a mobile provider, CDMA2000 1xRTT or GPRS.

Protocols
Modbus RTU; Modbus ASCII; Mobile-Terminated SMS; Mobile-Originated SMS; TCP/IP

Timebase Accuracy
±0.002%, synchronized every 24 hours with server software and modem

Supported Sensors
Flo-Tote 3, Flo-Dar, Flo-Dar with SVS, Rain Gauge

Sampler Interface
Compatible with Sigma 900 Standard, Sigma 900 Max, Hach SD900 to support set-point sampling,flow- pacing, and logging sample history.

Desktop Software
Flo-Ware for Windows software is required for programming the logger, data management, and report generation software. It is compatible with desktop/lap top computers utilizing Windows operating system. Minimum resolution needed is 1024x768.

Internet Application Software
FSDATA web-based software for flow meter data management and report generation for wireless flow meters and data access 24/7.

Certifications
Logger: CE; optional AC power supply: UL/CSA/CE

Warranty
1 year

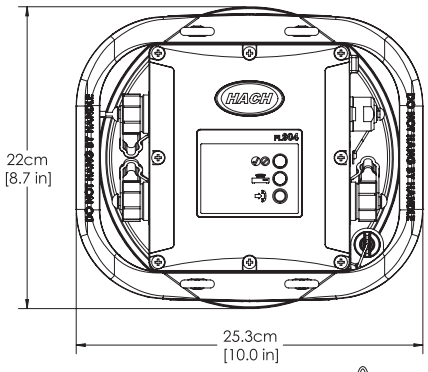
CE The FL900 Series Loggers meet CE requirements.

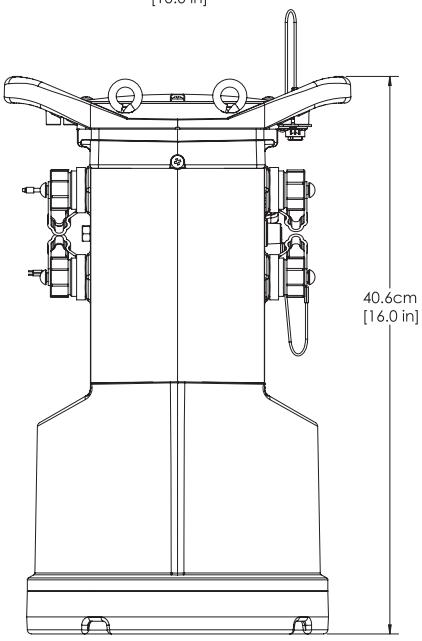
**Specifications subject to change without notice.*

Engineering Specifications

1. Exterior dimensions of the Flow Logger shall be 25.4 W x 22 D x 40 cm H (10.0 W x 8.7 D x 16.0 in. H)
2. The Flow Logger enclosure material shall be PC/ABS structural foam with NEMA 6P (IP68) rating.
3. The operating temperature for the Flow Logger shall be –18 to 60ºC (0 to 140ºF) at 95% relative humidity and storage temperature of –40 to 60ºC (–40 to 140ºF).
4. Power requirements of the Flow Logger shall be 8 to18 Vdc from batteries or external power source, 2.5W max.
5. When used with a Flo-Dar sensor, the Flow Logger shall have a battery life of 185 days utilizing 4 6v alkaline batteries at a 15 minute logging interval (at room temp.). When used with a Flo-Tote sensor, the Flow Logger shall have a battery life of 306 days utilizing 4 6v alkaline batteries at a 15 minute logging interval (at room temperature). A long-life battery for longer deployments shall be available option.
6. The Flow Logger shall have 1, 2 or 4 sensor ports with stainless steel connector, 1 communications port and 1 auxiliary port.
7. The Flow Logger shall have primary logging intervals of 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 or 60 minutes.
8. The Flow Logger shall have secondary logging intervals available to modify the logging rate based on a defined channel alarm condition or trigger.
9. Optional remote communication shall be available on the FL900 Series Loggers via Wireless modem; CDMA2000 1xRTT or GPRS.
10. The Flow Logger data storage event log shall be 1,000 events maximum in non-volatile flash memory.
11. Timebase Accuracy of the Flow Logger shall be 0.002% synchronized every 24 hours with server software and modem.
12. The Flow Logger shall support the Flo-Dar, Flo-Dar with SVS, Flo-Tote 3 Sensors and Rain Gauge.
13. The Flow Logger shall be compatible with Sigma 900 Standard, Sigma 900 Max and Hach SD900 to support set point sampling, flow-pacing and sample history logging.
14. The Flow Logger shall be able to connect to a lap top or desk top PC using either USB or RS232 serial connection.
15. The Flow Logger shall have an LED indicator for operating /programming status visible on the topmost horizontal surface of the logger.
16. The internet data management software shall indicate sites in alarm condition in either a map view or list view.
17. When connected to an external power source, the FL900 series logger shall be capable of power switching, i.e. drawing power from the external source and conserving the alkaline batteries inside the logger base. At the time the external power source reaches a low alarm condition, it will then switch the power draw to the alkaline batteries mounted inside the base of the logger.
18. The internet software for flow data management shall be Hach FSDATA.
19. The logger will be a Hach FL901, FL902, or FL904 Flow Logger.

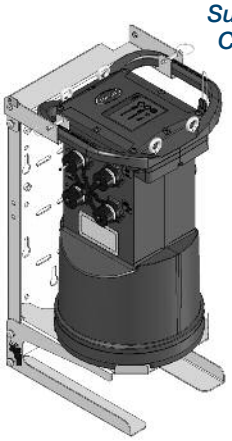
Dimensions



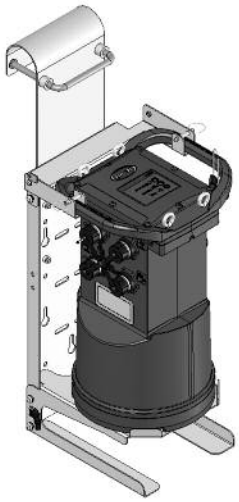


Installation/Mounting Options

Flow Logger Suspension Cable with Carabiner (Standard)



Flow Logger Wall Mount Prod. No. 8542700 (Optional)



Flow Logger Ladder Rung Mount Prod. No. 854450 (Optional)

Ordering Information

		Sensor Connector(s)	Country Code	Modem	Rain Gauge
FL90X Electronics (Flow Logger)	**Model FL90**	___	97	___	___
1 Sensor Connector		1			
2 Sensor Connectors		2			
4 Sensor Connectors		4			
None				X	
AT&T (Activated)				A	
GPRS no SIM				G	
Sprint (Inactive)				R	
Sprint (Activated)				S	
No Rain Gauge Connector					X
With Rain Gauge Connector					R

Cables

8528700 Cable, External power, 2 wire, 9 ft.
8528200 Cable, Communication, RS232
8528300 Cable, Communication, USB
8528400 Cable, Aux, 7pin MIL 5015 (Connect to Sigma Sampler), 9 ft.
8528401 Cable, Aux, 7pin MIL 5015 (Connect to Sigma Sampler), 25 ft

Antennas

5228400 Antenna, Half Wave (824-894, 1850-1990 MHz)
—US for Verizon, Sprint, AT&T, T-Mobile (Is attached to Logger)
6241804 Antenna, Mini-Wing, Quad (824-960, 1710-2170 MHz)
—US for Verizon, Sprint, AT&T, T-Mobile (Customer to Mount)
6683000 Antenna, Traffic Rated In Road/Burial (1850-1990 MHz)
—US for use with Sprint only wireless service
6246200 Antenna, Traffic Rated In Road/Burial (824-896 MHz)
—US for use with Verizon only wireless service
5255400 Antenna, Traffic Rated Manhole Lid (824-896, 1850-1990 MHz)
—US for Verizon, Sprint, AT&T, T-Mobile

Software

Model T200-200 Flo-Ware Desktop Software
FS-HOSTING Monthly data hosting service for FSDATA
FS-DATAXFR Monthly wireless service

Mounting Hardware

8543800 Wall mount bracket (304 Stainless)
8545600 Wall mount bracket with ladder hanger (304 Stainless)
8542700 Wall mount bracket with AC Power Supply shelf (304 Stainless)
8544500 Wall mount bracket with AC Power Supply Shelf with ladder hanger (304 Stainless)

Replacement Parts

8755500 Desiccant refill beads, Bulk 1.5 lb
11013M Battery, 6V lantern
8542900 Battery, long-life alkaline
8543000 Battery pack top cap adaptor and cable
(for long-life alkaline battery pack 800017701)
8542800 Rain Gauge with 100 ft. cable

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Rue J.H. Cool 19a
B-4840 Welkenraedt Belgium
Telephone: +32-87-899799
Fax: +32-87-899790
E-mail: site@flow-tronic.com
www.flow-tronic.com

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Be Right™

User Instructions

Antennas for flow products

Precautionary labels

Read all labels and tags attached to the instrument. Personal injury or damage to the instrument could occur if not observed.

	Electrical equipment marked with this symbol may not be disposed of in European public disposal systems after 12 August of 2005. In conformity with European local and national regulations (EU Directive 2002/98/EC), European electrical equipment users must now return old or end-of-life equipment to the Producer for disposal at no charge to the user. ***Note:*** *For return for recycling, please contact the equipment producer or supplier for instructions on how to return end-of-life equipment, producer-supplied electrical accessories, and all auxillary items for proper disposal.*

Product components

Make sure that all components have been received. If any items are missing or damaged, contact the manufacturer or a sales representative immediately.

Required equipment/software

Make sure that the following requirements are available:

- FL900 Series flow logger with modem option or Sigma 930T
- Remote host computer operating FSDATA or Telogers for Windows server software
- Portable computer operating FSDATA, FloWare or Telogers for Windows
- Activated wireless account

FL900 Series Flow Logger

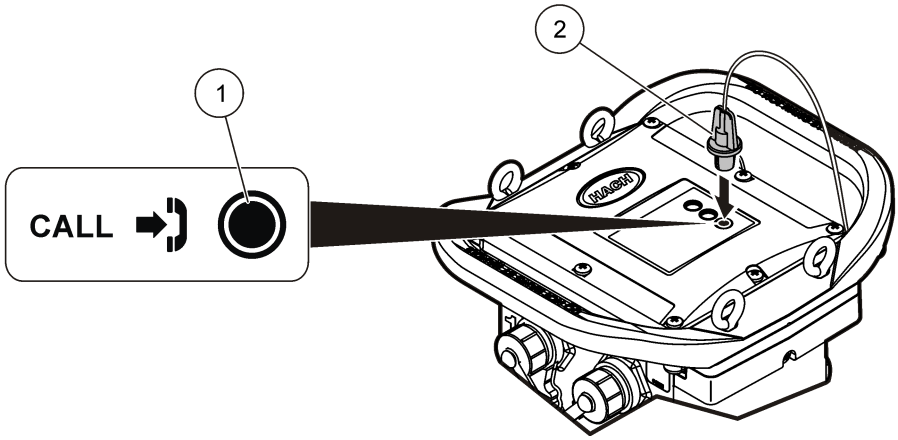
Verify the telemetry (wireless option)

The user can manually send a call to the server to make sure that the network communication is good.

1. Temporarily attach the antenna to the logger to test the antenna and the cell coverage at the site location before installation.
2. Touch the magnet to the call initiation target (Figure 1). The modem LED indicator changes to green.
3. Look at the modem LED indicator during the call (45 to 90 seconds) and wait for a change:
   - LED goes off—the connection to the server is good.
   - LED flashes red—the connection to the server failed.

   Note: *If the connection failed, refer to the instrument user manual for more information.*

Figure 1 Call the server



1	Call initiation target	**2**	Magnet

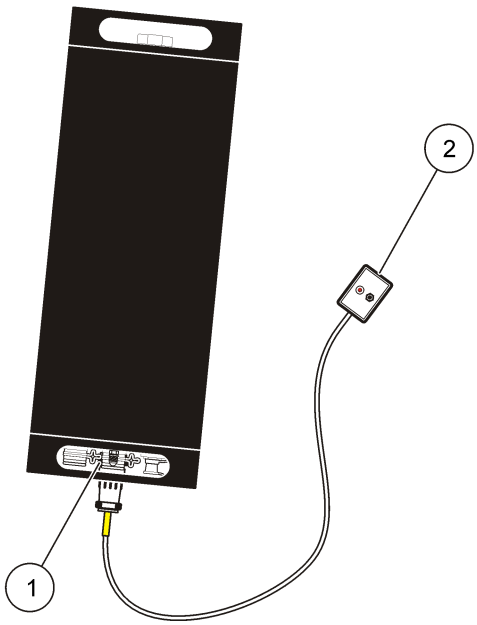
930T Flow meter

Verify the wireless connection

The tamper button is used to examine if the wireless connection is working.

1. Temporarily attach the antenna to the logger to test the antenna and the cell coverage at the site location before installation.
2. Attach the tamper module to the RS232 connector on the flow meter (Figure 2).
3. Push the tamper button to start a cellular call from the flow meter to the remote host computer.
4. Go to the event log in Telogers for Windows to make sure that the data was successfully downloaded from the flow meter to the remote host computer. Refer to the 930T documentation for further information about telemetry troubleshooting.

Figure 2 Tamper module connected to the 930T Flow meter



1	RS232 connector	**2**	Tamper module

Installation

⚠ WARNING

Electromagnetic radiation hazard. To meet the requirements of the FCC Grant, CE Mark and other regulatory bodies, do not use or install the device with an antenna that is not supplied by the manufacturer. Make sure that all antennas are kept at a minimum distance of 20 cm (7.9 in.) from all personnel in normal use.

NOTICE

Test the antenna and cell coverage at the site location before installation.

NOTICE

Make sure that the flow meter is programmed to call the host PC before installation.

Half wave antenna

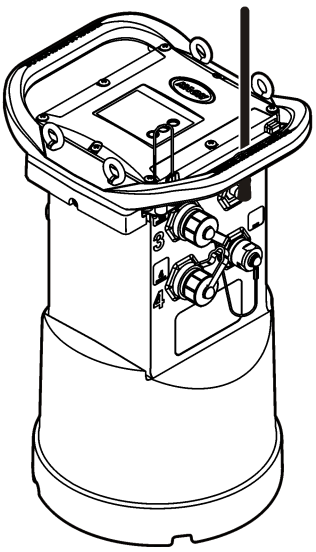
NOTICE

The half wave antenna is intended for above-ground use.

1. Unpack the antenna (Figure 3).
2. Bend the antenna at the joint to a 90 degree angle between the antenna and the swivel fitting.
3. Put the antenna extension inside of the logger handle (Figure 4).
4. Align the threads from the antenna fitting to the antenna receptacle on the logger. Hand-tighten by turning the swivel end.

Figure 3 Half wave antenna

Figure 4 Half wave antenna attached



Traffic rated manhole lid antenna

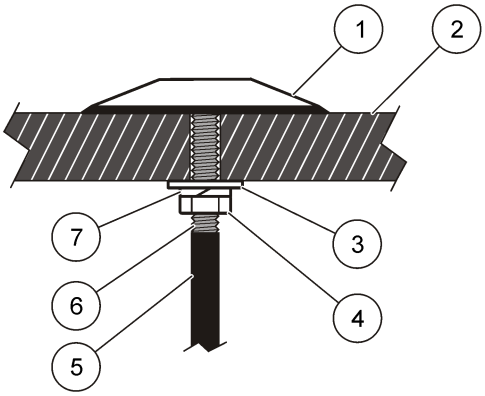
Required tools:

- 31.75 mm (1¼ in.) open-end wrench
- Large nylon Ty-wrap cable ties

1. Unpack the antenna (Figure 5) or disassemble the antenna from the instrument.
2. Make sure that the manhole lid has a 25.4 mm (1 in.) hole for the antenna neck to fit into.
   Note: *Do not use the pick hole. Use a drill, motor oil for lubrication and increasing size drill bits to drill the 25.4 mm (1 in.) hole if needed. Make sure that the location of the hole does not coincide with the ribs on the underside of the manhole lid.*
3. Remove the manhole lid and put the lid in a stable position where the lid top and bottom are accessible.
4. Remove the nut and washers from the threaded neck on the base of the antenna (Figure 6).
5. Put the antenna cable and neck through a hole on the manhole lid until the base of the antenna is against the top of the manhole lid.
6. Install the flat washer, then the lock washer and then the nut on to the threaded neck of the antenna.
7. Tighten the nut with the open-end wrench until both washers are flush against the base of the manhole lid and the antenna is tight (Figure 6).
8. Connect the antenna cable to the instrument connector labeled "Antenna". To make sure proper transmission, hand-tighten the connections.
9. Attach any excess cable to the access ladder or another non-obstructing location with Ty-wrap cable ties.
10. Replace the manhole lid.

Figure 5 Traffic rated manhole lid antenna

Figure 6 Manhole lid installation



1	Antenna top	**5**	Antenna cable
2	Manhole lid	**6**	Antenna threaded neck
3	Flat washer	**7**	Lock washer
4	31.75 mm (1¼ in.) nut		

Wing Quad antenna

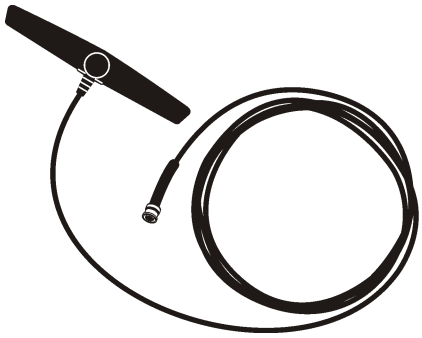
The Wing Quad antenna can be attached to an interior wall or to a window for a longer term deployment or the antenna can be attached to a manhole lid for a short term deployment.

Required tools:

- Large nylon Ty-wrap cable ties

1. Unpack the antenna (Figure 7).
2. To attach the antenna to a window or a wall, remove the adhesive backing and push the antenna to a clean surface.
3. To attach the antenna to a manhole, make sure that the manhole lid has a hole large enough for the antenna connector to fit into.
   Note: *Do not use the pick hole. Use a drill, motor oil for lubrication and increasing size drill bits to drill the 1" hole if needed. Make sure that the location of the hole does not coincide with the ribs on the underside of the manhole lid.*
4. Remove the manhole lid and put the lid in a stable position where the lid top and bottom are accessible.
5. Put the antenna cable and neck through a hole on the manhole lid until the base of the antenna is against the top of the manhole lid.
6. Attach the antenna to the manhole lid with heavy tape or tar tape.
7. Connect the antenna cable to the instrument connector labeled "Antenna". To make sure proper transmission, hand-tighten the connections.
8. Attach any excess cable to the access ladder or another non-obstructing location with Ty-wrap cable ties.
9. Replace the manhole lid.

Figure 7 Wing Quad antenna



Traffic rated in-road/burial antenna

Required tools:

- Asphalt saw or auger: saw capable of cutting 127 mm (5 in.) in diameter and 76.2 mm (3 in.) deep into a road surface or ground
- Asphalt chisel
- Hammer drill with 19.1 to 25.4 mm (¾ to 1 in.) asphalt drill bit (for antenna cable installation)
- Sakrete asphalt mix (Asphalt patch)
- Bondo; Mar-Hyde P606 Traffic Detector Wire Loop Sealer or equal
- Shovel, if placing in the ground

The traffic rated in-road/burial antenna is intended for burial beneath the road surface or ground adjacent to a manhole or vault that is being monitored (Figure 9).

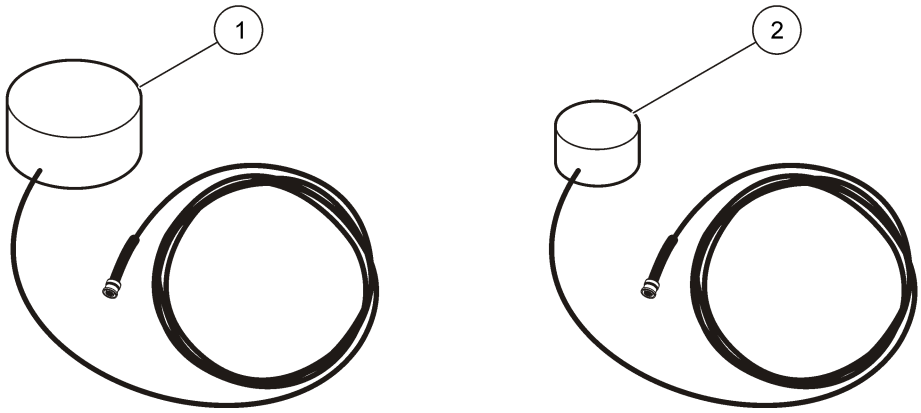
NOTICE

The antenna should be installed in the road approximately 152.4 to 203.2 mm (6 to 8 in.) inches from the manhole or vault containing the flow meter.

1. Unpack the antenna (Figure 8) or disassemble the antenna from the instrument.
2. Excavate a hole or trench in the road surface or ground approximately 127 mm (5 in.) in diameter (or square) and 76.2 mm (3 in.) deep.
3. Select the closest position from the excavated hole to the manhole. Drill a 19.1 to 25.4 mm (¾ to 1 in.) hole from the selected position to the manhole. Make sure to drill the hole below the steel manhole cover support ring (Figure 9, List item. on page 7).
4. Put the antenna cable through the drill hole into the manhole or vault.
5. Install the antenna in the excavated hole. Pull the antenna cable taut. Locate the antenna so that the ceramic side of the antenna is approximately 6.4 (¼ in.) to 12.7 mm (½ in.) maximum below the road or ground surface. Make sure the antenna sits safely in the hole.
6. Attach the antenna cable to the antenna connector.
7. Make sure that the antenna is working by placing a call from the instrument (refer to Verify the wireless connection on page 2).
8. When the operation of the antenna is confirmed, permanently bury the antenna.
   a. Insert asphalt mix around the antenna and pack it in place. Make sure the antenna is sitting firmly on a solid base and cannot be rocked back and forth.
   b. Install the asphalt mix around the antenna. The mix should be level with the road surface but not over the antenna surface.
   c. Pour the Bondo sealer on and over the asphalt mix and over the top of the antenna. There should be no more than 6.4 mm (¼ in.) of Bondo sealer over the top of the antenna.

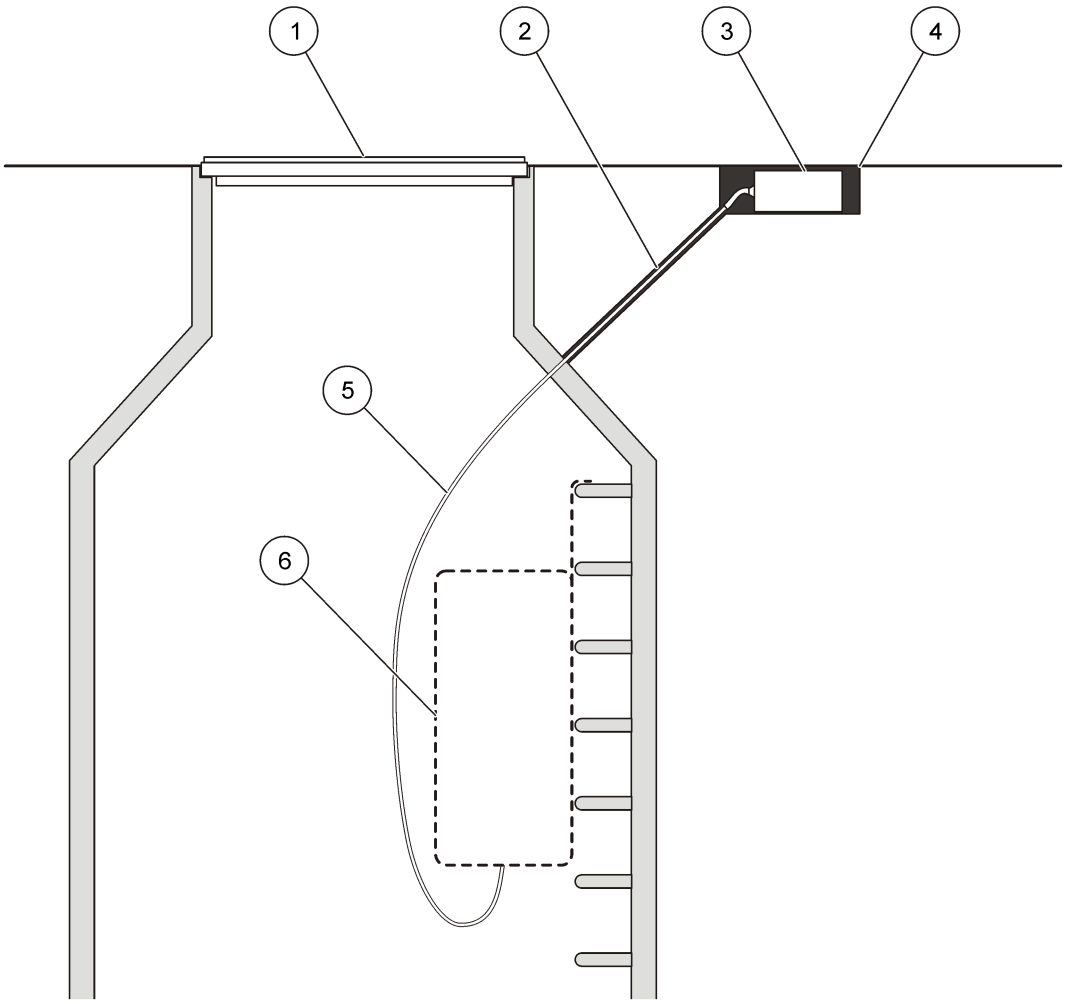
d. Connect the desired sensors and options to the flow meter. Calibrate the sensors and install the flow meter in the manhole.

Figure 8 Burial antennas



1	Traffic rated in-road/burial antenna (Verizon)	**2**	Traffic rated in-road/burial antenna (Sprint)

Figure 9 Burial antenna assembly



1	Manhole cover	**4**	Trench or hole for antenna
2	19.1 to 25.4 mm (¾ to 1 in.) hole	**5**	Antenna cable
3	Antenna	**6**	Flow meter

Replacement Parts

Note: *Product and Article numbers may vary for some selling regions. Contact the appropriate distributor or refer to the company website for contact information.*

Description	Item no.
Half wave, 824-894 & 1850-1990 MHz, 3 dBi	5228400
Half wave European, 870-960 & 1710-1880 MHz, 3dBi	5255300
Traffic rated manhole lid quad, 824-896 & 1850-1990 MHz, 3 dBi	5255400
Wing Quad, 824-960 & 1710-2170 MHz, 2.15 dBi	6241804
Traffic rated in-road/burial antenna (Verizon), 824-896 MHz, 3 dBi	6246200
Traffic rated in-road/burial antenna (Sprint), 1850-1990 MHz, 3 dBi	6683000

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08/2010, Edition 1

Tab 4: DVD with Raw Flow Monitoring Data

Tab 5: US^3 Company Information

US^3 is a California Corporation **Federal ID No. 33-0729605** and qualifies as a Minority Business Enterprise. US^3 has certified as an MBE with the California Public Utility Commission's authorized clearinghouse, **Verification Number: 97ES0008.**

US^3 is a specialty service company for the Water & Waste Water industry, providing monitoring and control for Utilities since 1996. US^3 is in the forefront of this industry by taking the proven technological approaches developed in other high-tech industries and applying them to protect one of our most precious natural resources - our water.

US^3 engineers and technical personnel have applied advanced instrumentation system technology to water/wastewater open channel flow monitoring, pipeline evaluation, engineering, and data analysis, all coupled to the power of the Internet. This unique integrated systems approach allows the company to bring greater insight and intelligence to gathering information about water/wastewater system performance of our clients, and in turn, to support the fulfillment of their commitments to manage and cost effectively design, operate, and maintain these systems.

Moreover, ***US^3*** supports Municipalities, Consulting Engineering firms and other water/waste water systems integrators by providing temporary technical services for engineering, software programming and technical site maintenance and calibration site support work, primarily in the Water and Waste Water industries.

Figure at right: All US^3 technicians are certified for Confined Space Entry.

Key Personnel Assigned

US³ provided the necessary resources to fully implement this project. Primary in support of this effort were the following personnel:

Mr. Mark Serres: Mr. Serres is a degreed electrical engineer with over 25 years of experience with fresh/wastewater systems, project management, and systems integration in relation to complex industrial systems. This includes experience in industrial automation and water/wastewater industries. Mr. Serres is responsible for assuring client satisfaction and marshalling the required resources to meet the project requirements.

Mr. Thomas Williams: Mr. Williams is an Engineering Manager with over 18 years of experience in complex systems development for wastewater monitoring. This experience includes hydraulic compatibility, instrumentation, communications and analysis. Mr. Williams is responsible for assuring that the required equipment is designed and calibrated to meet the project requirements.

Darlene Szczublewski, PE: Mrs. Szczublewski is a licensed Civil Engineer in multiple states. She has over 15 years of engineering experience with stormwater/wastewater related projects. She assisted in the completion of several Sanitary Sewer Evaluation Surveys and Capacity Analysis projects to meet Consent Decrees as well as completing numerous Infiltration and Inflow (I&I) studies for other clients. Mrs. Szczublewski has developed numerous flow data analysis techniques to present a clear informative picture of flow in a monitored system. Her work also includes the development of training programs for clients describing I&I and capacity analysis methodologies. Mrs. Szczublewski is responsible for analyzing the data as well as the data collection process and assuring that the reports meet the project requirements.

Name, title, address and telephone number of persons to contact regarding this US³ project.

Darlene Szczublewski, PE
Senior Civil Engineer
darlene.szczublewski@uscubed.com

9314 Bond Av, Suite A
El Cajon, CA 92021
619-546-4281 (work)
619-246-5304 (cell)

Tom Williams
Engineering Manager
tom.williams@uscubed.com

9314 Bond Av, Suite A
El Cajon, CA 92021
619-546-4281 (work)
619-398-7799 (cell)

NMG Geotechnical, Inc.

November 19, 2020

Project No. 20117-01

To: Sunrise Senior Living
7902 Westpark Drive
McLean, Virginia 22102

Attention: Ms. Jackie Dominguez

Subject: Supplemental Geotechnical Investigation for Due Diligence at Proposed Senior Living Development at 3320 Los Coyotes Diagonal, City of Long Beach, California

INTRODUCTION

In accordance with your authorization, NMG Geotechnical, Inc. has prepared this due diligence report for the subject site located at 3320 Los Coyotes Diagonal in the city of Long Beach, California. The purpose of this report is to present a summary of the geotechnical site conditions, with emphasis on the mapped Los Alamitos Fault, seismicity, and liquefaction potential of the underlying deep alluvium at the site. NMG performed a supplemental site investigation that included eleven cone penetrometer tests (CPTs) in order to obtain more detailed subsurface information. The geotechnical information from prior studies at the site was also reviewed and utilized. The seismicity design parameters have been updated to the 2019 California Building Code.

This report provides updated geotechnical findings and preliminary recommendations for design and construction of the proposed development. A geotechnical map, geologic cross-section, and CPT correlation exhibit were prepared to present the compiled data (Plates 1 and 2). Based on our study, we conclude that the site is considered suitable from a geotechnical viewpoint. This investigation established that the state mapped buried Los Alamitos Fault does not extend to the ground surface and should not pose a fault rupture hazard for the proposed development. The main geotechnical issues for the proposed development include the potential for strong seismic shaking and liquefaction resulting in seismic settlement. We found that excavation for possible subterranean parking under the building would increase the liquefaction hazards, and thus would need to be evaluated in more detail for the final design. Additional geotechnical review and investigation should be performed during the design phase in order to provide final recommendations for the proposed development.

ATTACHMENTS

Figure 1 – Site Location Map – Rear of Text
Figure 2 – Seismic Hazards Map – Rear of Text
Figure 3 – Regional Fault Map – Rear of Text
Appendix A – References
Appendix B – CPT and Prior Boring Logs
Appendix C – Prior Laboratory Test Data
Appendix D – Seismic Data
Appendix E – Liquefaction Analysis
Appendix F – General Earthwork and Grading Specifications
Plate 1 - Geotechnical Map – In Pocket
Plate 2 - Cross-Section A-A' and CPT Correlation Exhibit– In Pocket

SCOPE OF WORK

The scope of work performed for this study includes the following:

- **Background Review and Project Coordination:** We reviewed published and unpublished pertinent geotechnical data, including the prior geotechnical reports provided by you and published geological studies related to the Los Alamitos Fault (Appendix A). We also reviewed the site history, historic aerial photographs, and historic topographic maps for the site. We provided preliminary geotechnical information and documentation for the fault to the project team. Pertinent data from prior studies at the site were compiled.
- **Site Reconnaissance:** A site reconnaissance was performed to view the site conditions and mark the CPT locations.
- **Subsurface Exploration:** Clearance through DigAlert and the property management group was performed prior to field investigation. Advancement of eleven cone penetrometer test probes (CPTs) to depths of 30 to 50 feet were performed (Appendix B). Seismic shear wave velocity tests were performed on CPT-1 to aid in the characterization of the site class for seismic design. The nearby hollow-stem-auger borings performed by others, were also reviewed for validation of the soil types presented in the CPT soundings.
- **Geotechnical Analysis:** Geologic analysis included preparation of a geotechnical map and a cross-section utilizing the CPTs to evaluate if the alluvial layers are continuous across the mapped fault trace (Plates 1 and 2). Our geotechnical analysis included updated seismic design, liquefaction analysis, and seismic settlement analysis.
- **Report Preparation**: Preparation of this due diligence report with illustrations, summarizing our updated findings and preliminary recommendations for site development.

SITE CONDITIONS AND HISTORY

The approximate 2.2-acre site is located along the east side of Los Coyotes Diagonal, to the south of Wardlow Road (Figure 1). The western portion of the site is a vacant fenced lot and the eastern portion is a paved parking lot. There are existing drive isles with nearby buildings to the east and south sides. There is an alleyway and shopping center to the north and Los Coyotes Diagonal street to the west. A cell tower is in a fenced area located at the northeastern corner of the site.

Based on historic topographic maps and aerial photographs dating back to 1952, the following site history can be developed:

- In 1952/1953, Los Coyotes Diagonal was a two-lane roadway with a long building to the south of the property and a field onsite.
- In the 1963, the building was gone and it appears the initial construction of a large building began onsite.
- The 1964 topographic map indicates the larger new building was a hospital.
- By 1972, the hospital building was enlarged and the buildings to the east and south of the hospital were constructed.
- Between 2004 and 2009, the hospital building was demolished and removed from the site.
- By 2012, the eastern portion of the site was paved for a parking lot.

PRIOR STUDIES

Albus-Keefe & Associates, Inc. (AKA, 2019a) performed a prior geotechnical study that encompassed a larger site, including areas to the south and east of the subject site. During the AKA investigation, four borings were drilled onsite to depths between 16.5 and 51.5 feet below ground surface (bgs) that encountered shallow existing fill over the native alluvium. The boring locations are shown on Plate 1, the logs are included in Appendix B, and the laboratory data is included in Appendix C. The prior seismicity analysis by AKA obtained a PGA of 0.59g based on CBC 2013 and ASCE 7-10 (which are no longer the current building standards). They concluded that the alluvium below the site does not have the potential for liquefaction due to the dense nature of the coarse-grained alluvium at depth below groundwater. AKA estimated the seismic settlement to be 0.5 inches and the total (dry) static settlement to be 1 inch.

AKA also prepared a report to assess the potential for use of infiltration stormwater quality improvements at the site (AKA, 2019b). They concluded that due to the fine-grained nature of the subsurface soils in the upper 30 feet above the groundwater, the use of infiltration systems at the site is deemed unfeasible. AKA stated that the use of other methods (such as biofiltration) will be needed at the site.

Partner Assessment Corporation (Partner) prepared a geotechnical data review report of the AKA reports for Sunrise Senior Living. They noted a fault that was mapped at the site that was not discussed in the AKA report, and recommended an additional fault study. They also recommended additional geotechnical investigation be performed in order to further evaluate the seismic settlement potential.

PROPOSED DEVELOPMENT

Based on the concept plan, the proposed development will be a large 2-story building that covers the majority of the site. There will be onsite parking around the building. We understand that a below-ground parking lot area is under consideration. This development will include senior and assisted living, but will not be a skilled nursing facility.

FIELD EXPLORATION

NMG's field exploration was performed on October 21, 2020, consisted of a total of eleven CPTs (CPT-1 thru CPT-11), and varied from 30 to 50 feet deep. The CPTs were performed by Kehoe Testing and Engineering (KTE) and provide continuous data used for soil identification and stratigraphy. Seven of the CPTs were spaced at 16- to 25-foot intervals in a line across the mapped buried fault trace to evaluate whether the fault extends to the surface. Four other CPTs were performed within the future building area. Shear wave velocity was also performed for CPT-1 to aid in evaluation of seismic site class.

The CPTs were performed in general accordance with the current ASTM Standards (ASTM D5778 and ASTM D3441). The CPT equipment consisted of a conical tip and a cylindrical friction sleeve. The interior of the cone penetrometer is instrumented with strain gauges that allow simultaneous measurements of cone tip and friction sleeve resistance during penetration. The cone penetrometer assembly is continuously pushed into the soil by a set of hydraulic rams at a standard rate of 0.79 inch per second (20 mm per second), while the cone tip resistance and sleeve friction resistance are recorded every 1.967 inches (50 mm). The recorded cone resistance, friction resistance, friction ratio and soil behavior type interpretations are provided in Appendix B.

FINDINGS

Geologic Setting and Earth Units

The site is located in the southern portion of the Los Angeles Basin and is underlain by deep alluvium (CDMG, 1962 and 1997). Based on Quaternary Mapping by the State (CDMG, 1981), the site is underlain by approximately 90 feet of Holocene-age alluvium overlying over 2,400 feet of Pleistocene-age alluvium.

Based on soil mapping by the U.S. Department of Agriculture (1978), the near-surface soils consist of Hueneme-San Emigdio group. These soils have a Unified Soil Classification of SC, SM, ML, and CL, with a potentially low shrink swell, high corrosion to steel and low corrosion to concrete. They are mapped as hydrologic group B/C.

Prior borings drilled at the site indicate there are artificial fill materials overlying alluvium. The fill thickness was between 2 and 6 feet thick and consists of silty sand, clay and silt that was medium dense. The underlying alluvium consists of interlayered silt and clay with some sands. In one deep boring, there was a sand layer between 28 and 43 feet deep, with clay below to a total depth of 51.5 feet.

The CPTs indicate the upper 25 to 30 feet of alluvium is primarily fine-grained clay and silt with some local interlayers of silt sandy and sand. Below the clayey and silty alluvium is a 5- to 12-foot-thick layer of sandy silt and sand that is fairly dense. Below this zone, the majority of the alluvium is finer-grained interlayered clays and silts with lesser sand interlayers.

The prior soil testing indicates the onsite soils are slightly moist to moist and medium dense/medium stiff to stiff. The in-situ moisture contents in the alluvium varied between 12 and 31 percent, and the dry densities of the alluvium were between 87.5 and 107.4 pound per cubic foot (pcf). The optimum moisture content was 10.5 percent and the maximum dry density was 129.0 pcf.

The prior consolidation testing of six samples in the upper 6 feet found the soils to be moderately compressible. A remolded direct shear test for the clayey soil in the upper 5 feet indicated a cohesion of 200 psf and a soil friction angle of 25 degrees. The expansion index of lean clay from 0 to 5 feet was 33 or "low" and the soluble sulfate content is moderate (0.9%).

Groundwater

Groundwater was encountered at a depth of 27.5 feet in the prior Boring AB-2 by AKA in May 2019. The historic high groundwater is mapped by the State at a depth of approximately 28 feet (elevation 2 feet above mean sea level) (CDMG, 1997).

Three groundwater monitoring wells (MW-3 through MW-5; Plate 1) have been constructed at the site during a Phase II environmental study for a prior dry cleaner north of the project (Lindmark, 2020). Between the years 2000 and 2019, monitoring of these wells has indicated that the

groundwater fluctuates seasonally and annually, on the order of 12 feet. The recorded high-water levels were between 15 to 16 feet below ground, or at elevations of 12 to 13 feet above mean sea level (msl). Their latest available reading was at 22 feet deep in December of 2019. Lindmark prepared a groundwater contour map that indicates the gradient of the groundwater flow is toward the south.

Faulting

Background: The Los Alamitos Fault is not mapped in an Alquist Priolo (AP) fault rupture hazard zone (CDMG, 1986). The fault was mapped by the state as a buried feature based on deep oil well data (CGS, 2010). This fault is structurally related to the Compton Blind Thrust Fault that is located to the south of the site (offshore). The northwest-trending Los Alamitos Fault crosses the northeast portion of the site (Plate 1). The State maps this fault as having late Quaternary displacement (movement during the past 700,000 years), and not as an active fault.

In 2003, the State deleted the Compton Blind Thrust from their fault data base as a probabilistic seismic hazard (capable of producing ground shaking), based on reported lack of late Quaternary offset. The Compton-Los Alamitos was investigated by others using trenches and CPT probes across the surface projection of this fault and they found it did not offset the Gaspur aquifer dated as 15,000 to 20,000 years (CDMG, 2003).

The Southern California Earthquake Data Center (2020) identifies this fault with a total length of about 11 km and indicates this fault is part of the larger Compton-Los Alamitos Fault system.

In 2008, a study was performed on the Compton Blind Thrust Fault (Leon, et.al., 2009). This study found evidence that the blind thrust is an active fault and has generated six large earthquakes during the past 14,000 years. Based on petroleum seismic reflection surveys in oil wells, the Los Alamitos fault was determined to be a bend fold extending from the base of the Compton ramp. They believe the Compton Thrust is capable of generating a large earthquake in the future, but suggests the movement on the Los Alamitos would be sympathetic movement at depth.

The Compton-Los Alamitos Fault system has recently been studied by Yeats and Verdugo (2010). They also mapped the faults based on geophysical studies in deep oil wells up to 6.4 km deep. The Compton Blind Thrust is a fault mapped in the subsurface that dips toward the north (at depth under Long Beach). The blind thrust fault is considered to have reverse offset at depth and the Los Alamitos Fault changes upward into fault-propagation folds.

Findings Onsite: We performed a series of CPT soundings across the mapped buried fault in the northwest corner of the site. Cross-Section A-A' and the CPT correlation exhibit were prepared for geologic interpretation and to evaluate the continuity of the alluvial layers over the fault trace (Plate 2). Layering in sedimentary depositional environment of a meandering stream is often somewhat irregular. However, the alluvium layers in the upper 50 feet of alluvium were found to be continuous. In addition, the denser sandy layer at a depth of approximately 25 to 30 feet was found to be continuous. Thus, the Los Alamitos Fault is believed to be deep below the site and does not pose a fault rupture hazard. In addition, this fault is believed to be a buried feature related to the Compton Blind Thrust Fault, and not capable of generating a large earthquake event.

Seismicity and Secondary Seismic Hazards

Properties in southern California are subject to seismic hazards of varying degrees depending upon the proximity, degree of activity, and capability of nearby faults. These hazards can be primary (i.e., directly related to the energy release of an earthquake, such as surface rupture and ground shaking) or secondary (i.e., related to the effect of earthquake energy on the physical world, which can cause phenomena, such as liquefaction and ground lurching). Since there are no active faults at the site, the potential for primary ground rupture is considered very low. The primary seismic hazard for this site is ground shaking due to a future earthquake on one of the major regional active faults discussed above.

Using the USGS computer program (USGS, 2020) and the site coordinates of 33.8175 degrees north latitude and -118.1094 degrees west longitude, the controlling fault to the site is the Newport-Inglewood Fault with the maximum moment magnitude of 7.46 M_W. Other faults that can produce strong ground shaking at the site include the Compton Blind Thrust, Palos Verdes, and Puente Hills Blind Thrust Faults.

Based on the CPT-1 seismic cone, the average shear wave velocity of the underlying soils up to 50 feet bgs varies from 670 feet per second (ft/sec). Based on the 2019 CBC, the underlying soils may be classified as Site Class D.

Seismic design parameters were calculated based on the computer program by the Structural Engineers Association/Office of Statewide Health Planning and Development (2020) and is included in Appendix D. The seismic design parameter results are also presented in Section 3 of the Conclusion and Recommendation section.

Based on the hazards mapping by the California Geological Survey (CDMG, 1997 and 1999), the alluvium in this area is mapped as potentially liquefiable (Figure 2). The potential for liquefaction was assessed during this study and the results are presented in following section.

The potential for the seismic hazards of tsunami or seiche are considered low to nil. The site is located away from the ocean and is at an elevation of 27 to 29 feet above msl. The site is not located adjacent to a confined body of water; therefore, the potential for seiche (an oscillation of a body of water in an enclosed basin) is considered nil.

Liquefaction Potential

Liquefaction is a phenomenon in which earthquake-induced cyclic stresses generate excess pore-water pressure in low density (loose), saturated, sandy soils and soft silts below the water table. This causes a loss of shear strength and, in many cases, ground settlement. For liquefaction to occur, all of the following four conditions must be present:

- There must be severe ground shaking, such as occurs during a strong earthquake.
- The soil material must be saturated or nearly saturated, generally below the water table.
- The corrected normalized standard penetration test (SPT) blow counts (N_1) or the CPT tip resistance (Q) must be relatively low.

- The soil material must be granular (usually sands or silts) with, at most, only low plasticity. Clayey soils and silts of relatively high plasticity are generally not subject to liquefaction.

Liquefaction potential of the onsite soils was analyzed using the collected CPT data and the computer program CLiq (Version 2.2.0.18 developed by Geologismiki). The site peak ground acceleration of 0.73 g, maximum earthquake magnitude of 7.46, and the design high groundwater depth were used for the analysis. The liquefaction analysis was performed mainly for site conditions without a subterranean parking lot (no excavation). We also checked the liquefaction potential for the subterranean parking lot since the required excavation reduces the amount of soil cover, overburden stress and depth to groundwater. The liquefaction potential analysis is performed using the Robertson method and is implemented with depth-weighting factor for calculation of the equivalent volumetric strain of the soil profile included in the program and per the study by Cetin, et al. (Cetin, 2009).

We found the liquefaction potential for the sandy layers varied over a short distance. Based on the results, the liquefiable sandy layers are generally at a depth of 20 feet or more (from existing ground) and range in thickness from 0.5 to approximately 7 feet. Without excavation for subterranean parking below the building, the overall risk and probability for liquefaction is low, with a vertical liquefaction settlement up to 0.8 inches (at CPT-5). With excavation for subterranean parking, the risk and probability for liquefaction is higher and settlement is increased to 1.3 inches (at CPT-5).

The potential for loss of bearing was also evaluated based on the thickness of the liquefiable layers that will be left-in-place, versus the amount of fill and non-liquefiable alluvium that will overlie the liquefiable soils. The CPTs did not indicate a potential for local surface disruptions/loss of bearing strength for the site without the subterranean parking. However, the CPTs with the larger vertical settlement (mainly CPT-5 and CPT-6) did indicate a potential for local surface disruptions/loss of bearing strength when an excavation for subterranean parking is performed. The excavation reduces the thickness of the non-liquefiable fill material capping the site. The output for the liquefaction analysis is included in Appendix E.

CONCLUSIONS AND RECOMMENDATIONS

1. General Conclusion and Recommendation

Based on our updated geotechnical review and investigation, the proposed development at the site is considered geotechnically feasible. The Los Alamitos Fault does not pose a fault rupture hazard at the site; however, there is potential for strong ground shaking. The building and foundation for the project will need to be designed per the latest building and seismic codes. The overall risk and probability for liquefaction is low and, based on the liquefaction analysis, we estimate seismic settlement up to approximately 1 inch. Lowering the site grades for subterranean parking would increase the risk and probability for liquefaction at the site.

The recommendations in this report are preliminary and considered minimum and need to be reviewed in light of the actual design plans for the site development. Additional geotechnical review, investigation and analysis will be needed to provide final recommendations for design, grading, and construction of the proposed building and improvements.

2. Faulting

The layers in the alluvium overlying the mapped Los Alamitos Fault were determined to be continuous and there does not appear to be a near-surface offset. This fault is mapped based on deep oil well data and does not extend to the ground surface. This fault is considered a buried feature and therefore, a fault setback is not required at the subject site.

3. Seismic Design Guidelines

The following table summarizes the seismic design criteria for the subject site. These seismic design parameters are developed in accordance with ASCE 7-16 and 2019 CBC, with the assumption that the fundamental period of the structure is within the "exceptions" included in Section 11.4.8 of ASCE 7-16. The seismic response coefficient, C_s, should be determined per the parameters provided below and using equation 12.8-2 of ASCE 7-16.

Selected Seismic Design Parameters from 2019 CBC/ASCE 7-16	*Seismic Design Values*	*Reference*
Latitude	33.8175 North	
Longitude	117.1094 West	
Controlling Seismic Source	Newport-Inglewood Fault	USGS, 2020
Distance to Controlling Seismic Source	5.0 km	USGS, 2020
Site Class per Table 20.3-1 of ASCE 7-16	D	SEA/OSHPD, 2020
Spectral Acceleration for Short Periods (Ss)	1.54 g	SEA/OSHPD, 2020
Spectral Accelerations for 1-Second Periods (S_1)	0.55 g	SEA/OSHPD, 2020
Site Coefficient F_a, Table 11.4-1 of ASCE 7-16	1.0	SEA/OSHPD, 2020
Site Coefficient F_v, Table 11.4-2 of ASCE 7-16	1.75	
Design Spectral Response Acceleration at Short Periods (S_{DS}) from Equation 11.4-3 of ASCE 7-16	1.03 g	SEA/OSHPD, 2020
Design Spectral Response Acceleration at 1-Second Period (S_{D1}) from Equation 11.4-4 of ASCE 7-16	0.64 g	
T_S, S_{D1}/ S_{DS}, Section 11.4.6 of ASCE 7-16	0.62 sec	
T_L, Long-Period Transition Period	8 sec	SEA/OSHPD, 2020
Peak Ground Acceleration Corrected for Site Class Effects (PGA_M) from Equation 11.8-1 of ASCE 7-16	0.73 g	SEA/OSHPD, 2020
Seismic Design Category, Section 11.6 of ASCE 7-16	D	

4. Liquefaction and Foundation Considerations

Overall liquefaction potential at the site is low based on the current grades. The preliminary seismic settlement is estimated to be no more than 1 inch total, with the differential settlement of ½ inch over a 40-foot span. The estimated total seismic settlement increases up to 1.5 inches with the differential settlement of ¾ inch over a 40-foot span with excavation for the subterranean parking. Static settlement will depend on the future loading conditions and final graded site conditions. Subterranean parking will require retaining wall structures designed for the lateral earth pressures and groundwater conditions. The foundations and site improvements also need to take into account expansive and corrosive soils.

In general, we anticipate the future building will have a structural slab-on-grade and will not require deep foundations. The foundation slabs should be designed to tolerate the design settlement. A stiffer foundation (post-tensioned or matt slab) and/or reinforced soil zone may be considered to reduce the potential seismic impacts and settlement.

5. General Grading Recommendations

Grading and excavations should be performed in accordance with the City of Long Beach Grading Code and the General Earthwork and Grading Specifications in Appendix F. Clearing and grubbing of the site should include removal of pavement and concrete, underground pipes, landscaping, miscellaneous trash and debris, and disposal of this deleterious material offsite.

Existing fill and trench backfill are considered unsuitable and will require removal and recompaction. Remedial removals on the order of 3 to 6 feet are anticipated to remove existing fill and provide a uniform subgrade/foundation soil condition. Some moderate soil shrinkage and subsidence should be taken into account.

After removals and overexcavation, the bottoms should be scarified and moisture-conditioned prior to placement of fill. The fill should be placed in nearly horizontal loose lifts less than 8 inches in thickness, moisture-conditioned, and compacted to a minimum relative compaction of 90 percent (per ASTM D1557). The fills placed against ground sloping more than 5:1 should be keyed and benched into competent material as the new fill is constructed.

Onsite soil materials are considered suitable to be used as fill and trench backfill materials. The soils should be mixed and moisture-conditioned to provide a uniform blend of material.

6. Geotechnical Review of Future Plans

Once a grading plan becomes available, it should be reviewed by the geotechnical consultant to evaluate the design cuts and fills and provide specific remedial grading recommendations for the project. The proposed grading and construction will need to protect the adjacent buildings and improvements. A geotechnical grading plan review report will need to be submitted to the City of Long Beach for their review and approval prior to issuance of a grading permit.

Additional borings and laboratory testing will be needed for the design level study. The structural loading and foundation plan will need to be reviewed to provide our final assessment of the total and differential settlement for the proposed building. Once the building plan, foundation plan and precise grading plan are available, the final geotechnical recommendations for remedial grading and structural design will be provided.

7. Geotechnical Observation and Testing During Grading and Construction

Geotechnical observation and testing should be performed by the geotechnical consultant during the following phases of grading and construction:

- During site demolition, preparation and clearing;
- During earthwork operations, including remedial removals and pad overexcavation;
- During fill placement;
- During excavation, backfilling and installation of storm water BMPs;
- Upon completion of any excavation for buildings or retaining walls prior to pouring concrete;
- During slab and pavement subgrade preparation (including presoaking), prior to pouring of concrete;
- During and after installation of subdrains for retaining walls and building subgrade;
- During placement of backfill for utility trenches, retaining walls and basement walls; and
- When any unusual soil conditions are encountered.

If you have any questions regarding this report, please contact us. We appreciate the opportunity to offer our services.

Respectfully submitted,

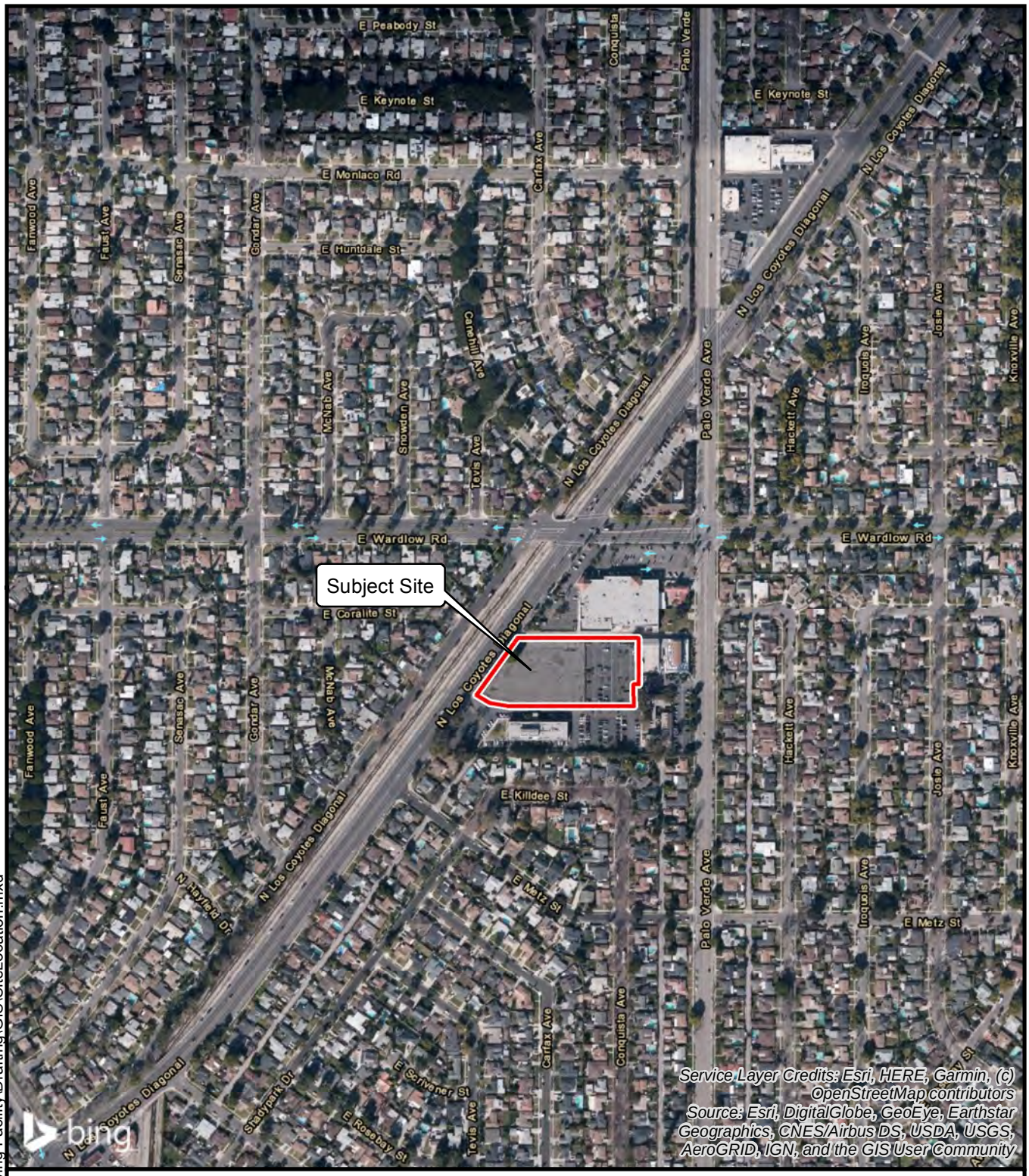
NMG GEOTECHNICAL, INC.

Karlos Markouizos, RCE 50312
Principal Engineer

Terri Wright, CEG 1342
Principal Geologist

KGM/TW/grd

Distribution: (1) Addressee (E-Mail)



0 250 500 Feet

1 inch = 500 feet

N

SITE LOCATION MAP

SUNRISE SENIOR FACILITY
3320 NORTH LOS COYOTES DIAGONAL
LONG BEACH, CALIFORNIA

Project Number: 20117-01
Project Sunrise/LB Senior Living
Date: 11/19/2020

By: KGM/TW

Figure 1

NMG

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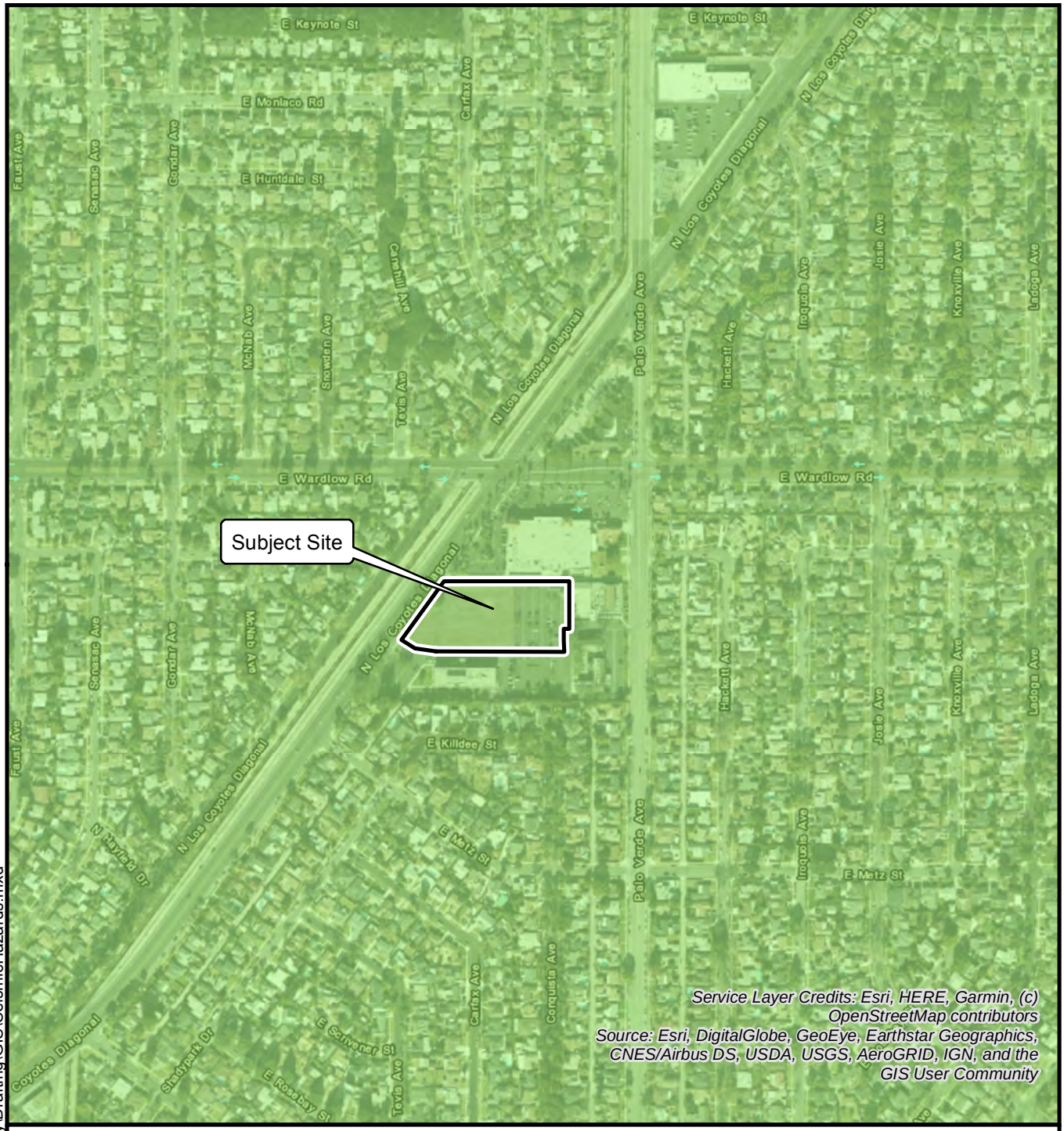

Legend

Liquefaction Zones

0 250 500 Feet

1 inch = 500 feet

N

SEISMIC HAZARDS ZONES MAP

Base: California Geological Survey, Earthquake Zones of Required Investigation, Los Alamitos
Dated: March 25, 1999

SUNRISE SENIOR FACILITY
3320 NORTH LOS COYOTES DIAGONAL
LONG BEACH, CALIFORNIA

Project Number:20117-01 By: KGM/TW
Project Name: Sunrise/LB Senior Living
Date: 11/19/2020 Figure 2

NMG

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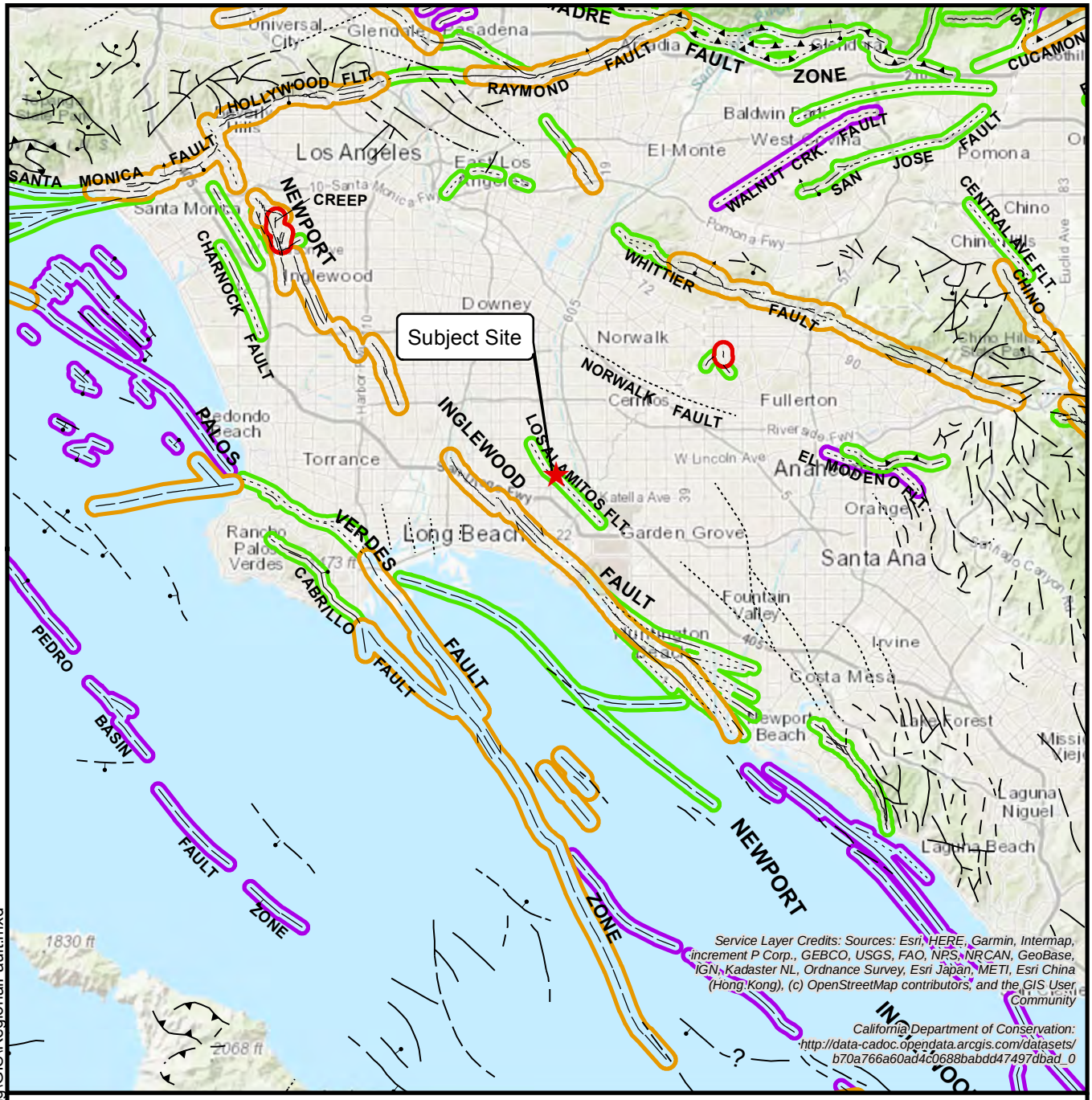

Legend

Faults

- Certain
- Approximately Located
- Concealed

Recency of Movement

- Historic
- Holocene
- Late Quaternary
- Quaternary

0 4 8 Miles

1 inch = 8 miles

N

REGIONAL FAULT MAP

Base: California Geological Survey, Fault Activity Map of California, 2010

SUNRISE SENIOR FACILITY
3320 NORTH LOS COYOTES DIAGONAL
LONG BEACH, CALIFORNIA

Project Number: 20117-01 By: KGM/TW

Project Name: Sunrise/LB Senior Living

Date: 11/19/2020 Figure 3

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APPENDIX A

APPENDIX A

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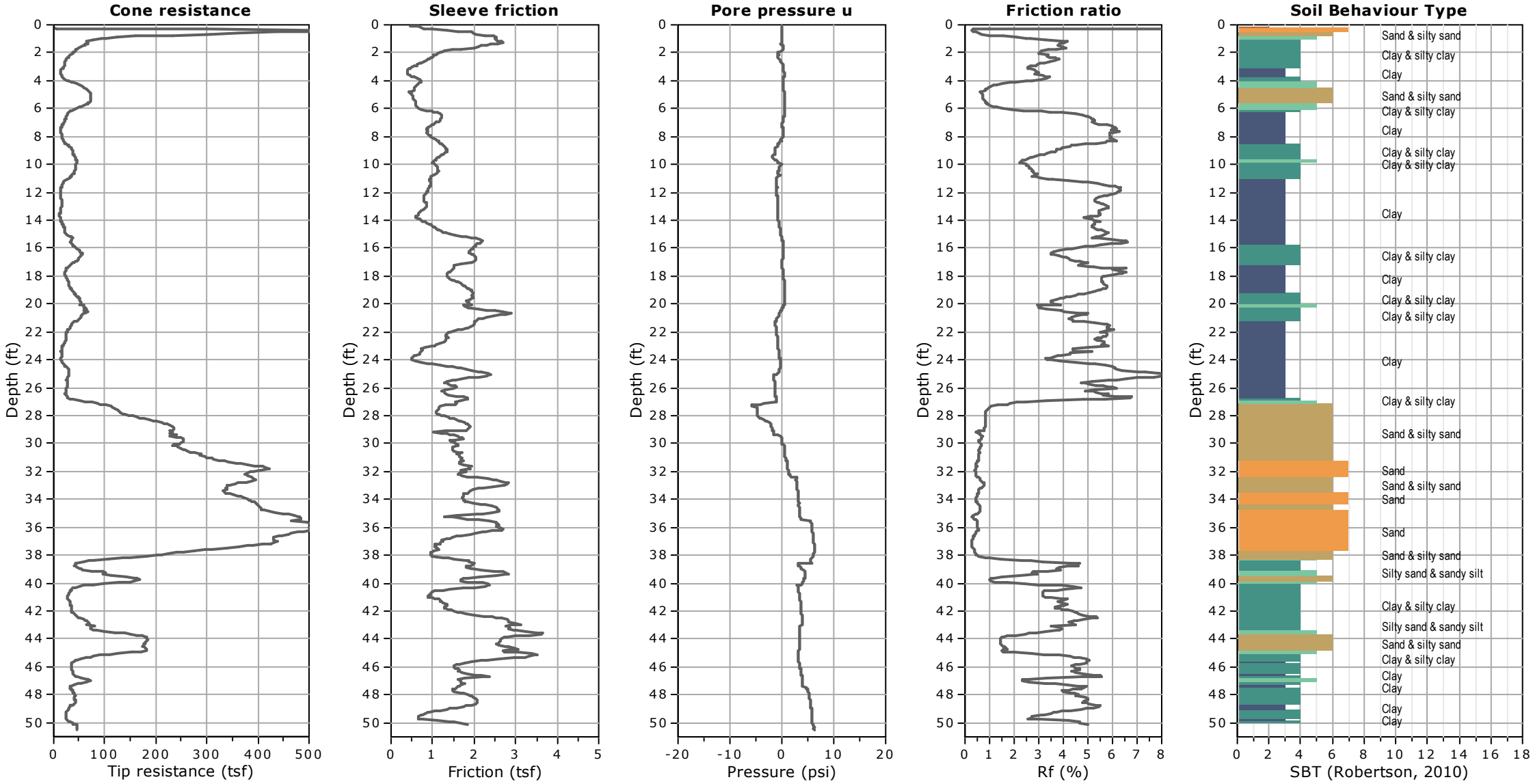
APPENDIX B

Kehoe Testing and Engineering
714-901-7270
steve@kehoetesting.com
www.kehoetesting.com

Project: **NMG Geotechnical / Sunrise Senior Living Facility**
Location: **Long Beach, CA**

CPT-1
Total depth: 50.48 ft, Date: 10/21/2020



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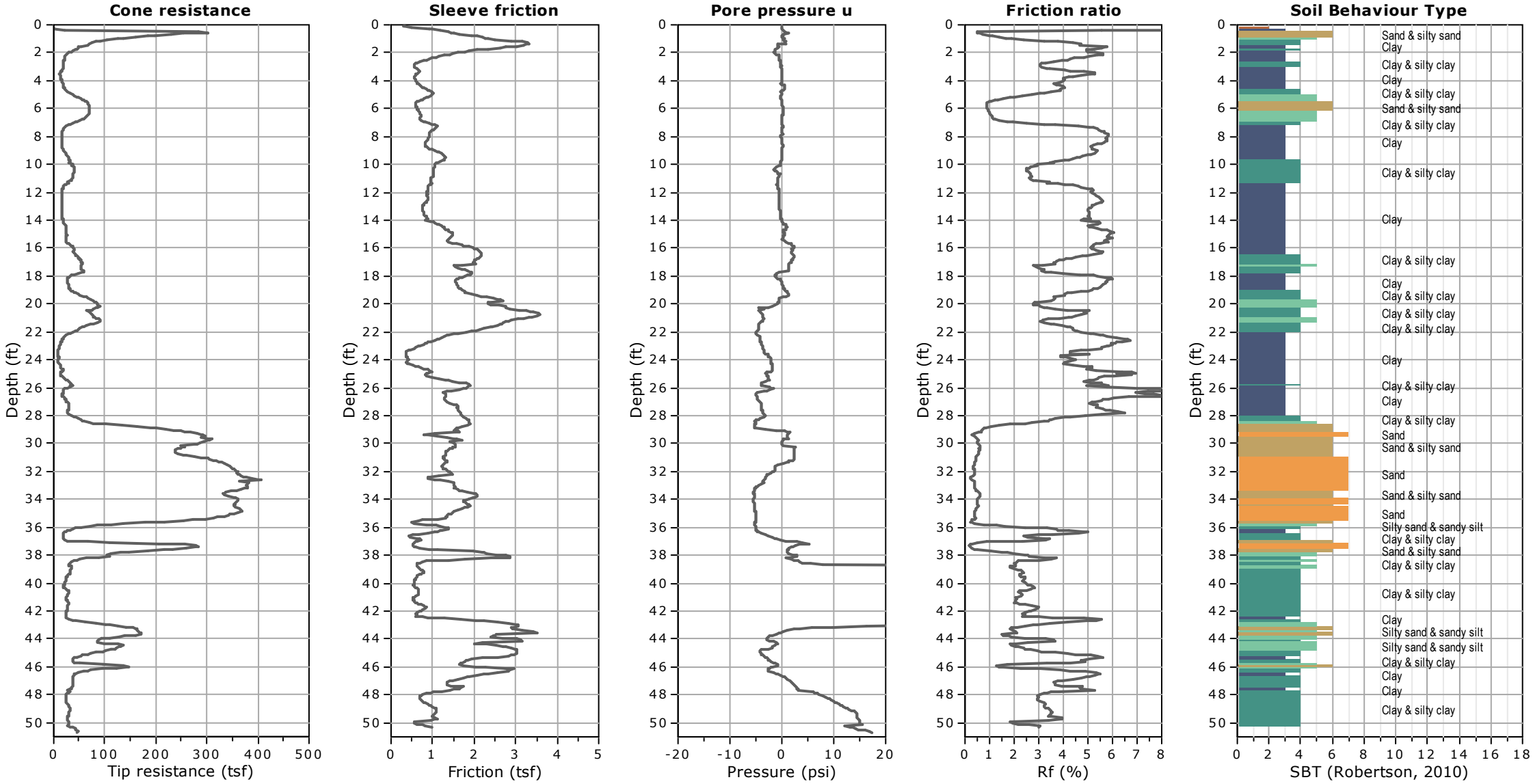
Project: **NMG Geotechnical / Sunrise Senior Living Facility**
Location: **Long Beach, CA**

CPT-2
Total depth: 50.69 ft, Date: 10/21/2020



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Location: **Long Beach, CA**

CPT-3
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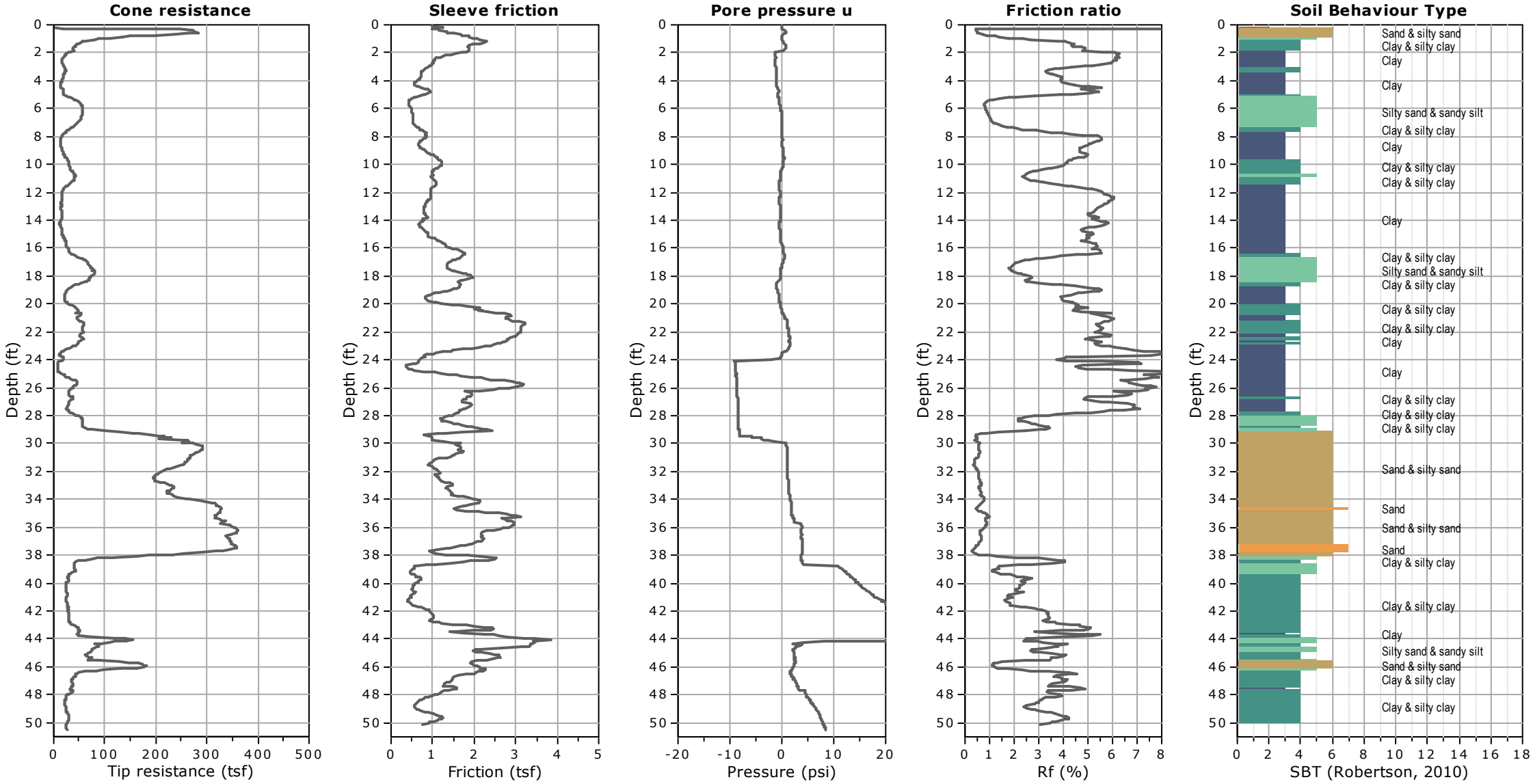

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Location: **Long Beach, CA**

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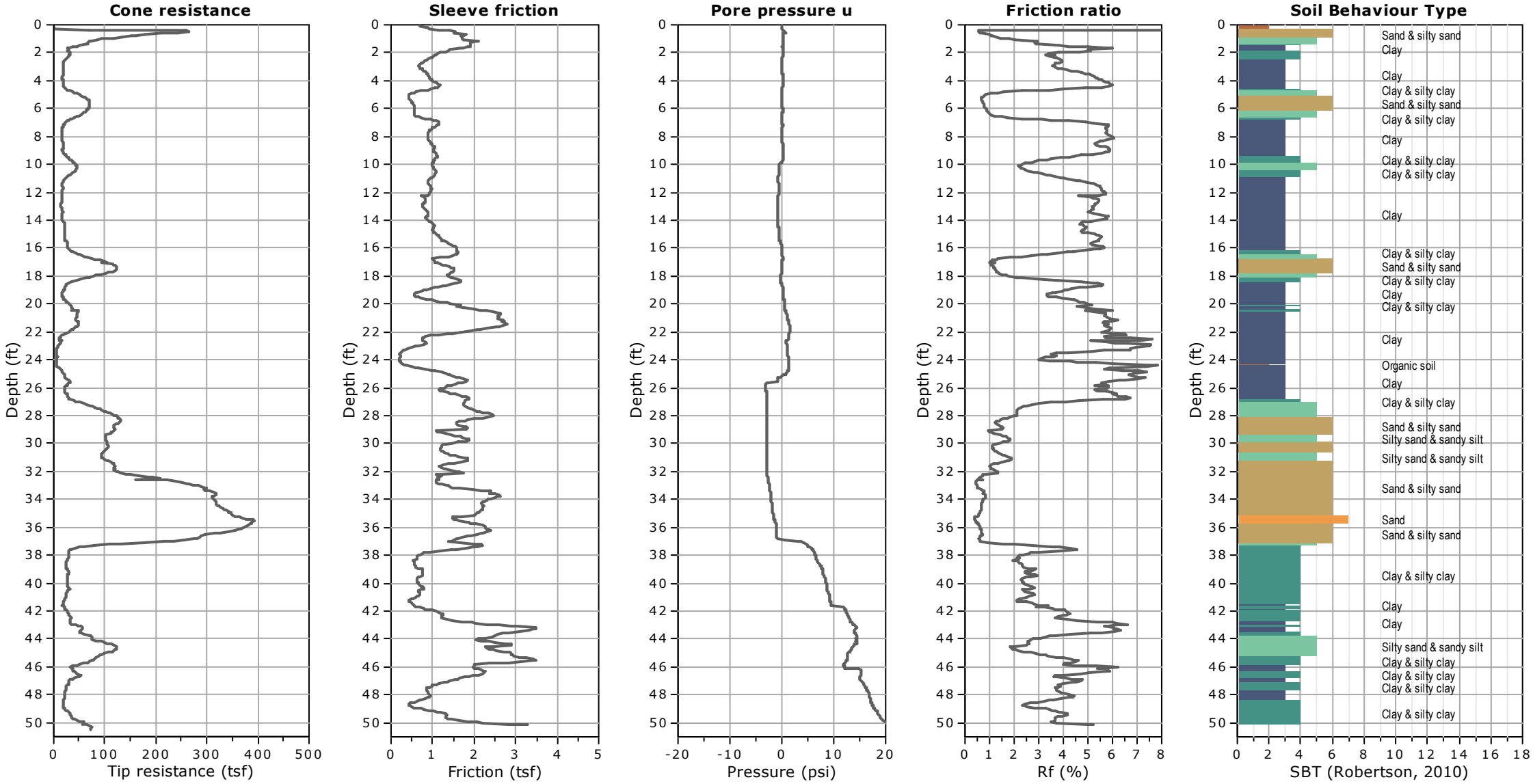

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Location: **Long Beach, CA**

CPT-5
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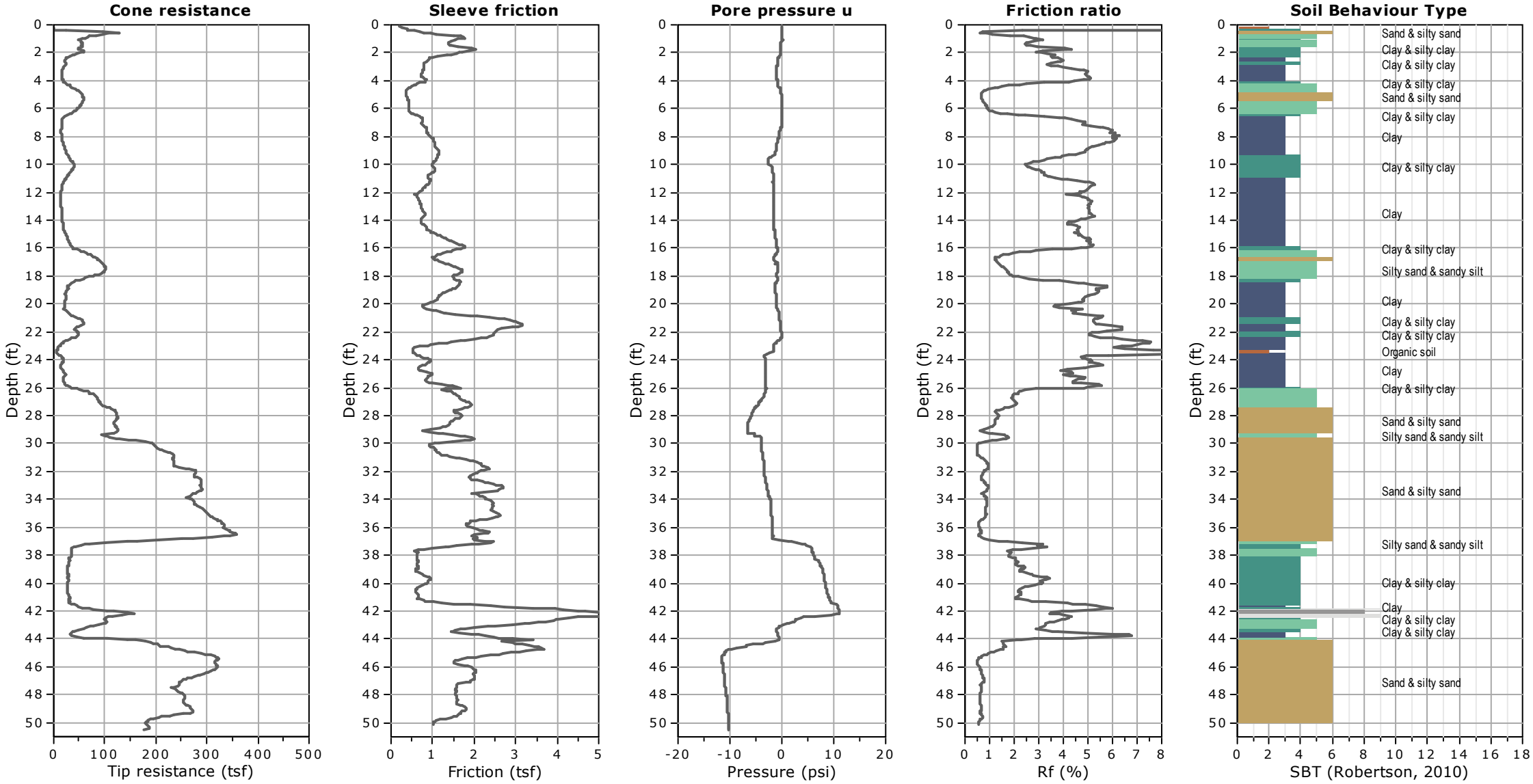

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Location: **Long Beach, CA**

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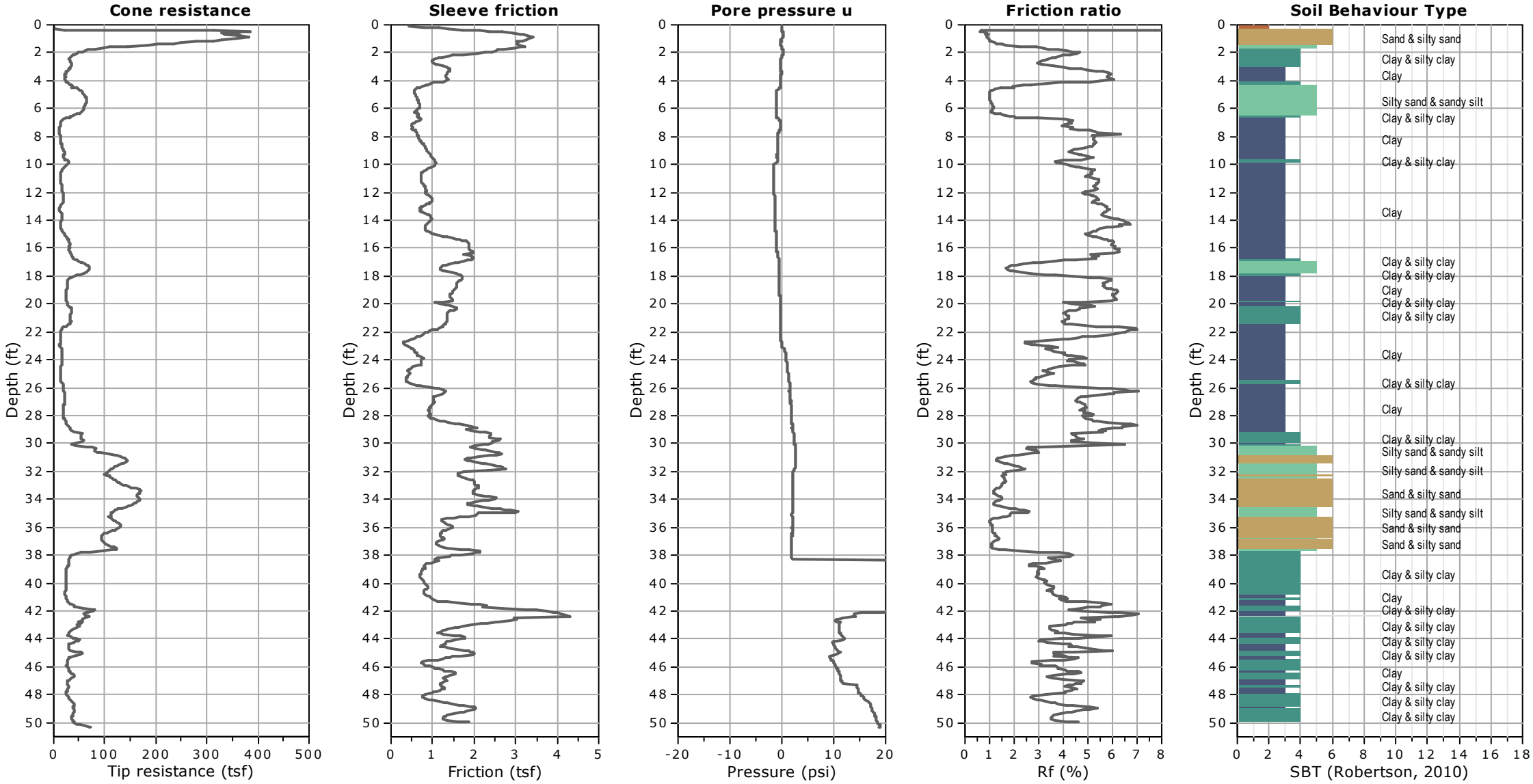

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Project: **NMG Geotechnical / Sunrise Senior Living Facility**
Location: **Long Beach, CA**

CPT-7
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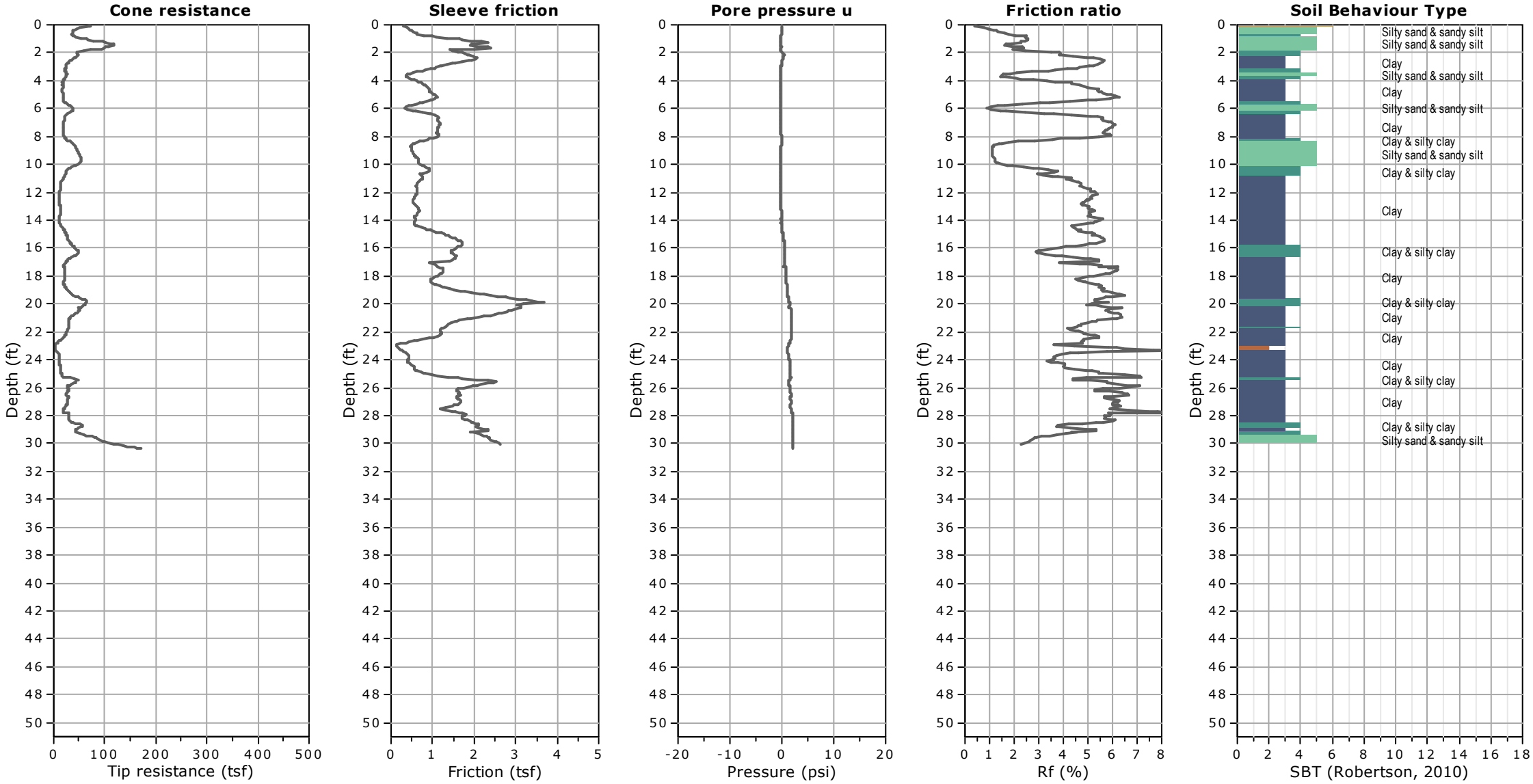

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www.kehoetesting.com

Project: **NMG Geotechnical / Sunrise Senior Living Facility**
Location: **Long Beach, CA**

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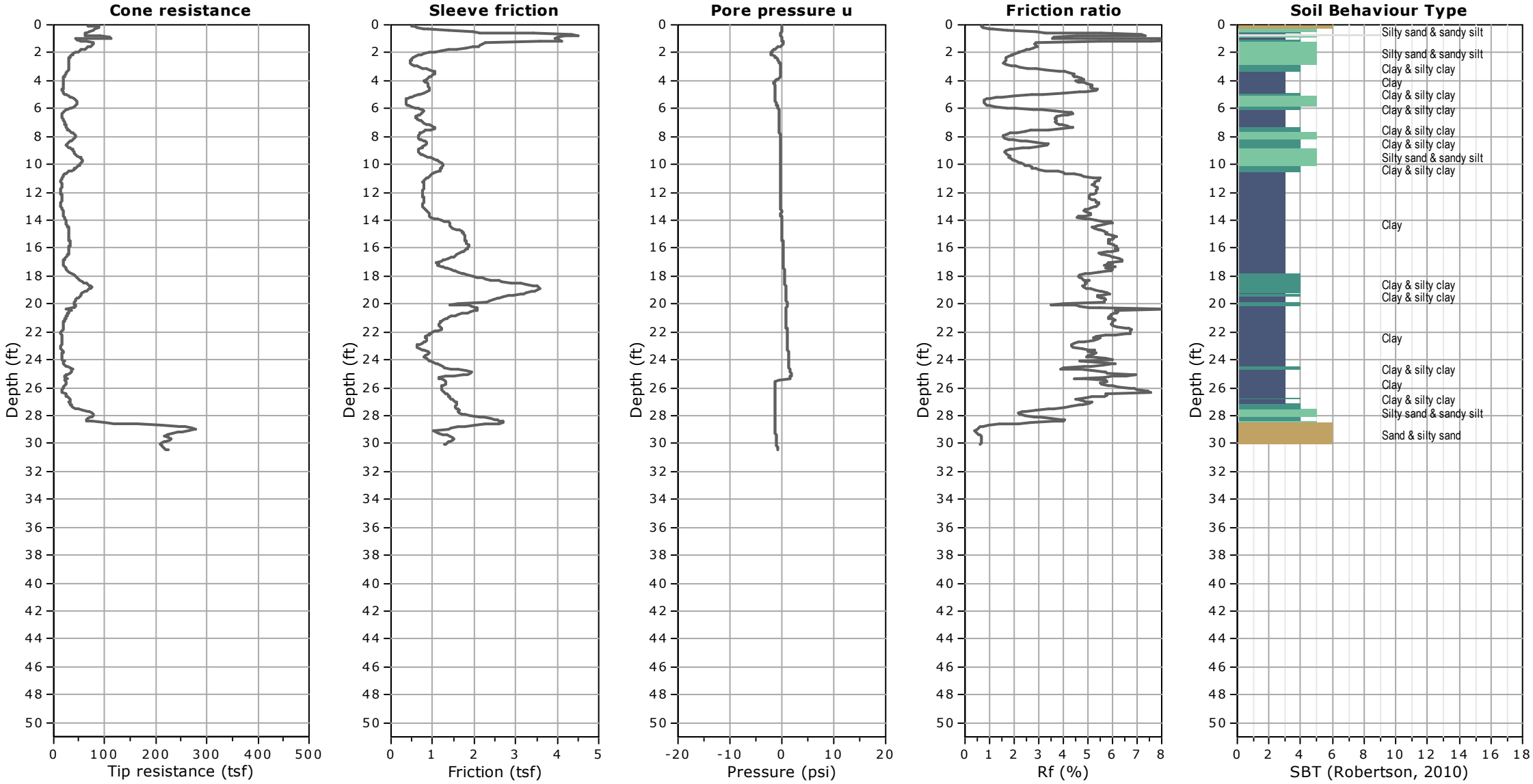

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steve@kehoetesting.com
www.kehoetesting.com

Project: **NMG Geotechnical / Sunrise Senior Living Facility**
Location: **Long Beach, CA**

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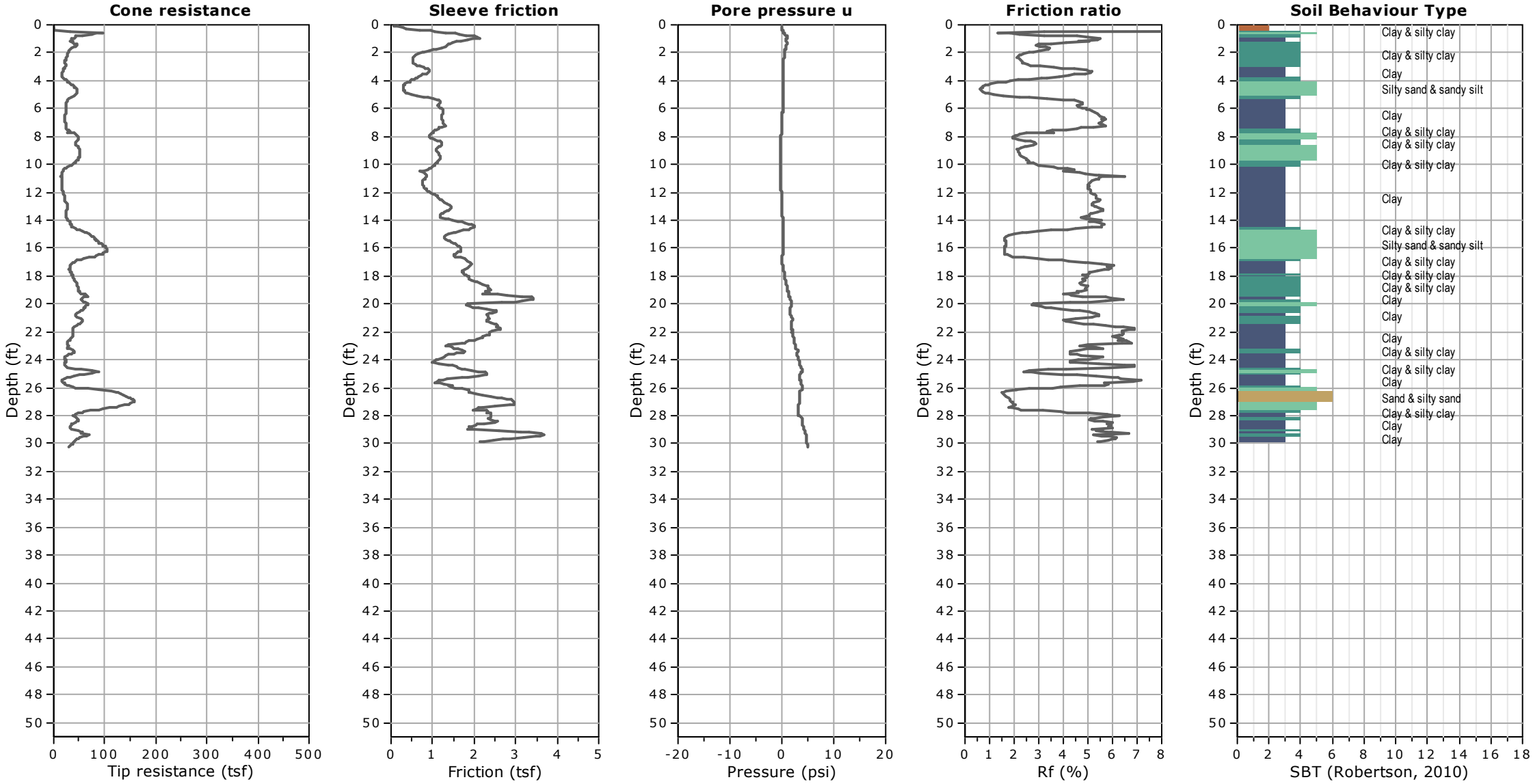

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steve@kehoetesting.com
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Project: **NMG Geotechnical / Sunrise Senior Living Facility**
Location: **Long Beach, CA**

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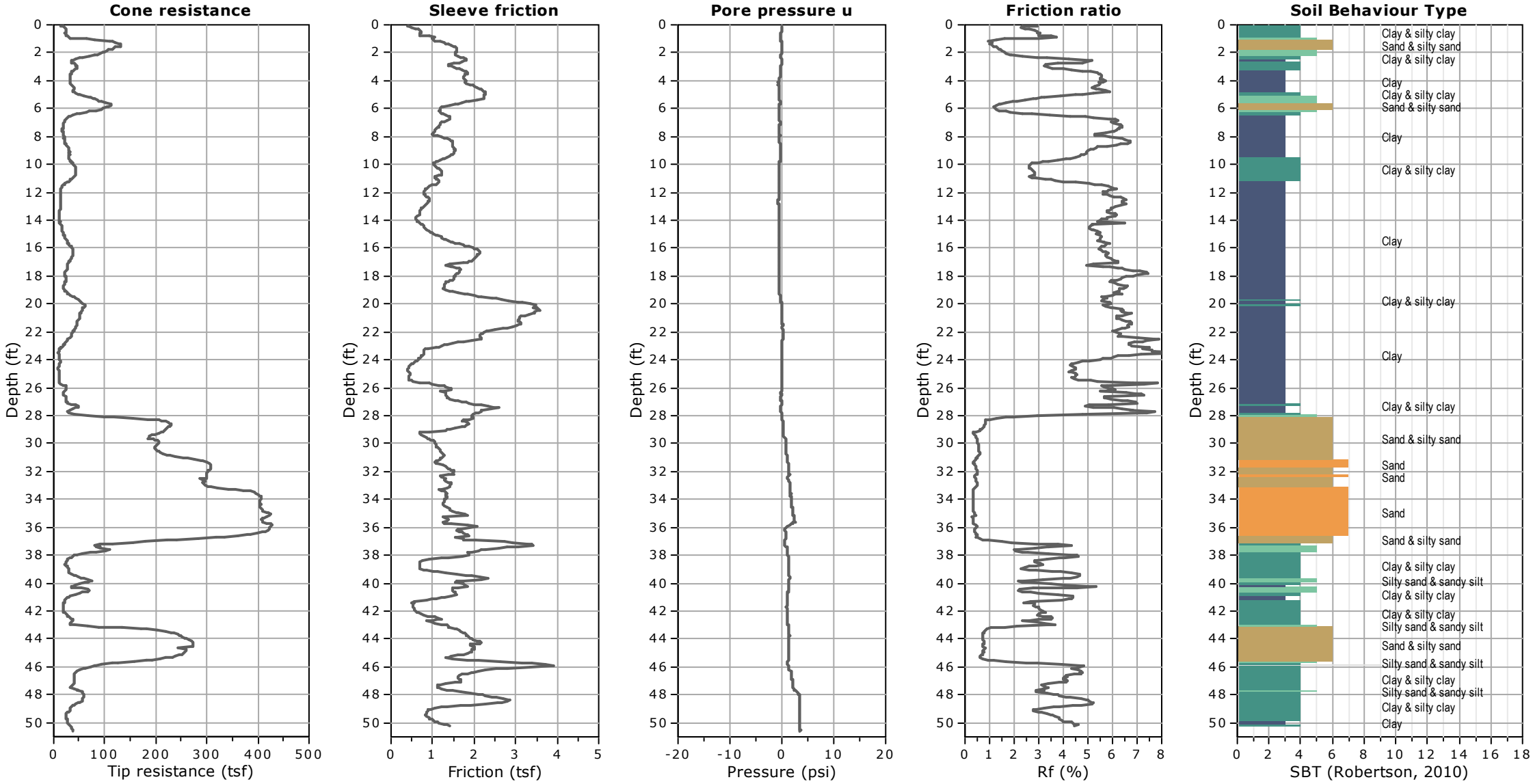
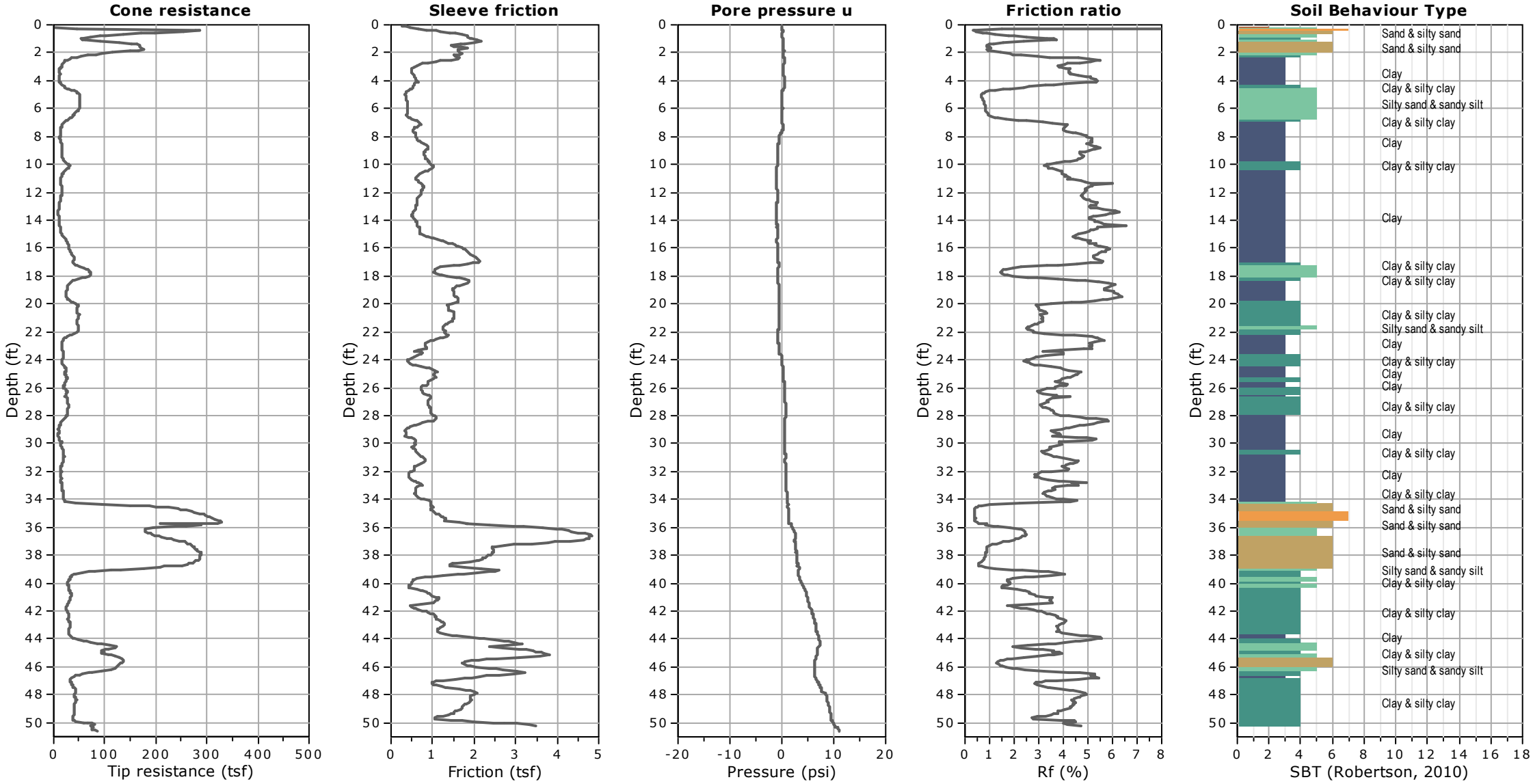


Kehoe Testing and Engineering
714-901-7270
steve@kehoetesting.com
www.kehoetesting.com

Project: **NMG Geotechnical / Sunrise Senior Living Facility**
Location: **Long Beach, CA**

CPT-11
Total depth: 50.62 ft, Date: 10/21/2020



NMG Geotechnical
Sunrise Senior Living Facility
Long Beach, CA

CPT Shear Wave Measurements

Location	Tip Depth (ft)	Geophone Depth (ft)	Travel Distance (ft)	S-Wave Arrival (msec)	S-Wave Velocity from Surface (ft/sec)	Interval S-Wave Velocity (ft/sec)
CPT-1	10.73	9.73	9.93	17.44	570	
	20.01	19.01	19.11	32.00	597	631
	30.09	29.09	29.16	43.12	676	903
	40.12	39.12	39.17	53.08	738	1005
	50.07	49.07	49.11	64.00	767	910

Shear Wave Source Offset - 2 ft

S-Wave Velocity from Surface = Travel Distance/S-Wave Arrival
Interval S-Wave Velocity = (Travel Dist2-Travel Dist1)/(Time2-Time1)

APPENDIX C

LABORATORY TESTING PROGRAM

Soil Classification

Soils encountered within the exploratory borings were initially classified in the field in general accordance with the visual-manual procedures of the Unified Soil Classification System (ASTM D 2487). The samples were re-examined in the laboratory and classifications reviewed and then revised where appropriate. The assigned group symbols are presented on the Exploration Logs provided in Appendix A.

In-Situ Moisture Content and Dry Density

Moisture content and dry density of in-place soil materials were determined in representative strata. Test data are presented on the Exploration Logs provided in Appendix A.

Laboratory Maximum Dry Density

Maximum dry density and optimum moisture content of onsite soils were determined for selected samples in general accordance with Method A of ASTM D 1557. Pertinent test values are given on Table B-1.

Direct Shear

The Coulomb shear strength parameters, angle of internal friction and cohesion, were determined for a bulk sample obtained from one our borings. The tests were performed in general conformance with Test Method ASTM D 3080. The sample was remolded to 90 percent of maximum dry density and at the optimum moisture content. Three specimens were prepared for each test, artificially saturated, and then sheared under varied loads at an appropriate constant rate of strain. Results are graphically presented on Plate B-9.

Soluble Sulfate Content

Chemical analysis was performed on selected samples to determine soluble sulfate content. The tests were performed in accordance with California Test Method No. 417. The test results are included on Table B-1.

Expansion Potential

An Expansion Index test was performed on a selected sample in accordance with ASTM D 4829. The test result and expansion potential are presented on Table B-1.

Atterberg Limits

Atterberg Limits (Liquid Limit, Plastic Limit, and Plasticity Index) were performed in accordance with Test Method ASTM D4318. Pertinent test values are presented within Table B-1.

Consolidation

Consolidation Tests were performed in general conformance with Test Method ASTM D 2435. Axial loads were applied in several increments to a laterally restrained 1-inch-thick sample. Loads were applied in geometric progression by doubling the previous load, and the resulting deformations were recorded at selected time intervals. The test samples were inundated at a selected surcharge loading in order to evaluate the effects of a sudden increase in moisture content. Results of these tests are graphically presented on Plates B-3 to B-8.

Corrosion

Select samples were tested for minimum resistivity and pH in accordance with California Test Method 643. Results of these tests are provided in Table B-1.

Percent Passing the No. 200 Sieve

Percent of material passing the No. 200 sieve was determined on selected samples to verify visual classifications performed in the field. These tests were performed in accordance with ASTM D 1140. Test results are presented on Table B-1.

Particle-Size Analyses

Particle-size analyses were performed on selected samples in accordance with ASTM D 422. The results are presented graphically on the attached Plates B-1 and B-2.

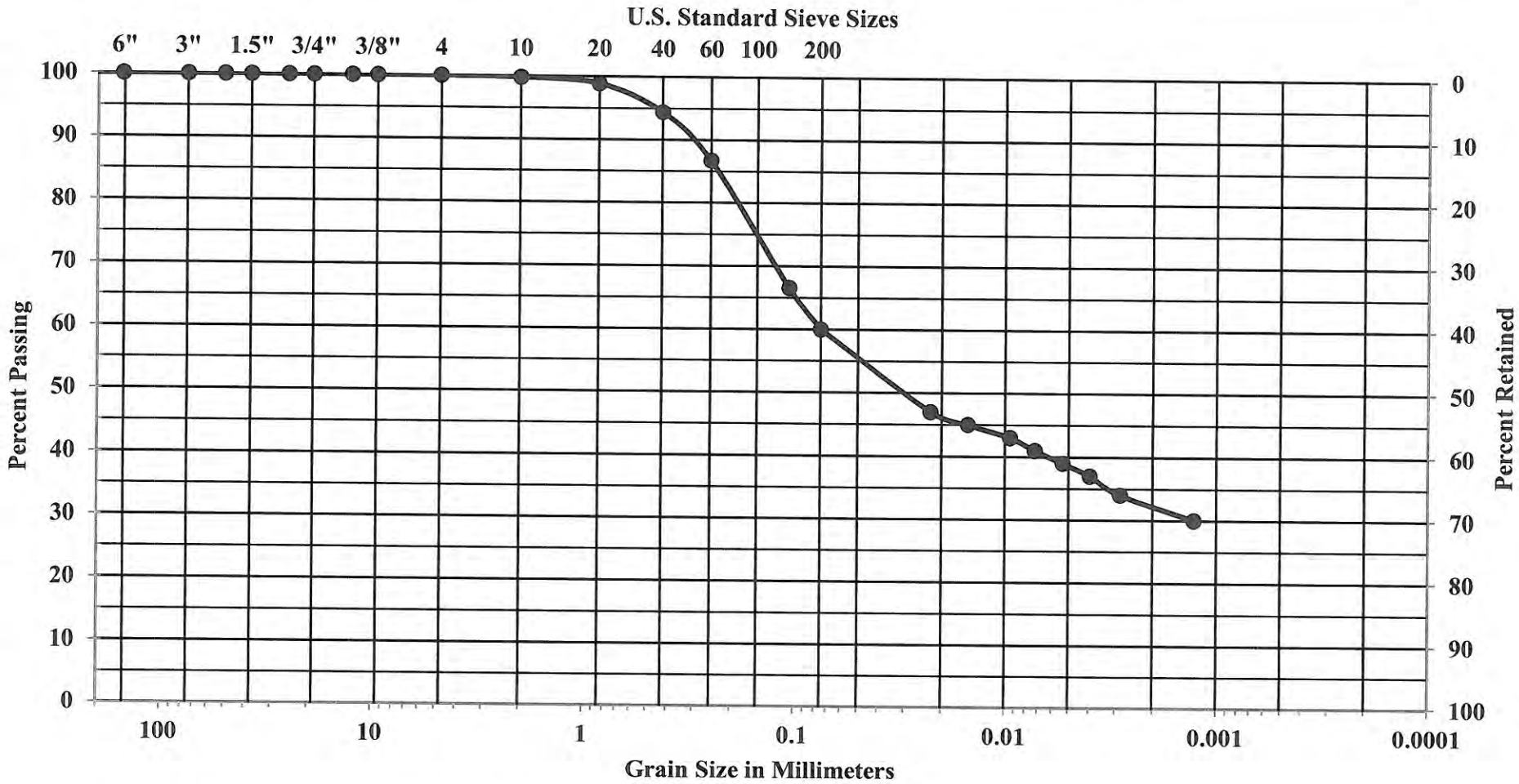
TABLE B-1
SUMMARY OF LABORATORY TEST RESULTS

Boring No.	Sample Depth (ft.)	Soil Description	Test Results	
B-2	0-5	Lean Clay (CL)	Maximum Dry Density: Optimum Moisture Content: Liquid Limit: Plasticity Index: pH: Resistivity: Chloride: Expansion Index: Expansion Potential: Soluble Sulfate Content:	129.0 pcf 10.5 % 33 13 7.8 120 ohm-cm 24.2 ppm 33 Low 0.009
B-2	30	Sand (SP)	Percent Passing No. 200 Sieve	4.8
B-2	45	Clay (CL)	Liquid Limit: Plasticity Index:	35.0 13.0

Note: Additional laboratory test results are provided on the boring logs in Appendix A.

GRAIN SIZE DISTRIBUTION

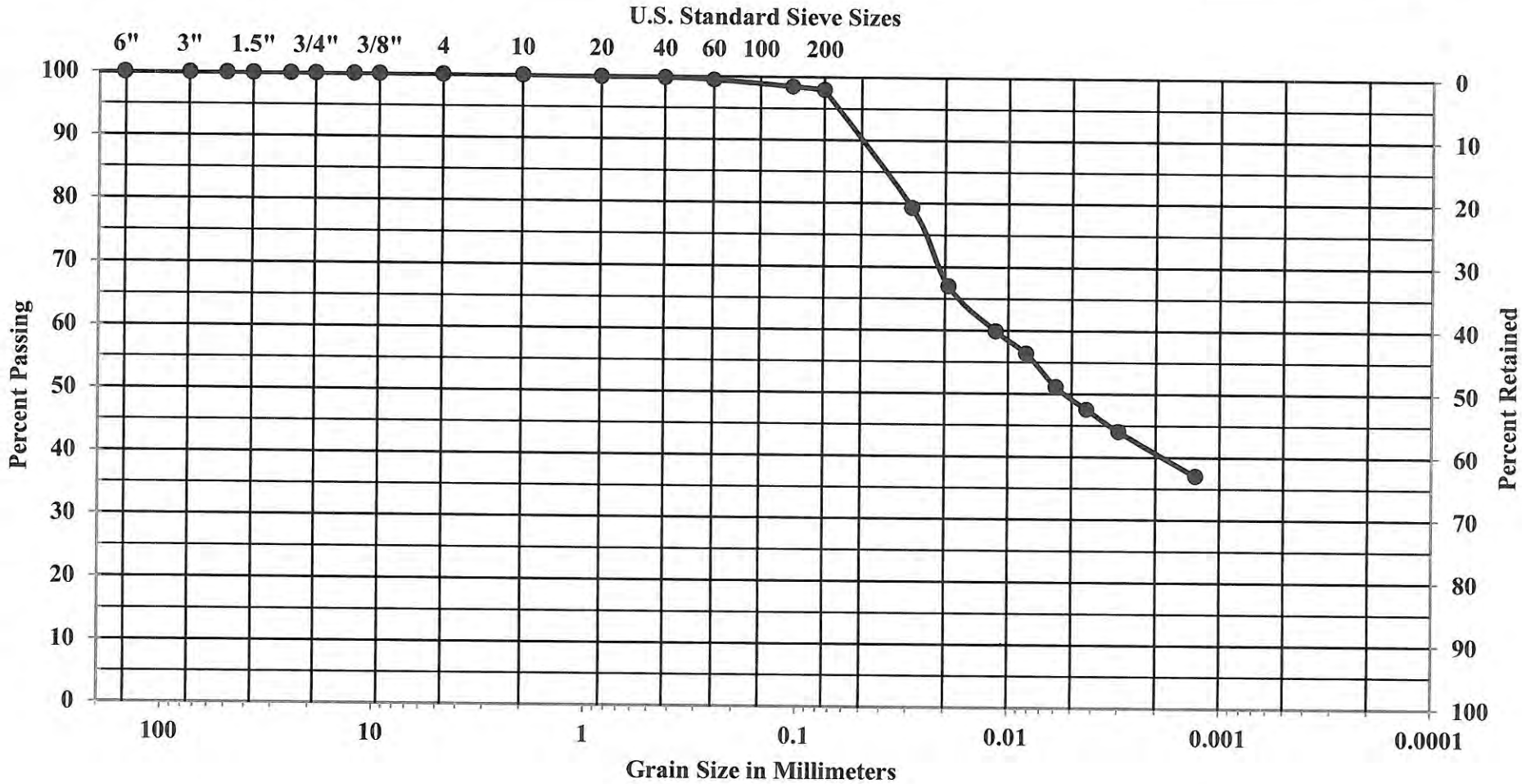
COBBLES	GRAVEL		SAND			SILT AND CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	



Job Number	Location	Depth	Description
2816.00	B-2	10	Sandy Silty Clay (CL-ML)

GRAIN SIZE DISTRIBUTION

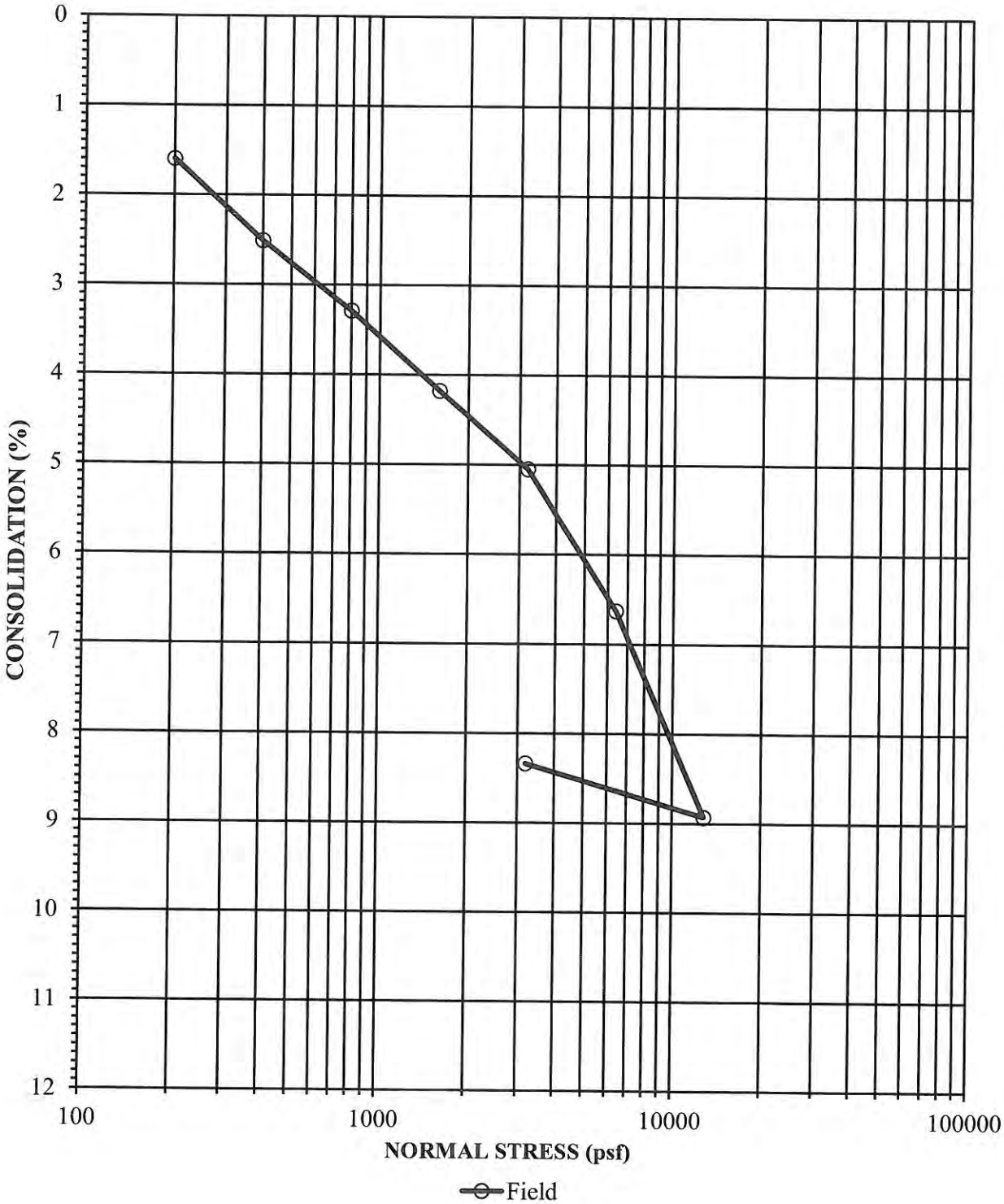
COBBLES	GRAVEL		SAND			SILT AND CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	



Job Number	Location	Depth	Description
2816.00	B-2	20	Clay (CL)

Albus-Keefe & Associates, Inc.

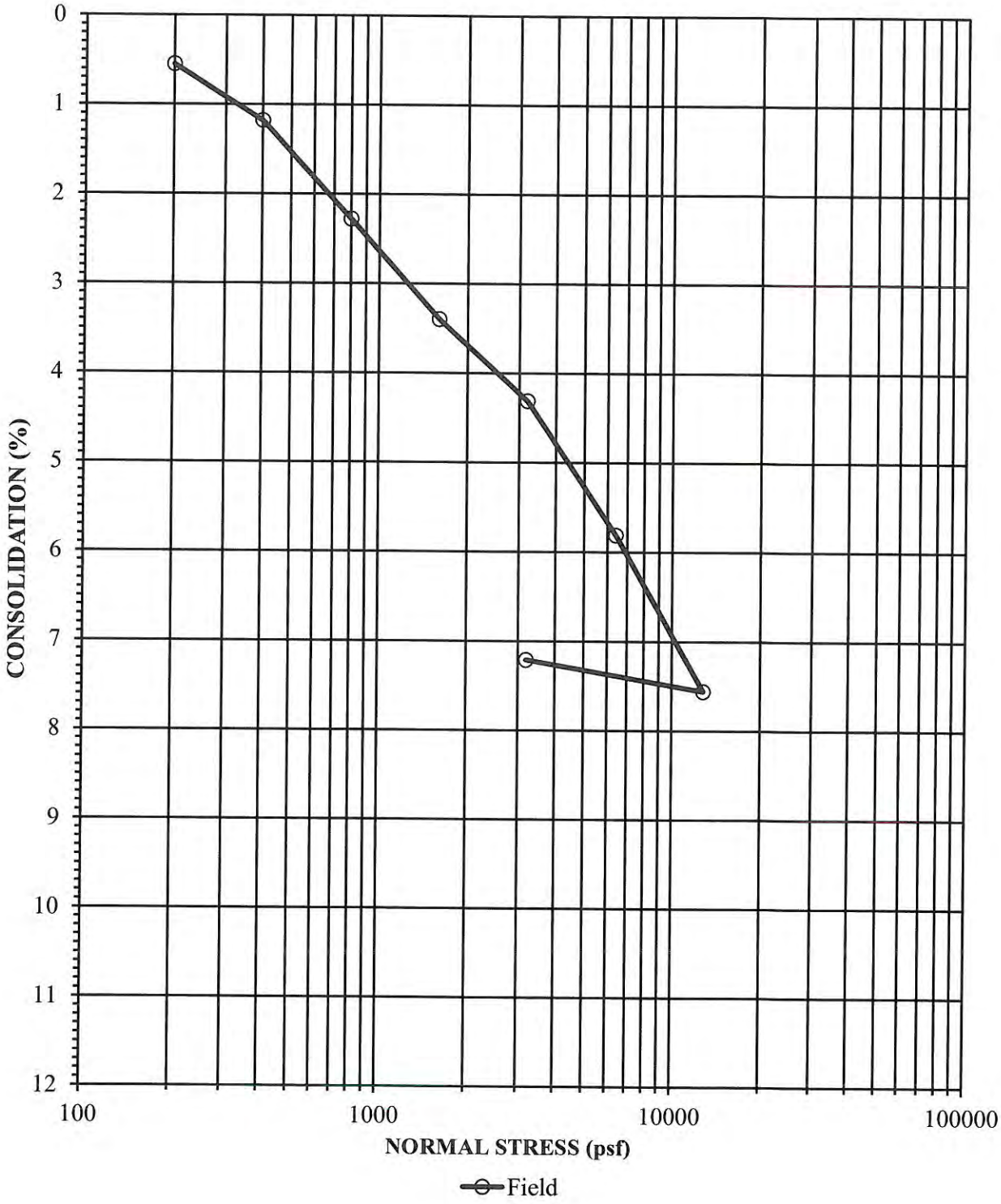
CONSOLIDATION



Job Number	Location	Depth	Description
2816.00	B-2	2	Clay (CL)

Initial Dry Density (pcf)	Initial Moisture Content (%)	Final Moisture Concent (%)
103.6	19.9	18

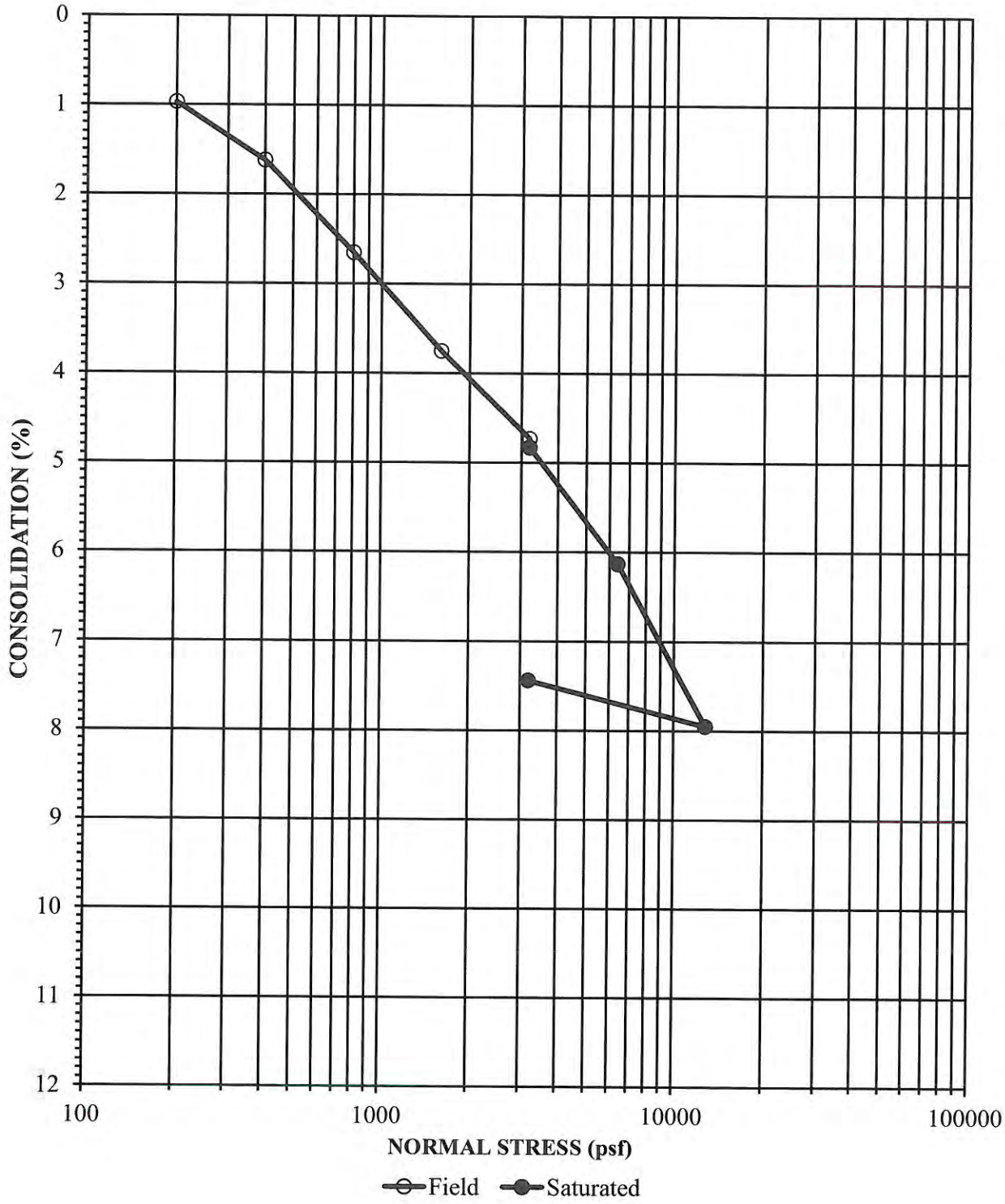
CONSOLIDATION



Job Number	Location	Depth	Description
2816.00	B-2	4	Clay (CL)

Initial Dry Density (pcf)	Initial Moisture Content (%)	Final Moisture Concent (%)
100.9	16.9	13.2

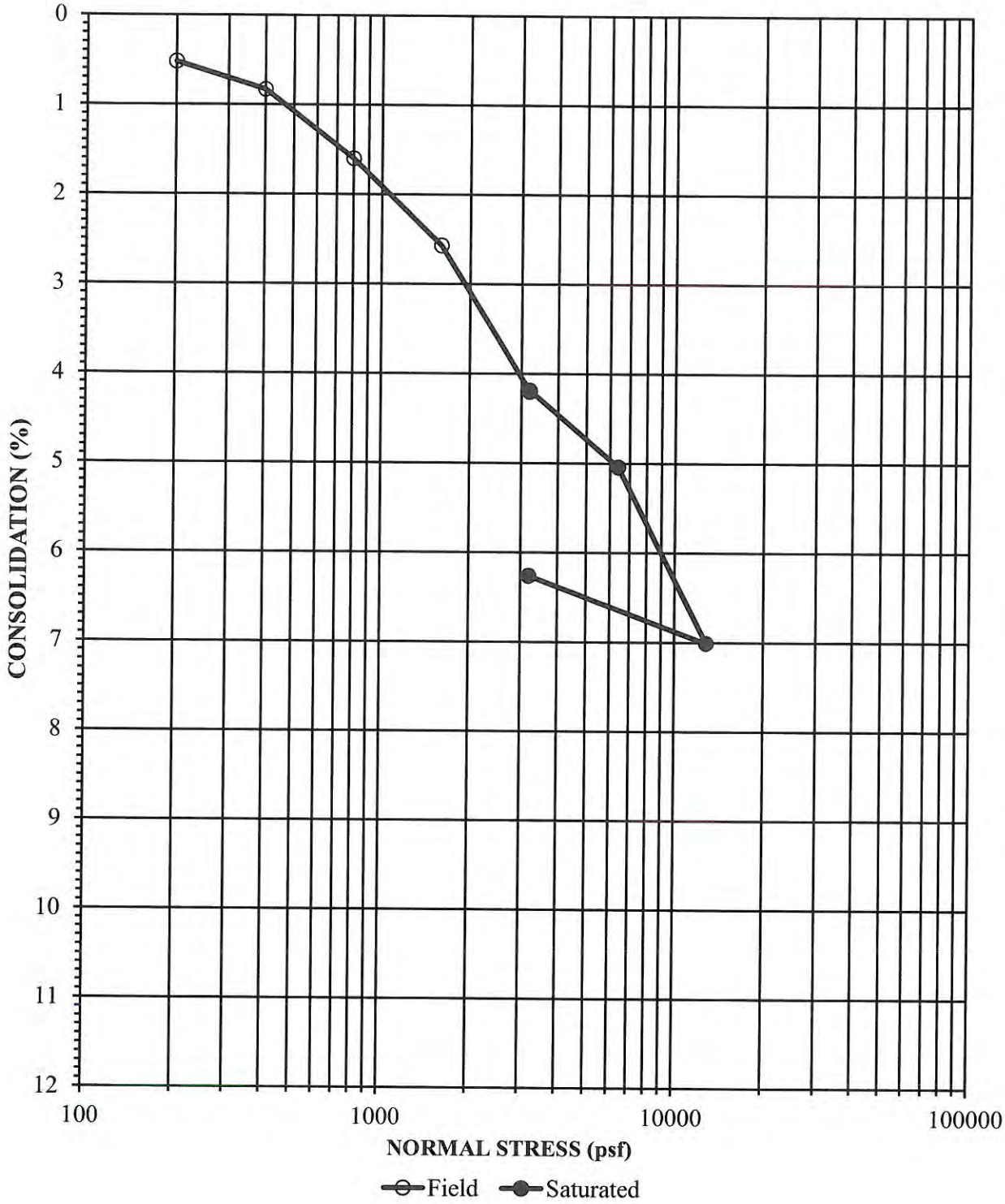
CONSOLIDATION



Job Number	Location	Depth	Description
2816.00	B-3	6	Silt (ML)

Initial Dry Density (pcf)	Initial Moisture Content (%)	Final Moisture Concent (%)
103.4	20.5	20.3

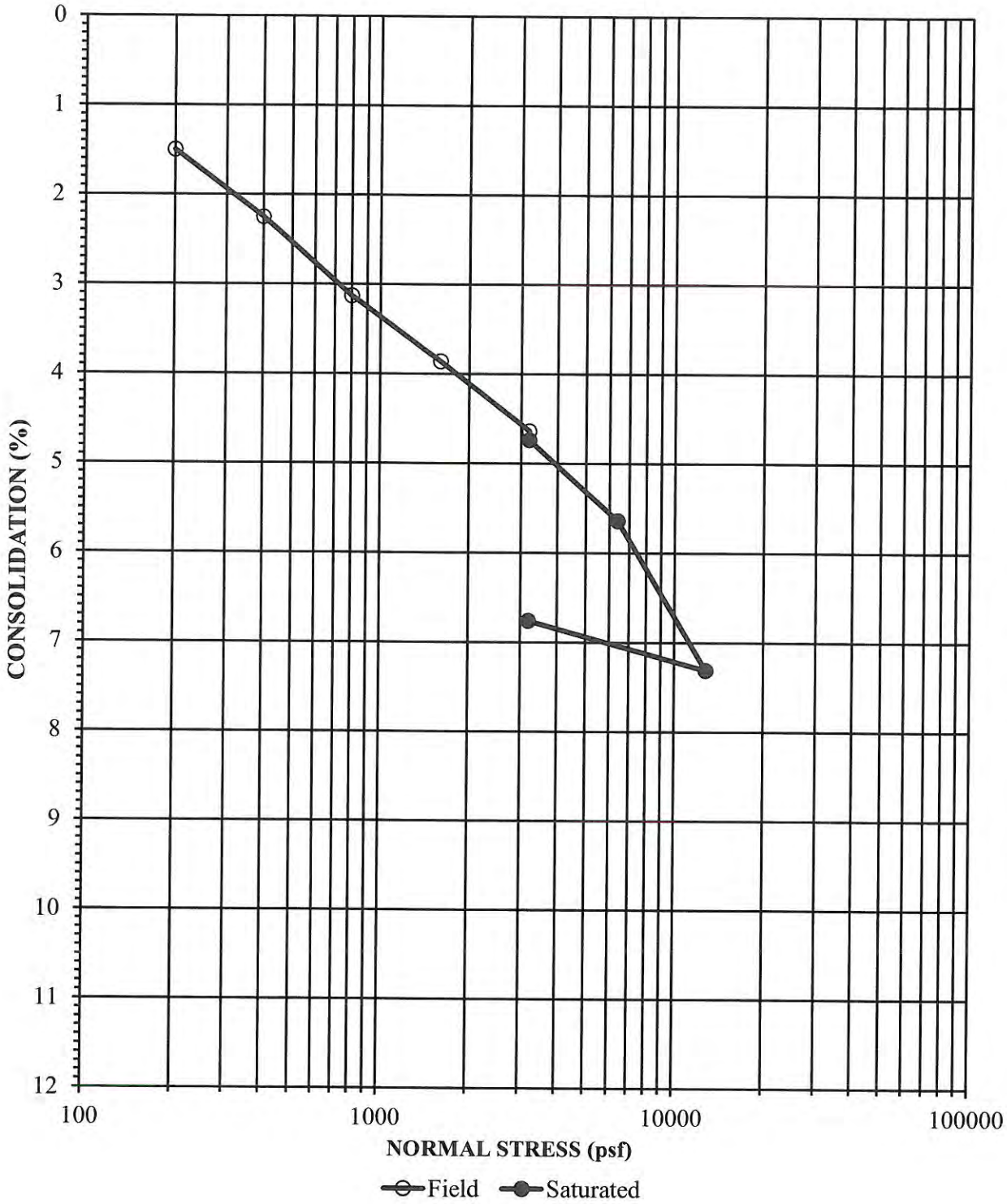
CONSOLIDATION



Job Number	Location	Depth	Description
2816.00	B-4	4	Silty Sand (SM)

Initial Dry Density (pcf)	Initial Moisture Content (%)	Final Moisture Concent (%)
101.1	22.2	22.6

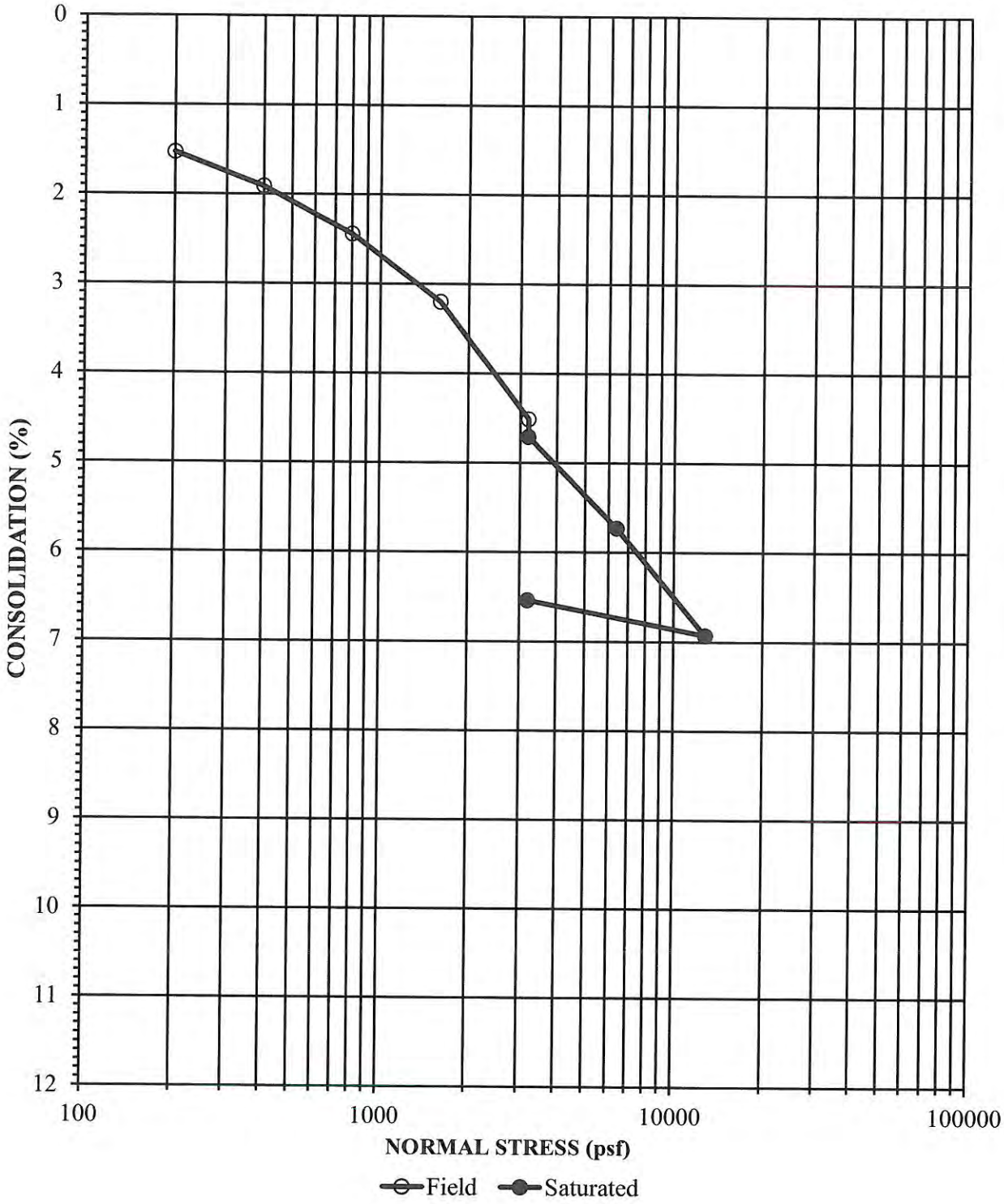
CONSOLIDATION



Job Number	Location	Depth	Description
2816.00	B-5	4	Silt (ML)

Initial Dry Density (pcf)	Initial Moisture Content (%)	Final Moisture Concent (%)
107.3	18.8	18.6

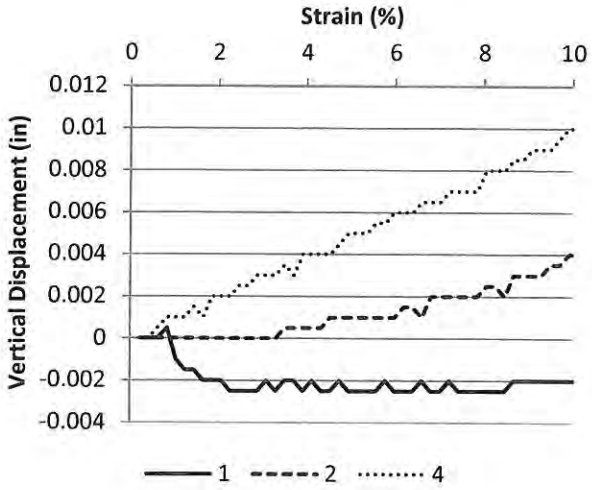
CONSOLIDATION

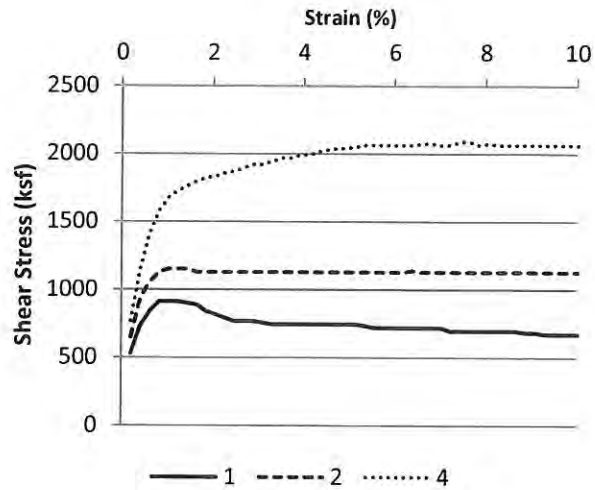


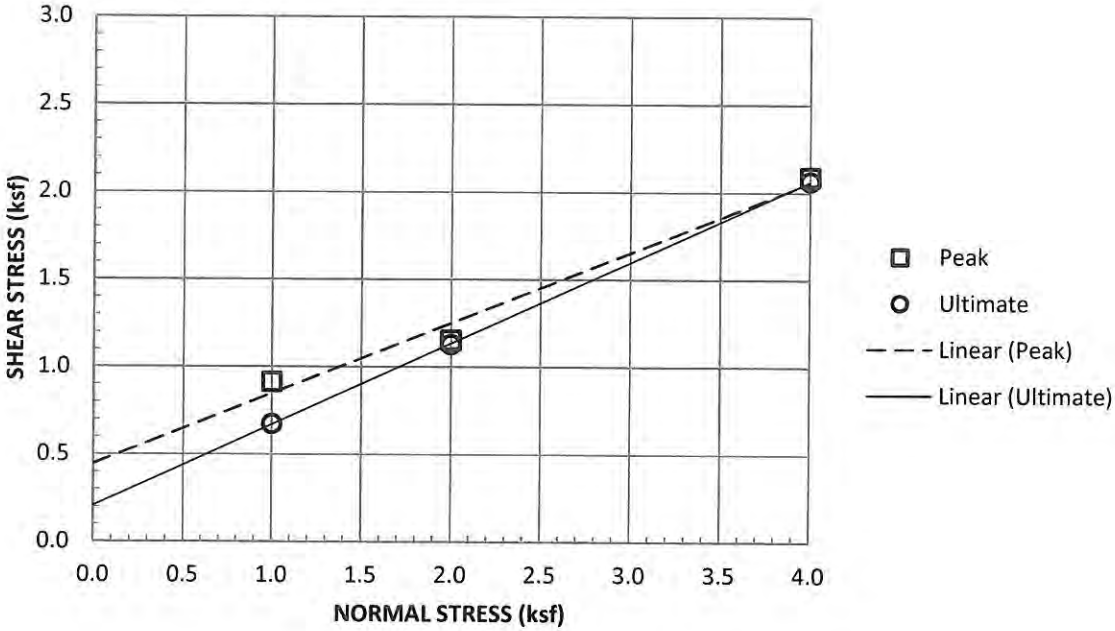
Job Number	Location	Depth	Description
2816.00	B-6	6	Sandy Clay (CL)

Initial Dry Density (pcf)	Initial Moisture Content (%)	Final Moisture Concent (%)
107.2	14.4	17.5

DIRECT SHEAR







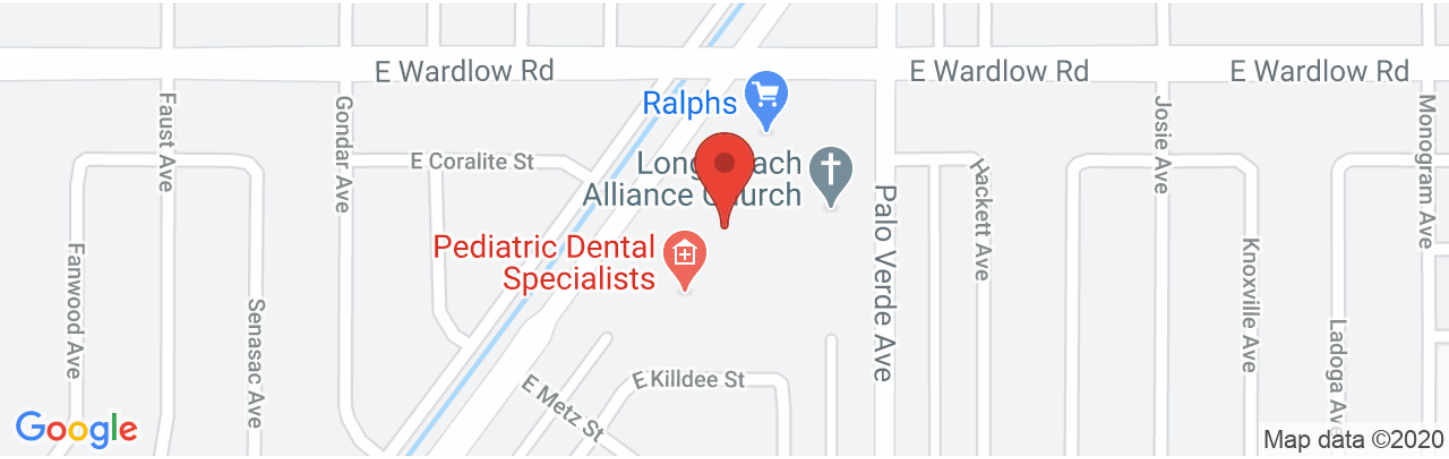
Sample Type:	Remolded 90% of 129 @ 10.5%, Saturated		
Normal Stress (ksf)	1	2	4
Peak Shear Stress (ksf)	0.912	1.152	2.088
Peak Displacement (in)	0.003	0.004	0.01
Ultimate Shear Stress (ksf)	0.672	1.128	2.064
Ultimate Displacement (in)	0.25	0.25	0.25
Initial Dry Density (pcf)	116.1	116.1	116.1
Initial Moisture Content (%)	10.5	10.5	10.5
Final Moisture Content (%)	13.8	13.9	13.8
Strain Rate (in/min)	.005		

Job Number	Location	Depth	Description
2816.00	B-2	0-5	Clay with gravel (CL)

APPENDIX D

Sunrise Long Beach

Latitude, Longitude: 33.817501, -118.109357



Date	9/25/2020, 2:55:33 PM
Design Code Reference Document	ASCE7-16
Risk Category	III
Site Class	D - Stiff Soil

Type	Value	Description
S_S	1.544	MCE_R ground motion. (for 0.2 second period)
S_1	0.553	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.544	Site-modified spectral acceleration value
S_{M1}	null -See Section 11.4.8	Site-modified spectral acceleration value
S_{DS}	1.03	Numeric seismic design value at 0.2 second SA
S_{D1}	null -See Section 11.4.8	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	null -See Section 11.4.8	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	null -See Section 11.4.8	Site amplification factor at 1.0 second
PGA	0.666	MCE_G peak ground acceleration
F_{PGA}	1.1	Site amplification factor at PGA
PGA_M	0.732	Site modified peak ground acceleration
T_L	8	Long-period transition period in seconds
SsRT	1.544	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	1.702	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	2.451	Factored deterministic acceleration value. (0.2 second)
S1RT	0.553	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.61	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.836	Factored deterministic acceleration value. (1.0 second)
PGAd	0.995	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.907	Mapped value of the risk coefficient at short periods
C_{R1}	0.907	Mapped value of the risk coefficient at a period of 1 s

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U.S. Geological Survey - Earthquake Hazards Program

Unified Hazard Tool

Please do not use this tool to obtain ground motion parameter values for the design code reference documents covered by the U.S. Seismic Design Maps web tools (e.g., the International Building Code and the ASCE 7 or 41 Standard). The values returned by the two applications are not identical.

Input

Edition

Dynamic: Conterminous U.S. 2014 (u…

Spectral Period

Peak Ground Acceleration

Latitude

Decimal degrees

33.817501

Time Horizon

Return period in years

2475

Longitude

Decimal degrees, negative values for western longitudes

-118.109357

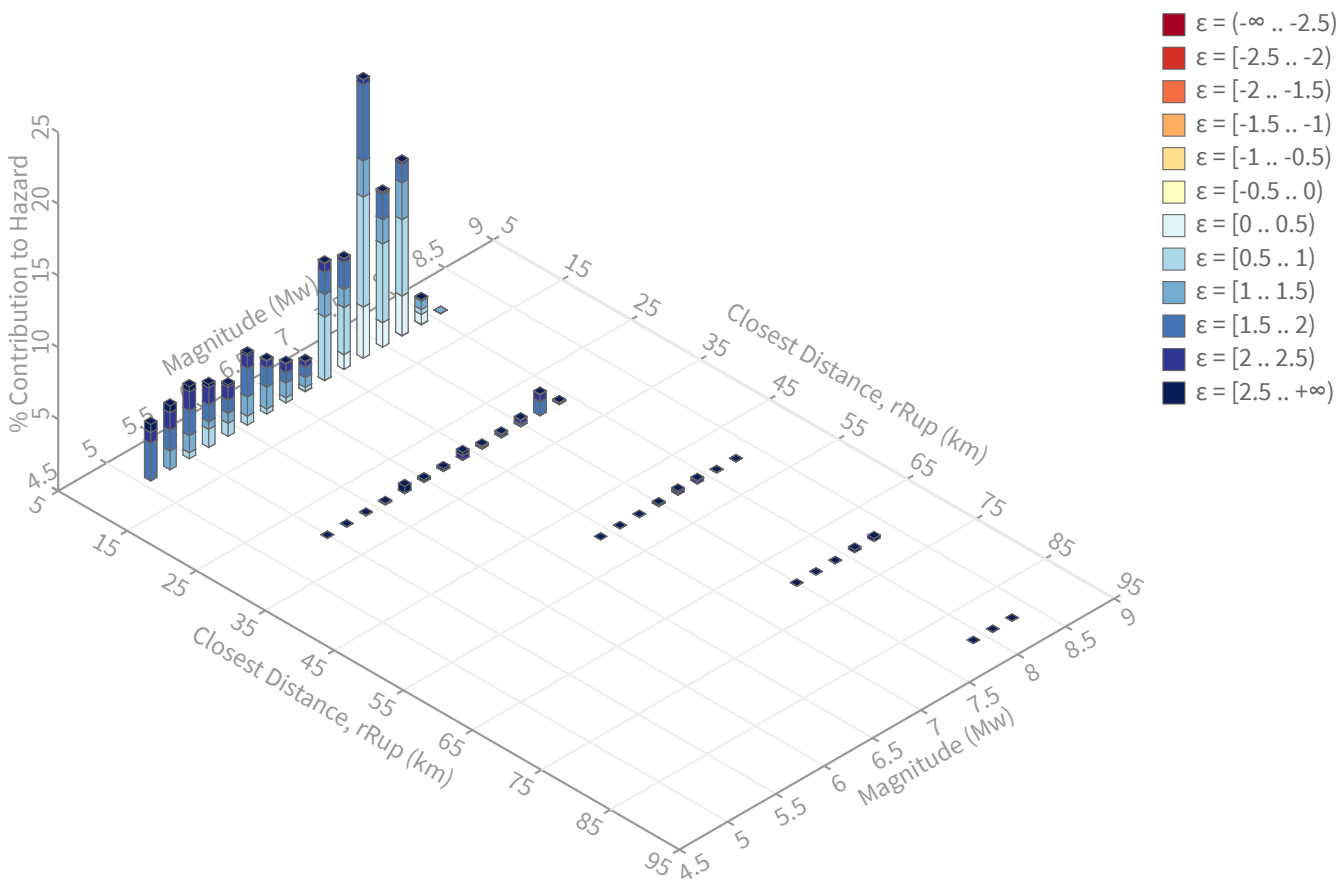
Site Class

259 m/s (Site class D)

Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 2475 yrs
Exceedance rate: 0.0004040404 yr^{-1}
PGA ground motion: 0.72716249 g

Recovered targets

Return period: 2902.9493 yrs
Exceedance rate: 0.00034447725 yr^{-1}

Totals

Binned: 100 %
Residual: 0 %
Trace: 0.04 %

Mean (over all sources)

m: 6.82
r: 10.15 km
ε_0: 1.28 σ

Mode (largest m-r bin)

m: 7.3
r: 10.03 km
ε_0: 0.98 σ
Contribution: 19.4 %

Mode (largest m-r-ε_0 bin)

m: 7.3
r: 7.54 km
ε_0: 0.64 σ
Contribution: 7.67 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km
m: min = 4.4, max = 9.4, Δ = 0.2
ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)
ε1: [-2.5 .. -2.0)
ε2: [-2.0 .. -1.5)
ε3: [-1.5 .. -1.0)
ε4: [-1.0 .. -0.5)
ε5: [-0.5 .. 0.0)
ε6: [0.0 .. 0.5)
ε7: [0.5 .. 1.0)
ε8: [1.0 .. 1.5)
ε9: [1.5 .. 2.0)
ε10: [2.0 .. 2.5)
ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set ↳ Source	Type	r	m	ε_0	lon	lat	az	%
UC33brAvg_FM32	System							34.09
Compton [0]		8.42	7.31	0.57	118.141°W	33.757°N	203.71	10.05
Newport-Inglewood alt 2 [3]		4.98	7.44	0.78	118.140°W	33.783°N	217.01	8.47
Palos Verdes [10]		15.58	7.40	1.73	118.253°W	33.746°N	239.11	3.92
Puente Hills (Coyote Hills) [1]		12.97	7.30	1.52	118.044°W	33.915°N	29.05	2.74
Compton [1]		8.49	7.20	0.61	118.161°W	33.764°N	218.82	1.40
Puente Hills (Santa Fe Springs) [1]		13.10	7.02	1.70	118.134°W	33.928°N	349.64	1.06
UC33brAvg_FM31	System							33.79
Newport-Inglewood alt 1 [3]		5.04	7.46	0.76	118.141°W	33.783°N	218.13	11.29
Compton [0]		8.42	7.25	0.59	118.141°W	33.757°N	203.71	9.82
Palos Verdes [10]		15.58	7.27	1.79	118.253°W	33.746°N	239.11	3.97
Puente Hills [2]		16.59	7.39	1.65	118.062°W	33.952°N	16.33	1.86
Compton [1]		8.49	7.15	0.62	118.161°W	33.764°N	218.82	1.07
UC33brAvg_FM31 (opt)	Grid							16.24
PointSourceFinite: -118.109, 33.840		5.68	5.62	1.34	118.109°W	33.840°N	0.00	3.98
PointSourceFinite: -118.109, 33.840		5.68	5.62	1.34	118.109°W	33.840°N	0.00	3.98
PointSourceFinite: -118.109, 33.894		9.35	5.77	1.84	118.109°W	33.894°N	0.00	1.41
PointSourceFinite: -118.109, 33.894		9.35	5.77	1.84	118.109°W	33.894°N	0.00	1.41
UC33brAvg_FM32 (opt)	Grid							15.88
PointSourceFinite: -118.109, 33.840		5.68	5.62	1.34	118.109°W	33.840°N	0.00	3.75
PointSourceFinite: -118.109, 33.840		5.68	5.62	1.34	118.109°W	33.840°N	0.00	3.75
PointSourceFinite: -118.109, 33.894		9.36	5.77	1.84	118.109°W	33.894°N	0.00	1.34
PointSourceFinite: -118.109, 33.894		9.36	5.77	1.84	118.109°W	33.894°N	0.00	1.34

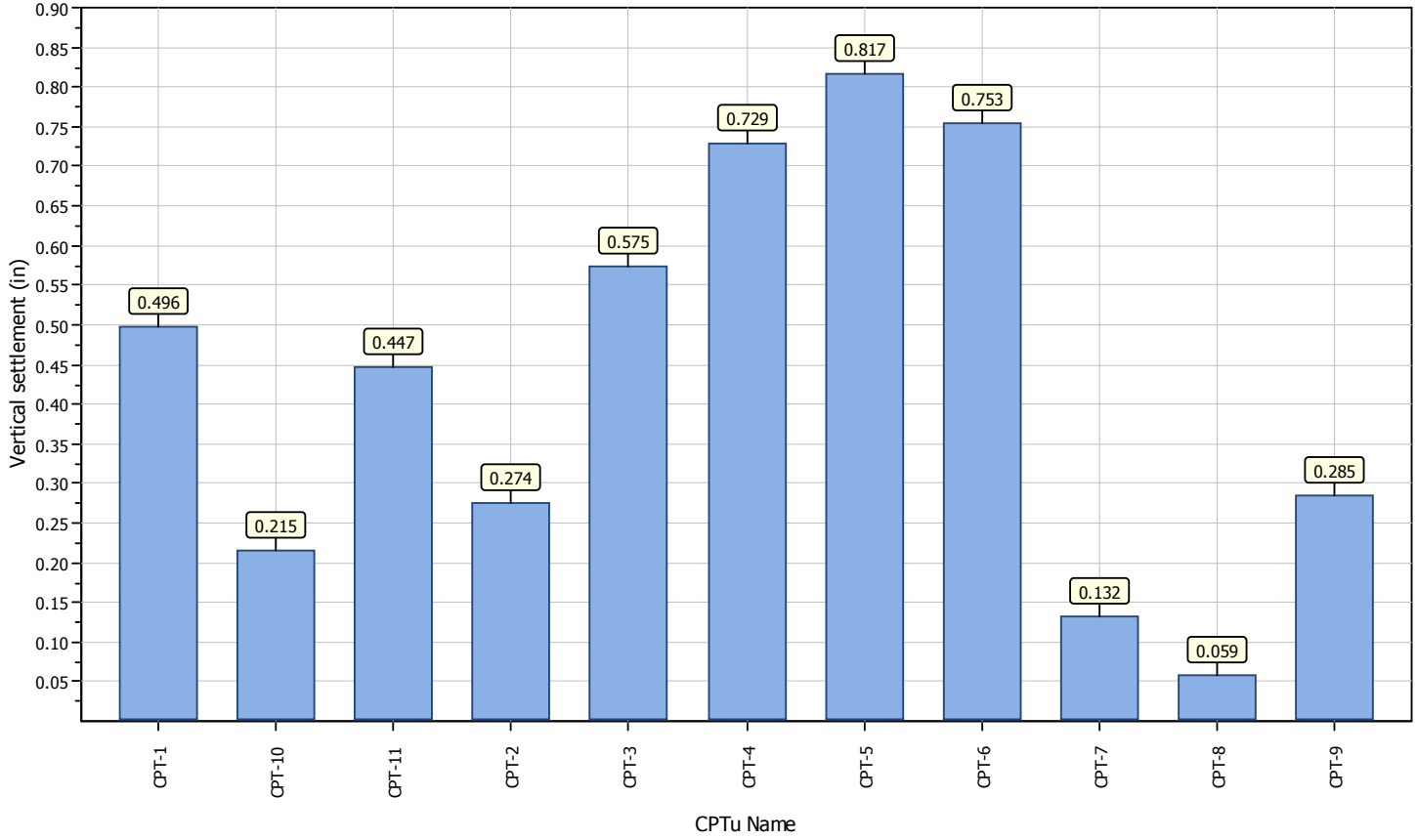
APPENDIX E

NMG Geotechnical, Inc.
17991 Fitch
Irvine, CA 92614

Project title : Sunrise Senior Living/Long Beach

Location : Long Beach, CA

Overall vertical settlements report



NMG Geotechnical, Inc.
17991 Fitch
Irvine, CA 92614

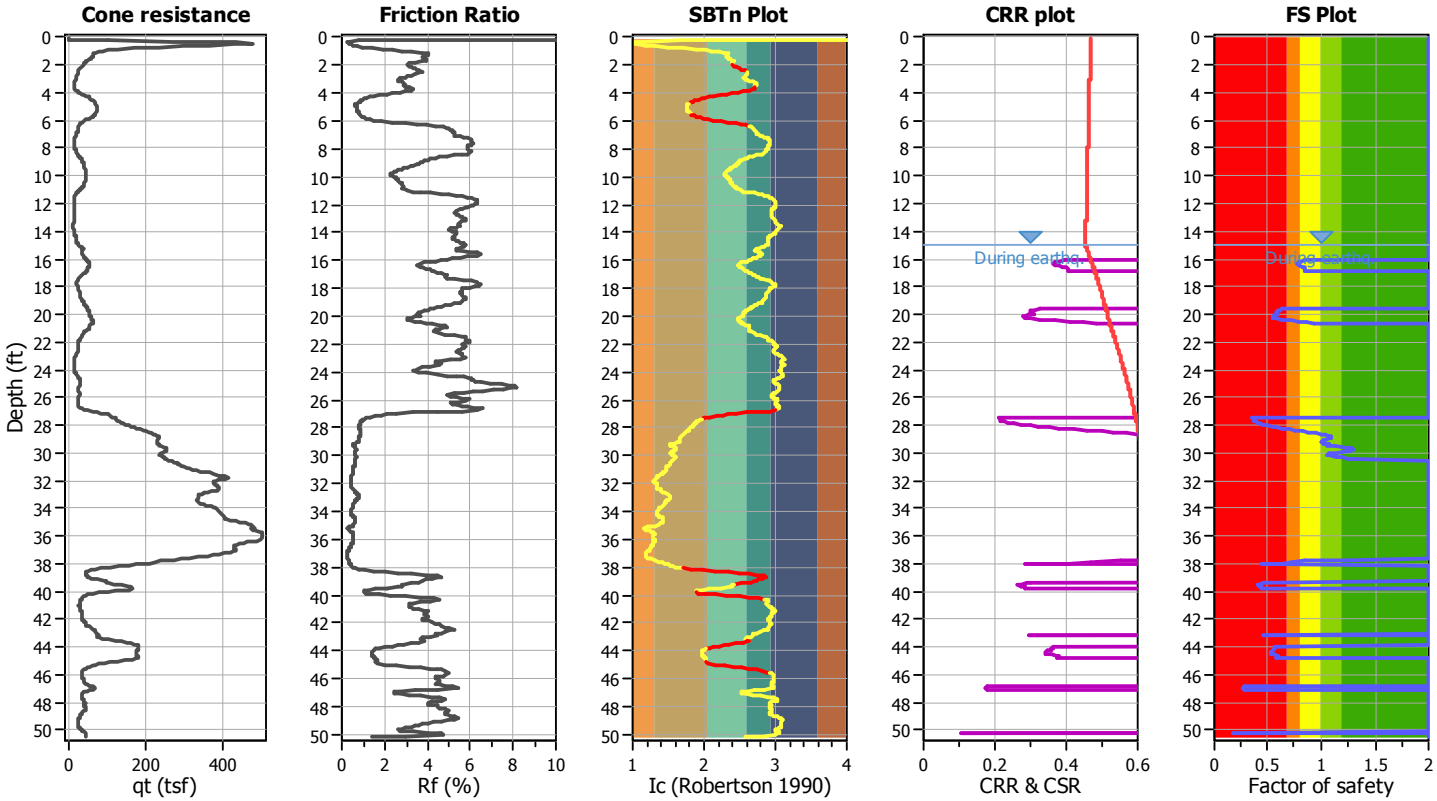
LIQUEFACTION ANALYSIS REPORT

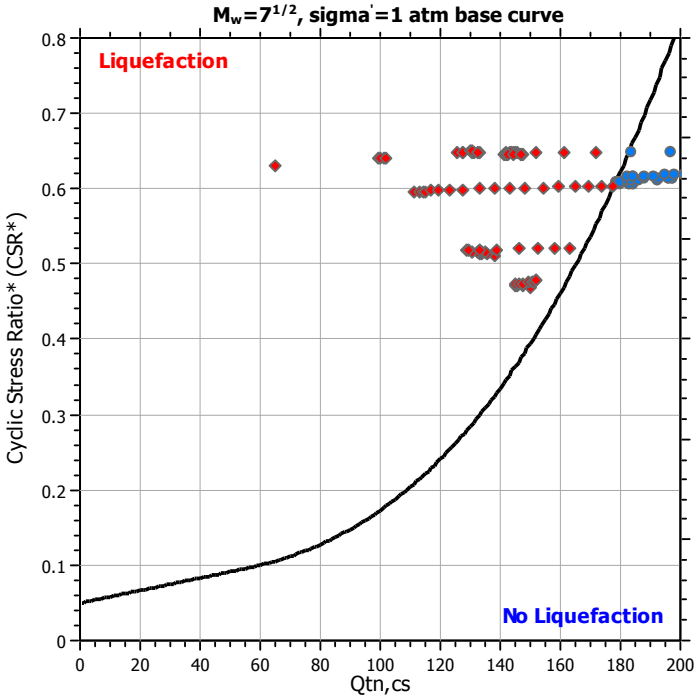
Project title : Sunrise Senior Living/Long Beach **Location : Long Beach, CA**

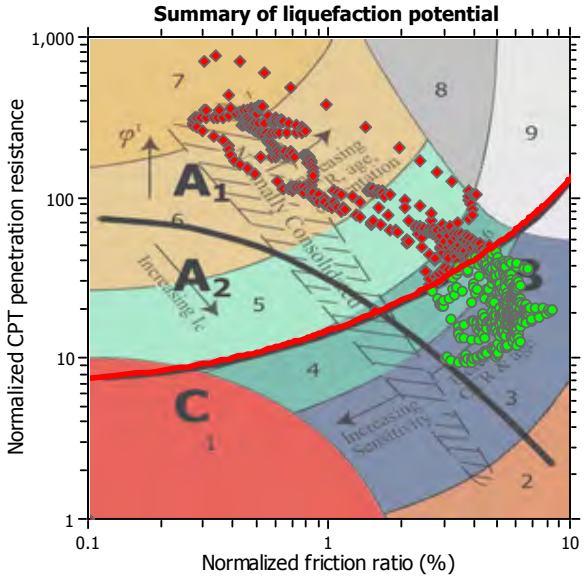
CPT file : CPT-1

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	22.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	15.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.46	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.73	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

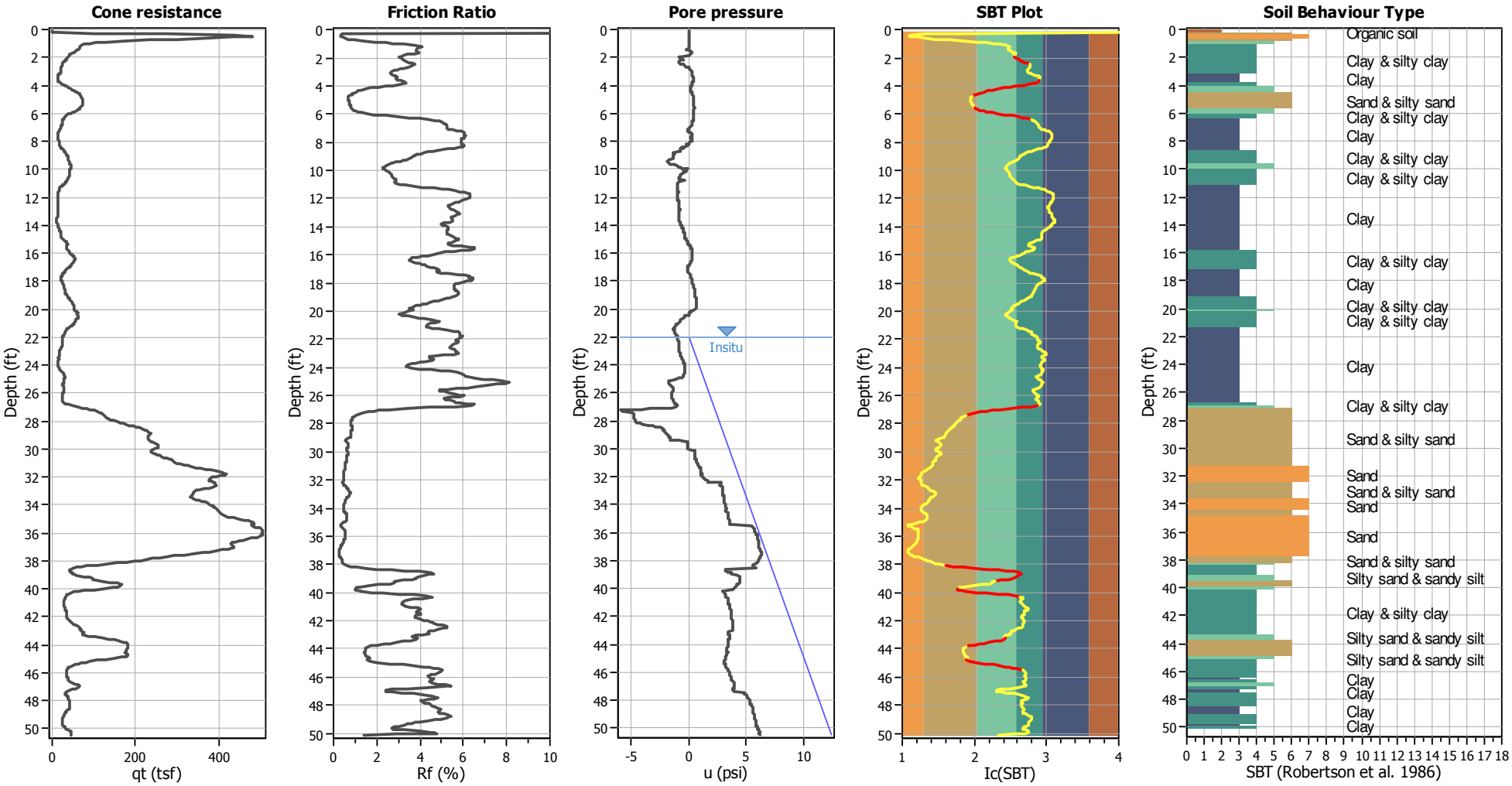






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



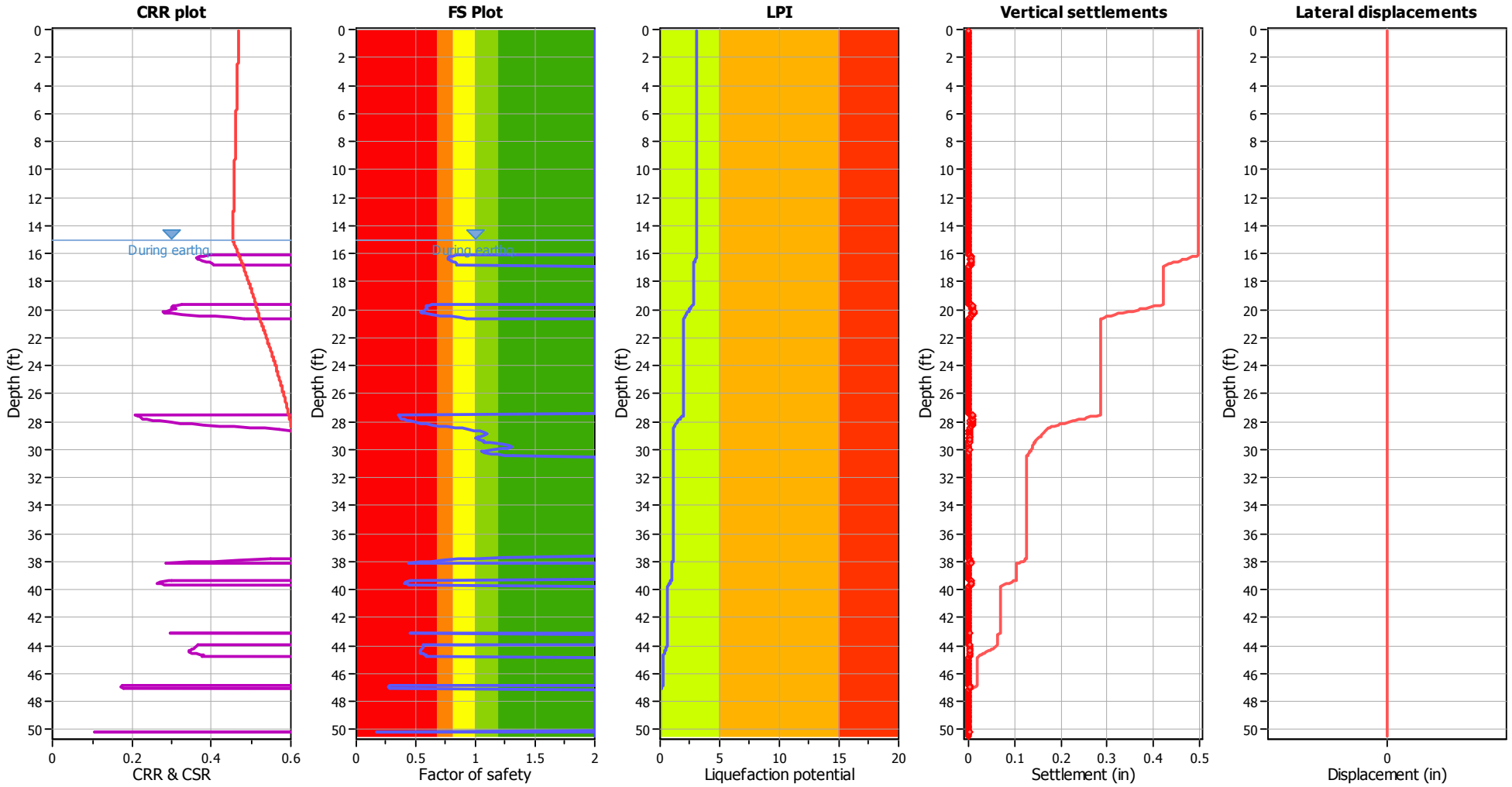
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

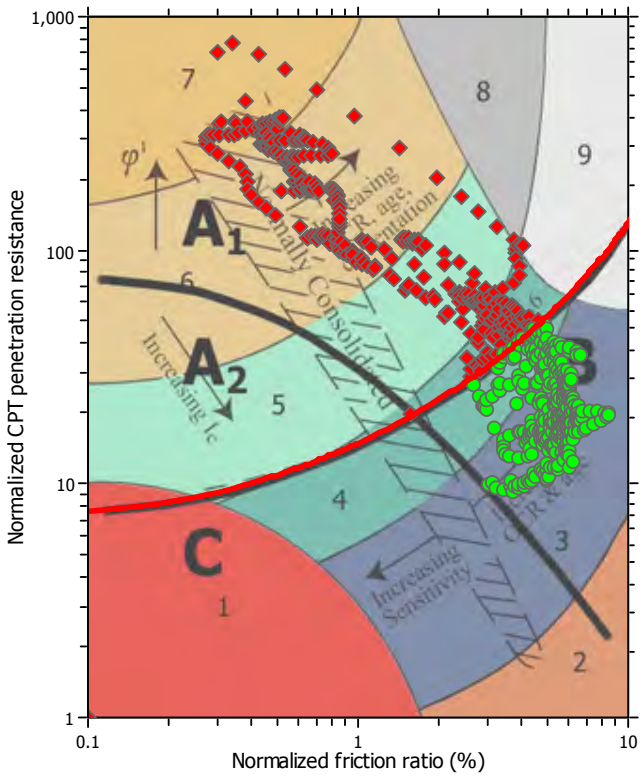
F.S. color scheme

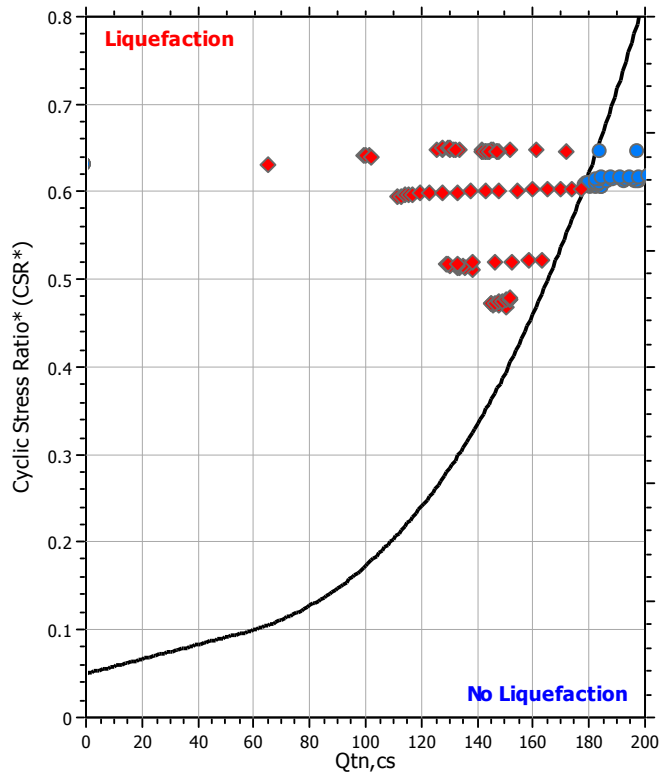
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

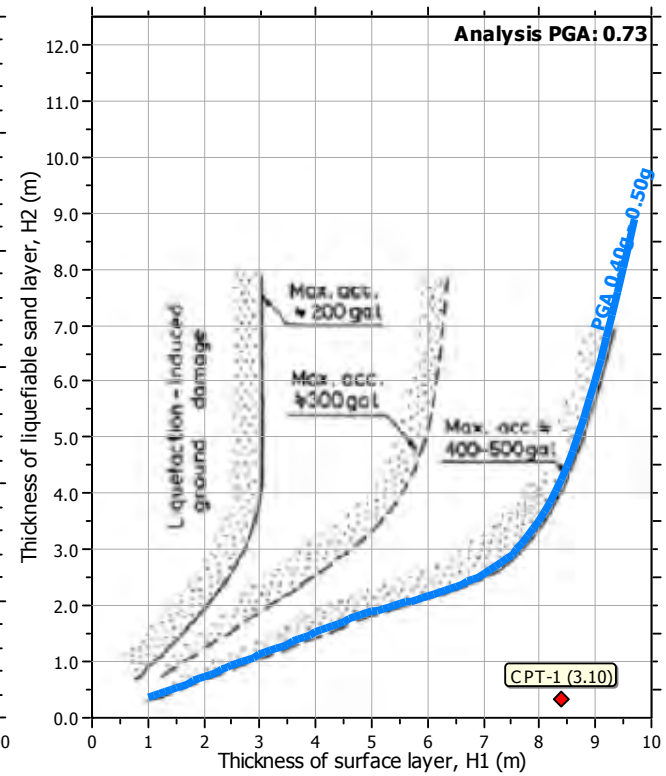
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots







Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

NMG Geotechnical, Inc.
17991 Fitch
Irvine, CA 92614

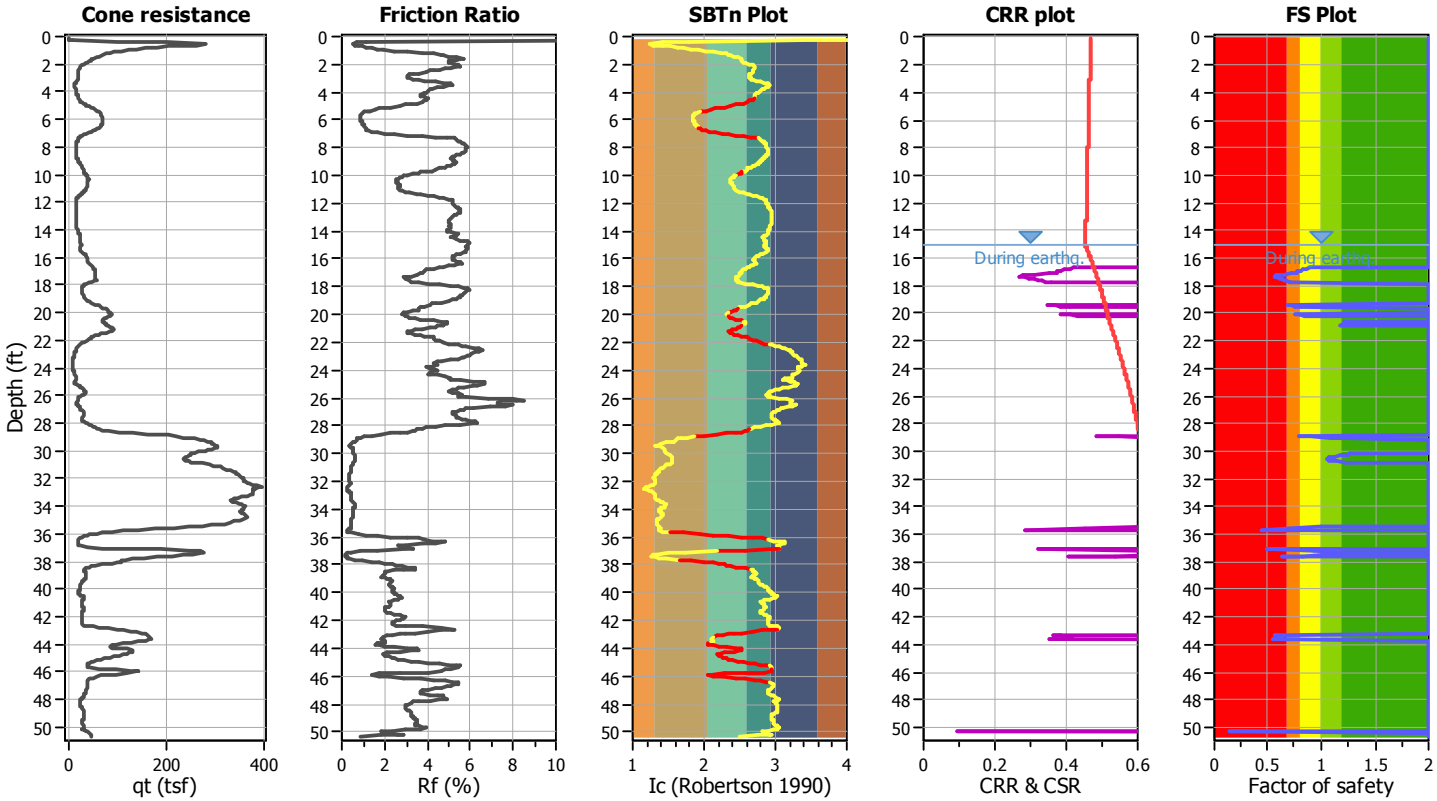
LIQUEFACTION ANALYSIS REPORT

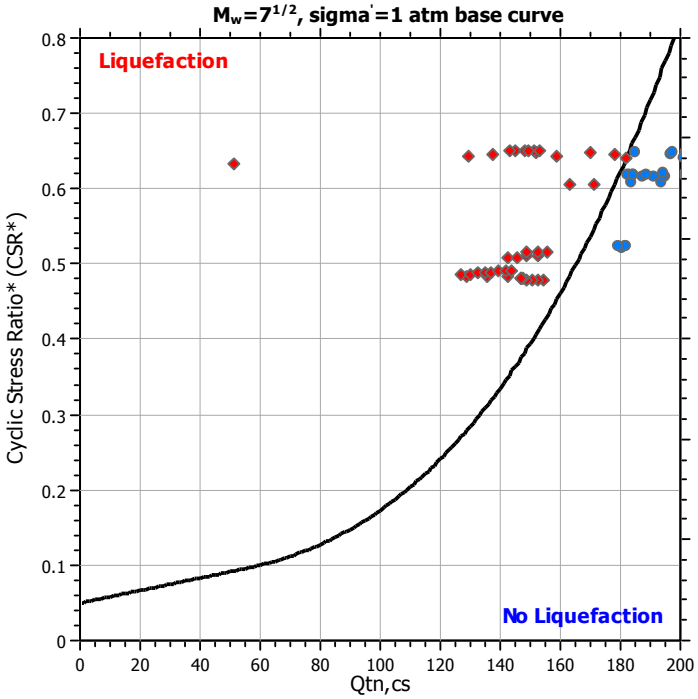
Project title : Sunrise Senior Living/Long Beach **Location : Long Beach, CA**

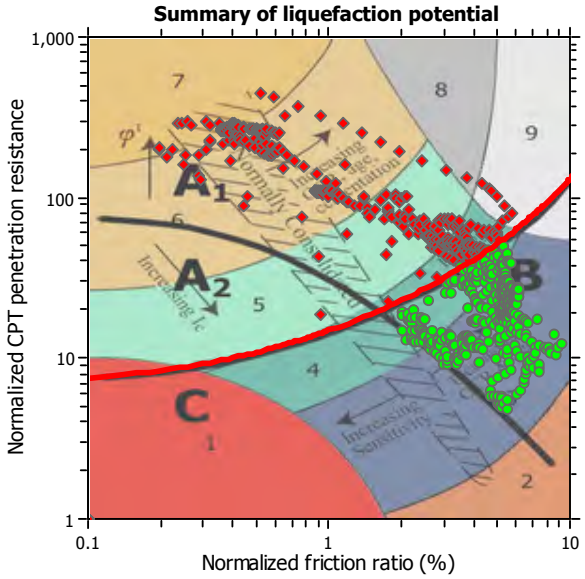
CPT file : CPT-2

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	22.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	15.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.46	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.73	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

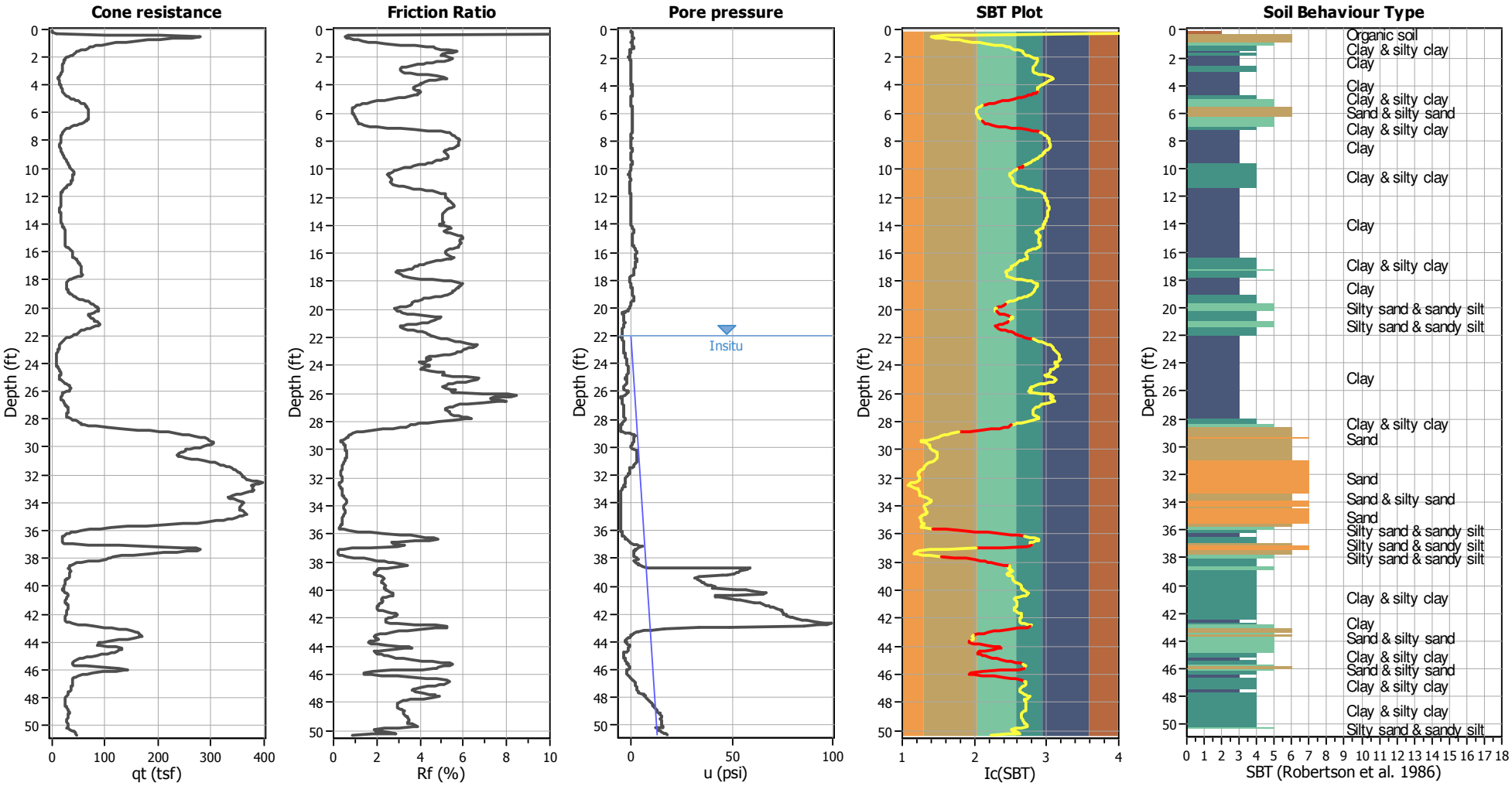






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



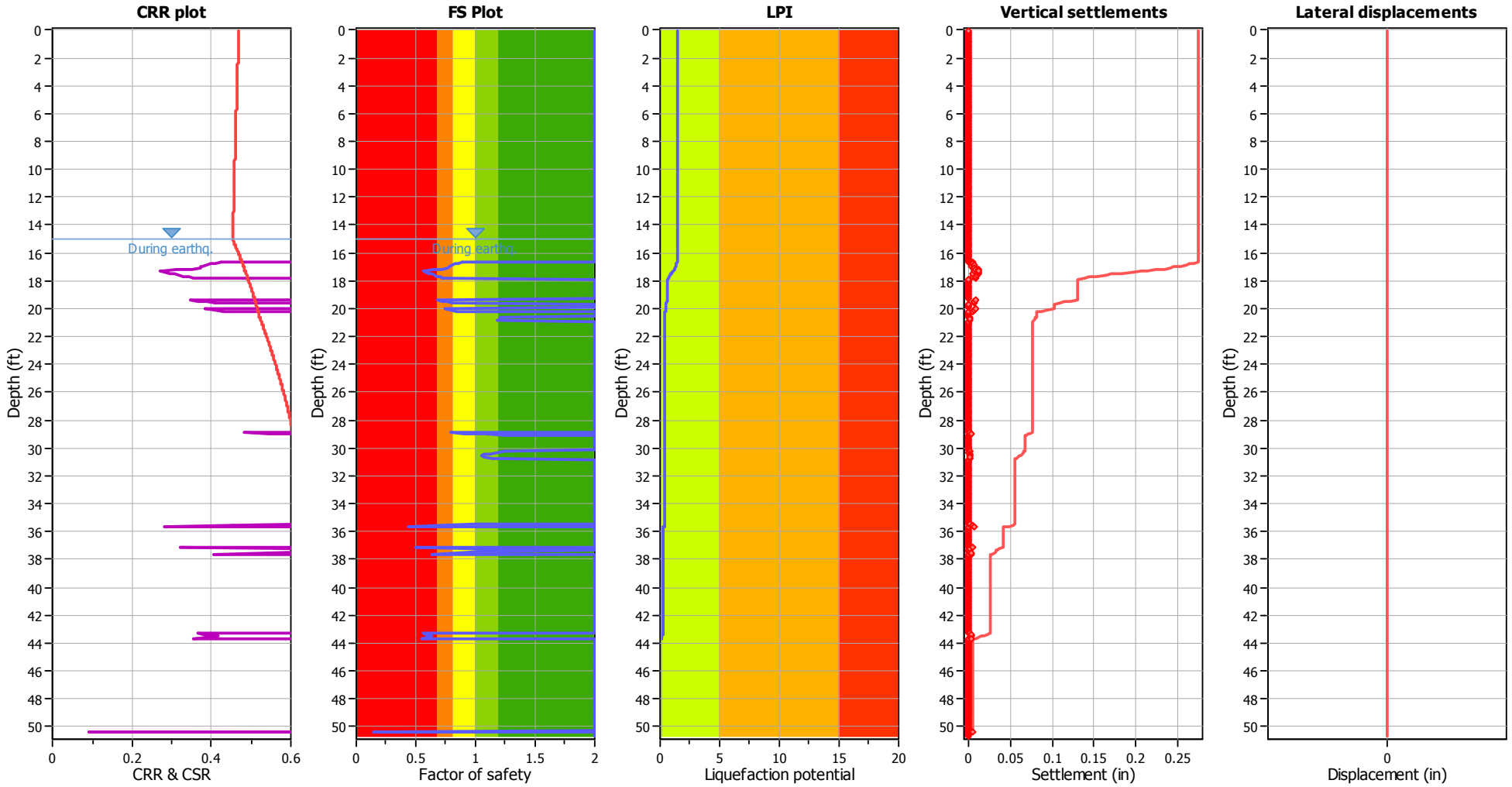
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

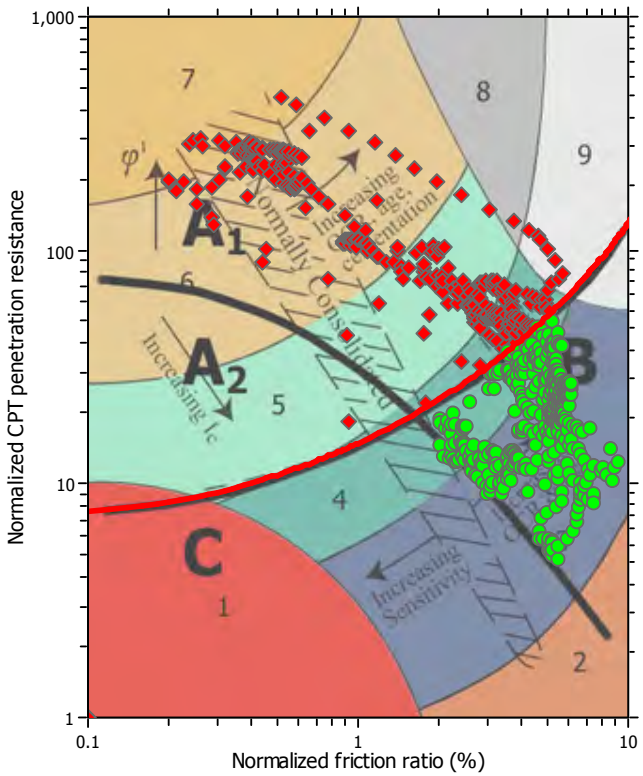
F.S. color scheme

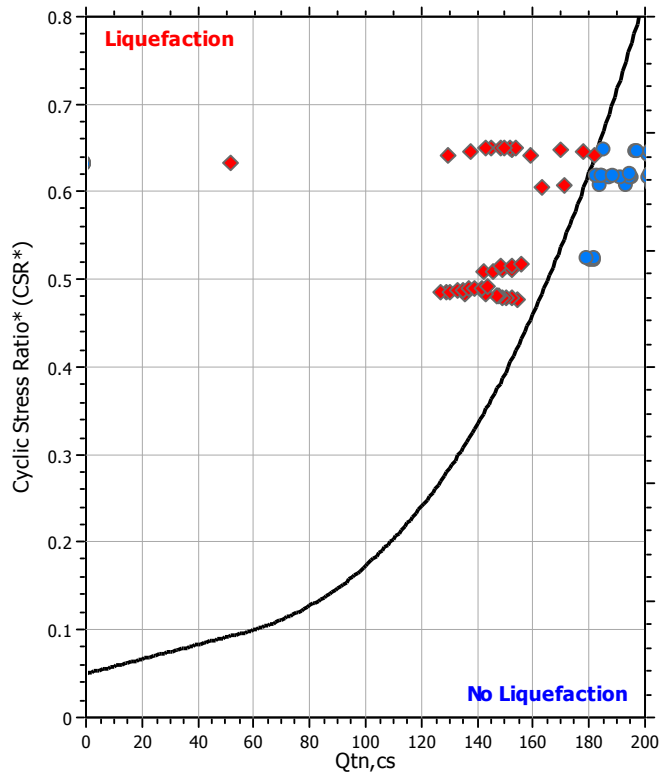
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

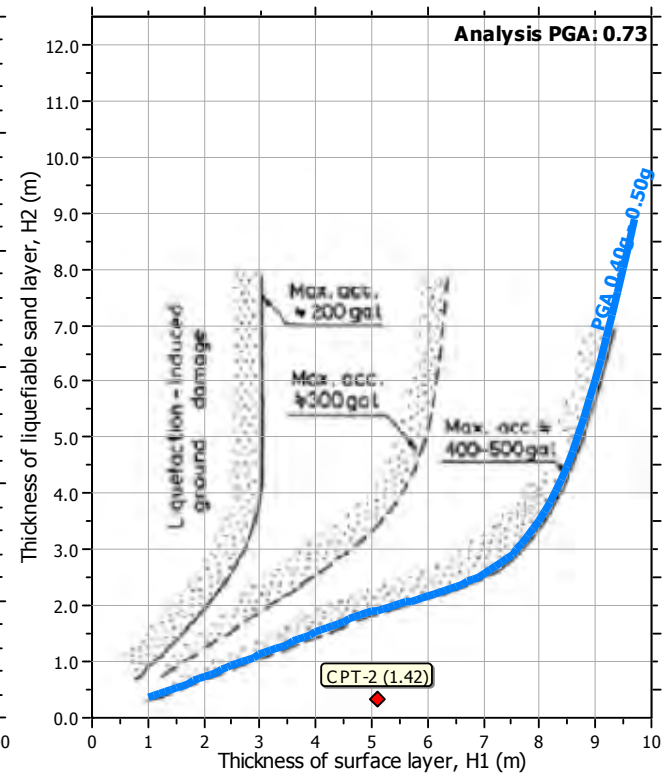
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots







Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

NMG Geotechnical, Inc.
17991 Fitch
Irvine, CA 92614

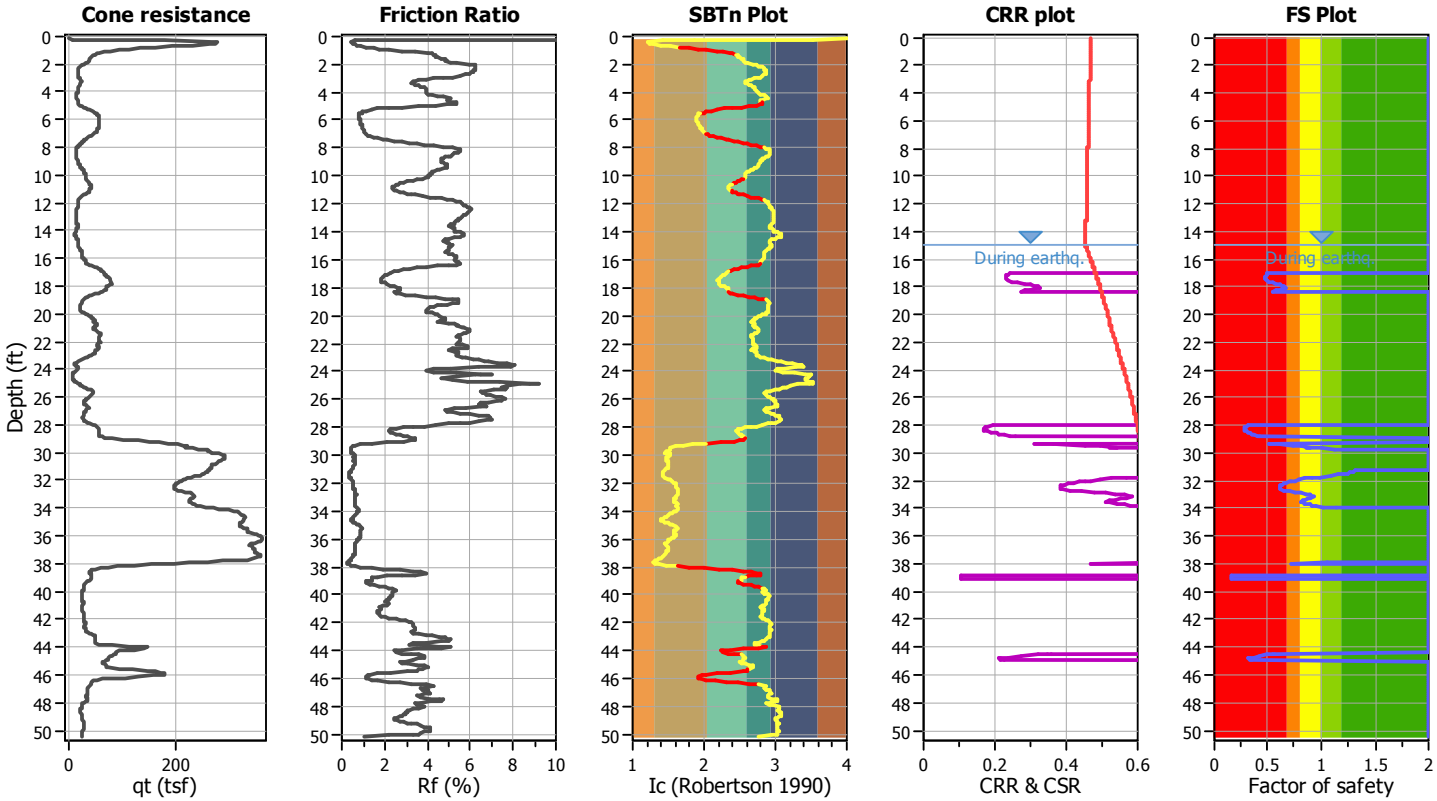
LIQUEFACTION ANALYSIS REPORT

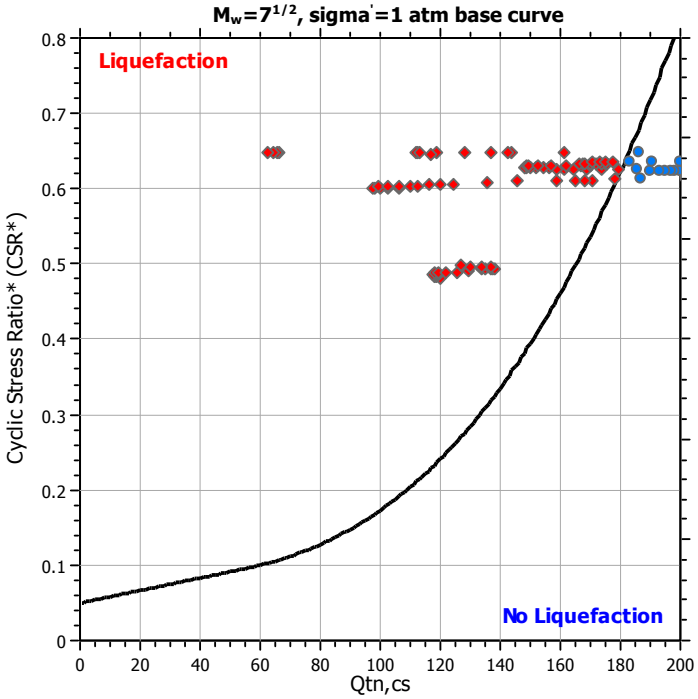
Project title : Sunrise Senior Living/Long Beach **Location : Long Beach, CA**

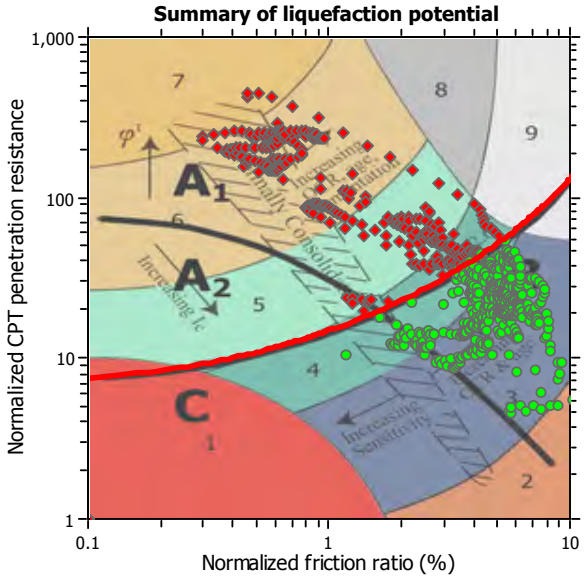
CPT file : CPT-3

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	22.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	15.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.46	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.73	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

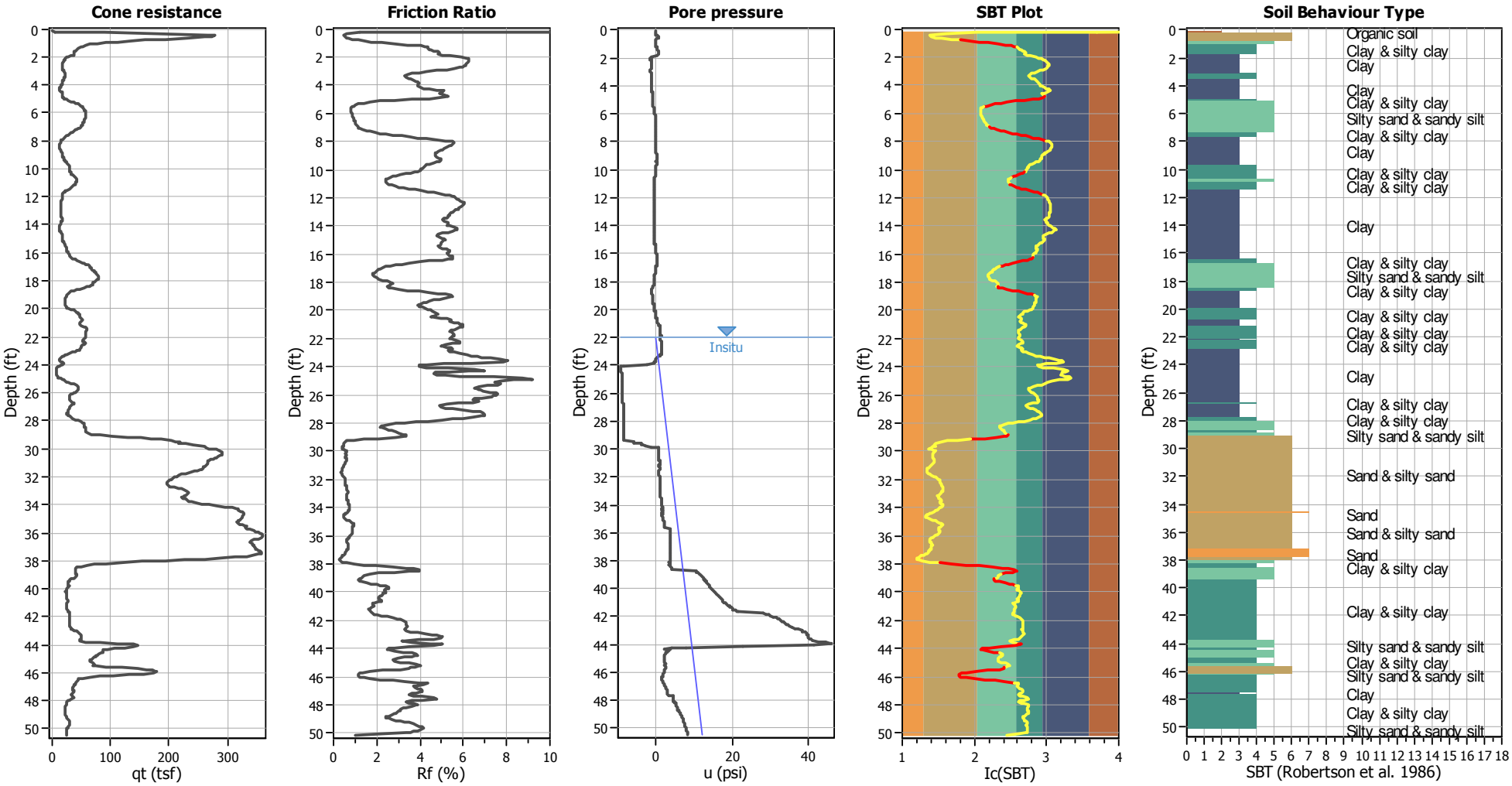






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



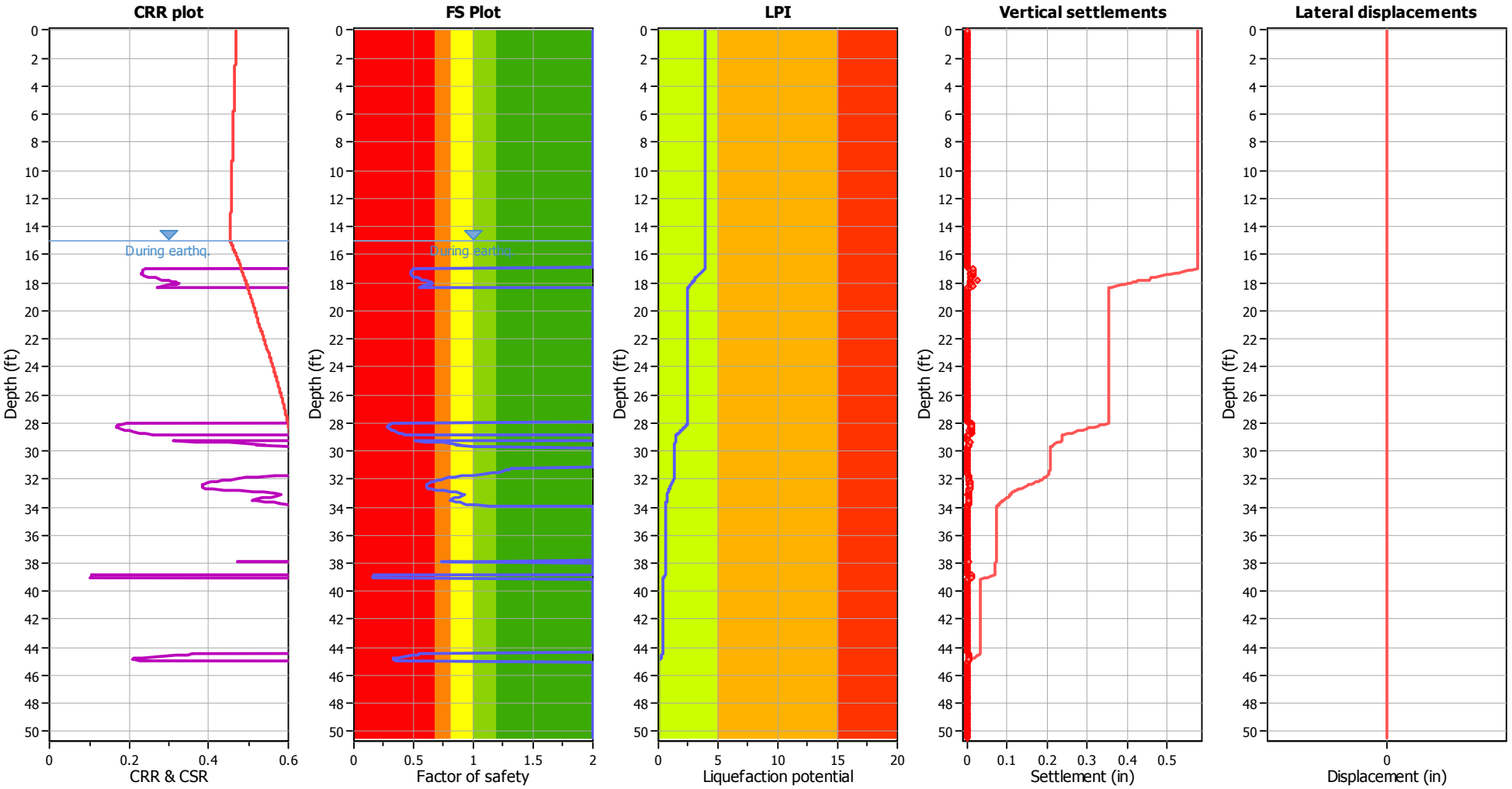
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

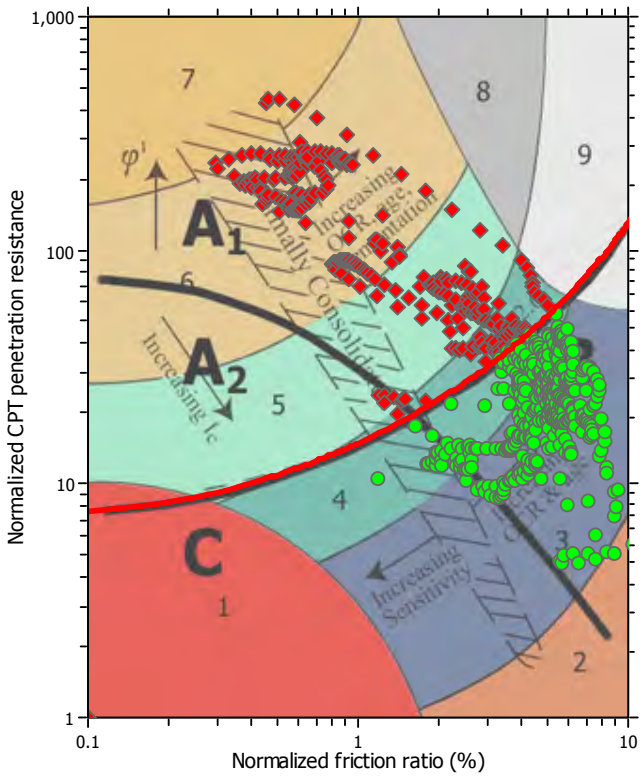
F.S. color scheme

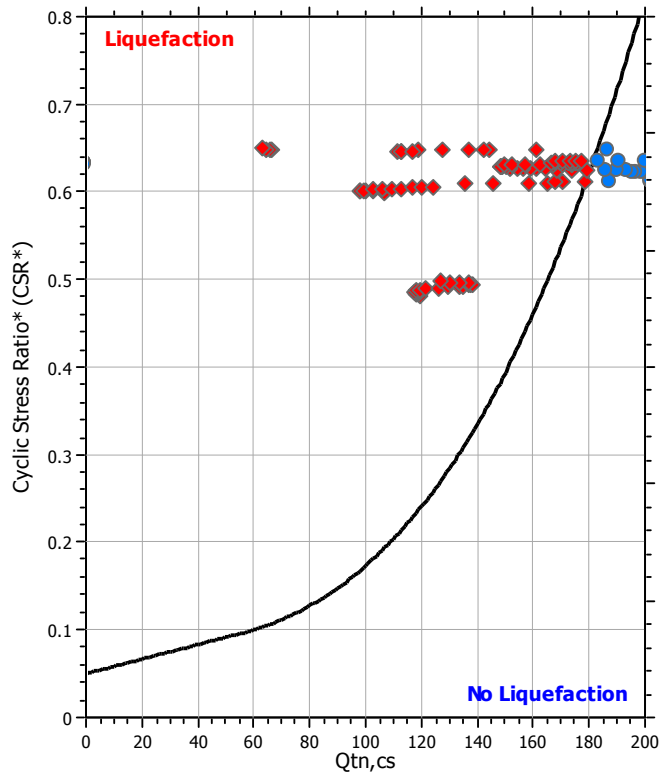
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

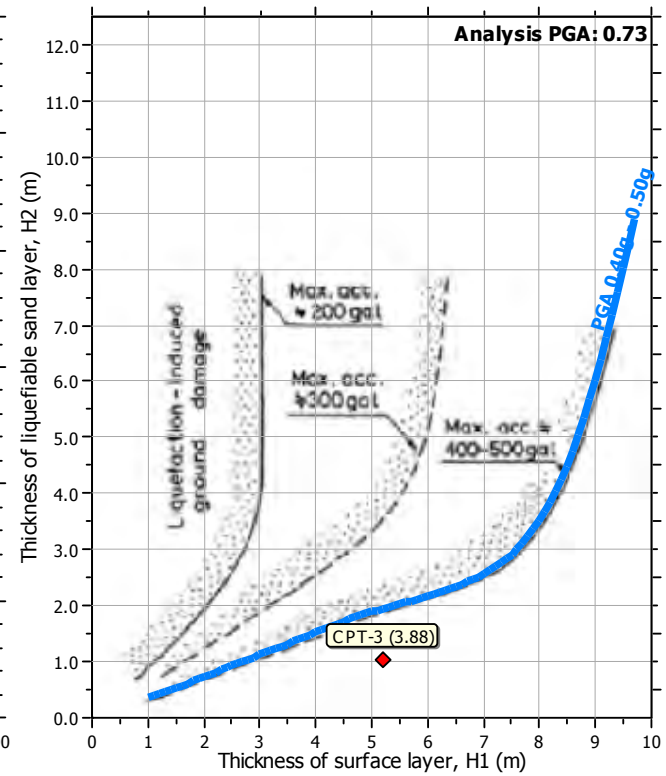
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots







Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

NMG Geotechnical, Inc.
17991 Fitch
Irvine, CA 92614

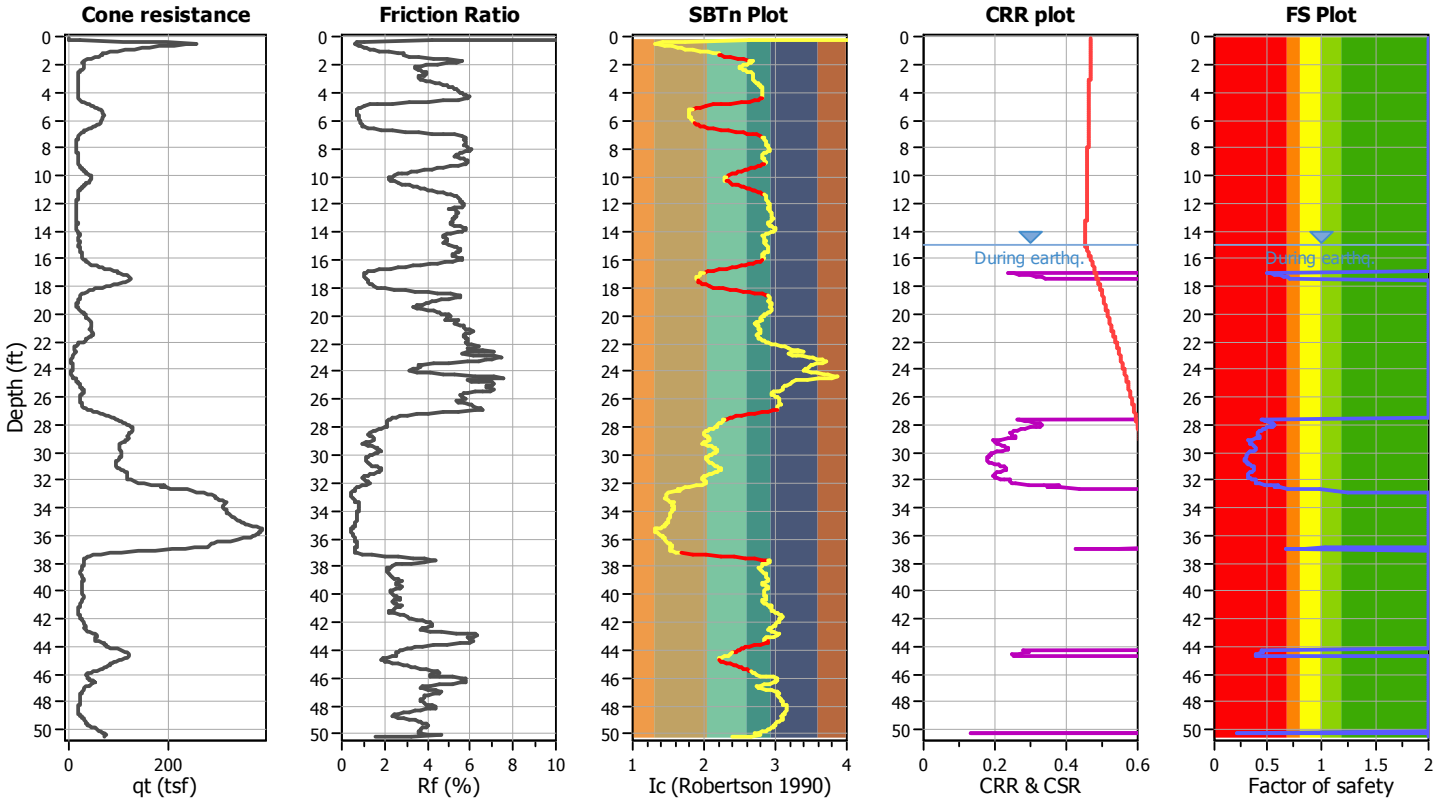
LIQUEFACTION ANALYSIS REPORT

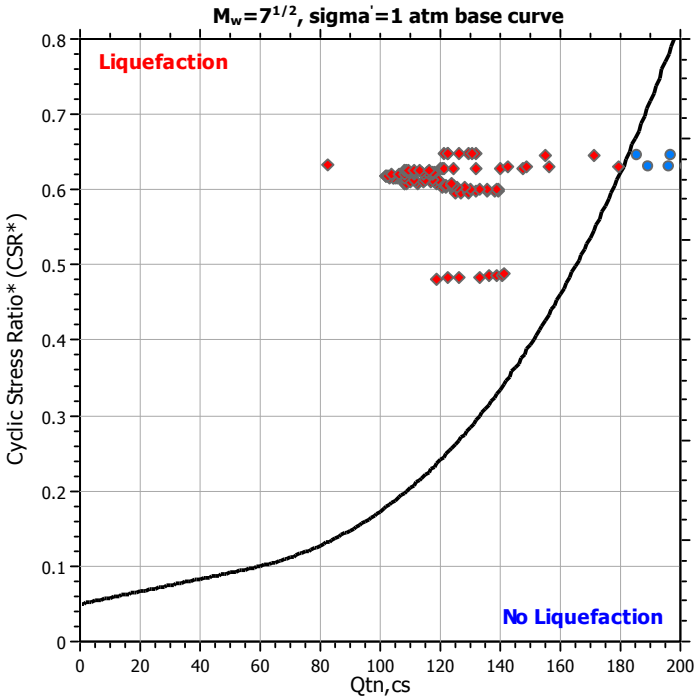
Project title : Sunrise Senior Living/Long Beach **Location : Long Beach, CA**

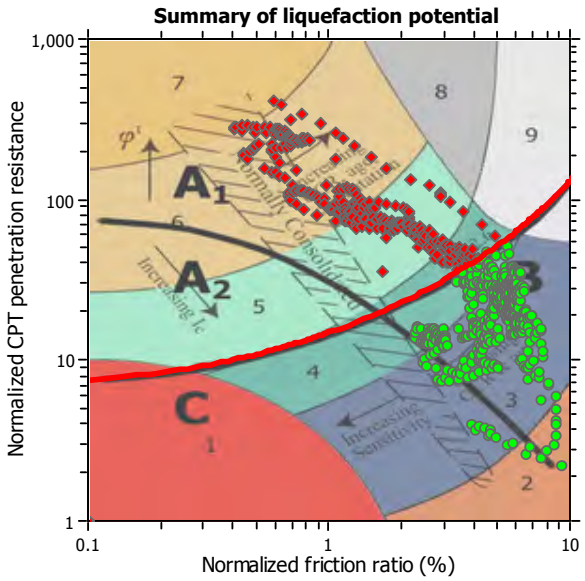
CPT file : CPT-4

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	22.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	15.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.46	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.73	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

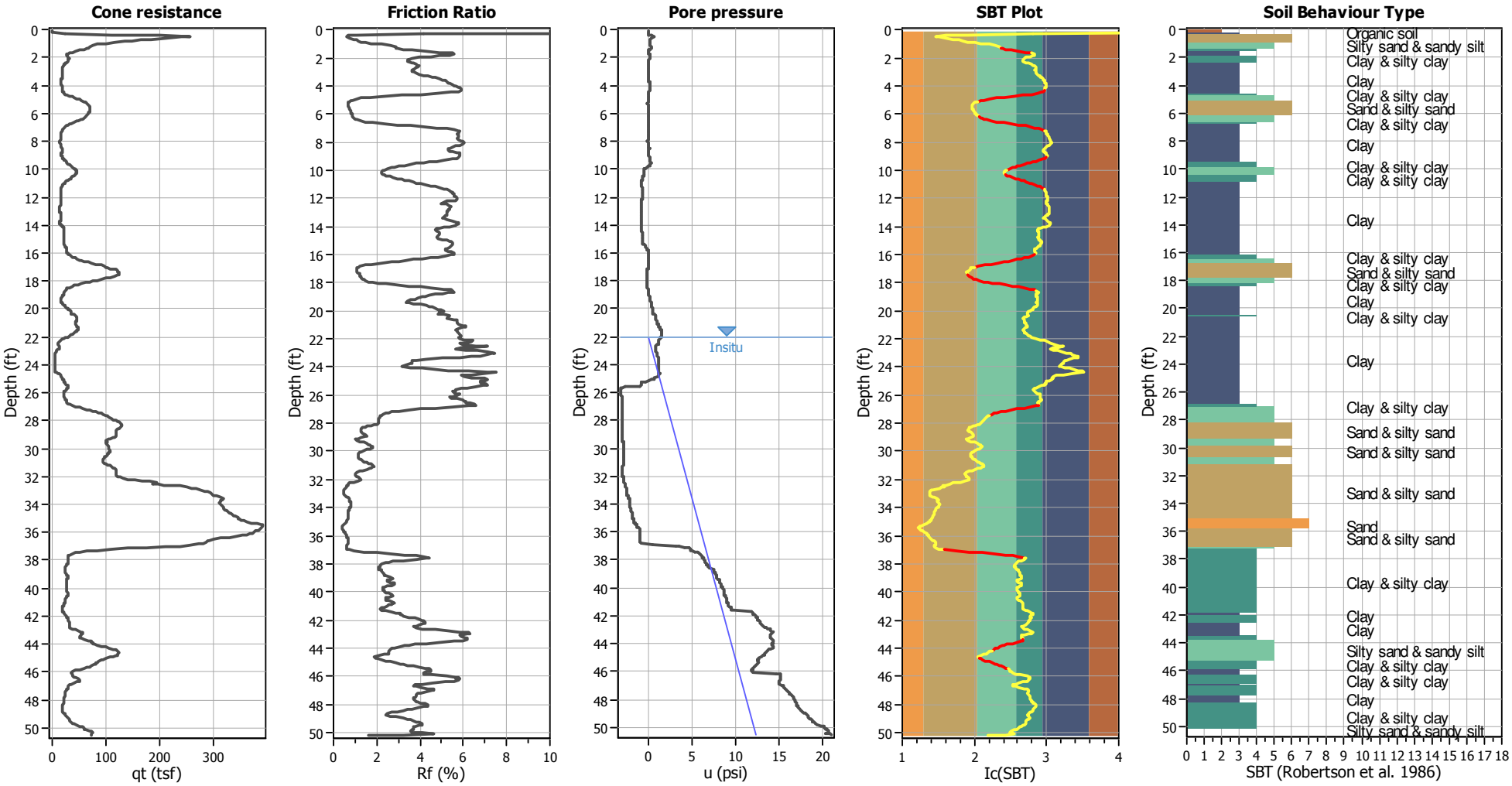






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



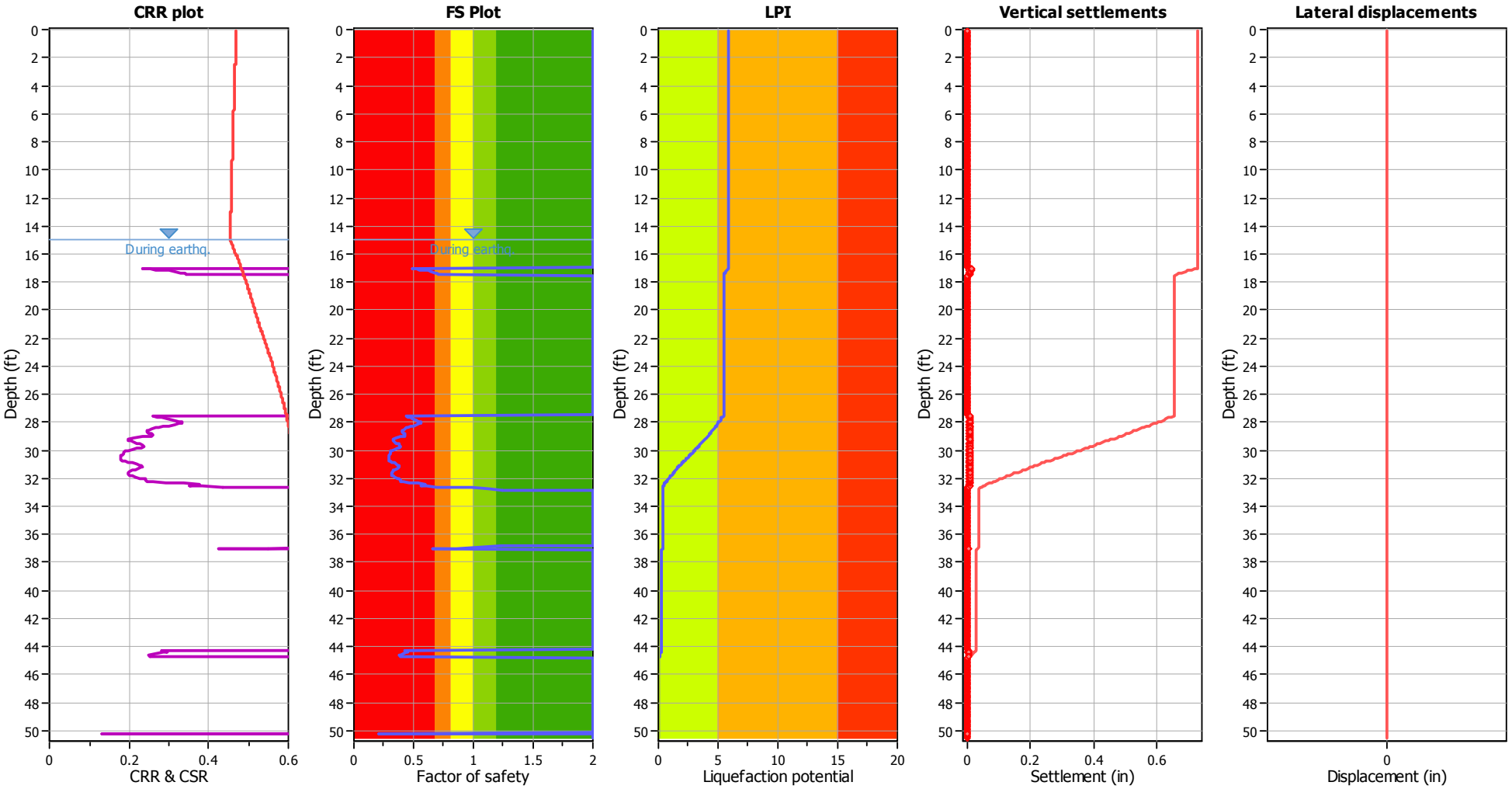
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

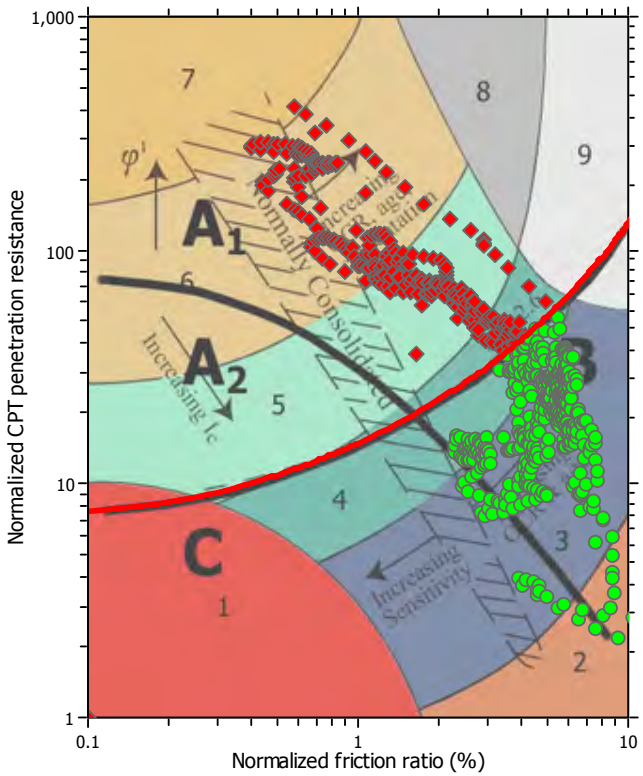
F.S. color scheme

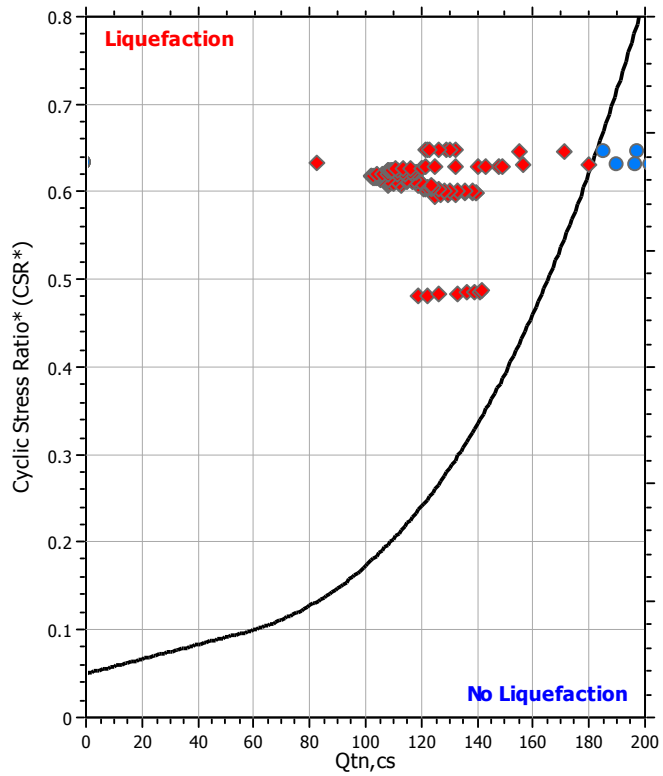
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

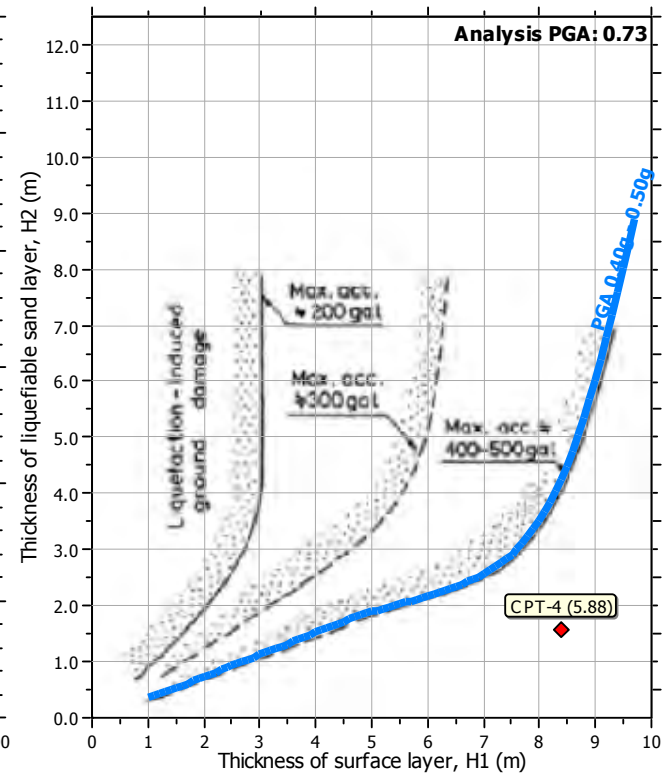
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots







Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

NMG Geotechnical, Inc.
17991 Fitch
Irvine, CA 92614

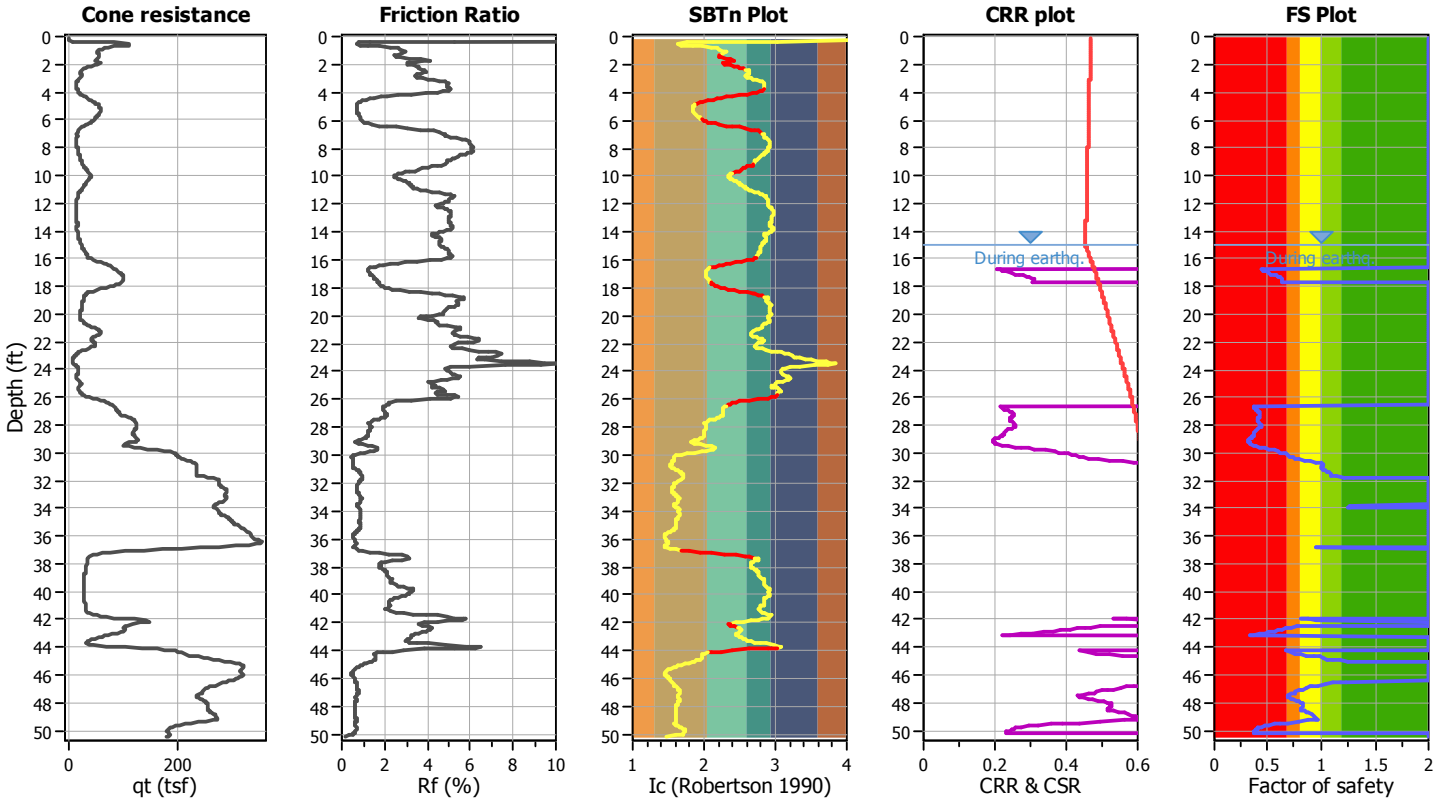
LIQUEFACTION ANALYSIS REPORT

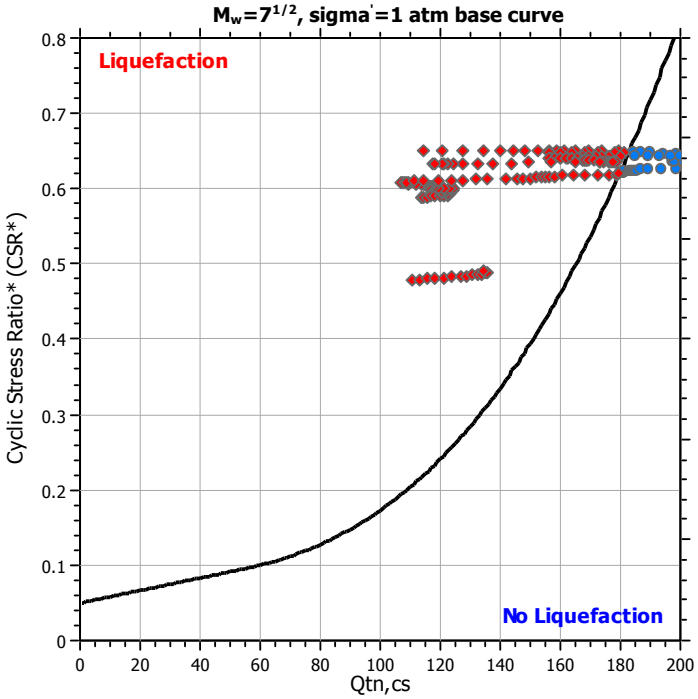
Project title : Sunrise Senior Living/Long Beach **Location : Long Beach, CA**

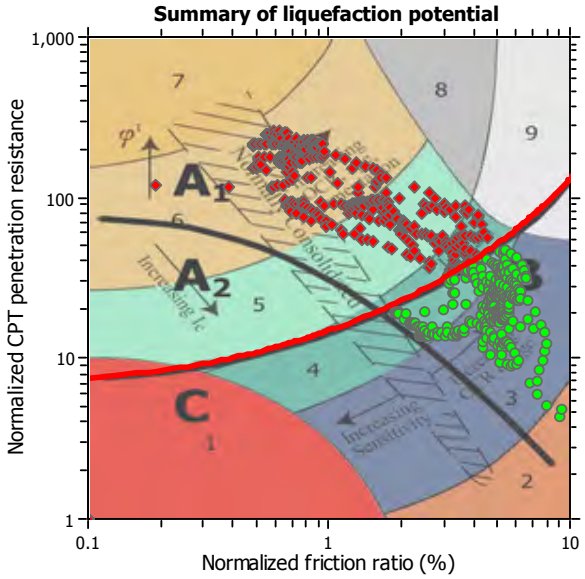
CPT file : CPT-5

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	22.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	15.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.46	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.73	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

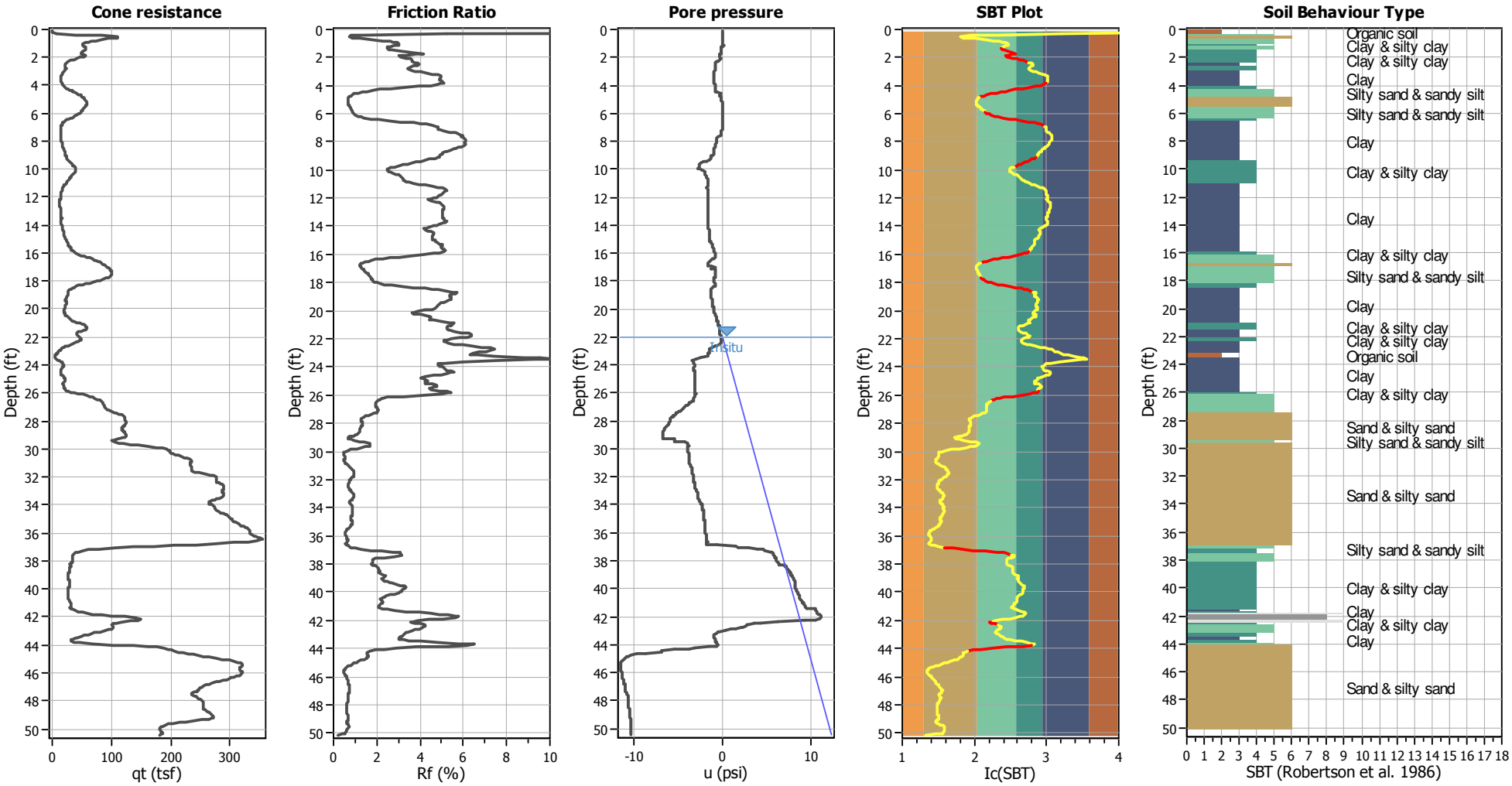






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



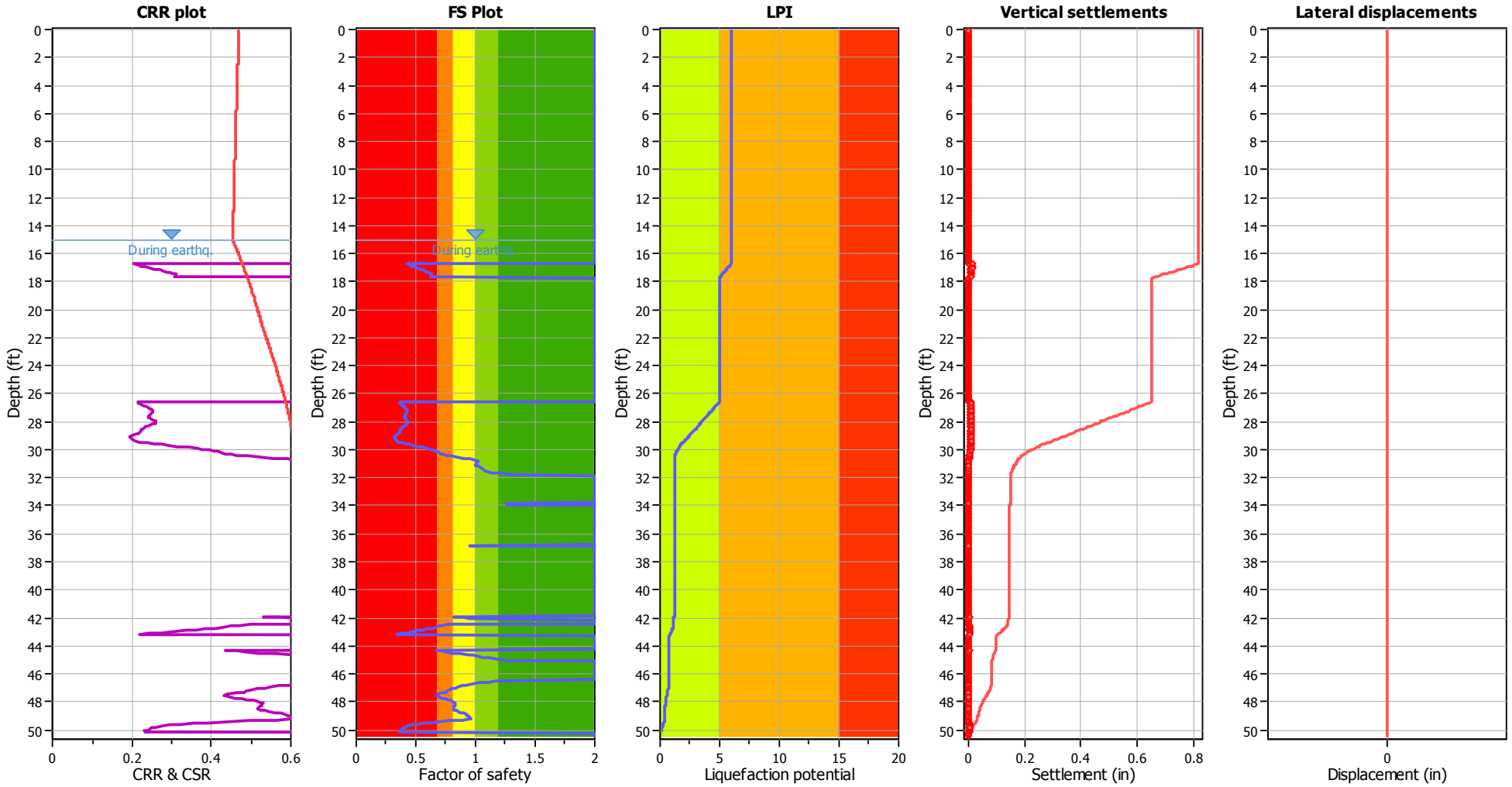
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

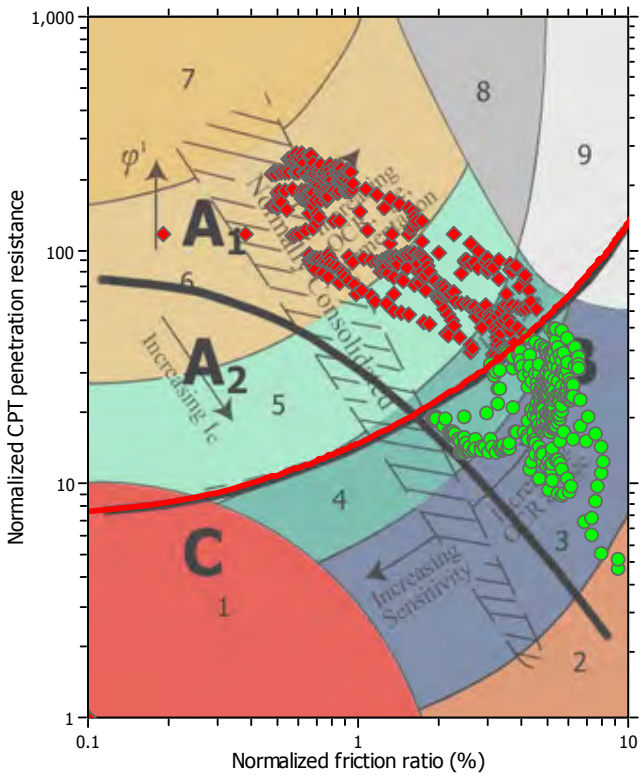
F.S. color scheme

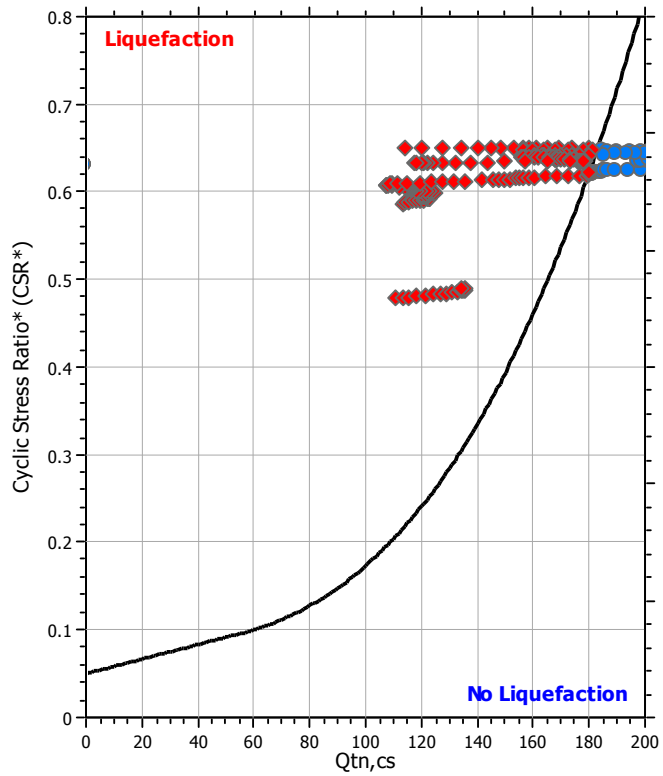
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

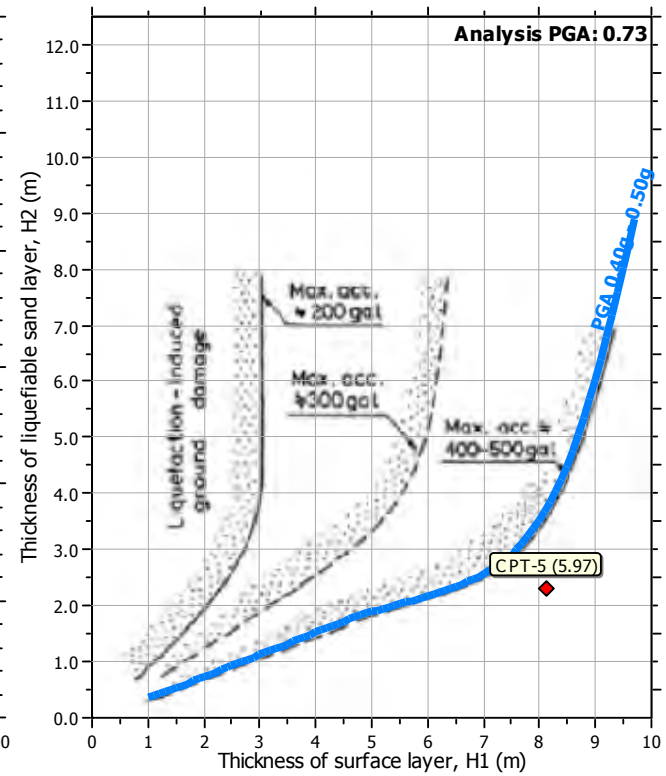
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots







Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

NMG Geotechnical, Inc.
17991 Fitch
Irvine, CA 92614

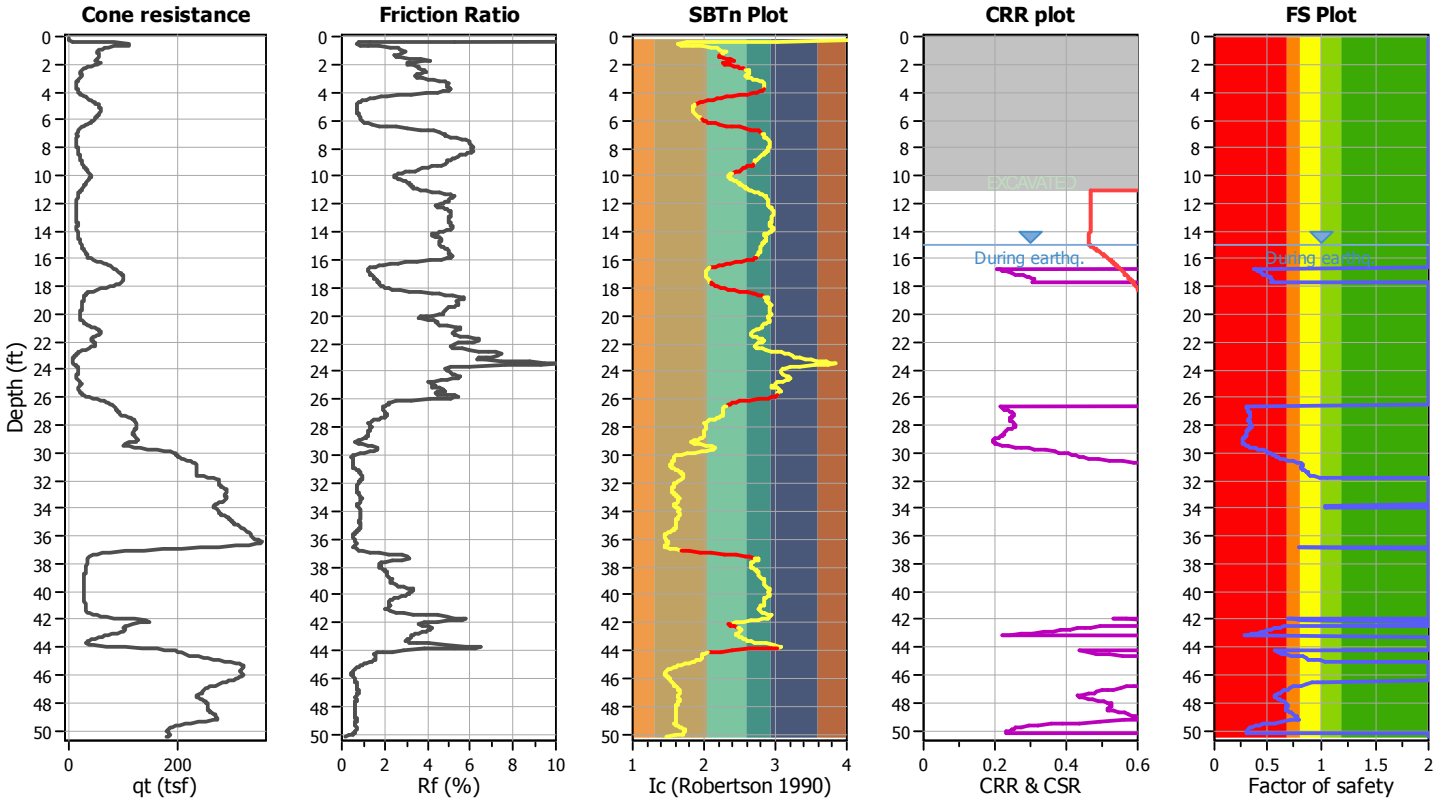
LIQUEFACTION ANALYSIS REPORT

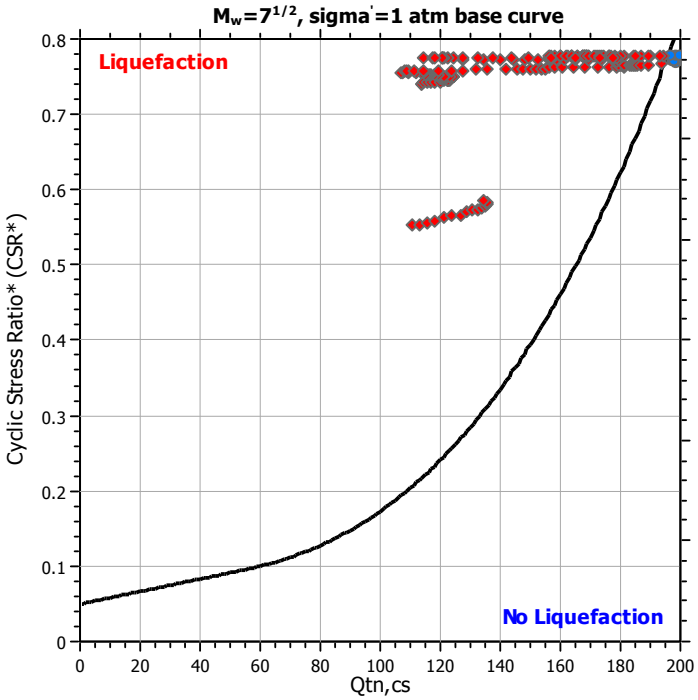
Project title : Sunrise Senior Living/Long Beach **Location : Long Beach, CA**

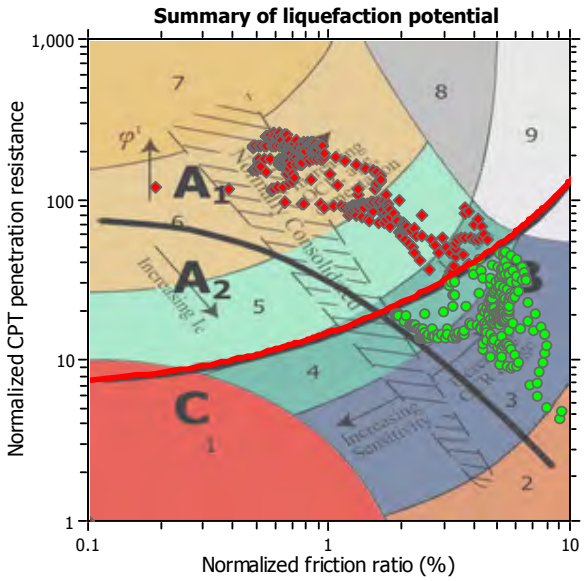
CPT file : CPT-5

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	22.00 ft	Excavation:	Yes	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	15.00 ft	Excavation depth:	11.00 ft	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Footing load:	0.00 tsf	Limit depth:	N/A
Earthquake magnitude M_w:	7.46	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.73	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

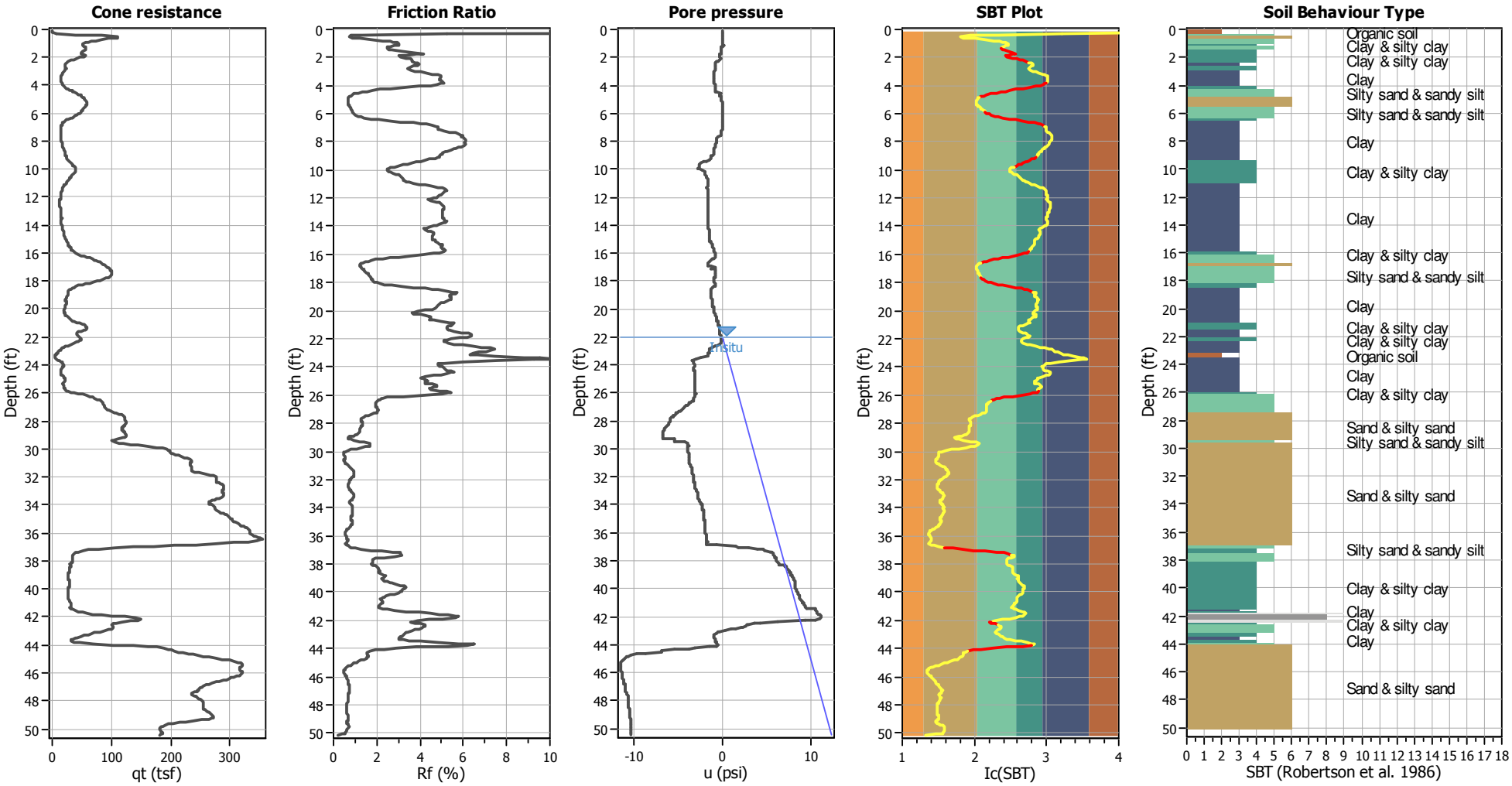






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



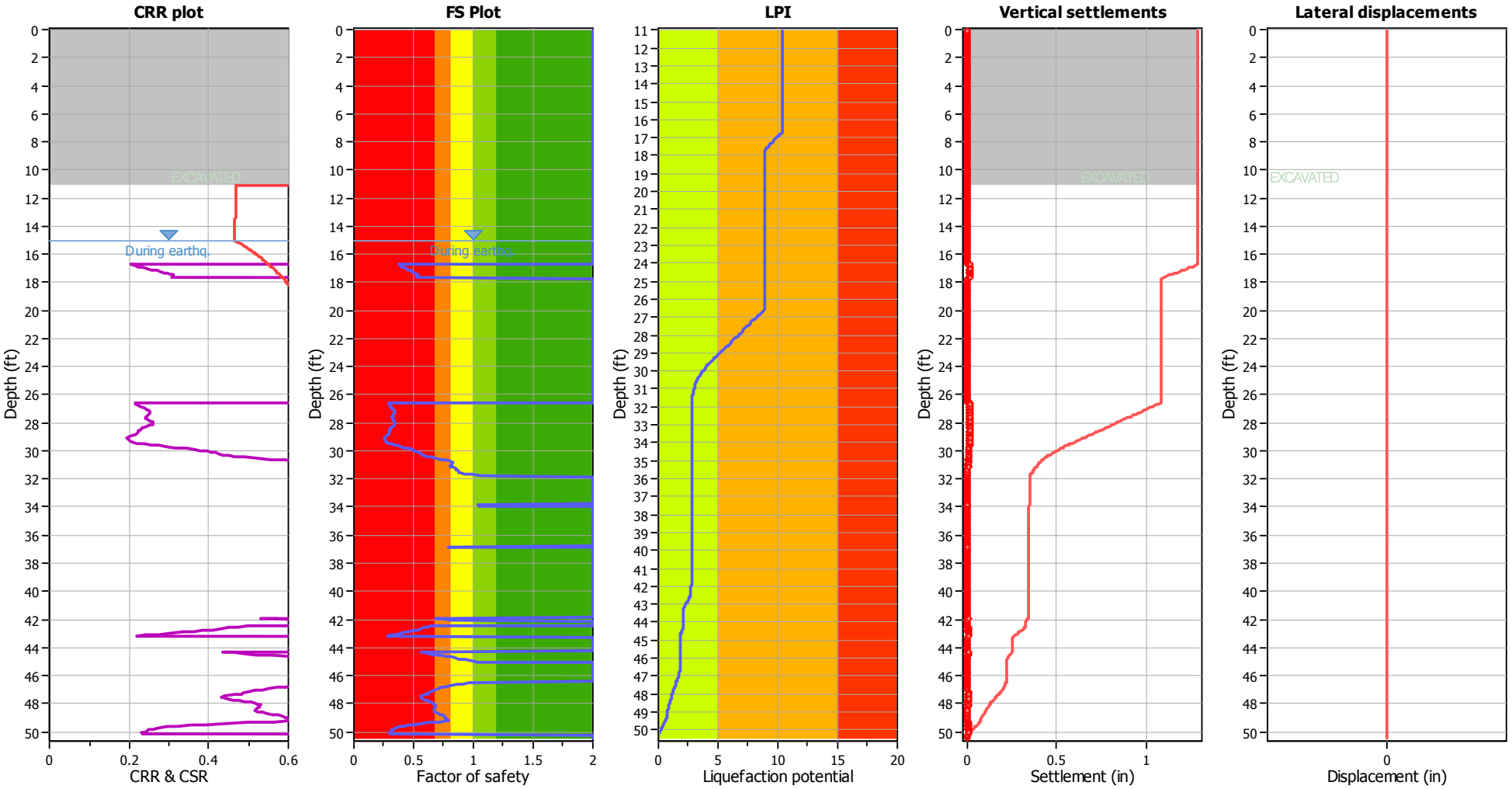
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Footing load:	0.00 tsf
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Excavation:	Yes	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Excavation depth:	11.00 ft	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Footing load:	0.00 tsf
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Excavation:	Yes	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Excavation depth:	11.00 ft	Limit depth:	N/A

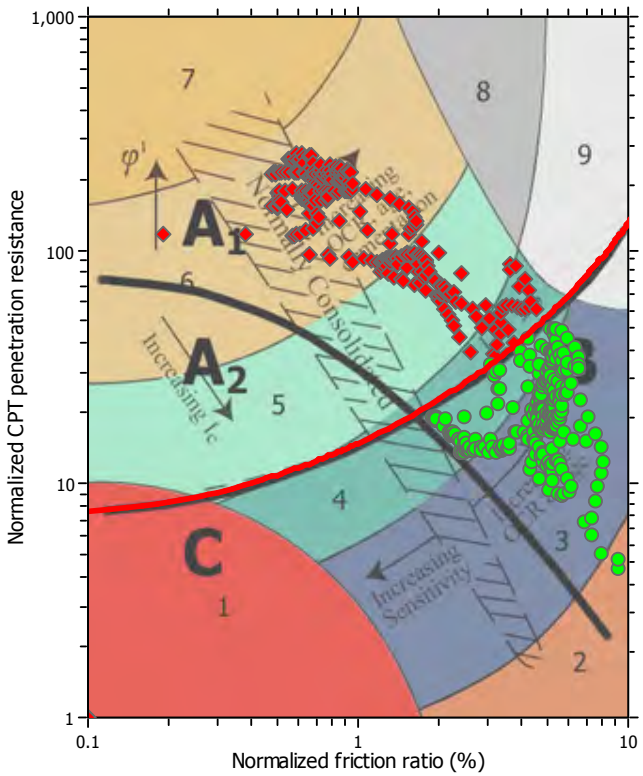
F.S. color scheme

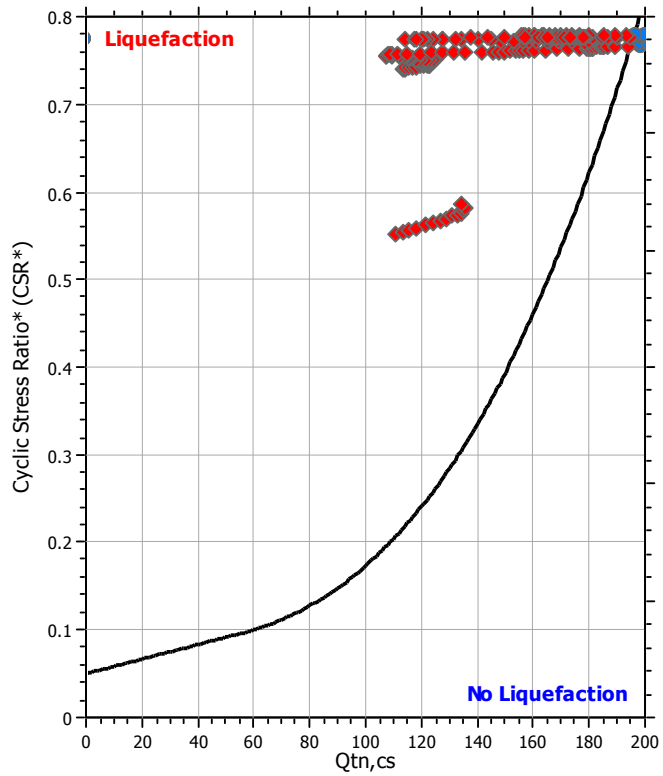
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

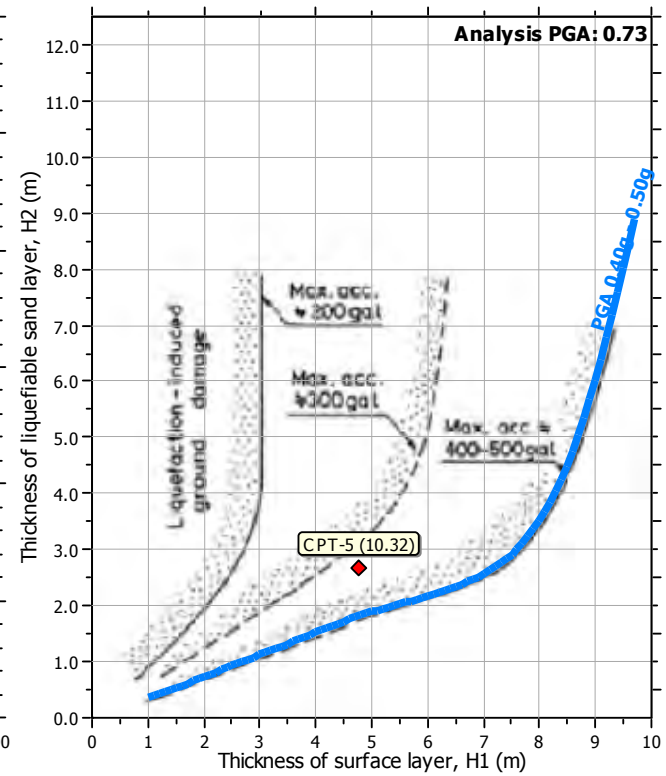
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots







Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Footing load:	0.00 tsf
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Excavation:	Yes	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Excavation depth:	11.00 ft	Limit depth:	N/A

NMG Geotechnical, Inc.
17991 Fitch
Irvine, CA 92614

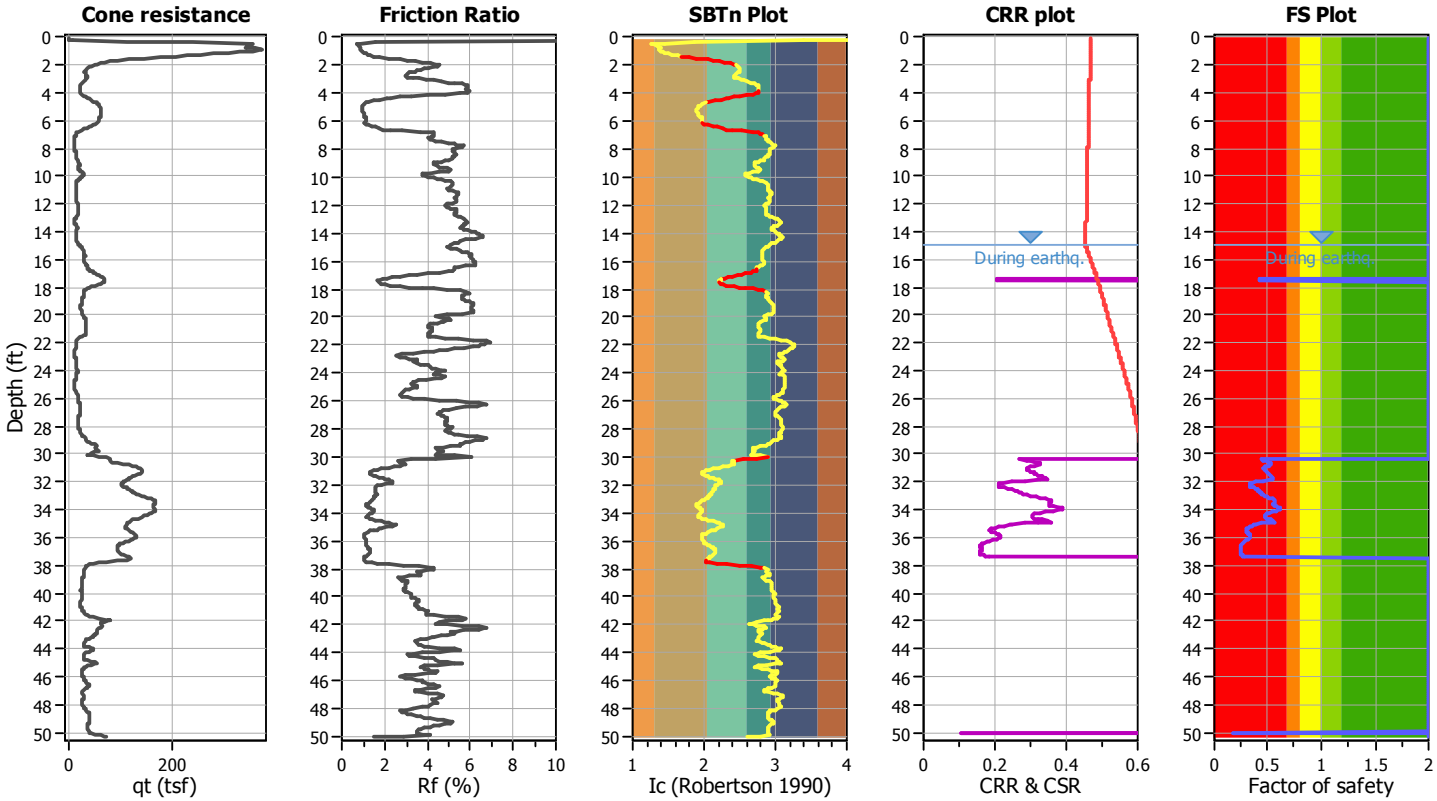
LIQUEFACTION ANALYSIS REPORT

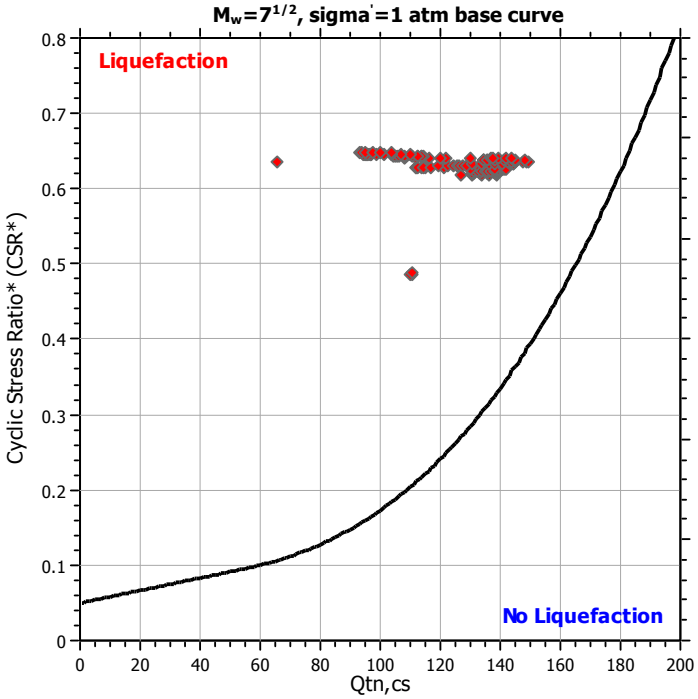
Project title : Sunrise Senior Living/Long Beach **Location : Long Beach, CA**

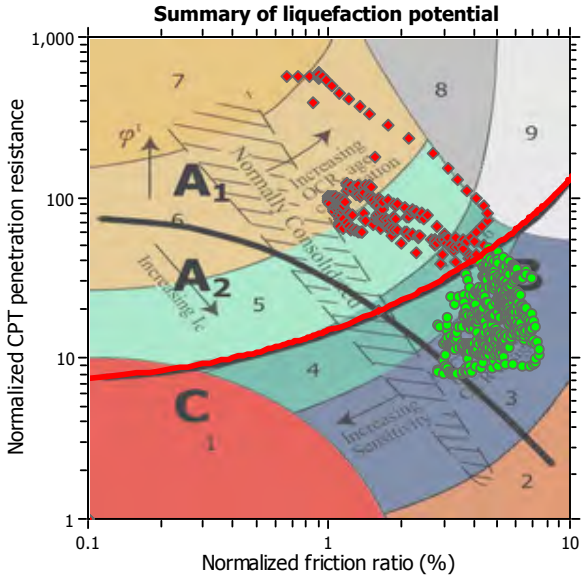
CPT file : CPT-6

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	22.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	15.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.46	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.73	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

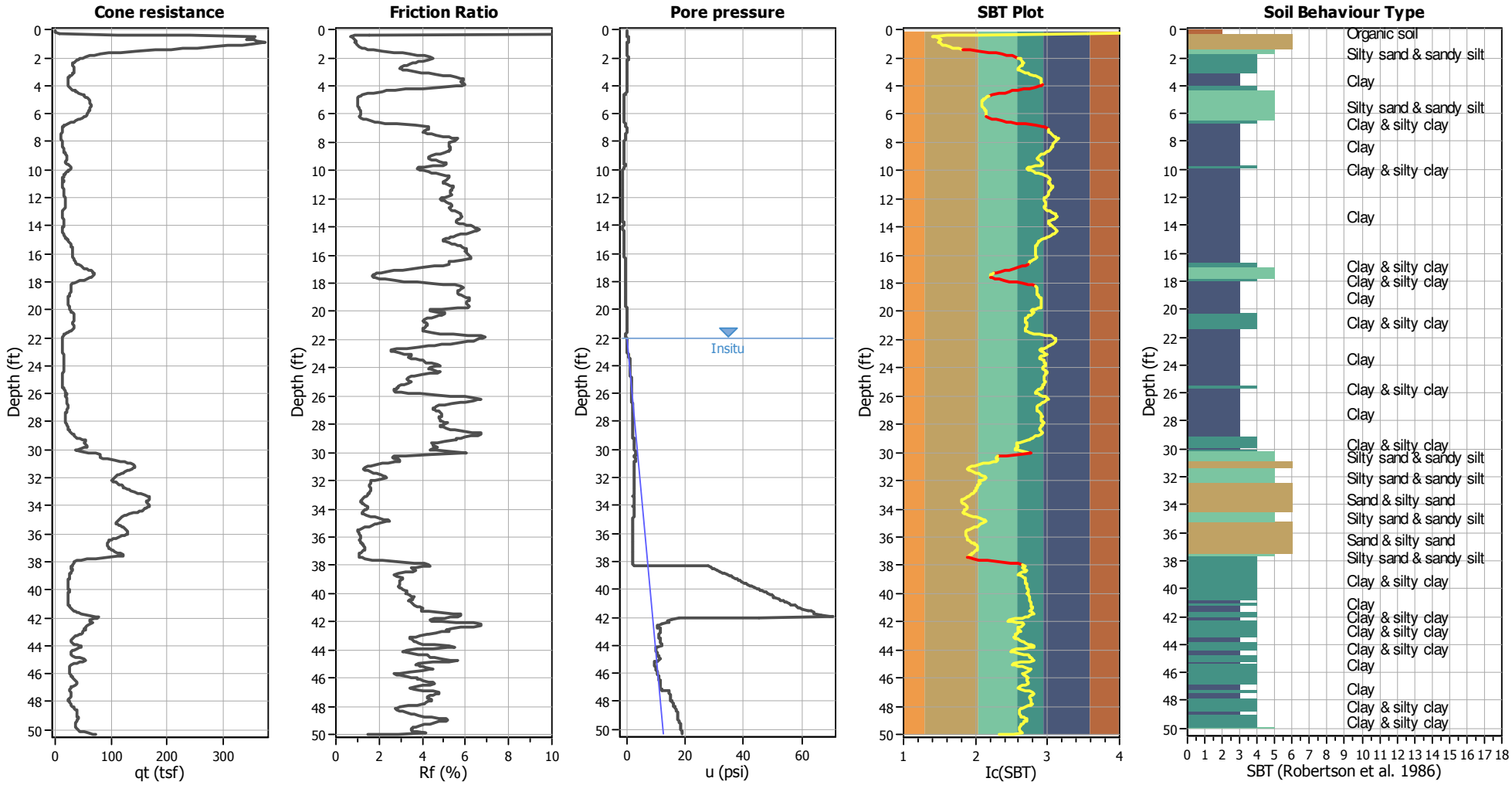






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



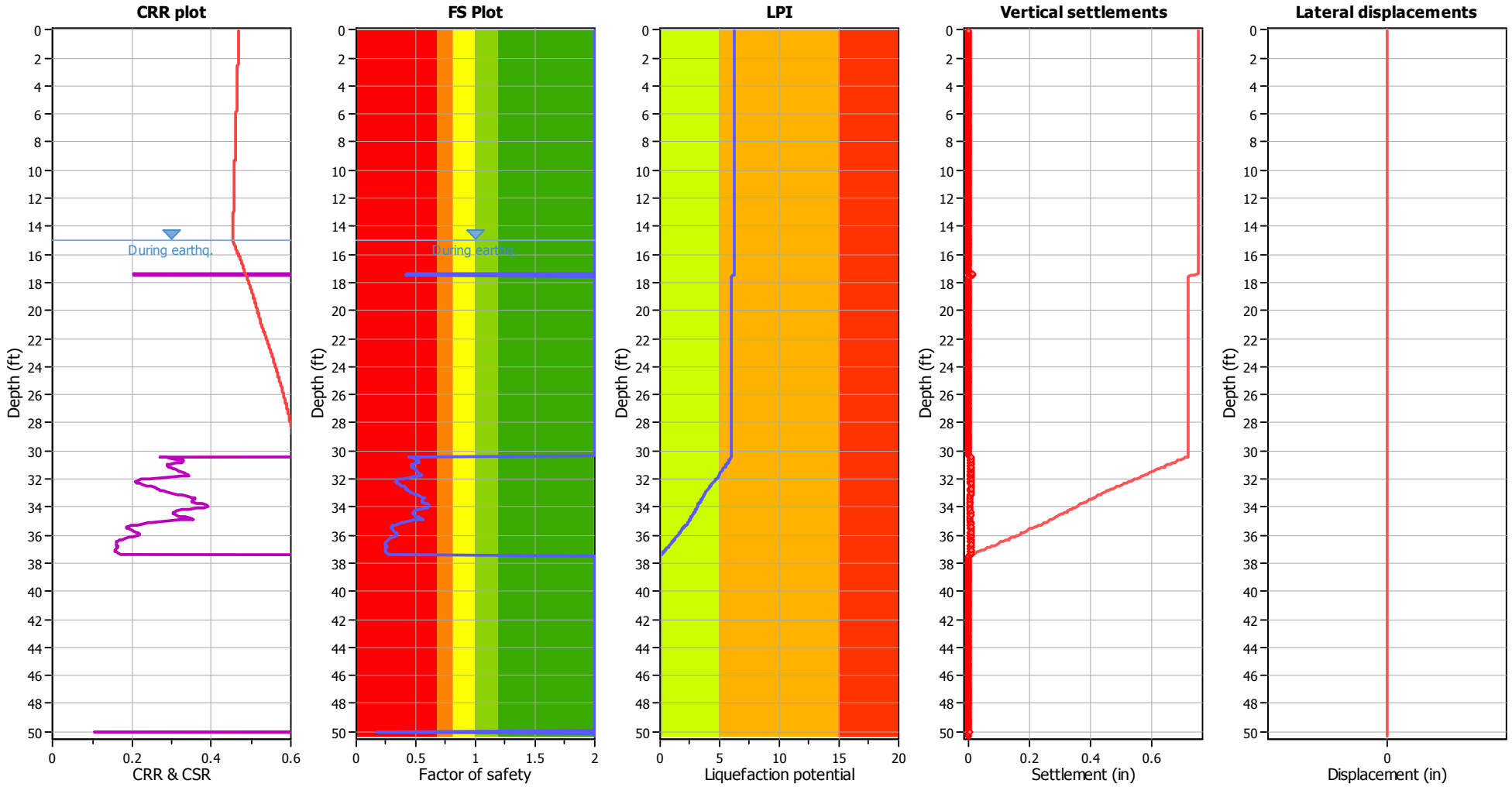
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
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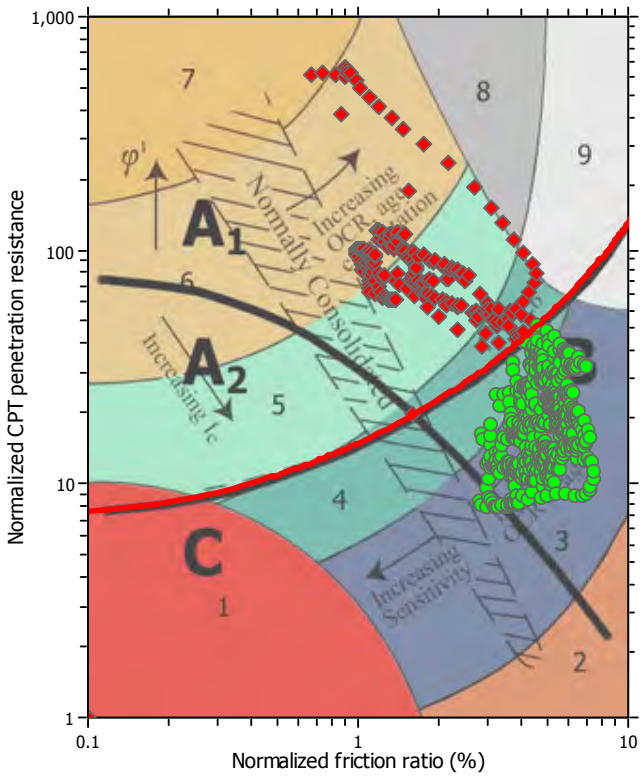
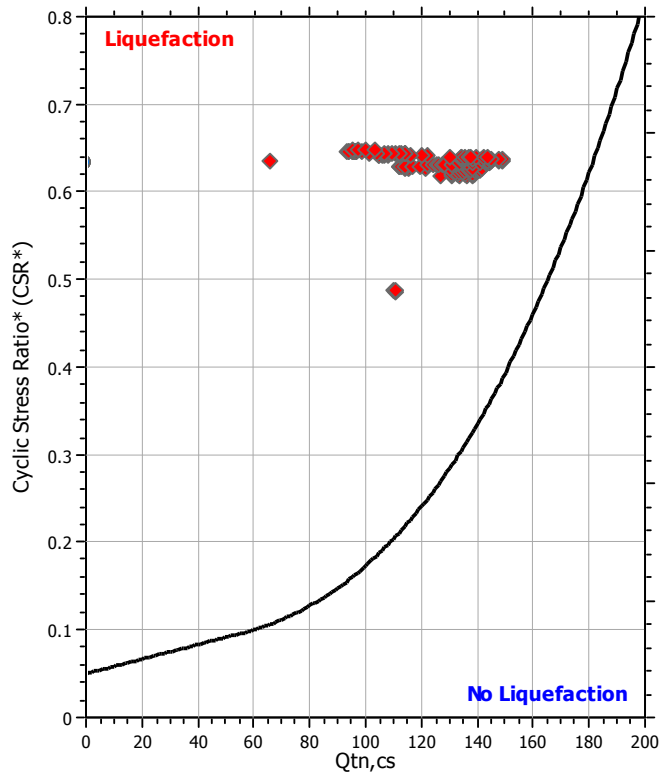
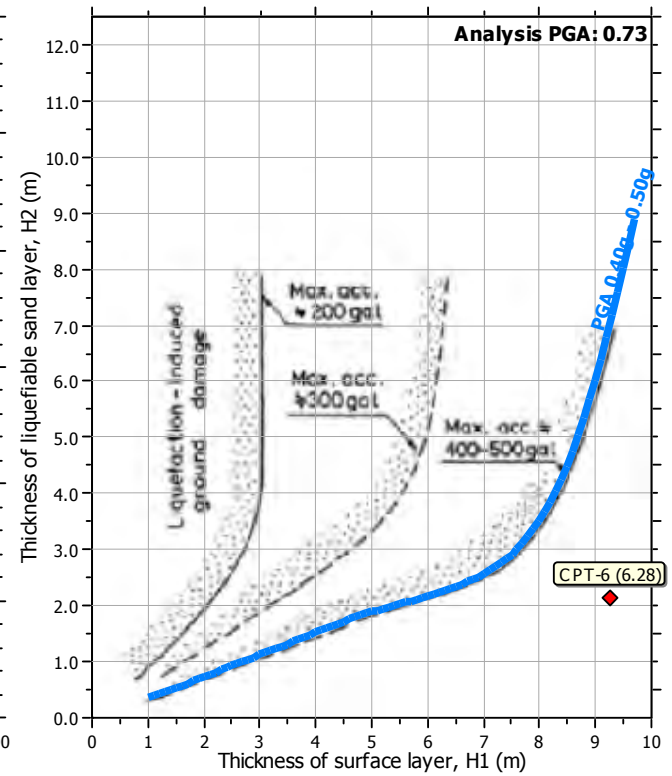
Liquefaction analysis summary plots







Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

NMG Geotechnical, Inc.
17991 Fitch
Irvine, CA 92614

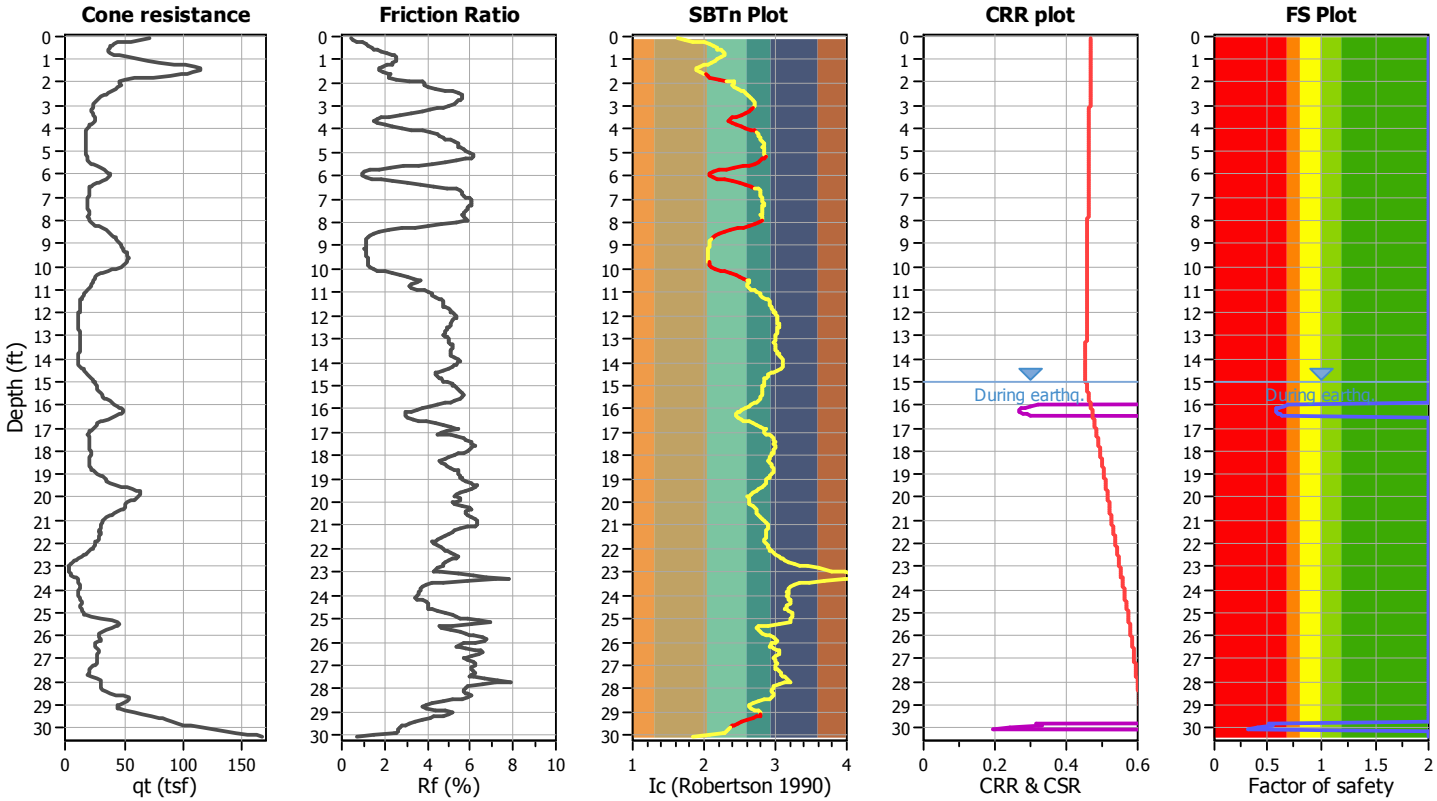
LIQUEFACTION ANALYSIS REPORT

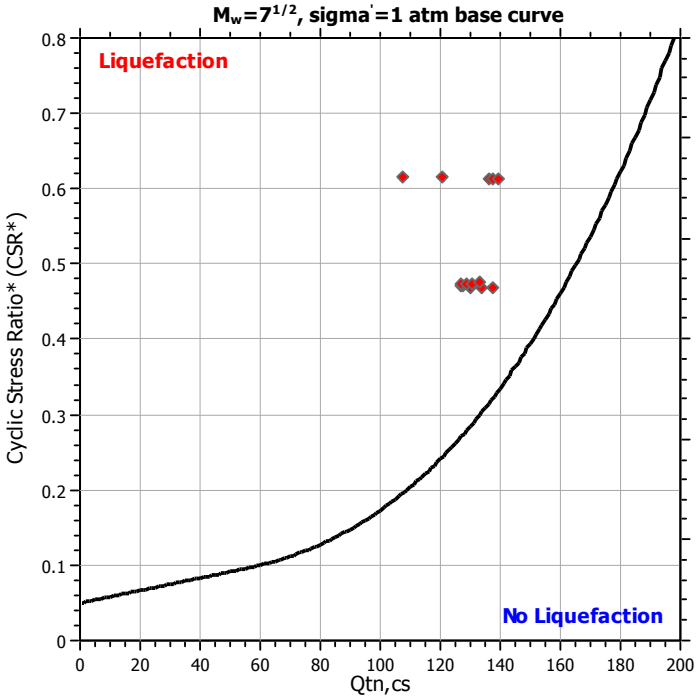
Project title : Sunrise Senior Living/Long Beach **Location : Long Beach, CA**

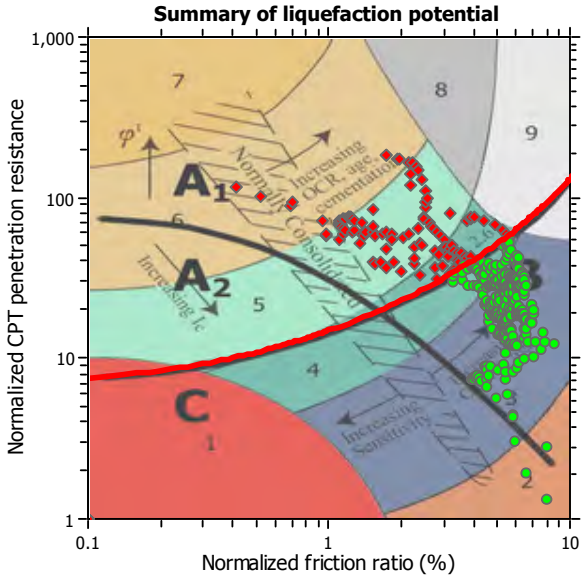
CPT file : CPT-7

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	22.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	15.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.46	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.73	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

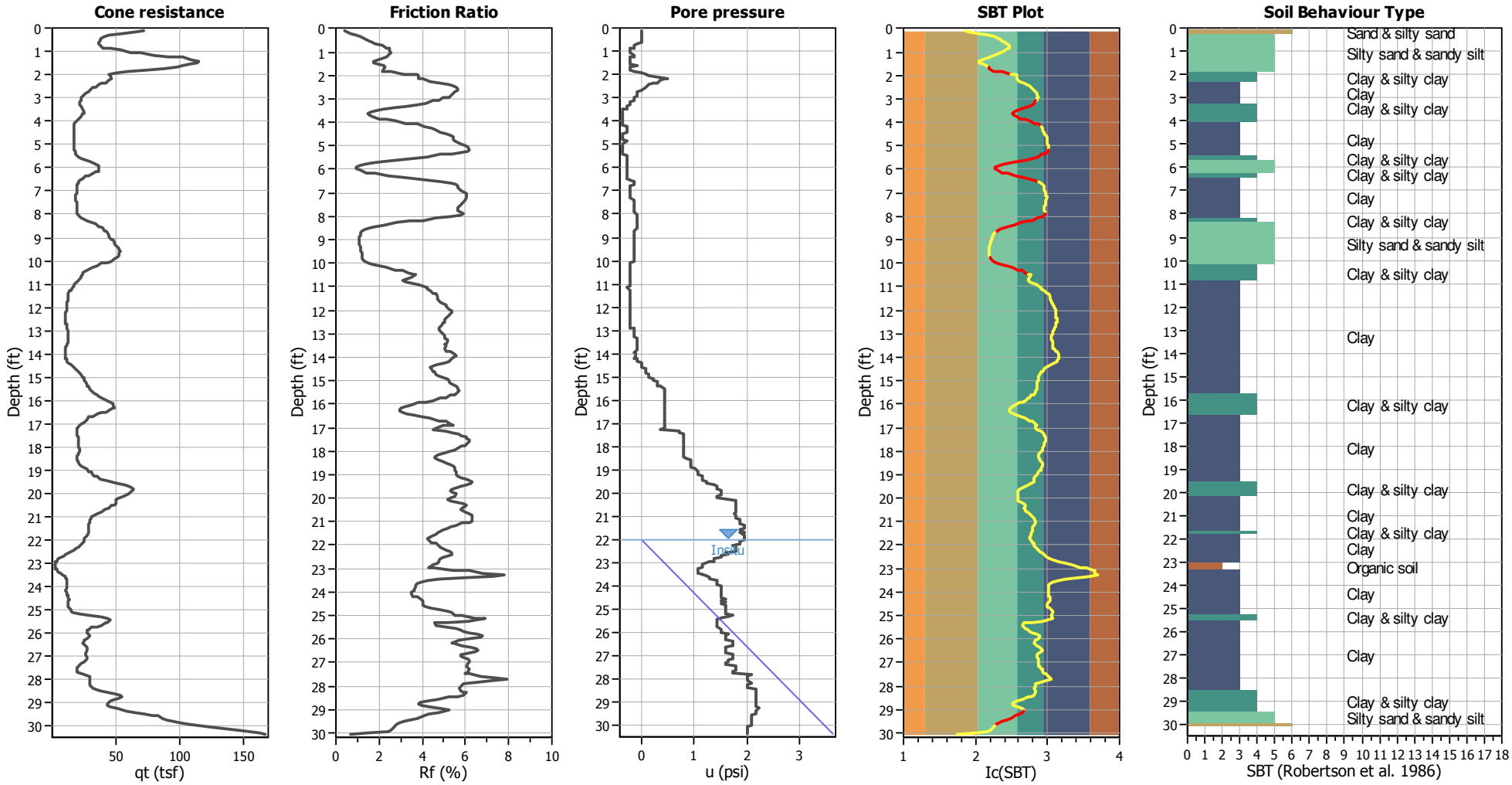






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



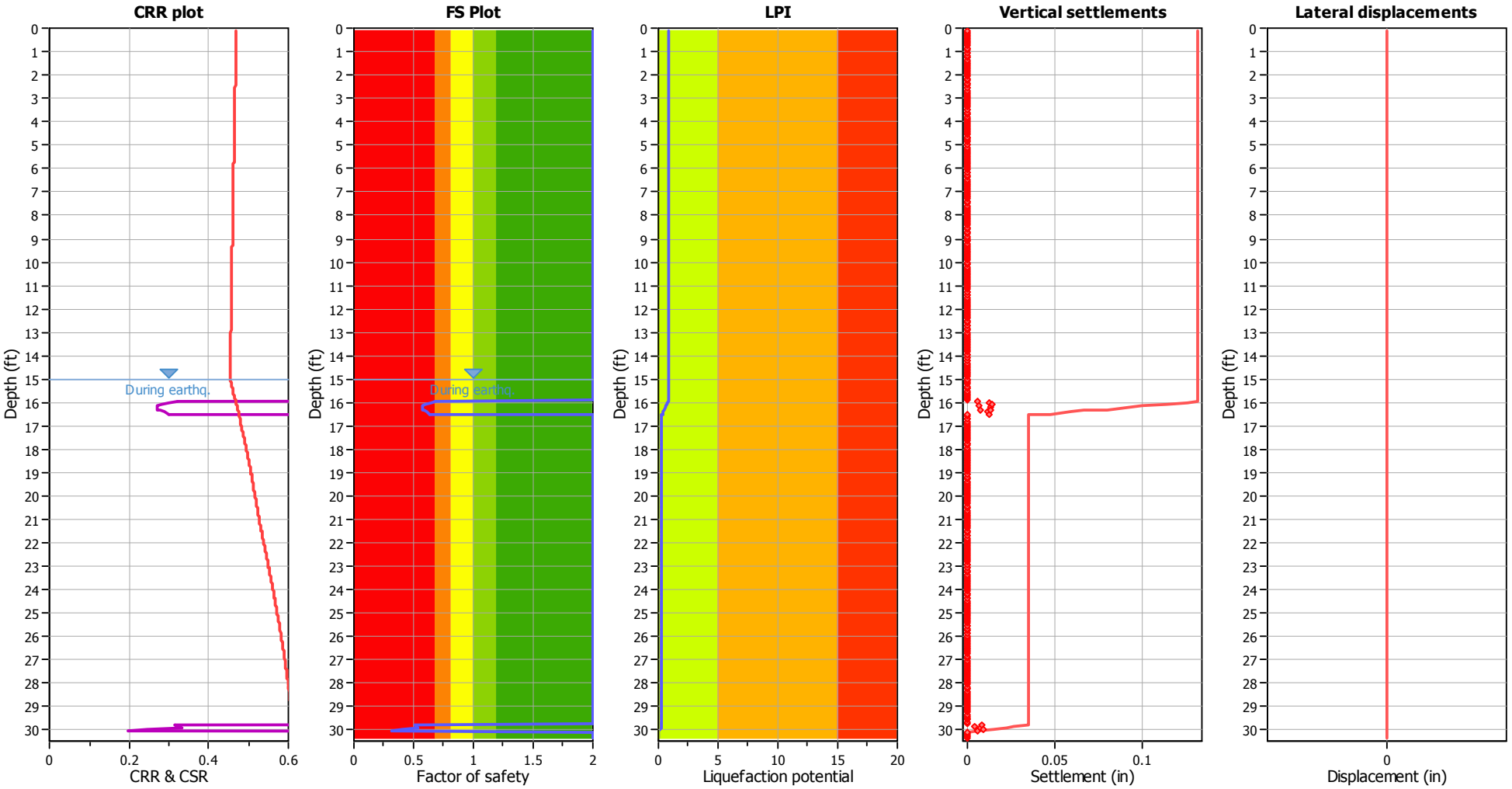
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

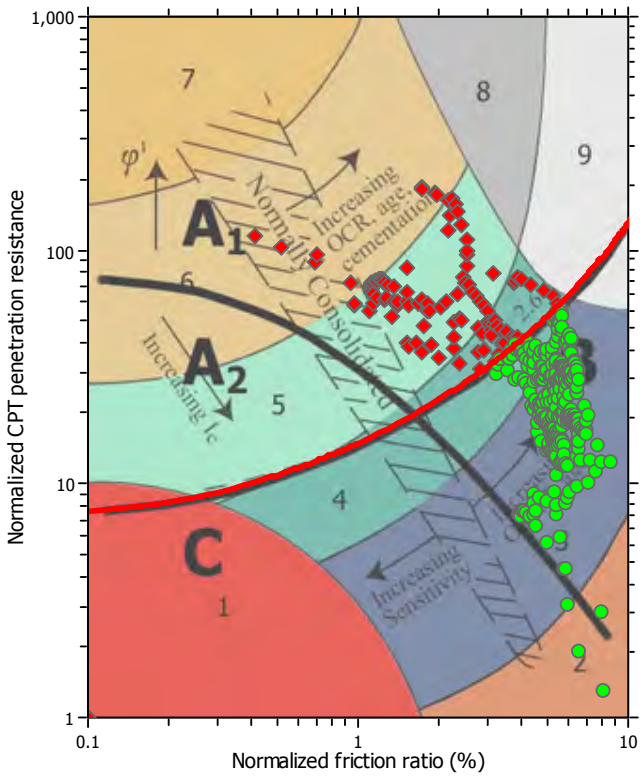
F.S. color scheme

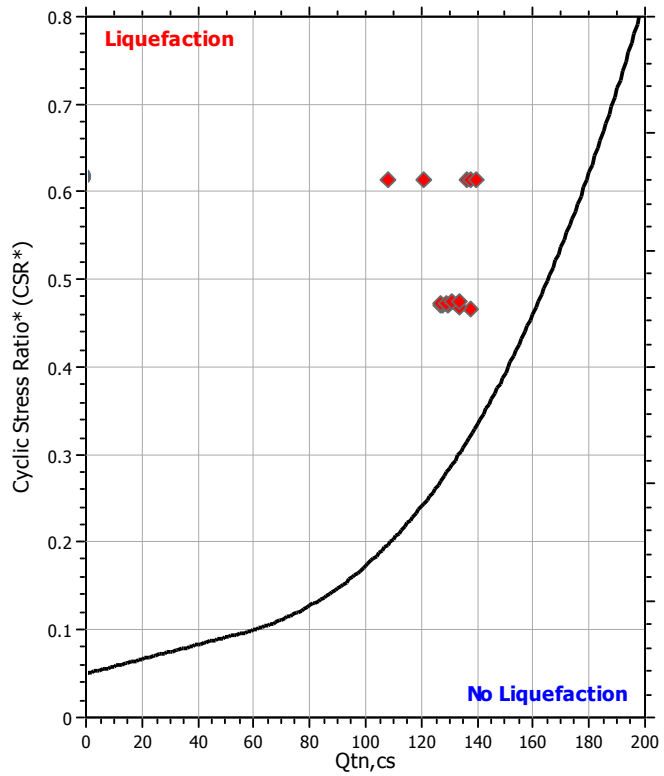
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

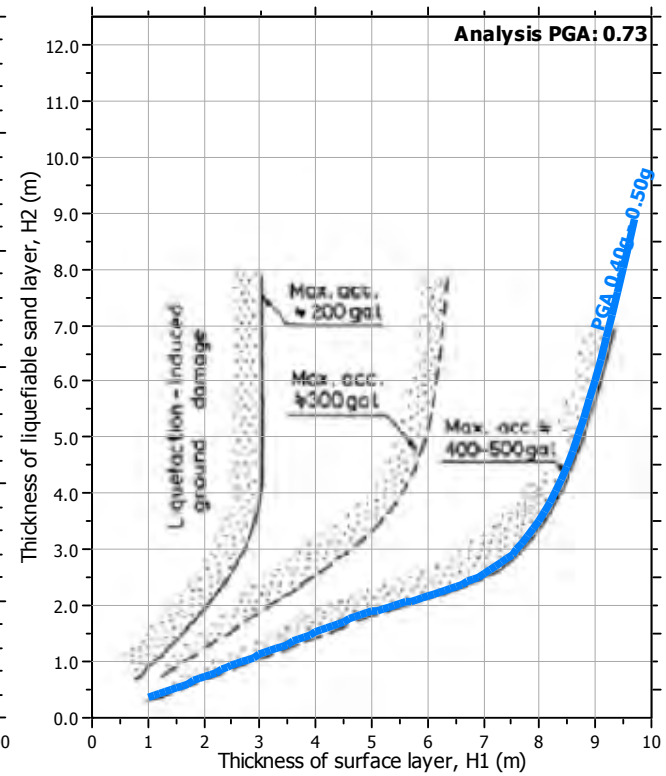
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots







Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

NMG Geotechnical, Inc.
17991 Fitch
Irvine, CA 92614

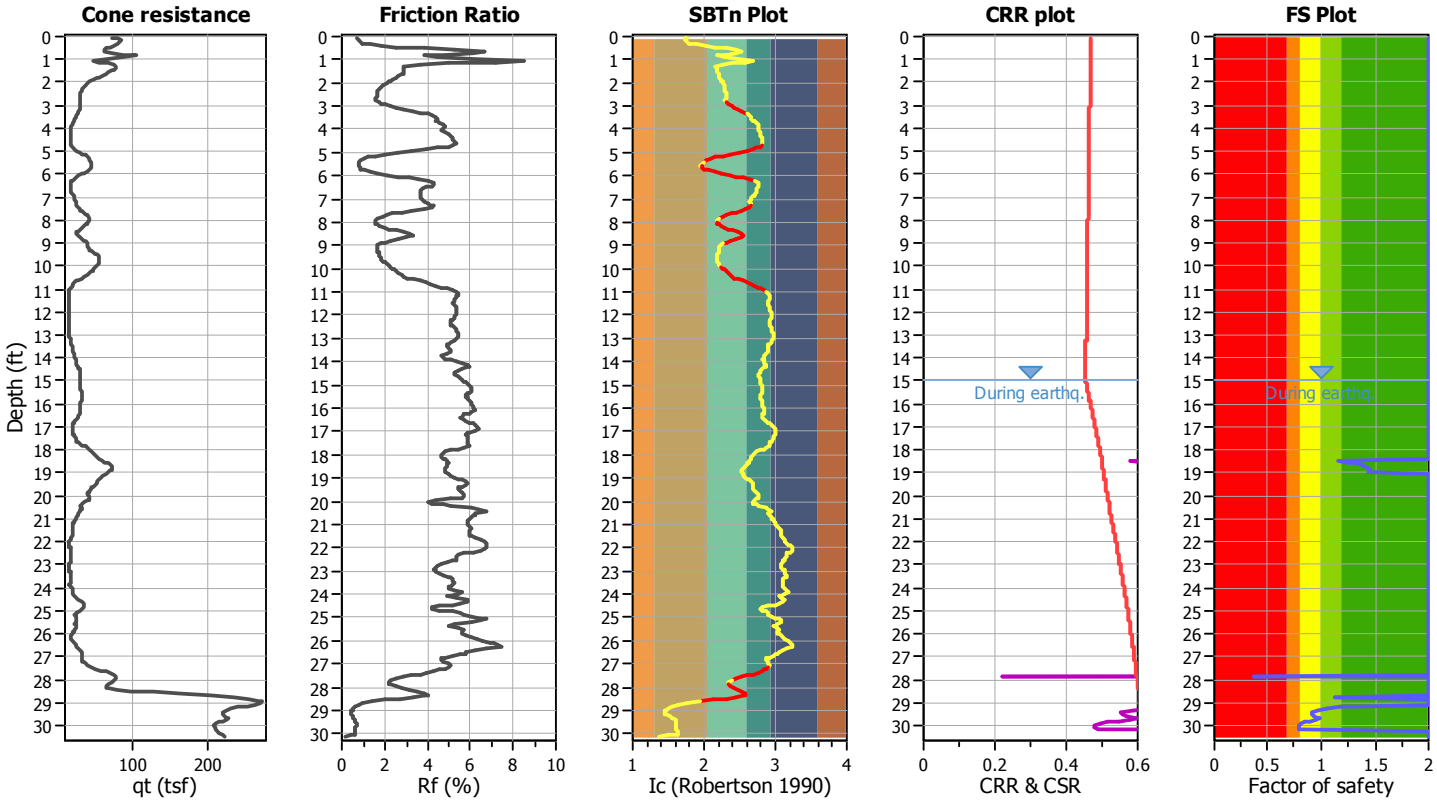
LIQUEFACTION ANALYSIS REPORT

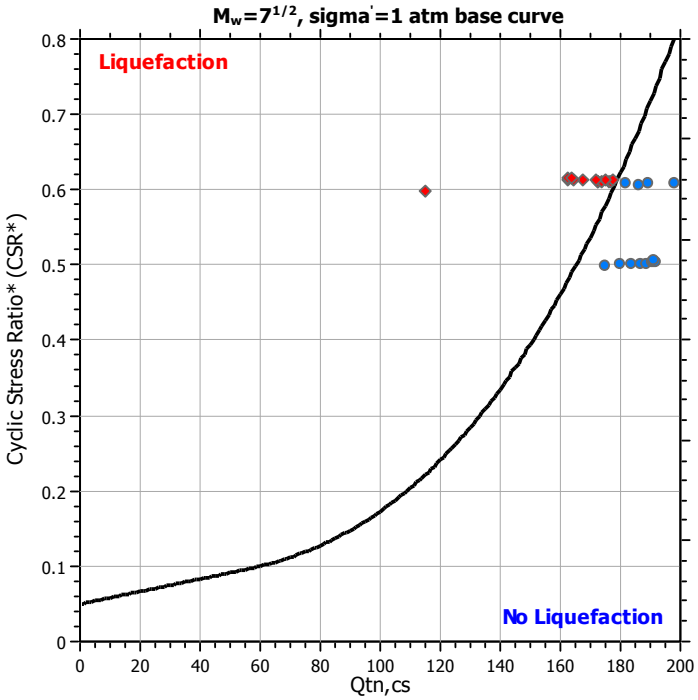
Project title : Sunrise Senior Living/Long Beach **Location : Long Beach, CA**

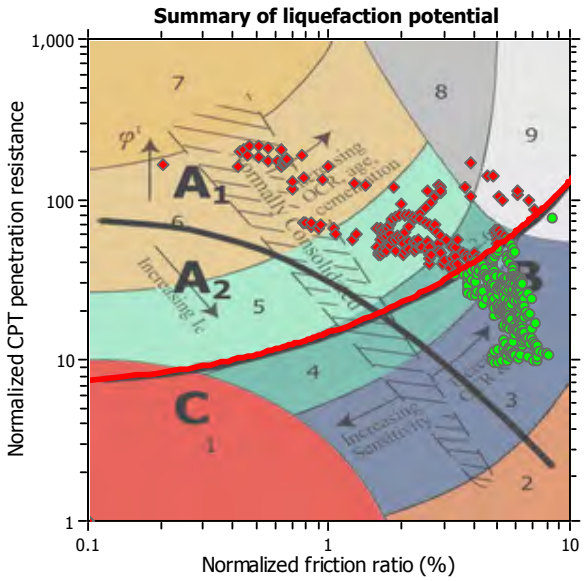
CPT file : CPT-8

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	22.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	15.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.46	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.73	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

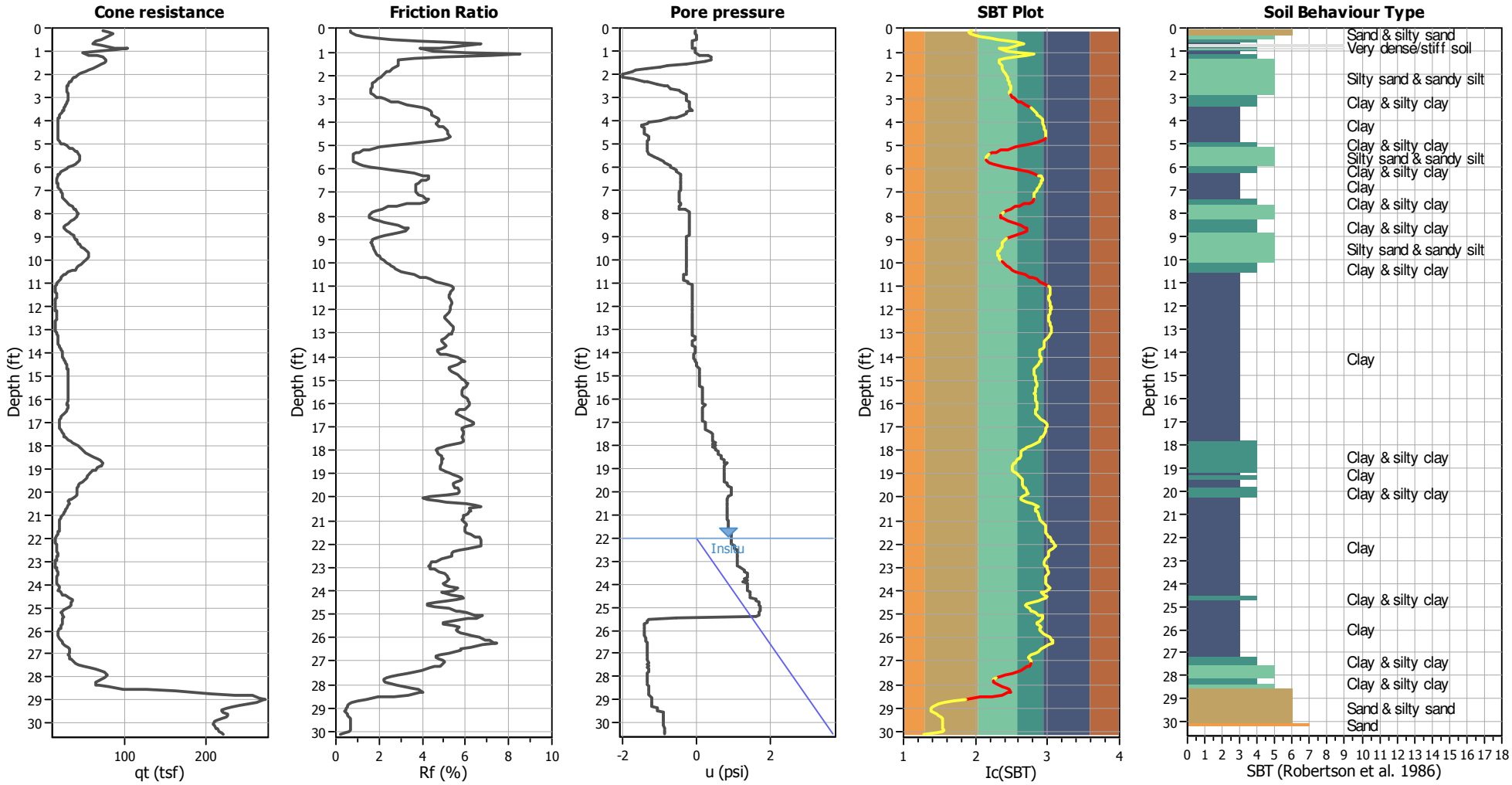






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



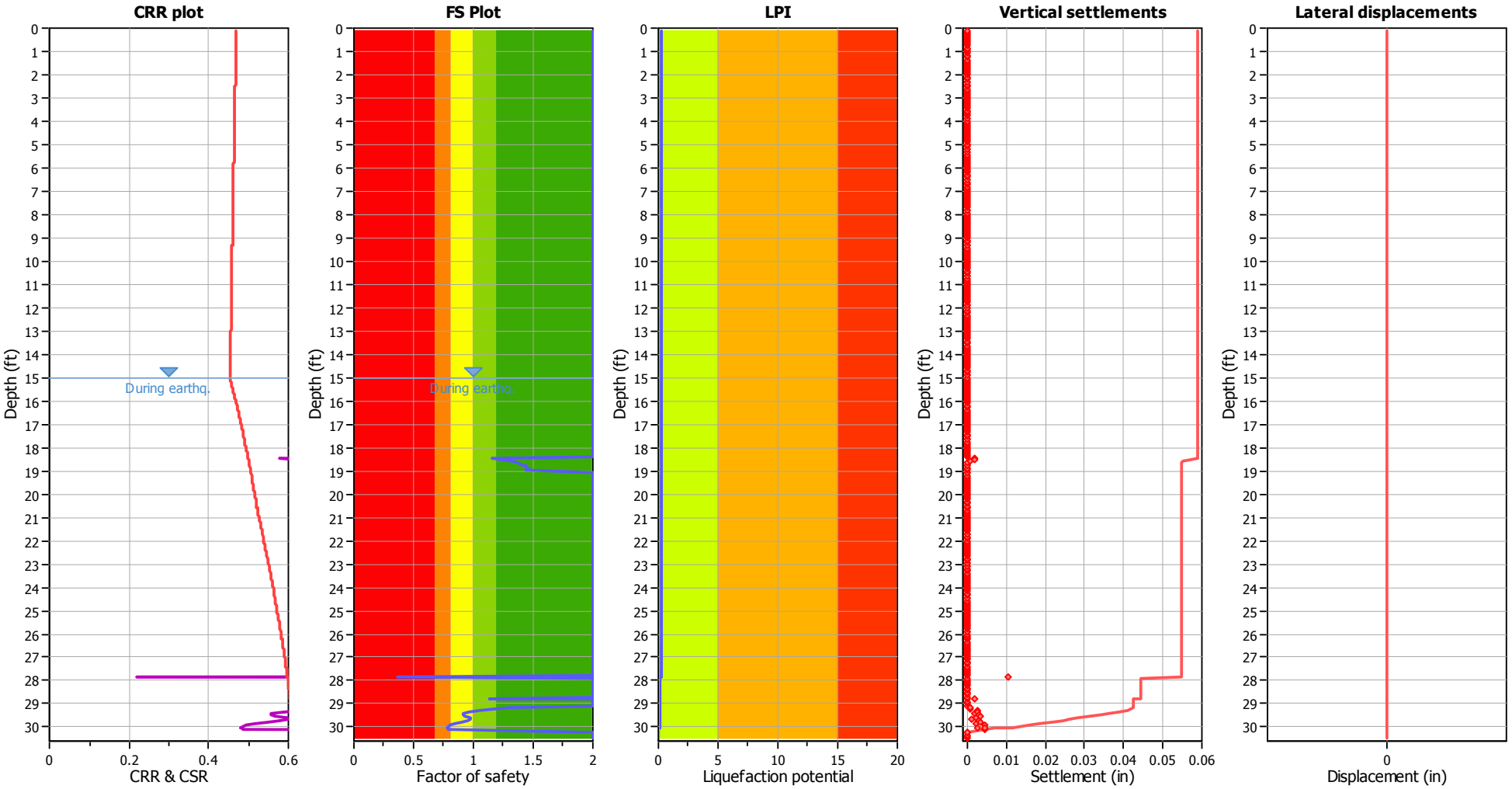
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

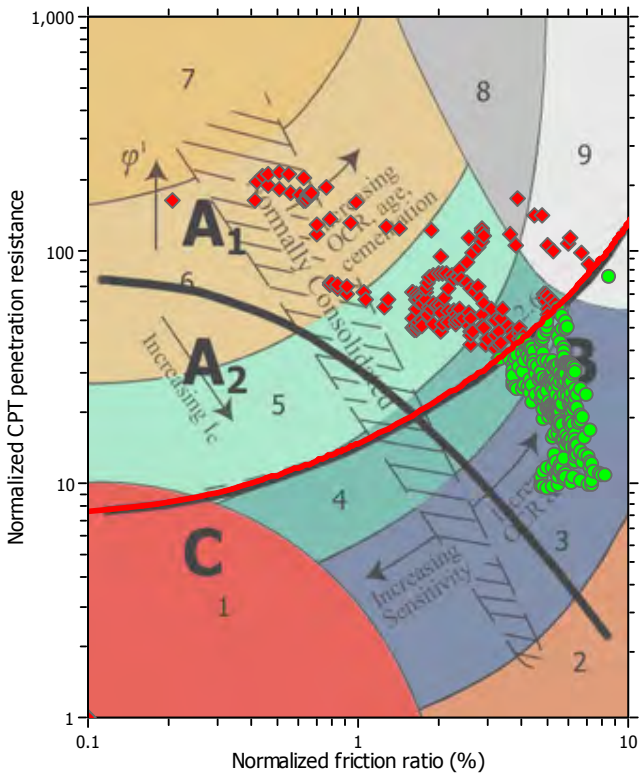
F.S. color scheme

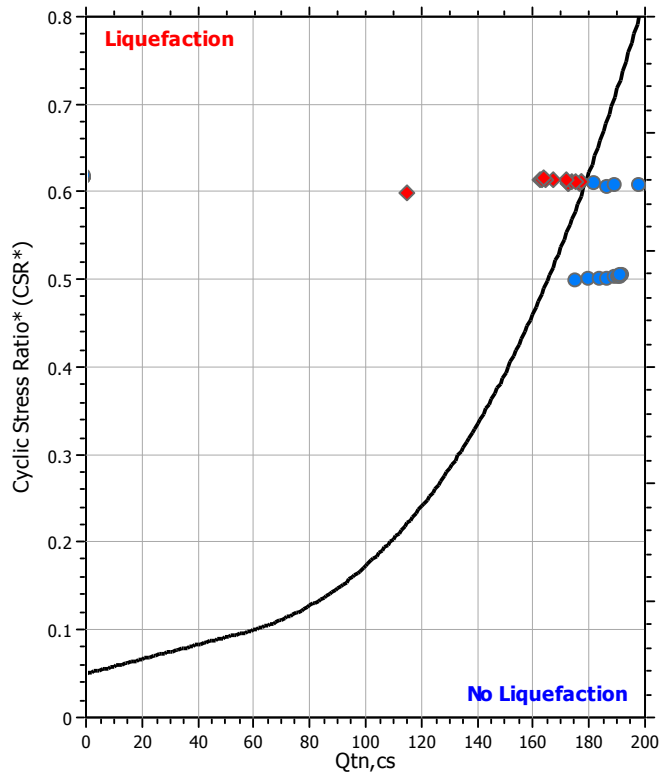
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

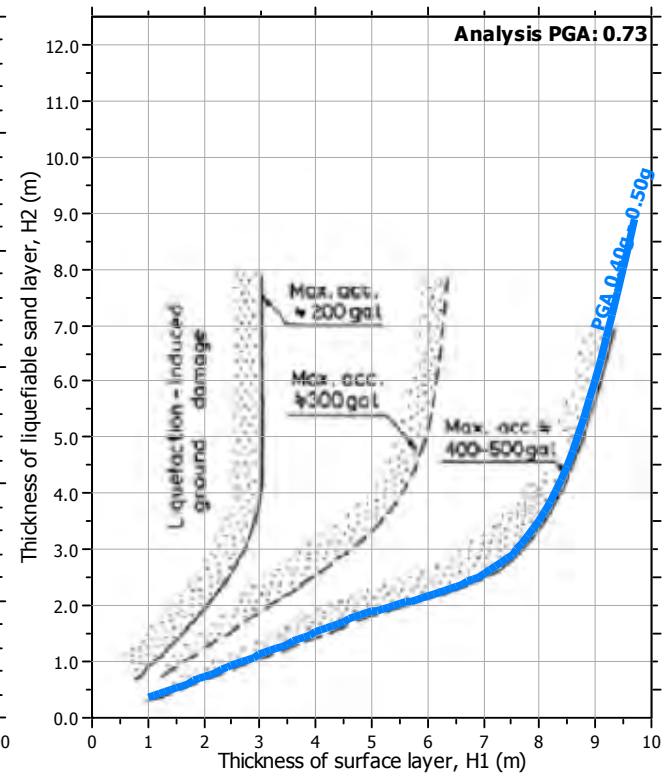
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots







Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

NMG Geotechnical, Inc.
17991 Fitch
Irvine, CA 92614

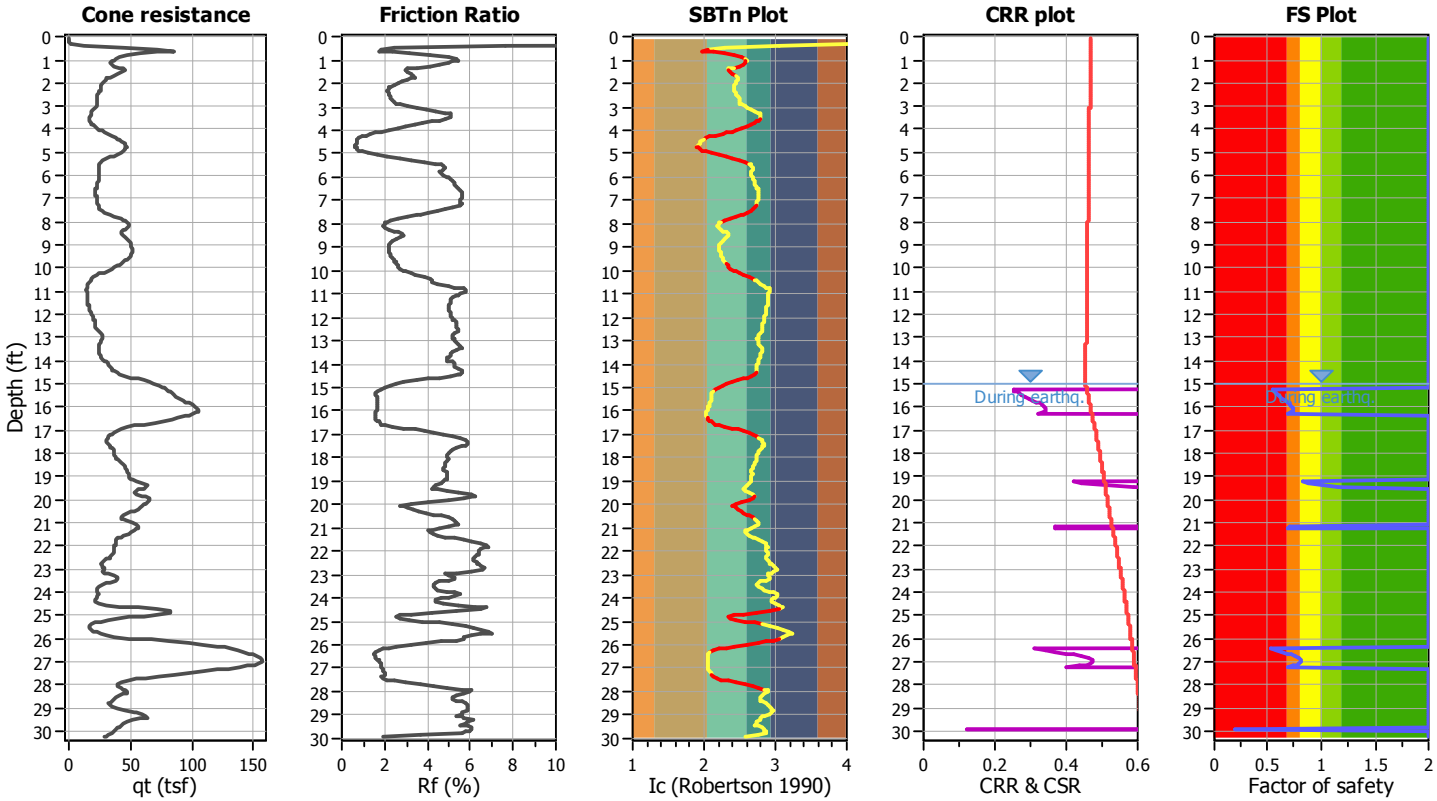
LIQUEFACTION ANALYSIS REPORT

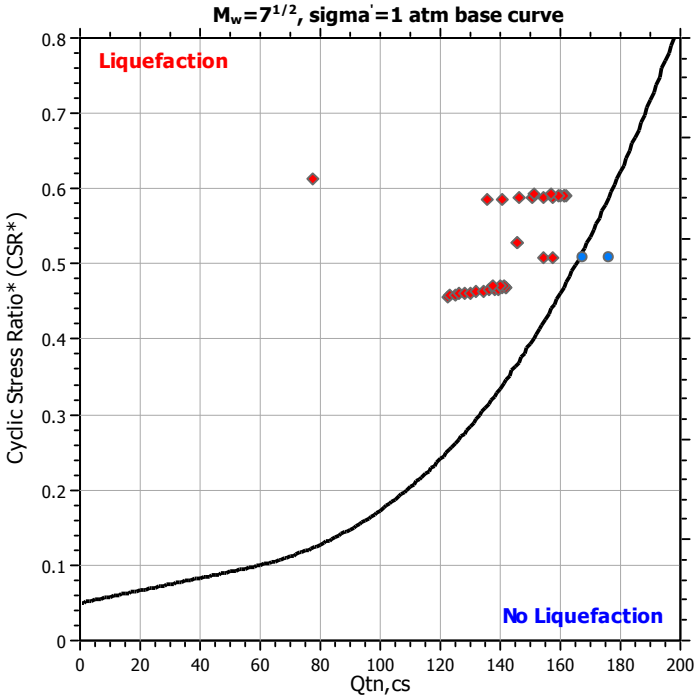
Project title : Sunrise Senior Living/Long Beach **Location : Long Beach, CA**

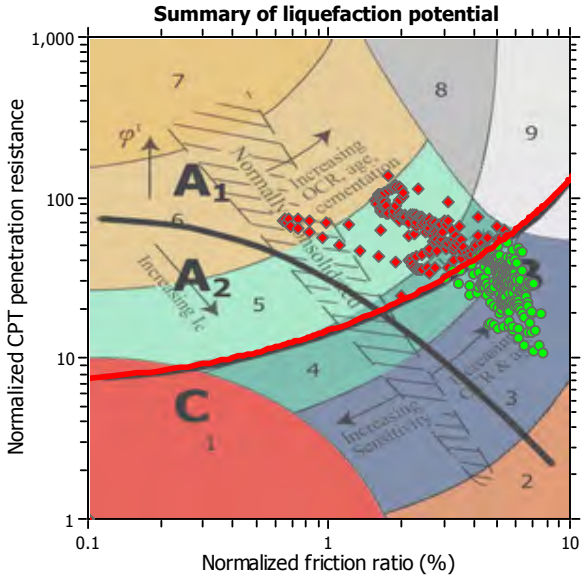
CPT file : CPT-9

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	22.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	15.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.46	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.73	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

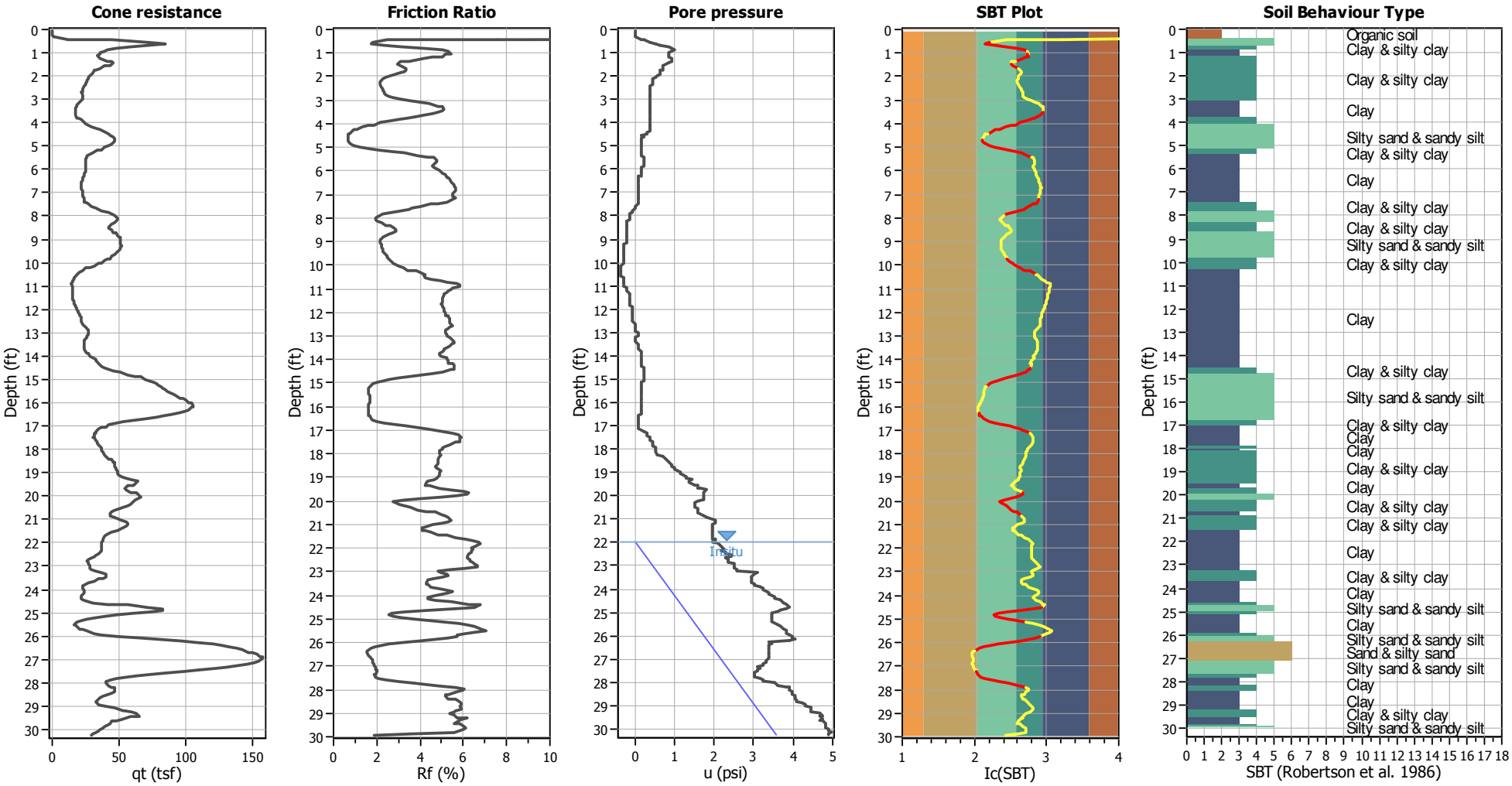






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



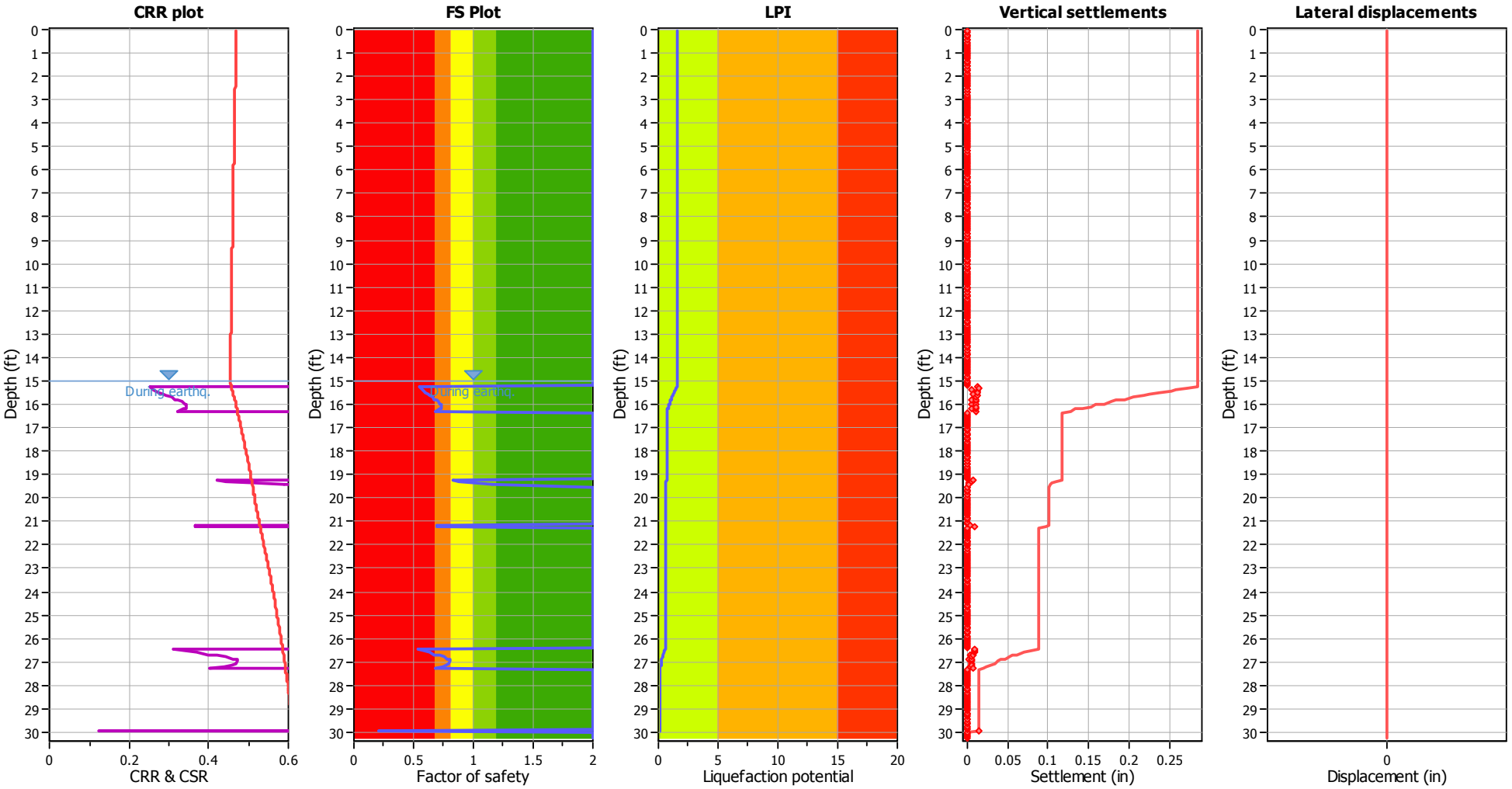
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

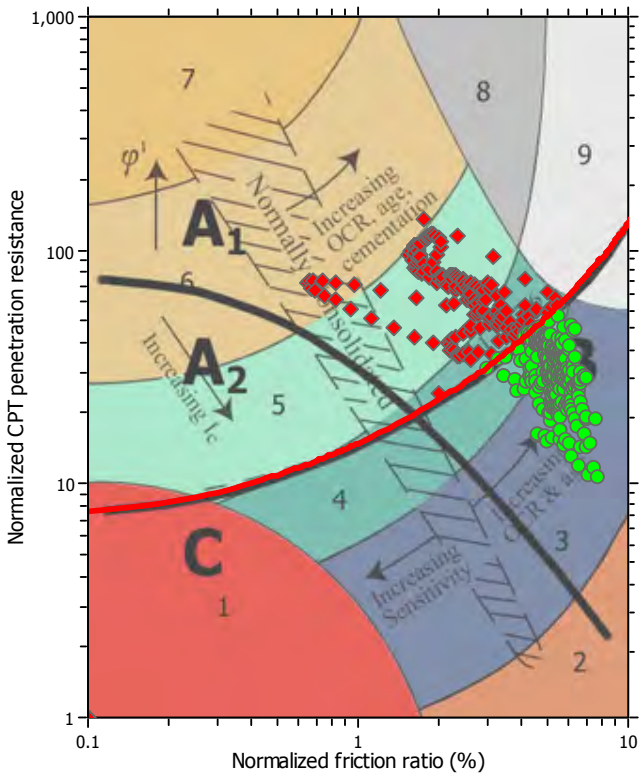
F.S. color scheme

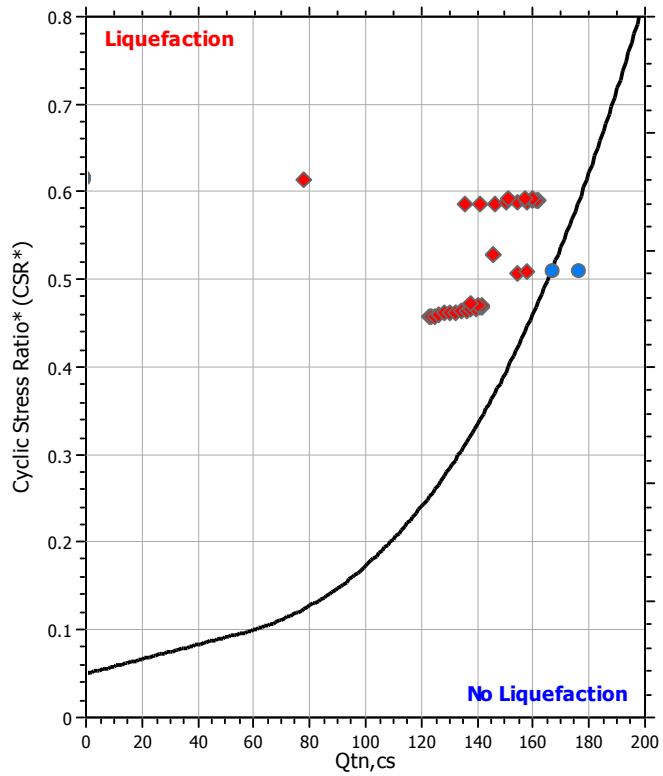
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

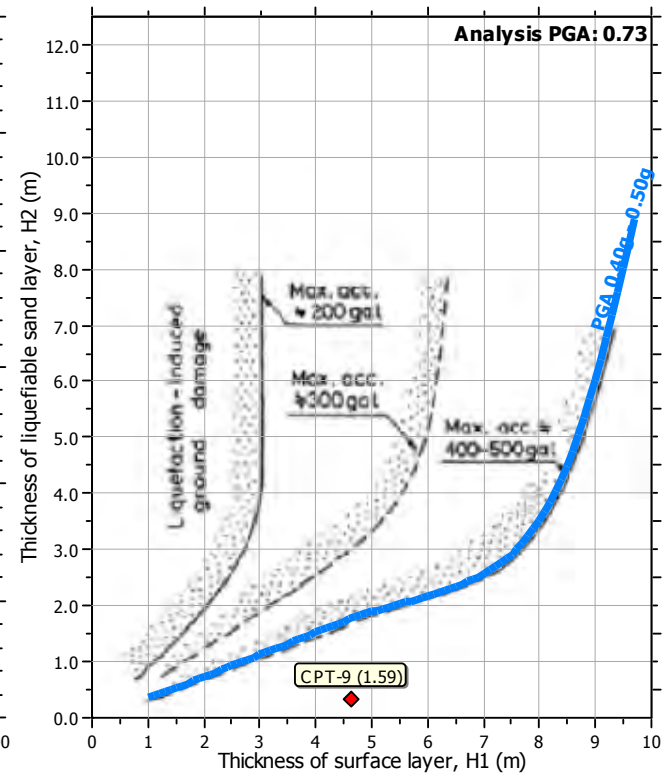
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots







Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

NMG Geotechnical, Inc.
17991 Fitch
Irvine, CA 92614

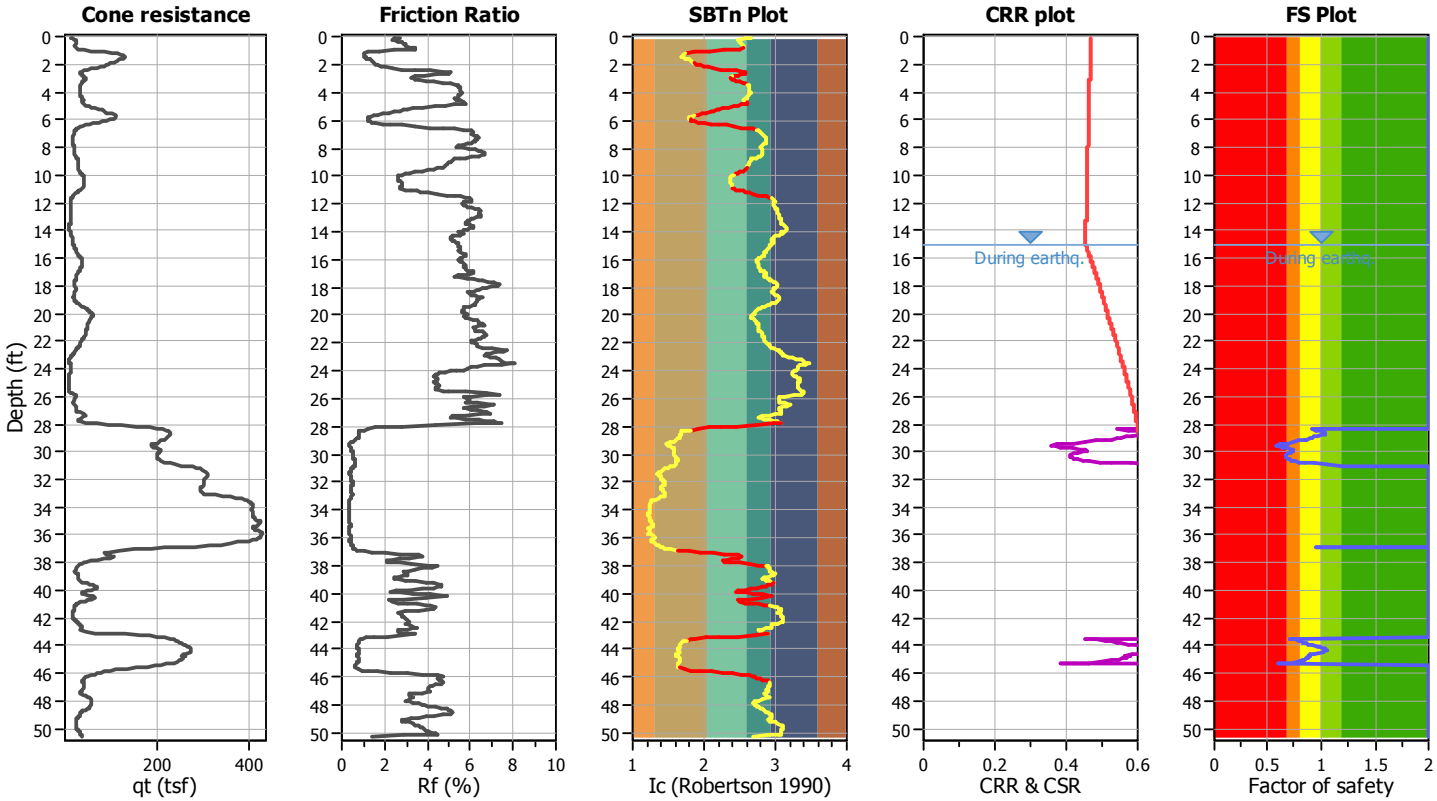
LIQUEFACTION ANALYSIS REPORT

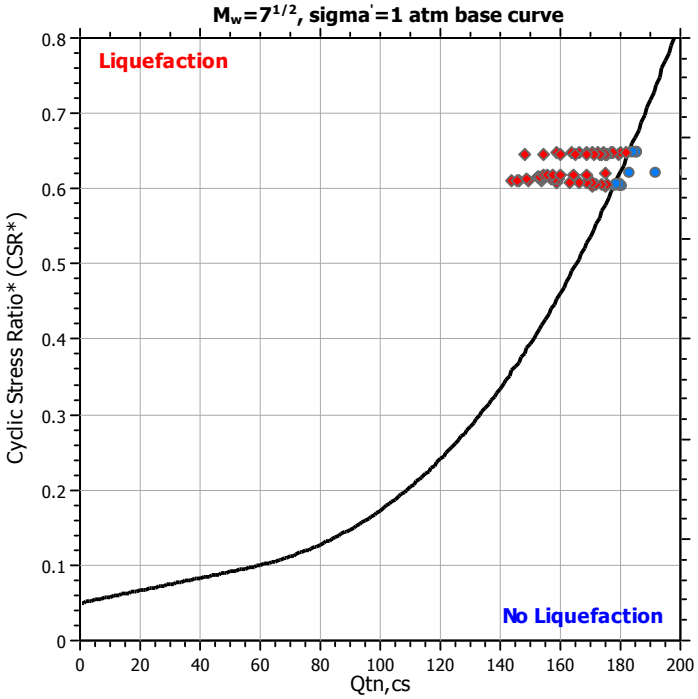
Project title : Sunrise Senior Living/Long Beach **Location : Long Beach, CA**

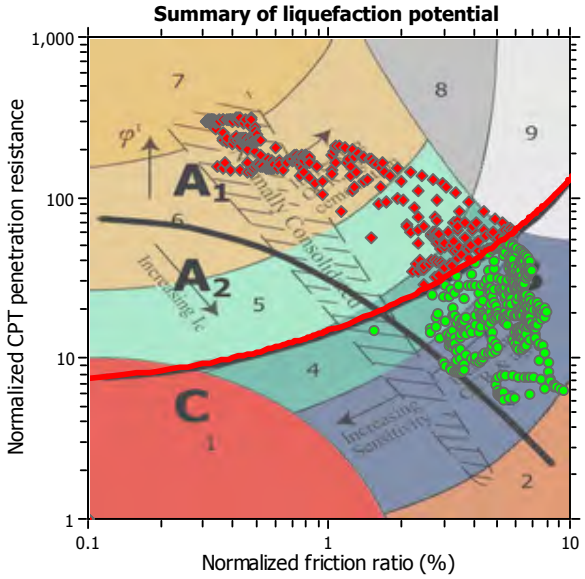
CPT file : CPT-10

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	22.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	15.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.46	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.73	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

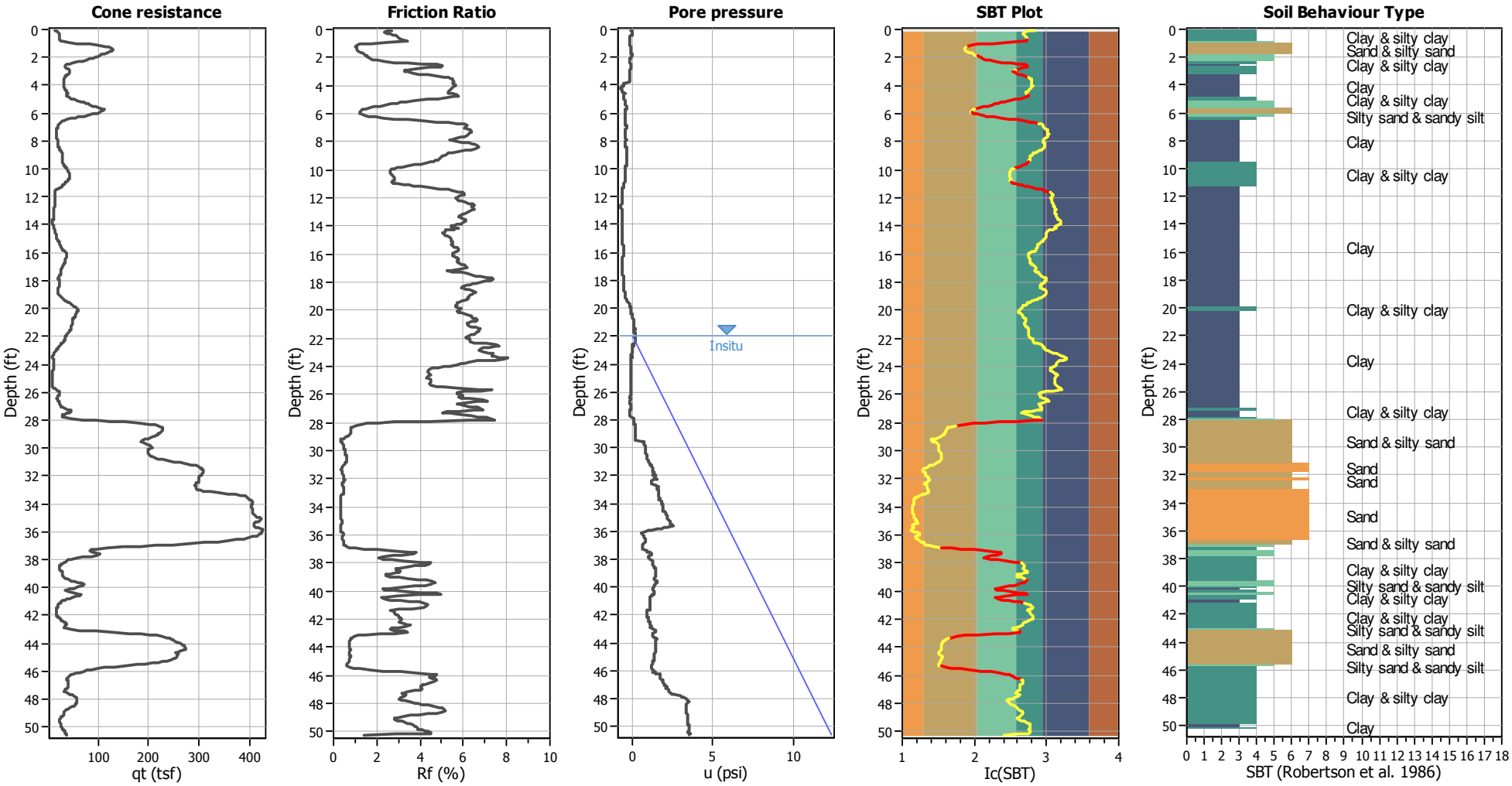






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



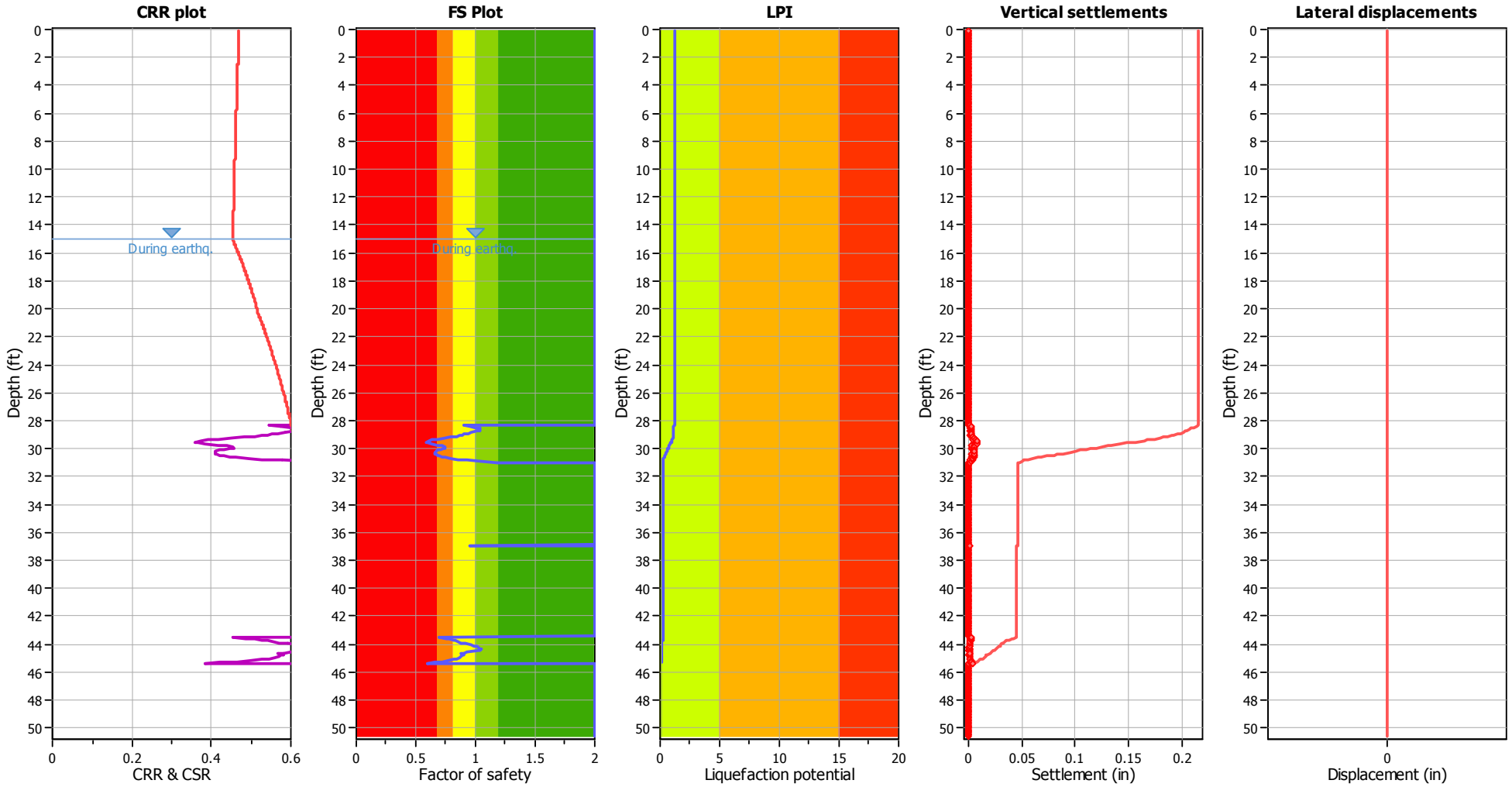
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

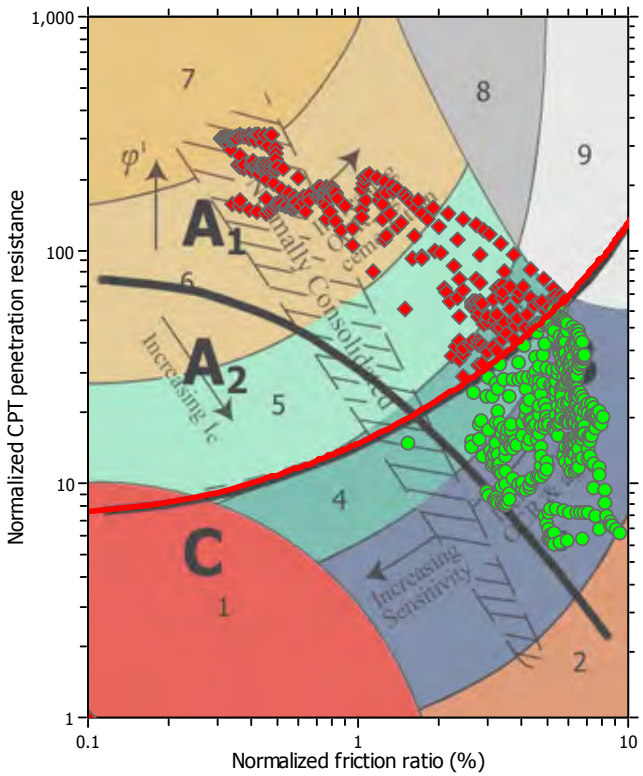
F.S. color scheme

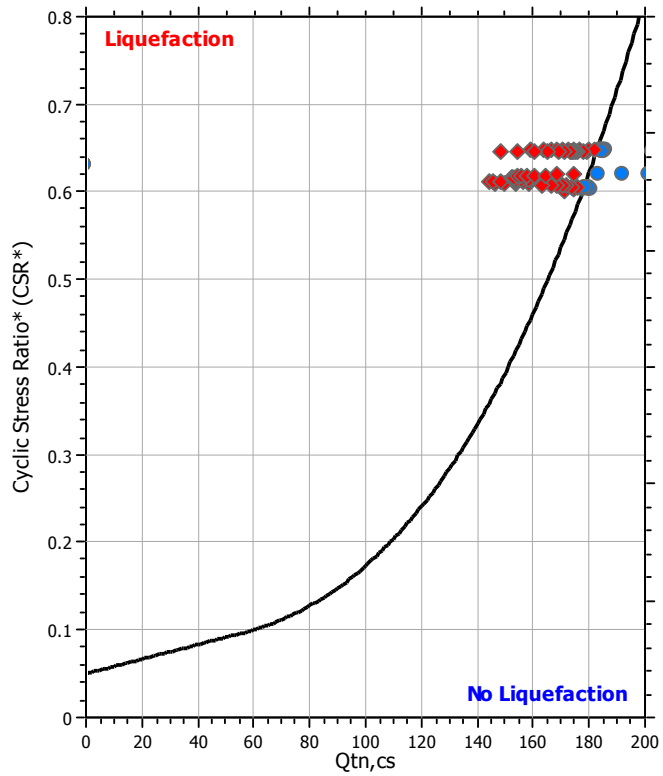
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

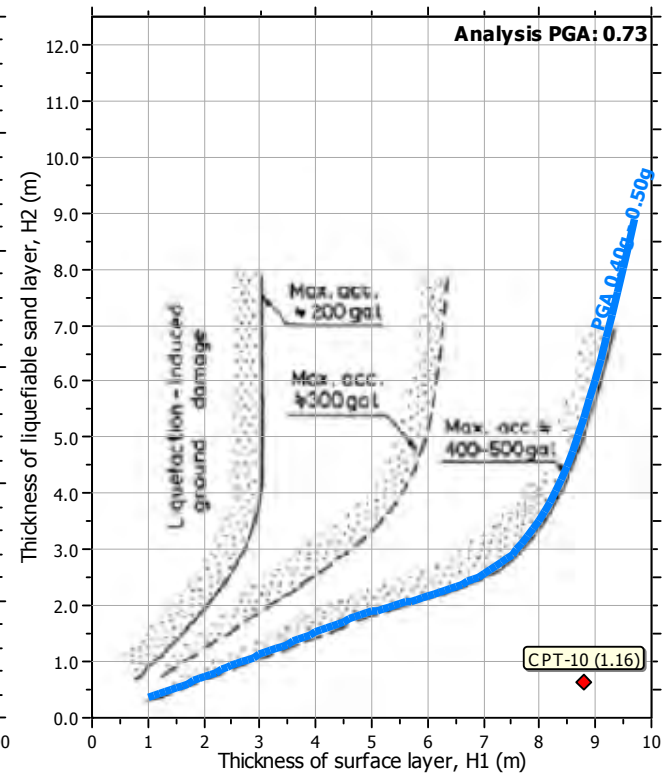
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots







Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

NMG Geotechnical, Inc.
17991 Fitch
Irvine, CA 92614

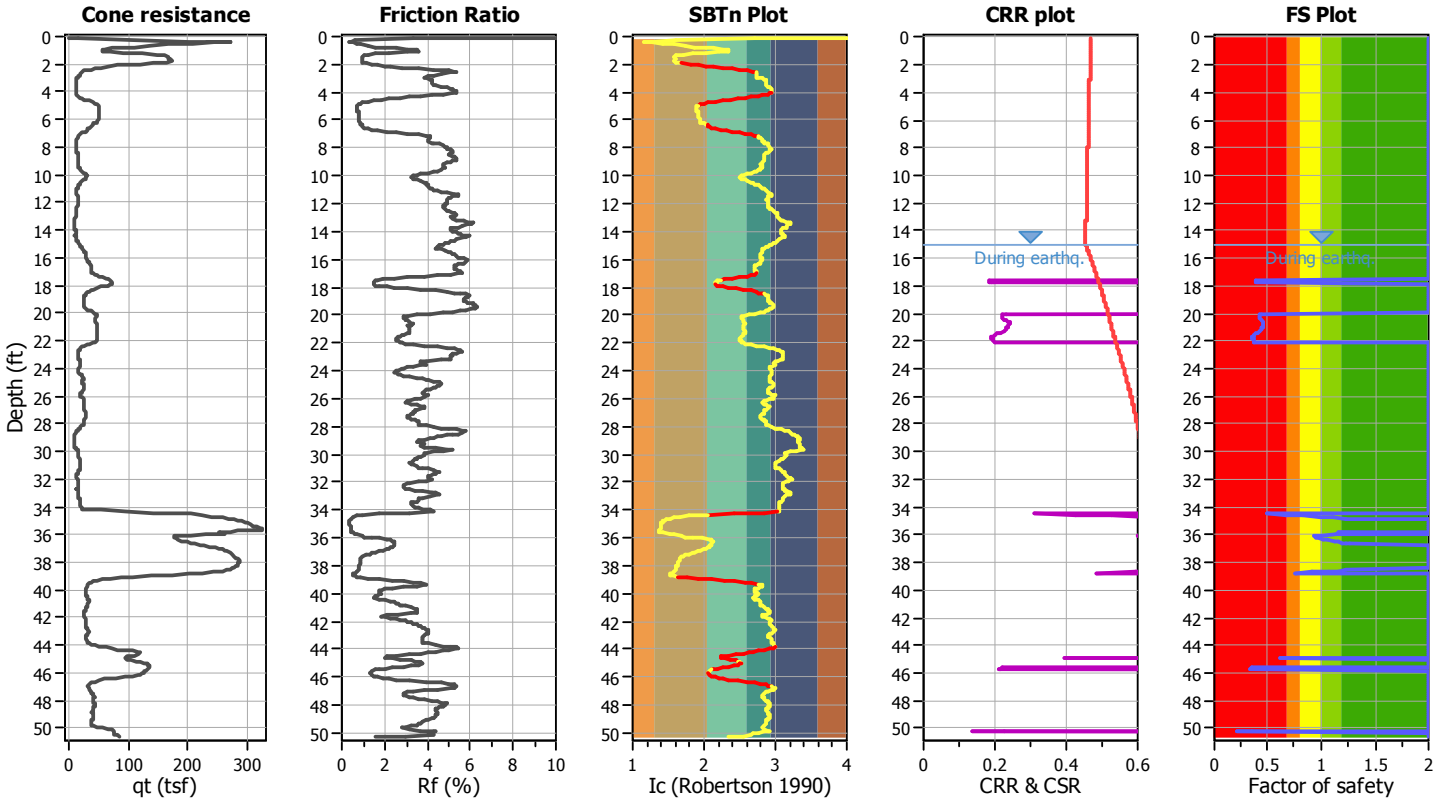
LIQUEFACTION ANALYSIS REPORT

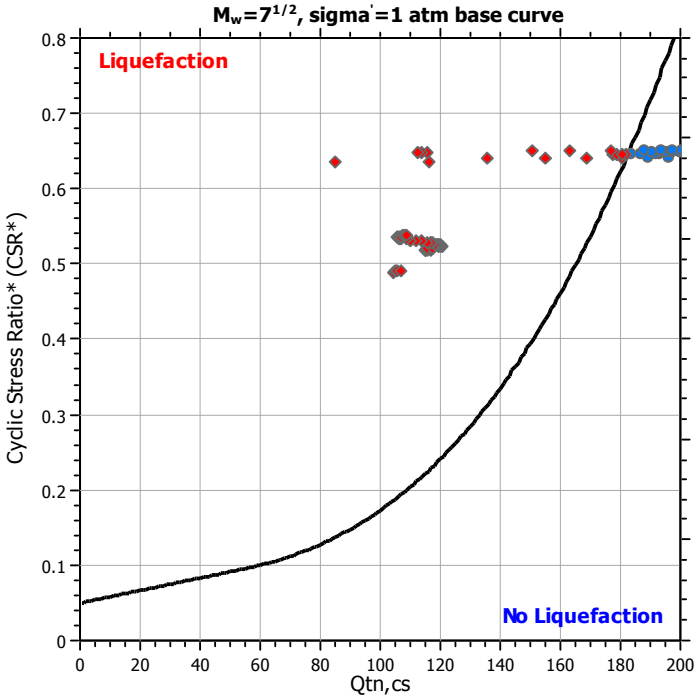
Project title : Sunrise Senior Living/Long Beach **Location : Long Beach, CA**

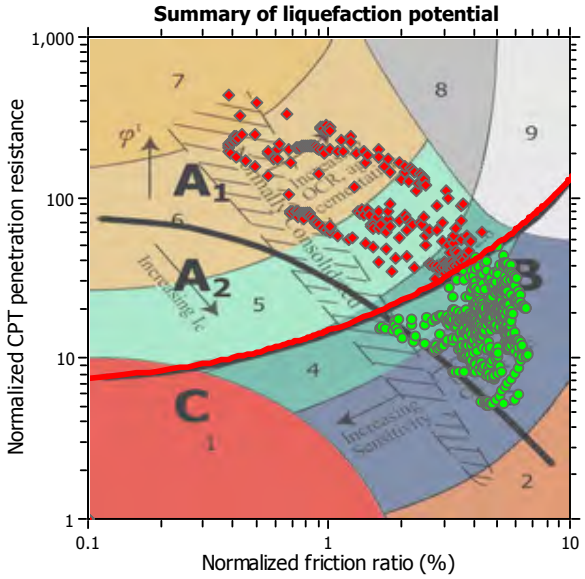
CPT file : CPT-11

Input parameters and analysis data

Analysis method:	NCEER (1998)	G.W.T. (in-situ):	22.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	NCEER (1998)	G.W.T. (earthq.):	15.00 ft	Fill height:	N/A	Limit depth applied:	No
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	N/A
Earthquake magnitude M_w:	7.46	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method based
Peak ground acceleration:	0.73	Unit weight calculation:	Based on SBT	K_σ applied:	Yes		

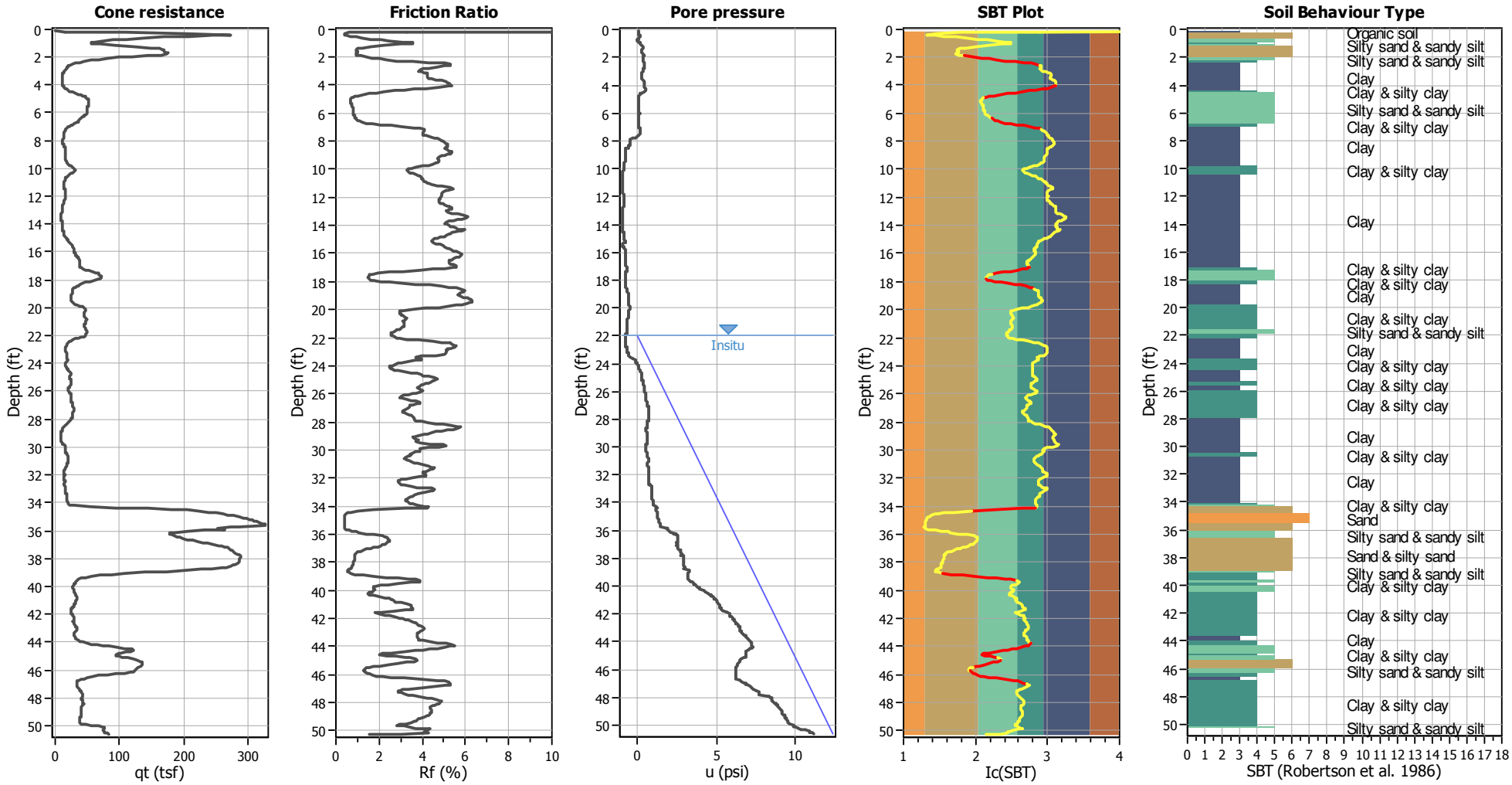






Zone A_1: Cyclic liquefaction likely depending on size and duration of cyclic loading
Zone A_2: Cyclic liquefaction and strength loss likely depending on loading and ground geometry
Zone B: Liquefaction and post-earthquake strength loss unlikely, check cyclic softening
Zone C: Cyclic liquefaction and strength loss possible depending on soil plasticity, brittleness/sensitivity, strain to peak undrained strength and ground geometry

CPT basic interpretation plots



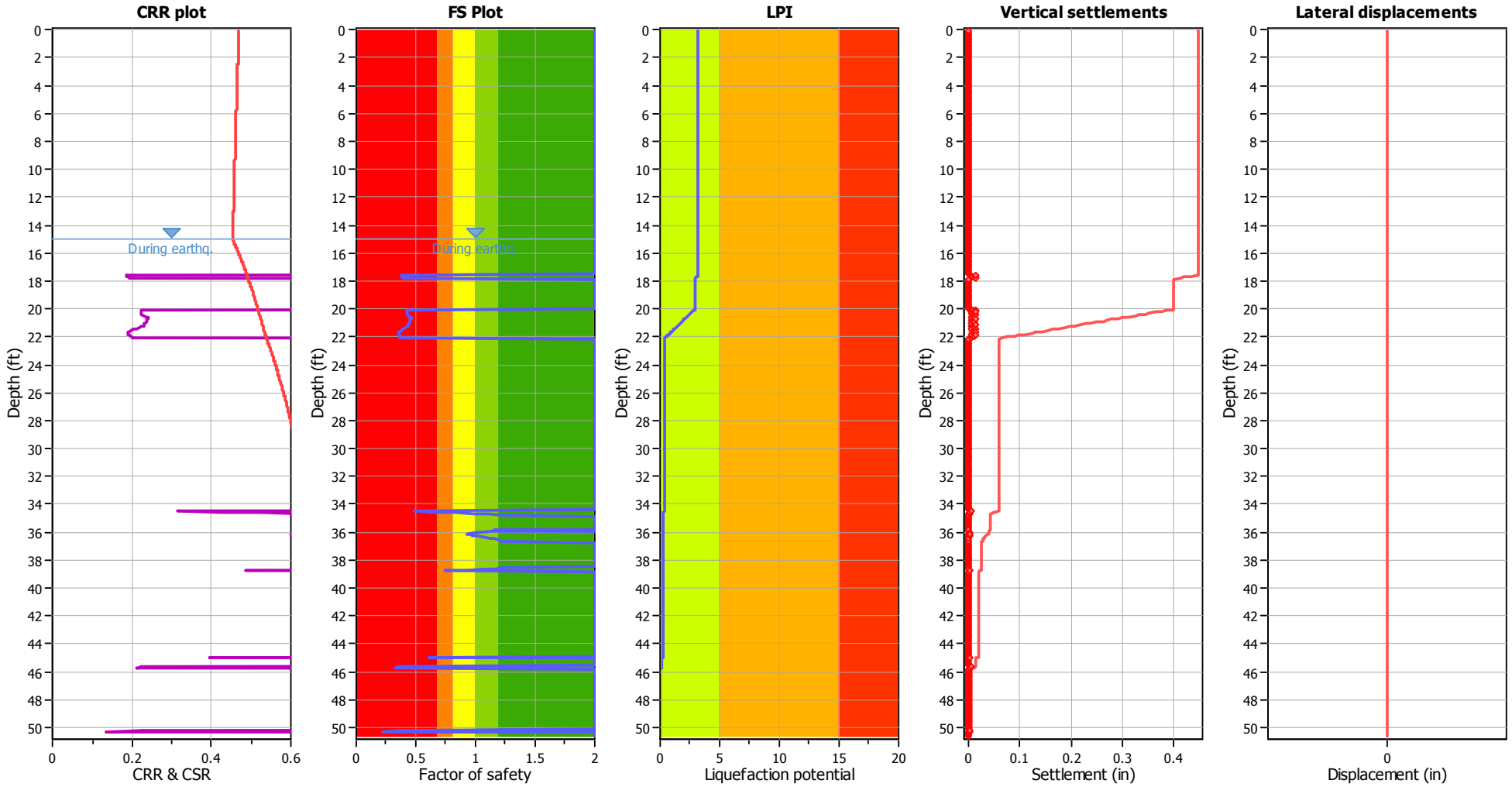
Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

SBT legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

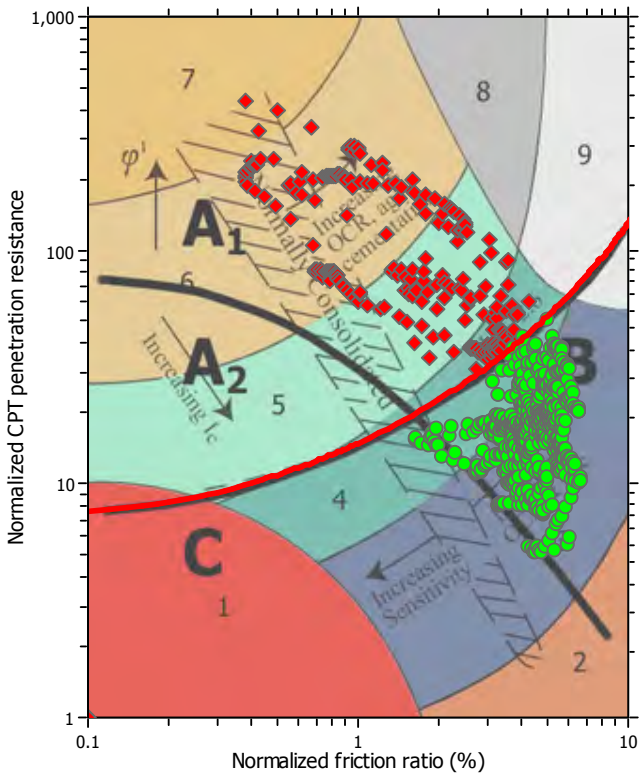
F.S. color scheme

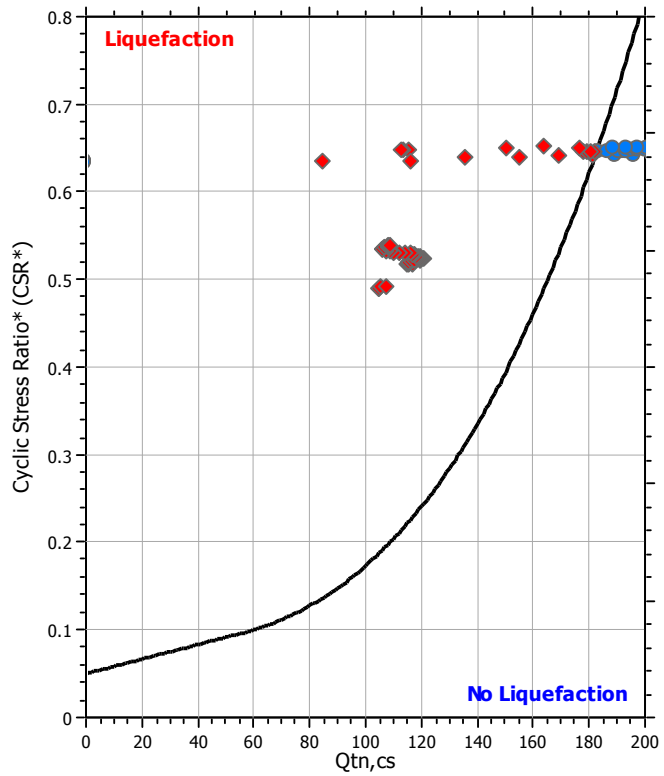
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

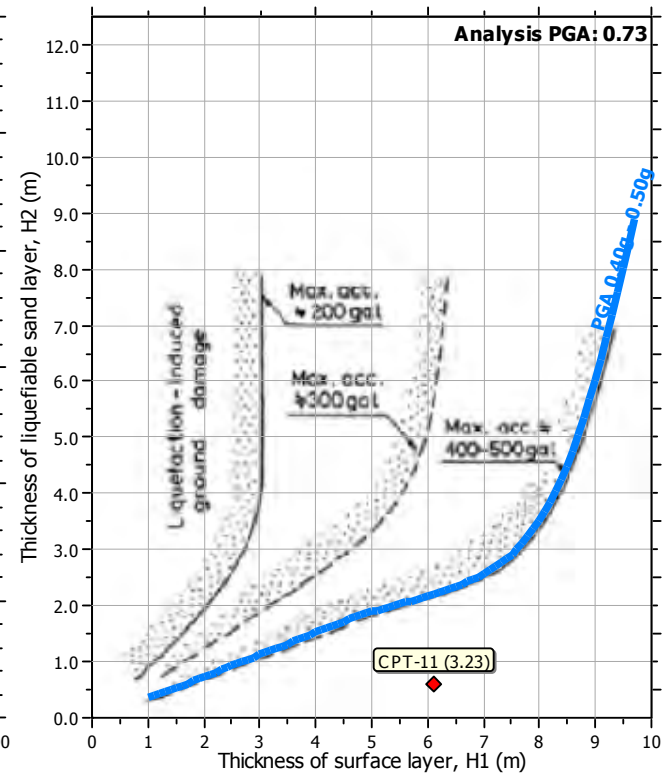
LPI color scheme

- Very high risk
- High risk
- Low risk

Liquefaction analysis summary plots







Input parameters and analysis data

Analysis method:	NCEER (1998)	Depth to water table (erthq.):	15.00 ft	Fill weight:	N/A
Fines correction method:	NCEER (1998)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	7.46	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.73	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	22.00 ft	Fill height:	N/A	Limit depth:	N/A

APPENDIX F

APPENDIX F

GENERAL EARTHWORK AND GRADING SPECIFICATIONS

1.0 General

1.1 Intent: These General Earthwork and Grading Specifications are for the grading and earthwork shown on the approved grading plan(s) and/or indicated in the geotechnical report(s). These Specifications are a part of the recommendations contained in the geotechnical report(s). In case of conflict, the specific recommendations in the geotechnical report shall supersede these more general Specifications. Observations of the earthwork by the project Geotechnical Consultant during the course of grading may result in new or revised recommendations that could supersede these specifications or the recommendations in the geotechnical report(s).

1.2 Geotechnical Consultant: Prior to commencement of work, the owner shall employ a geotechnical consultant. The geotechnical consultant shall be responsible for reviewing the approved geotechnical report(s) and accepting the adequacy of the preliminary geotechnical findings, conclusions, and recommendations prior to the commencement of the grading.

Prior to commencement of grading, the Geotechnical Consultant shall review the "work plan" prepared by the Earthwork Contractor (Contractor) and schedule sufficient personnel to perform the appropriate level of observation, mapping, and compaction testing.

During the grading and earthwork operations, the Geotechnical Consultant shall observe, map, and document the subsurface exposures to verify the geotechnical design assumptions. If the observed conditions are found to be significantly different than the interpreted assumptions during the design phase, the Geotechnical Consultant shall inform the owner, recommend appropriate changes in design to accommodate the observed conditions, and notify the review agency where required. Subsurface areas to be geotechnically observed, mapped, elevations recorded, and/or tested include natural ground after it has been cleared for receiving fill but before fill is placed, bottoms of all "remedial removal" areas, all key bottoms, and benches made on sloping ground to receive fill.

The Geotechnical Consultant shall observe the moisture-conditioning and processing of the subgrade and fill materials and perform relative compaction testing of fill to determine the attained level of compaction. The Geotechnical Consultant shall provide the test results to the owner and the Contractor on a routine and frequent basis.

1.3 The Earthwork Contractor: The Earthwork Contractor (Contractor) shall be qualified, experienced, and knowledgeable in earthwork logistics, preparation and processing of ground to receive fill, moisture-conditioning and processing of fill, and compacting fill. The Contractor shall review and accept the plans, geotechnical report(s), and these Specifications prior to commencement of grading. The Contractor shall be solely responsible for performing the grading in accordance with the plans and specifications.

The Contractor shall prepare and submit to the owner and the Geotechnical Consultant a work plan that indicates the sequence of earthwork grading, the number of "spreads" of work and the estimated quantities of daily earthwork contemplated for the site prior to commencement of grading. The Contractor shall inform the owner and the Geotechnical Consultant of changes in work schedules and updates to the work plan at least 24 hours in advance of such changes so that appropriate observations and tests can be planned and accomplished. The Contractor shall not assume that the Geotechnical Consultant is aware of all grading operations.

The Contractor shall have the sole responsibility to provide adequate equipment and methods to accomplish the earthwork in accordance with the applicable grading codes and agency ordinances, these Specifications, and the recommendations in the approved geotechnical report(s) and grading plan(s). If, in the opinion of the Geotechnical Consultant, unsatisfactory conditions, such as unsuitable soil, improper moisture condition, inadequate compaction, insufficient buttress key size, adverse weather, etc., are resulting in a quality of work less than required in these specifications, the Geotechnical Consultant shall reject the work and may recommend to the owner that construction be stopped until the conditions are rectified.

2.0 Preparation of Areas to be Filled

2.1 Clearing and Grubbing: Vegetation, such as brush, grass, roots, and other deleterious material shall be sufficiently removed and properly disposed of in a method acceptable to the owner, governing agencies, and the Geotechnical Consultant.

The Geotechnical Consultant shall evaluate the extent of these removals depending on specific site conditions. Earth fill material shall not contain more than 1 percent of organic materials (by volume). No fill lift shall contain more than 5 percent of organic matter. Nesting of the organic materials shall not be allowed.

If potentially hazardous materials are encountered, the Contractor shall stop work in the affected area, and a hazardous material specialist shall be informed

immediately for proper evaluation and handling of these materials prior to continuing to work in that area.

As presently defined by the State of California, most refined petroleum products (gasoline, diesel fuel, motor oil, grease, coolant, etc.) have chemical constituents that are considered to be hazardous waste. As such, the indiscriminate dumping or spillage of these fluids onto the ground may constitute a misdemeanor, punishable by fines and/or imprisonment, and shall not be allowed.

2.2 Processing: Existing ground that has been declared satisfactory for support of fill by the Geotechnical Consultant shall be scarified to a minimum depth of 6 inches. Existing ground that is not satisfactory shall be overexcavated as specified in the following section. Scarification shall continue until soils are broken down and free of large clay lumps or clods and the working surface is reasonably uniform, flat, and free of uneven features that would inhibit uniform compaction.

2.3 Overexcavation: In addition to removals and overexcavations recommended in the approved geotechnical report(s) and the grading plan, soft, loose, dry, saturated, spongy, organic-rich, highly fractured or otherwise unsuitable ground shall be overexcavated to competent ground as evaluated by the Geotechnical Consultant during grading.

2.4 Benching: Where fills are to be placed on ground with slopes steeper than 5:1 (horizontal to vertical units), the ground shall be stepped or benched. Please see the Standard Details for a graphic illustration. The lowest bench or key shall be a minimum of 15 feet wide and at least 2 feet deep, into competent material as evaluated by the Geotechnical Consultant. Other benches shall be excavated a minimum height of 4 feet into competent material or as otherwise recommended by the Geotechnical Consultant. Fill placed on ground sloping flatter than 5:1 shall also be benched or otherwise overexcavated to provide a flat subgrade for the fill.

2.5 Evaluation/Acceptance of Fill Areas: All areas to receive fill, including removal and processed areas, key bottoms, and benches, shall be observed, mapped, elevations recorded, and/or tested prior to being accepted by the Geotechnical Consultant as suitable to receive fill. The Contractor shall obtain a written acceptance from the Geotechnical Consultant prior to fill placement. A licensed surveyor shall provide the survey control for determining elevations of processed areas, keys, and benches.

3.0 Fill Material

3.1 General: Material to be used as fill shall be essentially free of organic matter and other deleterious substances evaluated and accepted by the Geotechnical Consultant prior to placement. Soils of poor quality, such as those with unacceptable gradation, high expansion potential, or low strength shall be placed in areas acceptable to the Geotechnical Consultant or mixed with other soils to achieve satisfactory fill material.

3.2 Oversize: Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 12 inches, shall not be buried or placed in fill unless location, materials, and placement methods are specifically accepted by the Geotechnical Consultant. Placement operations shall be such that nesting of oversized material does not occur and such that oversize material is completely surrounded by compacted or densified fill. Oversize material shall not be placed within 10 vertical feet of finish grade or within 2 feet of future utilities or underground construction.

3.3 Import: If importing of fill material is required for grading, proposed import material shall meet the requirements of Section 3.1. The potential import source shall be given to the Geotechnical Consultant at least 48 hours (2 working days) before importing begins so that its suitability can be determined and appropriate tests performed.

4.0 Fill Placement and Compaction

4.1 Fill Layers: Approved fill material shall be placed in areas prepared to receive fill (per Section 3.0) in near-horizontal layers not exceeding 8 inches in loose thickness. The Geotechnical Consultant may accept thicker layers if testing indicates the grading procedures can adequately compact the thicker layers. Each layer shall be spread evenly and mixed thoroughly to attain relative uniformity of material and moisture throughout.

4.2 Fill Moisture Conditioning: Fill soils shall be watered, dried back, blended, and/or mixed, as necessary to attain a relatively uniform moisture content at or slightly over optimum. Maximum density and optimum soil moisture content tests shall be performed in accordance with the American Society of Testing and Materials (ASTM Test Method D1557-91).

4.3 Compaction of Fill: After each layer has been moisture-conditioned, mixed, and evenly spread, it shall be uniformly compacted to not less than 90 percent of maximum dry density (ASTM Test Method D1557-91). Compaction equipment shall be adequately sized and be either specifically designed for soil compaction or of proven reliability to efficiently achieve the specified level of compaction with uniformity.

4.4 Compaction of Fill Slopes: In addition to normal compaction procedures specified above, compaction of slopes shall be accomplished by backrolling of slopes with sheepsfoot rollers at increments of 3 to 4 feet in fill elevation, or by other methods producing satisfactory results acceptable to the Geotechnical Consultant. Upon completion of grading, relative compaction of the fill, out to the slope face, shall be at least 90 percent of maximum density per ASTM Test Method D1557-91.

4.5 Compaction Testing: Field tests for moisture content and relative compaction of the fill soils shall be performed by the Geotechnical Consultant. Location and frequency of tests shall be at the Consultant's discretion based on field conditions encountered. Compaction test locations will not necessarily be selected on a random basis. Test locations shall be selected to verify adequacy of compaction levels in areas that are judged to be prone to inadequate compaction (such as close to slope faces and at the fill/bedrock benches).

4.6 Frequency of Compaction Testing: Tests shall be taken at intervals not exceeding 2 feet in vertical rise and/or 1,000 cubic yards of compacted fill soils embankment. In addition, as a guideline, at least one test shall be taken on slope faces for each 5,000 square feet of slope face and/or each 10 feet of vertical height of slope. The Contractor shall assure that fill construction is such that the testing schedule can be accomplished by the Geotechnical Consultant. The Contractor shall stop or slow down the earthwork construction if these minimum standards are not met.

4.7 Compaction Test Locations: The Geotechnical Consultant shall document the approximate elevation and horizontal coordinates of each test location. The Contractor shall coordinate with the project surveyor to assure that sufficient grade stakes are established so that the Geotechnical Consultant can determine the test locations with sufficient accuracy. At a minimum, two grade stakes within a horizontal distance of 100 feet and vertically less than 5 feet apart from potential test locations shall be provided.

5.0 Subdrain Installation

Subdrain systems shall be installed in accordance with the approved geotechnical report(s), the grading plan, and the Standard Details. The Geotechnical Consultant may recommend additional subdrains and/or changes in subdrain extent, location, grade, or material depending on conditions encountered during grading. All subdrains shall be surveyed by a land surveyor/civil engineer for line and grade after installation and prior to burial. Sufficient time should be allowed by the Contractor for these surveys.

6.0 Excavation

Excavations, as well as over-excavation for remedial purposes, shall be evaluated by the Geotechnical Consultant during grading. Remedial removal depths shown on geotechnical plans are estimates only. The actual extent of removal shall be determined by the Geotechnical Consultant based on the field evaluation of exposed conditions during grading. Where fill-over-cut slopes are to be graded, the cut portion of the slope shall be made, evaluated, and accepted by the Geotechnical Consultant prior to placement of materials for construction of the fill portion of the slope, unless otherwise recommended by the Geotechnical Consultant.

7.0 Trench Backfills

7.1 Contractor shall follow all OHSA and Cal/OSHA requirements for safety of trench excavations.

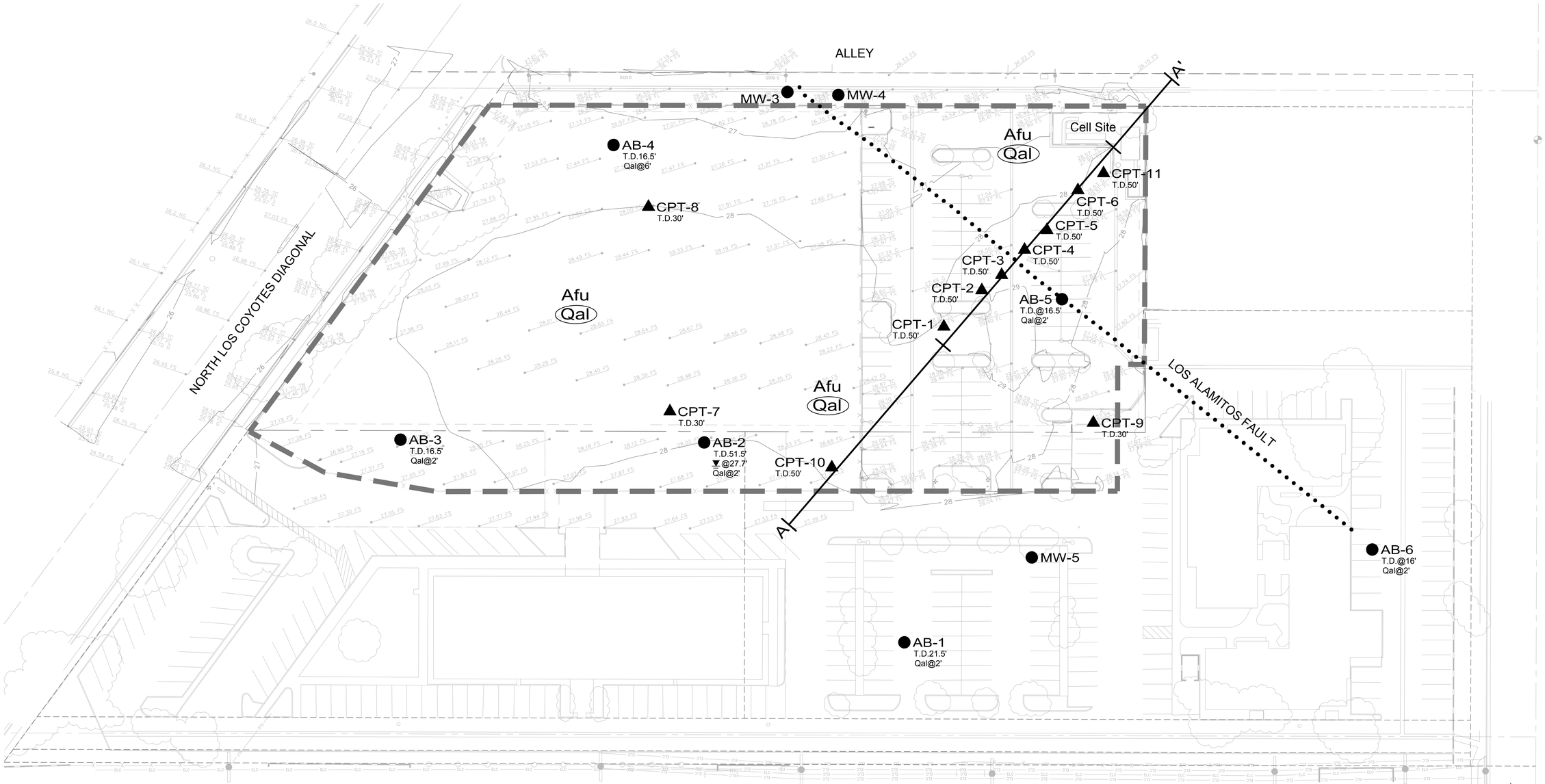
7.2 Bedding and backfill of utility trenches shall be done in accordance with the applicable provisions of Standard Specifications of Public Works Construction. Bedding material shall have a Sand Equivalent greater than 30 (SE>30). The bedding shall be placed to 1 foot over the top of the conduit and densified by jetting. Backfill shall be placed and densified to a minimum 90 percent of maximum from 1 foot above the top of the conduit to the surface, except in traveled ways (see Section 7.6 below).

7.3 Jetting of the bedding around the conduits shall be observed by the Geotechnical Consultant.

7.4 Geotechnical Consultant shall test the trench backfill for relative compaction. At least one test should be made for every 300 feet of trench and 2 feet of fill.

7.5 Lift thickness of trench backfill shall not exceed those allowed in the Standard Specifications of Public Works Construction unless the Contractor can demonstrate to the Geotechnical Consultant that the fill lift can be compacted to the minimum relative compaction by his alternative equipment and method.

7.6 Trench backfill in the upper foot measured from finish grade within existing or future traveled way, shoulder, and other paved areas (or areas to receive pavement) should be placed to a minimum 95 percent relative compaction.



LEGEND

EARTH UNITS - CIRCLED WHERE BURIED

Afu	UNCERTIFIED/UNDOCUMENTED FILL
Qal	ALLUVIUM

SYMBOLS - LOCATIONS ARE APPROXIMATE, QUERIED WHERE UNCERTAIN

• • • • • • • • • •	BURIED FAULT (AFTER CGS, 2010)
▲CPT-11 T.D.50'	CONE PENETROMETER TEST THIS INVESTIGATION, SHOWING TOTAL DEPTH
●AB-6 T.D.16' Qal@2' ▼@28'	BORING BY ALBUS-KEEFE, SHOWING TOTAL DEPTH, DEPTH TO EARTH UNIT AND DEPTH TO GROUNDWATER
●MW-5	MONITORING GROUND WATER WELL, BY LANDMARK (3 TOTAL)
A|——|A'	CROSS-SECTION
▬ ▬ ▬	PROJECT BOUNDARY

GRAPHIC SCALE

30 0 15 30 60

(IN FEET)
1 inch = 30 ft.

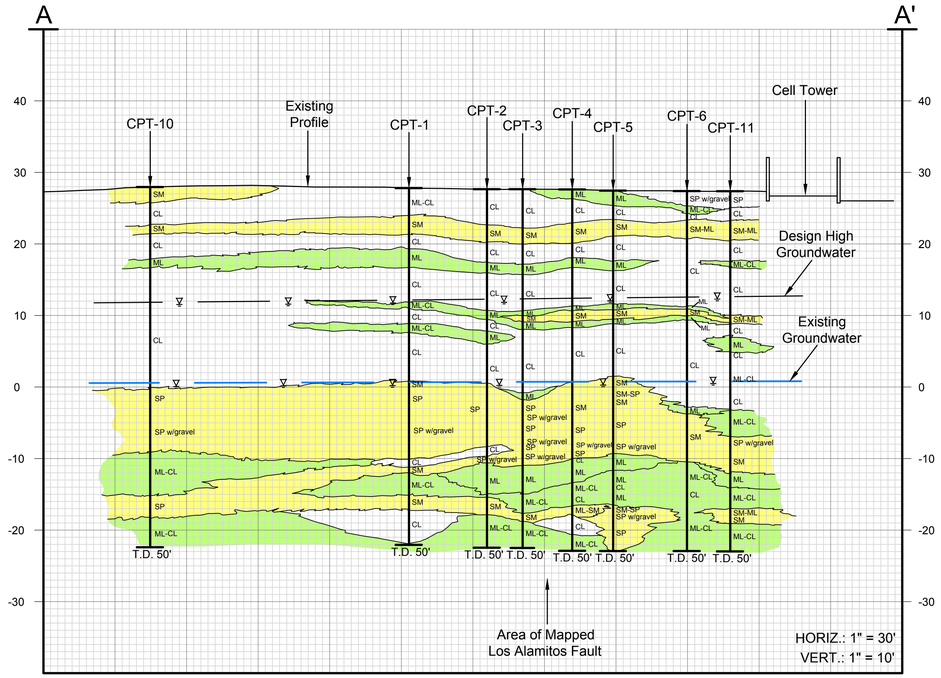
PLATE 1

PRELIMINARY GEOTECHNICAL MAP
SUNRISE SENIOR FACILITY AT
3320 NORTH LOS COYOTES DIAGONAL
LONG BEACH, CALIFORNIA

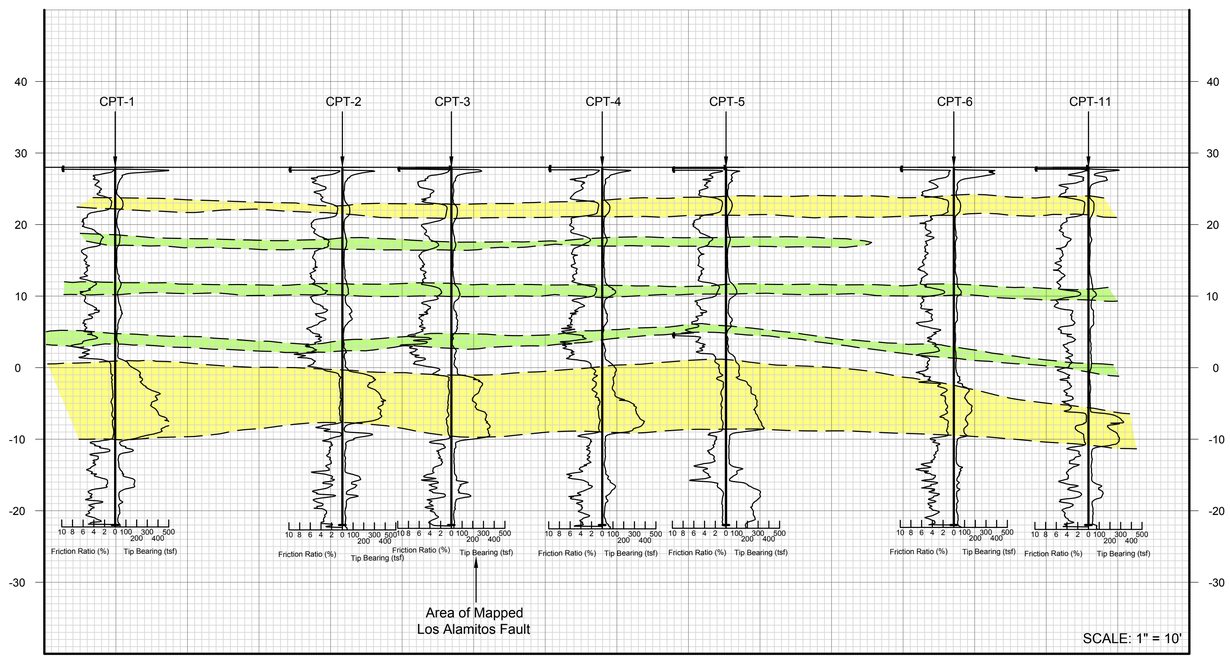
Project No.: 20117-01 By:KGM/TW
Project Name: Sunrise/LB Senior Living
Date: 11/19/2020 SCALE: 1" = 30'

NMG Geotechnical, Inc.

Drawing: P:\L\20201\20117-01 Sunrise LB Senior Living Family\Drafting_MP\20117-01 Plate.dwg Layout: 1 Last Saved: Thu Nov 05, 2020 - 2:26pm Last Plotted: Fri Nov 06, 2020 - 6:17am By: jschneider



GEOLOGIC CROSS-SECTION A-A'



CPT CORRELATION EXHIBIT

(SEE SECTION A-A' AND PLATE 1)

PLATE 2

Project No.: 20117-01	By: KGM/TW
Project Name: SUNRISE / LB Senior Living Date: 11/19/2020	

NMG Geotechnical, Inc.

ALBUS-KEEFE & ASSOCIATES, INC.
GEOTECHNICAL CONSULTANTS

June 11, 2019
J.N.: 2816.00

Ms. Doris Nguyen
The Olson Company
3010 Old Ranch Parkway, Suite 100
Seal Beach, California 90740

Subject: Geotechnical Investigation for Proposed Stormwater Quality Improvements, Wardlow Road & Los Coyotes Diagonal, Long Beach, California

Dear Ms. Nguyen,

Albus-Keefe & Associates, Inc. has completed a geotechnical investigation of the site for evaluation of the percolation characteristics of the site soils. The scope of this investigation consisted of the following:

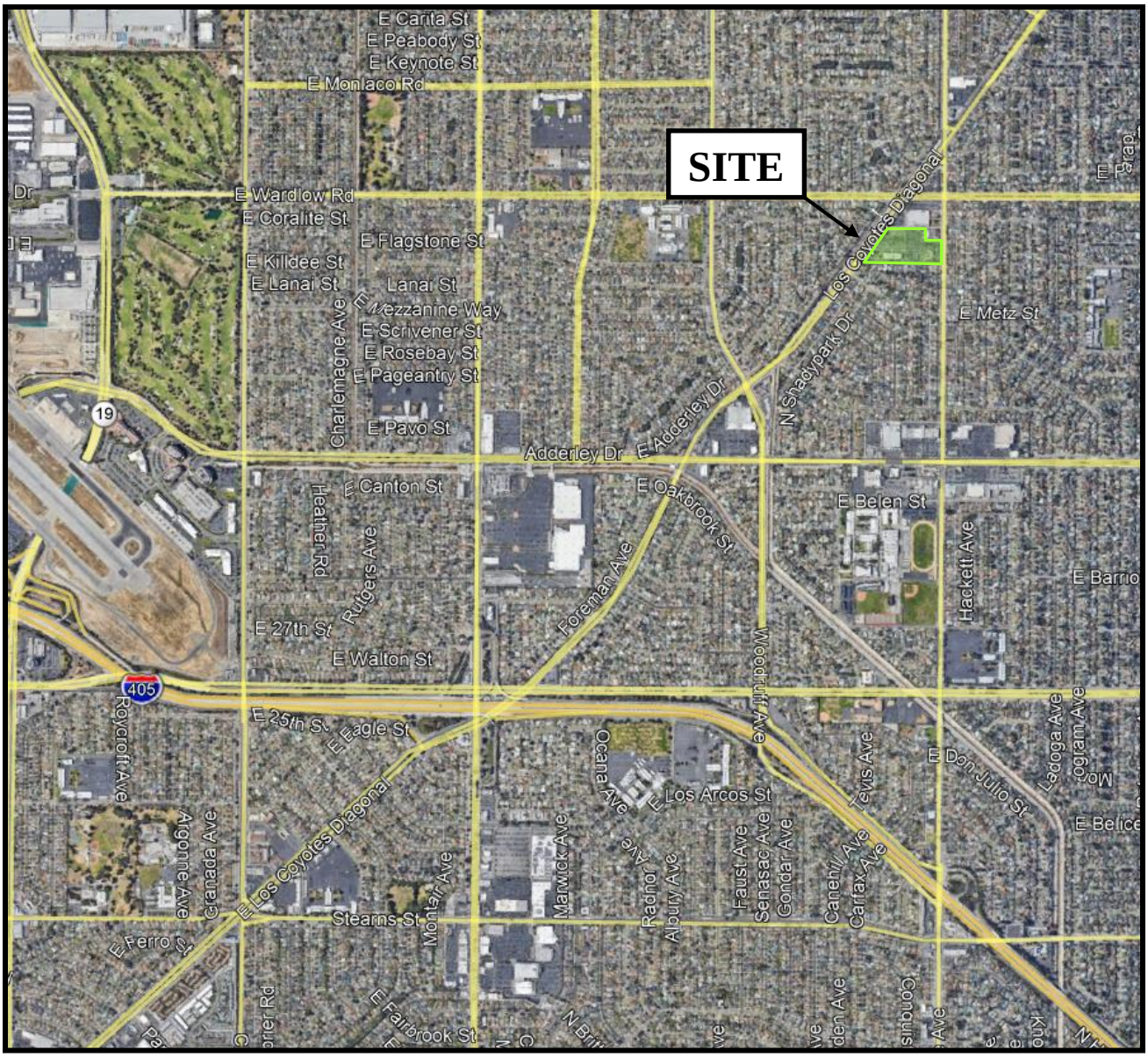
- Exploratory drilling, soil sampling and percolation test well installation
- Field percolation testing
- Laboratory testing of selected soil samples
- Engineering analysis of the data
- Preparation of this report

SITE DESCRIPTION AND PROPOSED DEVELOPMENT

Site Location and Description

The site is located on the southeast side of Los Coyotes Diagonal, south of the intersection with Wardlow Avenue in the city of Long Beach, California. The site is bordered by an alley road followed by a multi-tenant retail building to the north. A church to the northeast, Palo Verde Avenue to the east, single-family homes to the south, and Los Coyotes Diagonal to the west/northwest. The location of the site and its relationship to the surrounding areas is shown on the Site Location Map, Figure 1.

The site is irregular in shape and consists approximately 6.4 acres of land. The site is currently occupied by two 2-story commercial buildings. Improvements also include landscape planters, an abandoned asphalt-paved parking lot at the northwest portion of the site, and a cellular base station located at the northeast corner of the site. A chain link fence bounds the property along the north and west property line, a masonry wall to the east, and a wooden fence and masonry wall to the south. A security fence also surrounds the asphalt paved area.



© 2019 Google

N

SITE LOCATION MAP

The Olson Company
Proposed Residential Development
Wardlow Road & Los Coyotes Diagonal
Long Beach, California

NOT TO SCALE

FIGURE 1

The site is relatively level and the elevation ranges from 18 to 21 feet above mean sea level (MSL). Drainage within the site is generally directed to North Coyotes Diagonal, Palos Verdes Avenue, and the alley way to the north. Vegetation associated included ground cover, small shrubs, and scattered medium- to large-sized trees.

Proposed Development

We understand that the site will be redeveloped for residential use consisting of a community park, 35 two-story single-family homes, and 37 two-story townhomes. Associated interior driveways, perimeter/retaining walls, underground utilities, and a parking lot for the existing church are also planned.

No grading or structural plans were available in preparing of this report. However, we anticipate that minor rough grading of the site will be required to achieve future surface configuration and we expect the proposed residential dwellings will be wood-framed structures with concrete slabs on grade yielding relatively light foundation loads.

SUMMARY OF FIELD AND LABORATORY WORK

Subsurface Investigation

Subsurface exploration for this investigation was conducted at the site on May 24, 2019, and consisted of drilling six (6) exploratory borings. The borings were drilled to maximum depths of approximately 51.5 feet below the existing ground surface utilizing a truck-mounted, hollow-stem-auger drill rig. Representatives of *Albus-Keefe & Associates, In*c. logged the exploratory excavations. Visual and tactile identifications were made of the materials encountered, and their descriptions are presented on the Exploration Logs in Appendix A. The approximate locations of the exploratory excavations completed by this firm are shown on the enclosed Geotechnical Map, Plate 1.

Bulk, relatively undisturbed and Standard Penetration Test (SPT) samples were obtained at selected depths within the exploratory boring for subsequent laboratory testing. Relatively undisturbed samples were obtained using a 3-inch O.D., 2.5-inch I.D., California split-spoon soil sampler lined with brass rings. SPT samples were obtained from the boring using a standard, unlined SPT soil sampler. During each sampling interval, the sampler was driven 18 inches with successive drops of a 140-pound automatic hammer falling 30 inches. The number of blows required to advance the sampler was recorded for each six inches of advancement. The total blow count for the lower 12 inches of advancement per soil sample is recorded on the exploration log. Samples were placed in sealed containers or plastic bags and transported to our laboratory for analyses. The borings were backfilled with auger cuttings upon completion of sampling.

Laboratory Testing

Selected soil samples of representative earth materials were tested to assist in the formulation of conclusions and recommendations presented in this report. Tests consisted of in-situ moisture content and dry density, and grain-size analysis. Results of laboratory testing relevant to percolation characteristics are presented in the Appendix B.

ANALYSIS OF DATA

Subsurface Conditions

Descriptions of the earth materials encountered during our investigation are summarized below and are presented in detail on the Exploration Logs presented in Appendix A.

Soils encountered at the site consist of artificial fill materials overlying alluvial deposits. The artificial fill materials typically consist of brown silty sand, clay, and silt. These materials were typically slightly moist to moist and medium dense / medium stiff to stiff. The thickness of the fill was typically encountered from approximately 2 feet below existing grades, but 6 feet of fill was observed at exploratory boring B-4.

The alluvial deposits were encountered below the artificial fill materials to the maximum depth of exploration, 51.5 feet below the ground surface. The alluvial deposits consisted of silt and clay with thin layers of sand to the depth of 30 feet below the ground surface. Sand was observed from the depths of 30 to 45 feet below the existing ground surface. Below 45 feet the ground surface, fine-grained material was observed. The sand was typically brown with varying amounts of fines. These deposits are slightly moist to wet and loose to very dense. The fine-grained material consisted of brown clay and silt with varying amounts of sand. These deposits are typically slightly moist to moist and medium stiff to hard.

Groundwater

Groundwater was observed at 27.7 feet during this firm's subsurface investigation. A review of the CDMG Seismic Hazard Zone Report 019 indicates that historical high groundwater levels for the general site area is as shallow as 30 feet below the existing ground surface.

CONCLUSIONS AND RECOMMENDATIONS

Based on our observations in the field and laboratory testing, we anticipate that the infiltration at the site would be too low to meet the minimum requirements set by the Los Angeles County Regional Water Quality Board. The fine-grained nature of the subsurface soils which would have impeded infiltration was observed to the depth of 30 feet below the existing ground surface. Although coarse-grained soils were observed at depths below 30 feet, groundwater was also observed at 30 feet below existing ground surface. The groundwater would limit the infiltration zone of any WQMP to be located within the coarse-grained material. Infiltration of storm water through the use of a shallow chamber system or dry well at the site is deemed unfeasible. Therefore, treatment of storm water will require the use of other methods such as biofiltration.

LIMITATIONS

This report is based on the geotechnical data as described herein. The materials encountered in our boring excavations and utilized in our laboratory testing for this investigation are believed representative of the project area, and the conclusions and recommendations contained in this report are presented on that basis. However, soil and bedrock materials can vary in characteristics between points of exploration, both laterally and vertically, and those variations could affect the conclusions and recommendations contained herein. As such, observations by a geotechnical consultant during the construction phase of the storm water infiltration systems are essential to confirming the basis of this report.

This report has been prepared consistent with that level of care being provided by other professionals providing similar services at the same locale and time period. The contents of this report are professional opinions and as such, are not to be considered a guaranty or warranty.

This report should be reviewed and updated after a period of one year or if the site ownership or project concept changes from that described herein.

This report has been prepared for the exclusive use of **The Olson Company** to assist the project consultants in the design of the proposed development. This report has not been prepared for use by parties or projects other than those named or described herein. This report may not contain sufficient information for other parties or other purposes.

This report is subject to review by the controlling governmental agency.

We appreciate this opportunity to be of service to you. If you should have any questions regarding the contents of this report, please do not hesitate to call.

Sincerely,

ALBUS-KEEFE & ASSOCIATES, INC.

Mark Principe
Staff Engineer

Paul Hyun Jin Kim
Associate Engineer
P.E. 77214

Enclosures: Plate 1- Geotechnical Map
Appendix A - Exploratory Logs
Appendix B – Relevant Soil Laboratory Testing

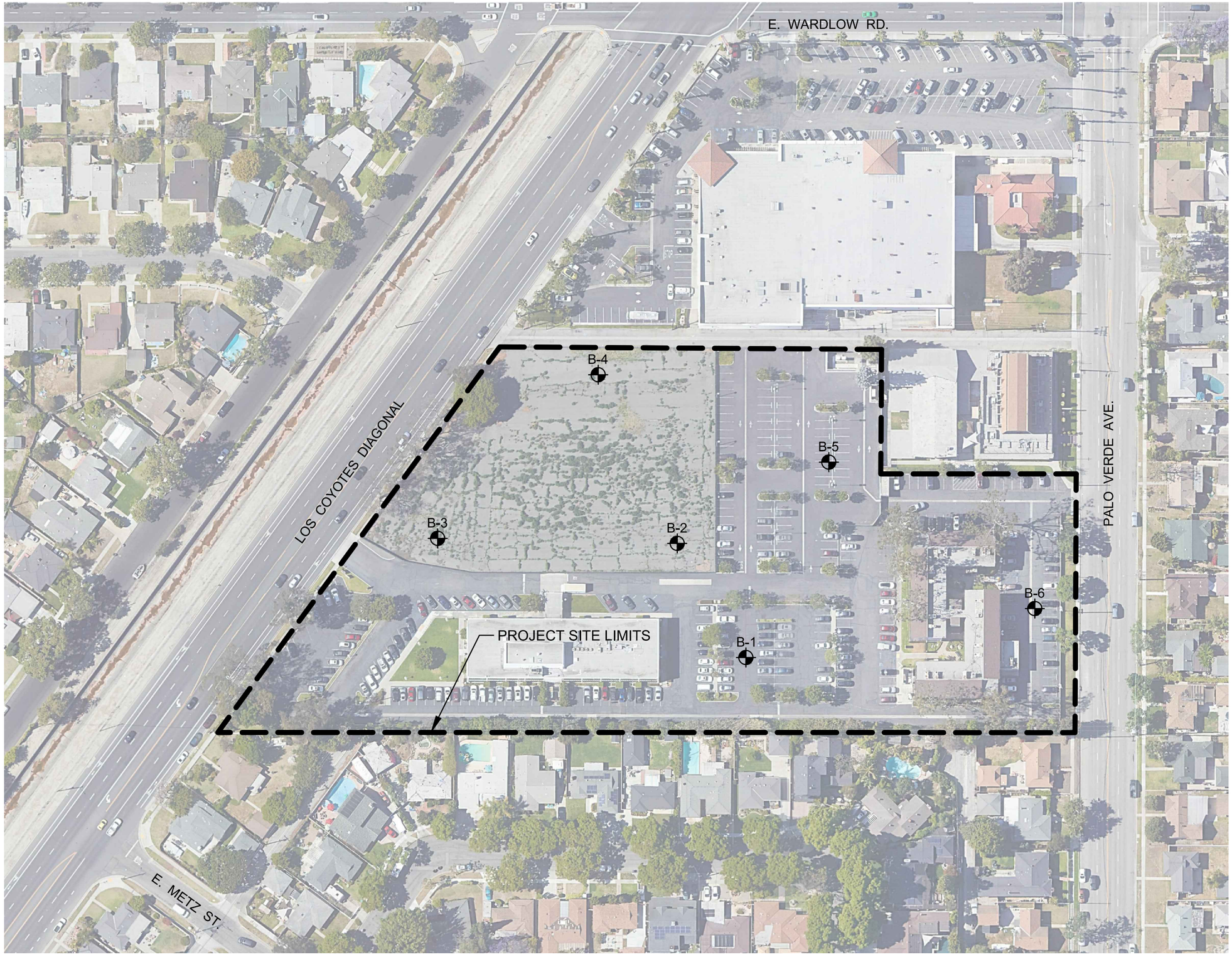
REFERENCES

Publications

California Department of Conservation, Division of Mines and Geology, Seismic Hazard Report 019, "Seismic Hazard Zone Report for the Los Alamitos 7.5-Minute Quadrangles, Los Angeles County, California", 1998.

Plans

Conceptual Site Plan, Long Beach at Wardlow, Long Beach, CA, ktgy Architecture + Planning, date March 7, 2019, Scale: 1" = 40", Sheet A1.0



0 50 100 200

APPROX SCALE : 1" = 100'

EXPLANATION

(Locations Approximate)

- Exploratory Boring

ALBUS-KEEFE & ASSOCIATES, INC.
GEOTECHNICAL CONSULTANTS

GEOTECHNICAL MAP

Job No.: 2816.00	Date: 06/05/19	Plate: 1

APPENDIX A

EXPLORATORY LOGS

EXPLORATION LOG

Project:		Location:
Address:		Elevation:
Job Number:	Client:	Date:
Drill Method:	Driving Weight:	Logged By:

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		EXPLANATION							
		Solid lines separate geologic units and/or material types.							
		Dashed lines indicate unknown depth of geologic unit change or material type change.							
5		**Solid black rectangle** in Core column represents California Split Spoon sampler (2.5in ID, 3in OD).							
		Double triangle in core column represents SPT sampler.							
10		**Vertical Lines** in core column represents Shelby sampler.							
		Solid black rectangle in Bulk column respresents large bag sample.							
		Other Laboratory Tests:							
15		Max = Maximum Dry Density/Optimum Moisture Content							
		EI = Expansion Index							
		SO4 = Soluble Sulfate Content							
		DSR = Direct Shear, Remolded							
		DS = Direct Shear, Undisturbed							
		SA = Sieve Analysis (1" through #200 sieve)							
		Hydro = Particle Size Analysis (SA with Hydrometer)							
20		200 = Percent Passing #200 Sieve							
		Consol = Consolidation							
		SE = Sand Equivalent							
		Rval = R-Value							
		ATT = Atterberg Limits							

EXPLORATION LOG

Project: Long Beach (Wardlow & Los Coyotes)		Location: B-1
Address: 3340 N Los Coyotes Diagonal, Long Beach, CA 90808		Elevation: 29.0
Job Number: 2816.00	Client: The Olson Company	Date: 5/24/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP/SD

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		Asphalt : 4 inches							
		ARTIFICIAL FILL (Af) Clay (CL): Grayish brown, moist, stiff, mica present, some silt							
				16			15.3	110.4	
		ALLUVIUM (Qal) Clay (CL): Grayish brown, moist, stiff, mica present, some silt							
				17			24.7	99	
5		@ 4 ft, trace pores, mica present, trace fine to medium grained sand, with silt							
		@ 6 ft, iron oxide		18			25	99.1	
10				14			28	92.5	
15				6					
		Sand (SP): Brown, moist, loose, fine to medium grained sand							
		Clay with Sand (CL): Reddish brown, moist, very stiff							
20				16					
		End of boring at depth of 21.5. No groundwater encountered. Backfilled with soil cuttings. Patched with AC cold patch.							

EXPLORATION LOG

Project: Long Beach (Wardlow & Los Coyotes)		Location: B-2
Address: 3340 N Los Coyotes Diagonal, Long Beach, CA 90808		Elevation: 31.1
Job Number: 2816.00	Client: The Olson Company	Date: 5/24/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP/SD

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		Asphalt : 1.5 inches							SO4 DS ATT pH Resist Ch MMaxax
		ARTIFICIAL FILL (Af) Clay (CL): Grayish brown, slightly moist, medium stiff, debris (asphalt), with fine gravel		10			12.4	110.1	Consol
		ALLUVIUM (Qal) Clay (CL): Grayish brown, slightly moist, medium stiff, with fine gravel, rootlets		12			11.6	102.3	Consol
5		@ 4 ft, , moist, stiff, mica present							
		@ 6 ft, iron oxide, increased silt		17			17.1	107.4	
		Sand (SP): Brown, moist, loose, fine to medium grained sand							
10		Sandy Silty Clay (CL-ML)): Reddish brown, moist, medium stiff, iron oxide, mica present		10			31.5	87.5	SA Hydro
15		@ 15 ft, light grayish browstiff, nodulus of clay		8					
		Clay (CL): Grayish brown, moist, very stiff, fine to medium grained sand toward sampler, mica present, iron oxide							
20				17					SA Hydro

Albus-Keefe & Associates, Inc.

Plate A-3

EXPLORATION LOG

Project: Long Beach (Wardlow & Los Coyotes)		Location: B-2
Address: 3340 N Los Coyotes Diagonal, Long Beach, CA 90808		Elevation: 31.1
Job Number: 2816.00	Client: The Olson Company	Date: 5/24/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP/SD

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
				10					
		Sand (SP): Yellowish brown, wet, dense, iron oxide, trace silt, fine to medium grained sand toward sampler							
30				27					200
35		@ 35 ft, grayish brownvery dense, fine to medium grained sand, no iron oxide		55					
40		@ 40 ft, increased fines toward sampler tip		38					
		Clay (CL): Grayish brown, moist, hard, fine to coarse grained sand							
45				20			21.2		ATT

EXPLORATION LOG

Project: Long Beach (Wardlow & Los Coyotes)		Location: B-2
Address: 3340 N Los Coyotes Diagonal, Long Beach, CA 90808		Elevation: 31.1
Job Number: 2816.00	Client: The Olson Company	Date: 5/24/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP/SD

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		@ 50 ft, , wet, increased fine grained sand		21			18.8		
		End of boring at depth pf 51.5 ft. Groundwater encountered at depth of 27.7 ft. Backfilled with soil cuttings.							

EXPLORATION LOG

Project: Long Beach (Wardlow & Los Coyotes)		Location: B-3
Address: 3340 N Los Coyotes Diagonal, Long Beach, CA 90808		Elevation: 29.3
Job Number: 2816.00	Client: The Olson Company	Date: 5/24/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP/SD

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		Asphalt : 1.5 inches							
		ARTIFICIAL FILL (Af) Silty Sand (SM): Brown, moist, medium dense, fine grained sand, trace pores, mica present		17			8.8	104.7	
		ALLUVIUM (Qal) Silty Sand (SM): Brown, moist, medium dense, fine grained sand, trace pores, mica present		19			28	97.1	
5		Clay (CL): Mottled grayish brown and light brown, moist, stiff, trace fine gravel, mica present, with silt							
		Silt (ML): Grayish brown, moist, stiff, mica present, iron oxide, with clay		20			21.6	104.2	Consol
		Clay (CL): Brown, moist, stiff, iron oxide, mica present, with silt							
10				11			27.9	94.2	
15		@ 15 ft, fine to medium grained sand		7					
		End of boring at depth of 16.5 ft. No groundwater encountered. Backfilled with soil cuttings.							

EXPLORATION LOG

Project: Long Beach (Wardlow & Los Coyotes)		Location: B-4
Address: 3340 N Los Coyotes Diagonal, Long Beach, CA 90808		Elevation: 30.8
Job Number: 2816.00	Client: The Olson Company	Date: 5/24/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP/SD

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		Asphalt : 2 inches							
		ARTIFICIAL FILL (Af) Clay (CL): Dark brown, moist, stiff, coarse grained sand, rootlets, debris (asphalt and concrete), mica present		22	■		13.5		
5		Silty Sand (SM): Grayish brown, slightly moist, medium dense, concrete debris, mica present		16	■		22.3	95.7	Consol
		ALLUVIUM (Qal) Silty Sand / Sandy Silt (SM/ML): Yellowish brown, slightly moist, medium dense / very stiff, nodulus silty clay		24	■		12.2	105.2	
		Clay (CL): Brown, moist, very stiff, mica present, with silt							
10				23	■		26.3	98.1	
15		@ 15 ft, stiff, trace coarse grained sand, fine gravel		7	▼				
		End of boring at depth of 16.5 ft. No groundwater encountered. Backfilled with soil cuttings.							

EXPLORATION LOG

Project: Long Beach (Wardlow & Los Coyotes)		Location: B-5
Address: 3340 N Los Coyotes Diagonal, Long Beach, CA 90808		Elevation: 30.4
Job Number: 2816.00	Client: The Olson Company	Date: 5/24/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP/SD

Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		Asphalt : 3 inches							
		ARTIFICIAL FILL (Af) Silt (ML): Grayish brown, slightly moist, stiff, fine gravel, mica, iron oxide, with clay		15	■		22.5	98.1	
		ALLUVIUM (Qal) Silt (ML): Grayish brown, slightly moist, very stiff, some pores, with clay nodules toward sampler tip		26	■		20.3	105.4	Consol
5		Sand (SP): Yellowish brown, slightly moist, medium dense, fine grained sand, trace silt							
		Clay (CL): Grayish brown, slightly moist, stiff, mica present, with silt		18	■		29.1	90.9	
		Silt (ML): Yellowish brown, moist, very stiff, mica present, some fine grained sand							
10				22	■		17.6	96.5	
		Clay (CL): Grayish brown, moist, very stiff, trace medium to coarse grained sand, gravel, with silt							
15				14	▼				
		End of boring at depth of 16.5 ft. No groundwater encountered. Backfilled with soil cuttings. Patched with AC cold patch.							

EXPLORATION LOG

Project: Long Beach (Wardlow & Los Coyotes)		Location: B-6
Address: 3340 N Los Coyotes Diagonal, Long Beach, CA 90808		Elevation: 29.0
Job Number: 2816.00	Client: The Olson Company	Date: 5/24/2019
Drill Method: Hollow-Stem Auger	Driving Weight: 140 lbs / 30 in	Logged By: MP/SD

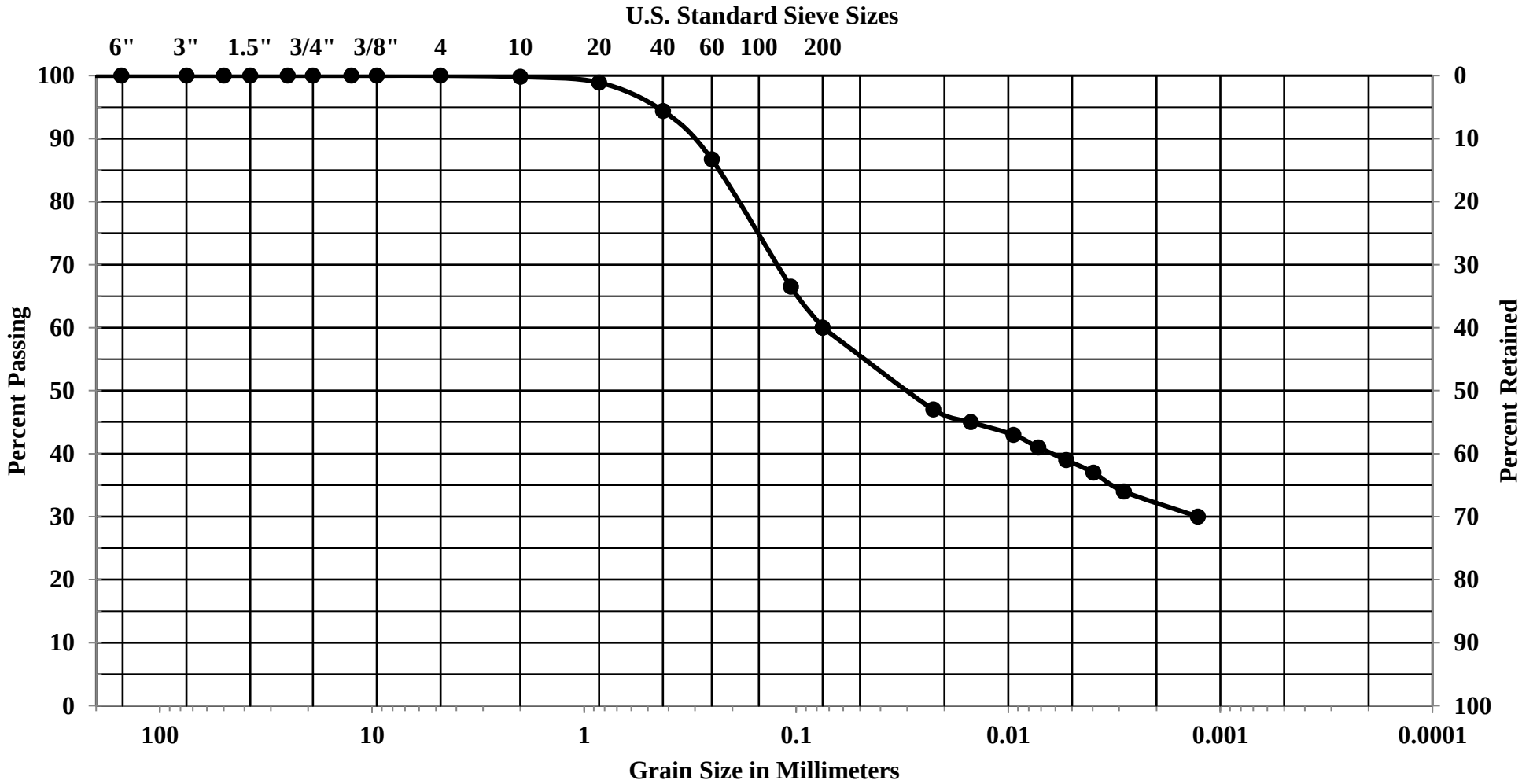
Depth (feet)	Lith-ology	Material Description	Water	Samples: Blows Per Foot	Samples: Core	Samples: Bulk	Laboratory Tests: Moisture Content (%)	Laboratory Tests: Dry Density (pcf)	Laboratory Tests: Other Lab Tests
		Asphalt : 3 inches							
		ARTIFICIAL FILL (Af) Clay (CL): Medium grayish brown, moist, stiff, mica present, some pores, with silt							
		@ 1.5 ft, debris (concrete)		15			24	96	
		ALLUVIUM (Qal) Clay (CL): Medium grayish brown, moist, stiff, mica present, some pores, with silt		22			25	98.8	
5		@ 4 ft, gray, moist, mica present, iron oxide specs							
		Sandy Clay (CL): Gray, moist, very stiff, fine grained sand, mica present		24			14.8	107.8	Consol
		Clay (CL): Grayish brown, moist, stiff, with silt							
10				13			27.5	92.8	
		Silt (ML): Medium gray, moist, very stiff, trace fine to coarse grained sand, iron oxide							
15				11					
		End of boring at depth of 16.5 ft. No groundwater encountered. Backfilled with soil cuttings. Pached with AC cold patch.							

APPENDIX B

RELEVANT SOIL LABORATORY TESTING

GRAIN SIZE DISTRIBUTION

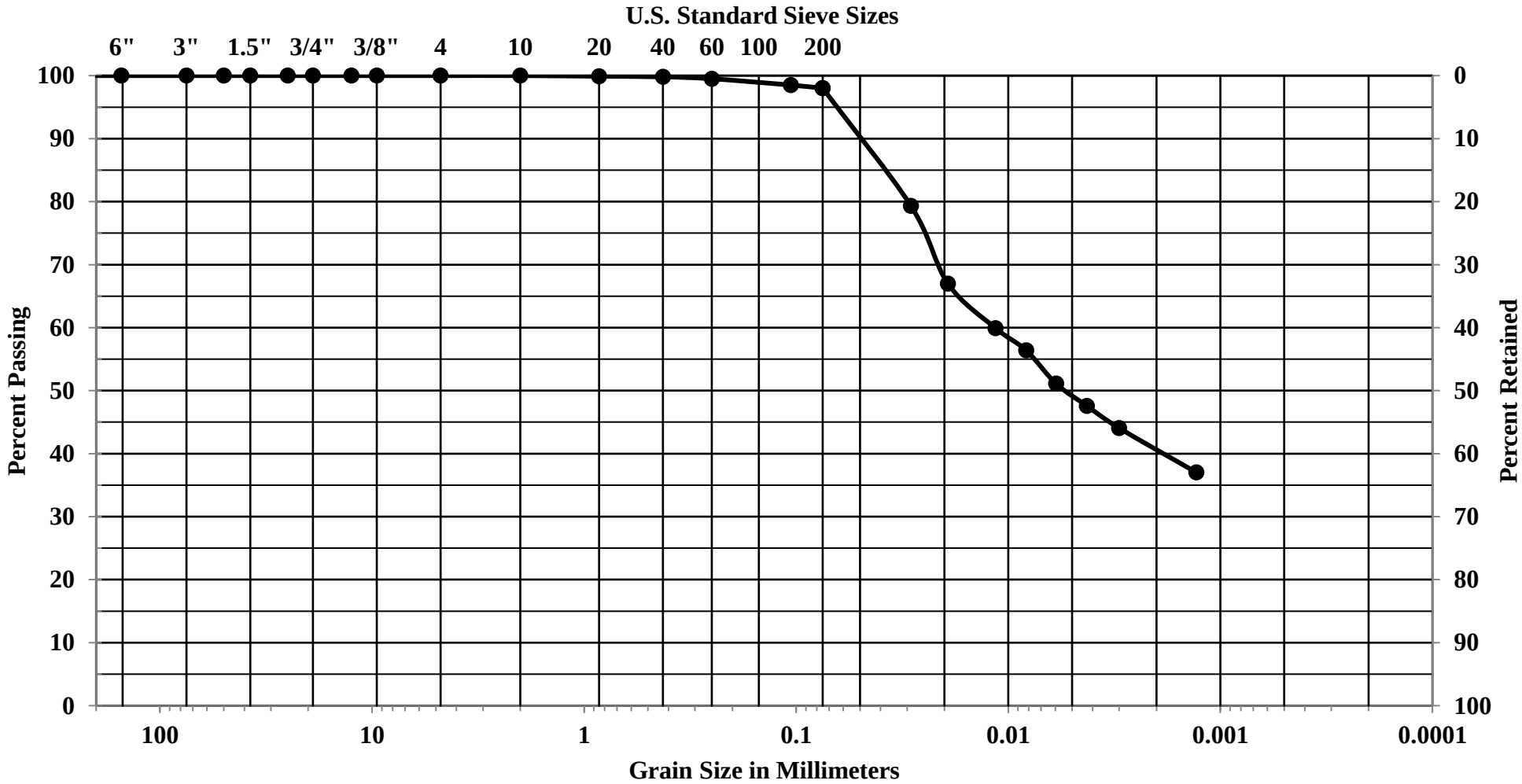
COBBLES	GRAVEL		SAND			SILT AND CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	



Job Number	Location	Depth	Description
2816.00	B-2	10	Sandy Silty Clay (CL-ML)

GRAIN SIZE DISTRIBUTION

COBBLES	GRAVEL		SAND			SILT AND CLAY
	COARSE	FINE	COARSE	MEDIUM	FINE	



Job Number	Location	Depth	Description
2816.00	B-2	20	Silt (ML)

PARTNER
Engineering and Science, Inc.®

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

Sunrise of Lakewood
3340 North Los Coyotes Diagonal
Long Beach, California 90808

Report Date: November 12, 2020
Partner Project No. 20-289715.1

Prepared for:

Sunrise Senior Living, LLC
7902 Westpark Drive
McLean, Virginia 22102

November 12, 2020

Jackie Dominguez
Sunrise Senior Living, LLC
7902 Westpark Drive
McLean, Virginia 22102

Subject: Phase I Environmental Site Assessment
Sunrise of Lakewood
3340 North Los Coyotes Diagonal
Long Beach, California 90808
Partner Project No. 20-289715.1

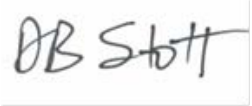
Dear Ms. Dominguez:

Partner Engineering and Science, Inc. (Partner) is pleased to provide the results of the *Phase I Environmental Site Assessment* (Phase I ESA) report of the abovementioned address (the "subject property"). This assessment was performed in conformance with the scope and limitations as detailed in the ASTM Practice E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

This assessment included a site reconnaissance as well as research and interviews with representatives of the public, property ownership, site manager, and regulatory agencies. An assessment was made, conclusions stated, and recommendations outlined.

We appreciate the opportunity to provide environmental services to you. If you have any questions concerning this report, or if we can assist you in any other matter, please contact me at 310-622-8855.

Sincerely,



Debbie Stott
Principal

EXECUTIVE SUMMARY

Partner Engineering and Science, Inc. (Partner) has performed a Phase I Environmental Site Assessment (ESA) in accordance with the scope of work and limitations of ASTM Standard Practice E1527-13, the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (AAI) (40 CFR Part 312) and set forth by Sunrise Senior Living, LLC for the property located at 3340 North Los Coyotes Diagonal, Long Beach, Los Angeles County, California 90808 (the "subject property"). The Phase I Environmental Site Assessment is designed to provide Sunrise Senior Living, LLC with an assessment concerning environmental conditions (limited to those issues identified in the report) as they exist at the subject property.

Property Description

The subject property is located on the east side of Los Coyotes Diagonal, south of East Wardlow Road, within a mixed commercial, retail, and residential area of Los Angeles County. Please refer to the table below for further description of the subject property:

Subject Property Data	
Address:	3340 North Los Coyotes Diagonal, Long Beach, California
Additional Address:	3320 North Los Coyotes Diagonal 3325 Palo Verde Avenue
Property Use:	Vacant, paved parking lot
Land Acreage (Ac):	Approximately 2.2 Ac
Number of Buildings:	0
Assessor's Parcel Number (APN):	7191-014-902
Current Tenants:	No current tenants
Site Assessment Performed By:	Debbie Stott of Partner
Site Assessment Conducted On:	August 28, 2020

The subject property is currently developed as a paved lot partially used for parking. The western portion of the subject property paved with asphalt and surrounded by security fencing. Access inside the fence was not provided, however, this did not hinder views of the subject property as many holes through the security fencing allowed views. The eastern portion of the subject property is currently used for parking by the two adjacent medical office buildings are included in the subject property.

According to available historical sources, the subject property was used primarily as agricultural developed or vacant land prior to 1963. Aerial photographs indicate that the land was vacant until developed with the Los Altos Hospital also known as Charter Hospital in 1964. The hospital was demolished sometime between 2006 and 2007 leaving an fenced, unpaved dirt lot. This subject property remained an fenced dirt lot until approximately 2011 when it was paved and the eastern portion of the subject property was lined as a parking lot. The subject property has remained a paved parking lot since.

The subject property is identified in the regulatory database report, as discussed below:

- The subject property, identified as Los Altos Hospital, Charter Hospital, CBHS @ Los Altos – 1 S/W Steel (EDR Map ID: A6, C14) at 3340 Los Coyotes Diagonal, is listed on the Leaking Underground Storage Tank (LUST), Cortese, Emissions Inventory Data (EMI), HIST Cortese,

California Environmental Reporting System (CERS), and Underground Storage Tank (UST) databases. A UST was identified with a tank classification of "1T". The subject property, identified as Los Altos Hospital, Charter Hospital, CBHS @ Los Altos – 1 S/W Steel (EDR Map ID: A6, C14) at 3340 Los Coyotes Diagonal, is listed on the LUST, Cortese, EMI, HIST Cortese, CERS, and UST databases. A UST was identified with a tank classification of "1T". On December 31, 1986, a release of diesel occurred which reportedly impacted soil and groundwater beneath the facility. The release occurred as a result of a leaking tank and was reported to the lead agency (Regional Water Quality Control Board (RWQCB)). According to the EDR database, the status of the release is listed as Completed-Case Closed as of October 15, 1997. No further information was available on the GeoTracker database.

As discussed in Sections 4.1.1 and 4.1.4, RWQCB records indicated that one 5,000-gallon single was closed in-place in 1997 on the northwest corner of the subject property. In 1988, the RWQCB mistakenly indicated that an unauthorized release associated with the UST had occurred. Subsequent tank tightness records indicated that a release had not occurred and the LUST was closed in 1997. In 1998, the closed in-place UST was removed from the subject property under the oversight of the Long Beach Fire Department (LBFD). An attached figure depicted the location of the former UST as located on the northwest corner of the subject property, south of the alley and east of Los Coyotes Diagonal. The UST was located adjacent to the west of the former hospital generator. The former onsite hospital was demolished by 2007 and the land graded and left vacant. Based on the regulatory records and case closure, the former UST and LUST case are considered a HREC.

During the vicinity reconnaissance, Partner observed the following land use on properties in the immediate vicinity of the subject property:

Immediately Surrounding Properties	
North:	An alley, followed by a Ralphs grocery store (3380 North Los Coyotes Diagonal) and North Los Coyotes Diagonal.
South:	A medical office building (3320 Palo Verde Avenue), followed by residential properties.
East:	An American Tower cell tower and parking lots for Long Beach Alliance Church (3331 Palo Verde Avenue), a medical office building (3325 Palo Verde Avenue), followed by Palo Verde Avenue and residential properties.
West:	North Los Coyotes Diagonal and a stormwater channel, followed by residential properties.

According to a 2019 Groundwater Monitoring report prepared by Lindmark Engineering for a former drycleaner located adjacent to the north and measurement made in onsite monitoring wells, depth to groundwater was measured to range from 21.03 to 23.15 feet below ground surface (bgs). Based on the information provided in the 2019 groundwater monitoring report groundwater flow is inferred to be toward the south. Partner sampled four of the monitoring wells October 21, 2020. Depth to groundwater was measured to be approximately 24 feet bgs.

Findings

A *recognized environmental condition (REC)* refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: due to release to the environment; under

conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The following was identified during the course of this assessment:

- McAlister GeoScience (MG) performed a Phase I ESA dated December 21, 2017 and Phase II Site Assessment Report dated February 20, 2018 for the subject property that identified a former dry cleaning facility (Royalty Cleaners) that was present on the adjoining property to the north from the late 1960s to the 1990s. This property is now part of the adjacent Ralph's grocery store. A release from the dry cleaner occurred and is an open case overseen by the RWQCB since 1996. Soil in the vicinity of the former drycleaner was remediated using excavation in October 2001. Additional remedial actions that combined vapor extraction with air sparging to reduce volatile organic compound (VOC) levels in soil and groundwater took place between January and December 2001. The RWQCB offered soil only closure via letter dated May 18, 2005. Continued groundwater monitoring was required and is ongoing.

  Investigations of soil, vapor, and groundwater indicate that vapor and groundwater beneath the subject property is impacted by VOCs as a result of the release from the former Royalty Cleaners case at 3378 Los Coyotes Diagonal

  Groundwater moves to the south-southeast and the impacted groundwater is located beneath the eastern portion of the subject property. MG collected soil from depths of 5, 10, and 15 feet bgs from seven borings onsite and on adjacent parcels. Soil vapor was also sampled at each borehole at 5 and 15 feet bgs. The soil and soil vapor samples were analyzed by the laboratory for VOCs using EPA Method 8260B. VOCs were not detected in the soil samples. VOCs were detected in soil vapor and were compared to the 2016 State of California RWQCB Environmental Screening Levels (ESLs) for residential properties, as well as for commercial/industrial properties. Tetrachloroethylene (PCE), trichloroethylene (TCE), and benzene were measured above the RWQCB ESLs in vapor samples collected onsite. PCE concentrations at 5 feet bgs ranged from 3 parts per billion by volume (ppbv) to 94 ppbv. At that time MG stated that the ESL was 35 ppbv. When converted to units used currently, those concentrations range from 20 to 638 microgram per cubic meter (µg/m3). Current vapor guidance for residential setting is 15 µg/m3.

  Benzene was considered likely to be due to the sample locations within parking lots and gasoline leaks from vehicles. MG stated the concentrations of PCE, TCE, and benzene in several soil vapor samples collected exceed the ESLs for residential properties established by the RWQCB. A threat to human health would exist in a facility that was to be built upon it, without proper engineering controls. MG recommended the use of engineering controls for new construction to prevent vapor intrusion.

  Lindmark Engineering issued a groundwater monitoring report dated January 15, 2019. Groundwater is sampled annually and was sampled from eight monitoring wells. Well MW5 appears to be within the footprint of the proposed building. The remaining monitoring wells appear to be offsite. Wells MW3, MW4, and MW10 are located in the alley to the north. Wells MW6 and MW11 are in the driveway south of the adjacent church, Well MW8 is southeast of the medical office building at 3325 Palo Verde Drive, Well MW is southeast of the medical office building at 3320 North Los Coyotes, and well MW9 is further south within Palo Verde Avenue.

The groundwater data indicate decreasing concentrations of PCE. PCE concentrations range from 1.94 micrograms per liter (µg/L) in well MW3 near the former source area (the former dry cleaner) to 9.30 µg/L in the farthest well MW9.

To evaluate the current groundwater conditions, Partner sampled monitoring wells MW4, MW4, MW5, and MW6 on October 21, 2020. PCE and TCE were detected in each of the analyzed groundwater samples at concentrations exceeding the applicable groundwater to vapor intrusion Environmental Screening Levels (ESLs) issued by the San Francisco Regional Water Quality Control Board dated 2019. None of the remaining detections were in exceedance of the vapor intrusion ESLs. No other VOCs were detected above the laboratory reporting limits.

During the previous groundwater sampling performed by Lindmark Engineering in 2019, PCE was detected in each of the analyzed groundwater samples, and TCE was detected in MW3-GW through MW5-GW, above the ESLs. The detected concentrations appear to be relatively stable since 2019. Concentrations of PCE and TCE have attenuated since monitoring began in 1996 to stable levels.

Partner opines that the owners of the subject property are not responsible for the VOC impacted groundwater moving beneath. The impacted groundwater and soil vapor caused by the former drycleaner represent a REC to the subject property. Partner concludes that further investigation is not warranted to proceed with the proposed project. The well within the footprint of the proposed project (MW5) will require abandonment. The proposed building must be protected from vapor intrusion through the use of engineering controls such as a vapor barrier combined with a passive venting system.

A *controlled recognized environmental condition (CREC)* refers to a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. The following was identified during the course of this assessment:

- Partner did not identify any controlled recognized environmental conditions during the course of this assessment.

A *historical recognized environmental condition (HREC)* refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. The following was identified during the course of this assessment:

- The subject property is listed in the UST and LUST databases in association with the historical hospital location at 3340 Los Coyotes Diagonal. RWQCB records indicated that one 5,000-gallon single was closed in-place in 1997 on the northwest corner of the subject property. In 1988, the RWQCB mistakenly indicated that an unauthorized release associated with the UST had occurred. Subsequent tank tightness records indicated that a release had not occurred and the LUST was closed in 1997. In 1998, the closed in-place UST was removed from the subject property under

the oversight of the LBFD. Based on the regulatory records and case closure, the former UST and LUST case are considered a HREC.

An *environmental issue* refers to environmental concerns identified by Partner, which do not qualify as RECs; however, warrant further discussion. The following was identified during the course of this assessment:

- Foundations associated with the demolished hospital building may be encountered during grading. These can be removed when encountered.

Conclusions, Opinions and Recommendations

Partner has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 of 3340 North Los Coyotes Diagonal, Long Beach, Los Angeles County, California (the "subject property"). Any exceptions to, or deletions from, this practice are described in Section 1.5 of this report.

This assessment has revealed evidence of recognized environmental conditions and an environmental issue in connection with the subject property. Based on the conclusions of this assessment, Partner recommends the following:

- Use of engineering controls such as a vapor barrier combined with a passive venting system to prevent vapor intrusion into new construction.
- Abandonment of monitoring well MW5 due to its location with the proposed footprint of new construction.

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1.0 INTRODUCTION

Partner Engineering and Science, Inc. (Partner) has performed a Phase I Environmental Site Assessment (ESA) in conformance with the scope and limitations of ASTM Standard Practice E1527-13 and the Environmental Protection Agency Standards and Practices for All Appropriate Inquiries (AAI) (40 CFR Part 312) for the property located at 3340 North Los Coyotes Diagonal, Long Beach, Los Angeles County, California (the "subject property"). Any exceptions to, or deletions from, this scope of work are described in the report.

1.1 Purpose

The purpose of this ESA is to identify existing or potential Recognized Environmental Conditions (as defined by ASTM Standard E1527-13) affecting the subject property that: 1) constitute or result in a material violation or a potential material violation of any applicable environmental law; 2) impose any material constraints on the operation of the subject property or require a material change in the use thereof; 3) require clean-up, remedial action or other response with respect to Hazardous Substances or Petroleum Products on or affecting the subject property under any applicable environmental law; 4) may affect the value of the subject property; and 5) may require specific actions to be performed with regard to such conditions and circumstances. The information contained in the ESA Report will be used by Client to: 1) evaluate its legal and financial liabilities for transactions related to foreclosure, purchase, sale, loan origination, loan workout or seller financing; 2) evaluate the subject property's overall development potential, the associated market value and the impact of applicable laws that restrict financial and other types of assistance for the future development of the subject property; and/or 3) determine whether specific actions are required to be performed prior to the foreclosure, purchase, sale, loan origination, loan workout or seller financing of the subject property.

This ESA was performed to permit the *User* to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) (42 U.S.C. §9601) liability (hereinafter, the "*landowner liability protections*," or "*LLPs*"). ASTM Standard E1527-13 constitutes "*all appropriate inquiry* into the previous ownership and uses of the *property* consistent with good commercial or customary practice" as defined at 42 U.S.C. §9601(35)(B).

1.2 Scope of Work

The scope of work for this ESA is in accordance with the requirements of ASTM Standard E1527-13. This assessment included: 1) a property and adjacent site reconnaissance; 2) interviews with key personnel; 3) a review of historical sources; 4) a review of regulatory agency records; and 5) a review of a regulatory database report provided by a third-party vendor. Partner contacted local agencies, such as environmental health departments, fire departments and building departments in order to determine any current and/or former hazardous substances usage, storage and/or releases of hazardous substances on the subject property. Additionally, Partner researched information on the presence of activity and use limitations (AULs) at these agencies. As defined by ASTM E1527-13, AULs are the legal or physical restrictions or limitations on the use of, or access to, a site or facility: 1) to reduce or eliminate potential exposure to hazardous substances or petroleum products in the soil or groundwater on the subject

property; or 2) to prevent activities that could interfere with the effectiveness of a response action, in order to ensure maintenance of a condition of no significant risk to public health or the environment. These legal or physical restrictions, which may include institutional and/or engineering controls (IC/ECs), are intended to prevent adverse impacts to individuals or populations that may be exposed to hazardous substances and petroleum products in the soil or groundwater on the property.

If requested by Client, this report may also include the identification, discussion of, and/or limited sampling of asbestos-containing materials (ACMs), lead-based paint (LBP), mold, and/or radon.

1.3 Limitations

Partner warrants that the findings and conclusions contained herein were accomplished in accordance with the methodologies set forth in the Scope of Work. These methodologies are described as representing good commercial and customary practice for conducting an ESA of a property for the purpose of identifying recognized environmental conditions. There is a possibility that even with the proper application of these methodologies there may exist on the subject property conditions that could not be identified within the scope of the assessment or which were not reasonably identifiable from the available information. Partner believes that the information obtained from the record review and the interviews concerning the subject property is reliable. However, Partner cannot and does not warrant or guarantee that the information provided by these other sources is accurate or complete. The conclusions and findings set forth in this report are strictly limited in time and scope to the date of the evaluations. The conclusions presented in the report are based solely on the services described therein, and not on scientific tasks or procedures beyond the scope of agreed-upon services or the time and budgeting restraints imposed by the Client. No other warranties are implied or expressed.

Some of the information provided in this report is based upon personal interviews, and research of available documents, records, and maps held by the appropriate government and private agencies. This report is subject to the limitations of historical documentation, availability, and accuracy of pertinent records, and the personal recollections of those persons contacted.

This practice does not address requirements of any state or local laws or of any federal laws other than the all appropriate inquiry provisions of the LLPs. Further, this report does not intend to address all of the safety concerns, if any, associated with the subject property.

Environmental concerns, which are beyond the scope of a Phase I ESA as defined by ASTM include the following: ACMs, LBP, radon, and lead in drinking water. These issues may affect environmental risk at the subject property and may warrant discussion and/or assessment; however, are considered non-scope issues. If specifically requested by the Client, these non-scope issues are discussed in Section 6.3.

1.4 User Reliance

Sunrise Senior Living, LLC engaged Partner to perform this assessment in accordance with an agreement governing the nature, scope and purpose of the work as well as other matters critical to the engagement. All reports, both verbal and written, are for the sole use and benefit of Sunrise Senior Living, LLC. Either verbally or in writing, third parties may come into possession of this report or all or part of the information generated as a result of this work. In the absence of a written agreement with Partner granting such rights, no third parties shall have rights of recourse or recovery whatsoever under any

course of action against Partner, its officers, employees, vendors, successors or assigns. Any such unauthorized user shall be responsible to protect, indemnify and hold Partner, Client and their respective officers, employees, vendors, successors and assigns harmless from any and all claims, damages, losses, liabilities, expenses (including reasonable attorneys' fees) and costs attributable to such Use. Unauthorized use of this report shall constitute acceptance of and commitment to these responsibilities, which shall be irrevocable and shall apply regardless of the cause of action or legal theory pled or asserted. Additional legal penalties may apply.

1.5 Limiting Conditions

The findings and conclusions contain all of the limitations inherent in these methodologies that are referred to in ASTM E1527-13.

Specific limitations and exceptions to this ESA are more specifically set forth below:

- Interviews with past or current owners, operators and occupants were not reasonably ascertainable and thus constitute a data gap. Based on information obtained from other historical sources (as discussed in Section 3.0), this data gap is not expected to alter the findings of this assessment.
- Partner requested information relative to deed restrictions and environmental liens, a title search, and completion of the AAI User Questionnaire from the Report User. This information was not provided at the time of the assessment.
- Partner submitted Freedom of Information Act (FOIA) requests to Regional Water Quality Control Board (RWQCB) for information pertaining to hazardous substances, underground storage tanks, releases, inspection records, etc. for the subject property and/or adjacent properties. As of this writing, this agency has not responded to Partner's request. Based on information obtained from other historical sources, this limitation is not expected to alter the overall findings of this assessment. These records have been requested to review in order to rule out potential environmental concern to the subject property.
- Partner was able to adequately view the subject property through the security fence. Partner was unable to walk across the parking lot. Due to time constraints associated with this report, the Client has requested the report despite the above-listed limitations.

2.0 SITE DESCRIPTION

2.1 Site Location and Legal Description

The subject property at 3340 North Los Coyotes Diagonal, Long Beach, Los Angeles County, California is located on the east side of Los Coyotes Diagonal, south of East Wardlow Road within a mixed commercial, retail, and residential area of Los Angeles County. According to the Los Angeles County Assessor, the subject property is legally described as Assessor Parcel Number (APN) 7191-014-902. Ownership information is not provided by Los Angeles County.

Please refer to Figure 1: Site Location Map, Figure 2: Site Plan, Figure 3: Topographic Map, and Appendix A: Site Photographs for the location and site characteristics of the subject property.

2.2 Current Property Use

The subject property is currently developed as a paved lot partially used for parking. The western portion of the subject property paved with asphalt and surrounded by security fencing. Access inside the fence was not provided, however, this did not hinder views of the subject property as many holes through the security fencing allowed views. The eastern portion of the subject property is currently used for parking by the two adjacent medical office buildings are included in the subject property.

The subject property is designated for institutional development by the City of Long Beach, California.

2.3 Current Use of Adjacent Properties

During the vicinity reconnaissance, Partner observed the following land use on properties in the immediate vicinity of the subject property:

Immediately Surrounding Properties

North: An alley, followed by Ralphs grocery store (3380 North Los Coyotes Diagonal) and North Los Coyotes Diagonal.

South: A medical office building (3320 Palo Verde Avenue), followed by residential properties.

East: An American Tower cell tower and parking lots for Long Beach Alliance Church (3331 Palo Verde Avenue), a medical office building (3325 Palo Verde Avenue), followed by Palo Verde Avenue and residential properties.

West: North Los Coyotes Diagonal and a stormwater channel, followed by residential properties.

The adjacent properties to the north, south and east are identified in the regulatory database report as discussed in Section 4.2.

2.4 Physical Setting Sources

2.4.1 Topography

The United States Geological Survey (USGS) *Los Alamitos, California* Quadrangle 7.5-minute series topographic map was reviewed for this ESA. According to the contour lines on the topographic map, the subject property is located at approximately 27 feet above mean sea level (MSL). The contour lines in the area of the subject property indicate the area is sloping toward the south.

A copy of the most recent topographic map is included as Figure 3 of this report.

2.4.2 Hydrology

According to a 2019 Groundwater Monitoring report prepared by Lindmark Engineering for a former drycleaner located adjacent to the north and measurement made in onsite monitoring wells, depth to groundwater was measured to range from 21.03 to 23.15 feet below ground surface (bgs). Based on the information provided in the 2019 groundwater monitoring report groundwater flow is inferred to be toward the south. Partner sampled four of the monitoring wells October 21, 2020. Depth to groundwater was measured to be approximately 24 feet bgs.

No settling ponds, lagoons, surface impoundments, wetlands or natural catch basins were observed at the subject property during this assessment.

2.4.3 Geology/Soils

The subject property is located in Los Angeles Central Basin just north of the Newport-Inglewood Fault within the Peninsular Ranges Geomorphic Province. It is bound to the southwest by Rosecrans and Dominguez Hills, which are surficial geomorphic features of the Newport-Inglewood Fault; to the southeast by the Orange County Coastal Plain; to the north by Elysian, Repetto, and Merced Hills; and to the northeast by Puente and Coyote Hills.

Based on descriptions in Albus Keefe & Associates, Geotechnical Due-Diligence Investigation, Proposed Multi-Family Residential Development, Wardlow Road & Los Coyotes Diagonal, Long Beach, California dated June 5, 2019, soils encountered at the site consist of artificial fill materials overlying alluvial deposits. The artificial fill materials typically consist of brown silty sand, clay, and silt. These materials were typically slightly moist to moist and medium dense / medium stiff to stiff. The thickness of the fill was typically encountered from approximately 2 feet below existing grades. Six feet of fill was observed at exploratory boring B-4.

The alluvial deposits were encountered below the artificial fill materials to the maximum depth of exploration, 51.5 feet below the ground surface. The alluvial deposits consisted of silt and clay with thin layers of sand to the depth of 30 feet below the ground surface. Sand was observed from the depths of 30 to 45 feet below the existing ground surface. Below 45 feet the ground surface, fine-grained material was observed. The sand was typically brown with varying amounts of fines. These deposits are slightly moist to wet and loose to very dense. The fine-grained material consisted of brown clay and silt with varying amounts of sand. These deposits are typically slightly moist to moist and medium stiff to hard.

2.4.4 Flood Zone Information

Partner performed a review of the Flood Insurance Rate Map, published by the Federal Emergency Management Agency. According to Community Panel Number 06037C1980F, dated September 26, 2008, the subject property appears to be located in Zone X, an area with reduced flood risk due to levee.

A copy of the reviewed flood map is included in Appendix B of this report.

3.0 HISTORICAL INFORMATION

Partner obtained historical use information about the subject property from a variety of sources. A chronological listing of the historical data found is summarized in the table below:

Historical Use Information		
Period/Date	**Source**	**Description/Use**
1896-1963	Aerial Photographs, Topographic Maps	Agriculturally Developed or Vacant Land
1964-2005	Aerial Photographs, Topographic maps, City Directories, Previous Report	Los Altos or Charter Hospital and parking lots
2006-2010	Aerial Photographs	Fenced Dirt Lot
2011-Present	Aerial Photographs, City Directories, Onsite Observations	Vacant, paved lot and paved parking lot

According to available historical sources, the subject property was used primarily as agricultural developed or vacant land prior to 1963. Aerial photographs indicate that the land was vacant until developed with the Los Altos Hospital also known as Charter Hospital in 1964. The hospital was demolished sometime between 2006 and 2007 leaving an fenced, unpaved dirt lot. This subject property remained an fenced dirt lot until approximately 2011 when it was paved and the eastern portion of the subject property was lined as a parking lot. The subject property has remained a paved parking lot since.

3.1 Aerial Photograph Review

Partner obtained available aerial photographs of the subject property and surrounding area from Environmental Data Resources (EDR) on August 11, 2020. The following was observed on the subject property and adjacent properties during the aerial photograph review:

Date: 1928		***Scale: 1"=500'***
Subject Property:	Appears to be vacant land, possibly in use agriculturally.	
North:	Appears to be vacant land, possibly in use agriculturally	
South:	Appears to be vacant land, possibly in use agriculturally	
East:	Appears to be vacant land, possibly in use agriculturally	
West:	Los Coyotes Diagonal is visible to the west with apparently undeveloped land beyond.	

Date: 1938, 1947		***Scale: 1"=500'***
Subject Property:	No significant changes visible	
North:	Appears to be vacant land, possibly in use agriculturally	
South:	Appears to be vacant land, possibly in use agriculturally	
East:	Appears to be vacant land, possibly in use agriculturally	
West:	Appears agricultural	

Date: 1952, 1963		***Scale: 1"=500'***
Subject Property:	Appears to be vacant graded land. By 1963 the land appears more disturbed.	
North:	Appears to be vacant land with and oval racetrack	
South:	Appears developed with a commercial building	
East:	Appears to have been graded or agricultural	
West:	Los Coyotes Diagonal with single family homes beyond	

Date:	***1977, 1979***	***Scale:***	***1"=500'***

Subject Property: Large commercial building is visible onsite (former Los Altos Hospital at 3340 Los Coyotes Diagonal)
North: Alleyway with rectangular commercial building and square commercial building beyond
South: Parking lot and commercial building with residences beyond
East: Parking lot, commercial building (current church building at 3331 Palo Verde Avenue). Vacant lot beyond parking lot to southeast. By 1979 this vacant lot developed with two commercial building (the current medical office building at 3325 Palo Verde Avenue)
West: Los Coyotes Diagonal with residences beyond

Date:	***1981, 1989, 1994***	***Scale:***	***1"=500'***

Subject Property: No significant changes visible
North: No significant changes visible
South: No significant changes visible
East: No significant changes visible
West: No significant changes visible

Date:	***2002, 2005***	***Scale:***	***1"=500'***

Subject Property: No significant changes visible
North: The rectangular commercial building across the alleyway is no longer present. The square building (current Ralphs grocery) has expanded to the west).
South: Remains a parking lot and commercial building (current medical office building) beyond
East: Remains a parking lot with commercial building (current church) beyond
West: Los Coyotes Diagonal with residences beyond

Date:	***2009***	***Scale:***	***1"=500'***

Subject Property: Appears to be a vacant dirt lot
North: No significant changes visible
South: No significant changes visible
East: No significant changes visible
West: No significant changes visible

Date:	***2012, 2016***	***Scale:***	***1"=500'***

Subject Property: Appears as a paved parking lot
North: No significant changes visible
South: No significant changes visible
East: No significant changes visible
West: No significant changes visible

Copies of select aerial photographs are included in Appendix B of this report.

3.2 Fire Insurance Maps

Partner requested Sanborn Fire insurance maps from EDR. Sanborn map coverage was not available for the subject property.

3.3 City Directories

Partner reviewed historical city directories obtained from EDR on August 12, 2020 for past names and businesses that were listed for the subject property and adjacent properties. The address of 3340 Los Coyotes Diagonal is used because the address of 3320 Los Coyotes Diagonal is the address of the medical office building adjacent to the south.

According to the city directory review, the subject property was occupied by a hospital between 1964 and 2005. Based on the city directory review, no environmentally sensitive listings were identified for the subject property address.

The adjacent property to the north at 3378 to 3380 Los Coyotes Diagonal was occupied by multiple small businesses including Royalty Cleaners and a Ralphs grocery store. The drycleaner is discussed further in Section 4.2 and 5.2.6.

The adjacent properties to the south and east have been occupied by medical office buildings with multiple medical professional tenants since construction of both buildings.

Copies of reviewed city directories are included in Appendix B of this report.

3.4 Historical Topographic Maps

Partner reviewed historical topographic maps obtained from EDR on August 11, 2020. The following was observed on the subject property and adjacent properties during the topographic map review:

Date:	***1896, 1899, 1902, 1923, 1925, 1935, 1942, 1945, 1947***
Subject Property:	Appears as vacant land
North:	Appears as vacant land
South:	Appears as vacant land
East:	Appears as vacant land
West:	Appears as vacant land

Date:	***1949, 1950***
Subject Property:	Appears as vacant land
North:	Appears as vacant land
South:	Appears as vacant land
East:	Appears as vacant land
West:	Los Coyotes Diagonal with apparent vacant land beyond

Date:	***1964, 1972, 1981***
Subject Property:	Hospital depicted
North:	Vicinity shaded indicating full development. Streets are shown. Specific buildings are not depicted
South:	Vicinity shaded indicating full development. Streets are shown. Specific buildings are not depicted
East:	Vicinity shaded indicating full development. Streets are shown. Specific buildings are not depicted
West:	Vicinity shaded indicating full development. Streets are shown. Specific buildings are not depicted

Copies of reviewed topographic maps are included in Appendix B of this report.

4.0 REGULATORY RECORDS REVIEW

4.1 Regulatory Agencies

4.1.1 Fire Department

Regulatory Agency Data	
Name of Agency:	City of Long Beach Fire Department (LBFD), Certified Unified Program Agency (CUPA)
Point of Contact:	Records Coordinator
Agency Address:	3205 N. Lakewood Boulevard, Long Beach, California
Agency Phone Number:	(562) 570-2541
Date of Contact:	August 12, 2020
Method of Communication:	Email
Summary of Communication:	

LBFD indicated that they had records for the subject property. A summary of the records is provided below:

- A Fire Prevention Plan Check Worksheet dated May 6, 1998 and an Underground Storage Tank (UST) Removal Inspection Report dated May 12, 1998 indicated the removal of one 5,000-gallon single walled steel UST at the Los Altos Hospital at 3340 Los Altos Diagonal under the oversight of the LBFD. An attached figure depicted the location of the former UST as located on the northwest corner of the subject property, south of the alley and east of Los Coyotes Diagonal. Pin holes were noted in the top of the tank. Three soil samples were collected. The current use of the building is listed as vacant.
- Notes from LBFD UST Unit indicated:
    - Installed 5M diesel Buehler (coated w/ black asphalt).
    - Tank test indicated a leak January 8, 1996 – one single walled steel.
- On November 13, 2013 and November 16, 2016, the LBFD inspected the Verizon cell tower (3340 Los Coyotes Diagonal) located adjacent to the northeast of the subject property. No violations were listed.

4.1.2 Air Pollution Control Agency

Regulatory Agency Data	
Name of Agency:	South Coast Air Quality Management District (SCAQMD)
Point of Contact:	http://www.aqmd.gov/home/tools/public/find
Agency Address:	21865 Copley Drive, Diamond Bar, California 91765
Agency Phone Number:	(909) 396-2000
Date of Contact:	August 12, 2020
Method of Communication:	Online
Summary of Communication:	

Partner researched the South Coast Air Quality Management District (SCAQMD) online database for information regarding any Permits to Operate (PTO), Notices of Violation (NOV), or Notices to Comply (NTC) records for the subject property related to air emission equipment.

The following records were found for the subject property address:

Facility ID	Facility Name/Address	Status	Equipment Listed	NOVs/NTC
103865	Charter Behavior Health Systems of SC/3340 Los Coyotes Diagonal	Active	No equipment listed.	No NOVs or NTCs were identified.
129860	Northwest Airlines Reservation Center/3340 Los Coyotes Diagonal	Duplicate	No equipment listed.	No NOVs or NTCs were identified.
128831	Northwest Airlines Reservations/3340 Los Coyotes Diagonal	Inactive	In 2001, a permit was issued for a ICE (50-500 HP) EM ELEC GEN- Diesel. Permit status is listed as inactive.	No NOVs or NTCs were identified.
19065	Los Altos Hospital & Mental Health Center/3340 Los Coyotes Diagonal	Out of Business	Between 1977 and 1993, permits were applied/issued for Boilers, a ICE (50-500 HP) EM ELEC GEN- Diesel, Cooling Tower-Hex Chrome Compliance, and Sterilizing Equipment. Permit status is listed as inactive or application cancelled.	No NOVs or NTCs were identified.

4.1.3 Regional Water Quality Agency

Regulatory Agency Data	
Name of Agency:	Regional Water Quality Control Board (RWQCB)
Point of Contact:	https://geotracker.waterboards.ca.gov/
Agency Address:	3737 Main Street, Suite 500, Riverside, California 92501
Agency Phone Number:	(951)781-4499
Date of Contact:	August 12, 2020
Method of Communication:	Online
Summary of Communication:	

The subject property was identified on the RWQCB GeoTracker online database:

- Charter Hospital Facility (3340 Los Coyotes Diagonal) is identified as a Leaking Underground Storage Tank (LUST) Cleanup Site. In 1988, a release of diesel which reportedly impacted soil and groundwater beneath the facility. The release was reported to the lead agency, the RWQCB (Case

908080043). The status of the release is listed as Completed-Case Closed as of October 15, 1997.

Partner obtained records from the RWQCB. A summary of the records is provided below:

- According to the 1997 RWQCB closure letter, on September 12, 1997, the RWQCB requested more information related to the operation of the onsite UST from Charter Behavioral Health Systems. The results of a tank pressure test were provided to the RWQCB that did not indicate any evidence of release from the diesel tank. Based on the information provided, the RWQCB colluded that the site had no unauthorized release and closed the case with no further action required on October 15, 1997.
- UST Case Review Form dated October 15, 1997 indicated that a 5,000-gallon diesel UST was closed in-place. Records show tank test passed, no record of unauthorized release. Two groundwater monitoring wells were installed to a depth of 20 feet bgs by Leighton & Associates in 1984 but no soil samples were collected. Groundwater was not encountered. An attached figure depicted the location of the former UST as located on the northwest corner of the subject property, south of the alley and east of Los Coyotes Diagonal. The UST was located adjacent to the west of the onsite generator.
- A UST Tank Testing and Certification dated January 8, 1996 indicated that one 5,000-gallon diesel Fuel #1 UST passed and was certified tight.

As discussed in Section 4.1.1, the UST was later removed under the oversight of the LBFD in May 1998.

4.1.4 Department of Toxic Substances Control

Regulatory Agency Data	
Name of Agency:	California Department of Toxic Substances Control (DTSC)
Point of Contact:	https://www.envirostor.dtsc.ca.gov/public/ and http://hwts.dtsc.ca.gov/
Agency Address:	1001 I Street, Sacramento, California 95814
Agency Phone Number:	(800) 728-6942
Date of Contact:	August 12, 2020
Method of Communication:	Online
Summary of Communication:	

The subject property was not identified in the online DTSC Envirostor database. The subject property was identified in the online Hazardous Waste Tracking System database, as discussed below.

ID Number	Facility Name/Address	Status	Inactive Date	Waste
CAC000020925	1X Los Altos Hospital/3340 Los Coyotes Diagonal	Inactive	October 25, 2000	No hazardous waste records were listed.
CAC000684536	1X Los Altos Hospital/3340 Los Coyotes Diagonal	Inactive	January 1, 1990	No hazardous waste records were listed.
CAC000739376	1X Los Altos	Inactive	October	The facility was listed as a generator

ID Number	Facility Name/Address	Status	Inactive Date	Waste
	Hospital/3340 Los Coyotes Diagonal		25, 2000	of the following hazardous waste in 1994: "asbestos-containing waste."
CAC001405784	Harbor Commerce Ctr/3340 Los Coyotes Diagonal	Inactive	October 25, 2000	The facility was listed as a generator of the following hazardous waste in 1998: "tank bottom waste."

4.1.5 Oil & Gas Exploration

Regulatory Agency Data	
Name of Agency:	California Division of Oil, Gas and Geothermal Resources (DOGGR)
Point of Contact:	http://www.conservation.ca.gov/dog/Pages/Wellfinder.aspx
Agency Address:	801 K Street, MS 24-01, Sacramento, CA 95814
Agency Phone Number:	(916) 322-1080
Date of Contact:	August 12, 2020
Method of Communication:	Online
Summary of Communication:	

According to DOGGR, no oil or gas wells are located on or adjacent to the subject property.

4.1.6 Assessor's Office

Regulatory Agency Data	
Name of Agency:	Los Angeles County Assessor
Point of Contact:	http://maps.assessor.lacounty.gov
Agency Address:	500 West Temple Street, Room 225, Los Angeles, California
Agency Phone Number:	(213) 974-3211
Date of Contact:	August 12, 2020
Method of Communication:	Online
Summary of Communication:	

According to records reviewed, the subject property is identified by Assessor Parcel Number (APN) 7191-014-902.

Copies of pertinent documents are included in Appendix B of this report.

4.2 Mapped Database Records Search

Information from standard federal, state, county, and city environmental record sources was provided by Environmental Data Resources, Inc. (EDR). Data from governmental agency lists are updated and integrated into one database, which is updated as these data are released. The information contained in this report was compiled from publicly available sources and the locations of the sites are plotted utilizing a geographic information system, which geocodes the site addresses. The accuracy of the geocoded locations is approximately +/-300 feet.

Using the ASTM definition of migration, Partner considers the migration of hazardous substances or petroleum products in any form onto the subject property during the evaluation of each site listed on the radius report, which includes solid, liquid, and vapor.

4.2.1 Regulatory Database Summary

Radius Report Data				
Database	**Search Radius (mile)**	**Subject Property**	**Adjacent Properties**	**Sites of Concern**
Federal NPL or Delisted NPL Site	1.00	N	N	N
Federal CERCLIS Site	0.50	N	N	N
Federal CERCLIS-NFRAP Site	0.50	N	N	N
Federal RCRA CORRACTS Facility	1.00	N	N	N
Federal RCRA TSDF Facility	0.50	N	N	N
Federal RCRA Generators Site (LQG, SQG, CESQG)	0.25	N	**Y**	N
Federal IC/EC Registries	0.50	N	N	N
Federal ERNS Site	Subject Property	N	N	N
State/Tribal Equivalent NPL	1.00	N	N	N
State/Tribal Equivalent CERCLIS	1.00	N	N	N
State/Tribal Landfill/Solid Waste Disposal Site	0.50	N	N	N
State/Tribal Leaking Storage Tank Site	0.50	**Y**	N	N
State/Tribal Registered Storage Tank Sites (UST/AST)	0.25	**Y**	N	N
State/Tribal Voluntary Cleanup Sites (VCP)	0.50	N	N	N
State/Tribal Spills	0.50	N	N	N
Federal Brownfield Sites	0.50	N	N	N
State Brownfield Sites	0.50	N	N	N
DRYCLEANERS	Varies	N	**Y**	
EDR MGP	Varies	N	N	N
EDR US Hist Auto Station	Varies	N	N	N
EDR US Hist Cleaners	Varies	N	N	N

4.2.2 Subject Property Listings

The subject property is identified in the regulatory database report, as discussed below:

- The subject property, identified as Los Altos Hospital, Charter Hospital, CBHS @ Los Altos – 1 S/W (single walled) Steel (EDR Map ID: A6, C14) at 3340 Los Coyotes Diagonal, is listed on the LUST, Cortese, EMI, HIST Cortese, CERS, and UST databases. A UST was identified with a tank classification of "1T". On December 31, 1986, a release of diesel occurred which reportedly impacted soil and groundwater beneath the facility. The release occurred as a result of a leaking tank and was reported to the lead agency (RWQCB). According to the EDR database, the status of the release is listed as Completed-Case Closed as of October 15, 1997.

  As discussed in Sections 4.1.1 and 4.1.4, RWQCB records indicated that one 5,000-gallon single

was closed in-place in 1997 on the northwest corner of the subject property. In 1988, the RWQCB mistakenly indicated that an unauthorized release associated with the UST had occurred. Subsequent tank tightness records indicated that a release had not occurred and the LUST was closed in 1997. In 1998, the closed in-place UST was removal from the subject property under the oversight of the LBFD. An attached figure depicted the location of the former UST as located on the northwest corner of the subject property, south of the alley and east of Los Coyotes Diagonal.

The former onsite hospital was demolished by 2007 and the land graded and left vacant. Based on the regulatory records and case closure, the former UST and LUST case are considered a HREC.

4.2.3 Adjacent Property Listings

The following adjacent properties are identified in the regulatory database report, as discussed below:

Los Coyotes Center (EDR Map ID: C10) is listed at 3378 Los Coyotes Diagonal, adjacent to the north and hydrologically up-gradient of the subject property, beyond the alley. The facility is listed on the RCRA-SQG, FINDS, ECHO, Envirostor, CPS-SLIC, EMI, CERS, and DRYCLEANERS databases. According to available information of the GeoTracker online database, Royalty Cleaners, a dry cleaning facility that operated a dry cleaning machine using tetrachloroethene (PCE) from 1970 to the late 1990s. The former dry cleaner was one of 11 former retail spaces that were demolished during construction of the Ralphs Grocery store in October 2000. Site investigations conducted indicated that soil and groundwater beneath the site (at 18-20 feet bgs) and the adjacent property to the south (including the subject property) was impacted by PCE. A soil vapor extraction and air sparing system operation at the site between January 1 and December 26, 2001 to remediate the subsurface soil. A total of 502 tons of soil was excavated to a depth of 6 feet bgs. On May 18, 2005, the RWQCB issued a No Further Action (NFA) for the soil only. Groundwater monitoring is currently being implemented. The impacted groundwater and soil vapor caused by the former drycleaner represent a REC to the subject property. Further investigation is not warranted at this time. Partner recommends the use of engineering controls such as a vapor barrier combined with a passive venting system for future construction at the subject property.

- Leonard Russo DDS (EDR Map ID: A1) is listed at 3320 Los Coyotes Diagonal, adjacent to the south and hydrologically down-gradient of the subject property. The facility is listed on the HAZNET and HWTS databases. This facility is listed in the HAZNET database for generating state-regulated wastes including halogenated solvents that were manifested for offsite disposal in 1999. Based on the regulatory status and down-gradient direction, these listings are not considered to have created an environmental concern to the subject property.
- Charter Behavioral Health (EDR Map ID: A2) is listed at 3320 Los Coyotes Diagonal, Suite 100, adjacent to the south and hydrologically down-gradient of the subject property. The facility is listed on the HAZNET and HWTS databases. This facility is listed in the HAZNET database for generating state-regulated wastes including polychlorinated biphenyls (PCBs) and material containing PCBs that were manifested for offsite disposal in 2000. Based on the regulatory status

and down-gradient direction, these listings are not considered to have created an environmental concern to the subject property.

- Andrew James Manos Do Inc. (EDR Map ID: A3) is listed at 3320 Los Coyotes Diagonal, Suite 112, adjacent to the south and hydrologically down-gradient of the subject property. The facility is listed on the RCRA SQG, FINDS, ECHO, HAZNET and HWTS databases. No RCRA violations are listed. This facility is listed in the HAZNET database for generating state-regulated wastes including photochemicals/photoprocessing waste that were manifested for offsite disposal in 1994. Based on the regulatory status and down-gradient direction, these listings are not considered to have created an environmental concern to the subject property.
- Dr. John McQuire (EDR Map ID: A4) is listed at 3320 Los Coyotes Diagonal, Suite 220, adjacent to the south and hydrologically down-gradient of the subject property. The facility is listed on the HAZNET and HWTS databases. This facility is listed in the HAZNET database for generating state-regulated wastes including halogenated solvents that were manifested for offsite disposal in 1999. Based on the regulatory status and down-gradient direction, these listings are not considered to have created an environmental concern to the subject property.
- Denis M Murphy MD (EDR Map ID: A5) is listed at 3320 Los Coyotes Diagonal, Suite 101, adjacent to the south and hydrologically down-gradient of the subject property. The facility is listed on the HWTS database in 1993. Based on the regulatory status and down-gradient direction, these listings are not considered to have created an environmental concern to the subject property.
- Long Beach Community (EDR Map ID: B7) is listed at 3325 Los Coyotes Diagonal, Suite 112, adjacent to the southeast and hydrologically down-gradient of the subject property. The facility is listed on the RCRA NonGen database. No RCRA violations are listed. Based on the regulatory status and down-gradient direction, these listings are not considered to have created an environmental concern to the subject property.
- Los Altos Foot Health Corp. (EDR Map ID: B8) is listed at 3325 Los Coyotes Diagonal, Suite 112, adjacent to the southeast and hydrologically down-gradient of the subject property. The facility is listed on the RCRA SQG, FINDS, and ECHO databases. No RCRA violations are listed. Based on the regulatory status and down-gradient direction, these listings are not considered to have created an environmental concern to the subject property.
- Ralphs (EDR Map ID: C9, C12, C13) is listed at 3378 Los Coyotes Diagonal, Suite 112, adjacent to the north and hydrologically up-gradient of the subject property. The facility is listed on the RCRA LQG, CERS, and CERS Haz Waste databases. No RCRA violations are listed. The facility was last inspected on February 27, 2020 by Long Beach Environmental Heath. Violations were noted for failure to have a business plan readily available and Failure to provide initial and annual training to all employees. Based on the regulatory status and down-gradient direction, these listings are not considered to have created an environmental concern to the subject property.

4.2.4 Sites of Concern Listings

No sites of concern are identified in the regulatory database report.

4.2.5 Orphan Listings

The property to the north, Royalty Cleaners (3378 Los Coyotes) is identified as a DRYCLEANERS site in the regulatory database report, as previously discussed in Section 4.2.3.

A copy of the regulatory database report is included in Appendix C of this report.

5.0 USER PROVIDED INFORMATION AND INTERVIEWS

In order to qualify for one of the *Landowner Liability Protections (LLPs)* offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the *Brownfields Amendments*), the *User* must conduct the following inquiries required by 40 CFR 312.25, 312.28, 312.29, 312.30, and 312.31. The *User* should provide the following information to the *environmental professional*. Failure to provide this information could result in a determination that *all appropriate inquiries* is not complete. The *User* is asked to provide information or knowledge of the following:

- Review Title and Judicial Records for Environmental Liens and AULs
- Specialized Knowledge or Experience of the User
- Actual Knowledge of the User
- Reason for Significantly Lower Purchase Price
- Commonly Known or *Reasonably Ascertainable* information
- Degree of Obviousness
- Reason for Preparation of this Phase I ESA

Fulfillment of these user responsibilities is key to qualification for the identified defenses to CERCLA liability. Partner requested our Client to provide information to satisfy User Responsibilities as identified in Section 6 of the ASTM guidance.

Pursuant to ASTM E1527-13, Partner requested the following site information from Sunrise Senior Living, LLC (User of this report).

User Responsibilities				
Item	**Provided By User**	**Not Provided By User**	**Discussed Below**	**Does Not Apply**
AAI User Questionnaire			**X**	
Title Records, Environmental Liens, and AULs			**X**	
Specialized Knowledge			**X**	
Actual Knowledge			**X**	
Valuation Reduction for Environmental Issues			**X**	
Identification of Key Site Manager	**Section 5.1.3**			
Reason for Performing Phase I ESA	**Section 1.1**			
Prior Environmental Reports			**X**	
Other			**X**	

5.1 Interviews

5.1.1 Interview with Owner

The owner of the subject property was not available to be interviewed at the time of the assessment.

5.1.2 Interview with Report User

Please refer to Section 5.2 below for information requested from the Report User.

Ms. Jackie Dominguez, report user, was not aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the subject property; any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the subject property; or any notices from a governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products.

According to Ms. Dominguez the subject property was historically developed with a local hospital and is currently a vacant paved lot.

5.1.3 Interview with Key Site Manager

A key site manager was not available to be interviewed at the time of this assessment.

5.1.4 Interviews with Past Owners, Operators and Occupants

Interviews with past owners, operators and occupants were not conducted since information regarding the potential for contamination at the subject property was obtained from other sources.

5.1.5 Interview with Others

As the subject property is not an abandoned property as defined in ASTM 1527-13, interview with others were not performed.

5.2 User Provided Information

5.2.1 Title Records, Environmental Liens, and AULs

Partner was not provided with title records or environmental lien and AUL information for review as part of this assessment.

5.2.2 Specialized Knowledge

The User did not have specialized knowledge of environmental conditions associated with the subject property at the time of the assessment.

5.2.3 Actual Knowledge of the User

The User was not aware of environmental liens and/or AULs encumbering the subject property or in connection with the subject property at the time of the assessment.

5.2.4 Valuation Reduction for Environmental Issues

The User was not aware of any reductions in property value due to environmental issues.

5.2.5 Commonly Known or Reasonably Ascertainable Information

The User did not provide information that is commonly known or *reasonably ascertainable* within the local community about the subject property at the time of the assessment.

5.2.6 Previous Reports and Other Provided Documentation

The following information was provided to Partner for review during the course of this assessment:

***Phase I Environmental Site Assessment, 3320 & 3340 Los Coyotes Diagonal and 3325 Palo Verde Avenue, Long Beach, California 90808*, McAlister GeoScience (December 27, 2017)**

Phase II Environmental Site Assessment, 3320 & 3340 Los Coyotes Diagonal and 3325 Palo Verde Avenue, Long Beach, California 90808, McAlister GeoScience (February 20, 2018)

McAlister GeoScience (MG) prepared the reports on behalf of Los Coyotes Redevelopment, LLC and Sonnocco Real Estate Group. The ESA assessment was performed in accordance with ASTM Standard E1527-13. The assessment consisted of a site reconnaissance, interviews with knowledgeable personnel, review of historical information, and a review of federal, state and local regulatory databases. The assessment was performed on a larger parcel of land that included the subject property. Pertinent information contained in this report is summarized below:

MG performed a Phase I ESA dated December 21, 2017 and Phase II Site Assessment Report dated February 20, 2018 identified a former dry cleaning facility by the name of Royalty Cleaners that was present on the adjoining property to the north from the late 1960s to the 1990s. This property is now part of the adjacent Ralph's grocery store. A release from the dry cleaner occurred and is an open case overseen by the RWQCB since 1996. Soil in the vicinity of the former drycleaner was remediated using excavation in October 2001. Additional remedial actions that combined vapor extraction with air sparging to reduce volatile organic compound (VOC) levels in soil and groundwater took place between January and December 2001. The RWQCB offered soil only closure via letter dated May 18, 2005. Continued groundwater monitoring was required and is ongoing.

Investigations of soil, vapor, and groundwater indicate that vapor and groundwater beneath the subject property is impacted by VOCs as a result of the release from the former Royalty Cleaners case at 3378 Los Coyotes Diagonal.

MG stated that "This assessment has revealed evidence of two RECs and one HREC in connection with the Subject Property. MG recommended:

- Soil gas sampling to further delineate the extent of the Tetrachloroethene (PCE) plume beneath the subject property due to the release at the former Royalty Cleaners at 3378 Los Coyotes Diagonal.
- Further public record research into the unknown status of the hospital UST. If no records are obtained, despite a reasonable attempt to do so, McAlister GeoScience recommends a geophysical survey in the potential locations of the UST to determine if it was removed or not. *Partner opines that before taking this step, an attempt to obtain regulatory records should occur.*
- Due to the regulatory status (closure in October of 1997) of the former LUST in association with hospital UST at the historical hospital location at 3340 Los Coyotes Diagonal, McAlister GeoScience recommends no further action.

Groundwater moves to the south-southeast and the impacted groundwater is located beneath the eastern portion of the subject property. MG collected soil from depths of 5, 10, and 15 feet bgs from seven borings onsite and on adjacent parcels. Soil vapor was also sampled at each borehole at 5 and 15 feet bgs. The soil and soil vapor samples were analyzed by the laboratory for VOCs using EPA Method 8260B. VOCs were not detected in the soil samples. VOCs were detected in soil vapor and were compared to the 2016 State of California RWQCB Environmental Screening Levels (ESLs) for residential properties, as well as for commercial/industrial properties.

Tetrachloroethylene (PCE), trichloroethylene (TCE), and benzene were measured above the RWQCB ESLs in vapor samples collected onsite. PCE concentrations at 5 feet bgs ranged from 3 parts per billion by volume (ppbv) to 94 ppbv. At that time MG stated that the ESL was 35 ppbv. When converted to units used currently, those concentrations range from 20 to 638 microgram per cubic meter (µg/m3). Current guidance for residential setting is 15 µg/m3.

Benzene was considered likely to be due to the sample locations within parking lots and gasoline leaks from vehicles.

MG stated the concentrations of PCE, TCE, and benzene in several soil vapor samples collected exceed the ESLs for residential properties established by the RWQCB. A threat to human health would exist in a facility that was to be built upon it, without proper engineering controls. MG recommended the use of engineering controls for new construction to prevent vapor intrusion.

***Groundwater Monitoring Report, 2019 Annual Sampling Event, Former Royalty Cleaners, 3378 Los Coyotes Diagonal, Long Beach, California*, Lindmark Engineering (January 15, 2019)**

Lindmark Engineering issued a groundwater monitoring report dated January 15, 2019 to the RWQCB. Groundwater is sampled annually and was sampled from eight monitoring wells. Well MW5 appears to be within the footprint of the proposed building. The remaining monitoring wells appear to be offsite. Wells MW3, MW4, and MW10 are located in the alley to the north. Wells MW6 and MW11 are in the driveway south of the adjacent church, Well MW8 is southeast of the medical office building at 3325 Palo Verde Drive, Well MW is southeast of the medical office building at 3320 North Los Coyotes, and well MW9 is further south within Palo Verde Avenue. The groundwater data indicate decreasing concentrations of PCE. PCE concentrations range from 1.94 micrograms per liter (µg/L) in well MW3 near the former source area (the former dry cleaner) to 9.30 µg/L in the farthest well MW9.

Partner opines that further investigation is not warranted to proceed with the proposed project. The well within the footprint of the proposed project will require abandonment. The proposed building must be protected from vapor intrusion through the use of engineering controls such as a vapor barrier combined with a passive venting system.

Groundwater Sampling Investigation Report, Sunrise of Lakewood CA, 3320 Los Coyotes Diagonal, Long Beach, California 90808, Partner Project Number: 20-289715.3. (November 11, 2020).

At the request of the client, Partner sampled groundwater from four of the wells on October 21, 2020. The Groundwater Sampling Investigation scope included the collection and analysis of four groundwater samples from existing monitoring wells MW3, MW4, MW5, and MW6. Groundwater samples were analyzed for VOCs using EPA Method 8260B. PCE and TCE were detected in each of the analyzed

groundwater samples at concentrations exceeding the applicable groundwater to vapor intrusion Environmental Screening Levels (ESLs) issued by the San Francisco Regional Water Quality Control Board dated 2019. None of the remaining detections of VOCs were in exceedance of the vapor intrusion ESLs. No other VOCs were detected above the laboratory reporting limits.

During the previous groundwater sampling performed by Lindmark Engineering in 2019, PCE was detected in each of the analyzed groundwater samples, and TCE was detected in MW3-GW through MW5-GW, above the ESLs. The detected concentrations appear to be relatively stable since 2019. Concentrations of PCE and TCE have attenuated since monitoring began in 1996 to stable levels.

Partner opines that the owners of the subject property are not responsible for the VOC impacted groundwater moving beneath. The impacted groundwater and soil vapor caused by the former drycleaner represent a REC to the subject property. Partner concludes that further investigation is not warranted to proceed with the proposed project. The well within the footprint of the proposed project (MW5) will require abandonment. The proposed building must be protected from vapor intrusion through the use of engineering controls such as a vapor barrier combined with a passive venting system.

Copies are included in Appendix B of this report.

6.0 SITE RECONNAISSANCE

The weather at the time of the site visit was sunny and clear. Refer to Section 1.5 for limitations encountered during the field reconnaissance and Sections 2.1 and 2.2 for subject property operations. The table below provides the site assessment details:

Site Assessment Data	
Site Assessment Performed By:	Debbie Stott
Site Assessment Conducted On:	August 28, 2020

Partner was not accompanied during the field reconnaissance.

No potential environmental concerns were identified during the onsite reconnaissance.

6.1 General Site Characteristics

6.1.1 Solid Waste Disposal

Solid waste is not currently generated at the subject property. The parcel is a vacant lot.

6.1.2 Sewage Discharge and Disposal

Although there are none currently, sanitary discharges on the subject property are directed into the municipal sanitary sewer system. The City of Long Beach services the subject property vicinity.

6.1.3 Surface Water Drainage

Storm water is removed from the subject property primarily by sheet flow action across the paved surfaces towards storm water drains located in the public right of way.

The subject property does not appear to be a designated wetland area, based on information obtained from the United States Department of Agriculture. No surface impoundments, wetlands, natural catch basins, settling ponds, or lagoons are located on the subject property. No drywells were identified on the subject property.

6.1.4 Source of Heating and Cooling

Natural gas service is provided by the City of Long Beach and electricity is provided by Southern California Edison. Water is provided by the Long Beach Water Department.

6.1.5 Wells and Cisterns

As described in Section 5.2.6 at least one monitoring well is located on the western portion of the subject property. The well is used for monitoring groundwater impacted by VOCs associated with a release from a former offsite drycleaner. No other aboveground evidence of wells or cisterns was observed during the site reconnaissance.

6.1.6 Wastewater

Although currently vacant, domestic wastewater generated at the subject property is disposed by means of the sanitary sewer system. No industrial process is currently performed at the subject property.

6.1.7 Septic Systems

No septic systems were observed or reported on the subject property.

6.1.8 Additional Site Observations

No additional general site characteristics were observed during the site reconnaissance.

6.2 Potential Environmental Hazards

6.2.1 Hazardous Substances and Petroleum Products Used or Stored at the Site

No hazardous substances or petroleum products were observed on the subject property during the site reconnaissance.

6.2.2 Aboveground & Underground Hazardous Substance or Petroleum Product Storage Tanks (ASTs/USTs)

No evidence of current ASTs or USTs was observed during the site reconnaissance.

6.2.3 Evidence of Releases

No spills, stains or other indications that a surficial release has occurred at the subject property were observed.

6.2.4 Polychlorinated Biphenyls (PCBs)

No potential PCB-containing equipment (transformers, oil-filled switches, hoists, lifts, dock levelers, hydraulic elevators, etc.) was observed on the subject property during Partner's reconnaissance.

6.2.5 Strong, Pungent or Noxious Odors

No strong, pungent or noxious odors were evident during the site reconnaissance.

6.2.6 Pools of Liquid

No pools of liquid were observed on the subject property during the site reconnaissance.

6.2.7 Drains, Sumps and Clarifiers

No drains, sumps, or clarifiers, other than those associated with storm water removal, were observed on the subject property during the site reconnaissance.

6.2.8 Pits, Ponds and Lagoons

No pits, ponds or lagoons were observed on the subject property.

6.2.9 Stressed Vegetation

No stressed vegetation was observed on the subject property.

6.2.10 Additional Potential Environmental Hazards

A cell tower is located adjacent to the northeast corner. Views of the batteries and other equipment were not possible as these were inside a cloaked enclosure. Evidence of spills or leaks on the paved surface of the ground was not observed. No additional environmental hazards, including landfill activities or radiological hazards, were observed.

6.3 Non-ASTM Services

6.3.1 Asbestos-Containing Materials (ACMs)

Asbestos is the name given to a number of naturally occurring, fibrous silicate minerals mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The Occupational Safety and Health Administration (OSHA) regulation 29 CFR 1926.1101 requires certain construction materials to be presumed to contain asbestos, for purposes of this regulation. All thermal system insulation (TSI), surfacing material, and asphalt/vinyl flooring that are present in a building that have not been appropriately tested are "presumed asbestos-containing material" (PACM).

No buildings or structures are located on the subject property. As such, an asbestos evaluation was not required by the scope of services.

6.3.2 Lead-Based Paint (LBP)

Lead is a highly toxic metal that affects virtually every system of the body. LBP is defined as any paint, varnish, stain, or other applied coating that has 1 mg/cm^2 (or 5,000 ug/g or 0.5% by weight) or more of lead. Congress passed the Residential Lead-Based Paint Hazard Reduction Act of 1992, also known as "Title X", to protect families from exposure to lead from paint, dust, and soil. Under Section 1017 of Title X, intact LBP on most walls and ceilings is not considered a "hazard," although the condition of the paint should be monitored and maintained to ensure that it does not become deteriorated. Further, Section 1018 of this law directed the Housing and Urban Development (HUD) and the US EPA to require the disclosure of known information on LBP and LBP hazards before the sale or lease of most housing built before 1978.

No buildings or structures are located on the subject property. As such, a LBP evaluation was not required by the scope of services.

6.3.3 Radon

Radon is a colorless, odorless, naturally occurring, radioactive, inert, gaseous element formed by radioactive decay of radium (Ra) atoms. The US EPA has prepared a map to assist National, State, and local organizations to target their resources and to implement radon-resistant building codes. The map divides the country into three Radon Zones, according to the table below:

EPA Radon Zones

EPA Zones	Average Predicted Radon Levels	Potential
Zone 1	Exceed 4.0 pCi/L	Highest
Zone 2	Between 2.0 and 4.0 pCi/L	Moderate
Zone 3	Less than 2.0 pCi/L	Low

It is important to note that the EPA has found homes with elevated levels of radon in all three zones, and the US EPA recommends site-specific testing in order to determine radon levels at a specific location. However, the map does give a valuable indication of the propensity of radon gas accumulation in structures.

Radon sampling was not conducted as part of this assessment. Review of the US EPA Map of Radon Zones places the subject property in Zone 2. Based upon the proposed installation of engineering controls to prevent vapor intrusion, radon is not considered to be an environmental concern.

6.3.4 Lead in Drinking Water

The Long Beach Water Department (LBWD) serves the subject property and vicinity. The main sources of water provided by the LBWD are groundwater pumped from the Los Angeles Central Basin and imported water from the Colorado River watershed and the Sacramento-San Joaquin Bay Delta. That water is imported into the region by the Metropolitan Water District of Southern California (MWD), one of the world's largest water agencies and the region's water wholesaler from which Long Beach purchases its imported water supplies. Water sampling was not conducted to verify water quality.

6.3.5 Mold

Molds are microscopic organisms found virtually everywhere, indoors and outdoors. Mold will grow and multiply under the right conditions, needing only sufficient moisture (e.g.in the form of very high humidity, condensation, or water from a leaking pipe, etc.) and organic material (e.g., ceiling tile, drywall, paper, or natural fiber carpet padding).

No buildings or structures are located on the subject property. As such, a mold evaluation was not required by the scope of services.

7.0 FINDINGS AND CONCLUSIONS

Findings

A *REC* refers to the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: due to release to the environment; under conditions indicative of a release to the environment; or under conditions that pose a material threat of a future release to the environment. The following was identified during the course of this assessment:

- McAlister GeoScience (MG) performed a Phase I ESA dated December 21, 2017 and Phase II Site Assessment Report dated February 20, 2018 for the subject property that identified a former dry cleaning facility (Royalty Cleaners) that was present on the adjoining property to the north from the late 1960s to the 1990s. This property is now part of the adjacent Ralph's grocery store. A release from the dry cleaner occurred and is an open case overseen by the Los Angeles RWQCB since 1996. Soil in the vicinity of the former drycleaner was remediated using excavation in October 2001. Additional remedial actions that combined vapor extraction with air sparging to reduce VOC levels in soil and groundwater took place between January and December 2001. The RWQCB offered soil only closure via letter dated May 18, 2005. Continued groundwater monitoring was required and is ongoing.

  Investigations of soil, vapor, and groundwater indicate that vapor and groundwater beneath the subject property is impacted by VOCs as a result of the release from the former Royalty Cleaners case at 3378 Los Coyotes Diagonal

  Groundwater moves to the south-southeast and the impacted groundwater is located beneath the eastern portion of the subject property. MG collected soil from depths of 5, 10, and 15 feet bgs from seven borings onsite and on adjacent parcels. Soil vapor was also sampled at each borehole at 5 and 15 feet bgs. The soil and soil vapor samples were analyzed by the laboratory for VOCs using EPA Method 8260B. VOCs were not detected in the soil samples. VOCs were detected in soil vapor and were compared to the 2016 State of California RWQCB ESLs for residential properties, as well as for commercial/industrial properties. PCE, TCE, and benzene were measured above the RWQCB ESLs in vapor samples collected onsite. PCE concentrations at 5 feet bgs ranged from 3 ppbv to 94 ppbv. At that time MG stated that the ESL was 35 ppbv. When converted to units used currently, those concentrations range from 20 to 638 µg/m3. Current guidance for residential setting is 15 µg/m3.

  Benzene was considered likely to be due to the sample locations within parking lots and gasoline leaks from vehicles. MG stated the concentrations of PCE, TCE, and benzene in several soil vapor samples collected exceed the ESLs for residential properties established by the RWQCB. A threat to human health would exist in a facility that was to be built upon it, without proper engineering controls. MG recommended the use of engineering controls for new construction to prevent vapor intrusion.

  Lindmark Engineering issued a groundwater monitoring report dated January 15, 2019. Groundwater is sampled annually and was sampled from eight monitoring wells. Well MW5 appears to be within the footprint of the proposed building. The remaining monitoring wells

appear to be offsite. Wells MW3, MW4, and MW10 are located in the alley to the north. Wells MW6 and MW11 are in the driveway south of the adjacent church, Well MW8 is southeast of the medical office building at 3325 Palo Verde Drive, Well MW is southeast of the medical office building at 3320 North Los Coyotes, and well MW9 is further south within Palo Verde Avenue. The groundwater data indicate decreasing concentrations of PCE. PCE concentrations range from 1.94 µg/L in well MW3 near the former source area (the former dry cleaner) to 9.30 µg/L in the farthest well MW9.

To evaluate the current groundwater conditions, Partner sampled monitoring wells MW4, MW4, MW5, and MW6 on October 21, 2020. PCE and TCE were detected in each of the analyzed groundwater samples at concentrations exceeding the applicable groundwater to vapor intrusion Environmental Screening Levels (ESLs) issued by the San Francisco Regional Water Quality Control Board dated 2019. None of the remaining detections were in exceedance of the vapor intrusion ESLs. No other VOCs were detected above the laboratory reporting limits.

During the previous groundwater sampling performed by Lindmark Engineering in 2019, PCE was detected in each of the analyzed groundwater samples, and TCE was detected in MW3-GW through MW5-GW, above the ESLs. The detected concentrations appear to be relatively stable since 2019. Concentrations of PCE and TCE have attenuated since monitoring began in 1996 to stable levels.

Partner opines that the owners of the subject property are not responsible for the VOC impacted groundwater moving beneath. The impacted groundwater and soil vapor caused by the former drycleaner represent a REC to the subject property. Partner concludes that further investigation is not warranted to proceed with the proposed project. The well within the footprint of the proposed project (MW5) will require abandonment. The proposed building must be protected from vapor intrusion through the use of engineering controls such as a vapor barrier combined with a passive venting system.

A *CREC* refers to a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority, with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls. The following was identified during the course of this assessment:

- Partner did not identify any controlled recognized environmental conditions during the course of this assessment.

A *HREC* refers to a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls. The following was identified during the course of this assessment:

- The subject property is listed in the UST and LUST databases in association with the historical hospital location at 3340 Los Coyotes Diagonal. RWQCB records indicated that one 5,000-gallon single was closed in-place in 1997 on the northwest corner of the subject property. In 1988, the RWQCB mistakenly indicated that an unauthorized release associated with the UST had occurred.

Subsequent tank tightness records indicated that a release had not occurred and the LUST was closed in 1997. In 1998, the closed in-place UST was removed from the subject property under the oversight of the LBFD. Based on the regulatory records and case closure, the former UST and LUST case are considered a HREC.

An *environmental issue* refers to environmental concerns identified by Partner, which do not qualify as RECs; however, warrant further discussion. The following was identified during the course of this assessment:

- Foundations associated with the demolished hospital building may be encountered during grading. These can be removed when encountered.

Conclusions, Opinions and Recommendations

Partner has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 of 3340 North Los Coyotes Diagonal, Long Beach, Los Angeles County, California (the "subject property"). Any exceptions to, or deletions from, this practice are described in Section 1.5 of this report.

This assessment has revealed evidence of recognized environmental conditions and/or environmental issues in connection with the subject property. Based on the conclusions of this assessment, Partner recommends the following:

- Use of engineering controls such as a vapor barrier combined with a passive venting system to prevent vapor intrusion into new construction.
- Abandonment of monitoring well MW5 due to its location with the proposed footprint of new construction.

8.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

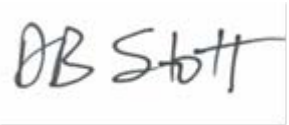
Partner has performed a Phase I Environmental Site Assessment of the property located at 3340 North Los Coyotes Diagonal, Long Beach, Los Angeles County, California in conformance with the scope and limitations of the protocol and the limitations stated earlier in this report. Exceptions to or deletions from this protocol are discussed earlier in this report.

By signing below, Partner declares that, to the best of our professional knowledge and belief, we meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR §312. Partner has the specific qualifications based on education, training, and experience to assess a *property* of the nature, history, and setting of the subject *property*. Partner has developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

Prepared By:

Heather Hodgetts
Senior Scientist

Reviewed by:



Debbie Stott, P.G.
Technical Director

9.0 REFERENCES

Reference Documents

American Society for Testing and Materials, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM Designation: E1527-13

Environmental Data Resources (EDR), Radius Report, August 2020

Federal Emergency Management Agency, Federal Insurance Administration, National Flood Insurance Program, Flood Insurance Map, accessed via internet, August 2020

United States Department of Agriculture, Natural Resources Conservation Service, accessed via internet, August 2020

United States Department of Agriculture, Natural Resources Conservation Service, Web Soil Survey, accessed via the internet, August 2020

United States Environmental Protection Agency, EPA Map of Radon Zones (Document EPA-402-R-93-071), accessed via the internet, August 2020

United States Geological Survey, accessed via the Internet, August 2020

United States Geological Survey Topographic Map, 7.5 minute series, accessed via internet, August 2020

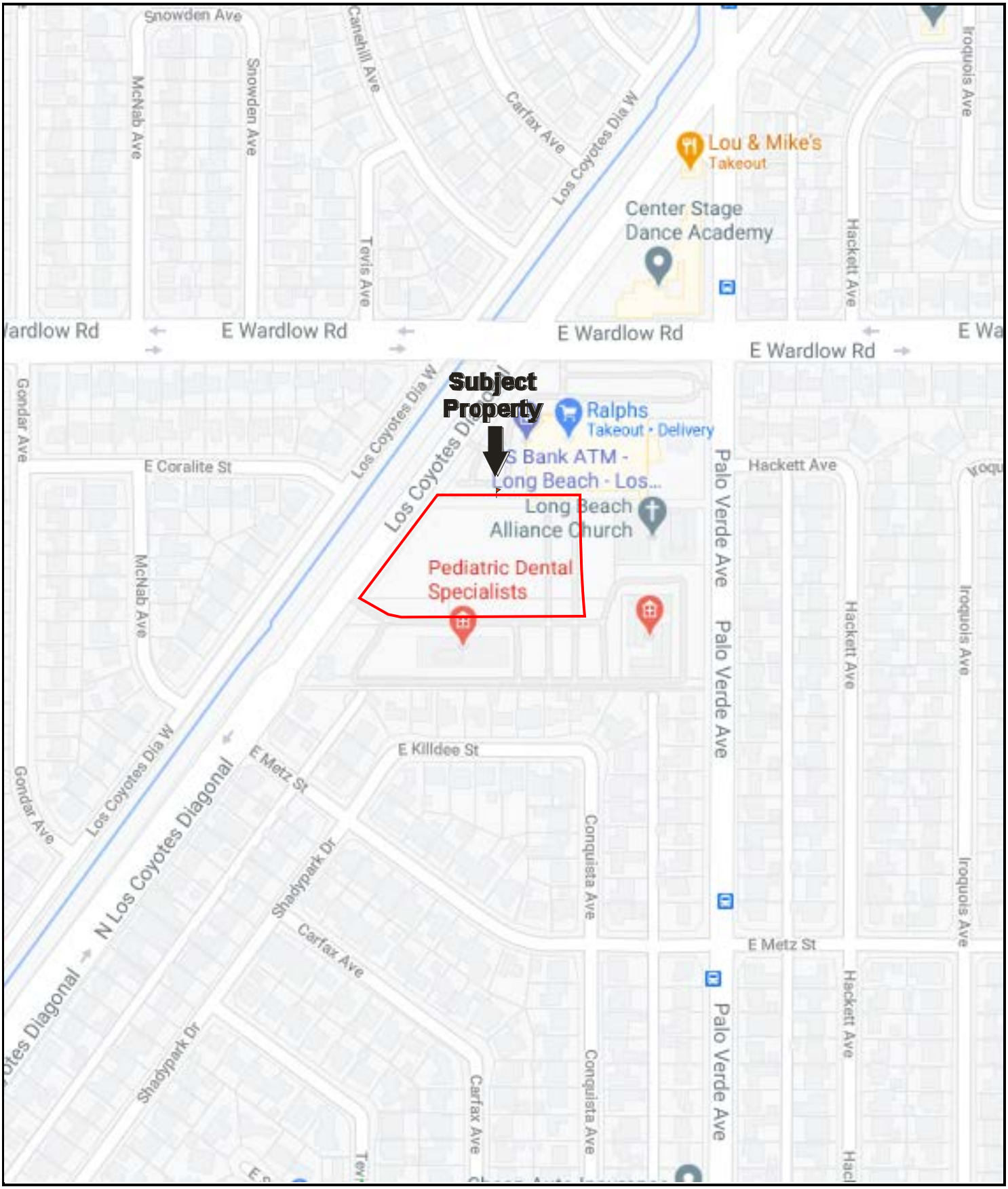
FIGURES

1 SITE LOCATION MAP

2 SITE PLAN

3 TOPOGRAPHIC MAP

PARTNER



N

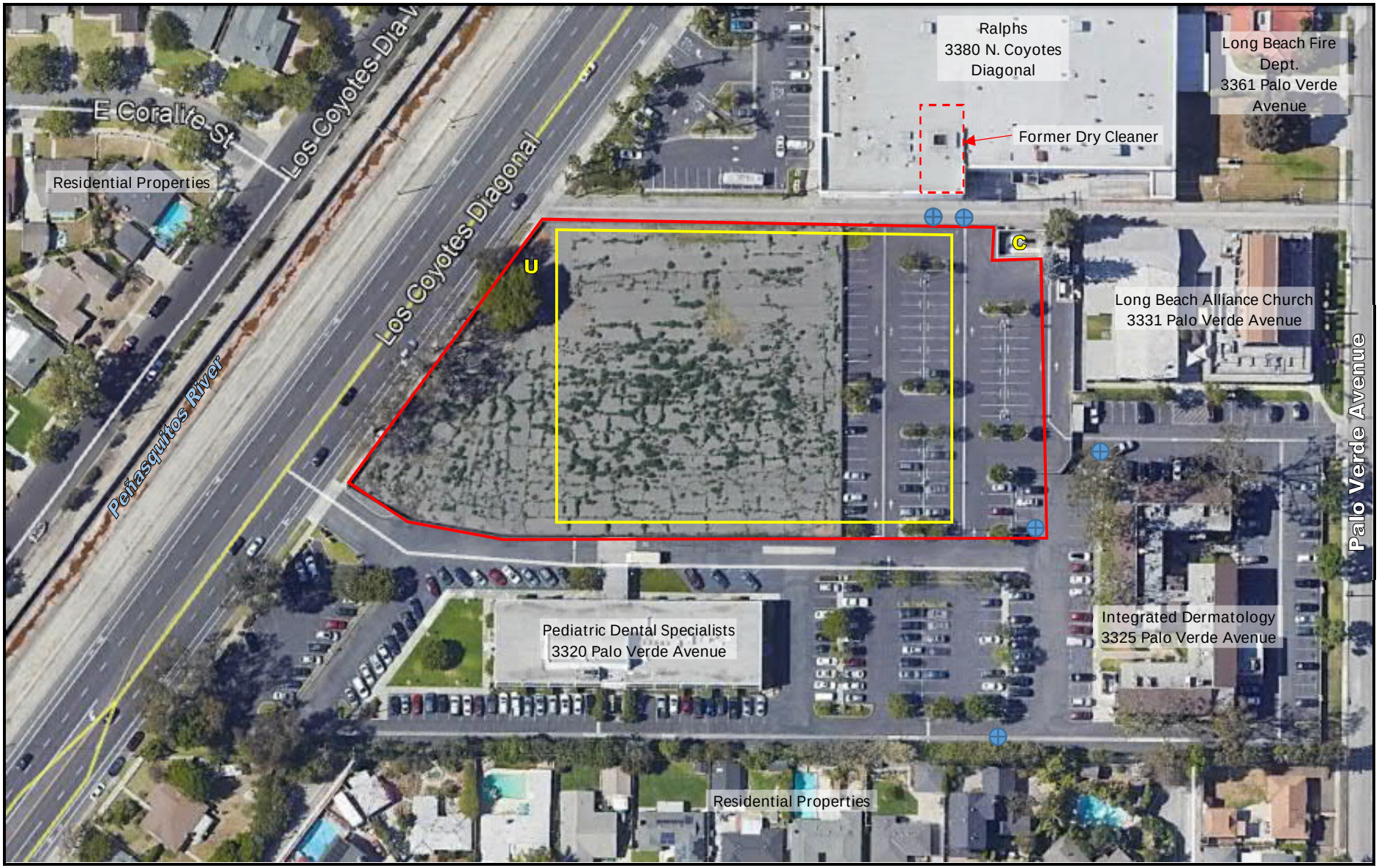
Drawing Not To Scale

KEY:
Subject Property

FIGURE 1: SITE LOCATION MAP

Project No. 20-289715.1

PARTNER



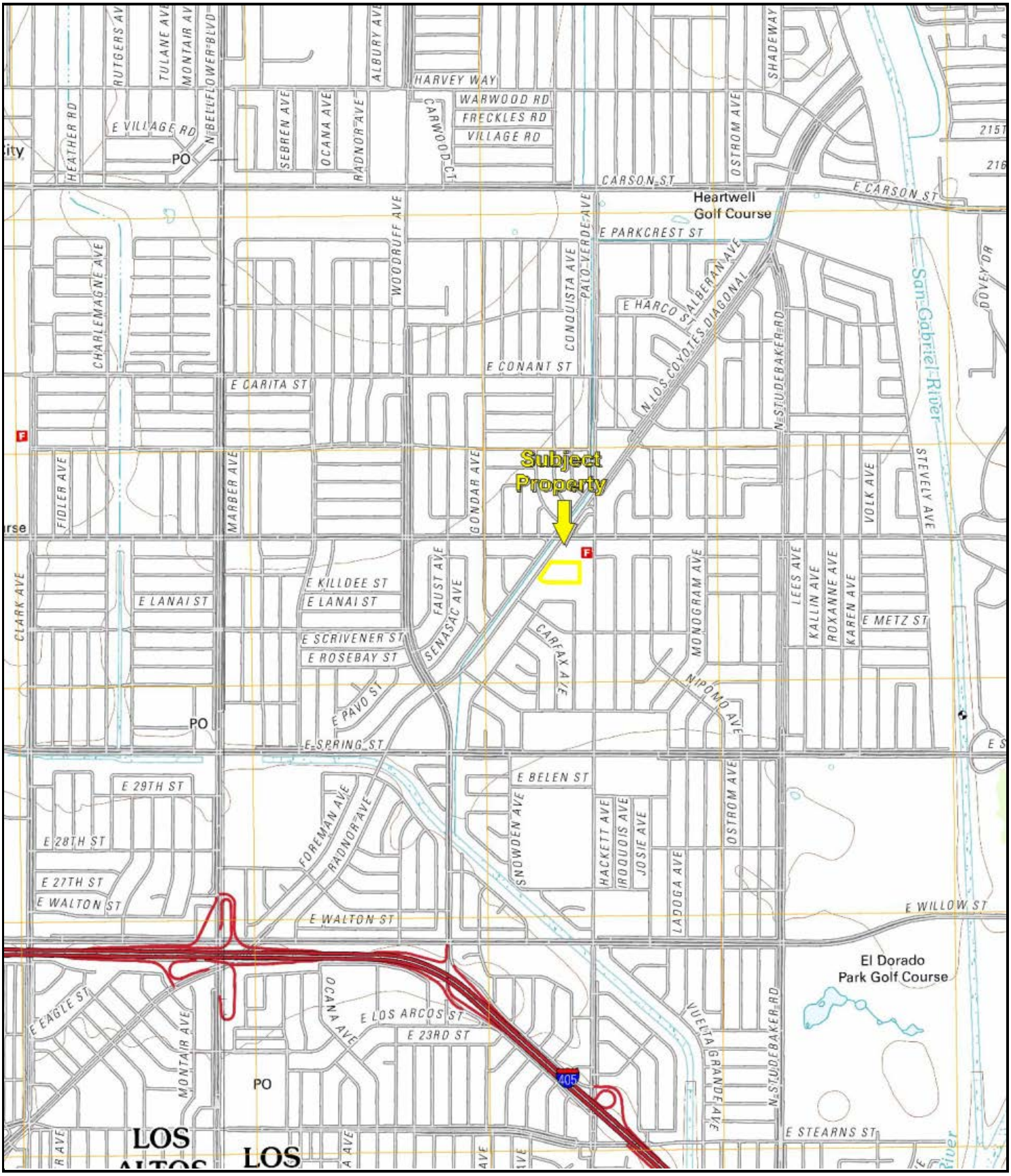
N

GROUNDWATER
FLOW

KEY: - Subject Property
- Approximate Location of Former Hospital Building
- Groundwater Monitoring Well
C – Cell Tower U – Former UST

FIGURE 2: SITE PLAN
Project No. 20-289715.1

PARTNER



N

USGS 7.5 Minute *Los Alamitos and Long Beach, California* Quadrangles
Created: 2012

KEY:
Subject Property

FIGURE 3: TOPOGRAPHIC MAP
Project No. 20-289715.1

PARTNER

APPENDIX A: SITE PHOTOGRAPHS

1. View north from south side of property.

2. View north from south side of property.

3. View southeast toward MOB from Los Coyotes Diagonal.

4. View southeast across subject property from Los Coyotes Diagonal.

5. View east across subject property from Los Coyotes Diagonal.

6. View south across subject property from Ralphs alleyway.

7. View south across subject property from Ralphs alleyway.

8. View southwest across subject property from Ralphs alleyway.

9. Church adjacent to the east at 3331 Palo Verde Avenue.

10. Parking lot adjacent to east, cell tower, and church beyond.

11. Parking lot adjacent to east. Ralphs grocery store to north.

12. Parking lot adjacent to east – view south. Subject property behind fence to the right of photo.

13. Medical office building at 3325 Palo Verde Avenue adjacent to east.

14. Parking lot adjacent to east and southeast.

15. Medical office building at 3320 North Los Coyotes Diagonal adjacent to south.

16. Entry to medical office building at 3320 North Los Coyotes Diagonal adjacent to south.

17. Residences across Los Coyotes Diagonal adjacent to west.

18. Ralphs grocery store adjacent to north at 3380 North Los Coyotes Diagonal.

19. View west along alley between subject property and Ralphs.

20. Cell tower enclosure adjacent to the east.

21. Monitoring well in Ralphs alley adjacent to north of subject property.

22. Residences across Palo Verde Avenue to east.

23. View west toward subject property (behind fence) from parking lot adjacent to east.

24. Monitoring well in eastern parking lot.

APPENDIX B: HISTORICAL/REGULATORY DOCUMENTATION

Aerial Photograph Year: 1928

500 1000 2000

N

Ke□□Su□□ect Propert□

Aerial Photograph Year: 1938

500 1000 2000

N

Ke Su ect Propert

Aerial Photograph Year: 1947

500 1000 2000

N

Ke Su ect Propert

Aerial Photograph Year: 1952

500 1000 2000

N

Ke□□Su□□ect Propert□

Aerial Photograph Year: 1963

500 1000 2000

N

Ke Su ect Propert

Aerial Photograph Year: 1977

500 1000 2000

N

Ke Su ect Propert

Aerial Photograph Year: 1979

500 1000 2000

N

Ke□□Su□□ect Propert□

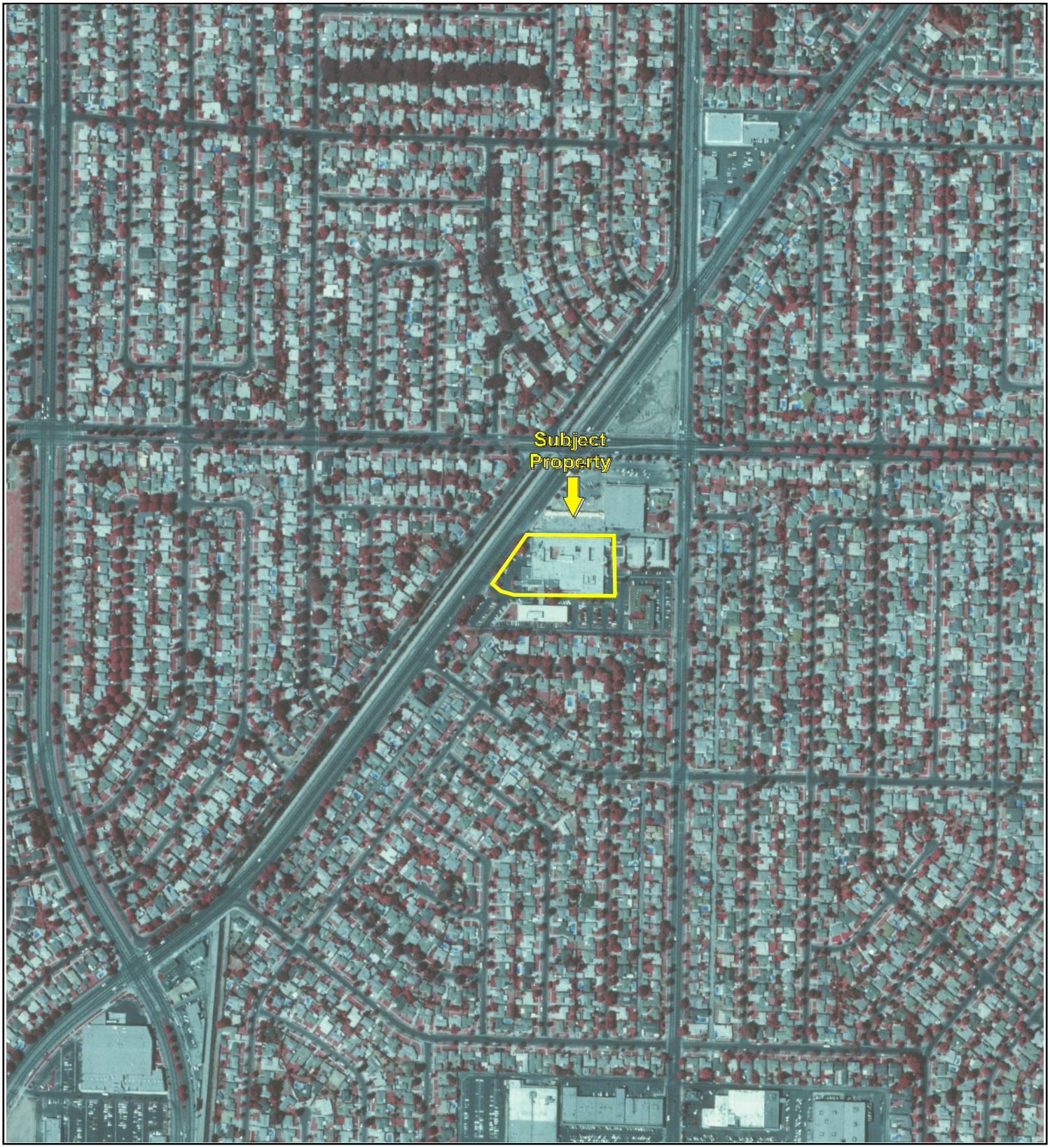
Aerial Photograph Year: 1981

500 1000 2000

N

Ke□□Su□□ect Propert□

Aerial Photograph Year: 1989



500 1000 2000

N

Ke□□Su□□ect Propert□

Aerial Photograph Year: 1994

500 1000 2000

N

Ke□□Su□□ect Propert□

Aerial Photograph Year: 2002

500 1000 2000

N

Ke□□Su□□ect Propert□

Aerial Photograph Year: 2005

500 1000 2000

N

Ke Su ect Propert

Aerial Photograph Year: 2009

500 1000 2000

N

Ke□□Su□□ect Propert□

Aerial Photograph Year: 2012

500 1000 2000

N

Ke□□Su□□ect Propert□

500 1000 2000

N

Ke Su ect Propert

Sunrise of Lakewood CA

3320 Los Coyotes Diagonal

LONG BEACH, CA 90808

Inquiry Number: 6152113.3

August 11, 2020

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

08/11/20

Site Name:	Client Name:
Sunrise of Lakewood CA	Partner Engineering and Science, Inc.
3320 Los Coyotes Diagonal	2154 Torrance Blvd, Suite 200
LONG BEACH, CA 90808	Torrance, CA 90501-0000
EDR Inquiry # 6152113.3	Contact: Cristina Scott

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Partner Engineering and Science, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 2819-4390-9DBF

PO # 20-289715.1

Project 20-289715.1

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 2819-4390-9DBF

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

The Sanborn Library LLC Since 1866™

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Sunrise Lakewood
3340 Los Coyotes Diagonal
Long Beach, CA 90808

Inquiry Number: 6179049.1
September 03, 2020

The EDR-City Directory Abstract

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1920 through 2014. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 660 feet of the target property.

A summary of the information obtained is provided in the text of this report.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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Data by infoUSA®

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Year	Source	TP	Adjoining	Text Abstract	Source Image
2014	Cole Information Services	-	X	X	-
2009	Cole Information Services	-	X	X	-
2006	Haines Company, Inc.	-	X	X	-
	Haines Company, Inc.	X	X	X	-
2004	Cole Information Services	-	X	X	-
	Haines Company	-	-	-	-
2003	Haines & Company	-	-	-	-
2001	Haines & Company, Inc.	-	-	-	-
2000	Haines	-	X	X	-
	Haines	X	X	X	-
1999	Cole Information Services	-	X	X	-
	Cole Information Services	X	X	X	-

EXECUTIVE SUMMARY

Year	Source	TP	Adjoining	Text Abstract	Source Image
1999	Haines Company	-	-	-	-
	Haines Company	X	-	X	-
1996	GTE	-	-	-	-
1995	Pacific Bell	X	X	X	-
1994	Cole Information Services	X	X	X	-
1992	PACIFIC BELL WHITE PAGES	-	-	-	-
1991	Pacific Bell	X	X	X	-
1990	Pacific Bell	-	X	X	-
1986	Pacific Bell	-	X	X	-
1985	Pacific Bell	X	X	X	-
1981	Pacific Telephone	-	X	X	-
1980	Pacific Telephone	X	X	X	-
1976	Pacific Telephone	-	X	X	-
1975	Pacific Telephone	X	X	X	-
1972	R. L. Polk & Co.	-	-	-	-
1971	R. L. Polk & Co.	-	-	-	-
1970	Pacific Telephone	-	-	-	-
1969	Pacific Telephone	X	X	X	-
1967	R. L. Polk & Co.	-	-	-	-
1966	Pacific Telephone	-	-	-	-
1965	GTE	-	-	-	-
1964	Pacific Telephone	-	X	X	-
1963	Pacific Telephone	-	-	-	-
1962	Pacific Telephone	-	-	-	-
1961	R. L. Polk & Co.	-	-	-	-
1960	Pacific Telephone	-	X	X	-
1958	Pacific Telephone	-	-	-	-
1957	Pacific Telephone	-	X	X	-
1956	Pacific Telephone	-	-	-	-
1955	R. L. Polk & Co.	-	-	-	-
1954	R. L. Polk & Co.	-	X	X	-
1952	Los Angeles Directory Co.	-	-	-	-
1951	Los Angeles Directory Co Publishers	-	-	-	-
1950	Pacific Telephone	-	-	-	-
1949	Los Angeles Directory Co.	-	-	-	-
1948	Los Angeles Directory Co.	-	-	-	-
1947	Pacific Directory Co.	-	-	-	-
1946	Southern California Telephone Co	-	-	-	-
1945	The Glendale Directory Co.	-	-	-	-
1944	R. L. Polk & Co.	-	-	-	-
1942	Los Angeles Directory Co.	-	-	-	-
1940	Los Angeles Directory Co.	-	-	-	-

EXECUTIVE SUMMARY

Year	Source	TP	Adjoining	Text Abstract	Source Image
1939	Los Angeles Directory Co.	-	-	-	-
1938	Los Angeles Directory Company Publishers	-	-	-	-
1937	Los Angeles Directory Co.	-	-	-	-
1936	Los Angeles Directory Co.	-	-	-	-
1935	Los Angeles Directory Co.	-	-	-	-
1934	Los Angeles Directory Co.	-	-	-	-
1933	Los Angeles Directory Co.	-	-	-	-
1932	Los Angeles Directory Co.	-	-	-	-
1931	Los Angeles Directory Company Publishers	-	-	-	-
1930	Los Angeles Directory Co.	-	-	-	-
1929	Los Angeles Directory Co.	-	-	-	-
1928	Los Angeles Directory Co.	-	-	-	-
1927	Los Angeles Directory Co.	-	-	-	-
1926	Los Angeles Directory Co.	-	-	-	-
1925	Los Angeles Directory Co.	-	-	-	-
1924	Los Angeles Directory Co.	-	-	-	-
1923	Los Angeles Directory Co.	-	-	-	-
1921	Los Angeles Directory Co.	-	-	-	-
1920	Los Angeles Directory Co.	-	-	-	-

EXECUTIVE SUMMARY

SELECTED ADDRESSES

The following addresses were selected by the client, for EDR to research. An "X" indicates where information was identified.

Address	***Type***	***Findings***
3320 Los Coyotes Diagonal	Client Entered	X
3378 Los Coyotes Diagonal	Client Entered	X
3380 Los Coyotes Diagonal	Client Entered	X
3331 Palo Verde Avenue	Client Entered	X
3325 Palo Verde Avenue	Client Entered	X

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

3340 Los Coyotes Diagonal
Long Beach, CA 90808

FINDINGS DETAIL

Target Property research detail.

LOS COYOTES DIAGNL

3340 LOS COYOTES DIAGNL

Year	Uses	Source
1999	ARNOLD WENDOLYN E LAW OFFICES OF	Cole Information Services
	WORLD OF WONDER CHILD	Cole Information Services

LOS COYOTES DIAGONAL

3340 LOS COYOTES DIAGONAL

Year	Uses	Source
1995	LOS ALTOS HOSPITAL & MENTAL HEALTH CENTER	Pacific Bell
1991	Los Altos Hospital And Mental Health Center	Pacific Bell
1985	LOS ALTOS HOSPITAL	Pacific Bell
1980	LOS ALTOS HOSPITAL	Pacific Telephone
1975	LOS ALTOS HOSPI TAL	Pacific Telephone

LOS COYOTES DIAGONAL N

3340 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	XXXX	Haines

LOS COYOTES DIAGONAL ST

3340 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	LOS ALTOS HOSPITAL	Pacific Telephone

FINDINGS

N LOS COYOTES DIAGONAL

3340 N LOS COYOTES DIAGONAL

Year	*Uses*	*Source*
2006	CAREER INST	Haines Company, Inc.
	TRAVEL & TRADE	Haines Company, Inc.
1994	LOS ALTOS HOSPITAL	Cole Information Services

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

CONQUISTA AVE

3286 CONQUISTA AVE

Year	Uses	Source
2000	CONQUISTA AV 90808 CONT	Haines
	GEORGE Ben	Haines

CORALITE ST

6109 CORALITE ST

Year	Uses	Source
1969	JACK GERALD L	Pacific Telephone

6115 CORALITE ST

Year	Uses	Source
1969	JAMEYSON HARRY E 0 H	Pacific Telephone

6121 CORALITE ST

Year	Uses	Source
1969	WADE HARRY B	Pacific Telephone

6125 CORALITE ST

Year	Uses	Source
1969	KENTROS THEO P 0 H	Pacific Telephone

6131 CORALITE ST

Year	Uses	Source
1969	DEL REAL FRED A	Pacific Telephone

6134 CORALITE ST

Year	Uses	Source
1969	LE TERNEAU JOHN J	Pacific Telephone

6135 CORALITE ST

Year	Uses	Source
1969	WALSH LEE A	Pacific Telephone

FINDINGS

6140 CORALITE ST

Year	Uses	Source
1969	MARINO PHIL	Pacific Telephone

6141 CORALITE ST

Year	Uses	Source
1969	MAC DONALD ELIZ MRS	Pacific Telephone

6144 CORALITE ST

Year	Uses	Source
1969	OVERSTREET J C	Pacific Telephone

6145 CORALITE ST

Year	Uses	Source
1969	MC GEE JOHN C	Pacific Telephone

6149 CORALITE ST

Year	Uses	Source
1969	WARD DEAN M	Pacific Telephone

6150 CORALITE ST

Year	Uses	Source
1969	KUHN MAURICE 0 H	Pacific Telephone

6155 CORALITE ST

Year	Uses	Source
1969	BUNDY F ALLEN	Pacific Telephone

6158 CORALITE ST

Year	Uses	Source
1969	EDWARDS MARK	Pacific Telephone

6161 CORALITE ST

Year	Uses	Source
1969	KRAUS VERNON R	Pacific Telephone

6165 CORALITE ST

Year	Uses	Source
1969	LEWELLYN B	Pacific Telephone

FINDINGS

E CORALITE ST

6109 E CORALITE ST

Year	Uses	Source
2014	MARILYN SHAW	Cole Information Services
2009	MARILYN SHAW	Cole Information Services
2006	e SHAW M J	Haines Company, Inc.
2004	MARILYN SHAW	Cole Information Services
1999	MARILYN SHAW	Cole Information Services
1994	SHAW, MARILYN J	Cole Information Services
1957	RORMAN H E LCDR USN	Pacific Telephone
1954	LUENEMANN VICTOR H	R. L. Polk & Co.

6115 E CORALITE ST

Year	Uses	Source
2014	GAIL GAYDOS	Cole Information Services
2009	GAIL GAYDOS	Cole Information Services
2006	o GAYDOSGail	Haines Company, Inc.
2004	GAIL GAYDOS	Cole Information Services
1999	GAIL GAYDOS	Cole Information Services
1964	JAMEYSON HARRY E	Pacific Telephone
1957	JAMEYSON HARRY E	Pacific Telephone

6121 E CORALITE ST

Year	Uses	Source
2014	SEAN VU	Cole Information Services
2009	SEAN VU	Cole Information Services
2006	VU Sean	Haines Company, Inc.
1999	SEAN VU	Cole Information Services
1994	WADE, HARRY B	Cole Information Services
1954	LEWIS ORTN E	R. L. Polk & Co.

6125 E CORALITE ST

Year	Uses	Source
2014	MANUEL YBARRA	Cole Information Services
2009	MANUEL YBARRA	Cole Information Services
2006	o YBARRAManuel	Haines Company, Inc.
2004	MANUEL YBARRA	Cole Information Services
1999	MANUEL YBARRA	Cole Information Services
1964	KENTROS THEO P	Pacific Telephone

FINDINGS

Year	Uses	Source
1960	POTTER RAYMOND H	Pacific Telephone
1957	POTTER RAYMOND H	Pacific Telephone

6131 E CORALITE ST

Year	Uses	Source
2014	APRIL CHA	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services
2006	o GUERREROJose	Haines Company, Inc.
2004	OCCUPANT UNKNOWN	Cole Information Services
1999	OCCUPANT UNKNOWN	Cole Information Services
1964	DEL REAL FRED A	Pacific Telephone
1957	DEL REAL FRED A	Pacific Telephone

6134 E CORALITE ST

Year	Uses	Source
2014	DORTON SAILOR	Cole Information Services
2009	JANDREW LOVE	Cole Information Services
2006	LOVEJ	Haines Company, Inc.
1999	JANDREW LOVE	Cole Information Services
1957	BILLMAN NEIL E	Pacific Telephone

6135 E CORALITE ST

Year	Uses	Source
2014	CRESCENCIO CASTRO	Cole Information Services
2009	CRESCENCIO CASTRO	Cole Information Services
2006	CASTRO Esperanza	Haines Company, Inc.
2004	ESPERANZA CASTRO	Cole Information Services
1999	OCCUPANT UNKNOWN	Cole Information Services
	CRESCENCIO CASTRO	Cole Information Services
1954	TIPPING ELLIS M	R. L. Polk & Co.

6140 E CORALITE ST

Year	Uses	Source
2014	GABRIEL ALVARADO	Cole Information Services
2009	GABRIEL ALVARADO	Cole Information Services
2006	o ALVARADO Gabnel	Haines Company, Inc.
2004	GABRIEL ALVARADO	Cole Information Services
1999	GABRIEL ALVARADO	Cole Information Services
	PHILIP MARINO	Cole Information Services
1954	COOPER H MAR VISTA	R. L. Polk & Co.

FINDINGS

6141 E CORALITE ST

Year	Uses	Source
2014	MICHAEL HODGSON	Cole Information Services
2009	MARIE SCHAEFFER	Cole Information Services
2004	MARIE SCHAEFFER	Cole Information Services
1999	MARIE SCHAEFFER	Cole Information Services
1954	SCHOOLER JAS W MRS	R. L. Polk & Co.

6144 E CORALITE ST

Year	Uses	Source
2014	MARTHA OVERSTREET	Cole Information Services
2009	JC OVERSTREET	Cole Information Services
2006	OVERSTREETJ	Haines Company, Inc.
2004	J OVERSTREET	Cole Information Services
1999	JC OVERSTREET	Cole Information Services
1964	OVERSTREET J C	Pacific Telephone
1960	KEENAN OWEN D	Pacific Telephone

6145 E CORALITE ST

Year	Uses	Source
2014	GIOVANNI CAU	Cole Information Services
2009	JEANINE DINA	Cole Information Services
2006	a DINAJeanine	Haines Company, Inc.
2004	JEANINE DINA	Cole Information Services
1999	JEANINE DINA	Cole Information Services
	GIOVANN CAU	Cole Information Services
1954	STEUBE WM H	R. L. Polk & Co.

6149 E CORALITE ST

Year	Uses	Source
2014	JAYNE BECKHAM	Cole Information Services
2009	JAYNE BECKHAM	Cole Information Services
2006	SCHNELLTheresa	Haines Company, Inc.
2004	DESTINIE WEAVER	Cole Information Services
1999	JAYNE BECKHAM	Cole Information Services
1994	WEAVER, DESTINI	Cole Information Services
1964	COLE EDW F JR	Pacific Telephone
1960	GUSTAFSON R T II	Pacific Telephone
1957	GUSTAFSON R T II	Pacific Telephone

FINDINGS

6150 E CORALITE ST

Year	Uses	Source
2014	KELLIE SIMPSON	Cole Information Services
2009	KELLIE SIMPSON	Cole Information Services
2006	o SIMPSONKS	Haines Company, Inc.
2004	KELLIE SIMPSON	Cole Information Services
1999	KELLIE SIMPSON	Cole Information Services
1957	NN MAURICE T	Pacific Telephone
1954	THOMPSON ERNEST R	R. L. Polk & Co.

6155 E CORALITE ST

Year	Uses	Source
2014	HEIDI AVILA	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services
2006	No Current Listing	Haines Company, Inc.
2004	LISA WILLARD	Cole Information Services
1999	OCCUPANT UNKNOWN	Cole Information Services
1994	HOPPER, M R	Cole Information Services
1964	FREW H G	Pacific Telephone
1954	WHITE FREDERICK	R. L. Polk & Co.

6158 E CORALITE ST

Year	Uses	Source
2014	LISA WILLARD	Cole Information Services
2009	LISA WILLARD	Cole Information Services
2006	a PADILLAKamei	Haines Company, Inc.
2004	AARON MATTHEWS	Cole Information Services
1999	BARBARA MATTHEWS	Cole Information Services
	LISA WILLARD	Cole Information Services
1994	WILLFONG, OMER B	Cole Information Services
1960	FREEMAN LOUIS I	Pacific Telephone
1957	FREEMAN LOUIS I	Pacific Telephone

6161 E CORALITE ST

Year	Uses	Source
2014	CYNTHIA GILL	Cole Information Services
2009	CYNTHIA GILL	Cole Information Services
2006	MARTINEZ Maximino	Haines Company, Inc.
2004	OCCUPANT UNKNOWN	Cole Information Services
1999	CYNTHIA GILL	Cole Information Services

FINDINGS

Year	Uses	Source
1960	ARNHEIM DANL D	Pacific Telephone
1957	LORGE LOUIS H	Pacific Telephone

6165 E CORALITE ST

Year	Uses	Source
2014	BARBARA MORTON	Cole Information Services
2009	MICHAEL MORTON	Cole Information Services
2006	a MORTON Michael	Haines Company, Inc.
2004	MICHAEL MORTON	Cole Information Services
1999	MICHAEL MORTON	Cole Information Services
1994	MORTON, MICHAEL	Cole Information Services

6169 E CORALITE ST

Year	Uses	Source
2014	CYNTHIA GILL	Cole Information Services

E KILLDEE ST

6230 E KILLDEE ST

Year	Uses	Source
2014	FERINAC LAGUANA	Cole Information Services
2009	MICHAEL FERINAC	Cole Information Services
2006	FERINACJohn	Haines Company, Inc.
1999	MICHAEL FERINAC	Cole Information Services
	OCCUPANT UNKNOWN	Cole Information Services

6231 E KILLDEE ST

Year	Uses	Source
2014	BRADY RYAN	Cole Information Services
2009	KIMBERLY JOHNSON	Cole Information Services
2006	o PIERCEJeffrey	Haines Company, Inc.
2004	NORMAN COX	Cole Information Services
1999	KIMBERLY JOHNSON	Cole Information Services
1964	KENNEDY MAXINE	Pacific Telephone
1960	PARKS PEGGY	Pacific Telephone
1957	COX ALEX T	Pacific Telephone
1954	COX NORMAN L	R. L. Polk & Co.

FINDINGS

6237 E KILLDEE ST

Year	Uses	Source
2014	MICHAEL MENDENHALL	Cole Information Services
2009	STEVE SERNA	Cole Information Services
2006	HOWELLLarry	Haines Company, Inc.
1999	STEVE SERNA	Cole Information Services
	MARTHA HARTER	Cole Information Services
1994	HARTER, MARTHA	Cole Information Services
1964	HARTER GARY G	Pacific Telephone
1960	HARTER GARY G	Pacific Telephone

6238 E KILLDEE ST

Year	Uses	Source
2014	MICHAEL ROBIDEAUX	Cole Information Services
2009	MICHAEL ROBIDEAUX	Cole Information Services
2004	MICHAEL ROBIDEAUX	Cole Information Services
1999	MICHAEL ROBIDEAUX	Cole Information Services
1964	ROBIDEAUX ANNEETTE	Pacific Telephone
1957	MORENUS RICHARD C	Pacific Telephone
1954	FITZGIBBONS J F	R. L. Polk & Co.

6243 E KILLDEE ST

Year	Uses	Source
2014	PAUL MOLINA	Cole Information Services
2009	PAUL MOLINA	Cole Information Services
2006	MOLINAPaul	Haines Company, Inc.
2004	PAUL MOLINA	Cole Information Services
	PAULS PIT STOP	Cole Information Services
1999	PAUL MOLINA	Cole Information Services
1994	KENNEDY, ALFRED	Cole Information Services
1960	JAMES VIRGINIA F	Pacific Telephone
1957	ANDERSON RALPH P	Pacific Telephone
1954	NIONDCIKE FRANK J	R. L. Polk & Co.

6249 E KILLDEE ST

Year	Uses	Source
2009	NORMAN HOEFLER	Cole Information Services
2004	NORMAN HOEFLER	Cole Information Services
1999	NORMAN HOEFLER	Cole Information Services

FINDINGS

6253 E KILLDEE ST

Year	Uses	Source
2014	OCCUPANT UNKNOWN	Cole Information Services
2009	JANE MAHER	Cole Information Services
2006	MAHERJane	Haines Company, Inc.
1999	OCCUPANT UNKNOWN	Cole Information Services
	JANE MAHER	Cole Information Services
1964	SITSER LINDA	Pacific Telephone
1960	SITSER FRED E	Pacific Telephone

6256 E KILLDEE ST

Year	Uses	Source
2014	GABRIEL LEBEAU	Cole Information Services
2009	OSCAR LEBEAU	Cole Information Services
2006	LEBEAU 0 T	Haines Company, Inc.
2004	OSCAR LEBEAU	Cole Information Services
1999	OSCAR LEBEAU	Cole Information Services
1994	LEBEAU, OSCAR	Cole Information Services
1964	KENNARD MABEL	Pacific Telephone
1957	KENNARD J E	Pacific Telephone
1954	KENNARD J E	R. L. Polk & Co.

6259 E KILLDEE ST

Year	Uses	Source
2014	LEE WILLIAMS	Cole Information Services
2009	LEE WILLIAMS	Cole Information Services
2006	WILLIAMS Lee	Haines Company, Inc.
2004	LEE WILLIAMS	Cole Information Services
1999	OCCUPANT UNKNOWN	Cole Information Services
	LEE WILLIAMS	Cole Information Services
1994	SHUMWAY, MARY F	Cole Information Services
1964	SHUMWAY CARLTON L	Pacific Telephone
1960	SHUMWAY CARLTON L	Pacific Telephone
1957	SHUMWAY CARLTON L	Pacific Telephone
1954	SHUMWAY CARNTON L	R. L. Polk & Co.

6262 E KILLDEE ST

Year	Uses	Source
2014	SANDRA THOMPSON	Cole Information Services
2009	ARVID PETERSON	Cole Information Services

FINDINGS

Year	Uses	Source
2004	ARVID PETERSON	Cole Information Services
1999	ARVID PETERSON	Cole Information Services
	OCCUPANT UNKNOWN	Cole Information Services
1964	PETERSON ROSEMARY	Pacific Telephone
1957	SUSANKA ALBERT J JR	Pacific Telephone
1954	SUSANKA ALBERT J JR	R. L. Polk & Co.

6265 E KILLDEE ST

Year	Uses	Source
2014	MARK BEAUSOLEIL	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services
2006	MACNEALThaddeus	Haines Company, Inc.
1994	WYNNE, JAMES	Cole Information Services
1960	PUGH ROBT W	Pacific Telephone
1957	STEPHENSON JOS B JR	Pacific Telephone
1954	STEPHENSON JOS B JR	R. L. Polk & Co.

6266 E KILLDEE ST

Year	Uses	Source
2014	ROSEMARY HILL	Cole Information Services
2009	ROSEMARY HILL	Cole Information Services
2006	No Current Listing	Haines Company, Inc.
2004	ROSEMARY HILL	Cole Information Services
1999	ROSEMARY HILL	Cole Information Services

6271 E KILLDEE ST

Year	Uses	Source
2014	BLAKE HANNAGAN	Cole Information Services
2009	DELYNN SCHOENHOLTZ	Cole Information Services
2006	o HENRYWayne	Haines Company, Inc.
2004	OCCUPANT UNKNOWN	Cole Information Services
1999	OCCUPANT UNKNOWN	Cole Information Services
	DELYNN SCHOENHOLTZ	Cole Information Services
1964	LAW WALLACE J SR	Pacific Telephone
1960	PASSAVANT TONY J	Pacific Telephone
1957	PASSAVANT TONY J	Pacific Telephone
1954	PASSAVANT TONY J	R. L. Polk & Co.

FINDINGS

6272 E KILLDEE ST

Year	Uses	Source
2014	LARRY ENTERLINE	Cole Information Services
2009	LARRY ENTERLINE	Cole Information Services
	SPRING FLORIST	Cole Information Services
2006	ENTERLINE Larry	Haines Company, Inc.
2004	LARRY ENTERLINE	Cole Information Services
1999	LARRY ENTERLINE	Cole Information Services
1964	FERREIRA LOUIS L	Pacific Telephone
1960	FERREIRA LOUIS L	Pacific Telephone
1957	FERREIRA LOUIS L	Pacific Telephone

6277 E KILLDEE ST

Year	Uses	Source
2014	COLLIE JANDA	Cole Information Services
2009	COLLIE JANDA	Cole Information Services
2006	JANDA Collie	Haines Company, Inc.
2004	JUDITH JANDA	Cole Information Services
1999	COLLIE JANDA	Cole Information Services
1994	JANDA, COLLIE	Cole Information Services
1964	BONN RUTH R	Pacific Telephone
1960	BONN HENRY A	Pacific Telephone
1957	BONN HENRY A	Pacific Telephone
1954	BONN HENRY A	R. L. Polk & Co.

6278 E KILLDEE ST

Year	Uses	Source
2014	CAROLE BRENNAN	Cole Information Services
2009	CAROLE BRENNAN	Cole Information Services
2004	CAROLINE SLADEK	Cole Information Services
1999	OCCUPANT UNKNOWN	Cole Information Services
	CAROLE BRENNAN	Cole Information Services
1994	BENCH, EDWIN K JR	Cole Information Services
1964	BENCH EDWIN K JR	Pacific Telephone
1960	BENCH EDWIN K JR	Pacific Telephone
1954	BENCH EDWIN K JR	R. L. Polk & Co.

6283 E KILLDEE ST

Year	Uses	Source
2014	RONALD SCHMIDT	Cole Information Services

FINDINGS

Year	Uses	Source
2009	RONALD SCHMIDT	Cole Information Services
2006	SCHMIDT Ronald	Haines Company, Inc.
2004	RONALD SCHMIDT	Cole Information Services
1999	RONALD SCHMIDT	Cole Information Services
1994	SCHMIDT, RONALD	Cole Information Services
1960	HULPKE JOHN E	Pacific Telephone
1957	HULPKE JOHN E	Pacific Telephone
1954	HULPHE JOHN E	R. L. Polk & Co.

6284 E KILLDEE ST

Year	Uses	Source
2014	MASAKO YAMAMOTO	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services
2006	9 YAMAMOTOChieko	Haines Company, Inc.
2004	OCCUPANT UNKNOWN	Cole Information Services
1957	LEASER LAWRENCE R	Pacific Telephone

6289 E KILLDEE ST

Year	Uses	Source
2014	GARY HELTON	Cole Information Services
2009	LINDA NELSON	Cole Information Services
2006	NELSON Byron	Haines Company, Inc.
2004	BYRON NELSON	Cole Information Services
1999	LINDA NELSON	Cole Information Services
1994	NELSON, BYRON A	Cole Information Services
1964	KRACHT FRED H	Pacific Telephone
1960	KRACHT FRED H	Pacific Telephone
1954	KRACHT FRED H	R. L. Polk & Co.

E METZ ST

6230 E METZ ST

Year	Uses	Source
2014	SHANON BARISOFF	Cole Information Services
2009	WILLIAM BARISOFF	Cole Information Services
	BORN 2 SHOPPE	Cole Information Services
2006	BARISOFFWm	Haines Company, Inc.
2004	WILLIAM BARISOFF	Cole Information Services
1999	WILLIAM BARISOFF	Cole Information Services
1964	MCGUIRE DAYTON E	Pacific Telephone

FINDINGS

Year	Uses	Source
1960	MC GUIRE D E	Pacific Telephone
1957	MCGUIRE D E	Pacific Telephone

6236 E METZ ST

Year	Uses	Source
2014	SUSAN PAZERA	Cole Information Services
2009	IVAN GONZALEZ	Cole Information Services
2006	SANDOVALI Ivan	Haines Company, Inc.
2004	CHRISTOPHER BARRETT	Cole Information Services
1999	IVAN GONZALEZ	Cole Information Services
1964	HEIM WILLI	Pacific Telephone
1960	HEIM WILLI	Pacific Telephone
1954	ZEISE CARL H	R. L. Polk & Co.

6241 E METZ ST

Year	Uses	Source
2014	KAY HANSEN	Cole Information Services
2009	KAY HANSEN	Cole Information Services
2004	KAY HANSEN	Cole Information Services
1999	KAY HANSEN	Cole Information Services
1964	BIRCH THOS E	Pacific Telephone
1960	BIRCH THOS E	Pacific Telephone
1957	BIRCH THOS E	Pacific Telephone
1954	BIRCH THOS E	R. L. Polk & Co.

6242 E METZ ST

Year	Uses	Source
2014	NANCY BUSH	Cole Information Services
2009	NANCY BUSH	Cole Information Services
2006	Bus H Nancy	Haines Company, Inc.
2004	NANCY BUSH	Cole Information Services
1999	NANCY BUSH	Cole Information Services
1994	BUSH, LEONARD	Cole Information Services
1964	VOTROUBEK WALTER P	Pacific Telephone
1960	VOTROUBEK WALTER P	Pacific Telephone

6247 E METZ ST

Year	Uses	Source
2014	FREDERICK NAVARRO	Cole Information Services
2009	LAUREN LITMAN	Cole Information Services

FINDINGS

Year	Uses	Source
2006	NAVARRO Frederick	Haines Company, Inc.
2004	LAUREN LITMAN	Cole Information Services
1999	LAUREN LITMAN	Cole Information Services
1964	NEWSOM VIVIAN M	Pacific Telephone
1960	NEWSOM C K DOUG	Pacific Telephone
1957	NEWSOM C K DOUG	Pacific Telephone
1954	NEWSOM C K DOUG	R. L. Polk & Co.

6248 E METZ ST

Year	Uses	Source
2014	GARY REYNOLDS	Cole Information Services
2009	GARY REYNOLDS	Cole Information Services
2006	REYNOLDS Gary	Haines Company, Inc.
2004	GARY REYNOLDS	Cole Information Services
1999	OCCUPANT UNKNOWN	Cole Information Services
	GARY REYNOLDS	Cole Information Services
1964	STIPAC CHAS J	Pacific Telephone
1960	STIPAC CHAS J	Pacific Telephone
1957	STIPAC CHAS J HARIST9-8671	Pacific Telephone
1954	STIPAC CHAS J	R. L. Polk & Co.

6253 E METZ ST

Year	Uses	Source
2014	JAMES KURT	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services
2006	KURT James	Haines Company, Inc.
1960	WALTERS RAY T	Pacific Telephone

6254 E METZ ST

Year	Uses	Source
2014	DAVID GANSEN	Cole Information Services
2009	DAVID GANSEN	Cole Information Services
2006	GIAVANTI Margaret	Haines Company, Inc.
2004	DAVID GANSEN	Cole Information Services
1999	DAVID GANSEN	Cole Information Services
1960	GLAAB GEO W	Pacific Telephone
1957	BURDICK ROBT W	Pacific Telephone
	FONNER JEAN B	Pacific Telephone

FINDINGS

6259 E METZ ST

Year	Uses	Source
2014	CESAR YANEZ	Cole Information Services
2009	JAMES WALKER	Cole Information Services
2004	DARLENE ROBERTS	Cole Information Services
1999	OCCUPANT UNKNOWN	Cole Information Services
	JAMES WALKER	Cole Information Services
1957	LAING RICHARD L	Pacific Telephone
1954	LAINGIVY L IVMRS	R. L. Polk & Co.

6260 E METZ ST

Year	Uses	Source
2014	OCCUPANT UNKNOWN	Cole Information Services
2009	VERNON NETWIG	Cole Information Services
2006	NETWIGVernon	Haines Company, Inc.
1999	VERNON NETWIG	Cole Information Services
1994	WETHERBY, V M	Cole Information Services
1964	SAWYER JAS	Pacific Telephone
1960	SAWYER JAS	Pacific Telephone
1957	IVEY RICHARD L	Pacific Telephone
1954	IVEY RICHARD L	R. L. Polk & Co.

E WARDLOW RD

6118 E WARDLOW RD

Year	Uses	Source
2014	WENDY HOOPS	Cole Information Services
2006	BOYNTONWillard G	Haines Company, Inc.
	a HOOPS Ronda	Haines Company, Inc.
1994	BOYNTON, WILLARD G	Cole Information Services
1991	Boynton Willard G	Pacific Bell
1985	Boynton Willard G	Pacific Bell
1980	Boynton Willard G	Pacific Telephone
1975	Boys Clubs	Pacific Telephone
	Boynton Willard G	Pacific Telephone
1957	KING WO L LT USN	Pacific Telephone
1954	GROVES HARRY W	R. L. Polk & Co.

FINDINGS

6124 E WARDLOW RD

Year	Uses	Source
2014	SYDNEY GITELSON	Cole Information Services
2009	ATUSHI KIRA	Cole Information Services
2006	MCNELLYMatthew	Haines Company, Inc.
2004	JESUS RODRIGUEZ	Cole Information Services
1999	ATUSHI KIRA	Cole Information Services
1994	DELGADO, JOE D	Cole Information Services
1985	WEISFIELDS JEWELERS	Pacific Bell
	Weiser Spencer R	Pacific Bell
1980	Weiser Spencer R	Pacific Telephone
1975	Jessner M	Pacific Telephone
1964	HEGEL WALTER E	Pacific Telephone
1960	HEGEL WALTER E	Pacific Telephone
1957	HARVEY LEE	Pacific Telephone
1954	BAUTER ROBT T	R. L. Polk & Co.

6128 E WARDLOW RD

Year	Uses	Source
2014	KAREN MERRITT	Cole Information Services
2009	THOMAS MERRITT	Cole Information Services
2006	a MERRITT Karen 00 U	Haines Company, Inc.
2004	THOMAS MERRITT	Cole Information Services
1999	THOMAS MERRITT	Cole Information Services
	OCCUPANT UNKNOWN	Cole Information Services
1960	BORK CAROL L	Pacific Telephone
1957	MARTIN MARY L	Pacific Telephone
1954	HEGLAND DURWARD J LT USAF	R. L. Polk & Co.

6134 E WARDLOW RD

Year	Uses	Source
2009	HUGO ROBST	Cole Information Services
1999	HUGO ROBST	Cole Information Services
1964	ROBST HUGO E	Pacific Telephone
1960	ROBST HUGO E	Pacific Telephone
1957	GARRISON CUES R	Pacific Telephone
1954	BONDS O L	R. L. Polk & Co.

FINDINGS

6140 E WARDLOW RD

Year	Uses	Source
2014	BRIAN RINALDI	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services
2006	STODDARDDawn	Haines Company, Inc.
2004	OCCUPANT UNKNOWN	Cole Information Services
1985	Raymond Keith	Pacific Bell
1980	Raymond Keith	Pacific Telephone
1975	Mc Bride Earl	Pacific Telephone
1964	MCBRIDE FAY	Pacific Telephone
1960	MCBRIDE FAY	Pacific Telephone
1957	MCBRIDE FAY	Pacific Telephone
1954	MCBRIDE FAY	R. L. Polk & Co.

6144 E WARDLOW RD

Year	Uses	Source
2014	JOHN HUBBARD	Cole Information Services
2009	J YOUNG	Cole Information Services
2006	o YOUNGJ	Haines Company, Inc.
2004	J YOUNG	Cole Information Services
1999	J YOUNG	Cole Information Services
	OCCUPANT UNKNOWN	Cole Information Services
1985	Mott Brian	Pacific Bell
1980	Stanwood Robt	Pacific Telephone
1960	GEORGE BEATRICE	Pacific Telephone
1957	HAWK LEWIS H JR	Pacific Telephone
1954	HAWK LEWIS H JR	R. L. Polk & Co.

6150 E WARDLOW RD

Year	Uses	Source
2014	ANDREW TSE	Cole Information Services
2009	ROBERT LECAM	Cole Information Services
2006	LECAMTracy	Haines Company, Inc.
1999	ROBERT LECAM	Cole Information Services
	OCCUPANT UNKNOWN	Cole Information Services
1964	STANLEY FRED L	Pacific Telephone
1960	STANLEY FRED L	Pacific Telephone
1957	WINANS RUBY C	Pacific Telephone
1954	WINANS F T	R. L. Polk & Co.

FINDINGS

6202 E WARDLOW RD

Year	Uses	Source
2009	OCCUPANT UNKNOWN	Cole Information Services
2006	a GIBBS Michael	Haines Company, Inc.
2004	MICHAEL GIBBS	Cole Information Services
1980	Caro Sylvian M	Pacific Telephone
1975	Caro Sylvian M	Pacific Telephone
1964	CARO SYLVIAN M	Pacific Telephone
1960	CARO SYLVIAN M	Pacific Telephone
1957	CARS SYLVIAN M	Pacific Telephone

6208 E WARDLOW RD

Year	Uses	Source
2014	JEANNE SHERIDAN	Cole Information Services
2009	KEITH BURGOYNE	Cole Information Services
2006	a BURGOYNE Jeanne	Haines Company, Inc.
1999	KEITH BURGOYNE	Cole Information Services
1980	Gill David & Linda	Pacific Telephone
	Gill David	Pacific Telephone
1975	Kainz Anton	Pacific Telephone
1960	CARTER HENRY J	Pacific Telephone
1957	CARTER HENRY J	Pacific Telephone
1954	CARTER HENRY J	R. L. Polk & Co.
	CARTER HENRY J	R. L. Polk & Co.

6212 E WARDLOW RD

Year	Uses	Source
2014	ERNESTO OCHOA	Cole Information Services
2009	ERNESTO OCHOA	Cole Information Services
2006	OCHOAEmesto	Haines Company, Inc.
	ROBLES Emeslo	Haines Company, Inc.
2004	ERNESTO ROBLES	Cole Information Services
1999	ERNESTO ROBLES	Cole Information Services
1994	OCHOA, ERNESTO	Cole Information Services
1991	Sorenson Dennis L	Pacific Bell
1985	Sorenson Dennis L	Pacific Bell
1980	Sorenson Dennis L	Pacific Telephone
1960	WATERS HERMAN G	Pacific Telephone
1957	HOENSON EDW	Pacific Telephone
1954	ARNDT LEONARD A	R. L. Polk & Co.

FINDINGS

6218 E WARDLOW RD

Year	Uses	Source
2014	KENNETH DIVER	Cole Information Services
2009	WARNER BAXTER	Cole Information Services
2006	BAXTERWamer	Haines Company, Inc.
2004	WARNER BAXTER	Cole Information Services
1999	BLOIS HAWKINS	Cole Information Services
	WARNER BAXTER	Cole Information Services
1991	Lawrence John A	Pacific Bell
1985	Harris C R	Pacific Bell
1980	Otero Edw J	Pacific Telephone
1975	Otero Edw J	Pacific Telephone
1964	MADDAMS WM G	Pacific Telephone
1960	MADDAMS WM G	Pacific Telephone
1957	MADDAMS WM G HARISN9-1361	Pacific Telephone
1954	MADDAMS WM G	R. L. Polk & Co.

6221 E WARDLOW RD

Year	Uses	Source
1964	CARTER ROBT L	Pacific Telephone

6228 E WARDLOW RD

Year	Uses	Source
2014	GREGORY GOLGART	Cole Information Services
2009	GREGORY GOLGART	Cole Information Services
2006	GOL	Haines Company, Inc.
2004	GREGORY GOLGART	Cole Information Services
1999	GREGORY GOLGART	Cole Information Services
1994	GOLGART, GREG	Cole Information Services
1991	Golgart G	Pacific Bell
1960	WERNER CHAS E	Pacific Telephone
1957	WERNER CHAS E	Pacific Telephone
1954	WERNER CHAS E	R. L. Polk & Co.

6229 E WARDLOW RD

Year	Uses	Source
2014	DOMINIC FREEMAN	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services
2006	FREEMAN Stanley	Haines Company, Inc.
2004	OCCUPANT UNKNOWN	Cole Information Services

FINDINGS

Year	Uses	Source
1991	Kranidas Mary O	Pacific Bell
1980	Worthley Wm	Pacific Telephone
1964	MYL JAS A	Pacific Telephone
1960	MYL JAS A	Pacific Telephone
1957	LUND ROBT H ATTY	Pacific Telephone
1954	LUND ROBT H ATTY	R. L. Polk & Co.

6235 E WARDLOW RD

Year	Uses	Source
2014	GLENDA KLINEDINEST	Cole Information Services
2009	CORNELIA HARMAN	Cole Information Services
2006	a HARMAN Comelia	Haines Company, Inc.
2004	CORNELIA HARMAN	Cole Information Services
1999	CORNELIA HARMAN	Cole Information Services
1957	BLODGETT A L	Pacific Telephone
1954	BLODETT A L	R. L. Polk & Co.

KILLDEE ST

6230 KILLDEE ST

Year	Uses	Source
1969	KRAMER RPBT H S	Pacific Telephone

6231 KILLDEE ST

Year	Uses	Source
1969	COX EUNICE MRS	Pacific Telephone

6237 KILLDEE ST

Year	Uses	Source
1969	HARTER HOLLY	Pacific Telephone

6238 KILLDEE ST

Year	Uses	Source
1969	ROBIDEAUX GENE L S	Pacific Telephone

6243 KILLDEE ST

Year	Uses	Source
1969	KENNEDY ALF	Pacific Telephone

FINDINGS

6249 KILLDEE ST

Year	Uses	Source
1969	HOEFLER NORMAN L S	Pacific Telephone

6253 KILLDEE ST

Year	Uses	Source
1969	REYNARD ORSON S	Pacific Telephone

6256 KILLDEE ST

Year	Uses	Source
1969	KENNARD MABEL	Pacific Telephone

6259 KILLDEE ST

Year	Uses	Source
1969	NO RETURN	Pacific Telephone

6262 KILLDEE ST

Year	Uses	Source
1969	D 08 BS FRED C	Pacific Telephone

6265 KILLDEE ST

Year	Uses	Source
1969	PUGH ROBT W 0 H	Pacific Telephone

6266 KILLDEE ST

Year	Uses	Source
1969	NO RETURN	Pacific Telephone

6271 KILLDEE ST

Year	Uses	Source
1969	FOGLESONG CURTIS L	Pacific Telephone

6272 KILLDEE ST

Year	Uses	Source
1969	FERREIRA LOUIS L S	Pacific Telephone

6277 KILLDEE ST

Year	Uses	Source
1969	BONN RUTH R MRS S	Pacific Telephone

6278 KILLDEE ST

Year	Uses	Source
1969	BENCH EDWIN K JR S HAS 5819	Pacific Telephone

FINDINGS

6283 KILLDEE ST

Year	Uses	Source
1969	CLAY DOUGLAS L S	Pacific Telephone

6284 KILLDEE ST

Year	Uses	Source
1969	WALLACE RAYMOND	Pacific Telephone

6289 KILLDEE ST

Year	Uses	Source
1969	KRACHT FRED H	Pacific Telephone

LOS COYOTES DIAGNL

3320 LOS COYOTES DIAGNL

Year	Uses	Source
1999	GELLERMAN G LEE MD	Cole Information Services
	MANOS ANDREW J DO INCORPORATED	Cole Information Services

LOS COYOTES DIAGONAL

3240 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Tan Sybil	Pacific Bell
1980	Watkins Levi L	Pacific Telephone
1975	Watkins Levi L	Pacific Telephone

3246 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Silva S	Pacific Bell

3251 LOS COYOTES DIAGONAL

Year	Uses	Source
1975	Williams Johanna	Pacific Telephone

3252 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Lund Alfred G	Pacific Bell

FINDINGS

3255 LOS COYOTES DIAGONAL

Year	Uses	Source
1980	Thielman Ronald E	Pacific Telephone
	RONS FLOOR COVERING	Pacific Telephone
1975	RONS FLOOR COVERING	Pacific Telephone
	Thielman Ronald E	Pacific Telephone

3256 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Offineer W J	Pacific Bell
1980	Offineer Woodrow J	Pacific Telephone
	Offineer R M	Pacific Telephone
1975	Offineer Woodrow J	Pacific Telephone
	Offineer R M	Pacific Telephone

3261 LOS COYOTES DIAGONAL

Year	Uses	Source
1975	Coberly Jas T	Pacific Telephone

3262 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Leader L	Pacific Bell

3302 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Sramek David	Pacific Bell
1985	Thomlison Cecil L	Pacific Bell
1975	Witt J L	Pacific Telephone
	Witt Sherman	Pacific Telephone

3310 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Pressley Leone Ratcliffe	Pacific Bell
1985	Pressley Leone Ratcliffe	Pacific Bell
1980	Pressley Leone Ratcliffe	Pacific Telephone
1975	Pressley Leone Ratcliffe	Pacific Telephone

3313 LOS COYOTES DIAGONAL

Year	Uses	Source
1980	Muehlebach Paul	Pacific Telephone
1975	Muehlebach Paul	Pacific Telephone

FINDINGS

3319 LOS COYOTES DIAGONAL

Year	Uses	Source
1975	De Celis Gladys	Pacific Telephone

Los Coyotes Diagonal

3320 Los Coyotes Diagonal

Year	Uses	Source
2006	BRIGHT SMILE	Haines Company, Inc.
	CORTEZSANTOS	Haines Company, Inc.
	DDS LOS COYOTES	Haines Company, Inc.
	IMAGING MCGUIREJOHNB	Haines Company, Inc.
	DDS ROSE JOHN DDS	Haines Company, Inc.
	INC ROWE DUSTIN L	Haines Company, Inc.
	DDS RUSSO LEONARD R	Haines Company, Inc.
	DDS PRO CORP	Haines Company, Inc.
2000	CORTEZ SANTOS DDS	Haines
	MANOS ANDREW DO INC	Haines
	ROSE JOHN DDS INC	Haines
	RUSSO LEONARD R	Haines
	DDS PRO CORP	Haines
1991	Andries Carol Roth MFCC	Pacific Bell
	Associated Occupational Therapists	Pacific Bell
	BAY PSYCHIATRIC MEDICAL GROUP	Pacific Bell
	Bellflower Mental Health Group	Pacific Bell
	BLACK MAURICE MD	Pacific Bell
	Brandis Alan D Ph D	Pacific Bell
	Brown Payton Gordon MD Inc	Pacific Bell
	California Center For Family Counseling	Pacific Bell
	FRIEDMANN CLAUDE MD INC	Pacific Bell
	GELLERMAN G LEE MD	Pacific Bell
	Golden State Physical Therapy Services	Pacific Bell
	Harris & Gellerman Medical Group A Professional Corporation	Pacific Bell
	Jacobson Everett Dr	Pacific Bell
	Lee Susan Shin Y MD	Pacific Bell
	Linden Robt D MD	Pacific Bell
	Lindquist Douglas S Ph D	Pacific Bell
	Murphy Denis M MD	Pacific Bell
	Perez Vincent MD	Pacific Bell

FINDINGS

Year	Uses	Source
1991	Perez Vincent S MD	Pacific Bell
	Prover Stephen D MD Inc	Pacific Bell
	Rogers Howard K MFCC	Pacific Bell
	Stolzberg Saul LCSW MFCC	Pacific Bell

LOS COYOTES DIAGONAL

3320 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Andries Carol Roth MFCC	Pacific Bell
	Associated Occupational Therapists	Pacific Bell
	BAY PSYCHIATRIC MEDICAL GROUP	Pacific Bell
	Bellflower Mental Health Group	Pacific Bell
	BLACK MAURICE MD	Pacific Bell
	Brandis Alan D Ph D	Pacific Bell
	Brown Payton Gordon MD Inc	Pacific Bell
	California Center For Family Counseling	Pacific Bell
	FRIEDMANN CLAUDE MD INC	Pacific Bell
	GELLERMAN G LEE MD	Pacific Bell
	Golden State Physical Therapy Services	Pacific Bell
	Harris & Gellerman Medical Group A Professional Corporation	Pacific Bell
	Jacobson Everett Dr	Pacific Bell
	Lee Susan Shin Y MD	Pacific Bell
	Linden Robt D MD	Pacific Bell
	Lindquist Douglas S Ph D	Pacific Bell
	Murphy Denis M MD	Pacific Bell
	Perez Vincent MD	Pacific Bell
	Perez Vincent S MD	Pacific Bell
	Prover Stephen D MD Inc	Pacific Bell
	Rogers Howard K MFCC	Pacific Bell
	Stolzberg Saul LCSW MFCC	Pacific Bell
1985	Bickel Yale B MD	Pacific Bell
	Carlstroem Charles M MD	Pacific Bell
	Coast Psychiatric Associates	Pacific Bell
	Daswani Moti S MD	Pacific Bell
	Domanchich Aurelius MD	Pacific Bell
	Faries Robt P MD	Pacific Bell
	Gellerman G Lee MD	Pacific Bell

FINDINGS

Year	Uses	Source
1985	Gokaldas Ray MD	Pacific Bell
	Harris & Gellerman Medical Group A Professional Corporation	Pacific Bell
	Harris William D MD	Pacific Bell
	Hunter Carol P Ph D	Pacific Bell
	Jenkins Charles E MD	Pacific Bell
	Koenker Rolf J MD	Pacific Bell
	Kotlewski Geo MD	Pacific Bell
	Manasantivongs Suthep MD	Pacific Bell
	Martinho Antone Inc ND	Pacific Bell
	Moskowitz Joseph MD	Pacific Bell
	Murphy Denis M MD	Pacific Bell
	Pathology Consultants Medical Group	Pacific Bell
	Romano Thos J MD	Pacific Bell
	Seitelman Jeffrey K MD	Pacific Bell
	Silverstein Ronald T MD	Pacific Bell
	Sleiman Raymond MD A Medical Corp	Pacific Bell
	Ahmadi Behrooz MD Inc	Pacific Bell
	ARTHRITIS CONSULTANTS INC	Pacific Bell

Los Coyotes Diagonal

3320 Los Coyotes Diagonal

Year	Uses	Source
1985	Ahmadi Behrooz MD Inc	Pacific Bell
	ARTHRITIS CONSULTANTS INC	Pacific Bell
	Bickel Yale B MD	Pacific Bell
	Carlstroem Charles M MD	Pacific Bell
	Coast Psychiatric Associates	Pacific Bell
	Daswani Moti S MD	Pacific Bell
	Domanchich Aurelius MD	Pacific Bell
	Faries Robt P MD	Pacific Bell
	Gellerman G Lee MD	Pacific Bell
	Gokaldas Ray MD	Pacific Bell
	Harris & Gellerman Medical Group A Professional Corporation	Pacific Bell
	Harris William D MD	Pacific Bell
	Hunter Carol P Ph D	Pacific Bell
	Jenkins Charles E MD	Pacific Bell
	Koenker Rolf J MD	Pacific Bell

FINDINGS

Year	Uses	Source
1985	Kotlewski Geo MD	Pacific Bell
	Manasantivongs Suthep MD	Pacific Bell
	Martinho Antone Inc ND	Pacific Bell
	Moskowitz Joseph MD	Pacific Bell
	Murphy Denis M MD	Pacific Bell
	Pathology Consultants Medical Group	Pacific Bell
	Romano Thos J MD	Pacific Bell
	Seitelman Jeffrey K MD	Pacific Bell
	Silverstein Ronald T MD	Pacific Bell
	Sleiman Raymond MD A Medical Corp	Pacific Bell
1980	Ahmadi Behrooz MD Inc	Pacific Telephone
	ARTHRITIS CONSULTANTS INC	Pacific Telephone
	Backhau David	Pacific Telephone
	Bickel Yale B MD	Pacific Telephone
	Coast Learning Center	Pacific Telephone
	COAST PSYCHIATRIC ASSOCIATES	Pacific Telephone
	Domanchich Aurelius MD	Pacific Telephone
	Faries Robt P MD	Pacific Telephone
	Frankel Geo W MD	Pacific Telephone
	Gellerman G Lee MD	Pacific Telephone
	Gokaldas Ray MD	Pacific Telephone
	Harris & Gellerman Medical Group A Professional Corporation	Pacific Telephone
	Harris William D MD	Pacific Telephone
	Hunter Carol P Ph D	Pacific Telephone
	JENKINS CHARLES E MD	Pacific Telephone
	Koenker Rolf J MD	Pacific Telephone
	Kotlewski Geo MD	Pacific Telephone
	Krishnamurthy Savithri MD	Pacific Telephone
	Martinho Antone Inc MD	Pacific Telephone
	Moskowitz Joseph MD	Pacific Telephone
	Moskowitz Joseph MD Inc	Pacific Telephone
	Murphy Denis M MD	Pacific Telephone
	Navarro O Manuel MD	Pacific Telephone
	Romano Thos J MD	Pacific Telephone
	Russell John K Ph D	Pacific Telephone
	Russell Ken Dr	Pacific Telephone
	Silverstein Ronald T MD	Pacific Telephone

FINDINGS

Year	Uses	Source
1980	Silverthorne John D MD A Professional Corporation	Pacific Telephone

LOS COYOTES DIAGONAL

3320 LOS COYOTES DIAGONAL

Year	Uses	Source
1980	Ahmadi Behrooz MD Inc	Pacific Telephone
	ARTHRITIS CONSULTANTS INC	Pacific Telephone
	Backhau David	Pacific Telephone
	Bickel Yale B MD	Pacific Telephone
	Coast Learning Center	Pacific Telephone
	COAST PSYCHIATRIC ASSOCIATES	Pacific Telephone
	Domanchich Aurelius MD	Pacific Telephone
	Faries Robt P MD	Pacific Telephone
	Frankel Geo W MD	Pacific Telephone
	Gellerman G Lee MD	Pacific Telephone
	Gokaldas Ray MD	Pacific Telephone
	Harris & Gellerman Medical Group A Professional Corporation	Pacific Telephone
	Harris William D MD	Pacific Telephone
	Hunter Carol P Ph D	Pacific Telephone
	JENKINS CHARLES E MD	Pacific Telephone
	Koenker Rolf J MD	Pacific Telephone
	Kotlewski Geo MD	Pacific Telephone
	Krishnamurthy Savithri MD	Pacific Telephone
	Martinho Antone Inc MD	Pacific Telephone
	Moskowitz Joseph MD	Pacific Telephone
	Moskowitz Joseph MD Inc	Pacific Telephone
	Murphy Denis M MD	Pacific Telephone
	Navarro O Manuel MD	Pacific Telephone
	Romano Thos J MD	Pacific Telephone
	Russell John K Ph D	Pacific Telephone
	Russell Ken Dr	Pacific Telephone
	Silverstein Ronald T MD	Pacific Telephone
	Silverthorne John D MD A Professional Corporation	Pacific Telephone
1975	Abarbanel A R Medical Corp	Pacific Telephone
	Ahmadi Behrooz MD Inc	Pacific Telephone
	Coast Learning Center	Pacific Telephone

FINDINGS

Year	Uses	Source
1975	COAST PSYCHIATRIC MEDICAL GROUP	Pacific Telephone
	David Laurence MD	Pacific Telephone
	Domanchich Aurelius MD	Pacific Telephone
	E R Physicians Medical Group Inc	Pacific Telephone
	ERDA Energy Systems Inc PO Box 182 Cypress	Pacific Telephone
	ERDA Energy Systems Inc PO Box 182 Cyp	Pacific Telephone
	Fagan Philip J Jr MD	Pacific Telephone
	Frankel Geo W MD	Pacific Telephone
	Gatov M L dntst	Pacific Telephone
	Gelfand Ben MD	Pacific Telephone
	Hales E Leroy MD	Pacific Telephone
	Havekorst Walter B DDS	Pacific Telephone
	Held Carl MD	Pacific Telephone
	Hoffeld Harvey MD	Pacific Telephone
	Hoffeld Medical Corp	Pacific Telephone
	Hunter Carol P Ph D	Pacific Telephone
	Jennings Herbert D MD	Pacific Telephone
	Koenker Rolf J MD	Pacific Telephone
	Krishnamurthy Savithri MD	Pacific Telephone
	Last Edward C Inc DDS	Pacific Telephone
	Legge Robt F MD	Pacific Telephone
	Marshall J Richard MD	Pacific Telephone
	Martinho Antone Inc MD	Pacific Telephone
	Moskowitz Joseph MD	Pacific Telephone
	Murphy Denis M MD	Pacific Telephone
	Murphy & Naughton MDs	Pacific Telephone
	Naughton Kevin P MD	Pacific Telephone
	Russell John Dr	Pacific Telephone
	Russell John K Ph D	Pacific Telephone
	Russell Ken Dr	Pacific Telephone
	Silverstein Ronald T MD	Pacific Telephone
	Silverthorne John D MD A Professional Corporation	Pacific Telephone
	Steele Dennis D Ph D	Pacific Telephone
	Weiner Stanley I MD	Pacific Telephone

Los Coyotes Diagonal

3320 Los Coyotes Diagonal

Year	Uses	Source
1975	Abarbanel A R Medical Corp	Pacific Telephone
	Ahmadi Behrooz MD Inc	Pacific Telephone
	Coast Learning Center	Pacific Telephone
	COAST PSYCHIATRIC MEDICAL GROUP	Pacific Telephone
	David Laurence MD	Pacific Telephone
	Domanchich Aurelius MD	Pacific Telephone
	E R Physicians Medical Group Inc	Pacific Telephone
	ERDA Energy Systems Inc PO Box 182 Cypress	Pacific Telephone
	ERDA Energy Systems Inc PO Box 182 Cyp	Pacific Telephone
	Fagan Philip J Jr MD	Pacific Telephone
	Frankel Geo W MD	Pacific Telephone
	Gatov M L dntst	Pacific Telephone
	Gelfand Ben MD	Pacific Telephone
	Hales E Leroy MD	Pacific Telephone
	Havekorst Walter B DDS	Pacific Telephone
	Held Carl MD	Pacific Telephone
	Hoffeld Harvey MD	Pacific Telephone
	Hoffeld Medical Corp	Pacific Telephone
	Hunter Carol P Ph D	Pacific Telephone
	Jennings Herbert D MD	Pacific Telephone
	Koenker Rolf J MD	Pacific Telephone
	Krishnamurthy Savithri MD	Pacific Telephone
	Last Edward C Inc DDS	Pacific Telephone
	Legge Robt F MD	Pacific Telephone
	Marshall J Richard MD	Pacific Telephone
	Martinho Antone Inc MD	Pacific Telephone
	Moskowitz Joseph MD	Pacific Telephone
	Murphy Denis M MD	Pacific Telephone
	Murphy & Naughton MDs	Pacific Telephone
	Naughton Kevin P MD	Pacific Telephone
	Russell John Dr	Pacific Telephone
	Russell John K Ph D	Pacific Telephone
	Russell Ken Dr	Pacific Telephone

FINDINGS

Year	Uses	Source
1975	Silverstein Ronald T MD	Pacific Telephone
	Silverthorne John D MD A Professional Corporation	Pacific Telephone
	Steele Dennis D Ph D	Pacific Telephone
	Weiner Stanley I MD	Pacific Telephone
1969	LOS ALTOS MEDICAL BUILDING	Pacific Telephone
	MURPHY DENNIS M OYS	Pacific Telephone
	NAIUGHTON KEVIN P PHYS	Pacific Telephone
	ABARBANEL A R PHYS	Pacific Telephone
	SILVERTHORNE JOHN 0 PHYS	Pacific Telephone
	NOSKOWITZ JOSEPH PHYS	Pacific Telephone
	FRANKEL GEO V PHYS	Pacific Telephone
	HOFFELD HARVEY PHYS	Pacific Telephone
	HAYEKORST WALTER 8 DENTIST	Pacific Telephone
	GELFAND 8 EN PHYS	Pacific Telephone
	ZAHN WILLARD F 00 YS	Pacific Telephone
	LEGGE ROST F PHYS LAST EDW C DENTIST	Pacific Telephone
	GATOV MAX L DENTIST	Pacific Telephone
	FABIAN DENIS PHYS	Pacific Telephone
	KOENKER ROLF J PHYS	Pacific Telephone
	PENNOCK CAMERON D PHYS	Pacific Telephone
	MARTINHO ANTONE PHYS	Pacific Telephone

LOS COYOTES DIAGONAL

3323 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Turcotte Evelyn	Pacific Bell
1980	Turcotte Evelyn	Pacific Telephone
1975	Lapinsky Geo J	Pacific Telephone

3329 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Reid Michael D	Pacific Bell
1980	Reid Michael D	Pacific Telephone

3333 LOS COYOTES DIAGONAL

Year	Uses	Source
1980	Miller Todd E	Pacific Telephone

FINDINGS

3339 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Cornelius Donald R Rev	Pacific Bell
1985	Cornelius Donald R Rev	Pacific Bell
1975	Matthews Grady A	Pacific Telephone

3350 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Block Buster Video	Pacific Bell
1985	Little Js	Pacific Bell
1980	Little Js	Pacific Telephone
1975	Little Js Barbering Service	Pacific Telephone

3354 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Melodies Dance Theatre	Pacific Bell
	Long Beach	Pacific Bell
1980	Long Beach	Pacific Telephone
	Melodies Dance Theatre	Pacific Telephone
1975	CAROLES DANCE THEATRE	Pacific Telephone
	Long Beach	Pacific Telephone

3356 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Mr Fish & Chips	Pacific Bell
1980	Mr Fish & Chips	Pacific Telephone
1975	Long Beach	Pacific Telephone
	Mr Foto Corp	Pacific Telephone

3358 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Cost Cutters	Pacific Bell
1985	Oceans Away Cruises & Travel	Pacific Bell
	Flowers By Morris	Pacific Bell
1980	FLOWERS BY MORRIS	Pacific Telephone
	Long Beach	Pacific Telephone
1975	FLOWERS BY MORRIS	Pacific Telephone
	Long Beach	Pacific Telephone

FINDINGS

3360 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Long Beach	Pacific Bell
1985	Medicine Shoppe The	Pacific Bell
1980	Medicine Shoppe The	Pacific Telephone
1975	United Properties & Investments Inc	Pacific Telephone

3362 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Rays Tailoring	Pacific Bell
1985	Rays Tailoring	Pacific Bell
1980	Rays Tailoring	Pacific Telephone
1975	Rays Tailoring	Pacific Telephone

3364 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Help U Sell Of East Long Beach	Pacific Bell
1985	Alert Tax Service	Pacific Bell
	Dependable Income Tax Service	Pacific Bell
	Flatto Herbert D Tax Service	Pacific Bell
1980	Dependable Income Tax Service	Pacific Telephone
	Alert Tax Service	Pacific Telephone
	Flatto Herbert D Tax Service	Pacific Telephone
1975	Long Beach	Pacific Telephone

3366 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Tenni Mocs Shoe Saloon	Pacific Bell
	Tenni Mocs Athletes Corner	Pacific Bell
1980	Tenni Mocs Shoe Saloon	Pacific Telephone
	Tenni Mocs Athletes Corner	Pacific Telephone
1975	Tenni Mocs Shoe Saloon	Pacific Telephone
	Tenni Mocs Athletes Corner	Pacific Telephone

3368 LOS COYOTES DIAGONAL

Year	Uses	Source
1975	Skeltons Card & Gift Shop	Pacific Telephone

3371 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Young Jack M	Pacific Bell

Year	Uses	Source
1980	Young Jack M	Pacific Telephone

3374 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Hair Unlimited	Pacific Bell
1980	Hair Unlimited	Pacific Telephone
1975	Hair Unlimited	Pacific Telephone

3376 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Backstage Video	Pacific Bell
1980	Vitamin City Inc	Pacific Telephone
1975	Art Line Frames	Pacific Telephone

Los Coyotes Diagonal

3378 Los Coyotes Diagonal

Year	Uses	Source
2000	XXXX	Haines
1991	Royalty Cleaners	Pacific Bell

LOS COYOTES DIAGONAL

3378 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Royalty Cleaners	Pacific Bell
1985	Royalty Cleaners	Pacific Bell

Los Coyotes Diagonal

3378 Los Coyotes Diagonal

Year	Uses	Source
1985	Royalty Cleaners	Pacific Bell
1980	Royalty Cleaners	Pacific Telephone

LOS COYOTES DIAGONAL

3378 LOS COYOTES DIAGONAL

Year	Uses	Source
1980	Royalty Cleaners	Pacific Telephone
1975	Royalty Cleaners	Pacific Telephone

FINDINGS

Los Coyotes Diagonal

3378 Los Coyotes Diagonal

Year	Uses	Source
1975	Royalty Cleaners	Pacific Telephone
1969	ROYALTY CLEANERS	Pacific Telephone

3380 Los Coyotes Diagonal

Year	Uses	Source
2006	DOWNEYSAVINGS	Haines Company, Inc.
	&LOAN RALPHSGROCERY	Haines Company, Inc.
	COMPANY	Haines Company, Inc.
2000	RALPHS GROCERY CO STORE	Haines
	SKLAVENITIS Panos	Haines
	X WARDLOW RD E	Haines
1991	Long Beach	Pacific Bell

LOS COYOTES DIAGONAL

3380 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Long Beach	Pacific Bell
1990	RALPHS GROCERY COMPANY OTHER STORES	Pacific Bell

Los Coyotes Diagonal

3380 Los Coyotes Diagonal

Year	Uses	Source
1990	RALPHS GROCERY COMPANY OTHER STORES	Pacific Bell
1986	RALPHS GROCERY COMPANY OTHER STORES-	Pacific Bell

LOS COYOTES DIAGONAL

3380 LOS COYOTES DIAGONAL

Year	Uses	Source
1986	RALPHS GROCERY COMPANY OTHER STORES-	Pacific Bell
1985	Long Beach	Pacific Bell

FINDINGS

Los Coyotes Diagonal

3380 Los Coyotes Diagonal

Year	Uses	Source
1985	Long Beach	Pacific Bell
1981	RALPH S GROCERY COMPANY OTHER STORES	Pacific Telephone

LOS COYOTES DIAGONAL

3380 LOS COYOTES DIAGONAL

Year	Uses	Source
1981	RALPH S GROCERY COMPANY OTHER STORES	Pacific Telephone
1980	Long Beach	Pacific Telephone

Los Coyotes Diagonal

3380 Los Coyotes Diagonal

Year	Uses	Source
1980	Long Beach	Pacific Telephone
1976	Ralphs Grocery Co	Pacific Telephone

LOS COYOTES DIAGONAL

3380 LOS COYOTES DIAGONAL

Year	Uses	Source
1976	Ralphs Grocery Co	Pacific Telephone
1975	Lucky Jewelers	Pacific Telephone
	Long Beach	Pacific Telephone

Los Coyotes Diagonal

3380 Los Coyotes Diagonal

Year	Uses	Source
1975	Lucky Jewelers	Pacific Telephone
	Long Beach	Pacific Telephone
1969	RALPNS MARKET GRO	Pacific Telephone

FINDINGS

LOS COYOTES DIAGONAL

3411 LOS COYOTES DIAGONAL

Year	Uses	Source
1980	Berry L	Pacific Telephone
1975	Konrath Jas A	Pacific Telephone

LOS COYOTES DIAGONAL N

3246 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	DUFFY Terence	Haines

3247 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	SOUPOS Michele	Haines

3251 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	WILLIAMS John	Haines

3252 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	METALIS Same	Haines
	METALIS S A	Haines

3255 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	TURI Mary	Haines

3256 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	DAILY Gloria	Haines

3261 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	MONTES Luis	Haines

3262 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	X MCNAB AV	Haines
	LARA Ricardo	Haines

FINDINGS

Year	Uses	Source
2000	X METZ E	Haines

3302 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	ABREGO Ralph	Haines

3310 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	LANGE Staven	Haines

3313 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	MUEHLEBACH Paul	Haines

3319 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	JOHNSON Samuel	Haines

3320 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	CORTEZ SANTOS DDS	Haines
	MANOS ANDREW DO INC	Haines
	ROSE JOHN DDS INC	Haines
	RUSSO LEONARD R	Haines
	DDS PRO CORP	Haines

3329 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	RICO William	Haines

3333 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	SOBH Haldar	Haines

3339 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	XXXX	Haines

3350 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	BLOCKBUSTER	Haines

Year	Uses	Source
2000	X CORALITE E	Haines

3358 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	COST CU	Haines

3360 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	GO DOGS GO	Haines

3364 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	UNITD STUDIOS OF SELF DE	Haines

3366 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	PIZZA HUT	Haines

3368 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	CIGARETTE CHEAPER	Haines
	CIGARETTES CH	Haines

3371 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	HANNA Sally	Haines

3374 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	XXXX	Haines

3376 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	XXXX	Haines

3378 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	XXXX	Haines

3380 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	SKLAVENITIS Panos	Haines

Year	Uses	Source
2000	RALPHS GROCERY CO STORE	Haines
	X WARDLOW RD E	Haines

3411 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	SHAVER M A	Haines

LOS COYOTES DIAGONAL ST

3240 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	WATKINS LEVI L	Pacific Telephone

3246 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	STREGE GEO A	Pacific Telephone

3247 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	MC DONALD LLOYD T	Pacific Telephone

3251 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	SIMMONS OLEN E	Pacific Telephone

3252 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	VACANT	Pacific Telephone

3255 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	THIELMAN RONALD E	Pacific Telephone

3256 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	OFFINEER IKOODROW J	Pacific Telephone

3261 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	COBERLY JAMES J	Pacific Telephone

FINDINGS

3262 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	POWELL RICHO C o	Pacific Telephone

3302 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	THOMLISON CECIL L 0 HA 9 46 S	Pacific Telephone

3303 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	WHITTEN ROY L	Pacific Telephone

3310 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	PRESSLEY LEONE MRS	Pacific Telephone

3313 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	QOUINN BLANCHE MRS	Pacific Telephone

3319 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	DE CELIS GLADYS MRS 0 H	Pacific Telephone

3320 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	PENNOCK CAMERON D PHYS	Pacific Telephone
	HAYEKORST WALTER 8 DENTIST	Pacific Telephone
	FABIAN DENIS PHYS	Pacific Telephone
	GATOV MAX L DENTIST	Pacific Telephone
	LEGGE ROST F PHYS LAST EDW C DENTIST	Pacific Telephone
	ZAHN WILLARD F 00 YS	Pacific Telephone
	GELFAND 8 EN PHYS	Pacific Telephone
	MARTINHO ANTONE PHYS	Pacific Telephone
	LOS ALTOS MEDICAL BUILDING	Pacific Telephone
	MURPHY DENNIS M OYS	Pacific Telephone
	NAIUGHTON KEVIN P PHYS	Pacific Telephone
	ABARBANEL A R PHYS	Pacific Telephone
	SILVERTHORNE JOHN 0 PHYS	Pacific Telephone
	NOSKOWITZ JOSEPH PHYS	Pacific Telephone
	FRANKEL GEO V PHYS	Pacific Telephone

FINDINGS

Year	Uses	Source
1969	HOFFELD HARVEY PHYS	Pacific Telephone
	KOENKER ROLF J PHYS	Pacific Telephone

3323 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	LAPINSKY GEC J 0 HAS 8809	Pacific Telephone

3329 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	NO RETURN	Pacific Telephone

3333 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	STEIN MEYER	Pacific Telephone

3339 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	WALTERS 41 CNL	Pacific Telephone

3366 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	UNDER CONSTN	Pacific Telephone

3368 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	UDEP CONSTN	Pacific Telephone

3371 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	YGLU D JACK M 0 425 82 S	Pacific Telephone

3372 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	PETERSON LAUNDROMAT	Pacific Telephone

3374 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	RAIP UNLIMITED BEAUTY SHOP	Pacific Telephone

3378 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	ROYALTY CLEANERS	Pacific Telephone

FINDINGS

3380 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	RALPNS MARKET GRO	Pacific Telephone

3403 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	SREEN JESS D	Pacific Telephone

MCNAB AVE

3309 MCNAB AVE

Year	Uses	Source
2014	MURIEL BLANK	Cole Information Services
2009	CARL BLANK	Cole Information Services
2006	a BLANK Robi J	Haines Company, Inc.
2000	BLANK Robt J	Haines
1999	CARL BLANK	Cole Information Services
1994	BLANK, ROBERT J	Cole Information Services
1991	Blank Robt J	Pacific Bell
1985	Blank Robt J	Pacific Bell
1980	Blank Robt J	Pacific Telephone
1975	Blank Robt J	Pacific Telephone
1964	BLANK ROBT J	Pacific Telephone
1960	BLANK ROBT J	Pacific Telephone
1957	BLANK ROBT J	Pacific Telephone

3315 MCNAB AVE

Year	Uses	Source
2014	BARRY HUNT	Cole Information Services
2009	ELAINE HUNT	Cole Information Services
2006	a HUNTMary	Haines Company, Inc.
2004	ELAINE HUNT	Cole Information Services
1999	ELAINE HUNT	Cole Information Services
1985	Pyka Lydia S Mrs	Pacific Bell
1980	Pyka Lydia S Mrs	Pacific Telephone
1975	Pyka Lydia S Mrs	Pacific Telephone
1964	PYKA LYDIA S MRS	Pacific Telephone
1960	PYKA LYDIA S MRS	Pacific Telephone
1957	PYKA LYDIA S MRS	Pacific Telephone

FINDINGS

3319 MCNAB AVE

Year	Uses	Source
2014	OCCUPANT UNKNOWN	Cole Information Services
2009	KEITH HUNT	Cole Information Services
2006	a HUNTKeith	Haines Company, Inc.
2004	KEITH HUNT	Cole Information Services
2000	HUNT Keith	Haines
1999	OCCUPANT UNKNOWN	Cole Information Services
	KEITH HUNT	Cole Information Services
1985	Negley Harold E	Pacific Bell
1980	Negley Harold E	Pacific Telephone
1975	Negley Harold E	Pacific Telephone
1964	NEGLEY HAROLD E	Pacific Telephone
1957	NEGLEY HAROLD E	Pacific Telephone

3322 MCNAB AVE

Year	Uses	Source
2014	KEVIN FISK	Cole Information Services
2009	KEVIN FISK	Cole Information Services
2006	FISKKevin	Haines Company, Inc.
2004	KELLY MAXWELL	Cole Information Services
2000	MAXWELL Kelly	Haines
1999	KEVIN FISK	Cole Information Services
	KELLY MAXWELL	Cole Information Services
1980	Boronstein Jacob	Pacific Telephone
1975	Boronstein Jacob	Pacific Telephone
1960	HICKS L E	Pacific Telephone
1957	HICKS L E	Pacific Telephone

3325 MCNAB AVE

Year	Uses	Source
2014	MARK NELSON	Cole Information Services
2009	MONICA BELLFLOWER	Cole Information Services
2006	a KACZOROWSKI Scottll	Haines Company, Inc.
2004	SCOTT KACZOROWSKI	Cole Information Services
2000	KACZOROWSKI Scott	Haines
1999	MONICA BELLFLOWER	Cole Information Services
1985	Derus F M	Pacific Bell
1980	Derus F M	Pacific Telephone
1975	Duncan Dale	Pacific Telephone

FINDINGS

Year	Uses	Source
1964	KNOTTS BONNIE	Pacific Telephone
1960	KNOTTS BONNIE	Pacific Telephone
1957	L(NETTS BOONNTO	Pacific Telephone

3328 MCNAB AVE

Year	Uses	Source
2014	JEAN HOLMES	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services
2006	HOLMES Thomas	Haines Company, Inc.
2004	OCCUPANT UNKNOWN	Cole Information Services
2000	HOLMES Thomas	Haines
1999	OCCUPANT UNKNOWN	Cole Information Services
1964	HAMILTON NIALL J	Pacific Telephone
1960	COSLETT KENNETH L	Pacific Telephone
1957	HAMILTON NIALL J	Pacific Telephone

3331 MCNAB AVE

Year	Uses	Source
2014	JAMES THOMPSON	Cole Information Services
2009	JAMES THOMPSON	Cole Information Services
	JIM THOMPSON CONSTRUCTION CO INC	Cole Information Services
2006	THOMPSON Jim	Haines Company, Inc.
2004	JAMES THOMPSON	Cole Information Services
2000	THOMPSON Jim	Haines
1999	JAMES THOMPSON	Cole Information Services
1994	THOMPSON, JIM	Cole Information Services
1991	Thompson Jim	Pacific Bell
1985	Thompson Jim	Pacific Bell
1980	Lundvall Larry L & Cheri A	Pacific Telephone
1975	Setzer Ralph E	Pacific Telephone
1964	HORNE IMA F	Pacific Telephone
1960	HORNE IMA F	Pacific Telephone
1957	DPUGGAN MICHAEL J	Pacific Telephone

3334 MCNAB AVE

Year	Uses	Source
2014	ROBERT KOLTS	Cole Information Services
2009	RICHARD MORRIS	Cole Information Services
2006	MORRIS Richard	Haines Company, Inc.

FINDINGS

Year	Uses	Source
2004	BRETT MORRIS	Cole Information Services
2000	MORRIS Richard	Haines
1999	RICHARD MORRIS	Cole Information Services
1994	MORRIS, H E	Cole Information Services
1991	Morris H E	Pacific Bell
1985	Morris H E	Pacific Bell
1980	Morris H E	Pacific Telephone
1975	Morris H E	Pacific Telephone
1964	MORRIS H E	Pacific Telephone
1960	MORRIS H E	Pacific Telephone
1957	MORRIS H E	Pacific Telephone

3335 MCNAB AVE

Year	Uses	Source
2014	ANTHONY THOMPSON	Cole Information Services
2009	JAMES THOMPSON	Cole Information Services
2006	THOMPSON James	Haines Company, Inc.
2000	THOMPSON James	Haines
1999	JAMES THOMPSON	Cole Information Services
1994	MAY, GARY H	Cole Information Services
1991	May Gary Henry	Pacific Bell
1985	Deaton Jack C	Pacific Bell
1960	BOOTH RAY WM	Pacific Telephone

3338 MCNAB AVE

Year	Uses	Source
2014	LUIS CHAVEZ	Cole Information Services
2009	LUIS CHAVEZ	Cole Information Services
2006	BRUCE Roger	Haines Company, Inc.
2004	ROGER BRUCE	Cole Information Services
2000	BRUCE Charles	Haines
1999	OCCUPANT UNKNOWN	Cole Information Services
	LUIS CHAVEZ	Cole Information Services
1994	R B CONSTRUCTION	Cole Information Services
1991	Solomon Frank	Pacific Bell
	Mitchell J C	Pacific Bell
	Solomon Frank Max	Pacific Bell
1985	Fisher Paul & Marianne	Pacific Bell
1980	Rainey L R Jr	Pacific Telephone

FINDINGS

Year	Uses	Source
1975	Tahbaz John	Pacific Telephone
1957	MCCARTHY A R	Pacific Telephone

3339 MCNAB AVE

Year	Uses	Source
2014	DAVID GROVE	Cole Information Services
2009	DAVID GROVE	Cole Information Services
2006	GROVE David	Haines Company, Inc.
2004	DAVID GROVE	Cole Information Services
2000	GROVE David	Haines
1999	DAVID GROVE	Cole Information Services
1994	GROVE, DAVID W	Cole Information Services
1980	Morton Cornell F	Pacific Telephone
1975	Adler Nathan	Pacific Telephone
1964	HILL KENNETH W	Pacific Telephone
1960	NYBORG EDW	Pacific Telephone
1957	NYBORG EDW	Pacific Telephone

3344 MCNAB AVE

Year	Uses	Source
2009	BETTY KELLY	Cole Information Services
2000	KELLY Michael	Haines
1999	BETTY KELLY	Cole Information Services
1975	Geltner Robt M	Pacific Telephone
1964	SCHOONDERBREEK JAN L	Pacific Telephone
1960	JONES MYERS	Pacific Telephone
1957	BOLTAN DUANE	Pacific Telephone

3345 MCNAB AVE

Year	Uses	Source
2014	MELANIE HENKEL	Cole Information Services
2009	MELANIE HENKEL	Cole Information Services
2006	HENKEL Ronald	Haines Company, Inc.
2004	MELANIE HENKEL	Cole Information Services
	MELS CREATIONS FROM THE HEART	Cole Information Services
2000	HENKEL Ronald A	Haines
1999	MELANIE HENKEL	Cole Information Services
1994	HENKEL, RONALD A	Cole Information Services
1991	Henkel Ronald A	Pacific Bell

FINDINGS

Year	Uses	Source
1985	Henkel Ronald A	Pacific Bell
1980	Henkel Ronald A	Pacific Telephone
1975	Henkel Ronald A	Pacific Telephone
1964	HILL THOS	Pacific Telephone
1957	UGGER DONNA M	Pacific Telephone

3350 MCNAB AVE

Year	Uses	Source
2014	BRIAN COLE	Cole Information Services
2009	BRIAN COLE	Cole Information Services
2006	a COLEBnan	Haines Company, Inc.
2000	BORJA Dale	Haines
1999	BRIAN COLE	Cole Information Services
1985	Broberg Ronald	Pacific Bell
1980	Broberg Ronald	Pacific Telephone
1975	Broberg Ronald	Pacific Telephone
1964	KRUTSCH IVAN	Pacific Telephone
1960	KRUTSCH IVAN	Pacific Telephone
1957	KRUTSCH IVAN	Pacific Telephone

3351 MCNAB AVE

Year	Uses	Source
2014	ERLINDA HATMAL	Cole Information Services
2009	ERLINDA HATMAL	Cole Information Services
2006	SCHWARZ Waller	Haines Company, Inc.
	HATMALErdinda	Haines Company, Inc.
2004	ERLINDA HATMAL	Cole Information Services
2000	SCHWARZ Walter	Haines
	X WARDLOW RD E	Haines
	X CORALITE E	Haines
1999	ERLINDA HATMAL	Cole Information Services
1985	Rutherford Frank	Pacific Bell
1980	Rutherford Frank	Pacific Telephone
1975	Rutherford Frank	Pacific Telephone
1964	CLARK LEONARD W JR	Pacific Telephone
1960	CLARK LEONARD W JR	Pacific Telephone
1957	CLARK LEONARD W JR	Pacific Telephone

METZ ST

6230 METZ ST

Year	Uses	Source
1969	PELDO GORDON L	Pacific Telephone

6236 METZ ST

Year	Uses	Source
1969	WHITNEY ART	Pacific Telephone

6241 METZ ST

Year	Uses	Source
1969	BIRCH THOMAS E	Pacific Telephone

6242 METZ ST

Year	Uses	Source
1969	VOTROUBEK WALTER P 0 H	Pacific Telephone

6247 METZ ST

Year	Uses	Source
1969	NEWSOM C K	Pacific Telephone

6248 METZ ST

Year	Uses	Source
1969	STIPAC CHARLES J 0 HA 9 B	Pacific Telephone

6253 METZ ST

Year	Uses	Source
1969	NO RETURN	Pacific Telephone

6254 METZ ST

Year	Uses	Source
1969	NO RETURN	Pacific Telephone

6259 METZ ST

Year	Uses	Source
1969	LAING IVY L MRS	Pacific Telephone

6260 METZ ST

Year	Uses	Source
1969	SAWYERS JAMES A	Pacific Telephone

N LOS COYOTES DIAGONAL

3240 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	MARK TAN	Cole Information Services
2009	ROBERT DUVAL	Cole Information Services
2006	TAN Juliet	Haines Company, Inc.
	DUVALRobert	Haines Company, Inc.
2004	JULIET TAN	Cole Information Services
1999	ROBERT DUVAL	Cole Information Services
1994	TAN, SYBIL	Cole Information Services

3246 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	LIYANG ZHANG	Cole Information Services
2009	BRIAN AITES	Cole Information Services
2006	a DUFFYTerence	Haines Company, Inc.
2004	TERENCE DUFFY	Cole Information Services
1999	BRIAN AITES	Cole Information Services

3247 N LOS COYOTES DIAGONAL

Year	Uses	Source
2009	RICHARD VOSPER	Cole Information Services
2006	VOSPER Richard	Haines Company, Inc.
1999	OCCUPANT UNKNOWN	Cole Information Services
	RICHARD VOSPER	Cole Information Services

3251 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	YOUNG KIM	Cole Information Services
2009	HEE KIM	Cole Information Services
2006	a KIM Sonny	Haines Company, Inc.
2004	HEE KIM	Cole Information Services
1999	HEE KIM	Cole Information Services

3252 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	S METALIS	Cole Information Services
2009	SPERO METALIS	Cole Information Services
2006	METALISS	Haines Company, Inc.
2004	SPERO METALIS	Cole Information Services

FINDINGS

Year	Uses	Source
1999	SPERO METALIS	Cole Information Services
1994	METALIS, S A	Cole Information Services

3255 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	KELVIN JACKSON	Cole Information Services
2009	KELVIN JACKSON	Cole Information Services
2006	o TURI Mary	Haines Company, Inc.
2004	MARY TURI	Cole Information Services
1999	KELVIN JACKSON	Cole Information Services
1994	TURI, MARY	Cole Information Services

3256 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	AMANDA DAILY	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services
2006	No Current Listing	Haines Company, Inc.
2004	GLORIA DAILY	Cole Information Services

3261 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	LUIS MONTES	Cole Information Services
2009	LUIS MONTES	Cole Information Services
2006	o MONTESLUis	Haines Company, Inc.
2004	LUIS MONTES	Cole Information Services
1999	LUIS MONTES	Cole Information Services

3262 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	RICARDO LARA	Cole Information Services
2009	RICARDO LARA	Cole Information Services
2006	LARARicardo	Haines Company, Inc.
2004	RICARDO LARA	Cole Information Services
1999	RICARDO LARA	Cole Information Services
1994	MATHER, DOUG	Cole Information Services

3302 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	RALPH ABREGO	Cole Information Services
2009	RALPH ABREGO	Cole Information Services

FINDINGS

Year	Uses	Source
2006	e ABREGO Ralph	Haines Company, Inc.
2004	RALPH ABREGO	Cole Information Services
1999	RALPH ABREGO	Cole Information Services
1994	MCDONALD, PHILLIP	Cole Information Services

3303 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	STACI SPRINGER	Cole Information Services
2009	WILLIAM OUIMETTE	Cole Information Services
2006	a OUIMETTEWilliam	Haines Company, Inc.
2004	OCCUPANT UNKNOWN	Cole Information Services
1999	WILLIAM OUIMETTE	Cole Information Services

3310 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	CAREY CROOK	Cole Information Services
2009	CAREY CROOK	Cole Information Services
2006	a HARMORKristin	Haines Company, Inc.
2004	STEVEN LANGE	Cole Information Services
1999	CAREY CROOK	Cole Information Services
1994	PRESSLEY, LEONE R	Cole Information Services

3313 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	PAUL MUEHLEBACH	Cole Information Services
2009	PAUL MUEHLEBACH	Cole Information Services
2006	a MUEHLEBACH Paul	Haines Company, Inc.
2004	PAUL MUEHLEBACH	Cole Information Services
1999	PAUL MUEHLEBACH	Cole Information Services

3319 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	DAVID GUEVARA	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services
2006	MCCALLTravis	Haines Company, Inc.
2004	COURTNEY STAMMLER	Cole Information Services

3320 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	PLANELLS ANA DDS	Cole Information Services

FINDINGS

Year	Uses	Source
2014	SANCHEZ ESTELA DDS	Cole Information Services
	RUSSO LEONARD R DDS A PROFESSIONAL C	Cole Information Services
	BRIGHT SMILE	Cole Information Services
	CORTEZ SANTOS	Cole Information Services
	ROSE JOHN DDS INC	Cole Information Services
	ROWE DUSTIN L DDS	Cole Information Services
	PEDIATRIC DENTAL SPECIALISTS	Cole Information Services
	MCGUIRE JOHN B DDS	Cole Information Services
	LOS COYOTES IMAGING	Cole Information Services
	PLANELLS ANA DDS	Cole Information Services
	SANCHEZ ESTELA DDS	Cole Information Services
	RUSSO LEONARD R DDS A PROFESSIONAL C	Cole Information Services
	BRIGHT SMILE	Cole Information Services
	CORTEZ SANTOS	Cole Information Services
	ROSE JOHN DDS INC	Cole Information Services
	ROWE DUSTIN L DDS	Cole Information Services
	PEDIATRIC DENTAL SPECIALISTS	Cole Information Services
	MCGUIRE JOHN B DDS	Cole Information Services
	LOS COYOTES IMAGING	Cole Information Services
2009	LOS COYOTES IMAGING CENTER	Cole Information Services
	JOHN ROSE DDS INC	Cole Information Services
	PEDIATRIC DENTAL SPECIALIST	Cole Information Services
	DUSTIN L ROWE DDS	Cole Information Services
	JOHN B MCGUIRE DDS	Cole Information Services
	CORTEZ SANTOS DDS & ASSOCIATES INC	Cole Information Services
	LEONARD R RUSSO DDS A PROFESSIONAL C	Cole Information Services
	LOS COYOTES IMAGING CENTER	Cole Information Services
	JOHN ROSE DDS INC	Cole Information Services
	JOHN B MCGUIRE DDS	Cole Information Services
	PEDIATRIC DENTAL SPECIALIST	Cole Information Services
	DUSTIN L ROWE DDS	Cole Information Services
	CORTEZ SANTOS DDS & ASSOCIATES INC	Cole Information Services
	LEONARD R RUSSO DDS A PROFESSIONAL C	Cole Information Services
2006	DDS PRO CORP	Haines Company, Inc.
	DDS RUSSO LEONARD R	Haines Company, Inc.

FINDINGS

Year	Uses	Source
2006	INC ROWE DUSTIN L	Haines Company, Inc.
	DDS ROSE JOHN DDS	Haines Company, Inc.
	IMAGING MCGUIREJOHNB	Haines Company, Inc.
	DDS LOS COYOTES	Haines Company, Inc.
	BRIGHT SMILE	Haines Company, Inc.
	CORTEZSANTOS	Haines Company, Inc.
2004	L JOHN ROSE DDS INC	Cole Information Services
	DUSTIN L ROWE DDS INC	Cole Information Services
	CORTEZ SANTOS DDS	Cole Information Services
	RUSSO LEONARD R DDS A PROF	Cole Information Services
	L JOHN ROSE DDS INC	Cole Information Services
	DUSTIN L ROWE DDS INC	Cole Information Services
	CORTEZ SANTOS DDS	Cole Information Services
	RUSSO LEONARD R DDS A PROF	Cole Information Services
1994	WARNER, TOM	Cole Information Services
	GEIZER, ROBERT C	Cole Information Services
	STOLZBERG, SAUL	Cole Information Services
	BAUSS, C	Cole Information Services
	SALAZARPEREZ, ANA M	Cole Information Services
	ANDREW J MANOS INC	Cole Information Services
	RONY ZOOKEVITCH DO	Cole Information Services
	ROBERT C GEIZER	Cole Information Services
	ALAN BRANDIS	Cole Information Services
	WARNER, TOM	Cole Information Services
	GEIZER, ROBERT C	Cole Information Services
	STOLZBERG, SAUL	Cole Information Services
	BAUSS, C	Cole Information Services
	SALAZARPEREZ, ANA M	Cole Information Services
	ANDREW J MANOS INC	Cole Information Services
	RONY ZOOKEVITCH DO	Cole Information Services
	ROBERT C GEIZER	Cole Information Services
	ALAN BRANDIS	Cole Information Services

3321 N LOS COYOTES DIAGONAL

Year	Uses	Source
2004	LAURENTIU GEORGESCU	Cole Information Services

FINDINGS

3323 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	GERALD TURCOTTE	Cole Information Services
2009	GERALD TURCOTTE	Cole Information Services
2004	OCCUPANT UNKNOWN	Cole Information Services
1999	GERALD TURCOTTE	Cole Information Services

3329 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	LEONHARDT TRUCKING	Cole Information Services
	WILLIAM RICO	Cole Information Services
2009	WILLIAM RICO	Cole Information Services
2006	RICO Wiliam	Haines Company, Inc.
2004	WILLIAM RICO	Cole Information Services
1999	WILLIAM RICO	Cole Information Services

3333 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	HAIDAR SOBH	Cole Information Services
2006	SOBHHaidar	Haines Company, Inc.
2004	OCCUPANT UNKNOWN	Cole Information Services

3339 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	GLENN MCGUIRE	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services
2006	No Current Listing	Haines Company, Inc.
2004	BARBARA IZYKOWSKI	Cole Information Services

3350 N LOS COYOTES DIAGONAL

Year	Uses	Source
1999	BLOCKBUSTER VIDEO	Cole Information Services
1994	BLOCKBUSTER VIDEO	Cole Information Services

3358 N LOS COYOTES DIAGONAL

Year	Uses	Source
1999	COST CUTTERS	Cole Information Services
1994	COST CUTTERS FAMILY HAIR CARE	Cole Information Services

FINDINGS

3360 N LOS COYOTES DIAGONAL

Year	Uses	Source
1999	GO DOGS GO	Cole Information Services
1994	MEDICINE SHOPPE PHARMACY	Cole Information Services

3362 N LOS COYOTES DIAGONAL

Year	Uses	Source
1999	TOP NAILS	Cole Information Services

3364 N LOS COYOTES DIAGONAL

Year	Uses	Source
1999	UNITED STUDIOS OF SELF DEFENSE	Cole Information Services

3366 N LOS COYOTES DIAGONAL

Year	Uses	Source
1999	PIZZA HUT DELIVERY OR CARRYOUT	Cole Information Services

3368 N LOS COYOTES DIAGONAL

Year	Uses	Source
1999	CIGARETTE CHEAPER 746	Cole Information Services

3371 N LOS COYOTES DIAGONAL

Year	Uses	Source
2009	SALLY HANNA	Cole Information Services
2006	HANNASally	Haines Company, Inc.
2004	SALLY HANNA	Cole Information Services
1999	SALLY HANNA	Cole Information Services

3374 N LOS COYOTES DIAGONAL

Year	Uses	Source
1999	MAIL CENTER POSTAL & BUSINESS SERVICES THE	Cole Information Services
1994	SYLVAN LEARNING CTR	Cole Information Services

3376 N LOS COYOTES DIAGONAL

Year	Uses	Source
1994	P Q ELECTRONICS	Cole Information Services

3378 N LOS COYOTES DIAGONAL

Year	Uses	Source
1994	ROYALTY CLEANERS	Cole Information Services
	ROYALTY CLEANERS	Cole Information Services

FINDINGS

3380 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	RALPHS	Cole Information Services
	LOCKSMITH	Cole Information Services
	US BANK	Cole Information Services
	RALPHS	Cole Information Services
	LOCKSMITH	Cole Information Services
	US BANK	Cole Information Services
2009	RALPHS GROCERY	Cole Information Services
	DOWNEY SAVINGS	Cole Information Services
	RALPHS GROCERY	Cole Information Services
	DOWNEY SAVINGS	Cole Information Services
2006	COMPANY	Haines Company, Inc.
	&LOAN RALPHSGROCERY	Haines Company, Inc.
	DOWNEYSAVINGS	Haines Company, Inc.
2004	RALPHS PHARMACY	Cole Information Services
	DOWNEY SAVINGS	Cole Information Services
	RALPHS PHARMACY	Cole Information Services
	DOWNEY SAVINGS	Cole Information Services
1999	RALPHS GROCERY COMPANY LONG BEACH	Cole Information Services
	RALPHS GROCERY COMPANY LONG BEACH	Cole Information Services
1994	RALPHS GROCERY CO	Cole Information Services
	RALPHS GROCERY CO	Cole Information Services

3403 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	EDUARDO CORTES	Cole Information Services
2009	EDUARDO CORTES	Cole Information Services
2006	CORTEZ Aleandra	Haines Company, Inc.
2004	ALEJANDRA CORTEZ	Cole Information Services
1999	EDUARDO CORTES	Cole Information Services

3411 N LOS COYOTES DIAGONAL

Year	Uses	Source
2014	STACIE HENDRIX	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services
2006	o MATTAZAROTeresa	Haines Company, Inc.
2004	OCCUPANT UNKNOWN	Cole Information Services

FINDINGS

PALO VERDE AVE

3325 PALO VERDE AVE

Year	Uses	Source
2014	MICHAEL CRADE	Cole Information Services
	NASIR TEJANI	Cole Information Services
	CRADE MICHAEL	Cole Information Services
	EYE PHYSICIANS OF LONG BEACH A MEDIC	Cole Information Services
	PERCER THOMAS MD	Cole Information Services
	MILLER ROBERT M MD INC	Cole Information Services
	EYE PHYSICIANS OF LONG BEACH	Cole Information Services
	RONLOV CARSTEN S MD INC	Cole Information Services
	UNIVERSAL CARE	Cole Information Services
	BELLETTI DOMINIC OD	Cole Information Services
	MASON OLIVER MD	Cole Information Services
	TEJANI NASIR MD	Cole Information Services
	PEDIATRIX MEDICAL	Cole Information Services
2009	SABIRA TEJANI	Cole Information Services
	CARSTEN S RONLOV MD INC	Cole Information Services
	LAURENCE MELTZER MD	Cole Information Services
	STUART H COLE MD INC	Cole Information Services
	SABIRA TEJANI MD	Cole Information Services
	EYE PHYSICIANS OF LONG BEACH	Cole Information Services
	MARIA D STEINLEITNER OD	Cole Information Services
	MARTINEZ CARLOS E MD	Cole Information Services
	KIM DAVID S MD	Cole Information Services
	AVAL SOHEIL M MD	Cole Information Services
	ADVANCED DERMATOLOGY SURGICAL & MEDI	Cole Information Services
	OLIVER L MASON MD	Cole Information Services
	ROBERT M MILLER MD INC	Cole Information Services
	UNIVERSAL CARE DENTAL GROUP	Cole Information Services
	KIM BROWN & CIMCOM MDS	Cole Information Services
	THOMAS PERCER MD	Cole Information Services
	ULTRASONICS	Cole Information Services
	PERCER & TRAN MDS	Cole Information Services
	KUSHNER ARNOLD G DR OF MEDICINE	Cole Information Services
	SPINAL DECOMPRESSION CENTER OF LONG	Cole Information Services

FINDINGS

Year	Uses	Source
2009	WEST COAST ORTHOPEDICS	Cole Information Services
	PEDIATRIX MEDICAL GROUP	Cole Information Services
2004	NASIR TEJANI	Cole Information Services
	MEAGAN MOORE	Cole Information Services
	FREDERIC ROSENBERG	Cole Information Services
	LOS ATOS FOOT HEALTH CORP	Cole Information Services
	OLIVER L MASON MD	Cole Information Services
	ULTRASONIC	Cole Information Services
	ULTRASONIX MEDICAL CORP	Cole Information Services
	STUART H COLE MD INC	Cole Information Services
	TEJANI NASIR MD	Cole Information Services
	ORTHOPEDIC MDCL OF SANTA ANA	Cole Information Services
1999	TAMAROFF MARC MD	Cole Information Services
	SABIRA TEJANI	Cole Information Services
	TEJANI SABIRA N MD	Cole Information Services
	MILLER ROBERT M MD	Cole Information Services
	KRAMER EDWARD M MD	Cole Information Services
	HIRSCHMAN HENRY MD	Cole Information Services
	MOBAYEN M M MD	Cole Information Services
	COLE STUART H MD INCORPORATED	Cole Information Services
	ROSENBERG FREDRIC R MD	Cole Information Services
	STOUT R CRAIG OD	Cole Information Services
	MASON OLIVER MD	Cole Information Services
	BARTLOW GREGORY A MD	Cole Information Services
	ALLRGY & ASTHMA CARE CENTER OF STHRN CALIFORNIA	Cole Information Services
	HIRSCHMAN EYE SURGERY CENTER	Cole Information Services
	ADVNCD DERM & PLAS SURG MEDICAL GROUP	Cole Information Services
	TEJANI NASIR MD	Cole Information Services
	SPARKS KENNETH MD	Cole Information Services
	MYOPIA TREATMENT CENTER	Cole Information Services
	MELTZER STEVEN MD	Cole Information Services
1994	PETER C TRAFAS MD	Cole Information Services

3331 PALO VERDE AVE

Year	Uses	Source
2009	CHRISTIAN & MISSIONARY ALLIANCE CHUR	Cole Information Services
	LBAC	Cole Information Services

Year	Uses	Source
2009	LONG BEACH ALLIANCE CHURCH	Cole Information Services
1999	CHRISTIAN & MISSIONARY ALLIANCE CHURCH	Cole Information Services
	ALLIANCE CHURCH	Cole Information Services
1994	CHRISTIAN & MISSIONARY CHURCH	Cole Information Services

Palo Verde Avenue

3325 Palo Verde Avenue

Year	Uses	Source
2006	AVALSOHEIL M MD	Haines Company, Inc.
	BARTLOW	Haines Company, Inc.
	GREGORYAMD COLE STUART H MD	Haines Company, Inc.
	CRADEMICHAEL	Haines Company, Inc.
	EYEPHYSCNSOF	Haines Company, Inc.
	LNG BCH HIRSCHMANEYE	Haines Company, Inc.
	SRGRY KIMDAVIDSMD	Haines Company, Inc.
	KRAMER EDWARD	Haines Company, Inc.
	MMD +KUSHNER ARNOLD	Haines Company, Inc.
	GMD INC MARTINEZCARLOS	Haines Company, Inc.
	EMD MASON OUVER MD	Haines Company, Inc.
	MILLERROBERTM	Haines Company, Inc.
	MDINC MOBAYEN M M MD	Haines Company, Inc.
	PEDIATRIX MEDICAL	Haines Company, Inc.
	GROUP RONLOVCARSTEN	Haines Company, Inc.
	S MD INC ROSENBERG	Haines Company, Inc.
	FREDRIC R MD SIMPKINS ALBERT	Haines Company, Inc.
	JRMD SPARKS KENNETH	Haines Company, Inc.
	MD +STEINLEITNER	Haines Company, Inc.
	MARIA D OD TEJANI NASIR DR	Haines Company, Inc.
	TEJANI NASIR MD	Haines Company, Inc.
	WESTCST	Haines Company, Inc.
	ORTHOPEDICS	Haines Company, Inc.
2000	ADVANCED DERMATOLGY	Haines
	ALLERGY & ASTHMA CARE	Haines
	BARTLOW GREGORY MD	Haines
	COLE STUART H MD	Haines
	HIRSCHMAN EYE SRGRY	Haines
	HIRSCHMAN EYE SRGRY	Haines

FINDINGS

Year	Uses	Source
2000	MARTINEZ CARLOS E MD	Haines
	MASON OLIVER MD	Haines
	MELTZER STEVEN MD	Haines
	MILLER ROBERT M MD	Haines
	MOBAYEN M M MD	Haines
	ROSENBERG F R MD	Haines
	SPARKS KENNETH MD	Haines
	STOUT R CRAIG OD	Haines
	TAMAROFF MARC MD	Haines
	TEJANI NASIR MD	Haines
	TEJANI SABIRA N MD	Haines
1995	Or Call	Pacific Bell
	Bartlow Gregory A MD	Pacific Bell
	Kramer Edward M MD	Pacific Bell
	Miller Robert M MD	Pacific Bell
	Mobayen MIRALESTEM MD	Pacific Bell
	Rosenberg Fredric R MD	Pacific Bell
	Direct Office	Pacific Bell
1991	ALLERGY & ASTHMA CARE CENTER OF SOUTHERN CALIFORNIA	Pacific Bell
	Bartlow Gregory A MD	Pacific Bell
	Berke Meyer MD	Pacific Bell
	Chin C F MD	Pacific Bell
	Coast Cardio Pulmonary Medical Group Inc	Pacific Bell
	Coast Diabetes & Endocrinology Medical Group	Pacific Bell
	COLE STUART H MD INC	Pacific Bell
	Dahlman Anton MD General Vascular & Oncologic Surgery	Pacific Bell
	Danon Guy	Pacific Bell
	Kurshenbaum Howard A MD	Pacific Bell
	Lakewood Cerriots & Los Altos Long Beach Dermatology Surgical & Medical Group Inc	Pacific Bell
	Lewis Cleveland Jr Inc MD	Pacific Bell
	Liechti Robt MD	Pacific Bell
	Los Altos Long Beach Dermatology Medical Group	Pacific Bell
	Lutzker Steven W MD	Pacific Bell
	Mason Oliver MD	Pacific Bell

FINDINGS

Year	Uses	Source
1991	Meltzer Steven MD	Pacific Bell
	MENTER MURRAY MD	Pacific Bell
	Miller Robert M MD	Pacific Bell
	Mobayen M M MD	Pacific Bell
	Myopia Treatment Center	Pacific Bell
	Rosenberg Fredric R MD	Pacific Bell
	Sury B V MD FACP	Pacific Bell
	Tamaroff Marc MD	Pacific Bell
	Long Beach	Pacific Bell
	Long Beach	Pacific Bell
1985	Allergy & Clinical Immunology Consultants	Pacific Bell
	Bartlow Gregory A MD	Pacific Bell
	Barton Cornelia N MD	Pacific Bell
	Berke Meyer MD	Pacific Bell
	Chin C F MD	Pacific Bell
	COAST CARDIO PULMONARY MEDICAL GROUP INC	Pacific Bell
	COLE STUART H MD INC	Pacific Bell
	King Laura A MD	Pacific Bell
	Lakewood Cerritos & Los Altos Long Beach Dermatology Surgical & Medical Group Inc	Pacific Bell
	Lewis Cleveland Jr Inc MD	Pacific Bell
	Liechti Robt E MD	Pacific Bell
	LOS ALTOS LONG BEACH DERMATOLOGY MEDICAL GROUP	Pacific Bell
	Lutzker Steven W MD	Pacific Bell
	Maznavi M H MD	Pacific Bell
	Meltzer Laurence Dr	Pacific Bell
	Menter Murray MD	Pacific Bell
	Miller Robert M MD	Pacific Bell
	Rizza Joseph MD	Pacific Bell
	Roberts Stephen R DPM	Pacific Bell
	Rosenberg Fredric R MD	Pacific Bell
	Sury B V MD	Pacific Bell
	TAMAROFF MARC MD	Pacific Bell
	TEJANI NASIR MD	Pacific Bell
	TEJANI SABIRA N MD	Pacific Bell
	Warner Margaret MD	Pacific Bell
1980	Allergy & Clinical Immunology Consultants	Pacific Telephone

FINDINGS

Year	Uses	Source
1980	Bartlow Gregory A MD	Pacific Telephone
	Berke Meyer MD	Pacific Telephone
	Coast Cardio Pulmonary	Pacific Telephone
	Cole Stuart H MD	Pacific Telephone
	Ginsburg Samuel B MD	Pacific Telephone
	King Laura A MD	Pacific Telephone
	Liechti Robt E MD	Pacific Telephone
	Los Altos Long Beach Dermatology Group	Pacific Telephone
	Los Altos Radiology Services	Pacific Telephone
	Meltzer Laurence Dr	Pacific Telephone
	Menter Murray MD	Pacific Telephone
	Miller Robt M MD	Pacific Telephone
	Pedarsani M H MD	Pacific Telephone
	Rizza Jos MD	Pacific Telephone
	Robboy Stanley G MD	Pacific Telephone
	Roberts Stephen R DPM	Pacific Telephone
	Rosenberg Fredric R MD	Pacific Telephone
	Tamaroff Marc MD	Pacific Telephone
	Warner Margaret MD	Pacific Telephone
	Zamost Marvin A MD	Pacific Telephone

3331 Palo Verde Avenue

Year	Uses	Source
2006	ALLIANCECHURCH	Haines Company, Inc.
	CHRISTIAN&	Haines Company, Inc.
	MSSNRYALNCECH	Haines Company, Inc.
2000	ALLIANCE CHURCH	Haines
1991	Alliance Church	Pacific Bell
	Christian & Missionary Alliance Church	Pacific Bell
1985	Alliance Church	Pacific Bell
	Christian & Missionary Alliance Church	Pacific Bell
	Vietnamese Alliance Church	Pacific Bell
1980	Alliance Church	Pacific Telephone
	Christian & Missionary Alliance Church	Pacific Telephone
	Vietnamese Alliance Church	Pacific Telephone
1975	Christian & Missionary Alliance Church	Pacific Telephone
1969	CHRISTIAN 6 MISSIONARY ALLIANCE	Pacific Telephone
	CHURCH	Pacific Telephone
	PALO VERDE AV Contd	Pacific Telephone

FINDINGS

Year	Uses	Source
1964	CHRISTIAN & MISSIONARY ALLIANCE CHURCH	Pacific Telephone

SHADY PARK DR

3231 SHADY PARK DR

Year	Uses	Source
1969	LANE DAVID L	Pacific Telephone

3237 SHADY PARK DR

Year	Uses	Source
1969	LINDY BEATRICE A MRS	Pacific Telephone

3243 SHADY PARK DR

Year	Uses	Source
1969	KERR THOS E	Pacific Telephone

SHADYPARK DR

3231 SHADYPARK DR

Year	Uses	Source
2014	TONY SKOURTAS	Cole Information Services
2009	TONY SKOURTAS	Cole Information Services
2006	SKOURTASTony	Haines Company, Inc.
2004	TONY SKOURTAS	Cole Information Services
1999	TONY SKOURTAS	Cole Information Services
1994	PENDERGAST, THOMAS	Cole Information Services
1980	Gardner Bill	Pacific Telephone

3237 SHADYPARK DR

Year	Uses	Source
2014	M GOSSLAND	Cole Information Services
2009	TIFFANY CARRESI	Cole Information Services
2006	SAENZ VALIENTE	Haines Company, Inc.
2004	DEANNA WALLER	Cole Information Services
1999	OCCUPANT UNKNOWN	Cole Information Services
	TIFFANY CARRESI	Cole Information Services
1994	LINDY, JOHN P	Cole Information Services
1991	Lindy John P	Pacific Bell
1985	Lindy John P	Pacific Bell
1980	Lindy John P	Pacific Telephone

Year	Uses	Source
1975	Lindy John P	Pacific Telephone

3243 SHADYPARK DR

Year	Uses	Source
2014	ORTENZIO MORACA	Cole Information Services
2009	MARY KERR	Cole Information Services
2006	KERR Thos E	Haines Company, Inc.
2004	MARY KERR	Cole Information Services
1999	MARY KERR	Cole Information Services
1994	KERR, THOMAS E	Cole Information Services
1991	Kerr Thos E	Pacific Bell
1985	Kerr Thos E	Pacific Bell
1980	Kerr Thos E	Pacific Telephone
1975	Kerr Thos E	Pacific Telephone

SHADYPARK DR N

3231 SHADYPARK DR N

Year	Uses	Source
2000	CURINGTON George	Haines

3237 SHADYPARK DR N

Year	Uses	Source
2000	WATSON Ryan	Haines

3243 SHADYPARK DR N

Year	Uses	Source
2000	KERR Thos E	Haines
	X KILLDEE E	Haines

SNOWDEN AVE

3402 SNOWDEN AVE

Year	Uses	Source
2014	JAMES ESTES	Cole Information Services
2009	JAMES ESTES	Cole Information Services
2006	ESTES James	Haines Company, Inc.
2004	JAMES ESTES	Cole Information Services
2000	ESTES James	Haines
	ESTES James	Haines

FINDINGS

Year	Uses	Source
1999	JAMES ESTES	Cole Information Services
1994	ESTES, JAMES T	Cole Information Services
1969	CHAPMAN LARRY K	Pacific Telephone
1957	ARNOLD RICHARD E	Pacific Telephone

3403 SNOWDEN AVE

Year	Uses	Source
2014	KELO JACKETT	Cole Information Services
2009	MICHAEL MAWN	Cole Information Services
2006	MAWN Michael	Haines Company, Inc.
	VELASQUEZ Jesus	Haines Company, Inc.
2004	TODD WARREN	Cole Information Services
	MV HANDYMAN	Cole Information Services
2000	VELASQUEZ Jesus	Haines
	VELASQUEZ	Haines
1999	MICHAEL MAWN	Cole Information Services
1969	DUGGAN MICHL J	Pacific Telephone
1964	DUGGAN MICHAEL J	Pacific Telephone
1960	DUGGAN MICHAEL J	Pacific Telephone
1957	BARON LEONARD	Pacific Telephone

3408 SNOWDEN AVE

Year	Uses	Source
2014	BRETT POIRIER	Cole Information Services
2009	A & E FITNESS	Cole Information Services
	BRETT POIRIER	Cole Information Services
2006	POIRIER Bretll R	Haines Company, Inc.
2004	AJAY SINHA	Cole Information Services
2000	STONE Alice	Haines
	STONE Alice	Haines
1999	BRETT POIRIER	Cole Information Services
1994	STONE, FRANK J	Cole Information Services
1991	Stone Frank J	Pacific Bell
1985	Stone Frank J	Pacific Bell
1980	Stone Frank J	Pacific Telephone
1975	Stone Frank J	Pacific Telephone
1969	STAR ROBT L	Pacific Telephone
1960	WASLOSKI JOHN E	Pacific Telephone
1957	SMITH LEE0ENS USN	Pacific Telephone

FINDINGS

3409 SNOWDEN AVE

Year	Uses	Source
2014	SANDRA TRACY	Cole Information Services
2009	SANDRA TRACY	Cole Information Services
2006	TRACYQ	Haines Company, Inc.
2004	SANDRA TRACY	Cole Information Services
2000	TRACY Ralph W	Haines
	TRACY Ralph W	Haines
1999	SANDRA TRACY	Cole Information Services
	OCCUPANT UNKNOWN	Cole Information Services
	TRACY RALPH W	Cole Information Services
1994	TRACY, RALPH W	Cole Information Services
1991	Tracy Ralph W	Pacific Bell
1985	Tracy Ralph W	Pacific Bell
1980	Tracy Ralph W	Pacific Telephone
1975	Tracy Ralph W	Pacific Telephone
1969	TRACY RALPH W 0 H	Pacific Telephone
1964	TRACY RALPH W	Pacific Telephone
1960	TRACY RALPH W	Pacific Telephone

3414 SNOWDEN AVE

Year	Uses	Source
1957	COZENS ARTHUR E	Pacific Telephone

TEVIS AVE

3403 TEVIS AVE

Year	Uses	Source
2014	GLORIA YUJUICO	Cole Information Services
2009	GLORIA BAGUINDOC	Cole Information Services
2006	YUJUICO Glona	Haines Company, Inc.
	BAGUINDOC Gloin	Haines Company, Inc.
2004	GLORIA BAGUINDOC	Cole Information Services
2000	YUJUICO Gloria	Haines
	BAGUINDOC Gloria	Haines
1999	GLORIA BAGUINDOC	Cole Information Services
1994	BAGUINDOC, GLORIA	Cole Information Services
1980	Babiak Timothy	Pacific Telephone
1975	Roberts Geo F	Pacific Telephone
1969	ROBERTS GEO 0 H	Pacific Telephone

FINDINGS

Year	Uses	Source
1960	ROBERTS GEO F	Pacific Telephone
1957	ROBERTS GEAO F	Pacific Telephone

3409 TEVIS AVE

Year	Uses	Source
2014	KEVIN BRANCH	Cole Information Services
2009	OCCUPANT UNKNOWN	Cole Information Services
2006	BRANCH Kennelh D	Haines Company, Inc.
2004	KENNETH BRANCH	Cole Information Services
2000	BRANCH Kenneth D	Haines
1994	BRANCH, KENNETH D	Cole Information Services
1991	Branch Kenneth D	Pacific Bell
1985	Branch Kenneth D	Pacific Bell
1980	Branch Kenneth D	Pacific Telephone
1975	Branch Kenneth D	Pacific Telephone
1969	LUKASIK MICHL	Pacific Telephone
1964	HOOVEN ROBT G	Pacific Telephone
1960	HOOVEN ROBT G	Pacific Telephone
1957	HOOVEN ROBT G	Pacific Telephone
1954	HOOVEN ROBT G	R. L. Polk & Co.

3410 TEVIS AVE

Year	Uses	Source
2014	CHRISTOPHER DONOVAN	Cole Information Services
2009	CHRIS DONOVAN	Cole Information Services
2006	No Current Listing	Haines Company, Inc.
2004	CHRISTOPHER DONOVAN	Cole Information Services
2000	DONOVAN C	Haines
1999	CHRIS DONOVAN	Cole Information Services
1994	DONOVAN, C	Cole Information Services
1991	Donovan C	Pacific Bell
1985	Donovan C	Pacific Bell
1980	Donovan C	Pacific Telephone
1975	Hoffman Donald F	Pacific Telephone
1969	FRYE VERNON	Pacific Telephone
1964	FRYE VERNON	Pacific Telephone
1957	FRYE VERNON	Pacific Telephone

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3413 TEVIS AVE

Year	Uses	Source
2009	PIERRETTE BUNCH	Cole Information Services
2006	BUNCH Pierrete	Haines Company, Inc.
2004	PIERRETTE BUNCH	Cole Information Services
2000	BUNCH Pierrette	Haines
1999	OCCUPANT UNKNOWN	Cole Information Services
	PIERRETTE BUNCH	Cole Information Services
1994	BUNCH, P S	Cole Information Services
1991	Bunch P S	Pacific Bell
1985	Bunch P S	Pacific Bell
1980	Bunch P S	Pacific Telephone
1975	Bunch P S	Pacific Telephone
1969	BUNCH PIERRETTE S MRS	Pacific Telephone
1964	EDEN R H	Pacific Telephone
1960	HOLT FRANCIS C	Pacific Telephone
1957	HOLT FRAUCDS C	Pacific Telephone

3418 TEVIS AVE

Year	Uses	Source
2014	WILLIAM SWANK	Cole Information Services
2009	WILLIAM SWANK	Cole Information Services
2006	S CIEPLYSM	Haines Company, Inc.
	SWANKWS	Haines Company, Inc.
2004	WILLIAM SWANK	Cole Information Services
2000	CIEPLY S M	Haines
	SWANK W S	Haines
1999	WILLIAM SWANK	Cole Information Services
1994	CIEPLY, SYLVIA M	Cole Information Services
	SWANK, WILLIAM S	Cole Information Services
1991	Swank W S	Pacific Bell
	Cieply S M	Pacific Bell
1969	MILLER JETHRO W	Pacific Telephone
1964	MULHALL JAS	Pacific Telephone
1960	HALL PHIL	Pacific Telephone

3419 TEVIS AVE

Year	Uses	Source
2014	BINH LE	Cole Information Services
2009	DENISE LACROIX	Cole Information Services

Year	Uses	Source
2006	BLASETTIManc	Haines Company, Inc.
2004	DENISE LACROIX	Cole Information Services
2000	BLASETTI Marc	Haines
1999	OCCUPANT UNKNOWN	Cole Information Services
	DENISE LACROIX	Cole Information Services
1994	GOLDBART, ADAM	Cole Information Services
1969	LOPEZ RICARDO F	Pacific Telephone
1960	OUSLEY ROBT N	Pacific Telephone
1957	OUSLEY ROBT N	Pacific Telephone

WARDLOW RD E

6118 WARDLOW RD E

Year	Uses	Source
2000	BOYNTON Willard G	Haines
	X MCNAB AV	Haines
1969	BOYNTON WILLARD G 0 H	Pacific Telephone

6124 WARDLOW RD E

Year	Uses	Source
2000	RODRIGUEZ Jesus	Haines
1969	POTTER FRED W	Pacific Telephone

6128 WARDLOW RD E

Year	Uses	Source
2000	MERRITT Wendell	Haines
1969	NO RETURN	Pacific Telephone

6134 WARDLOW RD E

Year	Uses	Source
2000	ROBST Hugo	Haines
1969	ROBST H E 0 HAl 7055	Pacific Telephone

6140 WARDLOW RD E

Year	Uses	Source
2000	STODDARD Dawn	Haines
1969	MC BRIDE EARL 6 H	Pacific Telephone

6144 WARDLOW RD E

Year	Uses	Source
2000	X TEVIS AV	Haines

FINDINGS

Year	Uses	Source
2000	X SNOWDEN AV	Haines
	HEPTINSTALL Terry	Haines
1969	STANWOOD HAROLD A	Pacific Telephone

6150 WARDLOW RD E

Year	Uses	Source
1969	DIETRICH HENRY S	Pacific Telephone

6202 WARDLOW RD E

Year	Uses	Source
2000	DYER Meryle	Haines
1969	CARO LEANOR 0 HAS 8930	Pacific Telephone

6208 WARDLOW RD E

Year	Uses	Source
2000	BURGOYNE Jeanne	Haines
1969	KAINZ ANTON	Pacific Telephone

6212 WARDLOW RD E

Year	Uses	Source
2000	ROBLES Ernesto	Haines
1969	RIFFLE FRANCIS M MRS	Pacific Telephone

6218 WARDLOW RD E

Year	Uses	Source
2000	HAWKINS Blois	Haines
1969	SIMS ALICE J MRS	Pacific Telephone

6228 WARDLOW RD E

Year	Uses	Source
2000	GOLGART G	Haines
1969	WERNER CHARLES	Pacific Telephone

6229 WARDLOW RD E

Year	Uses	Source
2000	FREEMAN Stanley	Haines
1969	VACANT	Pacific Telephone

6235 WARDLOW RD E

Year	Uses	Source
2000	HARMAN Louis 00 V	Haines

FINDINGS

Year	Uses	Source
2000	X PALO VERDE AV	Haines
	X LOS COYOTES DIGNL N	Haines
1969	HARMAN LEWIS A	Pacific Telephone

FINDINGS

ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

Address Researched	Address Not Identified in Research Source
3231 SHADY PARK DR	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3231 SHADYPARK DR	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3231 SHADYPARK DR	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3231 SHADYPARK DR N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3237 SHADY PARK DR	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3237 SHADYPARK DR	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3237 SHADYPARK DR	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3237 SHADYPARK DR N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3240 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3240 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3240 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3240 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3243 SHADY PARK DR	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3243 SHADYPARK DR	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3243 SHADYPARK DR	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3243 SHADYPARK DR N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3246 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
3246 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3246 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3246 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3246 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3247 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3247 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3247 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3247 N LOS COYOTES DIAGONAL	2014, 2006, 2004, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3251 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
3251 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3251 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3251 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3251 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3252 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3252 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3252 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3252 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3252 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3255 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3255 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3255 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3255 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3255 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3256 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3256 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3256 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3256 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3256 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3261 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3261 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3261 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3261 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3261 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3262 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3262 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3262 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3262 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3262 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3286 CONQUISTA AVE	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3302 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3302 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3302 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3302 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3302 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3303 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3303 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3303 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3309 MCNAB AVE	2006, 2004, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3309 MCNAB AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3310 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3310 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3310 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3310 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3310 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3313 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3313 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3313 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3313 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3313 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3315 MCNAB AVE	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3315 MCNAB AVE	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3319 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3319 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3319 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
3319 MCNAB AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3319 MCNAB AVE	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3319 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3319 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3320 LOS COYOTES DIAGNL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3320 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3320 Los Coyotes Diagonal	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3320 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3320 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3320 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3320 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3320 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3321 N LOS COYOTES DIAGONAL	2014, 2009, 2006, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3322 MCNAB AVE	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3322 MCNAB AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3323 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3323 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3323 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3325 MCNAB AVE	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3325 MCNAB AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3325 PALO VERDE AVE	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3325 Palo Verde Avenue	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1994, 1992, 1990, 1986, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3328 MCNAB AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3328 MCNAB AVE	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3329 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3329 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3329 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3329 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3329 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3331 MCNAB AVE	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3331 MCNAB AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3331 PALO VERDE AVE	2014, 2006, 2004, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3331 Palo Verde Avenue	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3333 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3333 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3333 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3333 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3333 N LOS COYOTES DIAGONAL	2009, 2006, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3334 MCNAB AVE	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3334 MCNAB AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3335 MCNAB AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3335 MCNAB AVE	2006, 2004, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3338 MCNAB AVE	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3338 MCNAB AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3339 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3339 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3339 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3339 MCNAB AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3339 MCNAB AVE	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3339 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
3339 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3344 MCNAB AVE	2014, 2006, 2004, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3344 MCNAB AVE	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3345 MCNAB AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3345 MCNAB AVE	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3350 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3350 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3350 MCNAB AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3350 MCNAB AVE	2006, 2004, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3350 N LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3351 MCNAB AVE	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3351 MCNAB AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3354 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3356 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3358 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3358 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3358 N LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3360 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3360 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3360 N LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3362 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3362 N LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3364 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3364 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3364 N LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3366 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3366 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3366 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3366 N LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3368 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3368 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3368 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3368 N LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3371 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3371 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3371 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3371 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3371 N LOS COYOTES DIAGONAL	2014, 2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3372 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3374 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3374 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3374 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3374 N LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3376 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3376 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3376 N LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3378 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3378 Los Coyotes Diagonal	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
3378 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3378 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3378 N LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3378 N LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3380 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3380 Los Coyotes Diagonal	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3380 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3380 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3380 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
3380 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3380 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3402 SNOWDEN AVE	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3402 SNOWDEN AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3403 LOS COYOTES DIAGONAL ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3403 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3403 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3403 SNOWDEN AVE	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3403 SNOWDEN AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3403 TEVIS AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3403 TEVIS AVE	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3408 SNOWDEN AVE	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3408 SNOWDEN AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3409 SNOWDEN AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3409 SNOWDEN AVE	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3409 TEVIS AVE	2006, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3409 TEVIS AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3410 TEVIS AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3410 TEVIS AVE	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3411 LOS COYOTES DIAGONAL	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3411 LOS COYOTES DIAGONAL N	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3411 N LOS COYOTES DIAGONAL	2006, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3411 N LOS COYOTES DIAGONAL	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3413 TEVIS AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3413 TEVIS AVE	2014, 2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3414 SNOWDEN AVE	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3418 TEVIS AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3418 TEVIS AVE	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3419 TEVIS AVE	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3419 TEVIS AVE	2014, 2009, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6109 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6109 E CORALITE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6109 E CORALITE ST	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6115 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6115 E CORALITE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6115 E CORALITE ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6118 E WARDLOW RD	2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6118 E WARDLOW RD	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6118 WARDLOW RD E	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6121 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6121 E CORALITE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6121 E CORALITE ST	2006, 2004, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6124 E WARDLOW RD	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6124 E WARDLOW RD	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6124 WARDLOW RD E	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6125 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6125 E CORALITE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6125 E CORALITE ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6128 E WARDLOW RD	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6128 E WARDLOW RD	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6128 WARDLOW RD E	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6131 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6131 E CORALITE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6131 E CORALITE ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6134 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6134 E CORALITE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6134 E CORALITE ST	2006, 2004, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6134 E WARDLOW RD	2014, 2006, 2004, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6134 E WARDLOW RD	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6134 WARDLOW RD E	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6135 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6135 E CORALITE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6135 E CORALITE ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6140 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6140 E CORALITE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6140 E CORALITE ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6140 E WARDLOW RD	2006, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6140 E WARDLOW RD	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6140 WARDLOW RD E	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6141 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6141 E CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6141 E CORALITE ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6144 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6144 E CORALITE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6144 E CORALITE ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6144 E WARDLOW RD	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6144 E WARDLOW RD	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6144 WARDLOW RD E	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6145 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6145 E CORALITE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6145 E CORALITE ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6149 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6149 E CORALITE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6149 E CORALITE ST	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6150 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6150 E CORALITE ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6150 E CORALITE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6150 E WARDLOW RD	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6150 E WARDLOW RD	2006, 2004, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6150 WARDLOW RD E	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6155 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6155 E CORALITE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6155 E CORALITE ST	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6158 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6158 E CORALITE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6158 E CORALITE ST	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6161 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6161 E CORALITE ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6161 E CORALITE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6165 CORALITE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6165 E CORALITE ST	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6165 E CORALITE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6169 E CORALITE ST	2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6202 E WARDLOW RD	2014, 2006, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6202 E WARDLOW RD	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6202 WARDLOW RD E	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6208 E WARDLOW RD	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6208 E WARDLOW RD	2006, 2004, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6208 WARDLOW RD E	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6212 E WARDLOW RD	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6212 E WARDLOW RD	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6212 WARDLOW RD E	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6218 E WARDLOW RD	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6218 E WARDLOW RD	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6218 WARDLOW RD E	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6221 E WARDLOW RD	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6228 E WARDLOW RD	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6228 E WARDLOW RD	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6228 WARDLOW RD E	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6229 E WARDLOW RD	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1990, 1986, 1985, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6229 E WARDLOW RD	2006, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6229 WARDLOW RD E	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6230 E KILLDEE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6230 E KILLDEE ST	2006, 2004, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6230 E METZ ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6230 E METZ ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6230 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6230 METZ ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6231 E KILLDEE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6231 E KILLDEE ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6231 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6235 E WARDLOW RD	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6235 E WARDLOW RD	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6235 WARDLOW RD E	2014, 2009, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6236 E METZ ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6236 E METZ ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6236 METZ ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6237 E KILLDEE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6237 E KILLDEE ST	2006, 2004, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6237 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6238 E KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6238 E KILLDEE ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6238 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6241 E METZ ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6241 E METZ ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6241 METZ ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6242 E METZ ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6242 E METZ ST	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6242 METZ ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6243 E KILLDEE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6243 E KILLDEE ST	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6243 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6247 E METZ ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6247 E METZ ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6247 METZ ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6248 E METZ ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6248 E METZ ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6248 METZ ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6249 E KILLDEE ST	2014, 2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6249 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
6253 E KILLDEE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6253 E KILLDEE ST	2006, 2004, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6253 E METZ ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6253 E METZ ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6253 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6253 METZ ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6254 E METZ ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6254 E METZ ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6254 METZ ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6256 E KILLDEE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
6256 E KILLDEE ST	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6256 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6259 E KILLDEE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6259 E KILLDEE ST	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6259 E METZ ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6259 E METZ ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6259 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6259 METZ ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6260 E METZ ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6260 E METZ ST	2006, 2004, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
6260 METZ ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6262 E KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6262 E KILLDEE ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6262 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6265 E KILLDEE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6265 E KILLDEE ST	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6265 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6266 E KILLDEE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6266 E KILLDEE ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6266 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
6271 E KILLDEE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6271 E KILLDEE ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6271 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6272 E KILLDEE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6272 E KILLDEE ST	2006, 2003, 2001, 2000, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6272 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6277 E KILLDEE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6277 E KILLDEE ST	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6277 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6278 E KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
6278 E KILLDEE ST	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6278 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6283 E KILLDEE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6283 E KILLDEE ST	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6283 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6284 E KILLDEE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6284 E KILLDEE ST	2006, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6284 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6289 E KILLDEE ST	2014, 2009, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6289 E KILLDEE ST	2006, 2003, 2001, 2000, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
6289 KILLDEE ST	2014, 2009, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1994, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched	Address Not Identified in Research Source
3340 Los Coyotes Diagonal	2009, 2004, 2003, 2001, 1996, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets:

1896 Source Sheets

Downey
1896
15-minute, 62500

1899 Source Sheets

Downey
1899
15-minute, 62500

1902 Source Sheets

Downey
1902
15-minute, 62500

1923 Source Sheets

Artesia
1923
7.5-minute, 24000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets:

1925 Source Sheets

Long Beach
1925
7.5-minute, 24000

Clearwater
1925
7.5-minute, 24000

Artesia
1925
7.5-minute, 24000

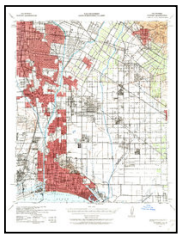
1935 Source Sheets

Los Alamitos
1935
7.5-minute, 31680

1942 Source Sheets

Downey
1942
15-minute, 62500

1943 Source Sheets



Downey
1943
15-minute, 62500
Aerial Photo Revised 1939

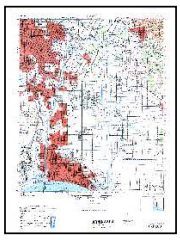
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets:

1945 Source Sheets

Artesia
1945
7.5-minute, 24000

1947 Source Sheets



DOWNEY
1947
15-minute, 50000

1949 Source Sheets

Long Beach
1949
7.5-minute, 24000

Los Alamitos
1949
7.5-minute, 24000
Aerial Photo Revised 1947

1950 Source Sheets

Los Alamitos
1950
7.5-minute, 24000
Aerial Photo Revised 1947

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets:

1964 Source Sheets

Long Beach
1964
7.5-minute, 24000
Aerial Photo Revised 1963

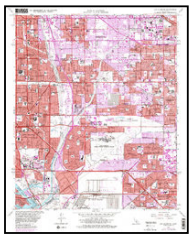
Los Alamitos
1964
7.5-minute, 24000
Aerial Photo Revised 1963

1972 Source Sheets

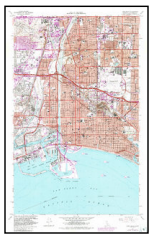
Los Alamitos
1972
7.5-minute, 24000
Aerial Photo Revised 1972

Long Beach
1972
7.5-minute, 24000
Aerial Photo Revised 1972

1981 Source Sheets



Los Alamitos
1981
7.5-minute, 24000
Aerial Photo Revised 1978

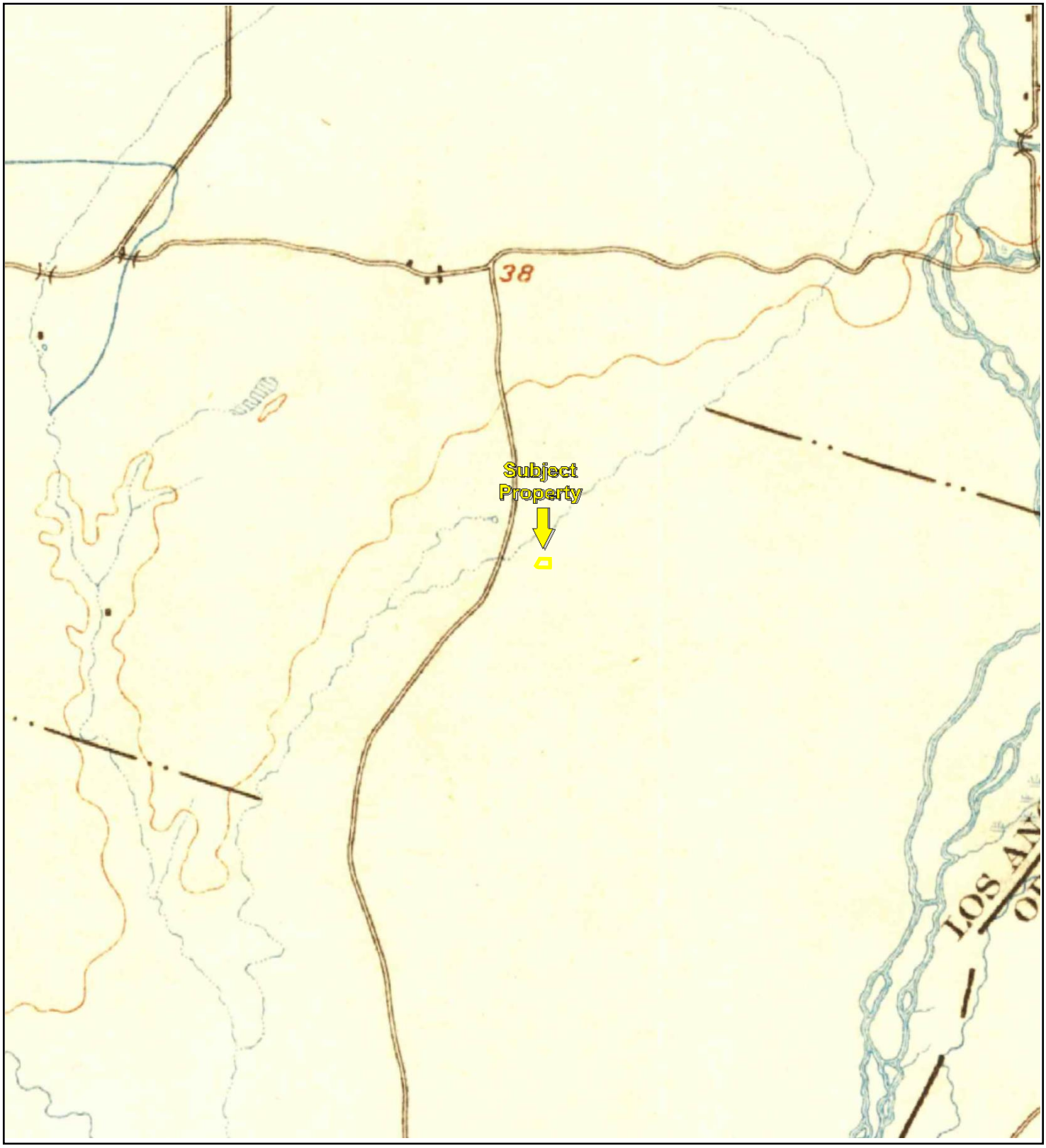


Long Beach
1981
7.5-minute, 24000
Aerial Photo Revised 1978

2012 Source Sheets

Los Alamitos
2012
7.5-minute, 24000

Long Beach
2012
7.5-minute, 24000



TP, Downey, 1896, 15-minute

0 Miles 0.25 0.5 1 1.5

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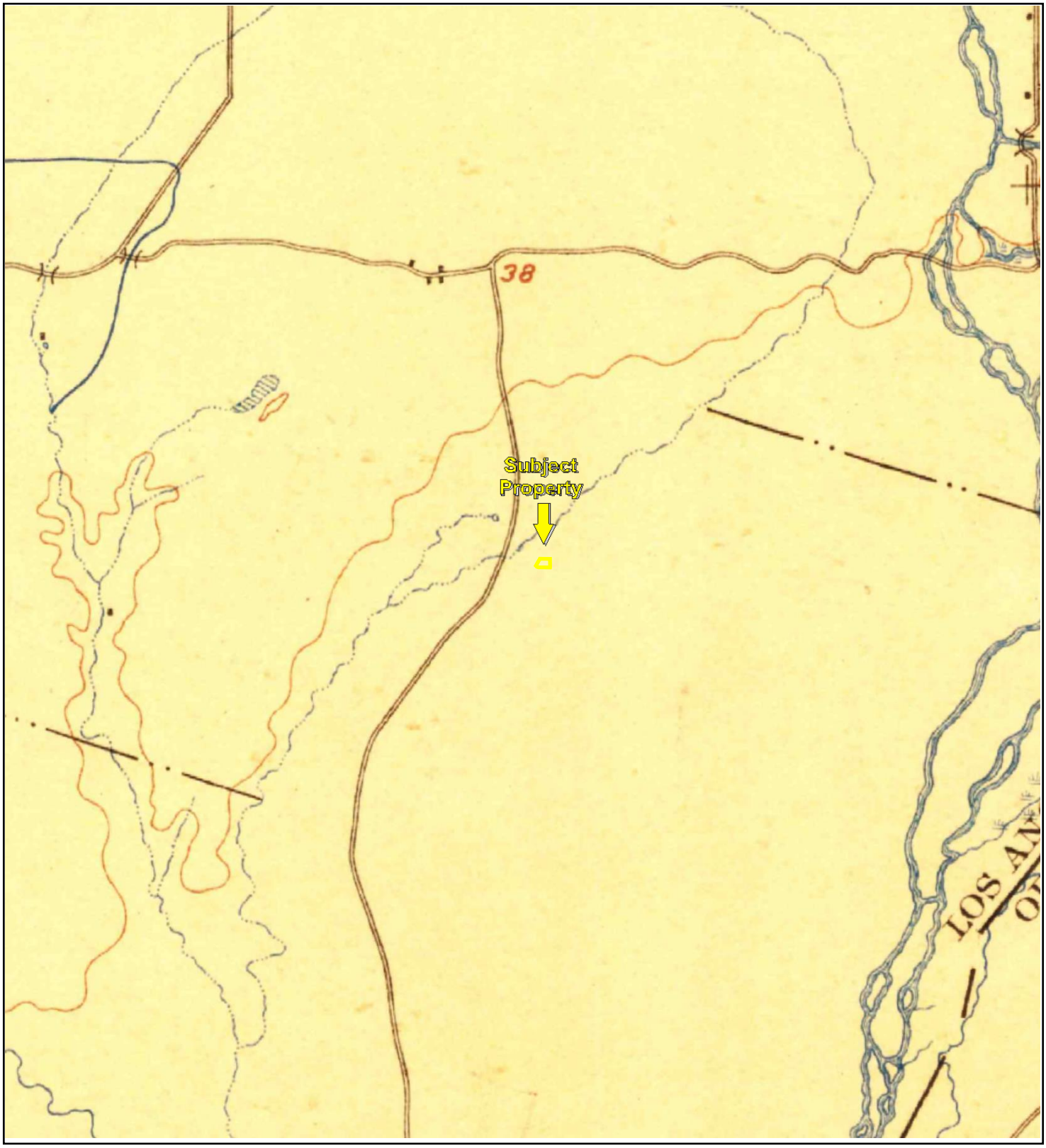
APPENDIX B: Topographic Maps

Project No. 20-289715.1

PARTNER



TP, Downey, 1899, 15-minute

0 Miles 0.25 0.5 1 1.5

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APPENDIX B: Topographic Maps

Project No. 20-289715.1

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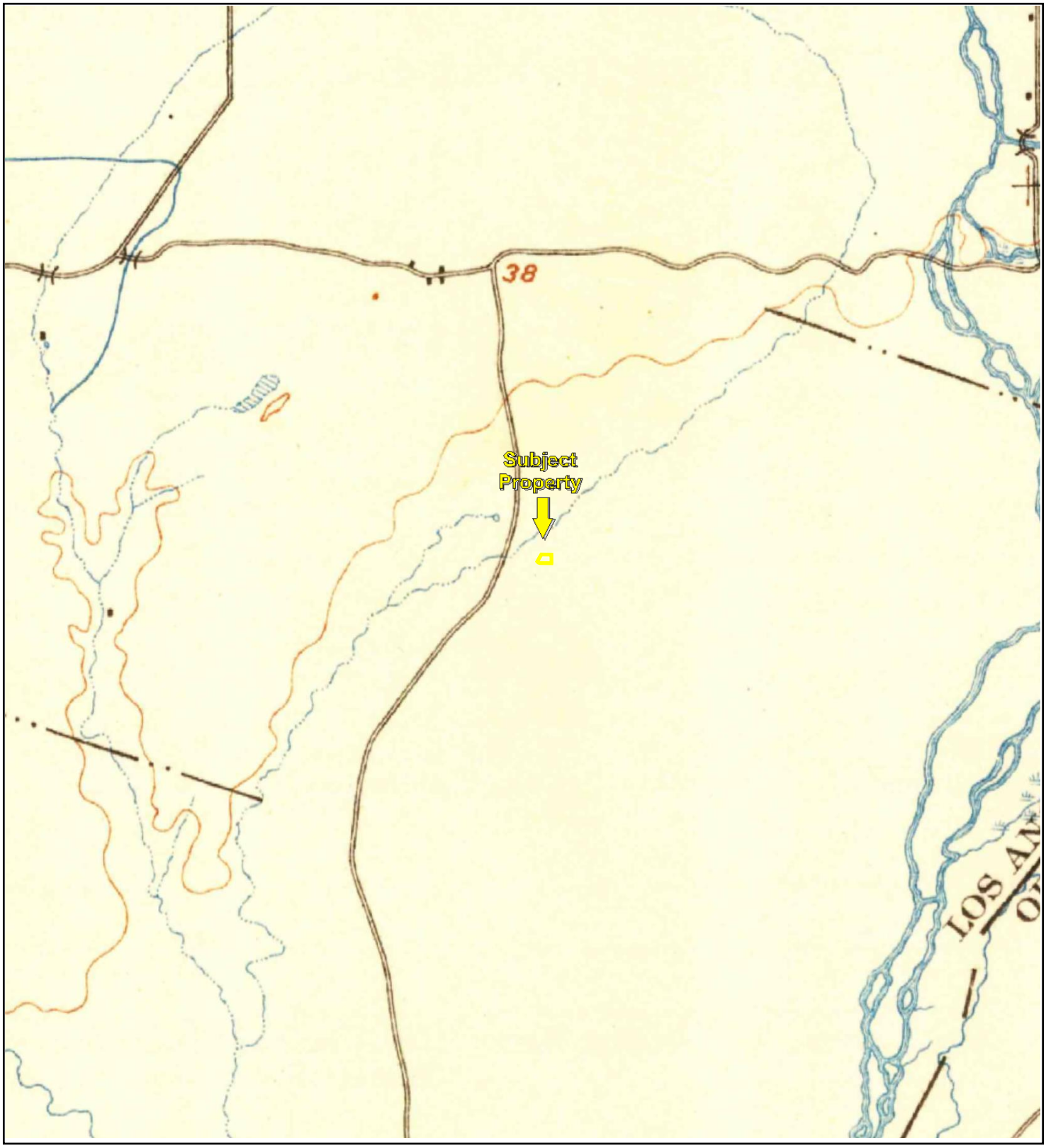

TP, Downey, 1902, 15-minute

0 Miles 0.25 0.5 1 1.5

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APPENDIX B: Topographic Maps

Project No. 20-289715.1

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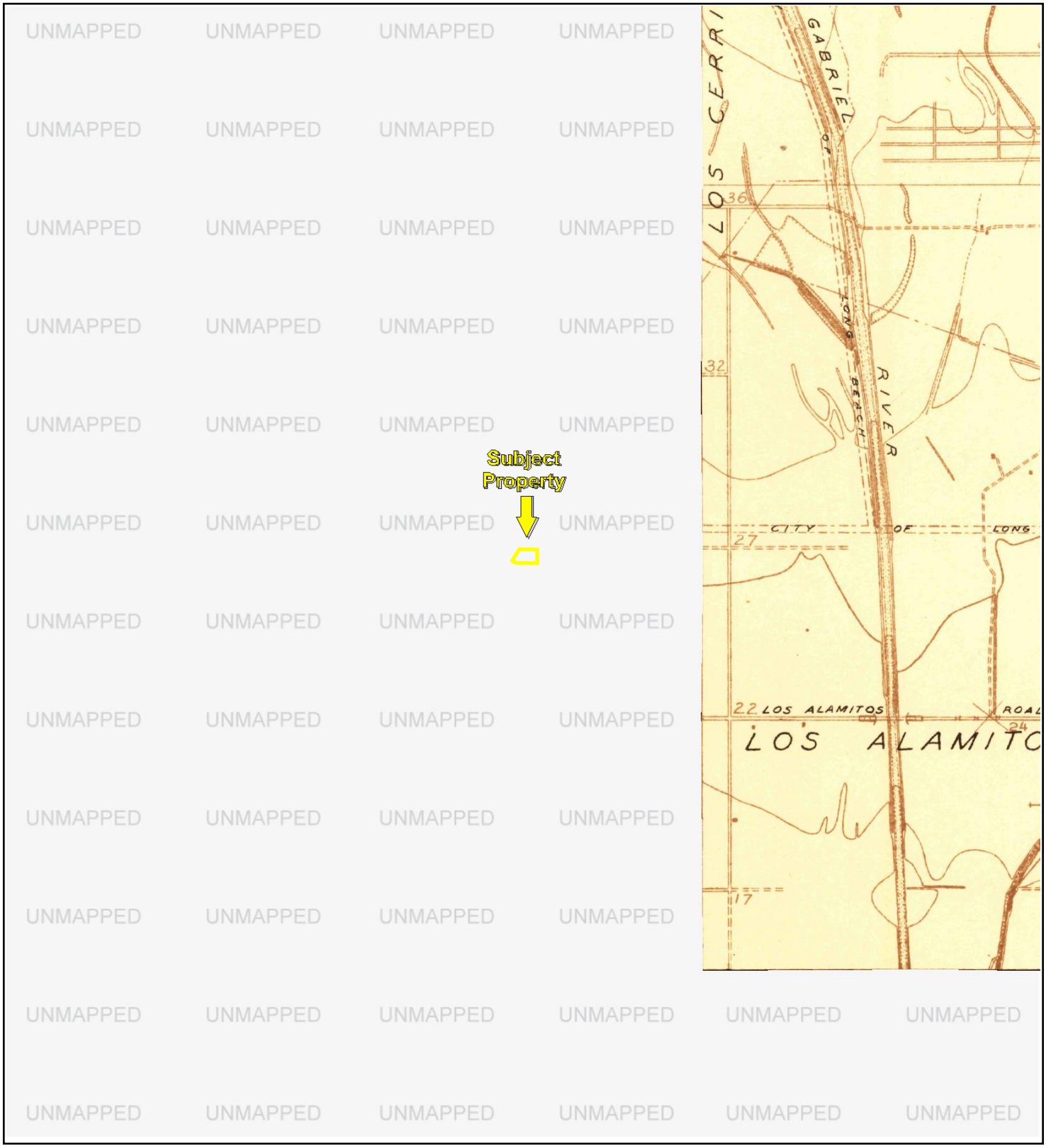

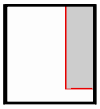

NE, Artesia, 1923, 7.5-minute

0 Miles 0.25 0.5 1 1.5

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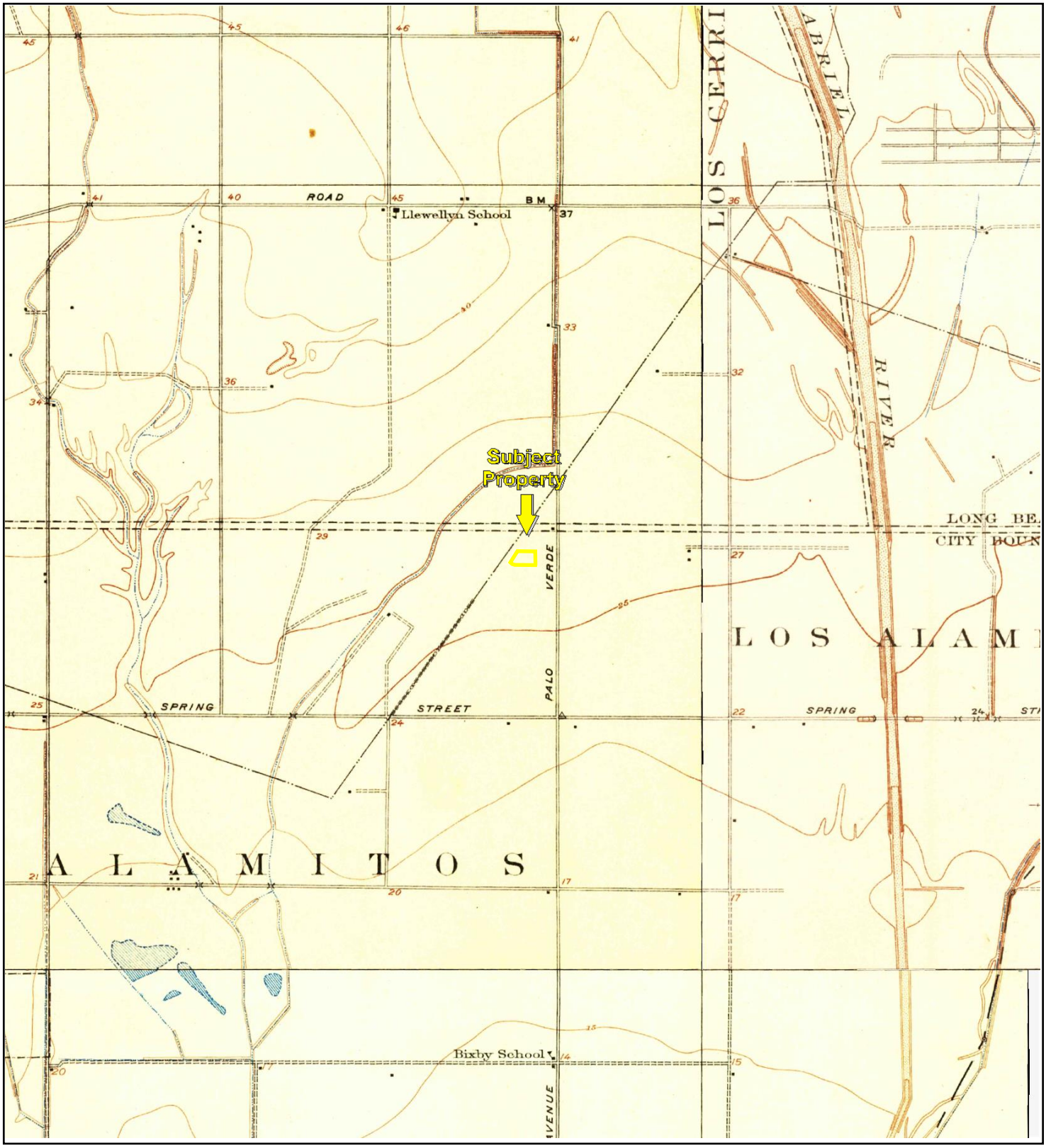
APPENDIX B: Topographic Maps

Project No. 20-289715.1

PARTNER



TP, Clearwater, 1925, 7.5-minute
NE, Artesia, 1925, 7.5-minute
SW, Long Beach, 1925, 7.5-minute

0 Miles 0.25 0.5 1 1.5

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APPENDIX B: Topographic Maps

Project No. 20-289715.1

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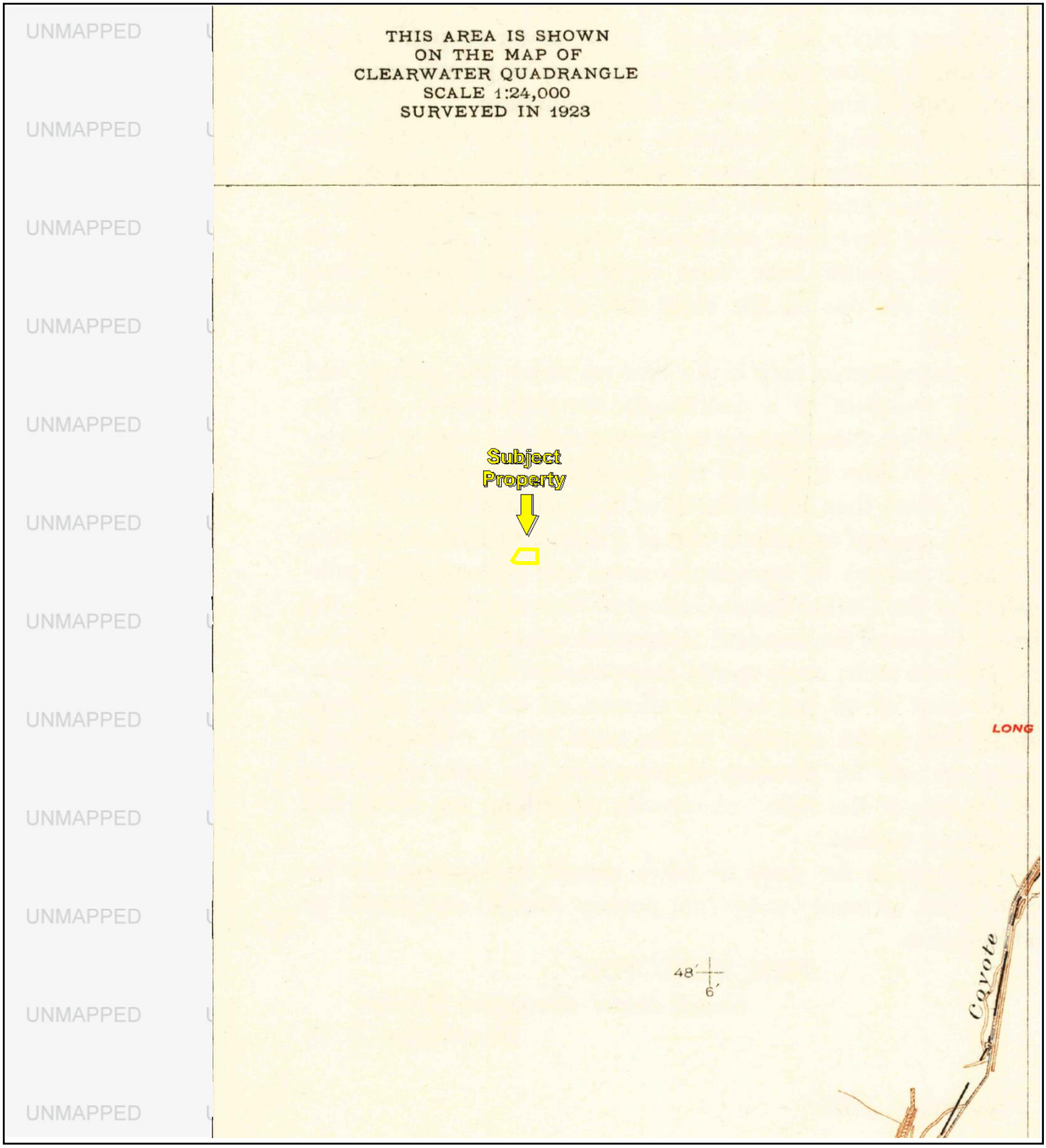

TP, Los Alamitos, 1935, 7.5-minute

0 Miles 0.25 0.5 1 1.5

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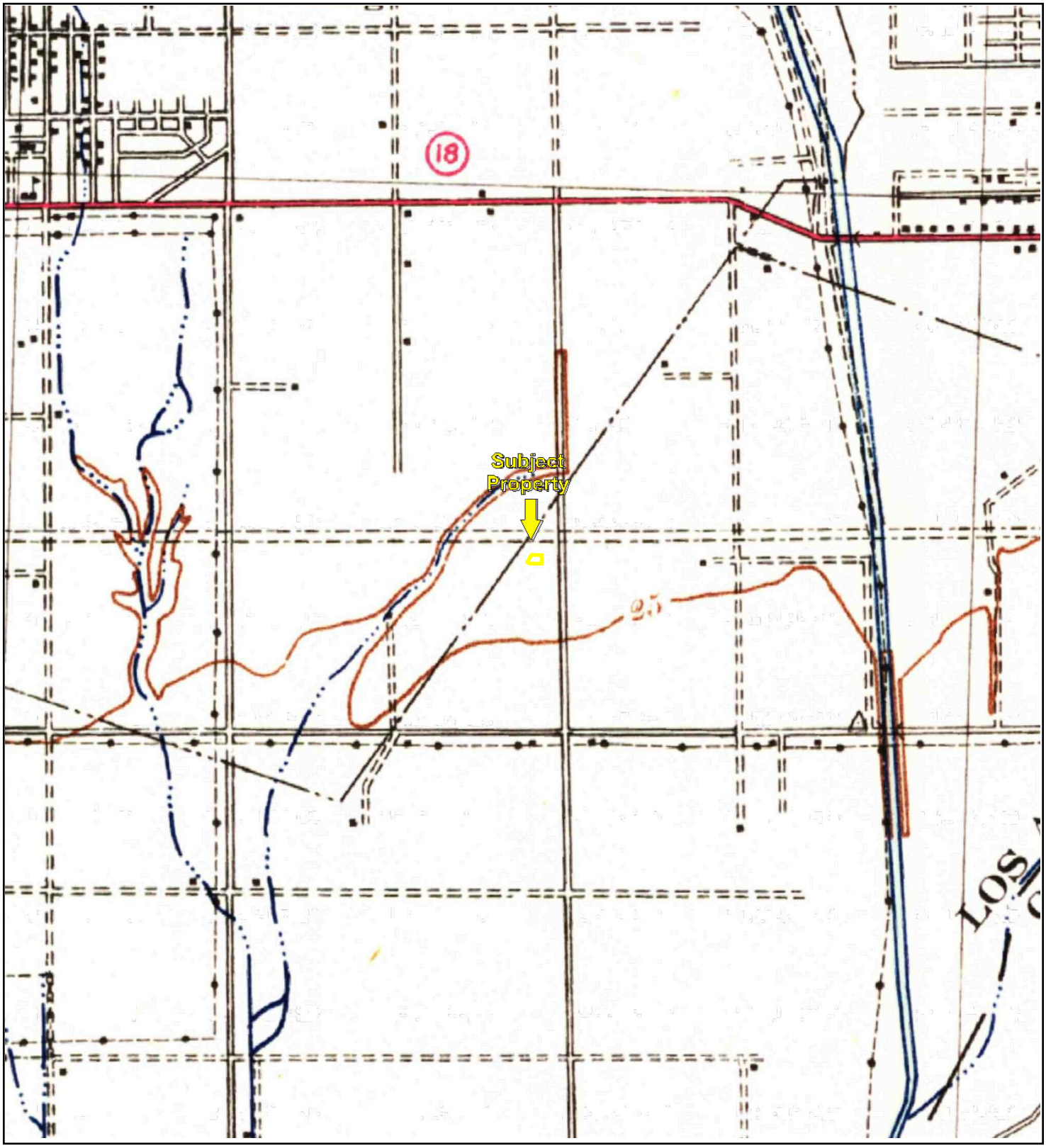
APPENDIX B: Topographic Maps

Project No. 20-289715.1

PARTNER



TP, Downey, 1942, 15-minute

0 Miles 0.25 0.5 1 1.5

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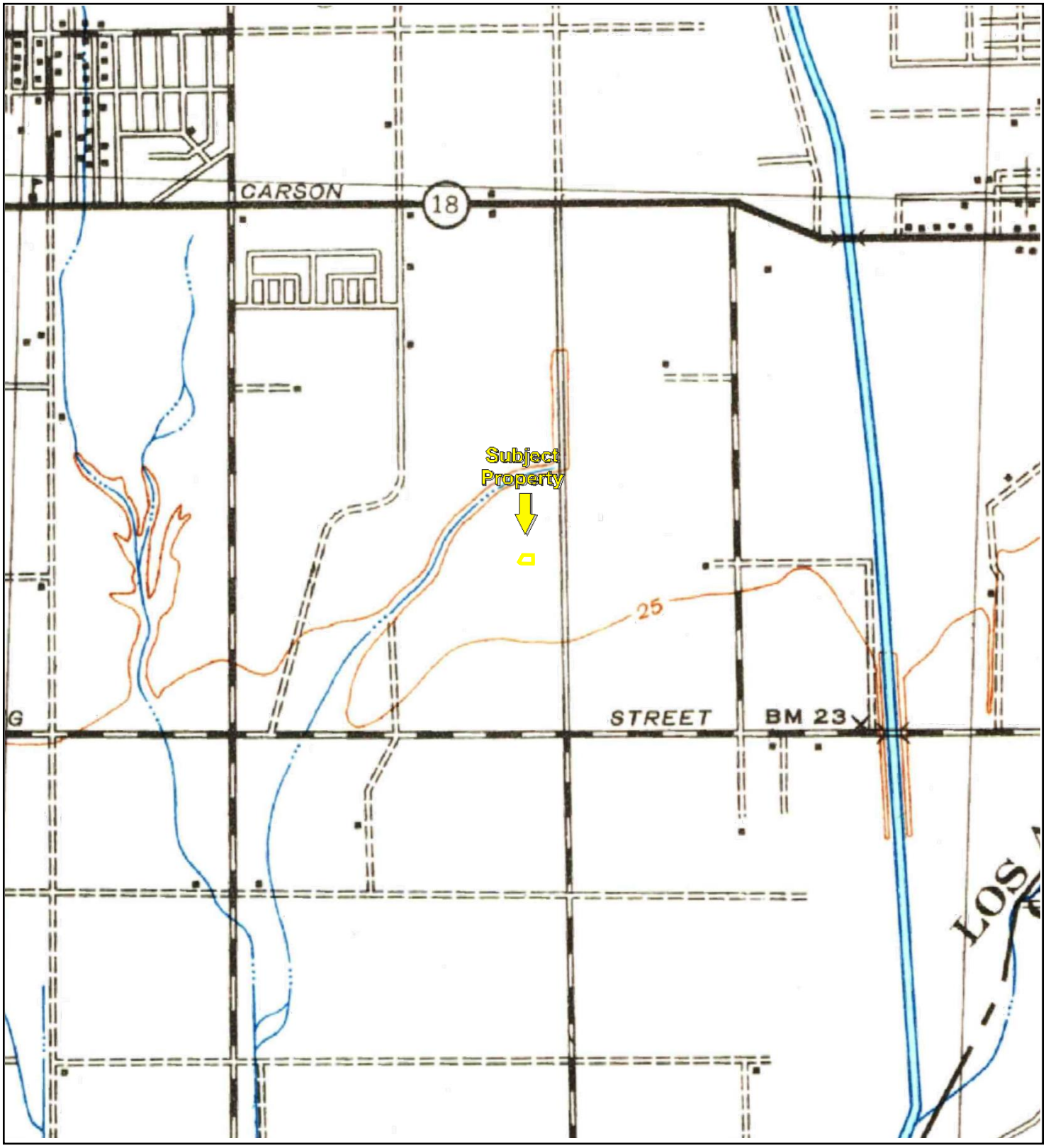
APPENDIX B: Topographic Maps

Project No. 20-289715.1

PARTNER



TP, Downey, 1943, 15-minute

0 Miles 0.25 0.5 1 1.5

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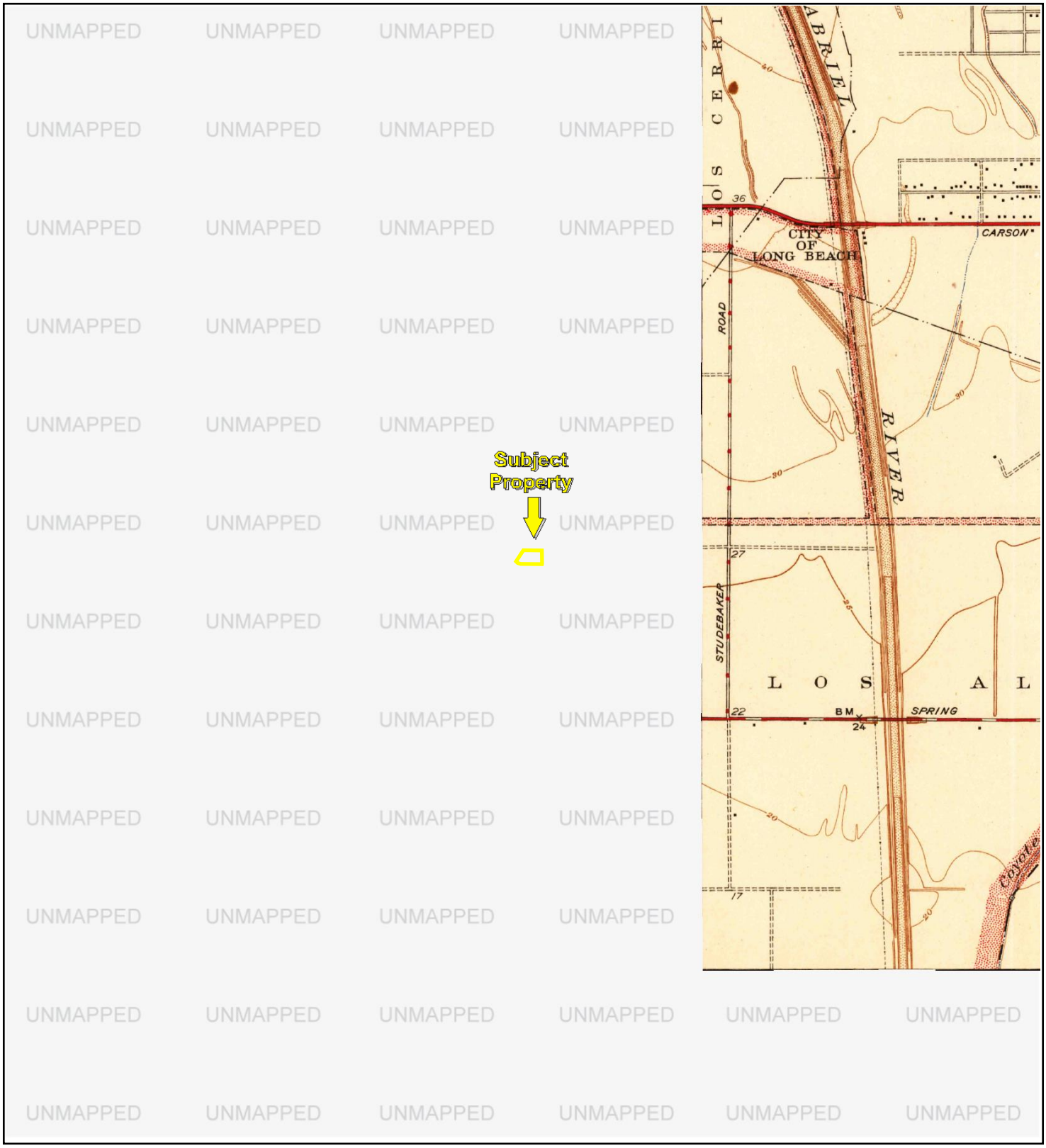

NE, Artesia, 1945, 7.5-minute

0 Miles 0.25 0.5 1 1.5

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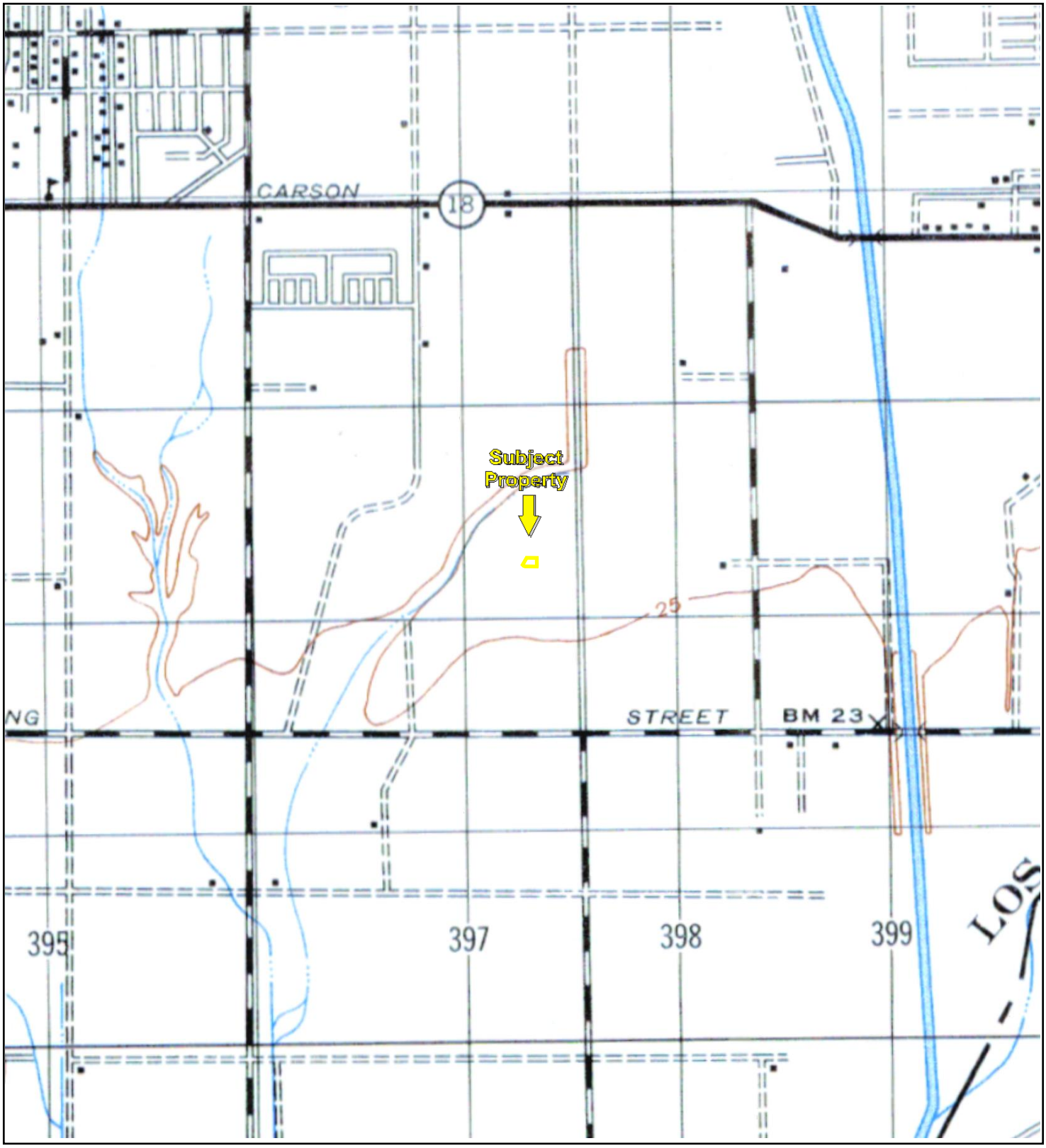
APPENDIX B: Topographic Maps

Project No. 20-289715.1

PARTNER



TP, DOWNEY, 1947, 15-minute

0 Miles 0.25 0.5 1 1.5

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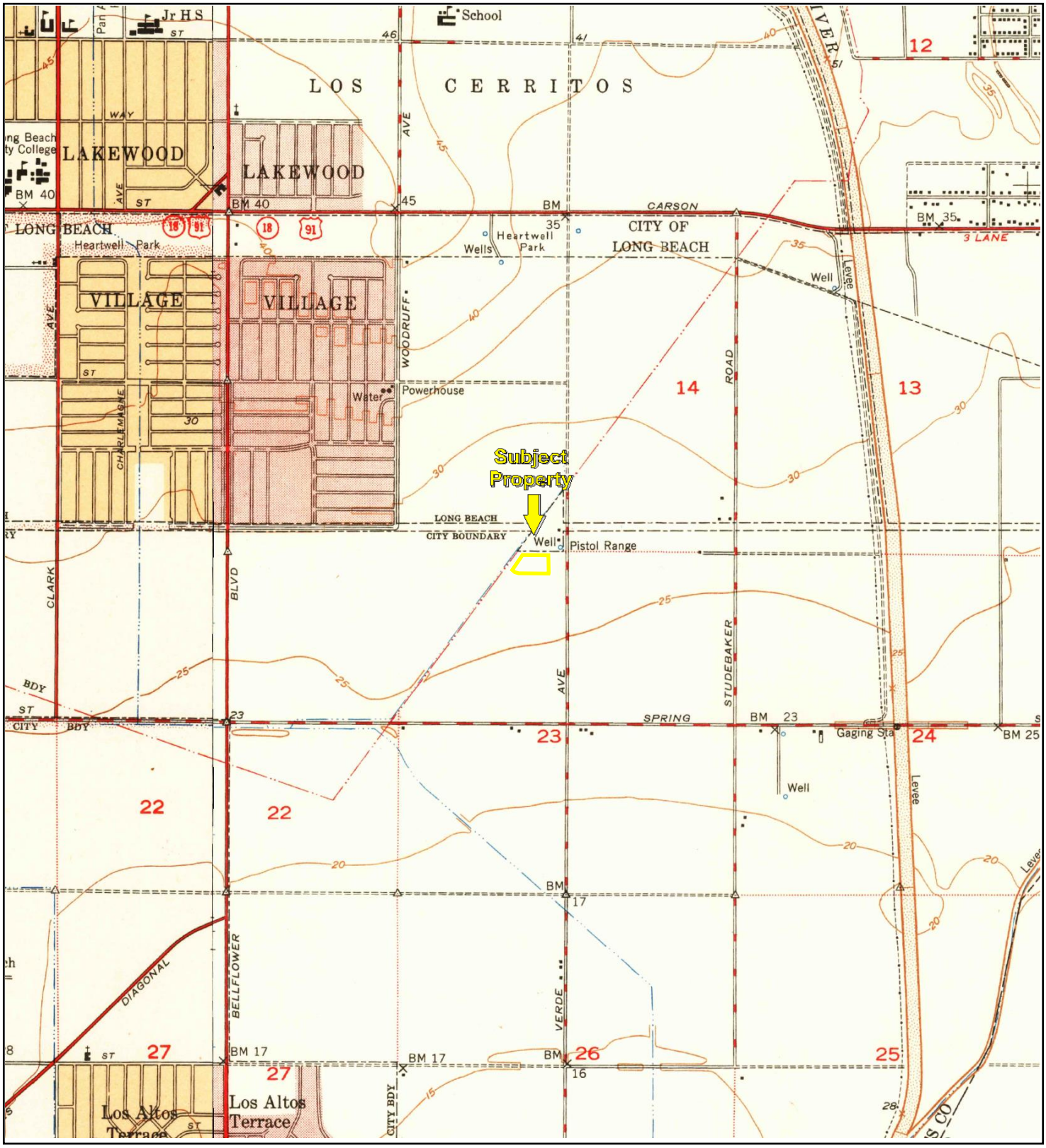
APPENDIX B: Topographic Maps

Project No. 20-289715.1

PARTNER



TP, Los Alamitos, 1949, 7.5-minute
W, Long Beach, 1949, 7.5-minute

0 Miles 0.25 0.5 1 1.5

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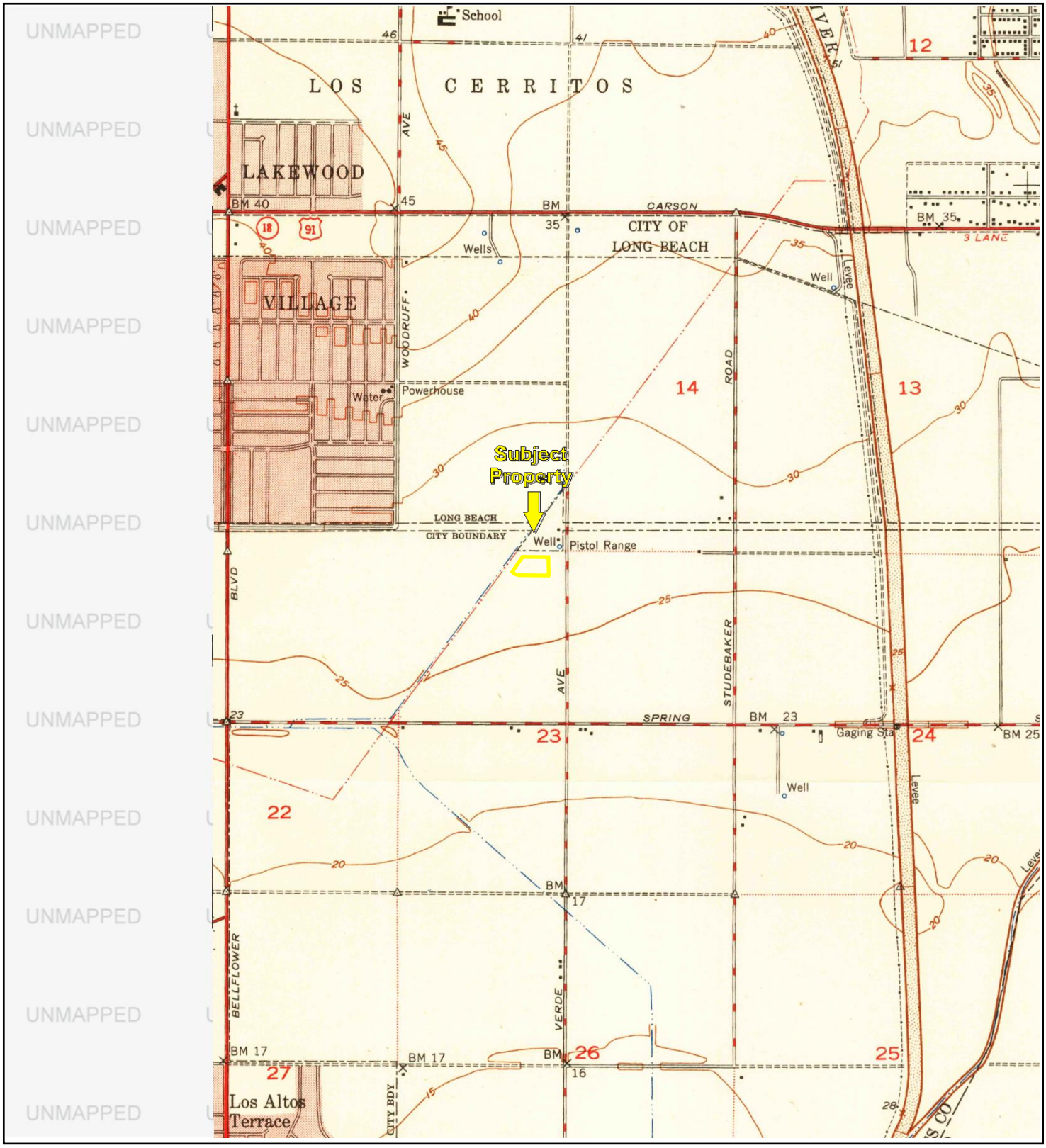
APPENDIX B: Topographic Maps

Project No. 20-289715.1

PARTNER



TP, Los Alamitos, 1950, 7.5-minute

0 Miles 0.25 0.5 1 1.5

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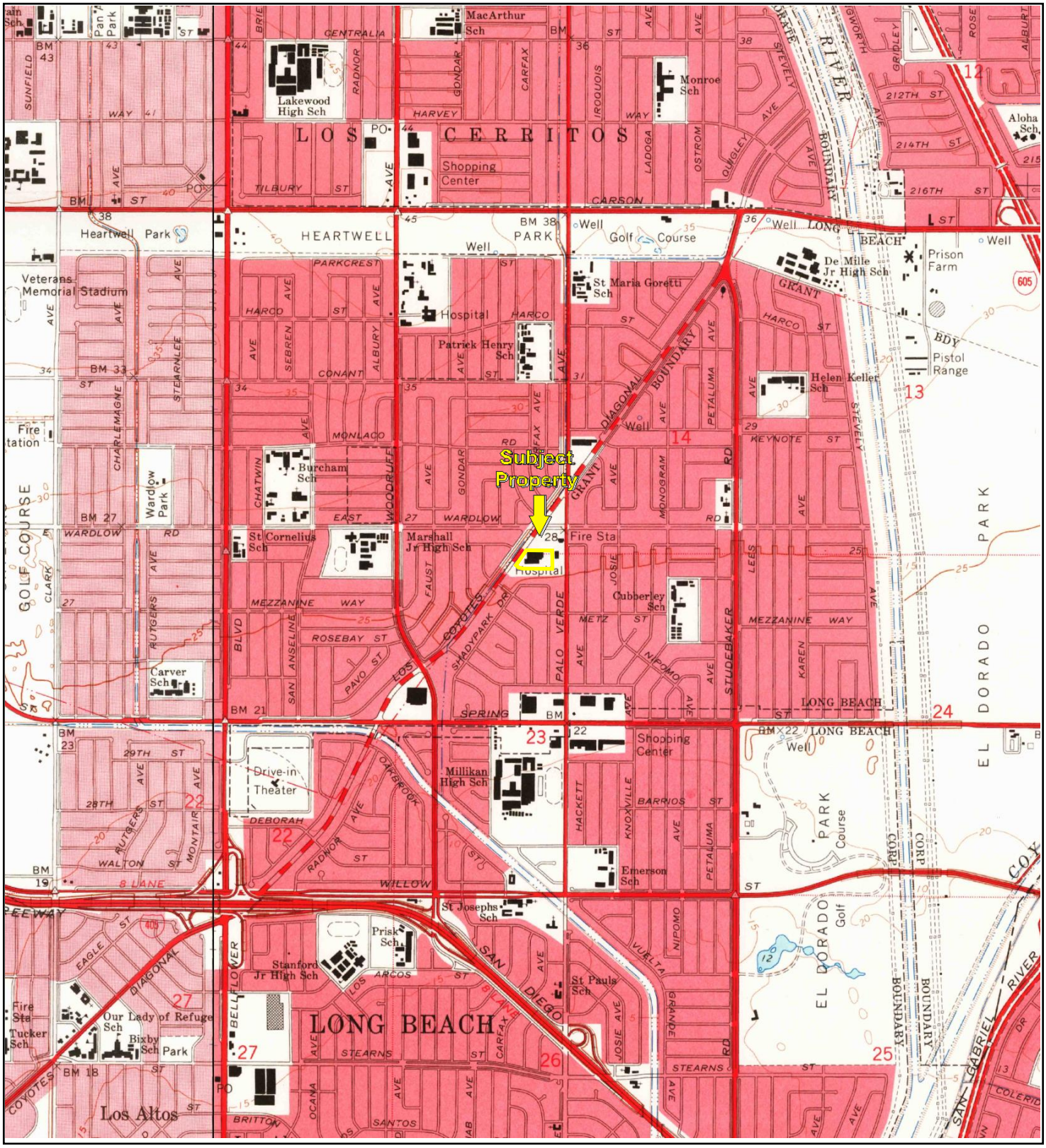

TP, Los Alamitos, 1964, 7.5-minute
W, Long Beach, 1964, 7.5-minute

0 Miles 0.25 0.5 1 1.5

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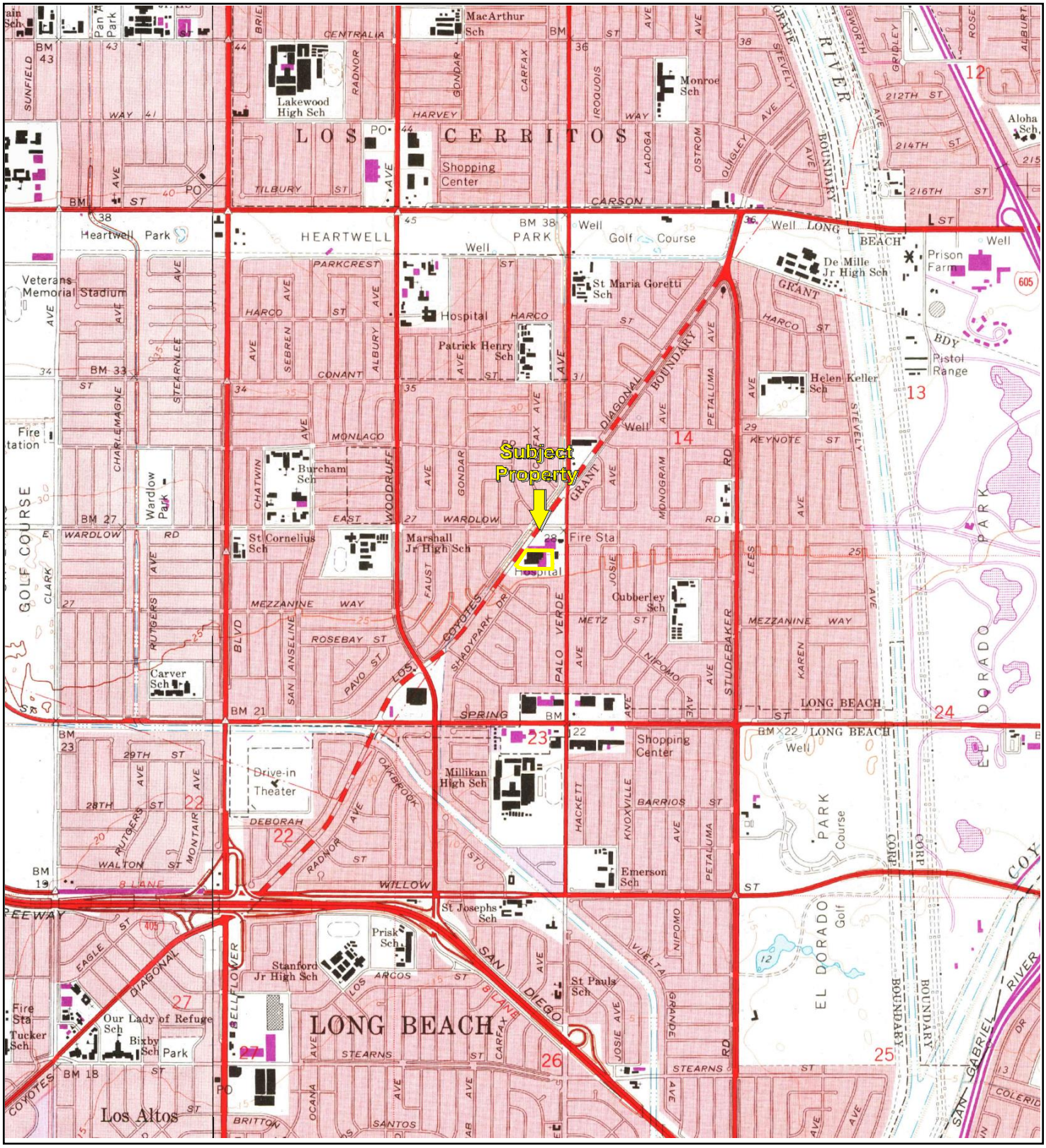
APPENDIX B: Topographic Maps

Project No. 20-289715.1

PARTNER



TP, Los Alamitos, 1972, 7.5-minute
W, Long Beach, 1972, 7.5-minute

0 Miles 0.25 0.5 1 1.5

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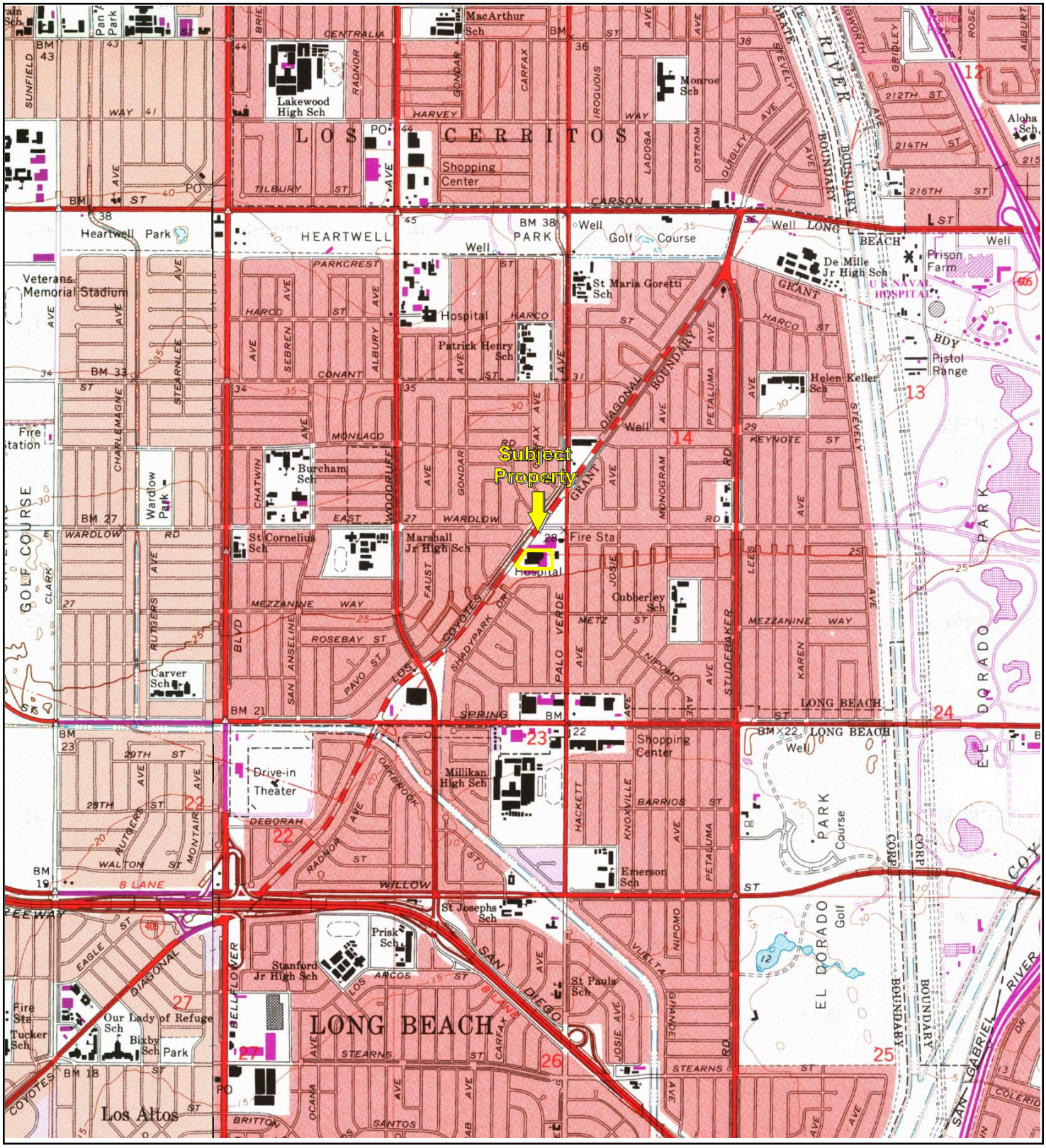
APPENDIX B: Topographic Maps

Project No. 20-289715.1

PARTNER



TP, Los Alamitos, 1981, 7.5-minute
W, Long Beach, 1981, 7.5-minute

0 Miles 0.25 0.5 1 1.5

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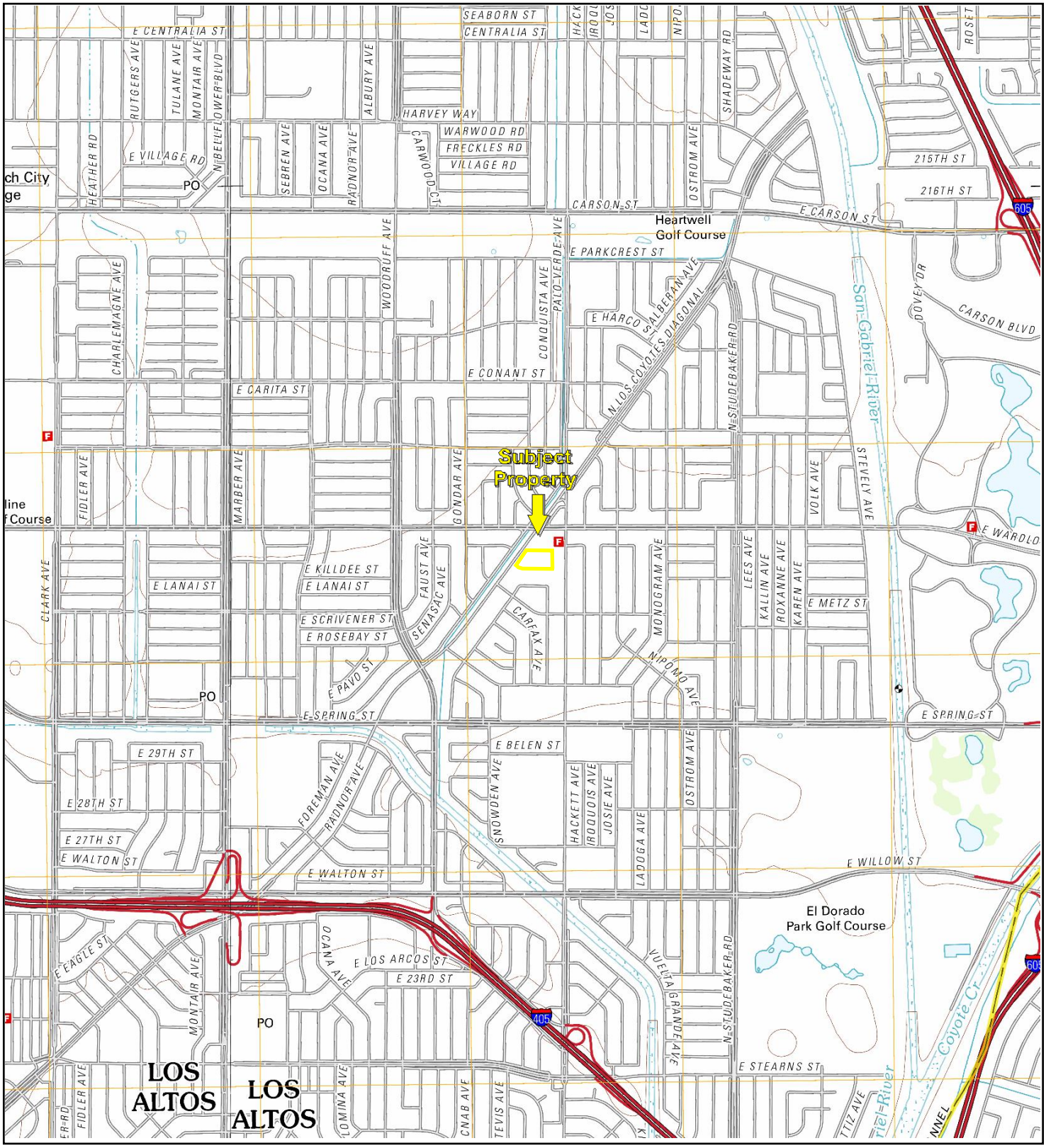
APPENDIX B: Topographic Maps

Project No. 20-289715.1

PARTNER



TP, Los Alamitos, 2012, 7.5-minute
W, Long Beach, 2012, 7.5-minute

0 Miles 0.25 0.5 1 1.5

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APPENDIX B: Topographic Maps

Project No. 20-289715.1

PARTNER

January 15, 2019
Project No. 2018-233
By Email

Mr. Robert Ehe
California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, California 90013

Re: 2019 Annual Groundwater Monitoring Report, Former Royalty Cleaners, 3378 Los Coyotes Diagonal, Long Beach, California, SLIC No. 537

Dear Mr. Ehe:

Lindmark Engineering (LE) has prepared the attached report to present the results of the 2019 annual groundwater monitoring event at the subject site. The report has been uploaded to Geotracker.

In view of the long term trend of PCE attenuation and maximum PCE concentrations below 50 µg/L for the last five events, and below 10 µg/L during this event, LE believes the site should be processed for closure. LE will contact you to discuss the requirements and schedule for site closure.

Please call us at 818-707-6100 if you have any questions.

Best regards,

PROFESSIONAL GEOLOGIST
DAVID WAYNE SMITH
NO. 8817
EXP. NOV. 30, 2020
STATE OF CALIFORNIA

David W. Smith, PG
Senior Project Geologist

and,

REGISTERED PROFESSIONAL ENGINEER
ULF M. LINDMARK
NO. 36787
EXPIRATION JUNE 30, 2020
CIVIL
STATE OF CALIFORNIA

Ulf Lindmark, PE, BCEE
President

cc: Maya Lopez Grasse/Alston+Bird (pdf)

Groundwater Monitoring Report
2019 Annual Sampling Event
Former Royalty Cleaners
3378 Los Coyotes Diagonal, Long Beach, California

15-Jan-20

GENERAL SITE INFORMATION

Site name:	Former Royalty Cleaners	**On-site groundwater wells:**	0
Site address	3378 Los Coyotes Diagonal, Long Beach, California	**Off-site groundwater wells:**	9

AGENCY INFORMATION

Local Agenc California Regional Water Quality Control Board, LA Region
Case Officer Mr. Robert Ehe
State Agenc State Water Resources Control Board

WORK PERFORMED IN 2019

Conducted 2019 annual groundwater gauging and sampling on December 18, 2019.

GROUNDWATER GAUGING AND SAMPLING FIELD ACTIVITIES

Groundwater monitoring wells gauging date:	18-Dec-19
Groundwater monitoring wells sampling date:	18-Dec-19
Number of wells gauged:	9
Number of wells sampled:	9
Method of purging/volume purged:	Submersible pump; approximately 95.5 gallons purged
Purged water disposal:	Crosby and Overton, Long Beach, California
Amount of LNAPL recovered during purging:	Not applicable
LNAPL disposal/treatment:	Not applicable
Field observations/notes:	No light non-aqueous phase liquid (LNAPL) was detected in wells. Tree roots observed in MW5, MW6, and MW8

RESULTS OF GROUNDWATER GAUGING

Minimum depth to groundwater (feet below ground surface [bgs]):	20.62	in well	MW9
Maximum depth to groundwater (feet bgs):	23.15	in well	MW5
Lowest groundwater elevation (feet above mean sea level):	3.34	in well	MW9
Highest groundwater elevation (feet above mean sea level):	4.07	in well	MW10
Average change in groundwater elevation since previous event (feet):	1.61		
Recent groundwater gradient and flow direction and date:	0.0014	S on	12/18/19
Previous groundwater gradient, flow direction and date:	0.0030	SSW on	12/19/18

LABORATORY RESULTS OF GROUNDWATER SAMPLES

Laboratory name:	American Scientific Laboratories, LLC, Los Angeles, California		
List of analyses performed:	Volatile organic compounds by EPA Method 8260B		
Maximum PCE concentration (µg/L):	9.3	in well	MW9
Maximum TCE concentration (µg/L):	7.8	in well	MW4

FINDINGS

Groundwater elevation data collected during this monitoring event show an average 1.61-foot increase compared with data reported during the previous sampling event (2018 Annual Groundwater Monitoring Event). The groundwater elevations in all wells increased. The groundwater gradient has shifted to a more southerly direction, with flatter slope, however it is generally similar to previous monitoring events (0.0014), with the prevailing groundwater flow direction to the south, with a minor component to the southwest . Roots were encountered in MW5, MW6, and MW8, and were noted in the field logs. The roots may have influenced some measurements in these wells.

Tetrachloroethene (PCE) concentrations have generally decreased compared to the previous sampling event. PCE concentrations decreased or remained below laboratory detection limits in all wells. PCE concentrations in MW3, MW6, MW7, MW10, and MW11 were below the maximum contaminant level (MCL = 5 µg/L). For the first time since the inception of monitoring in 1996, all PCE concentrations were below 10 µg/L. It appears the core of the PCE plume in groundwater continues to elongate toward the direction of MW9, however PCE concentrations are declining. The aerial extent of the PCE plume in groundwater, with concentrations above the California Maximum Contaminant Level (MCL) of 5 µg/L, has decreased since the last sampling event. Concentrations indicate the plume is decreasing in size consistent with natural attenuation.

Trichloroethene (TCE) concentrations above the method detection limit (MDL) were detected in seven wells (MW3, MW4, MW5, MW6, MW7, MW8, and MW9). TCE concentrations decreased in most wells, however increased in well MW8, or remained below detection limits in wells MW10 and MW11. The highest TCE concentration was detected in MW4 (7.76 µg/L). *Cis*-1,2-dichloroethene (cis-1,2-DCE), which is a daughter product of TCE, was detected in four wells during this sampling event, MW3, MW4, MW6 and MW7, and decreased to below detection limits in MW5. Chlorobenzene and toluene were detected in MW3 (0.900J µg/L and 0.450J µg/L,

respectively). No other VOCs were detected.

The PCE concentration in the most downgradient well, MW9, decreased from 17.1 µg/L during the previous sampling event to 9.30 µg/L during this event. Well MW9 is approximately 140 feet downgradient of well MW8. Since 2006, the PCE concentrations in MW8 have shown a declining trend after reaching a peak of 178 µg/L on December 13, 2005. The reduction in maximum PCE concentrations from well MW6, 266 feet upgradient of MW8, to MW8 (maximum of 1,550 µg/L at MW6 to a maximum of 178 µg/L at MW8) and from MW8 to MW9 (a maximum of 178 µg/L at MW8 to a maximum of 22.5 µg/L at MW9) indicates very significant attenuation in the downgradient direction.

CONCLUSIONS

If roots continue to influence depth to groundwater measurements at site wells, excessive root growth could affect groundwater sampling during subsequent sampling events.

The presence of TCE and cis-1,2-DCE concentrations at the site indicates the degradation of the parent compound, PCE.

Trace detections of chlorobenzene and toluene in MW3, which was the first well purged, are likely due to minor equipment cross contaminant. These compounds have never been detected before at the site, and were only detected in the first well purged. Furthermore, these compounds are not degradation products of PCE, TCE or cis-1,2-DCE.

PCE concentrations found during this sampling event decreased in all wells, with many concentrations in wells nearing their historic low range, and the concentration in MW3 falling below its historic range. PCE concentrations in downgradient well MW8 continues to be lower than upgradient well (MW5) or wells close to the source area (MW4). However well MW3 near the source area has decreased significantly, from 27.1 µg/L during the last sampling event to 1.94 µg/L during this event. Well MW4 near the source area also has shown decreasing PCE concentrations, from 13.3 µg/L during the last sampling event to 6.30 µg/L during this event, despite large fluctuations in groundwater elevations. These data support the conclusion that the PCE plume is decreasing in mass.

Based on the historic PCE data from wells MW6, MW8, and MW9, well MW9 is a representative downgradient well. LE expects that a long-term trend of attenuation in the downgradient direction and stable or lower PCE concentrations in this well will continue.

In view of the long term trend of PCE attenuation and maximum PCE concentrations below 50 µg/L for the last five events, and below 10 µg/L during this event, LE believes the site should be processed for closure.

STATEMENT OF LIMITATIONS

This report has been prepared for the exclusive use of the client and may not be relied upon by any other person or entity without Lindmark Engineering's express written permission.

The services described in this report were performed in a manner consistent with Lindmark Engineering's agreement with the client and in accordance with generally accepted professional consulting principles and practices.

Opinions and recommendations contained in this report apply to conditions existing at certain locations when services were performed and are intended only for the specific purposes, locations, time frames, and project parameters indicated. Lindmark Engineering cannot be responsible for the impact of any changes in environmental standards, practices, or regulations after performance of services.

Lindmark Engineering has not attempted to verify information/data provided to it by our client or other third parties, except as explicitly noted in our report, and makes no express representations to the accuracy of such information/data by the inclusion of it in our report.

This report is issued with the understanding that the client, the property owner, or its representative is responsible for ensuring that the information, conclusions and recommendations contained herein are brought to the attention of the appropriate regulatory agencies, as required.

ATTACHMENTS

Tables

Table 1	Summary of Groundwater Monitoring Results
Table 2	Summary of Groundwater Analytical Results
Table 3	Historic Groundwater Elevations
Table 4	Historic Groundwater Analytical Results – Organic Contaminants

Figures

Figure 1	Site Vicinity Map
Figure 2	Groundwater Contour Map (12/18/19)
Figure 3	PCE, TCE, and cis-1,2-DCE Concentration Map in Groundwater (12/18/19)

Appendices

Appendix A	Field Methodology
Appendix B	Graphs of Detected Concentrations & Groundwater Elevations versus Time
Appendix C	Well Purging Records
Appendix D	Laboratory Analytical Reports and Chain-of-Custody Records
Appendix E	Non-Hazardous Waste Manifest

TABLES

Table 1
Summary of Groundwater Monitoring Results
Former Royalty Cleaners

Well ID	Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)
MW1	12/18/19		Abandoned	
MW2	12/18/19		Abandoned	
MW3	12/18/19	26.07	22.08	3.99
MW4	12/18/19	26.11	22.12	3.99
MW5	12/18/19	26.71	23.15	3.56
MW6	12/18/19	26.47	22.80	3.67
MW7	12/18/19	25.02	21.59	3.43
MW8	12/18/19	24.67	21.17	3.50
MW9	12/18/19	23.96	20.62	3.34
MW10	12/18/19	25.50	21.43	4.07
MW11	12/18/19	24.97	21.03	3.94

AMSL = Above mean sea level

Table 2
Summary of Groundwater Analytical Results
2019 Annual Monitoring Event

Well ID	Date	PCE (µg/L)	TCE (µg/L)	Other (µg/L)
MW1	12/18/19	—	—	—
MW2	12/18/19	—	—	—
MW3	12/18/19	1.94	3.38	1.32*
MW4	12/18/19	6.30	7.76	0.975J*
MW5	12/18/19	6.92	4.17	ND
MW6	12/18/19	4.21	1.12	0.515J*
MW7	12/18/19	4.54	3.33	0.470J*
MW8	12/18/19	5.97	1.06	ND
MW9	12/18/19	9.30	2.59	ND
MW10	12/18/19	ND	ND	ND
MW11	12/18/19	ND	ND	ND
MDL		0.421	0.117	—
PQL		1.00	1.00	—
Cal MCL		5.00	5.00	—

Notes:

Cal MCL = California Department of Health Services Maximum Contaminant Level
PQL = Practical quantitation limit
MDL = Method detection limit
µg/L = Micrograms per liter
ND = Not detected at or above stated PQL
PCE Tetrachloroethene
TCE Trichloroethene
* cis-1,2-DCE

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)		Notes
MW1					
02/03/00	26.01	18.33	7.68		
04/13/00	26.01	17.62	8.39	(H)	
07/03/00	26.01	18.37	7.64		
09/11/00	26.01	19.66	6.35	(L)	
10/10/00	26.01	abandoned			
MW2					
02/03/00	28.53	20.67	7.86		
04/13/00	28.53	19.94	8.59	(H)	
07/03/00	28.53	20.72	7.81		
09/11/00	28.53	22.00	6.53	(L)	
10/10/00	28.53	abandoned			
MW3					
02/03/00	26.07	18.36	7.71		
04/13/00	26.07	17.64	8.43		
07/03/00	26.07	18.39	7.68		
09/11/00	26.07	19.74	6.33		
11/03/00	26.07	20.06	6.01		
02/05/01	26.07	19.48	6.59		
07/02/01	26.07	17.41	8.66		
01/29/02	26.07	19.09	6.98		
03/28/02	26.07	18.97	7.10		
04/12/02	26.07	18.93	7.14		
06/27/02	26.07	20.11	5.96		
11/03/02	26.07	21.76	4.31		
01/02/03	26.07	20.99	5.08		
03/17/03	26.07	19.69	6.38		
09/03/03	26.07	19.75	6.32		
03/19/04	26.07	18.90	7.17		
09/17/04	26.07	20.97	5.10		
05/27/05	26.07	13.41	12.66	(H)	
12/13/05	26.07	15.52	10.55		
06/13/06	26.07	14.19	11.88		
12/18/06	26.07	16.53	9.54		
06/05/07	26.07	16.78	9.29		

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
12/13/07	26.07	19.65	6.42	
12/22/08	26.07	20.99	5.08	
06/10/09	26.07	21.15	4.92	
11/24/09	26.07	22.32	3.75	
06/25/10	26.07	20.94	5.13	
12/16/10	26.07	21.56	4.51	
12/20/11	26.07	17.38	8.69	
12/20/12	26.07	19.05	7.02	
12/30/13	26.07	20.31	5.76	
02/13/15	26.07	22.32	3.75	
12/23/15	26.07	23.60	2.47	
12/20/16	26.07	25.10	0.97 (L)	
12/28/17	26.07	22.92	3.15	
12/19/18	26.07	23.68	2.39	
12/18/19	26.07	22.08	3.99	
MW4				
02/03/00	26.11	18.42	7.69	
04/13/00	26.11	17.70	8.41	
07/03/00	26.11	18.46	7.65	
09/11/00	26.11	19.80	6.31	
11/03/00	26.11	20.12	5.99	
02/05/01	26.11	19.56	6.55	
07/02/01	26.11	17.49	8.62	
01/29/02	26.11	19.15	6.96	
03/28/02	26.11	19.05	7.06	
04/12/02	26.11	18.99	7.12	
06/27/02	26.11	20.19	5.92	
11/03/02	26.11	21.83	4.28	
01/02/03	26.11	21.05	5.06	
03/17/03	26.11	19.74	6.37	
09/03/03	26.11	19.80	6.31	
03/19/04	26.11	18.97	7.14	
09/17/04	26.11	21.04	5.07	
05/27/05	26.11	13.48	12.63 (H)	
12/13/05	26.11	15.57	10.54	
06/13/06	26.11	14.25	11.86	
12/18/06	26.11	16.60	9.51	
06/05/07	26.11	16.85	9.26	

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)		Notes
12/13/07	26.11	19.72	6.39		
12/22/08	26.11	21.06	5.05		
06/10/09	26.11	21.21	4.90		
11/24/09	26.11	22.37	3.74		
06/25/10	26.11	21.00	5.11		
12/16/10	26.11	21.62	4.49		
12/20/11	26.11	17.44	8.67		
12/20/12	26.11	19.15	6.96		
12/30/13	26.11	20.35	5.76		
02/13/15	26.11	22.41	3.70		
12/23/15	26.11	23.54	2.57		
12/20/16	26.11	25.12	0.99	(L)	
12/28/17	26.11	22.98	3.13		
12/19/18	26.11	23.83	2.28		
12/18/19	26.11	22.12	3.99		
MW5					
02/03/00	26.71	19.55	7.16		
04/13/00	26.71	18.85	7.86		
07/03/00	26.71	19.56	7.15		
09/11/00	26.71	20.94	5.77		
11/03/00	26.71	21.29	5.42		
02/05/01	26.71	20.68	6.03		
07/02/01	26.71	18.61	8.10		
01/29/02	26.71	20.28	6.43		
03/28/02	26.71	20.16	6.55		
04/12/02	26.71	20.13	6.58		
06/27/02	26.71	21.34	5.37		
11/03/02	26.71	22.98	3.73		
01/02/03	26.71	22.14	4.57		
03/17/03	26.71	20.80	5.91		
09/03/03	26.71	20.94	5.77		
03/19/04	26.71	20.06	6.65		
09/17/04	26.71	22.20	4.51		
05/27/05	26.71	14.59	12.12	(H)	
12/13/05	26.71	16.47	10.24		
06/13/06	26.71	15.37	11.34		
12/18/06	26.71	17.71	9.00		
06/05/07	26.71	17.98	8.73		

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)		Notes
12/13/07	26.71	20.81	5.90		
12/22/08	26.71	22.16	4.55		
06/10/09	26.71	22.27	4.44		
11/24/09	26.71	23.50	3.21		
06/25/10	26.71	22.02	4.69		
12/16/10	26.71	22.72	3.99		
12/20/11	26.71	18.62	8.09		
12/20/12	26.71	20.26	6.45		
12/30/13	26.71	21.65	5.06		
02/13/15	26.71	23.52	3.19		
12/23/15	26.71	24.76	1.95		
12/20/16	26.71	26.28	0.43	(L)	
12/28/17	26.71	24.00	2.71		
12/19/18	26.71	24.86	1.85		
12/18/19	26.71	23.15	3.56		
MW6					
04/13/00	26.47	18.55	7.92		
07/03/00	26.47	19.34	7.13		
09/11/00	26.47	20.72	5.75		
11/03/00	26.47	21.05	5.42		
02/05/01	26.47	20.40	6.07		
07/02/01	26.47	18.38	8.09		
01/29/02	26.47	20.02	6.45		
03/28/02	26.47	19.88	6.59		
04/12/02	26.47	19.85	6.62		
06/27/02	26.47	21.11	5.36		
11/03/02	26.47	22.72	3.75		
01/02/03	26.47	21.84	4.63		
03/17/03	26.47	20.51	5.96		
09/03/03	26.47	20.70	5.77		
03/19/04	26.47	19.75	6.72		
09/17/04	26.47	21.96	4.51		
05/27/05	26.47	14.37	12.10	(H)	
12/13/05	26.47	16.45	10.02		
06/13/06	26.47	15.08	11.39		
12/18/06	26.47	17.35	9.12		
06/05/07	26.47	17.71	8.76		
12/13/07	26.47	20.51	5.96		

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)		Notes
12/22/08	26.47	21.88	4.59		
06/10/09	26.47	21.88	4.59		
11/24/09	26.47	23.21	3.26		
06/25/10	26.47	21.74	4.73		
12/16/10	26.47	22.41	4.06		
12/20/11	26.47	18.23	8.24		
12/20/12	26.47	20.04	6.43		
12/30/13	26.47	21.14	5.33		
02/13/15	26.47	23.14	3.33		
12/23/15	26.47	24.45	2.02		
12/20/16	26.47	25.74	0.73	(L)	
12/28/17	26.47	23.58	2.89		
12/19/18	26.47	24.20	2.27		
12/18/19	26.47	22.80	3.67		
MW7					
03/28/02	25.02	18.66	6.36		
04/12/02	25.02	18.62	6.40		
06/27/02	25.02	19.87	5.15		
11/03/02	25.02	21.53	3.49		
01/02/03	25.02	20.65	4.37		
03/17/03	25.02	19.28	5.74		
09/03/03	25.02	19.44	5.58		
03/19/04	25.02	18.56	6.46		
09/17/04	25.02	20.72	4.30		
05/27/05	25.02	13.13	11.89	(H)	
12/13/05	25.02	15.19	9.83		
06/13/06	25.02	14.10	10.92		
12/18/06	25.02	16.34	8.68		
06/05/07	25.02	16.50	8.52		
12/13/07	25.02	19.37	5.65		
12/22/08	25.02	20.73	4.29		
06/10/09	25.02	20.77	4.25		
11/24/09	25.02	21.94	3.08		
06/25/10	25.02	20.52	4.50		
12/16/10	25.02	21.38	3.64		
12/20/11	25.02	17.05	7.97		
12/20/12	25.02	20.70	4.32		
12/30/13	25.02	20.05	4.97		

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
02/13/15	25.02	22.52	2.50	
12/23/15	25.02	23.24	1.78	
12/20/16	25.02	24.54	0.48 (L)	
12/28/17	25.02	22.44	2.58	
12/19/18	25.02	23.23	1.79	
12/18/19	25.02	21.59	3.43	
MW8				
03/28/02	24.67	18.49	6.18	
04/12/02	24.67	18.51	6.16	
06/27/02	24.67	19.92	4.75	
11/03/02	24.67	21.52	3.15	
01/02/03	24.67	20.41	4.26	
03/17/03	24.67	19.10	5.57	
09/02/03	24.67	19.39	5.28	
03/19/04	24.67	18.34	6.33	
09/17/04	24.67	20.75	3.92	
05/27/05	24.67	13.18	11.49 (H)	
12/13/05	24.67	15.17	9.50	
06/13/06	24.67	13.82	10.85	
12/18/06	24.67	16.17	8.50	
06/05/07	24.67	16.40	8.27	
12/13/07	24.67	19.33	5.34	
12/22/08	24.67	20.65	4.02	
06/10/09	24.67	20.71	3.96	
11/24/09	24.67	21.91	2.76	
06/25/10	24.67	20.28	4.39	
12/16/10	24.67	21.05	3.62	
12/20/11	24.67	16.81	7.86	
12/20/12	24.67	18.56	6.11	
12/30/13	24.67	19.70	4.97	
02/13/15	24.67	21.71	2.96	
12/23/15	24.67	23.00	1.67	
12/20/16	24.67	24.50	0.17 (L)	
12/28/17	24.67	22.01	2.66	
12/19/18	24.67	23.00	1.67	
12/18/19	24.67	21.17	3.50	
MW9				
01/02/03	23.96	19.87	4.09	
03/17/03	23.96	18.47	5.49	
09/02/03	23.96	18.87	5.09	
03/19/04	23.96	17.79	6.17	

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
09/17/04	23.96	20.22	3.74	
05/27/05	23.96	12.72	11.24 (H)	
12/13/05	23.96	14.7	9.26	
06/13/06	23.96	13.33	10.63	
12/18/06	23.96	15.68	8.28	
06/05/07	23.96	15.90	8.06	
12/13/07	23.96	18.84	5.12	
12/22/08	23.96	20.18	3.78	
06/10/09	23.96	20.16	3.80	
11/24/09	23.96	21.33	2.63	
06/25/10	23.96	19.71	4.25	
12/16/10	23.96	20.46	3.50	
12/20/11	23.96	16.32	7.64	
12/20/12	23.96	17.96	6.00	
12/30/13	23.96	19.18	4.78	
02/13/15	23.96	21.07	2.89	
12/23/15	23.96	22.49	1.47	
12/20/16	23.96	23.81	0.15 (L)	
12/28/17	23.96	21.63	2.33	
12/19/18	23.96	22.33	1.63	
12/18/19	23.96	20.62	3.34	

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
MW10				
12/13/05	25.50	15.15	10.35	
06/13/06	25.50	13.80	11.70 (H)	
12/18/06	25.50	16.15	9.35	
06/05/07	25.50	16.42	9.08	
12/13/07	25.50	19.28	6.22	
12/22/08	25.50	20.62	4.88	
06/10/09	25.50	20.73	4.77	
11/24/09	25.50	21.92	3.58	
06/25/10	25.50	20.42	5.08	
12/16/10	25.50	21.10	4.40	
12/20/11	25.50	16.88	8.62	
12/20/12	25.50	18.53	6.97	
12/30/13	25.50	19.91	5.59	
02/13/15	25.50	21.70	3.80	
12/23/15	25.50	23.07	2.43	
12/20/16	25.50	24.39	1.11 (L)	
12/28/17	25.50	21.70	3.80	
12/19/18	25.50	22.61	2.89	
12/18/19	25.50	21.43	4.07	

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
MW11				
12/13/05	24.97	15.07	9.90	
06/13/06	24.97	13.68	11.29 (H)	
12/18/06	24.97	16.04	8.93	
06/05/07	24.97	16.30	8.67	
12/13/07	24.97	19.18	5.79	
12/22/08	24.97	20.52	4.45	
06/10/09	24.97	20.51	4.46	
11/24/09	24.97	21.72	3.25	
06/25/10	24.97	20.14	4.83	
12/16/10	24.97	21.46	3.51	
12/20/11	24.97	16.67	8.30	
12/20/12	24.97	18.81	6.16	
12/30/13	24.97	19.65	5.32	
02/13/15	24.97	21.49	3.48	
12/23/15	24.97	22.83	2.14	
12/20/16	24.97	24.31	0.66 (L)	
12/28/17	24.97	21.92	3.05	
12/19/18	24.97	22.71	2.26	
12/18/19	24.97	21.03	3.94	

Notes:

(H) = Highest historical groundwater elevation
(L) = Lowest historical groundwater elevation
AMSL = Above mean sea level

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
MW1				
05/06/96	3,700.0	ND	ND	
02/03/00	1,980.0	65.0	13.0	Other was *cis*- 1,2-dichloroethene
07/03/00	1,990.0	ND	ND	
09/11/00	3,560.0	118.0	ND	
10/10/00			abandoned	
MW2				
05/06/96	8.3	2.6	ND	
02/03/00	ND	ND	ND	
07/03/00	ND	ND	ND	
09/11/00	ND	ND	ND	
09/27/00			abandoned	
MW3				
05/06/96	2,200.0	ND	ND	
02/03/00	72.0	19.0	ND	
07/03/00	60.4	14.9	ND	
09/11/00	50.5	29.0	0.7	Other was *cis*- 1,2-dichloroethene
11/03/00	26.5	26.3	1.0	Other was *cis*- 1,2-dichloroethene
02/05/01	23.6	5.0	ND	
07/02/01	94.7	3.8	0.7	
07/02/01	–	–	0.5	Other was chloroform (trichloromethane)
01/29/02	4.0	7.6	ND	
03/28/02	19.4	2.7	ND	
06/27/02	377.0	39.0	ND	
11/13/02	55.1	25.0	4.2	Other was *cis*- 1,2-dichloroethene
01/02/03	20.9	25.6	1.6	Other was *cis*- 1,2-dichloroethene
03/17/03	31.7	4.3	ND	
09/02/03	95.5	16.3	0.7	Other was *cis*- 1,2-dichloroethene
03/19/04	17.1	2.2	ND	
09/17/04	150.0	33.0	ND	
05/27/05	10.0	17.0	1.4	Other was *cis*- 1,2-dichloroethene
12/13/05	14.4	4.0	ND	
06/13/06	13.3	5.1	ND	

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
12/18/06	29.0	26.0	1.8	Other was *cis*-1,2-dichloroethene
06/05/07	81.1	17.2	1.0	Other was *cis*-1,2-dichloroethene
12/13/07	145.0	58.5	4.9	Other was *cis*-1,2-dichloroethene
12/22/08	63.8	44.2	3.1	Other was *cis*-1,2-dichloroethene
06/10/09	142.0	33.8	2.6	Other was *cis*-1,2-dichloroethene
11/24/09	152.0	78.7	10.1	Other was *cis*-1,2-dichloroethene
06/25/10	37.1	9.4	ND	
12/16/10	14.2	2.7	ND	
12/21/11	89.6	37.3	4.39	Other was *cis*-1,2-dichloroethene
12/20/12	14.1	3.96	ND	
12/30/13	12.8	2.70	ND	
02/13/15	53.7	18.3	1.85	Other was *cis*-1,2-dichloroethene
12/23/15	14.3	4.22	0.37 J	Other was *cis*-1,2-dichloroethene
12/20/16	34.0	19.0	3.60	Other was *cis*-1,2-dichloroethene
12/28/17	38.0	26.4	5.24	Other was *cis*-1,2-dichloroethene
12/19/18	27.1	19.6	19.9	Other was Methylene chloride
12/18/19	1.94	3.38	1.32	*Other was *cis*-1,2-dichloroethene, and chlorobenzene = 0.900J µg/L, and Toluene = 0.450J µg/L
MW4				
05/06/96	1,300.0	ND	ND	
02/03/00	1,540.0	59.0	ND	
07/03/00	2,200.0	ND	ND	
09/11/00	1,280.0	ND	ND	
11/03/00	830.0	78.0	ND	
02/05/01	2,630.0	59.0	ND	
07/02/01	975.0	45.0	ND	
01/29/02	820.0	49.0	ND	
03/28/02	559.0	14.0	ND	
06/27/02	147.0	6.0	ND	
11/13/02	792.0	93.0	ND	
01/02/03	410.0	49.0	ND	
03/17/03	109.0	6.8	ND	
09/02/03	645.0	31.0	ND	
03/19/04	97.1	7.6	ND	
09/17/04	410.0	34.0	ND	

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
05/27/05	81.0	19.0	0.90 J	Other was *cis*- 1,2-dichloroethene
12/13/05	110.0	13.6	ND	
06/13/06	516.0	67.0	ND	
12/18/06	740.0	71.0	1.7	Other was *cis*- 1,2-dichloroethene
06/05/07	131.0	12.1	ND	
12/13/07	1,440.0	108.0	ND	
12/22/08	960.0	121.0	ND	
06/10/09	165.0	18.6	ND	
11/24/09	851.0	102.0	ND	
06/25/10	69.9	15.8	1.35	Other was *cis*- 1,2-dichloroethene
12/16/10	79.5	27.4	2.91	Other was *cis*- 1,2-dichloroethene
12/21/11	21.7	4.3	0.540 J	Other was *cis*- 1,2-dichloroethene
12/20/12	96.8	48.1	4.37	Other was *cis*- 1,2-dichloroethene
12/30/13	133.0	67.0	7.41	Other was *cis*- 1,2-dichloroethene
02/13/15	73.3	53.2	8.57	Other was *cis*- 1,2-dichloroethene
12/23/15	37.4	18.7	2.67	Other was *cis*- 1,2-dichloroethene
12/20/16	36.8	39.2	9.34	Other was *cis*- 1,2-dichloroethene
12/28/17	4.78	9.95	20.0	Other was *cis*- 1,2-dichloroethene
12/19/18	13.3	9.14	15.8	Other was Methylene chloride
12/18/19	6.30	7.76	0.975 J	Other was cis-1,2-dichloroethene
MW5				
02/03/00	29.0	2.2	ND	
07/03/00	8.7	ND	ND	
09/11/00	15.0	0.6	ND	
11/03/00	14.9	ND	ND	
02/05/01	7.7	ND	ND	
07/02/01	6.2	ND	ND	
01/29/02	5.4	ND	ND	
03/28/02	25.3	2.1	ND	
06/27/02	16.7	1.3	ND	
11/13/02	11.2	0.9	ND	
01/02/03	6.1	0.7	ND	
03/17/03	15.6	1.1	ND	
09/02/03	11.2	0.8	ND	
03/19/04	9.5	ND	ND	

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
09/17/04	5.8	ND	ND	
05/27/05	3.5	0.39 J	ND	
12/13/05	15.6	0.85 J	ND	
06/13/06	16.6	2.3	ND	
12/18/06	9.8	1.0	ND	
06/05/07	4.5	ND	ND	
12/13/07	9.3	ND	ND	
12/22/08	8.45	ND	ND	
06/10/09	6.62	ND	ND	
11/24/09	5.37	ND	ND	
06/25/10	3.21	ND	ND	
12/16/10	4.05	ND	ND	
12/21/11	2.46	1.5	0.325 J	Other was *cis*- 1,2-dichloroethene
12/20/12	19.30	9.26	1.23	Other was *cis*- 1,2-dichloroethene
12/30/13	25.60	5.39	ND	
02/13/15	67.2	25.0	4.06	Other was *cis*- 1,2-dichloroethene
12/23/15	40.5	10.2	1.29	Other was *cis*- 1,2-dichloroethene
12/20/16	33.2	10.5	1.43	Other was *cis*- 1,2-dichloroethene
12/28/17	34.5	11.9	1.38	Other was *cis*- 1,2-dichloroethene
12/19/18	11.4	4.38	0.535 J	Other was cis-1,2-dichloroethene, and Methylene chloride = 9.06
12/18/19	6.92	4.17	ND	
MW6				
04/13/00	84.5	3.2	ND	
07/03/00	66.8	2.3	ND	
09/11/00	1,550.0	ND	ND	
11/03/00	115.0	4.9	ND	
02/05/01	77.6	5.6	ND	
07/02/01	48.2	2.8	ND	
01/29/02	44.4	2.2	ND	
03/28/02	19.8	1.5	ND	
06/27/02	82.4	7.0	ND	
11/13/02	61.2	4.1	ND	
01/02/03	41.9	2.5	ND	
03/17/03	128.0	5.3	ND	
09/02/03	147.0	5.5	6.8	Other was dichlorodifluoromethane

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
03/19/04	140.0	8.7	ND	
09/17/04	89.0	7.2	ND	
05/27/05	38.0	3.8	ND	
12/13/05	86.5	6.8	0.76 J	Other was *cis*- 1,2-dichloroethene
06/13/06	65.4	8.1	ND	
12/18/06	80.0	9.9	0.8	Other was *cis*- 1,2-dichloroethene
06/05/07	121.0	10.9	1.4	Other was *cis*- 1,2-dichloroethene
12/13/07	64.1	6.6	ND	
12/22/08	72.3	7.72	ND	
06/10/09	103.0	13.50	ND	
11/24/09	144.0	17.70	ND	
06/25/10	86.3	12.50	ND	
12/16/10	95.7	12.40	ND	
12/21/11	26.3	3.66	0.510 J	
12/20/12	29.9	4.76	2.98	Other was *cis*- 1,2-dichloroethene
12/30/13	26.7	3.67	ND	
02/13/15	17.9	5.77	0.490 J	*cis*- 1,2-dichloroethene
12/23/15	ND	ND	ND	
12/20/16	7.92	1.90	20.3	Other was p-isopropyltoluene
12/28/17	17.4	3.32	1.45	*cis*- 1,2-dichloroethene
12/19/18	9.65	2.43	21.9	Other was Methylene chloride
12/18/19	4.21	1.12	0.515 J	Other was cis-1,2-dichloroethene
MW7				
03/28/02	1.2	ND	ND	
06/27/02	0.8	ND	ND	
11/13/02	0.5	ND	ND	
01/02/03	ND	ND	ND	
03/17/03	1.1	ND	ND	
09/02/03	0.6	ND	ND	
03/19/04	ND	ND	ND	
09/17/04	ND	ND	ND	
05/27/05	0.48 J	ND	ND	
12/13/05	2.0	0.25 J	ND	
06/13/06	1.5	1.7	ND	
12/18/06	3.6	ND	ND	

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
06/05/07	ND	ND	ND	
12/13/07	2.0	ND	ND	
12/22/08	ND	ND	ND	
06/10/09	ND	ND	ND	
11/24/09	ND	ND	ND	
06/25/10	ND	ND	ND	
12/16/10	ND	ND	ND	
12/21/11	ND	ND	ND	
12/20/12	ND	ND	ND	
12/30/13	ND	ND	ND	
02/13/15	ND	ND	2.56	p-Isopropyltoluene
12/23/15	ND	ND	ND	
12/20/16	ND	ND	20.3	Other was p-Isopropyltoluene
12/28/17	ND	0.460 J	ND	
12/19/18	7.01	3.66	0.975 J	Other was cis-1,2-dichloroethene, and Methylene chloride = 5.82, and Isopropylbenzene = 0.480J, and p-Isopropylbenzene = 11.4
12/18/19	4.54	3.33	0.470 J	Other was cis-1,2-dichloroethene
MW8				
03/28/02	42.3	1.8	ND	
06/27/02	51.7	2.7	ND	
11/13/02	66.6	3.1	ND	
01/02/03	53.2	3.5	ND	
03/17/03	149.0	5.5	ND	
09/02/03	64.6	2.9	97.6	Other was dichlorodifluoromethane
03/19/04	112.0	5.1	4.1	Other was dichlorodifluoromethane
09/17/04	42.0	3.3	ND	
05/27/05	66.0	4.2	ND	
12/13/05	178.0	6.4	ND	
06/13/06	121.0	10.1	ND	
12/18/06	82.0	4.8	ND	
06/05/07	36.6	3.3	ND	
12/13/07	43.3	2.4	ND	
12/22/08	38.1	2.46	ND	

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
06/10/09	27.2	2.57	ND	
11/24/09	37.8	3.32	ND	
06/25/10	25.1	3.79	ND	
12/16/10	23.1	4.47	ND	
12/21/11	8.59	1.45	ND	
12/20/12	16.5	2.85	ND	
12/30/13	13.4	1.83	ND	
02/13/15	5.76	1.60	ND	
12/23/15	7.18	1.51	ND	
12/20/16	5.55	0.845 J	ND	
12/28/17	6.56	0.950 J	ND	
12/19/18	7.35	0.985 J	19.4	Other was Methylene chloride
12/18/19	5.97	1.06	ND	
MW9				
01/02/03	ND	ND	ND	
03/17/03	ND	ND	ND	
09/02/03	ND	ND	ND	
03/19/04	ND	ND	ND	
09/17/04	ND	ND	ND	
05/27/05	2.9	ND	ND	
12/13/05	15.5	0.95	ND	
06/13/06	20.0	2.6	ND	
12/18/06	4.5	ND	ND	
06/05/07	1.3	ND	ND	
12/13/07	ND	ND	ND	
12/22/08	3.57	ND	ND	
06/10/09	2.78	ND	ND	
11/24/09	8.72	ND	ND	
06/25/10	13.5	1.62	ND	
12/16/10	7.6	ND	ND	
12/21/11	12.5	1.61	ND	
12/20/12	22.5	3.95	ND	
12/30/13	19.5	2.85	ND	
02/13/15	18.4	3.92	ND	
12/23/15	22.5	4.11	ND	

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
12/20/16	19.4	2.88	ND	
12/28/17	19.3	3.15	ND	
12/19/18	17.1	2.80	19.6	Other was Methylene chloride
12/18/19	9.30	2.59	ND	
MW10				
12/13/05	0.63 J	0.38 J	ND	
06/13/06	ND	ND	ND	
12/18/06	ND	0.9	8.5	Other was dichlorodifluoromethane
06/05/07	ND	ND	ND	
12/13/07	ND	ND	7.5	Other was chloromethane (methyl chloride)
12/22/08	ND	ND	ND	
06/10/09	ND	ND	ND	
11/24/09	ND	ND	ND	
06/25/10	ND	ND	ND	
12/16/10	ND	ND	ND	
12/21/11	ND	ND	ND	
12/20/12	ND	ND	ND	
12/30/13	ND	ND	ND	
02/13/15	3.05	0.760 J	ND	
12/23/15	ND	ND	ND	
12/20/16	0.635 J	0.140 J	ND	
12/28/17	ND	ND	ND	
12/19/18	ND	ND	15.9	Other was Methylene chloride
12/18/19	ND	ND	ND	
MW11				
12/13/05	22.8	1.7	ND	
06/13/06	1.5	1.9	ND	
12/18/06	1.2	ND	1.1	Other was dichlorodifluoromethane
06/05/07	ND	ND	ND	
12/13/07	ND	ND	ND	
12/22/08	ND	ND	ND	
06/10/09	ND	ND	ND	
11/24/09	1.67	ND	ND	
06/25/10	ND	ND	ND	
12/16/10	ND	ND	ND	
12/21/11	0.495 J	0.320 J	ND	
12/20/12	ND	ND	ND	
12/30/13	ND	ND	ND	

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
02/13/15	ND	ND	ND	
12/23/15	ND	ND	ND	
12/20/16	ND	ND	ND	
12/28/17	ND	ND	ND	
12/19/18	ND	ND	7.31	Other was Methylene chloride
12/18/19	ND	ND	ND	
HP2				
02/16/01	3.2	ND	ND	
HP1				
04/10/00	82.3	7.0	ND	
CPT-1 at 30'				
11/26/96	0.61	ND	ND	
CPT-1 at 33'				
11/26/96	0.51	3.9	ND	
CPT-1 at 40'				
11/26/96	ND	ND	ND	

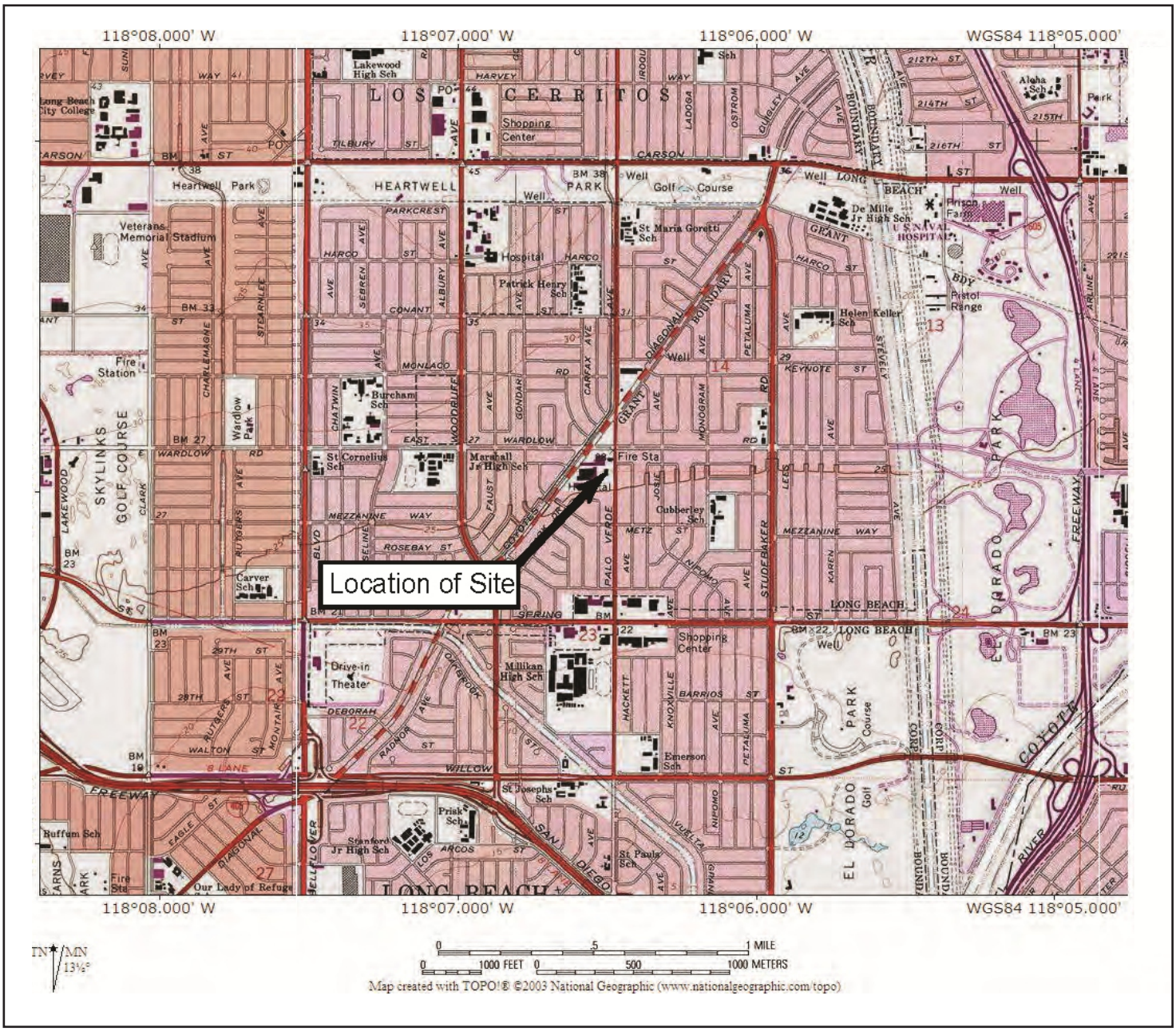
Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
CPT-1 at 52'				
11/26/96	ND	ND	ND	
GW1				
09/16/96	ND	ND	6.7	Other was acetone
G2				
09/16/96	ND	ND	6.7	Other was acetone
G3				
09/16/96	65.0	4.7	ND	
G4				
09/16/96	25.0	ND	17.0	Other was acetone
G5				
09/16/96	5.6	4.8	ND	

Notes:

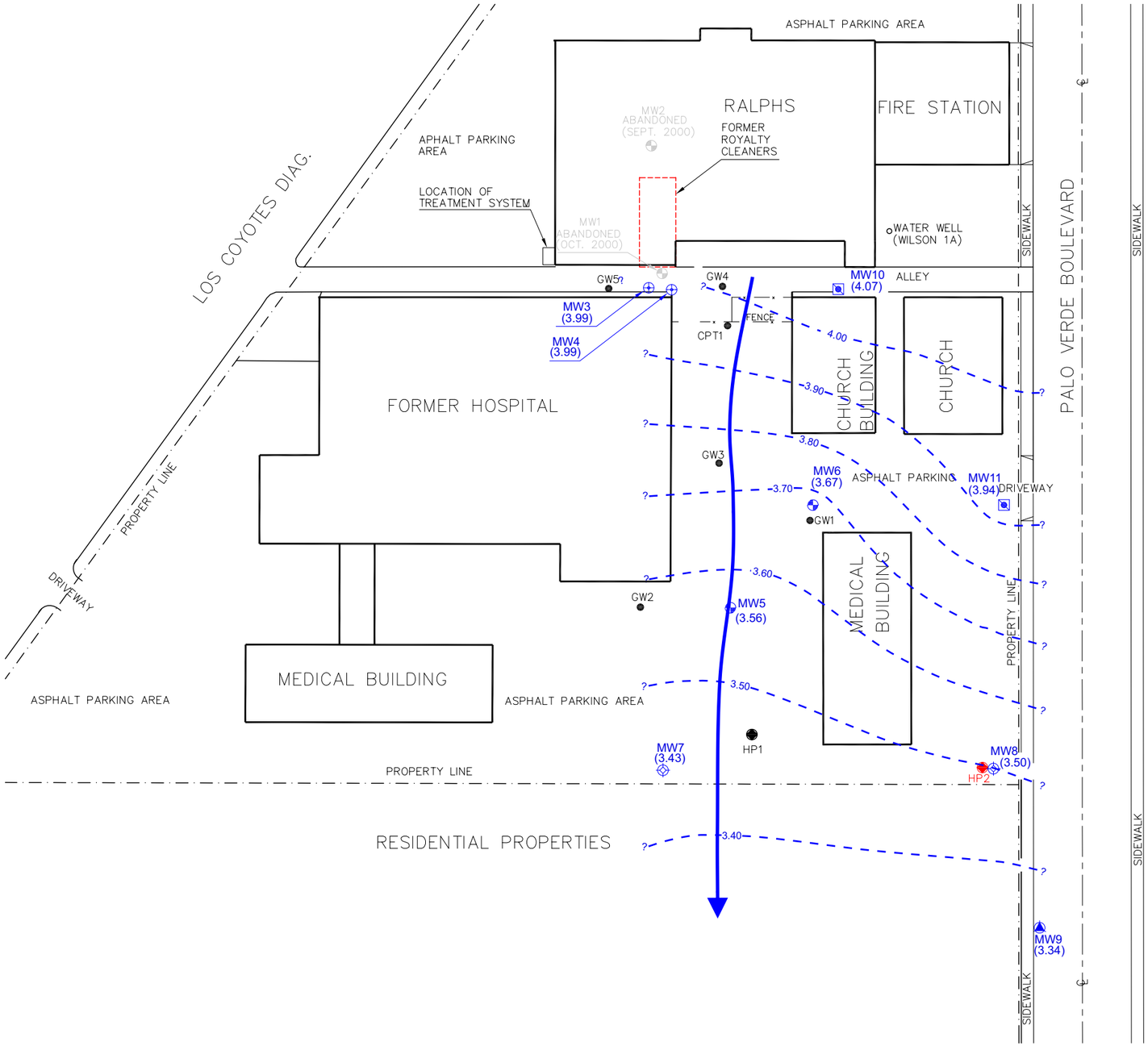
µg/L = Micrograms per liter
NA = Not analyzed
ND = Not detected at or above stated reporting or practical quantitation limit.
See previous report for limits.
J = Estimated result. Compound positively detected at a value less than the reporting or practical quantitatic
– = Not applicable

FIGURES



N

Project Name:	FORMER ROYALTY CLEANERS 3378 LOS COYOTES DIAGONAL, LONG BEACH, CALIFORNIA			
Title:	SITE VICINITY MAP 2019 ANNUAL GROUNDWATER MONITORING EVENT			
Drafted By:	Approved By:	Project No.:	Date:	Figure No.:
DWS	UML	2019-257	1/20	1



LEGEND:

MW11	GROUNDWATER MONITORING WELL BY LE DECEMBER 2005
MW9	GROUNDWATER MONITORING WELL BY LE DECEMBER 2002
MW8	GROUNDWATER MONITORING WELL BY LE MARCH 2002
MW6	GROUNDWATER MONITORING WELL BY LE 2000
MW4	GROUNDWATER MONITORING WELL BY MCLAREN – HART 1996
MW2	ABANDONED MONITORING WELL
GW1	GEOPROBE WATER SAMPLE (SEPTEMBER 1996)
CPT1	CONE PENETROMETER SAMPLE (NOVEMBER 1996)
HP1	HYDROPUNCH SAMPLE (APRIL 2000)
HP2	HYDROPUNCH SAMPLE (FEBRUARY 2001)
(4.07)	GROUNDWATER ELEVATION MEASURED IN FT ABOVE MSL (DECEMBER 18, 2019)
- - 4.00 - - -	GROUNDWATER ELEVATION CONTOUR
→	GROUNDWATER GRADIENT

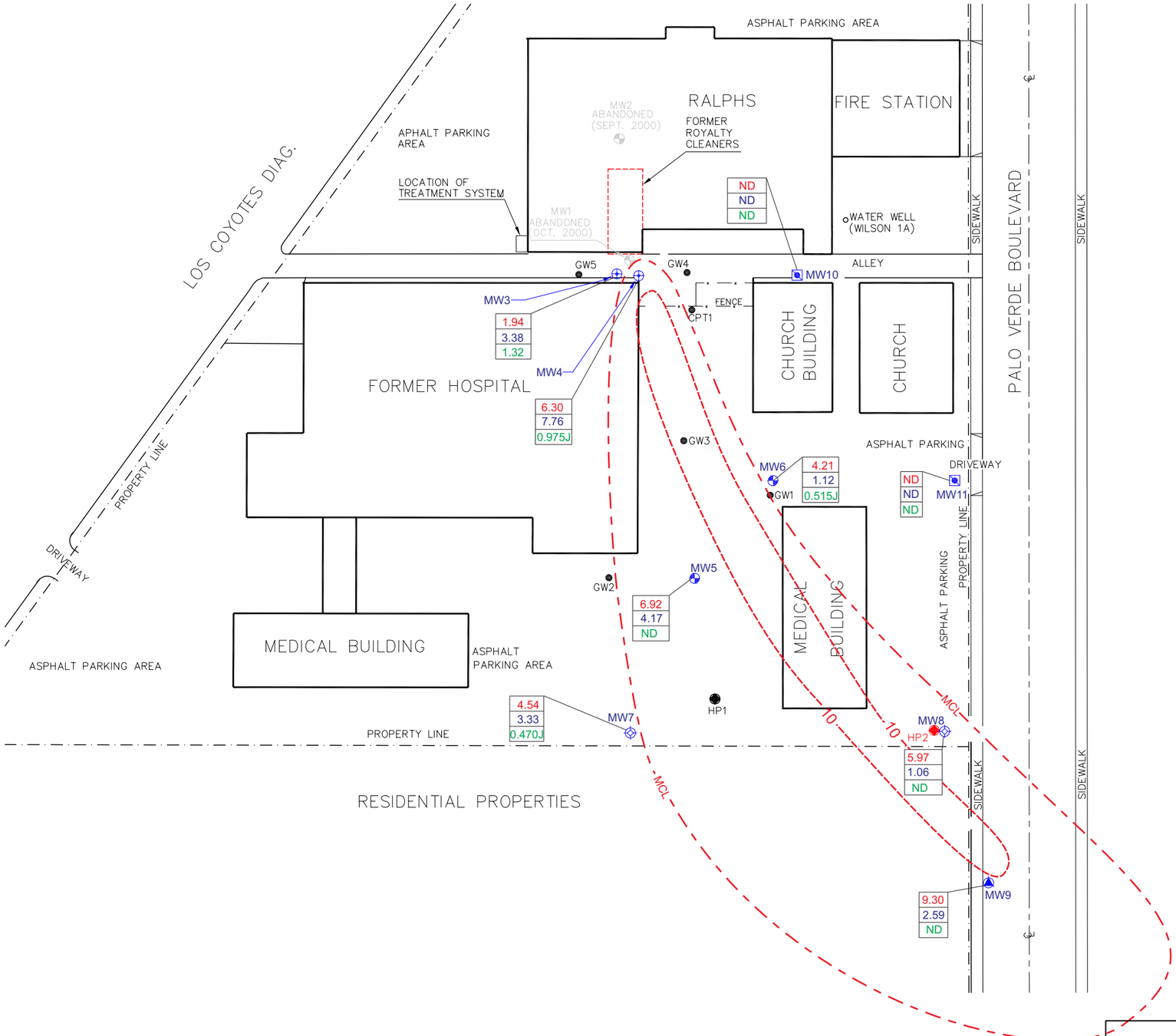
MW1 AND MW2 WELLS WERE ABANDONED

SCALE: 1" = 100'

0 1" 2"

0 100' 200'

Project Name: FORMER ROYALTY CLEANERS 3378 LOS COYOTES DIAGONAL, LONG BEACH, CALIFORNIA				
Title: GROUNDWATER ELEVATION CONTOURS 2019 ANNUAL GROUNDWATER MONITORING EVENT				
Drafted By: DWS	Approved By: UML	Project No.: 2019-257	Date: 1/20	Figure No.: 2



LEGEND:

MW11	GROUNDWATER MONITORING WELL BY LE DECEMBER 2005
MW9	GROUNDWATER MONITORING WELL BY LE DECEMBER 2002
MW8	GROUNDWATER MONITORING WELL BY LE MARCH 2002
MW6	GROUNDWATER MONITORING WELL BY LE 2000
MW4	GROUNDWATER MONITORING WELL BY MCLAREN – HART 1996
MW2	ABANDONED MONITORING WELL
GW1	GEOPROBE WATER SAMPLE (SEPTEMBER 1996)
CPT1	CONE PENETROMETER SAMPLE (NOVEMBER 1996)
HP1	HYDROPUNCH SAMPLE (APRIL 2000)
HP2	HYDROPUNCH SAMPLE (FEBRUARY 2001)
	CHEMICAL CONCENTRATION IN GROUNDWATER µg/l (12/18/19)
9.30	PCE
2.59	TCE
ND	CIS-1,2-DCE
ND	NOT DETECTED ABOVE METHOD DETECTION LIMIT
10	INTERPRETED PCE ISOCONCENTRATION CONTOUR
MCL	MAXIMUM CONCENTRATION LEVEL (MCL) PCE ISOCONCENTRATION CONTOUR (MCL = 5 µg/l)

SCALE: 1" = 100'

0 1" 2"

0 100' 200'

LANDMARK ENGINEERING

Project Name: FORMER ROYALTY CLEANERS
3378 LOS COYOTES DIAGONAL, LONG BEACH, CALIFORNIA

Title: PCE, TCE, & CIS-1,2-DCE CONCENTRATION MAP
2019 ANNUAL GROUNDWATER MONITORING EVENT

Drafted By:	Approved By:	Project No.:	Date:	Figure No.:
DWS	UML	2019-257	1/20	3

APPENDIX A

Field Methodology

Field Methodology

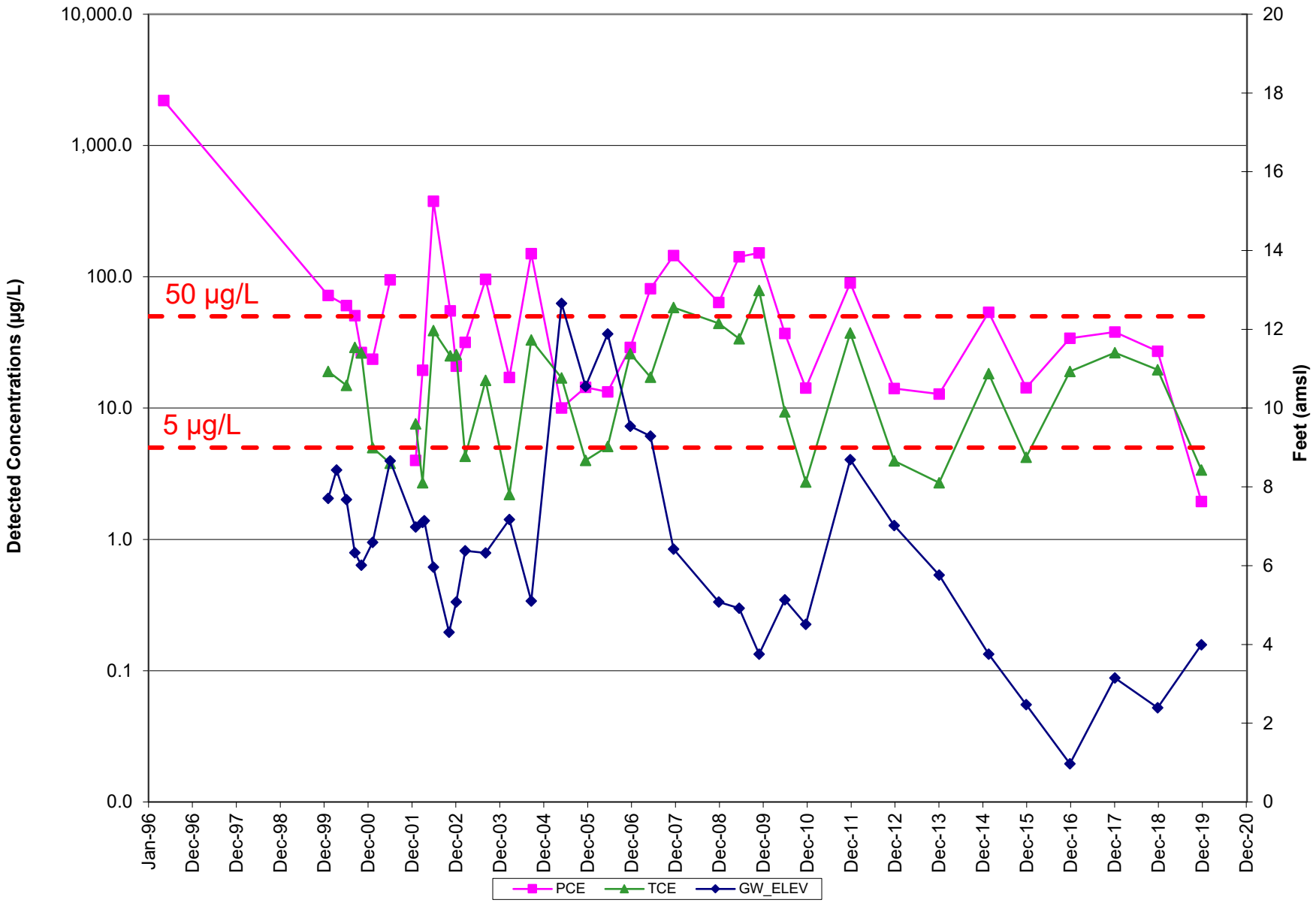
Prior to sampling, Lindmark Engineering (LE) measured the depth to groundwater using a Solinist depth to water probe. Following measurement of depth to groundwater, LE purged each well using a Grundfos submersible pump, with dedicated tubing. During purging, LE measured the dissolved oxygen (DO) electrical conductivity, temperature, pH, turbidity, and oxidation-reduction potential (ORP), of the purged water in each well using a continuous flow-through cell attached to a Horiba multi-parameter meter. Purging continued until the conductivity, temperature, and pH had stabilized, or at least three well volumes had removed.

LE collected groundwater samples from each of the wells after they had recovered to at least 80 percent of static levels. A dedicated, disposable high-density polyethylene bailer was used to collect groundwater samples from each sampled well. LE transferred the groundwater into unpreserved gas chromatography vials (also known as volatile organic ampules [VOAs]). The vials were sealed with Teflon-lined caps, labeled, placed on ice, and transported to a state-certified laboratory (American Scientific Laboratories) for analysis within 24 hours of sampling. Each sample was recorded on a chain-of-custody record identifying the sampler, sample identification, time and date of sampling, container type, couriers, responsible laboratory personnel, and requested analyses.

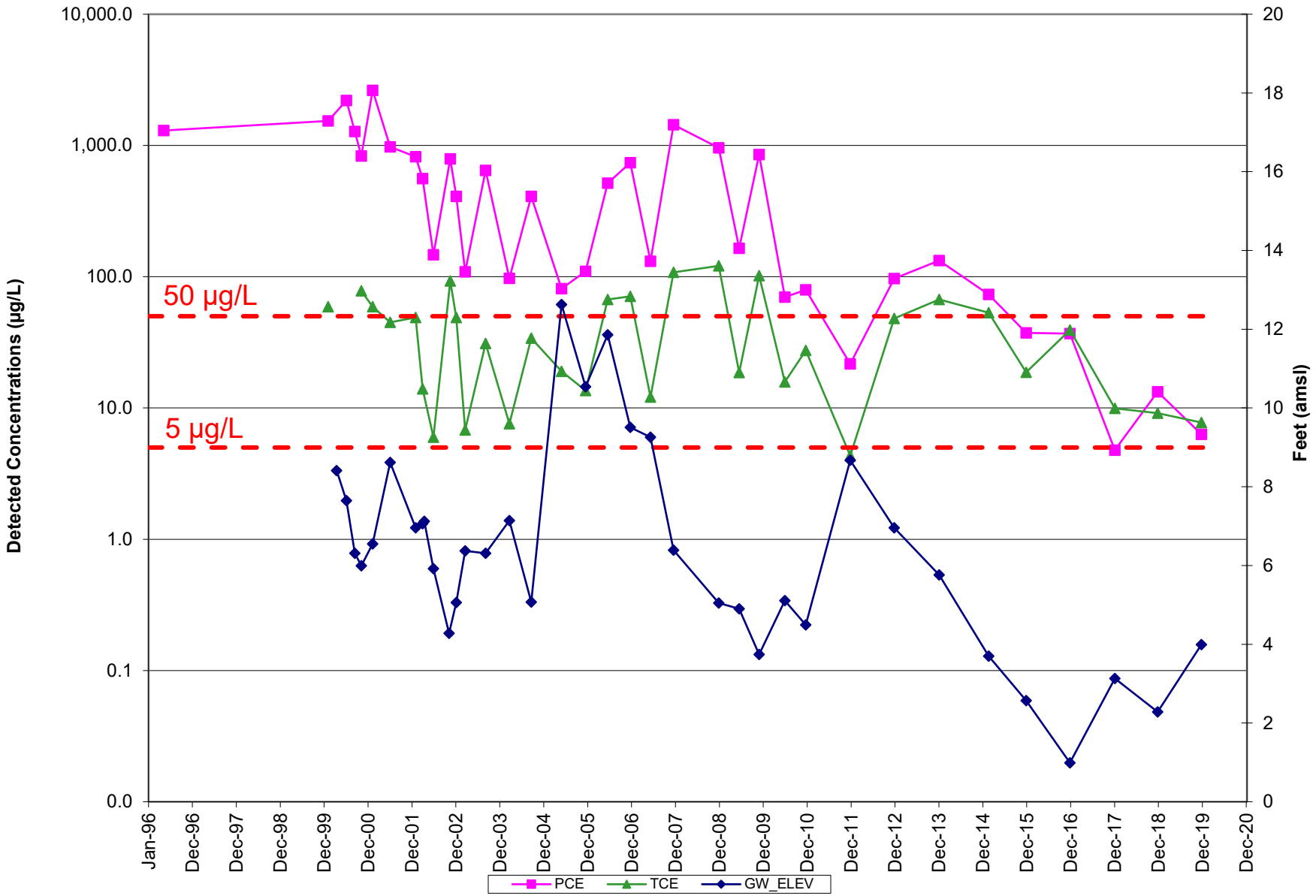
APPENDIX B

Graphs of Detected Concentrations and Groundwater Elevations vs. Time

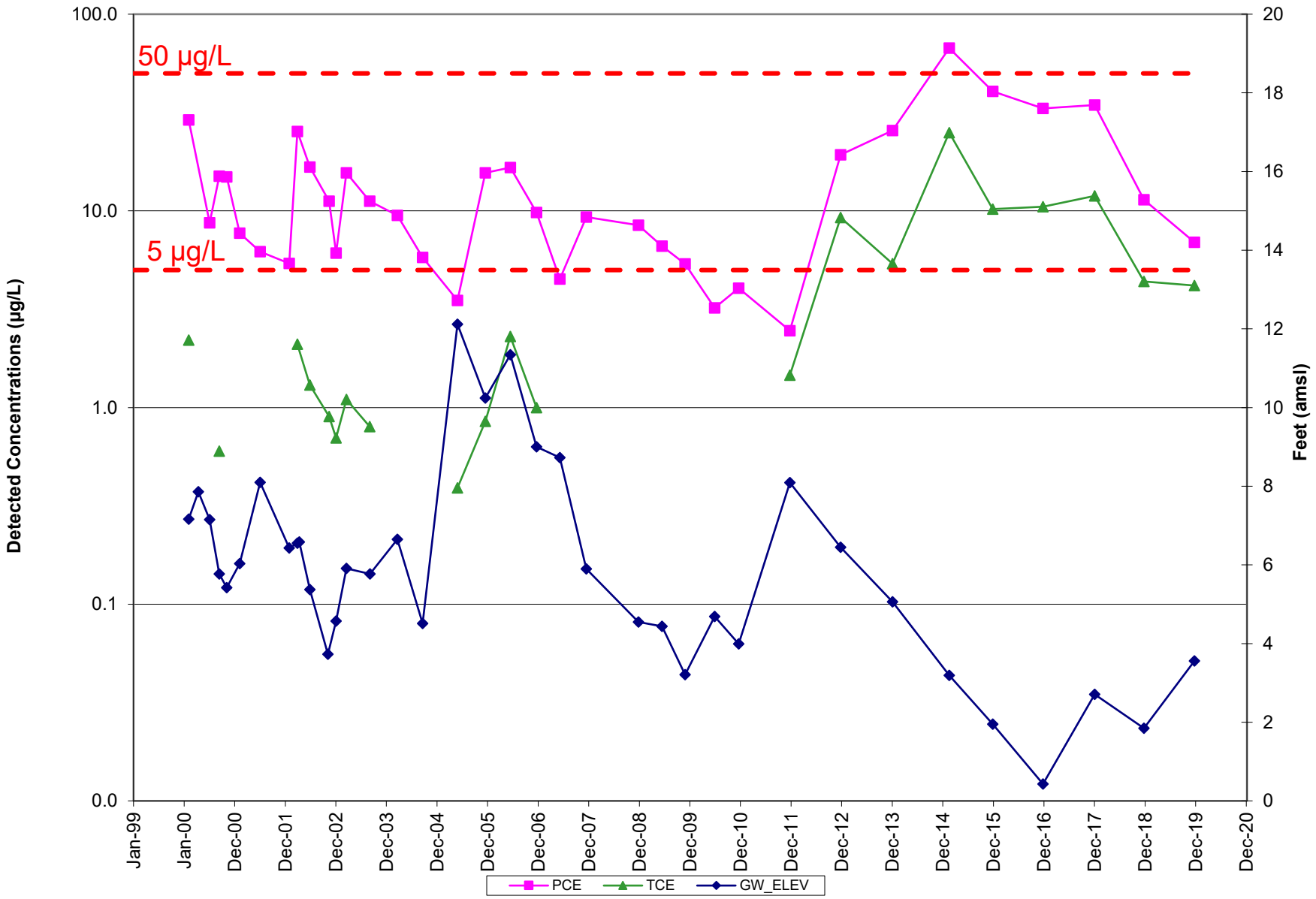
MW3: Detected Concentrations & Groundwater Elevations Versus Time



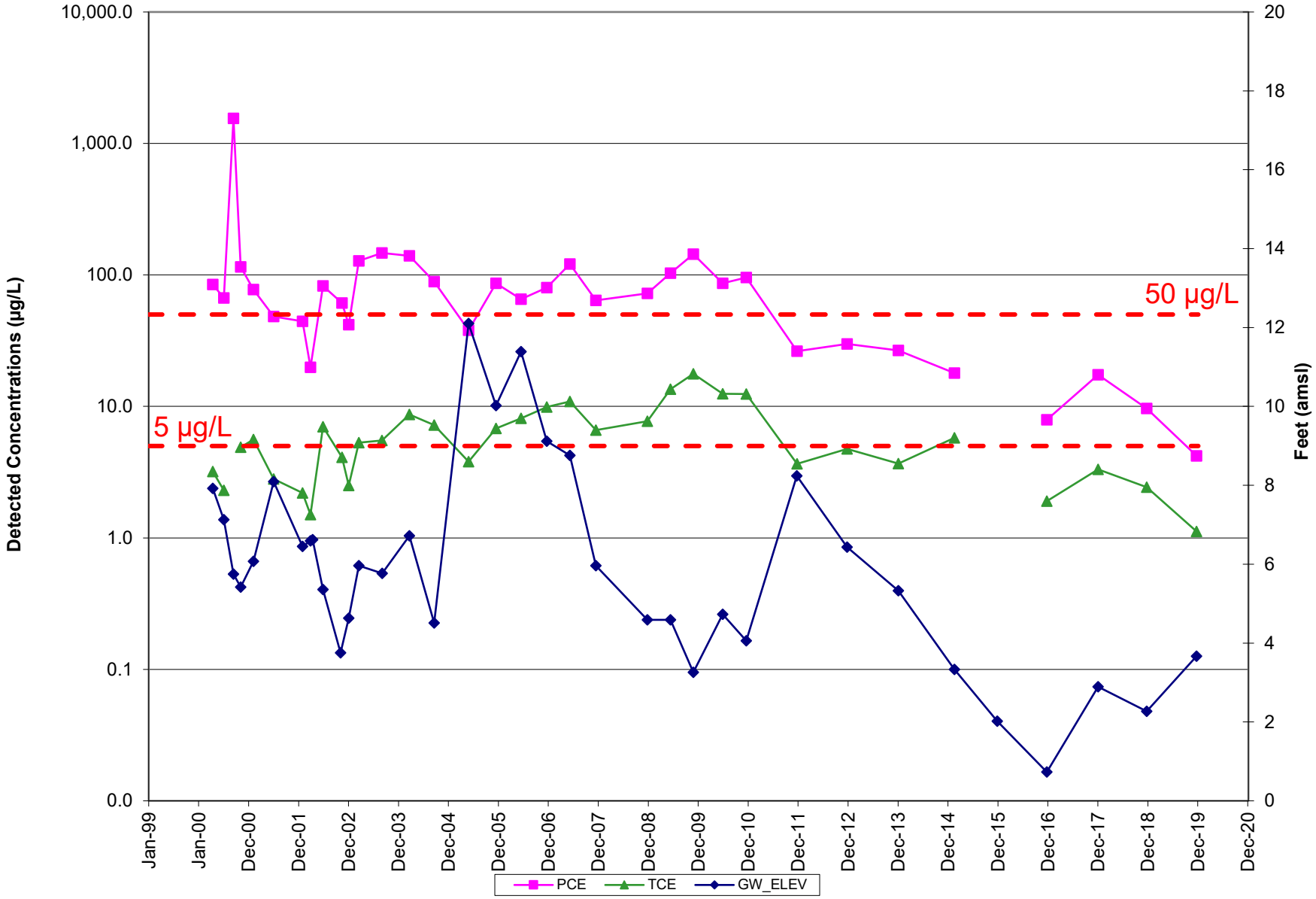
MW4: Detected Concentrations & Groundwater Elevations Versus Time



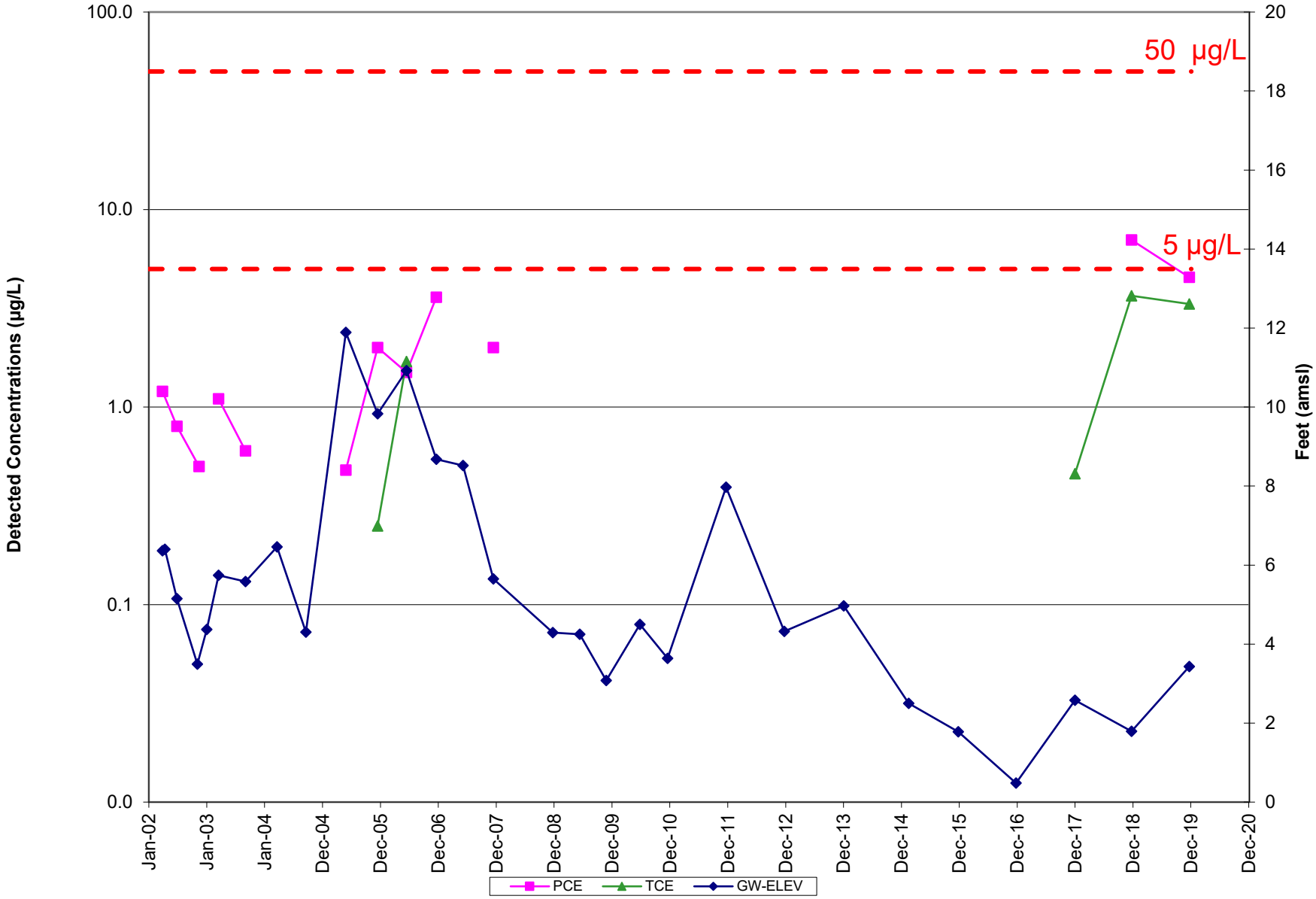
MW5: Detected Concentrations & Groundwater Elevations Versus Time



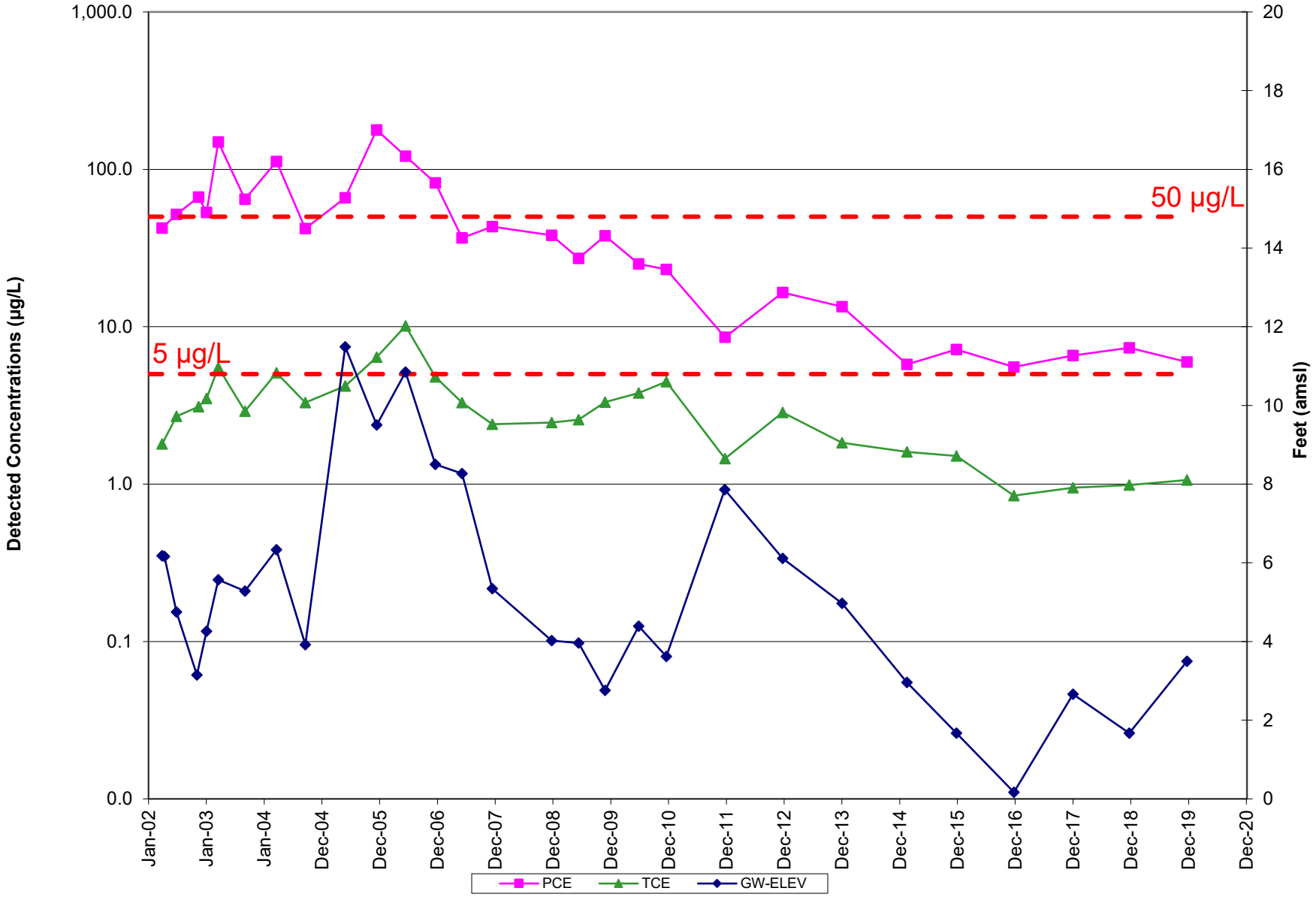
MW6: Detected Concentrations & Groundwater Elevations Versus Time



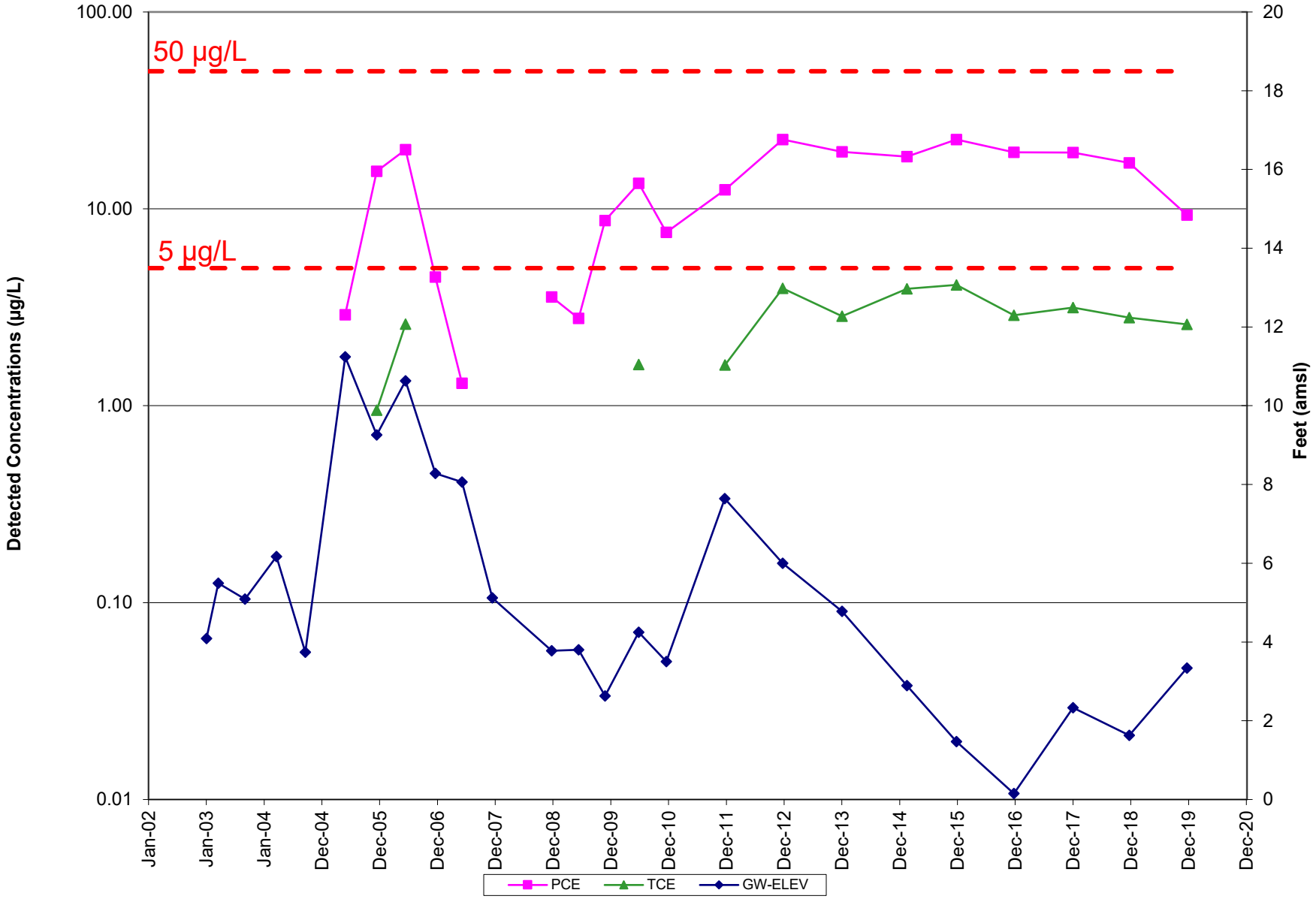
MW7: Detected Concentrations & Groundwater Elevations Versus Time



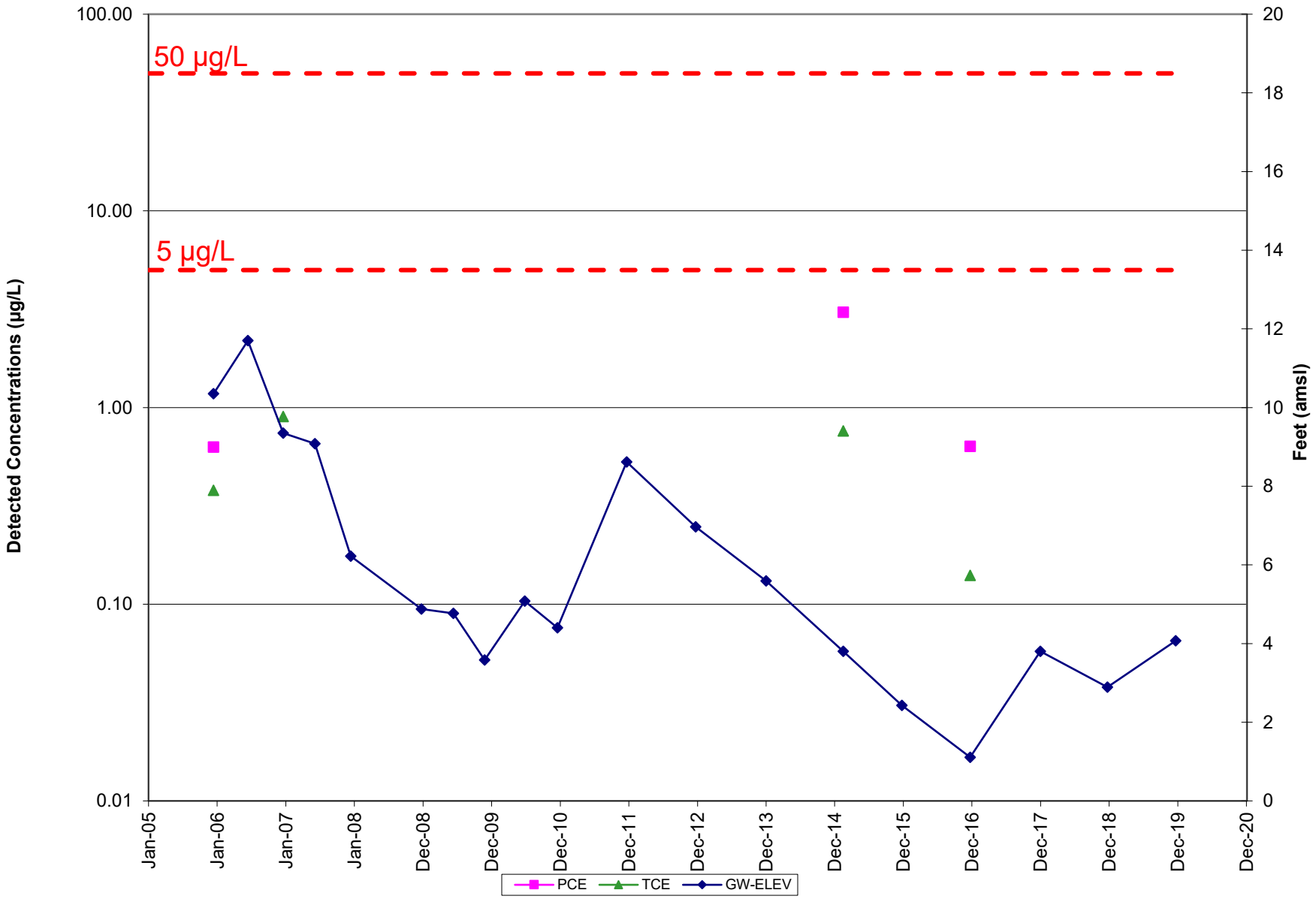
MW8: Detected Concentrations & Groundwater Elevations Versus Time



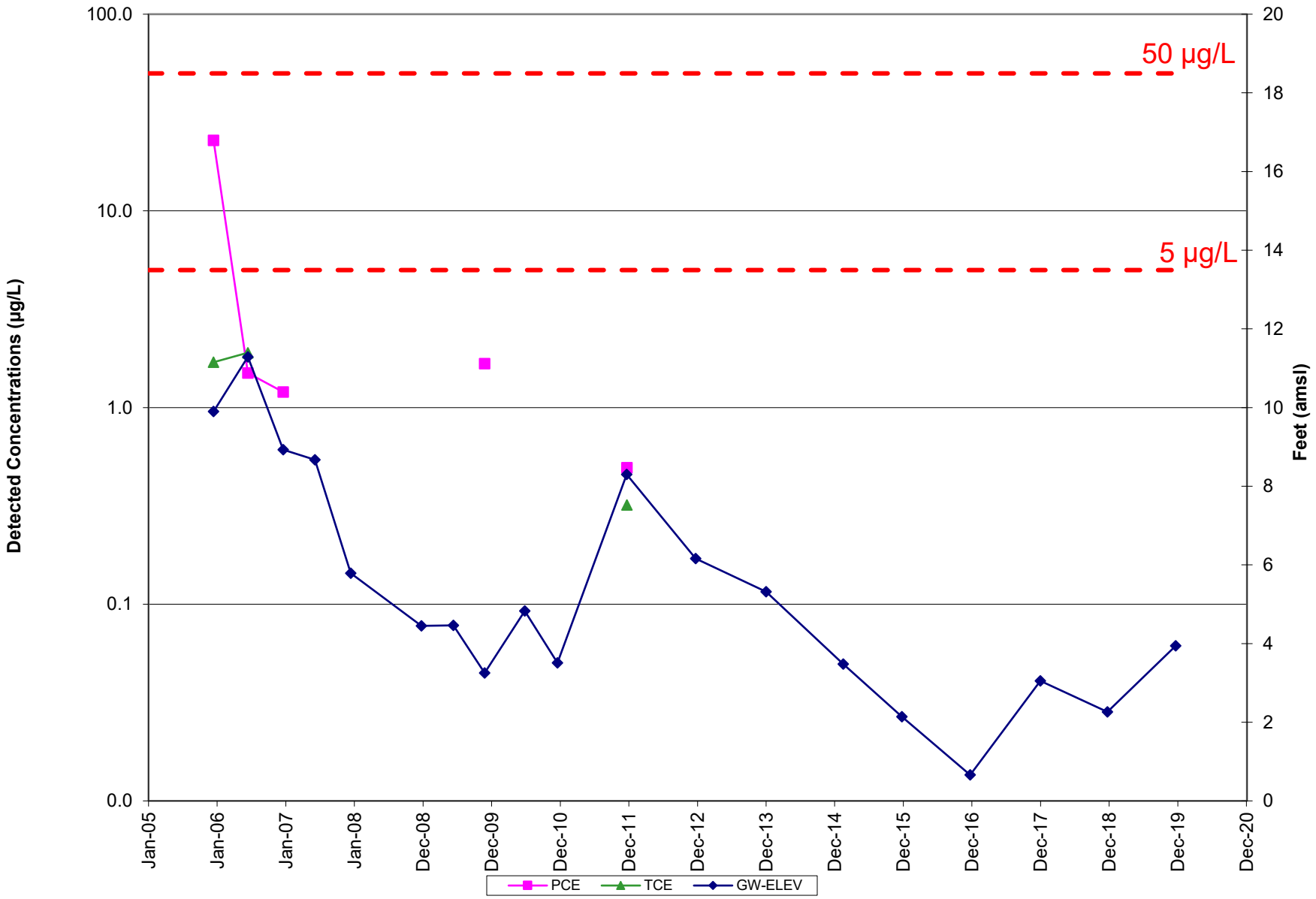
MW9: Detected Concentrations & Groundwater Elevations Versus Time



MW10: Detected Concentrations & Groundwater Elevations Versus Time



MW11: Detected Concentrations & Groundwater Elevations Versus Time



APPENDIX C

Well Purging Records

Groundwater Monitoring & Product Recovery Records

Lindmark Engineering
2625 Townsgate Road, Suite 330
Westlake Village, CA 91361
818-707-6100/805-267-1101

Project Name & No. Los Coyotes / 2019-257
Water Level Instrument Solonist
Measured by DWS & ST
DO Meter Calibrated by Pine Env. Elevation

Date	Well No.	Time	DTW	PM	Δ	DO	PDO	DTB	DTP	PT	Volume Bailed (gal.)		Post-bailing	
											Water	Product	DTW	DTP
12/18/19	MW3	9:17	22.08	23.68	+1.60	1.80	1.75	33.90	/	/	24	/	22.11	/
12/18/19	MW4	9:09	22.12	23.83	+1.71	0.00	0.31	34.50	/	/	23	/	22.04	/
12/18/19	MW5	8:52	23.15	24.86	+1.71	1.41	0.33	30.70	/	/	4.5	/	23.10	/
12/18/19	MW6	8:46	22.80	24.20	+1.40	0.01	0.30	36.22	/	/	6	/	22.75	/
12/18/19	MW7	8:27	21.59	23.23	+1.64	0.69	0.63	39.50	/	/	7	/	22.06	/
12/18/19	MW8	8:37	21.17	23.00	+1.83	0.09	0.32	39.62	/	/	8	/	21.20	/
12/18/19	MW9	9:00	20.62	23.33	+2.71	0.04	0.35	33.59	/	/	6.5	/	20.70	/
12/18/19	MW10	8:18	21.43	22.61	+1.18	0.10	0.33	40.60	/	/	8.5	/	21.40	/
12/18/19	MW11	7:59	21.03	22.71	+1.68	3.54	0.48	38.00	/	/	8	/	21.05	/

DTW = Depth to water (in feet) from top of casing
PM = Previous DTW measurement (in feet)
Δ = Difference between previous & current measurement (in feet)
DO = Dissolved oxygen (in mg/l)
PDO = Previous DO measurement (in mg/l)
DTB = Depth to bottom (in feet)
DTP = Depth to free product (in feet) from top of casing
PT = Product thickness (in feet)

gw_mon031218

Groundwater Monitoring Well Purging Record

Project: Los Coyotes GWM Project No.: 2019-257

Date: 12/18/19 Weather: overcast / 42°F

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW3 Well Condition: fair

Does this wellhead require repair? ☐ yes ☒ no Explanation:

Does this well require bolts and/or well locking caps? ☒ yes ☐ no Explanation: no locking cap, bolt and lid are partially broken

Static depth to water from top of casing ..... A: 22.08 ft. Time: 9:17

Top of casing to bottom of casing ..... B: 33.90 ft.

Feet of water in well ..... H: 11.82 ft. H = B - A

Diameter ..... D: 4 in. V = H x 0.65

Volume of water in well ..... V: 7.68 gal. ~~V = H/77.01~~

Three well volumes ..... Vx3: 23.05 gal.

Purge time begin: 2:53 Purge time finish: 2:56

Purging/bailing technique: sub. pump Purging/bailing equipment: rediflow grunfos

Average pumping rate: 0.96 ga/min Volume of water removed: 24ga

Depth to water from top of casing (at time of sampling): 22.11 Sampling time: 3:49

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (ppm)	Observations
2:35	6.94	979	23.40	6.9	0.73	70	0.647	2ga
2:41	7.01	1160	23.27	44.6	1.10	-68	0.738	6ga
2:43	7.04	1530	23.14	23.1	0.53	-70	0.993	10ga
2:53	7.03	1520	23.12	16.7	0.01	-69	0.936	18ga
2:55	7.20	963	23.13	16.3	1.80	-51	0.617	24ga

Groundwater Monitoring Well Purging Record

Project: Los Coyotes GWM Project No.: 2019-257

Date: 12/18/19 Weather: overcast / 42°F

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW4 Well Condition: poor

Does this wellhead require repair? ☒ yes ☐ no Explanation: well cap is

Does this well require bolts and/or well locking caps? ☒ yes ☐ no Explanation: covered / filled w/ soil, no bolt

Static depth to water from top of casing ..... A: 22.12 ft. Time: 9:09

Top of casing to bottom of casing ..... B: 34.50 ft.

Feet of water in well ..... H: 12.38 ft. H = B - A

Diameter ..... D: 4 in. V = H x 0.65

Volume of water in well ..... V: 8.05 gal. ~~= 2H/77.01~~ V

Three well volumes ..... Vx3: 24.14 gal.

Purge time begin: 2:03 Purge time finish: 2:26

Purging/bailing technique: sub. pump Purging/bailing equipment: rediflow grunfos

Average pumping rate: 1.2 ga/min Volume of water removed: 23

Depth to water from top of casing (at time of sampling): 22.04 Sampling time: 3:45

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (ppm)	Observations
2:06	7.17	1450	23.41	17.4	0.24	138	0.927	~~1ga~~ 1.5ga
2:10	7.10	1450	23.52	41.5	0.14	111	0.927	4.5ga
2:12	7.10	1460	23.44	61	0.06	94	0.932	8ga
2:15	7.10	1460	23.35	51.8	0.04	84	0.933	10ga
2:20	7.09	1460	23.22	28.0	0.00	68	0.930	15ga
2:23	7.10	1460	23.14	13.9	0.00	58	0.934	20ga
2:25	7.10	1460	23.16	13.2	0.00	55	0.935	23ga

Groundwater Monitoring Well Purging Record

Project: Los Coyotes GWM Project No.: 2019-257

Date: 12/18/19 Weather: Overcast / 42°F

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW5 Well Condition: Okay

Does this wellhead require repair? ☐ yes ☒ no Explanation: Ø

Does this well require bolts and/or well locking caps? ☒ yes ☐ no Explanation: bolts do not lock roots in well

Static depth to water from top of casing ..... A: 23.15 ft. Time: 8:52

Top of casing to bottom of casing ..... B: 30.70 ft.

Feet of water in well ..... H: 7.55 ft. H = B - A

Diameter ..... D: 2 in.

Volume of water in well ..... V: 1.21 gal. ~~= 2πr²H~~

Three well volumes ..... Vx3: 3.62 gal. V = H × 0.16

Purge time begin: 1:24 Purge time finish: 1:31

Purging/bailing technique: sub. pump Purging/bailing equipment: rediflow grunfos

Average pumping rate: 2.25 gal/min Volume of water removed: 4.5 gal

Depth to water from top of casing (at time of sampling): 23.10 Sampling time: 3:35

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (g/L) ~~(ppm)~~	Observations
1:28	7.08	1560	25.19	340	2.51	128	1.00	1.5 gal
1:29	7.13	1560	25.36	65.9	0.47	115	1.00	4 gal
1:30	7.14	1460	25.39	46	1.41	113	1.00	4.5 gal

Groundwater Monitoring Well Purging Record

Project: Los Coyotes Project No.: 2019-257

Date: 12/18/19 Weather: overcast / 42°F

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW6 Well Condition: good

Does this wellhead require repair? ☐ yes ☒ no Explanation:

Does this well require bolts and/or well locking caps? ☒ yes ☐ no Explanation: bolts do not work, roots in well

Static depth to water from top of casing ..... A: 22.80 ft. Time: 8:46

Top of casing to bottom of casing ..... B: 36.22 ft.

Feet of water in well ..... H: 13.42 ft. H = B - A

Diameter ..... D: 2 in.

Volume of water in well ..... V: 2.15 gal. ~~$\pi r^2 H / 77.01$~~ V=H x 0.16

Three well volumes ..... Vx3: 6.44 gal.

Purge time begin: 12:58 Purge time finish: 1:15

Purging/bailing technique: submersible pump Purging/bailing equipment: rediflow grundfos

Average pumping rate: 0.43 gal/min Volume of water removed: 6 gal

Depth to water from top of casing (at time of sampling): 22.75 Sampling time: 3:31

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (ppm)	Observations
1:01	7.11	2010	23.36	0.0	3.11	144	1.28	1 ga
1:04	7.11	2040	23.30	0.0	2.74	136	1.31	2 ga
1:07	7.09	2150	24.17	433	0.59	104	1.38	3 ga
1:10	7.10	2160	24.14	200	0.05	91	~~0~~ 1.38	4 ga
1:13	7.09	2170	24.00	145	0.02	79	1.39	5 ga
1:15	7.08	2170	24.07	96.3	0.01	72	1.39	6 ga

Groundwater Monitoring Well Purging Record

Project: Los Coyotes GWM Project No.: 2019-257

Date: 12/18/19 Weather: Overcast / 42°F

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW7 Well Condition: okay

Does this wellhead require repair? ☐ yes ☒ no Explanation:

Does this well require bolts and/or well locking caps? ☒ yes ☐ no Explanation: bolt do not work

Static depth to water from top of casing ..... A: 21.59 ft. Time: 8:27

Top of casing to bottom of casing ..... B: 39.50 ft.

Feet of water in well ..... H: 17.91 ft. H = B - A

Diameter ..... D: 2 in.

Volume of water in well ..... V: 2.86 gal. ~~= 2.11/77.01~~

Three well volumes ..... Vx3: 8.60 gal. V=H x 0.16

Purge time begin: 11:28 Purge time finish: 12:07

Purging/bailing technique: submersible pump Purging/bailing equipment: rediflow grunfos

Average pumping rate: 0.19 ga/min* Volume of water removed: 7ga

Depth to water from top of casing (at time of sampling): 22.06 Sampling time: 3:19

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (ppm)	Observations
11:30	7.18	1560	24.18	0	3.05	142	1.01	2ga
11:35	7.02	1570	25.87	0	6.57	141	1.01	*3ga (problem w/ flow controller)
12:00	7.18	1590	23.33	0	1.40	157	1.02	*4.5ga (resume purging)
12:04	7.08	1570	24.11	0	0.69	158	1.00	5ga
12:06	7.03	1560	24.72	0	0.68	151	1.00	5.5ga
12:07	7.04	1570	24.57	0	0.69	148	1.00	7ga

Groundwater Monitoring Well Purging Record

Project: Los Coyotes GWM Project No.: 2019-257

Date: 12/18/19 Weather: overcast / 42°F

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW8 Well Condition: good

Does this wellhead require repair? ☐ yes ☒ no Explanation:

Does this well require bolts and/or well locking caps? ☐ yes ☒ no Explanation: Roots in well

Static depth to water from top of casing ..... A: ~~21.12~~ 21.17 ft. Time: 8:37

Top of casing to bottom of casing ..... B: 39.62 ft.

Feet of water in well ..... H: 18.45 ft. H = B - A

Diameter ..... D: 2 in.

Volume of water in well ..... V: 2.95 gal.

Three well volumes ..... Vx3: 8.86 gal. V = H x 0.16

Purge time begin: 12:22 Purge time finish: 12:35

Purging/bailing technique: submersible pump Purging/bailing equipment: rediflow grunfos

Average pumping rate: 0.62 ga/min Volume of water removed: 8 ga

Depth to water from top of casing (at time of sampling): 21.20 Sampling time: 3:25

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (ppm)	Observations
12:24	7.27	1530	23.14	1000+	1.30	145	0.979	2 ga
12:26	7.24	1550	23.36	825	0.44	138	0.993	4 ga
12:27	7.16	1550	23.45	453	0.12	131	0.993	4.5 ga
12:28	7.16	1560	23.68	211	0.06	119	0.996	5 ga
12:31	7.16	1570	23.73	82	0.01	104	1.01	6 ga
12:33	7.15	1580	23.76	65	0.07	98	1.01	7 ga
12:35	7.30	1550	23.40	94	0.09	94	0.993	8 ga

Groundwater Monitoring Well Purging Record

Project: Los Coyotes GWM Project No.: 2019-257

Date: 12/18/19 Weather:

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW9 Well Condition: good

Does this wellhead require repair? ☐ yes ☒ no Explanation:

Does this well require bolts and/or well locking caps? ☒ yes ☐ no Explanation: bolts do not lock well cover

Static depth to water from top of casing ..... A: 20.62 ft. Time: 9:00

Top of casing to bottom of casing ..... B: 33.59 ~~23.33~~ ft.

Feet of water in well ..... H: 12.97 ~~2.71~~ ft. H = B - A

Diameter ..... D: 2 in.

Volume of water in well ..... V: 2.08 gal. ~~$\pi r^2 H/231$~~ V

Three well volumes ..... Vx3: 6.22 gal. V = H x 0.16

Purge time begin: 1:46 Purge time finish: 1:53

Purging/bailing technique: sub. pump Purging/bailing equipment: redflow grunfos

Average pumping rate: 0.93 ga/min Volume of water removed: 6.5 ga

Depth to water from top of casing (at time of sampling): 20.70 Sampling time: 3:41

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (ppm)	Observations
1:47	7.12	1550	24.36	0.0	0.18	146	0.987	1ga
1:52	7.26	1530	24.49	0.0	0.34	136	0.980	4.5ga
1:53	7.06	1530	24.48	0.0	0.04	133	0.979	~~6ga~~ 6.5ga

Groundwater Monitoring Well Purging Record

Project: Los Coyotes GWM Project No.: 2019-257

Date: 12/18/19 Weather: overcast / 42°F

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW10 Well Condition: fair

Does this wellhead require repair? ☐ yes ☒ no Explanation:

Does this well require bolts and/or well locking caps? ☒ yes ☐ no Explanation: bolts and well lid are partially broken

Static depth to water from top of casing ..... A: 21.43 ft. Time: 8:18

Top of casing to bottom of casing ..... B: 40.60 ft.

Feet of water in well ..... H: 19.17 ft. H = B - A

Diameter ..... D: 2 in.

Volume of water in well ..... V: 3.07 gal. ~~$= \pi^2 H/77.01$ V~~

Three well volumes ..... Vx3: 9.20 gal. V = H x 0.16

Purge time begin: 11:00 Purge time finish: 11:08

Purging/bailing technique: submersible pump Purging/bailing equipment: rediflow grundfos

Average pumping rate: 1.06 ga/min Volume of water removed: 8.5 ga

Depth to water from top of casing (at time of sampling): 21.40 Sampling time: 3:13

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (ppm)	Observations
11:00	7.18	1190	21.43	0.0*	5.93	140	0.787	1.5 ga
11:02	7.09	1350	23.26	0.0	5.92	132	0.870	4 ga
11:03	7.11	1370	23.39	0.0	6.36	129	0.875	5 ga
11:05	7.07	1410	23.45	0.0	0.20	126	0.403	7 ga
11:07	7.13	1410	23.51	980	0.11	120	0.898	7.5 ga
11:08	7.13	1400	23.50	1000+	0.10	119	0.896	~~8 ga~~ 8.5 ga

Groundwater Monitoring Well Purging Record

Project: Los Coyotes GWM Project No.: 2019-257

Date: 12/18/19 Weather: Overcast / 42°F

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW11 Well Condition: okay

Does this wellhead require repair? ☐ yes ☒ no Explanation:

Does this well require bolts and/or well locking caps? ☒ yes ☐ no Explanation: bolts are loose

Static depth to water from top of casing ..... A: 21.03 ft. Time: 7:59

Top of casing to bottom of casing ..... B: 38.00 ft.

Feet of water in well ..... H: 16.97 ft. H = B - A

Diameter ..... D: 2 in.

Volume of water in well ..... V: 2.71 gal. ~~$V = \frac{H \times D^2}{17.01}$~~

Three well volumes ..... Vx3: 8.14 gal. V = H x 0.16

Purge time begin: 10:24 Purge time finish: 10:38

Purging/bailing technique: sub. pump Purging/bailing equipment: rediflow grunfos

Average pumping rate: 0.57 ga/min Volume of water removed: 8 ga

Depth to water from top of casing (at time of sampling): 21.05 Sampling time: 3:07

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (ppm)	Observations
10:24	7.85	1680	20.36	0.0*	2.50	95	1.05	*cloudy, out of tray, 1.5 ga
10:30	7.09	1580	23.54	0.0*	2.01	106	1.01	3 ga
10:33	7.15	1580	23.69	0.0*	3.69	105	1.01	4 ga
10:36	7.26	1570	22.68	0.0*	1.42	113	1.00	5 ga
10:37	7.15	1570	23.27	0.0*	3.20	114	1.01	7 ga
10:38	7.14	1560	23.17	0.0*	3.54	108	1.00	8 ga

APPENDIX D

Laboratory Analytical Reports and Chain-of-Custody Records

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

06 January 2020

Ulf Lindmark

Lindmark Engineering

2625 Townsgate Road Suite # 330

Westlake Village, CA 91361

Work Order #: 1912220

Project Name: Los Coyotes GWM

Project ID: 2019-257

Site Address: 3378 Los Coyotes Diagonal Long Beach

Enclosed are the results of analyses for samples received by the laboratory on December 19, 2019. If you have any questions concerning this report, please feel free to contact us.

Rojert G. Araghi

Laboratory Director

American Scientific Laboratories, LLC (ASL) accepts sample materials from clients for analysis with the assumption that all of the information provided to ASL verbally or in writing by our clients (and/or their agents), regarding samples being submitted to ASL, is complete and accurate. ASL accepts all samples subject to the following conditions:

1) ASL is not responsible for verifying any client-provided information regarding any samples submitted to the laboratory.
2) ASL is not responsible for any consequences resulting from any inaccuracies , omissions, or misrepresentations contained in client-provided information regarding samples submitted to the laboratory.

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA, CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

COC# № 85072 GLOBAL ID _____ E REPORT: ☐ PDF ☐ EDF ☐ EDD ASL JOB# 1912220

CHAIN OF CUSTODY RECORD

Company: Lindmark Engineering		Report To:	ANALYSIS REQUESTED
Address: 2625 Townsgate Rd	Project Name: Los Coyotes GWM	Address:	
suite 330 Westlake Village	Site Address: 3378 Los Coyotes	Invoice To:	
Telephone: Fax: 818-707-6100	Diagonal, Long Beach	Address:	
Special Instruction:	Project ID: 2019-257		
E-mail: dsmith@lindmarkeng.com	Project Manager: Ulf Lindmark	P.O.#:	

ITEM	LAB USE ONLY Lab ID	SAMPLE DESCRIPTION Sample ID	Date	Time	Container(s) #	Type	Matrix	Preservation	VOCs by 8260B	Remarks
	1912220-01	MW3	12/18/19	3:49	3	VOAs	water	ice	X	
	1912220-02	MW4	12/18/19	3:45	3	VOAs	water	ice	X	
	1912220-03	MW5	12/18/19	3:35	3	VOAs	water	ice	X	
	1912220-04	MW6	12/18/19	3:31	3	VOAs	water	ice	X	
	1912220-05	MW7	12/18/19	3:19	3	VOAs	water	ice	X	
	1912220-06	MW8	12/18/19	3:25	3	VOAs	water	ice	X	
	1912220-07	MW9	12/18/19	3:41	3	VOAs	water	ice	X	
	1912220-08	MW10	12/18/19	3:13	3	VOAs	water	ice	X	
	1912220-09	MW11	12/18/19	3:07	3	VOAs	water	ice	X	

Collected By: [signature]	Date 12/18/19	Time 3:49	Relinquished By:	Date	Time
Relinquished By: [signature]	Date 12/19/19	Time 10:40	Received For Laboratory [signature]	Date 12/19/19	Time 10:40
Received By:	Date	Time	Condition of Sample:		

TAT: ☒ Normal ☐ Rush

White - Report, Yellow - Laboratory, Pink - Client

Job# 1912220

ASL Sample Receipt Form

Client: Lindmark Engineering

Date: 12-19-19

Sample Information:

Temperature: 4.5 °C ☐ Blank ☒ Sample

Custody Seal: ☐ Yes ☒ No ☐ Not Available

Received Within Holding Time: ☒ Yes ☐ No

Container:

Proper Containers and Sufficient Volume: ☒ Yes ☐ No

Soil: __☐ 4oz __☐ 8oz __☐ Sleeve __☐ VOA

Water: __☐500AG __☐1AG __☐125PB __☐250PB __☐500PB __☒VOA __☐Other _____

Air: __☐ Tedlar®

Sample Containers Intact: ☒ Yes ☐ No

Trip Blank ☐ Yes ☒ No

Chain-of-Custody (COC):

Received: ☒ Yes ☐ No

Samplers Name: ☒ Yes ☐ No

Container Labels match COC: ☒ Yes ☐ No

COC documents received complete: ☒ Yes ☐ No

Proper Preservation Noted: ☒ Yes ☐ No

Completed By: Janet Chin

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

ANALYTICAL SUMMARY REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW 3	1912220-01	Water	12/18/2019 15:49	12/19/2019 10:40
MW 4	1912220-02	Water	12/18/2019 15:45	12/19/2019 10:40
MW 5	1912220-03	Water	12/18/2019 15:35	12/19/2019 10:40
MW 6	1912220-04	Water	12/18/2019 15:31	12/19/2019 10:40
MW 7	1912220-05	Water	12/18/2019 15:19	12/19/2019 10:40
MW 8	1912220-06	Water	12/18/2019 15:25	12/19/2019 10:40
MW 9	1912220-07	Water	12/18/2019 15:41	12/19/2019 10:40
MW 10	1912220-08	Water	12/18/2019 15:13	12/19/2019 10:40
MW 11	1912220-09	Water	12/18/2019 15:07	12/19/2019 10:40

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rojert G. Araghi

Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 3

Laboratory Sample ID: 1912220-01 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Chlorobenzene	**0.900**	J	0.176	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
cis-1,2-Dichloroethene	**1.32**		0.279	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B

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Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 3

Laboratory Sample ID: 1912220-01 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Tetrachloroethene	**1.94**		0.421	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Toluene	**0.450**	J	0.282	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Trichloroethene	**3.38**		0.117	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Surrogate: 4-Bromofluorobenzene			*105 %*		*70-120*		5030B	12/23/2019 21:11	ED	*8260B*
Surrogate: Dibromofluoromethane			*101 %*		*70-120*		5030B	12/23/2019 21:11	ED	*8260B*
Surrogate: Toluene-d8			*97.8 %*		*70-120*		5030B	12/23/2019 21:11	ED	*8260B*

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Rojert G. Araghi, President/Lab Director

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2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 4

Laboratory Sample ID: 1912220-02 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Chlorobenzene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
cis-1,2-Dichloroethene	**0.975**	J	0.279	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B

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Rojert G. Araghi, President/Lab Director

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Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 4

Laboratory Sample ID: 1912220-02 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Tetrachloroethene	**6.30**		0.421	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Toluene	ND		0.282	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Trichloroethene	**7.76**		0.117	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Surrogate: 4-Bromofluorobenzene			*104 %*		*70-120*		5030B	12/23/2019 21:37	ED	*8260B*
Surrogate: Dibromofluoromethane			*104 %*		*70-120*		5030B	12/23/2019 21:37	ED	*8260B*
Surrogate: Toluene-d8			*93.9 %*		*70-120*		5030B	12/23/2019 21:37	ED	*8260B*

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Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 5

Laboratory Sample ID: 1912220-03 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Chlorobenzene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
cis-1,2-Dichloroethene	ND		0.279	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B

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Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 5

Laboratory Sample ID: 1912220-03 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Tetrachloroethene	**6.92**		0.421	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Toluene	ND		0.282	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Trichloroethene	**4.17**		0.117	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Surrogate: 4-Bromofluorobenzene			*102 %*		*70-120*		5030B	12/23/2019 22:03	ED	*8260B*
Surrogate: Dibromofluoromethane			*102 %*		*70-120*		5030B	12/23/2019 22:03	ED	*8260B*
Surrogate: Toluene-d8			*95.8 %*		*70-120*		5030B	12/23/2019 22:03	ED	*8260B*

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Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
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Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 6

Laboratory Sample ID: 1912220-04 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Chlorobenzene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
cis-1,2-Dichloroethene	**0.515**	J	0.279	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B

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Rojert G. Araghi, President/Lab Director

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Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 6

Laboratory Sample ID: 1912220-04 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Tetrachloroethene	**4.21**		0.421	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Toluene	ND		0.282	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Trichloroethene	**1.12**		0.117	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Surrogate: 4-Bromofluorobenzene			*105 %*		*70-120*		5030B	12/23/2019 22:28	ED	*8260B*
Surrogate: Dibromofluoromethane			*101 %*		*70-120*		5030B	12/23/2019 22:28	ED	*8260B*
Surrogate: Toluene-d8			*95.7 %*		*70-120*		5030B	12/23/2019 22:28	ED	*8260B*

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Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 7

Laboratory Sample ID: 1912220-05 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Chlorobenzene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
cis-1,2-Dichloroethene	**0.470**	J	0.279	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B

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Rojert G. Araghi, President/Lab Director

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Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 7

Laboratory Sample ID: 1912220-05 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Tetrachloroethene	**4.54**		0.421	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Toluene	ND		0.282	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Trichloroethene	**3.33**		0.117	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Surrogate: 4-Bromofluorobenzene			*107 %*		*70-120*		5030B	12/23/2019 22:54	ED	*8260B*
Surrogate: Dibromofluoromethane			*115 %*		*70-120*		5030B	12/23/2019 22:54	ED	*8260B*
Surrogate: Toluene-d8			*94.1 %*		*70-120*		5030B	12/23/2019 22:54	ED	*8260B*

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Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 8

Laboratory Sample ID: 1912220-06 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Chlorobenzene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
cis-1,2-Dichloroethene	ND		0.279	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B

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Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 8

Laboratory Sample ID: 1912220-06 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Tetrachloroethene	**5.97**		0.421	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Toluene	ND		0.282	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Trichloroethene	**1.06**		0.117	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Surrogate: 4-Bromofluorobenzene			*105 %*		*70-120*		5030B	12/23/2019 23:19	ED	*8260B*
Surrogate: Dibromofluoromethane			*106 %*		*70-120*		5030B	12/23/2019 23:19	ED	*8260B*
Surrogate: Toluene-d8			*92.8 %*		*70-120*		5030B	12/23/2019 23:19	ED	*8260B*

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American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 9

Laboratory Sample ID: 1912220-07 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Chlorobenzene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
cis-1,2-Dichloroethene	ND		0.279	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B

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2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 9

Laboratory Sample ID: 1912220-07 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Tetrachloroethene	**9.30**		0.421	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Toluene	ND		0.282	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Trichloroethene	**2.59**		0.117	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Surrogate: 4-Bromofluorobenzene			*108 %*		*70-120*		5030B	12/23/2019 23:45	ED	*8260B*
Surrogate: Dibromofluoromethane			*114 %*		*70-120*		5030B	12/23/2019 23:45	ED	*8260B*
Surrogate: Toluene-d8			*99.7 %*		*70-120*		5030B	12/23/2019 23:45	ED	*8260B*

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Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 10

Laboratory Sample ID: 1912220-08 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Chlorobenzene	ND		0.176	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
cis-1,2-Dichloroethene	ND		0.279	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B

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Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 10

Laboratory Sample ID: 1912220-08 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Tetrachloroethene	ND		0.421	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Toluene	ND		0.282	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Trichloroethene	ND		0.117	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Surrogate: 4-Bromofluorobenzene			*101 %*		*70-120*		5030B	12/24/2019 00:11	ED	*8260B*
Surrogate: Dibromofluoromethane			*115 %*		*70-120*		5030B	12/24/2019 00:11	ED	*8260B*
Surrogate: Toluene-d8			*95.2 %*		*70-120*		5030B	12/24/2019 00:11	ED	*8260B*

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Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 11

Laboratory Sample ID: 1912220-09 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Chlorobenzene	ND		0.176	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
cis-1,2-Dichloroethene	ND		0.279	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B

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Rojert G. Araghi, President/Lab Director

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2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 11

Laboratory Sample ID: 1912220-09 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Tetrachloroethene	ND		0.421	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Toluene	ND		0.282	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Trichloroethene	ND		0.117	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Surrogate: 4-Bromofluorobenzene			*105 %*		*70-120*		5030B	12/24/2019 00:36	ED	*8260B*
Surrogate: Dibromofluoromethane			*119 %*		*70-120*		5030B	12/24/2019 00:36	ED	*8260B*
Surrogate: Toluene-d8			*97.4 %*		*70-120*		5030B	12/24/2019 00:36	ED	*8260B*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Volatile Organic Compounds - Quality Control Report

Analyte	Result	MDL	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BA00024 - 5030B - 8260B											
Blank (BA00024-BLK1)					Prepared & Analyzed: 12/23/201						
Acetone	ND	2.52	5.00	ug/L							
Benzene	ND	0.097	1.00	"							
Bromobenzene	ND	0.291	1.00	"							
Bromochloromethane	ND	0.169	1.00	"							
Bromodichloromethane	ND	0.169	1.00	"							
Bromoform	ND	0.284	5.00	"							
Bromomethane	ND	0.174	3.00	"							
2-Butanone (MEK)	ND	5.00	5.00	"							
n-Butylbenzene	ND	0.363	1.00	"							
sec-Butylbenzene	ND	0.338	1.00	"							
tert-Butylbenzene	ND	0.235	1.00	"							
Carbon disulfide	ND	0.463	1.00	"							
Carbon tetrachloride	ND	0.144	1.00	"							
Chlorobenzene	ND	0.176	1.00	"							
Chloroethane	ND	0.328	3.00	"							
2-Chloroethyl vinyl ether	ND	0.665	5.00	"							
Chloroform	ND	0.247	1.00	"							
Chloromethane	ND	0.174	3.00	"							
4-Chlorotoluene	ND	0.147	1.00	"							
2-Chlorotoluene	ND	0.311	1.00	"							
1,2-Dibromo-3-chloropropane	ND	0.333	5.00	"							
Dibromochloromethane	ND	0.300	1.00	"							
1,2-Dibromoethane	ND	0.226	1.00	"							
Dibromomethane	ND	0.316	1.00	"							
1,2-Dichlorobenzene	ND	0.358	1.00	"							
1,3-Dichlorobenzene	ND	0.333	1.00	"							
1,4-Dichlorobenzene	ND	0.384	1.00	"							
Dichlorodifluoromethane	ND	0.244	3.00	"							
1,1-Dichloroethane	ND	0.372	1.00	"							
1,2-Dichloroethane	ND	0.182	1.00	"							
1,1-Dichloroethene	ND	0.355	1.00	"							
cis-1,2-Dichloroethene	ND	0.279	1.00	"							
trans-1,2-Dichloroethene	ND	0.176	1.00	"							
1,2-Dichloropropane	ND	0.359	1.00	"							
1,3-Dichloropropane	ND	0.205	1.00	"							
2,2-Dichloropropane	ND	0.341	1.00	"							
1,1-Dichloropropene	ND	0.210	1.00	"							
cis-1,3-Dichloropropene	ND	0.122	1.00	"							
trans-1,3-Dichloropropene	ND	0.100	1.00	"							
Ethylbenzene	ND	0.209	1.00	"							

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Volatile Organic Compounds - Quality Control Report

Analyte	Result	MDL	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BA00024 - 5030B - 8260B											
Blank (BA00024-BLK1)					Prepared & Analyzed: 12/23/201						
Hexachlorobutadiene	ND	0.413	3.00	ug/L							
2-Hexanone	ND	0.944	5.00	"							
Isopropylbenzene	ND	0.291	1.00	"							
p-Isopropyltoluene	ND	0.468	1.00	"							
Methyl tert-Butyl Ether (MTBE)	ND	0.240	2.00	"							
4-Methyl-2-pentanone (MIBK)	ND	1.71	5.00	"							
Methylene chloride	ND	4.69	5.00	"							
Naphthalene	ND	0.375	1.00	"							
n-Propylbenzene	ND	0.254	1.00	"							
Styrene	ND	0.122	2.00	"							
1,1,1,2-Tetrachloroethane	ND	0.141	1.00	"							
1,1,2,2-Tetrachloroethane	ND	0.579	1.00	"							
Tetrachloroethene	ND	0.421	1.00	"							
Toluene	ND	0.282	1.00	"							
1,2,3-Trichlorobenzene	ND	0.219	1.00	"							
1,2,4-Trichlorobenzene	ND	0.451	1.00	"							
1,1,1-Trichloroethane	ND	0.150	1.00	"							
1,1,2-Trichloroethane	ND	0.233	1.00	"							
Trichloroethene	ND	0.117	1.00	"							
Trichlorofluoromethane	ND	0.294	1.00	"							
1,2,3-Trichloropropane	ND	0.303	1.00	"							
1,2,4- Trimethylbenzene	ND	0.451	1.00	"							
1,3,5- Trimethylbenzene	ND	0.219	1.00	"							
Vinyl acetate	ND	1.62	5.00	"							
Vinyl chloride	ND	0.331	3.00	"							
o-Xylene	ND	0.262	1.00	"							
m,p-Xylenes	ND	0.476	2.00	"							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rojert G. Araghi

Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
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2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Volatile Organic Compounds - Quality Control Report

Analyte	Result	MDL	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BA00024 - 5030B - 8260B											
Matrix Spike (BA00024-MS1)		**Source: 1912220-01**			Prepared & Analyzed: 12/23/201						
Benzene	55.5			ug/L	50.0	0.00	111	75-120			
Chlorobenzene	48.8			"	50.0	0.900	95.7	75-120			
1,1-Dichloroethene	47.3			"	50.0	0.00	94.6	75-120			
Methyl tert-Butyl Ether (MTBE)	40.0			"	50.0	0.00	80.0	75-120			
Toluene	56.9			"	50.0	0.450	113	75-120			
Trichloroethene	52.3			"	50.0	3.38	97.8	75-120			
Matrix Spike Dup (BA00024-MSD1)		**Source: 1912220-01**			Prepared & Analyzed: 12/23/201						
Benzene	51.6			ug/L	50.0	0.00	103	75-120	7.32	15	
Chlorobenzene	46.4			"	50.0	0.900	91.0	75-120	4.96	15	
1,1-Dichloroethene	41.2			"	50.0	0.00	82.3	75-120	13.9	15	
Methyl tert-Butyl Ether (MTBE)	40.4			"	50.0	0.00	80.7	75-120	0.946	15	
Toluene	54.3			"	50.0	0.450	108	75-120	4.77	15	
Trichloroethene	50.4			"	50.0	3.38	94.0	75-120	3.62	15	

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Rojert G. Araghi

Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the practical quantitation limit (PQL)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

APPENDIX E

Non-Hazardous Waste Manifest

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: Not Required
2. Page 1 of 1
3. Emergency Response Phone: 888-423-6060
4. Waste Tracking Number: 122019050

GENERATOR

5. Generator's Name and Mailing Address
Royalty Cleaners
3378 Los Coyotes Diagonal
Long Beach CA 90808
Generator's Phone: 818 707-6100

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: American Integrated Services, Inc.
U.S. EPA ID Number: CAR000148338

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Crosby & Overton, Inc.
1630 W. 17th Street
Long Beach CA 90813
Facility's Phone: 562 432-5445
U.S. EPA ID Number: CAD028409019

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1	Non-Hazardous Waste Liquid (Groundwater)	12	DM	94	G	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
Wear proper PPE while handling. Weights or volumes are approximate.
Job# 39009-8-5 Profile# 27579
L55121
D181251
2 drums

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: AIS on behalf of Generator - J Sherman
Signature: AIS
Month 12 Day 18 Year 19

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Alonzo Delgado
Signature:
Month 12 Day 18 Year 19

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

H135

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name
Signature
Month 12 Day 30 Year 19

169-BLC-O 5 11977 (Rev. 9/09)

TRANSPORTER #1

Well Finder
CalGEM GIS

More Info | Help |

- Well Status and Well Type Filter
- Search
- Zoom to Field
- Measurement
- Layers

yotes diagonal, long beach ca

Basemaps

E Harco St
E Conant St
E Canta St
E Peabody St
E Brittain St
Monaco Rd
E Huntdale St
E Parapet St
E Oxholm St
E Gossamer St
E Keynote St
E Monaco Rd
E Wardlow Rd
E Coralite St
E Premium St
E Killdee St
E Lanai St
E Mezzanine Way
E Scrivener St
E Rosebay St
E Metz St
Rancho Estates
E Pageantry St
E Spring St
E Oakbrook St
E Belen St
N Los Coyotes Diagonal
San Anselmo Ave
Fanwood Ave
Faust Ave
Gondar Ave
Cantax Ave
Knoxville Ave
Monogram Ave
Nipomo Ave
Ostrom Ave
Karen Ave
Volk Ave
Albway Ave
Stanley Ave
Senasac Ave
Shadypark Dr
Lewis Ave
Conquista Ave
Palo Verde Ave
Hackett Ave
Iroquois Ave
Josie Ave
Ladoga Ave
Petaluma Ave
N Studebaker Rd
Lees Ave
Kallin Ave
Roxanne Ave
Pattiz Ave
Chatwin Ave
Marwick Ave
Ocana Ave
Lomina Ave
E Pavo St
E Adderley Dr
McNab Ave
Woodruff Ave
Rodior Ave
Albury Ave
Snowden Ave
Canetia Ave
Long Beach Ave
Arlotte Ave
San Gabriel River Fwy
Patrick Henry K-8 School
Keller Dual Immersion Middle School
David Burcham K-8 School
John Marshall Academy of The Arts
Robert A Millikan High School
El Dorado Regional
El Dorado Dog Park
El Dorado - Nature Center & Community Gardens
El Dorado Park West
0.3mi
1:18,056 33.819105 -118.08356

Powered by WellSTAR

ENVIROSTOR

3340 los coyotes diagonal, long beach ca

Map Address

Map | Satellite

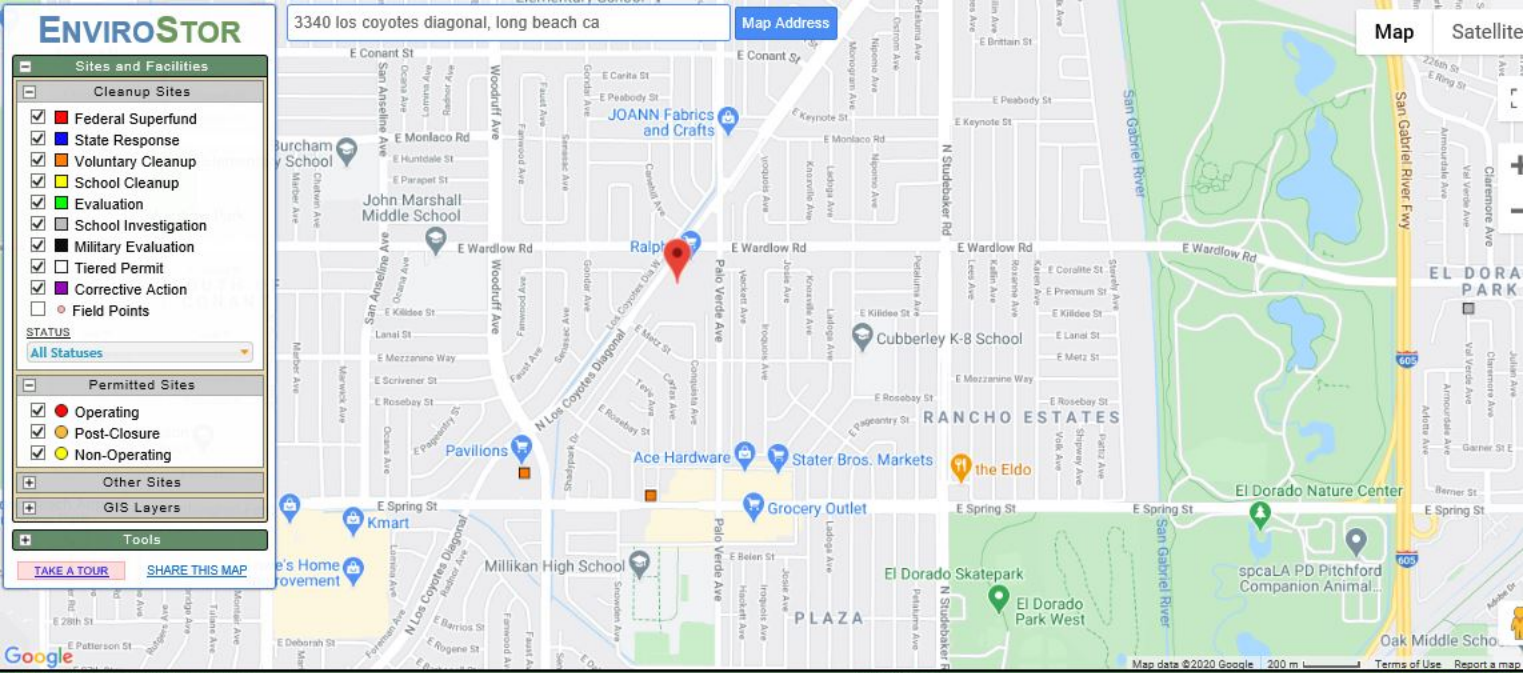
- Sites and Facilities
  - Cleanup Sites
    - ☑ Federal Superfund
    - ☑ State Response
    - ☑ Voluntary Cleanup
    - ☑ School Cleanup
    - ☑ Evaluation
    - ☑ School Investigation
    - ☑ Military Evaluation
    - ☑ Tiered Permit
    - ☑ Corrective Action
    - ☐ Field Points

STATUS

All Statuses

- Permitted Sites
  - ☑ Operating
  - ☑ Post-Closure
  - ☑ Non-Operating
- Other Sites
- GIS Layers
- Tools

TAKE A TOUR | SHARE THIS MAP



SITES CURRENTLY VISIBLE ON MAP

3 SITES LISTED

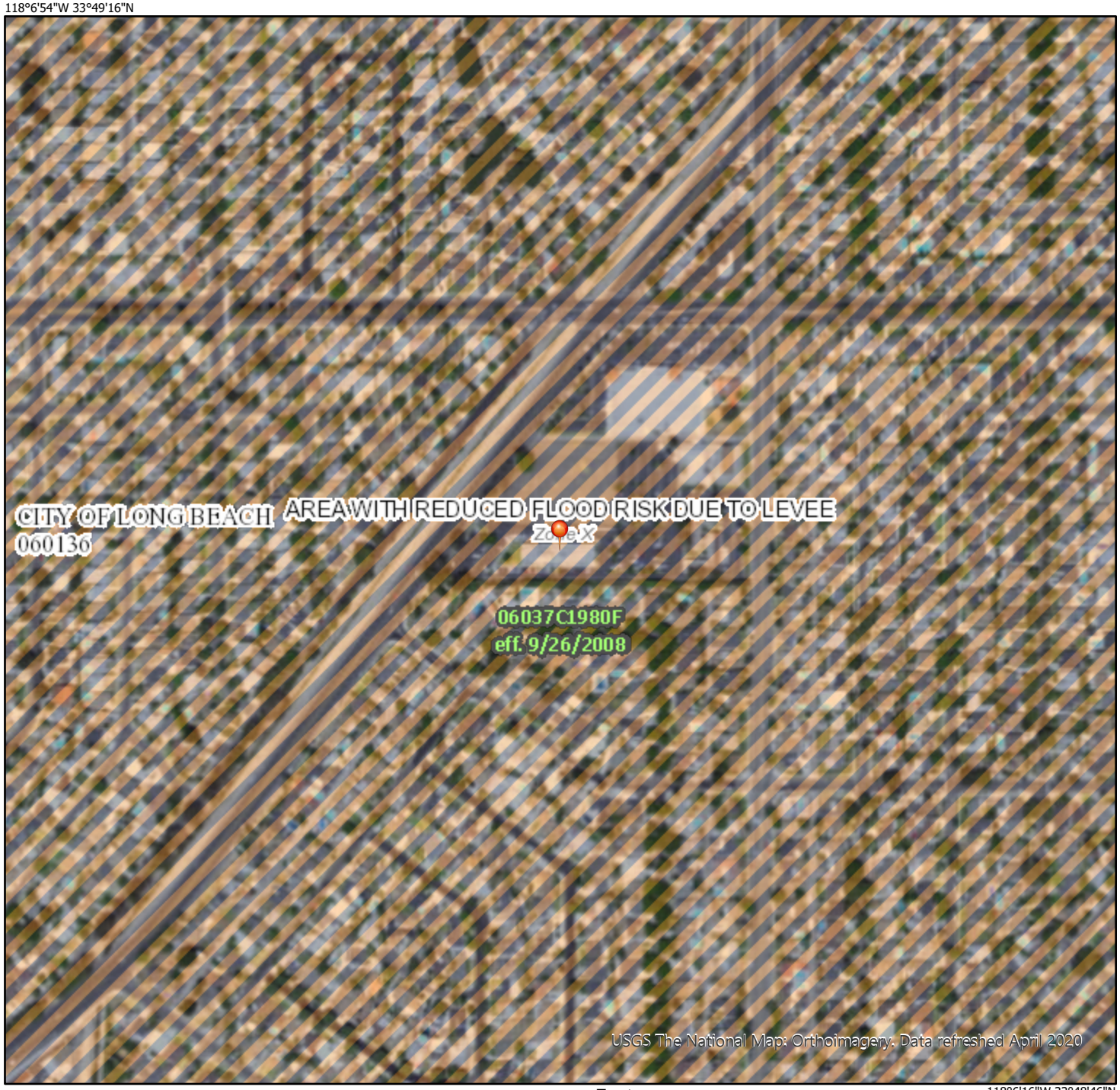
EXPORT THIS LIST TO EXC

PROJECT NAME	STATUS	PROJECT TYPE	ADDRESS	CITY
CREIGHTON'S CLEANERS	ACTIVE	VOLUNTARY CLEANUP	5951 SPRING STREET	LONG BEACH
LAKEWOOD PLAZA	ACTIVE	VOLUNTARY CLEANUP	6223-6351 EAST SPRING STREET	LONG BEACH
NEWCOMB ACADEMY	NO FURTHER ACTION	SCHOOL INVESTIGATION	3351 VAL VERDE AVENUE	LONG BEACH

National Flood Hazard Layer FIRMette

FEMA

118°6'54"W 33°49'16"N



118°6'16"W 33°48'46"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS

- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD

- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS

- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES

- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES

- B 20.2 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- 8 Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS

- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/31/2020 at 4:10 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

GEOTRACKER

Sites and Facilities - INFO

Cleanup Sites

- [x] LUST Cleanup Sites
- [x] Cleanup Program Sites
- [x] Military Cleanup Sites
  - [x] Military Cleanup Sites
  - [x] Military Privatized Sites
  - [x] Military UST Sites
- [ ] DTSC Cleanup Sites

Permitted Facilities

- [x] Waste Discharge Requirements (WDR) Sites
- [ ] Permitted USTs - INFO
- [ ] DTSC Hazardous Waste Sites
- [ ] Land Disposal Sites
- [x] Irrigated Lands Regulatory Program Sites
- [ ] Oil / Gas Sites
- [x] Confined Animal Sites

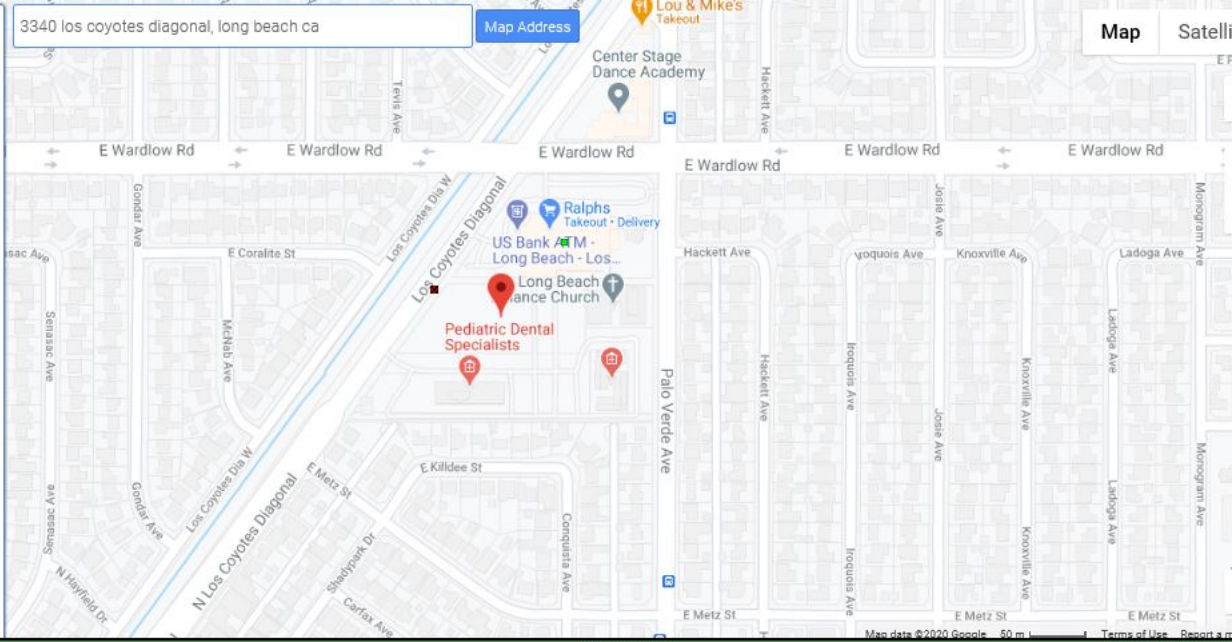
Other Sites

- [ ] Project Sites
- [ ] Non-Case Information Sites
- [ ] Sampling Points - Public
- [ ] Field Points
- [ ] AGLand Domestic Wells

3340 los coyotes diagonal, long beach ca

Map Address

Map | Satelli



SITES CURRENTLY VISIBLE ON MAP — 2 SITES LISTED — EXPORT THIS LIST TO E

SITE NAME	GLOBAL ID	STATUS	ADDRESS	CITY
CHARTER HOSPITAL FACILITY	T0603701883	COMPLETED - CASE CLOSED	3340 LOS COYOTES DIAGONAL	LONG BEACH
ROYALTY CLEANERS	SL184301413	OPEN - VERIFICATION MONITORING	3378 LOS COYOTES DIAGONAL	LONG BEACH

STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER

CASE SUMMARY

REPORT DATE
1/1/1988

HAZARDOUS MATERIAL INCIDENT REPORT FILED WITH OES?

I. REPORTED BY -
UNKNOWN

CREATED BY
UNKNOWN

III. SITE LOCATION

FACILITY NAME
CHARTER HOSPITAL FACILITY

FACILITY ID

FACILITY ADDRESS
3340 LOS COYOTES DIAGONAL
LONG BEACH, CA 90808
LOS ANGELES COUNTY

ORIENTATION OF SITE TO STREET

CROSS STREET

V. SUBSTANCES RELEASED / CONTAMINANT(S) OF CONCERN
DIESEL

VI. DISCOVERY/ABATEMENT

DATE DISCHARGE BEGAN

DATE DISCOVERED

HOW DISCOVERED

DESCRIPTION

DATE STOPPED

STOP METHOD

DESCRIPTION

VII. SOURCE/CAUSE

SOURCE OF DISCHARGE
Other

CAUSE OF DISCHARGE
Unknown

DISCHARGE DESCRIPTION

VIII. CASE TYPE

CASE TYPE
Aquifer used for drinking water supply

IX. REMEDIAL ACTION
NO REMEDIAL ACTIONS ENTERED

X. GENERAL COMMENTS

XI. CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION REPORTED HEREIN IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

XII. REGULATORY USE ONLY

LOCAL AGENCY CASE NUMBER	REGIONAL BOARD CASE NUMBER
	908080043

LOCAL AGENCY

CONTACT NAME	INITIALS	ORGANIZATION_NAME	EMAIL ADDRESS
CARMEN PIRO	CP	LONG BEACH, CITY OF	carmen.piro@longbeach.gov

ADDRESS
2525 GRAND AVE.
LONG BEACH, CA 90815

CONTACT DESCRIPTION

PHONE TYPE	PHONE NUMBER	EXTENSION
phone	(562)-570-4137	

REGIONAL BOARD

CONTACT NAME	INITIALS	ORGANIZATION_NAME	EMAIL ADDRESS
YI LU	YL	LOS ANGELES RWQCB (REGION 4)	ylu@waterboards.ca.gov

ADDRESS

R4 UNKNOWN, CA

CONTACT DESCRIPTION

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Contact Us

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Department of Toxic Substances Control
Meredith Williams, Ph.D., Director
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806

Jared Blumenfeld
Secretary for
Environmental Protection

Gavin Newsom
Governor

Facility Search Results

Selection Criteria:

Facility:	
Search on:	Physical Address
Street:	3340 los
City:	long beach
Status:	Active and Inactive
Sort Direction:	asc
Sorted By:	EPA ID
Records Found:	4

EPA ID Number	Name	Address	City	Zip
CAC000020925	1X LOS ALTOS HOSPITAL	3340 LOS CAYOTES DIAGONAL	LONG BEACH	908080000
CAC000684536	1X LOS ALTOS HOSPITAL	3340 LOS COYOTES DIAGONAL	LONG BEACH	908089968
CAC000739376	1X LOS ALTOS HOSPITAL	3340 LOS COYOTES DIAGONAL	LONG BEACH	908089968
CAC001405784	HARBOR COMMERCE CTR	3340 LOS COYOTES DIAGONAL	LONG BEACH	908080000

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Report Generation Date: 09/11/2020

Jared Blumenfeld
Secretary for
Environmental Protection

Department of Toxic Substances Control
Meredith Williams, Ph.D., Director
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806

Gavin Newsom
Governor

EPA ID PROFILE

Map

ID Number:	CAC000020925	**Status:**	INACTIVE
Name:	1X LOS ALTOS HOSPITAL	**Inactive Date:**	10/25/2000 12:00:00 AM
County:	LOS ANGELES	**Record Entered:**	7/23/1987 12:00:00 AM
NAICS:	N/A	**Last Updated:**	10/25/2000 12:00:00 AM

	Name	Address	City	State	Zip Code	Phone
Location	1X LOS ALTOS HOSPITAL	3340 LOS CAYOTES DIAGONAL	LONG BEACH	CA	908080000	
Mailing		3340 LOS CAYOTES DIAGONAL	LONG BEACH	CA	908080000	
Owner	--	--	--	99	--	0000000000
Operator/Contact	S SMITH	--	--	99	--	6192820711

Based Only Upon ID Number: **CAC000020925**

Calif. Manifests?	Non Calif. Manifests?	Transporter Registration?
N/A	N/A	N/A

California and Non California Manifest Tonnage Total and Waste Code by Year Matrix by Entity Type (if available) are on the next page

Calif. Manifest Counts and Total Tonnage

No Records Found

Non California Manifest Total Tonnage

No Records Found

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Report Generation Date: 09/11/2020

Jared Blumenfeld
Secretary for
Environmental Protection

Department of Toxic Substances Control
Meredith Williams, Ph.D., Director
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806

Gavin Newsom
Governor

EPA ID PROFILE

Map

ID Number:	CAC000684536	**Status:**	INACTIVE
Name:	1X LOS ALTOS HOSPITAL	**Inactive Date:**	1/1/1900 12:00:00 AM
County:	LOS ANGELES	**Record Entered:**	4/20/1992 12:00:00 AM
NAICS:	N/A	**Last Updated:**	5/6/1998 12:00:00 AM

	Name	Address	City	State	Zip Code	Phone
Location	1X LOS ALTOS HOSPITAL	3340 LOS COYOTES DIAGONAL	LONG BEACH	CA	908089968	
Mailing		--	CHULA VISTA	CA	919100000	
Owner	LOS ALTOS HOSPITAL	--	--	99	--	0000000000
Operator/Contact	STEPHEN SMITH VP	--	--	99	--	6194763562

Based Only Upon ID Number: **CAC000684536**

Calif. Manifests?	Non Calif. Manifests?	Transporter Registration?
N/A	N/A	N/A

California and Non California Manifest Tonnage Total and Waste Code by Year Matrix by Entity Type (if available) are on the next page

Calif. Manifest Counts and Total Tonnage

No Records Found

Non California Manifest Total Tonnage

No Records Found

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Report Generation Date: 09/11/2020

Jared Blumenfeld
Secretary for
Environmental Protection

Department of Toxic Substances Control
Meredith Williams, Ph.D., Director
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806

Gavin Newsom
Governor

EPA ID PROFILE

Map

ID Number:	CAC000739376	**Status:**	INACTIVE
Name:	1X LOS ALTOS HOSPITAL	**Inactive Date:**	10/25/2000 12:00:00 AM
County:	LOS ANGELES	**Record Entered:**	4/26/1994 12:00:00 AM
NAICS:	N/A	**Last Updated:**	10/25/2000 12:00:00 AM

	Name	Address	City	State	Zip Code	Phone
Location	1X LOS ALTOS HOSPITAL	3340 LOS COYOTES DIAGONAL	LONG BEACH	CA	908089968	
Mailing		3340 LOS COYOTES DIAGONAL	LONG BEACH	CA	908089968	
Owner	LOS ALTOS HOSPITAL	--	--	99	--	0000000000
Operator/Contact	KENT DUNLAP	--	--	99	--	3104219311

Based Only Upon ID Number: **CAC000739376**

Calif. Manifests?	Non Calif. Manifests?	Transporter Registration?
Yes	N/A	N/A

California and Non California Manifest Tonnage Total and Waste Code by Year Matrix by Entity Type (if available) are on the next page

Calif. Manifest Counts and Total Tonnage

Top line represents Manifest Count and Bottom line represents Total Tonnage

Year	Generator	Trans. 1	Trans. 2	TSDF	ALT. TSDF

1994	1 2.52840	0 0.00000	0 0.00000	0 0.00000	0 0.00000

Non California Manifest Total Tonnage

No Records Found

Waste Code Matrix					
California	Generator	Trans. 1	Trans. 2	TSDF	Alt. TSDF
RCRA	Generator	Trans. 1	Trans. 2	TSDF	Alt. TSDF

Waste Code Matrix as a spreadsheet

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Report Generation Date: 09/11/2020

California Waste Code by Year Matrix

ID Number: **CAC000739376**
Entity Type: **Generator**

1994 2020 Select Years

Calif. Code	Description	1994
151	ASBESTOS-CONTAINING WASTE	2.52840
	Grand Total	2.52840

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Report Generation Date: 09/11/2020

RCRA Waste Code by Year Matrix

ID Number: **CAC000739376**
Entity Type: **Generator**

No Records Found

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Report Generation Date: 09/11/2020

Jared Blumenfeld
Secretary for
Environmental Protection

Department of Toxic Substances Control
Meredith Williams, Ph.D., Director
1001 "I" Street
P.O. Box 806
Sacramento, California 95812-0806

Gavin Newsom
Governor

EPA ID PROFILE

Map

ID Number:	CAC001405784	**Status:**	INACTIVE
Name:	HARBOR COMMERCE CTR	**Inactive Date:**	10/25/2000 12:00:00 AM
County:	LOS ANGELES	**Record Entered:**	5/6/1998 12:00:00 AM
NAICS:	N/A	**Last Updated:**	10/25/2000 12:00:00 AM

	Name	Address	City	State	Zip Code	Phone
Location	HARBOR COMMERCE CTR	3340 LOS COYOTES DIAGONAL	LONG BEACH	CA	908080000	
Mailing		211 EAST OCEAN BLVD #230	LONG BEACH	CA	908030000	
Owner	HARBOR COMMERCE CENTER	211 EAST OCEAN BLVD #230	LONG BEACH	CA	908030000	0000000000
Operator/Contact	TOM DEAN	211 EAST OCEAN BLVD #230	LONG BEACH	CA	908030000	5625900222

Based Only Upon ID Number: **CAC001405784**

Calif. Manifests?	Non Calif. Manifests?	Transporter Registration?
Yes	N/A	N/A

California and Non California Manifest Tonnage Total and Waste Code by Year Matrix by Entity Type (if available) are on the next page

Calif. Manifest Counts and Total Tonnage

Top line represents Manifest Count and Bottom line represents Total Tonnage

Year	Generator	Trans. 1	Trans. 2	TSDF	ALT. TSDF

1998	1 0.62550	0 0.00000	0 0.00000	0 0.00000	0 0.00000

Non California Manifest Total Tonnage

No Records Found

Waste Code Matrix					
California	Generator	Trans. 1	Trans. 2	TSDF	Alt. TSDF
RCRA	Generator	Trans. 1	Trans. 2	TSDF	Alt. TSDF

Waste Code Matrix as a spreadsheet

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Report Generation Date: 09/11/2020

California Waste Code by Year Matrix

ID Number: **CAC001405784**
Entity Type: **Generator**

1998 2020 Select Years

Calif. Code	Description	1998
241	TANK BOTTOM WASTE	0.62550
	Grand Total	**0.62550**

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Report Generation Date: 09/11/2020

RCRA Waste Code by Year Matrix

ID Number: **CAC001405784**
Entity Type: **Generator**

No Records Found

The Department of Toxics Substances Control (DTSC) takes every precaution to ensure the accuracy of data in the Hazardous Waste Tracking System (HWTS). However, because of the large number of manifests handled, inaccuracies in the submitted data, limitations of the manifest system and the technical limitations of the database, DTSC cannot guarantee that the data accurately reflect what was actually transported or produced.

Report Generation Date: 09/11/2020

CITY OF LONG BEACH
UNIFIED PROGRAM AGENCY
c/o LONG BEACH FIRE DEPARTMENT
3205 Lakewood Blvd
Long Beach, CA 90808

Phone (562) 570-2581 or (562) 570-2588
Fax (562) 570-2566
Inspector Olson
Date 11/7/13
Routine ✓ Reinspection ____
Consult ____ Other ____
HC 4149 FRG 1

Business Name: VERIZON
Address: 3340 Los Coyotes L B. CA.
Phone: ____

Hazardous Materials Business Emergency Plan
WWW.LONGBEACHCUPA.ORG

On the above date an inspection of your business/facility was conducted in order to determine compliance with the California Health and Safety Code (HSC) Chapter 6.95; Title 19 of the California Code of Regulations: and the City of Long Beach Municipal Code. Violations determined from this inspection are noted below:

Violation classification: M= minor; II = Class II; I = Class I

___ Failure to establish/implement a Business Emergency Plan. [HSC 25503.5]
___ Chemical inventory is incomplete or needs to be updated. [HSC 25504]
___ Failure to submit a Business Emergency Plan to the Long Beach Fire Dept. [HSC 25505]
___ Failure to review and update the Business Emergency Plan. [HSC 25505(c)]
___ Emergency Response Plan inadequate and/or does not include adequate notification,mitigation and abatement procedures. [HSC 25504]
___ Employee training program is inadequate. [HSC 25504]
___ Business Owner/Operator Identification page is incomplete or needs to be updated. [HSC 25509]
___ Failure to provide name, title, and 24-hour phone number of emergency contacts(s). [HSC 25509(a)]
___ Site Map is incomplete or insufficient. [HSC 25509(a)]
___ Failure to report a release or threatened release. [HSC 25507]
___ Other (See comments)
✓ No violations found at this time. No corrective actions required.
___ Facility access for inspection granted [HSC 25508(a)]

___ Corrections are required and documentation must be returned to this office within _____ days.
___ **All previous violations outstanding. No progress.**
If all violations are not corrected and an additional inspection is necessary, a reinspection fee will be charged.

___ **FINAL NOTICE. ALL VIOLATIONS MUST BE CORRECTED IMMEDIATELY. FAILURE TO COMPLY WILL RESULT IN A REFERRAL TO THE CITY PROSECUTOR'S OFFICE FOR FURTHER ACTION.**

Comments: N/A VIOLATIONS

www.longbeachcupa.org

Facility Signature Matt Ota Title Tech Date 11-7-13

Facility Rep. Print Name Matt Ota Next Inspection ____

Rev 04/2013 White Original - Fire Yellow Copy - Facility

LONG BEACH FIRE DEPARTMENT

CUPA Fire Inspection Report BIR 3126

CASE # FIRE_____

Bureau of Fire Prevention • 3205 Lakewood Blvd • Long Beach, California 90808 • **(562) 570-2560 • Fax (562) 570-2566**

Business Name	Contact	Title	CERS / HC #
VERIZON (KNOXVILLE)	SCOTT BAKER		4149

Business Address	City	State	Zip Code	Phone	Last BEP Date	FRG
3340 LOS COYOTES	LB	CA.		(714) 514-2211	12/9/16	1

Hazardous Materials Business Emergency Plan

cers.calepa.ca.gov

- Facility access for inspection granted HSC 25508(a) (Y) N
- Minor Violation as defined in California Health & Safety Code (CHSC) 25404 (c) (3)
- Class II Violation as defined in California Code of Regulations (CCR), Title 22, 66260.10
- Class I Violation as defined in California Code of Regulations (CCR), Title 22, 66260.10 and California Health & Safety Code (CHSC) 25110.8.5

MINOR	CLASS II	CLASS I	CORRECTED	
☐	☐	☐		1. Failure to establish/implement a Business Emergency Plan. HSC 25503.5
☐	☐	☐		2. Chemical inventory is incomplete or needs to be updated. HSC 25504
☐	☐	☐		3. Failure to submit a Business Emergency Plan to the Long Beach Fire Department. HSC 25505
☐	☐	☐		4. Failure to review and update the Business Emergency Plan. HSC 25505(c)
☐	☐	☐		5. Emergency Response Plan inadequate and/or does not include adequate notification, mitigation and abatement procedures. HSC 25504
☐	☐	☐		6. Employee training program is inadequate. HSC 25504
☐	☐	☐		7. Business Owner/Operator Identification page is incomplete or needs to be updated. HSC 25509
☐	☐	☐		8. Failure to provide name, title, and 24-hour phone number of emergency contact(s). HSC 25509(a)
☐	☐	☐		9. Site Map is incomplete or insufficient. HSC 25509(a)
☐	☐	☐		10. Failure to report a release or threatened release. HSC 25507

ADDITIONAL VIOLATIONS/COMMENTS — **☑ = VIOLATION TO BE CORRECTED**

NO Violations

☐	☐	☐		**A re-inspection fee of $_____ is being assessed for non-compliance with violations**
☐	☐	☐		**A re-inspection fee of $_____ is being assessed for non-compliance with violations**

The scheduled re-inspection date is not an expressed or implied permit to allow the continuation of any unsafe condition or code violation. Orders and reports shall be complied with by the owner/ responsible party, correct all violations prior to the re-inspection date. Any code violations shall be corrected upon receipt of this Inspection Notice. Non-compliance by the re-inspection date is a misdemeanor and may result in a referral to City Prosecutor. California Health & Safety Code § 25514 and 25514.3.

RECEIVED BY:	NO RP AVAILABLE ☐	PRINT NAME: Scott Baker	TITLE: Field Tech	DATE: 11.16.16
RECEIVED BY:	NO RP AVAILABLE ☐	PRINT NAME:	TITLE:	DATE:
RECEIVED BY:	NO RP AVAILABLE ☐	PRINT NAME:	TITLE:	DATE:

INITIAL INSPECTION CONDUCTED DATE: BY: DID #:	FIRST RE-INSPECTION ON OR AFTER DATE:	SECOND RE-INSPECTION ON OR AFTER DATE:
FIRST RE-INSPECTION CONDUCTED DATE: BY: DID #:	SECOND RE-INSPECTION CONDUCTED DATE: BY: DID #:	

REFERRED TO FP DATE: ☐ ABATED / IN COMPLIANCE ☐ NO VIOLATIONS OBSERVED DATE: 11/16/16 BY: V. Ortiz DID #: 71393

INSPECTOR: _____

Contact: (562) _____

WHITE - FIRE PREVENTION GREEN - FINAL NOTICE CANARY - THIRD NOTICE PINK - SECOND NOTICE GOLDENROD - FIRST NOTICE

LONG BEACH FIRE DEPARTMENT
FIRE PREVENTION BUREAU
-- Underground Storage Tanks --

Tanks	Tank Test	Leak Test	Strt Number	Street Name	Business Name		
1T	01/08/96	01/08/96	3340	LOS COYOTES DIAG	** CBHS @ LOS ALTOS - 1 S/W STEEL	LB	-> 2371

08/14/96 PORTER-> FACILITY CLOSED 04/01/96 (VACANT) WILL KEEP CURRENT
01/05/95 HAYS-> NO WRMP; NEW A,OLD B FORMS & FINANCIAL RESP OK 10/00/84
SWENSON-> LOS ALTOS HOSPITAL FINAL RPT OK LEIGHTON
10/26/62 PORTER-> INSTALLED 5M DIESEL BUEHLER (COATED W/BLACK ASHPALT)

ATTN:- INSP. TOM HAYS

PAID

FIRE PREVENTION PLAN CHECK WORKSHEET

PROJECT # 254087 (T)
(Dept. Use Only)

DATE: 5/6/98

TYPE OF PLANS: (Put an X in front of ONE)

___ Building/New Construction

___ Sprinkler/New Construction

___ Dry/Wet Chemical

___ Fire Alarm

___ Above Ground Tanks (_____No. of Tanks)

___ Other

RECEIVED
MAY 06 1998
DSC/FIRE PREVENTION

geologists & engineers
31320 Via Colinas, Suite 104
Westlake Village, CA 91362

California Environmental
William D. Edwards
Manager
Construction Division
(818) 991-1542
(213) 485-0606
PAGER (818) 587-0806
FAX (818) 991-0739

✓ Underground Tanks (___1___No. of Tanks)

___ Spray Booth

REMOVAL

PLEASE PRINT - MUST BE FILLED OUT COMPLETELY

PROJECT NAME: LOS ALTOS HOSPITAL		
PROJECT ADDRESS: 3340 LOS COYOTES DIAGONAL, LONG BEACH		
DESCRIPTION OF WORK: REMOVE 1-5K EMERGENCY GEN. TANK (DIESEL)		
APPLICANT/CONTRACTOR: CALIFORNIA ENVIRONMENTAL	PHONE: (818) 991-1542	FAX#: (818) 991-0739
ADDRESS/CITY/ST/ZIP: 31320 VIA COLINAS, SUITE 104, WESTLAKE VILLAGE, CA. 91362		
STATE LIC.#: 732377	CLASS: A, B, HAZ ASB.	EXPIRATION DATE: 2/99
CITY BUS. LIC. #: 98017370		EXPIRATION DATE: 8/98
CURRENT BUILDING USE: VACANT	PROPOSED BUILDING USE: NURSERY SCHOOL	
OCCUPANCY CLASSIFICATION: (per UBC) N/A	SQ. FT.	TYPE OF CONSTRUCTION:
BUILDING SPRINKLERED: YES _____	NO _____	

****

(Fire Prevention Office Use Only)

Plans Submitted By: BILL EDWARDS

Plan Review Fees: $200.00

Plan Review Checked By: T. A. Hays

Approved Date: 5-7-98

(3) SETS

APPROVED
MAY 7 1998
Date: _____
L. B. F. D.
BUREAU OF FIRE PREVENTION

WORKSHT3.PC 1/1/96

UNDERGROUND STORAGE TANK REMOVAL INSPECTION REPORT

925 Harbor Plaza, Suite 100
Phone (310) 570-2560
Long Beach, California 90802
Fax (310) 570-2566

RECEIVED MAY 12 1998 FIRE PREVENTION

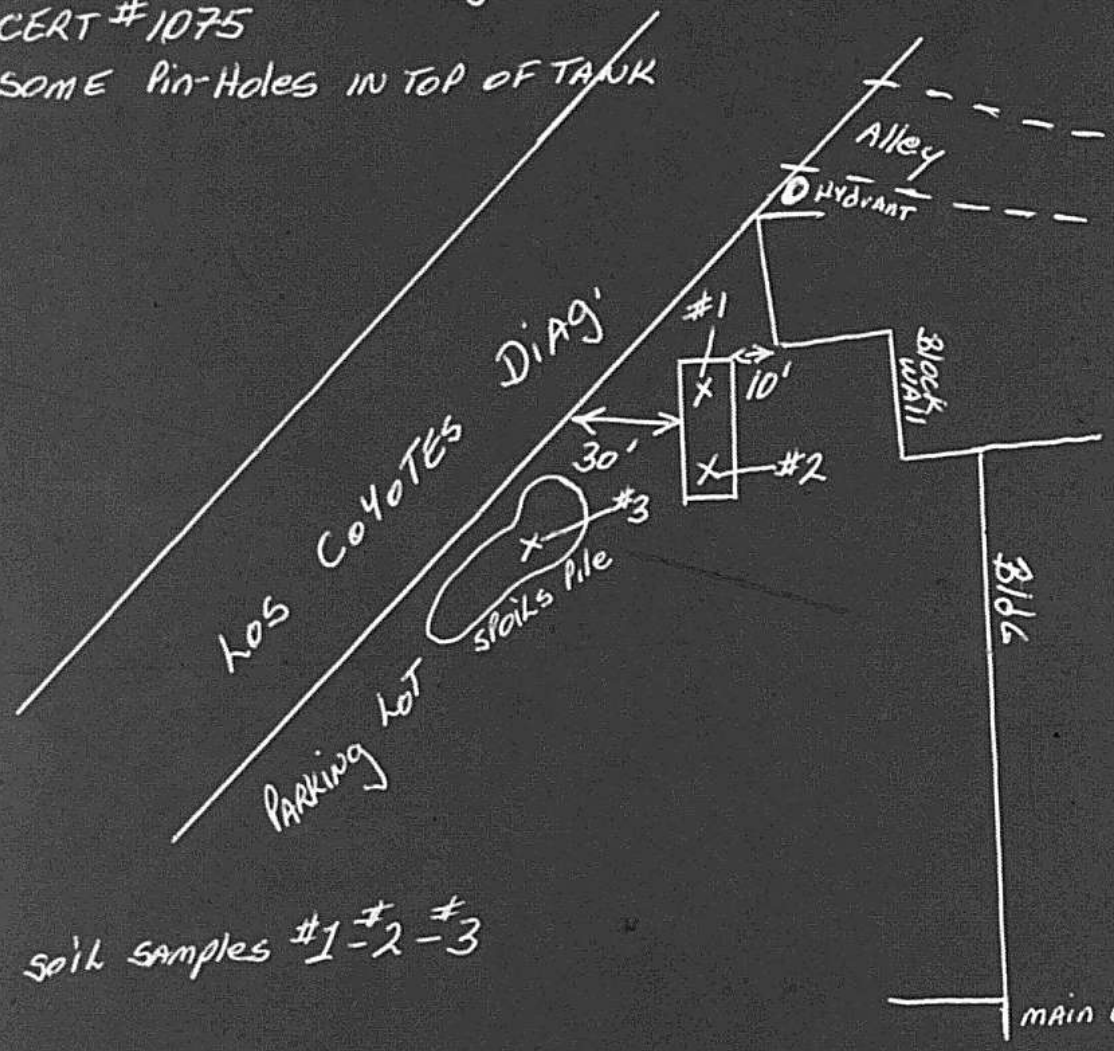
NAME	ADDRESS	PHONE#

Site 3340 Los Coyotes Diag.
Owner Los Altos Hospital
Contractor California Environmental, Inc.
Geologist Michael Tiffany
Lab Columbia Analytical

DATE 5/12/98
PROJECT# 254087T
INSPECTOR T. Hays

SITE MAP

N ⇑



Soil samples #1-#2-#3

Remove 1 tank(s) per current Long Beach Fire Department and Long Beach Health Department guidelines. Soil sample analysis shall be submitted to both agencies within 14 days.

I have read and understand the above.

Signature | Print name & phone # | Company and Title

Wilfred Edwards 818 991-1542 CE. RME/MGR. COOS DIV.

USTRIR.UG

FR-389 (10/94)

1. POSSIBLE GW FLOW BUT NOT ESTABLISHED
2. WELLS SHOULD HAVE BEEN COMPLETED 20' INTO GW
3. WANT COPIES OF THE MONITORING REPORTS REF. TO HAZ. MAT. MAN. PLAN.
4. ~~WERE THE ON~~ TEST THE WELLS FOR GC/FID MODIFIED FOR DIESEL RANGE HYDROCARBONS
5. A MIN. OF ONE SOIL SAMPLE PER BORING SHOULD HAVE BEEN ANALYZED REGARDLESS OF NO VISIBLE CONTAMINATION
6. NO CAP ON WELL #1 DETAIL SHOWS WATER COVER W/NO ELEV.
7. WELL 2 SAME AS 1

PRIORITY III

RWQCB UST PROGRAM
TRACKING STEPS

Los Altos Hospital
Long Beach

FUEL SOLVENT

omplex ☐ , Offsite ☐

	No.	INTERIM CLEANUP A	B	C	D	E
NG/PRIORITIZATION						
mation.....	1					
ase(s).....	1					
agency role						
LIA, RB).....	NA					
n.....	1					
RP to verify						
in process.....	NA					
SSESSMENT						
develop an						
.....						
to obtain an						
.....						
nt plan.....						
n.....						
of assessment plan						
nt report.....						
upon assessement						
results.....						
STEP 3: REMEDIAL INVESTIGATION						
. Notify Rp to develop remediation plan...						
. Enforcement required to obtain remediation plan.....						
. Review draft remediation plan.....						
. Approve remediation plan.....						
STEP 4: REMEDIATION						
. Issue permits or orders.....						
. Implementation of final remediation.....						
. Review and approve remediation monitoring.....						
. Monitor remediation progress and results						
. Make necessary modifications to remediation plan.....						
STEP 5: SITE CLOSURE						
. Make decision regarding "How Clean is Clean".....						
. Notify RP site is closed.....						

Note: A=No Action, B=Tank R/R, C=Soil R/R, D=Free Product Recovery, E=G.W. Pumping

RWQCB UST PROGRAM
TRACKING STEPS

NAME AND ADDRESS OF SITE: Los Altos Hospital Long Beach

TYPE OF CHEMICAL LEAK: FUEL SOLVENT
(Circle one or both)

Simple ☐, Moderate ☐, Complex ☐, Offsite ☐

TASKS	No.	INTERIM CLEANUP A	B	C	D	E
STEP 1: NOTIFICATION/LOGGING/PRIORITIZATION						
. Receive/Release information.....	/					
. Enter data and data base(s).....	/					
. Determination of lead agency role (non-pilot LIA, pilot LIA, RB).....	NA					
. Initial prioritization.....	/					
. Initial contacts with RP to verify information and explain process.....	NA					
STEP 2: PRELIMINARY SITE ASSESSMENT						
. Notification of RP to develop an assessment plan.....						
. Enforcement required to obtain an assessment plan.....						
. Review draft assessment plan.....						
. Approve assessment plan.....						
. Review implementation of assessment plan						
. Review final assessment report.....						
. Prioritize cases based upon assessement results.....						
STEP 3: REMEDIAL INVESTIGATION						
. Notify Rp to develop remediation plan...						
. Enforcement required to obtain remediation plan.....						
. Review draft remediation plan.....						
. Approve remediation plan.....						
STEP 4: REMEDIATION						
. Issue permits or orders.....						
. Implementation of final remediation.....						
. Review and approve remediation monitoring.....						
. Monitor remediation progress and results						
. Make necessary modifications to remediation plan.....						
STEP 5: SITE CLOSURE						
. Make decision regarding "How Clean is Clean".....						
. Notify RP site is closed.....						

Note: A=No Action, B=Tank R/R, C=Soil R/R, D=Free Product Recovery, E=G.W. Pumping

Cal/EPA

Los Angeles Regional Water Quality Control Board

101 Centre Plaza Drive
Monterey Park, CA
91754-2156
(213) 266-7500
FAX (213) 266-7600

Pete Wilson
Governor

October 15, 1997

Mr. Art Gonzalez
Charter Behavioral Health Systems
Western Region Office
16960 East Bastanchury Road, Suite E
Yorba Linda, CA 92886

UNDERGROUND STORAGE TANK CASE FILE
CHARTER HOSPITAL FACILITY
3340 LOS COYOTES DIAGONAL, LONG BEACH (FILE NO. 908080043)

Our letter dated September 12, 1997, requested more information related to the operation of underground storage tanks at the subject site. In response, your letter via facsimile provided information on the result of the tank pressure test. The test result did not indicate any evidence of leakage from the diesel tank. There is no record of unauthorized release from the tank.

As a result, no further action is required related to underground storage tank operation at the site. We will update the information in our data base to reflect that the site has had no unauthorized release. Thank you for your promptness in responding to our inquiry. Please contact Yue Rong at (213) 266-7604 if you have any questions regarding this matter.

for JAMES D. KUYKENDALL
Supervising Water Resources Control Engineer
Underground Tanks Section

cc: Mr. David Deaner, State Water Resources Control Board, Underground Storage Tank Cleanup Fund
Mr. Alfredo Cardenas, Water Replenishment District of Southern California
Mr. Steven Nakauchi, Long Beach Department of Health and Human Services

State of California
Environmental Protection Agency

UNDERGROUND STORAGE TANK CASE REVIEW FORM

Los Angeles Regional
Water Quality Control Board

Date: 10/9/97	LUSTIS file no.: 908080043	Case reviewer: YR	
Site Name/Address: **Los Altos Hospital** **3340 Los Coyotes Diagonal** **Long Beach, CA 90808**	Responsible parties: Charter Behavioral Health System	Address: Art Gonzalez 16960 E. Bastanchury Rd, Ste E Yorba Linda, CA 92886	Phone no.: 18005112396

I. CASE INFORMATION (N/A = Not Applicable)

Tank No.	Size in Gallons	Contents	Closed in-place/Removed?	Date
1	5,000	diesel	in-place	
2				
3				
4				

II. SITE CHARACTERIZATION INFORMATION (GW=groundwater, -- =Not Reported)

GW Basin: Central	Beneficial uses: MUN	Depth to drinking water aquifer: >50 ft.	
Distance to nearest municipal supply well: 0.9 miles		Distance between known shallow GW contamination and aquifer: n/a	
GW highest depth: n/a	GW lowest depth: n/a	Well screen interval: n/a	Flow direction: n/a
Soil types: Silty clay		Maximum soil depth sampled: 20 ft.	

III. MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS -- Initial and Latest (ND=Non-detect; NRQ=Not required)

Contaminant	Soil (mg/kg)		Water (µg/L)		Contaminant	Soil (mg/kg)		Water (µg/L)	
	Initial (Year)	Latest (Year)	Initial (Year)	Latest (Year)		Initial (Year)	Latest (Year)	Initial (Year)	Latest (Year)
TPH (Gas)	n/a		n/a		Ethylbenzene				
TPH (Diesel)					Xylenes				
Benzene					MTBE				
Toluene					Other				

*no soil sample was analyzed.

IV. SOIL REMEDIATION

Method: none	Duration of remediation: n/a

V. GROUNDWATER REMEDIATION

Method: none	Duration of remediation: n/a

VI. FREE PRODUCT:

Was free product encountered? n/a	Has free product been totally recovered? n/a
When was free product recovery project completed? n/a	

VII. RECOMMENDED ACTION:

Soil Closure only: Yes	Case Closure: yes	Solvent Case? No
Additional Action Required (i.e.: additional site assessment, remediation, monitoring): none		

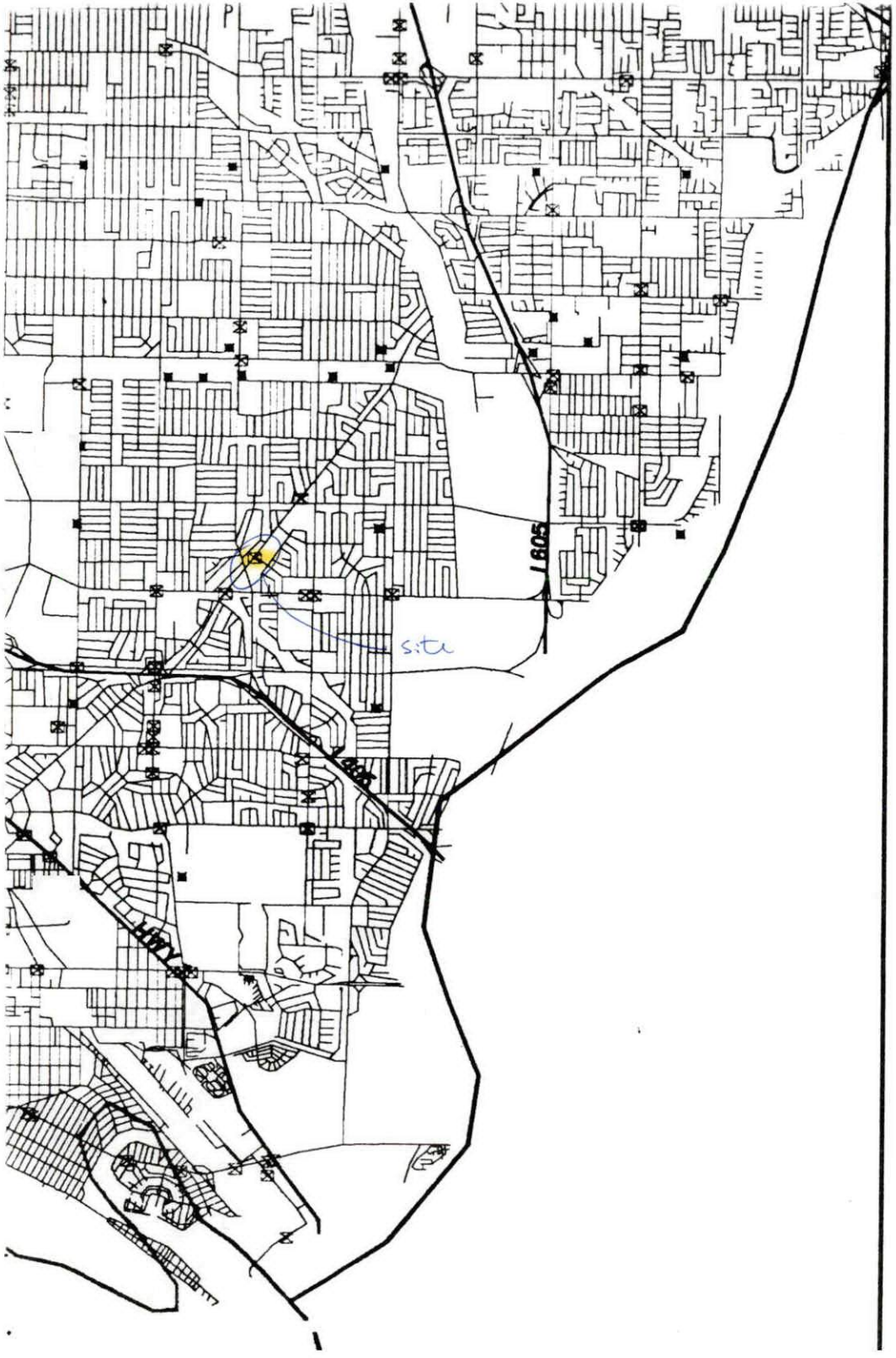
VIII. COMMENTS AND JUSTIFICATION FOR RECOMMENDED ACTION:

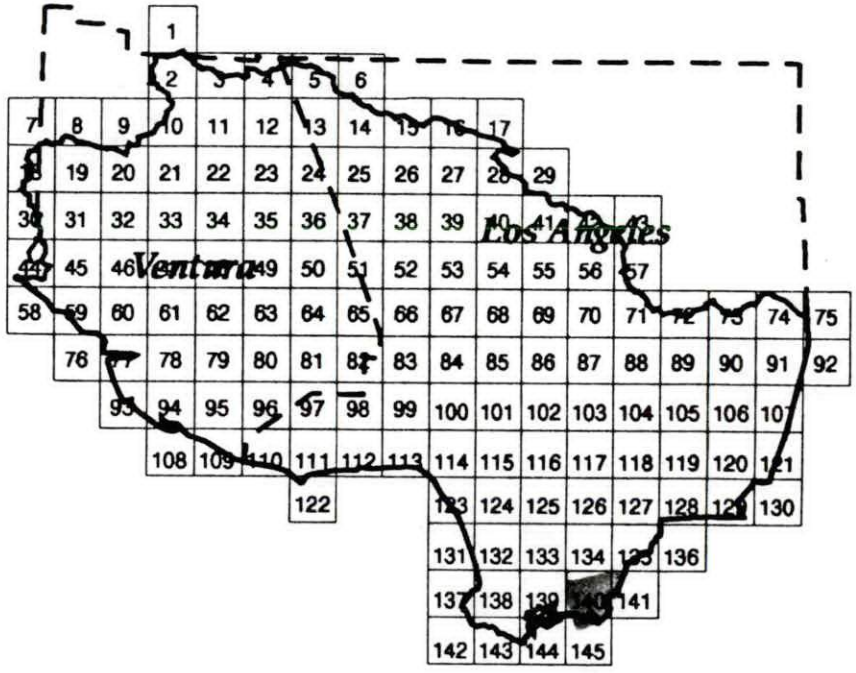
This site has one diesel tank, which is still in place. Record showed tank test passed. No record of unauthorized release. Two wells was installed at the site, but no soil samples were analyzed and no groundwater was encountered. Soil is primarily clayey. Given the situation that diesel was contents in tank and soil is tight in terms of transport, threat to groundwater is not very high. Domestic well is located about 0.9 miles east of the site (see RWQCB map #140). This site is closed and tank has been taken out of service since 1996. This site has been through Level 3 of MTBE review, and determined as a low risk case.

Recommend for closure.

LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD

LUSTIS SITES AND PRODUCTION WELLS



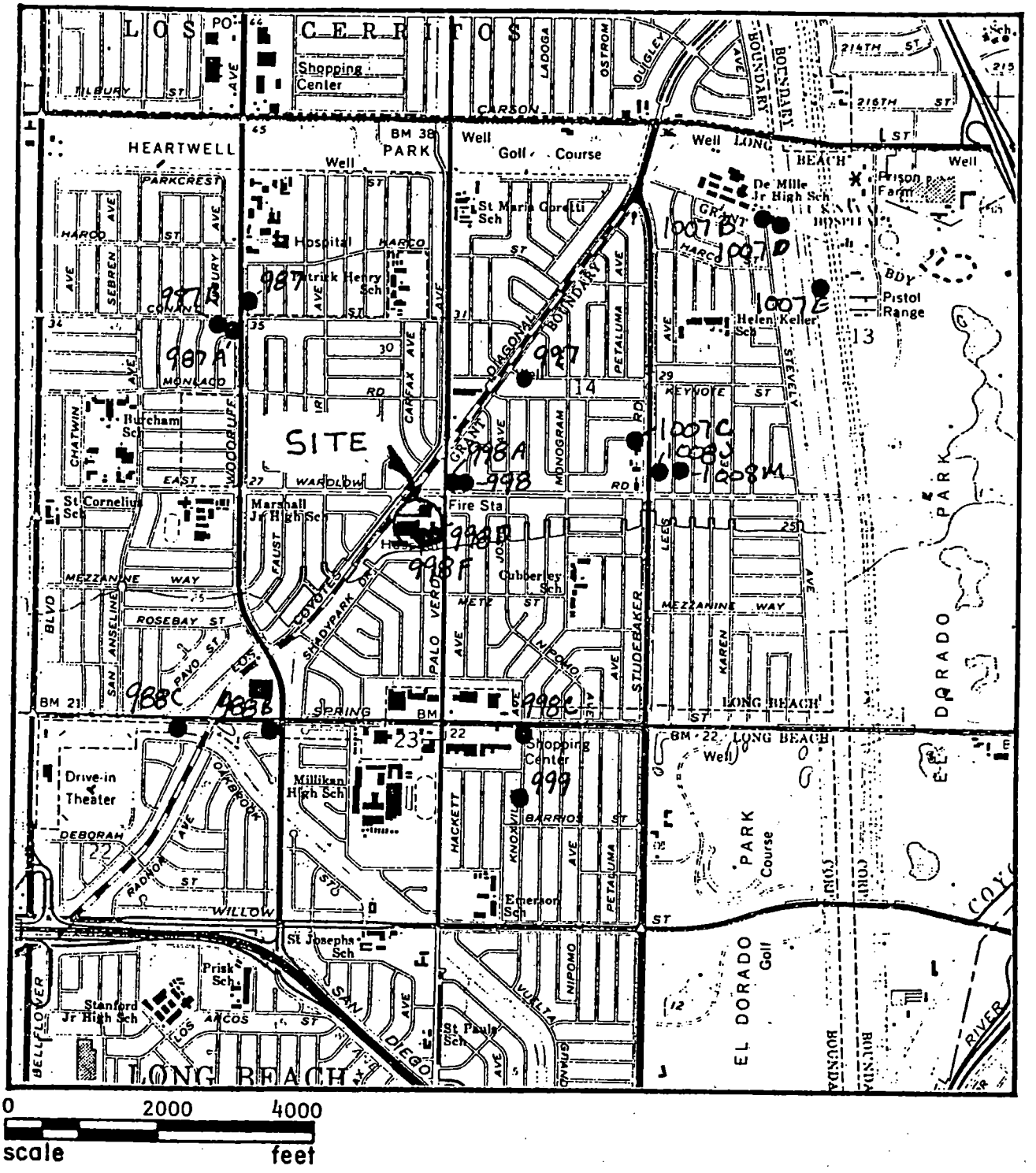


LEGEND

- ROADS
- REGION 4 BOUNDARY
- COUNTY BOUNDARIES
- MTBE IMPACTED WELLS
- OTHER PRODUCTION WELLS

N

1840438-02



INDEX MAP

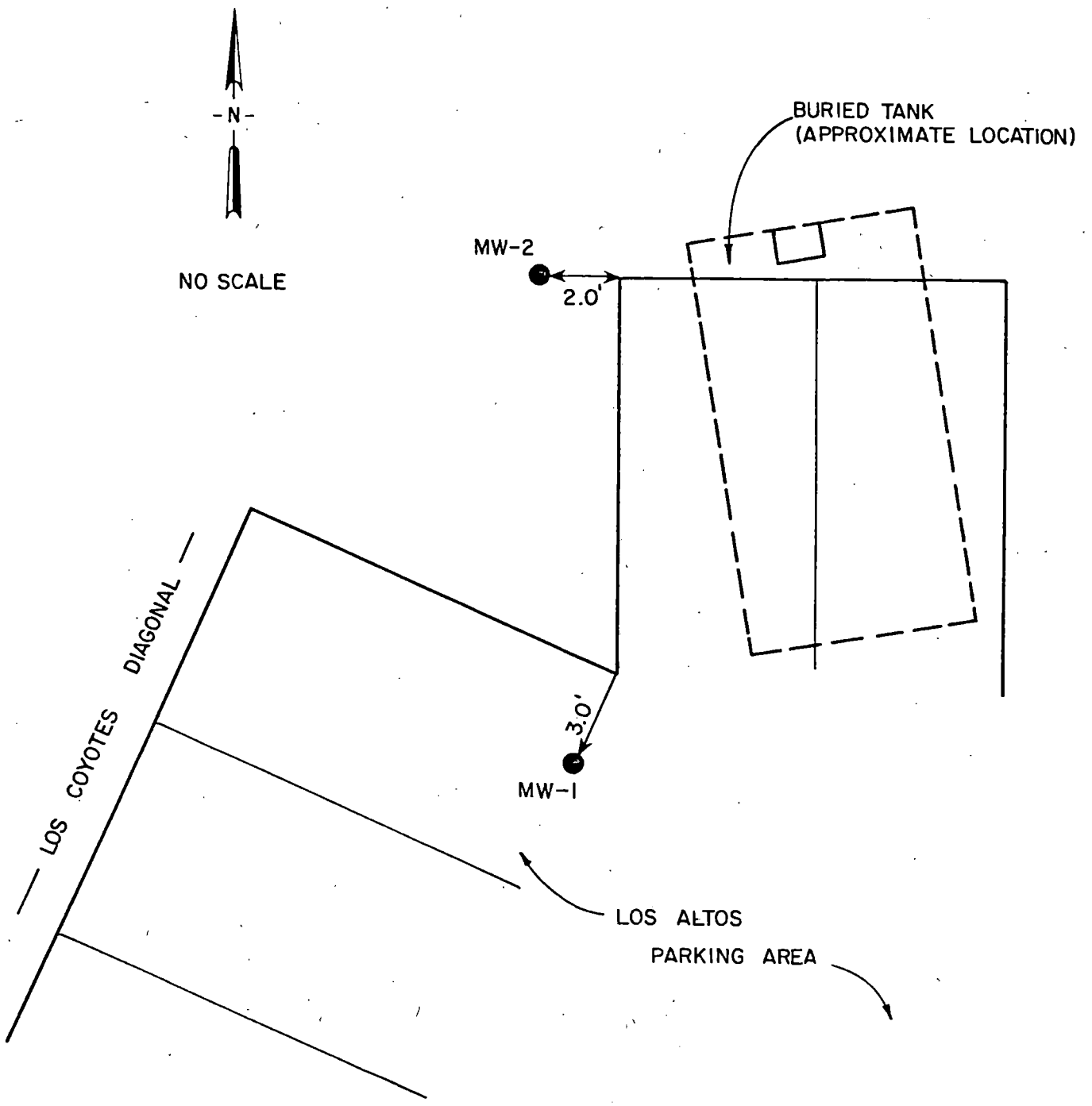
OF

LOS ALTOS HOSPITAL

LONG BEACH FACILITY

Showing Nearby Wells (900 and 1000 Series = L.A. County Flood Control District Numbers)

Base Map: USGS 7½-Minute Los Alamitos Quadrangle



LEIGHTON and ASSOCIATES INCORPORATED

Project No. 4840438-02

LOCATIONS OF MONITORING WELLS
LOS ALTOS HOSPITAL
UNDERGROUND TANK
LONG BEACH, CALIFORNIA

AMERICAN TANK TESTING

Tank Testing, Monitoring Service, Helium Testing
24781 Mosquero Lane, Mission Viejo, CA 92691
Phone (714) 581-7518 ; Fax (714) 581-3867

Charter Behavioral Health System
3340 Los Coyotes Diagonal
Long Beach, CA 90808

Date : January 8, 1996

Attention Mr. James Day.

Subject : **UNDERGROUND TANK TESTING AND CERTIFICATION**

Dear Mr. Day,

In accordance with our agreement we arrived at the subject facility on 01/08/96 to test one underground tank system, using the UST2000/P and PL-400 leak detector methods. A full system test was performed with the following results

Tank #	Capacity	Product	Tank Test / GPH	Ullage Test	Line test / GPH
1	5,000	Diesel Fuel # 1	Pass / +0.021596	Pass	Pass / -0.005959

The tank system (tank and lines) was certified with test results within the State standard of -0.05 GPH. Because of almost infinite variables involved, this is intended to be a mathematical tolerance and is not the permission of the actual leakage. Based on the above criteria, we find the tanks **mathematically TIGHT.** Enclosed you will find copies of the relevant technical test printouts and worksheets. More detailed information will be promptly made available to you as soon as you will request it.
Our company values your business immensely and we hope you will call us again next year, when testing will become due.

AMERICAN TANK TESTING

Razvan " Ross " Raicu, M.S.E.E.
California State License # 90-1185
President

CHARTER BEHAVIORAL HEALTH SYSTEMS, INC.
WESTERN REGION

16960 E. Bastanchury Road, Suite "E"
Yorba Linda, CA 92886

FACSIMILE COVER SHEET

To: [redacted] YUE RONG
Company: [redacted] L.A. REGIONAL WATER Q.C. BOARD
Phone: [redacted] (213) 266-7500
Fax: [redacted] (213) 266-7600

From: Art Gonzalez 714 358-4245
Company: C.B.H.S. - Western Region Office
Phone: 714-985-9370 1-800 571-2396
Fax: 714-985-9389

Date: 10-9-97 908080043
Pages including this cover page: 9

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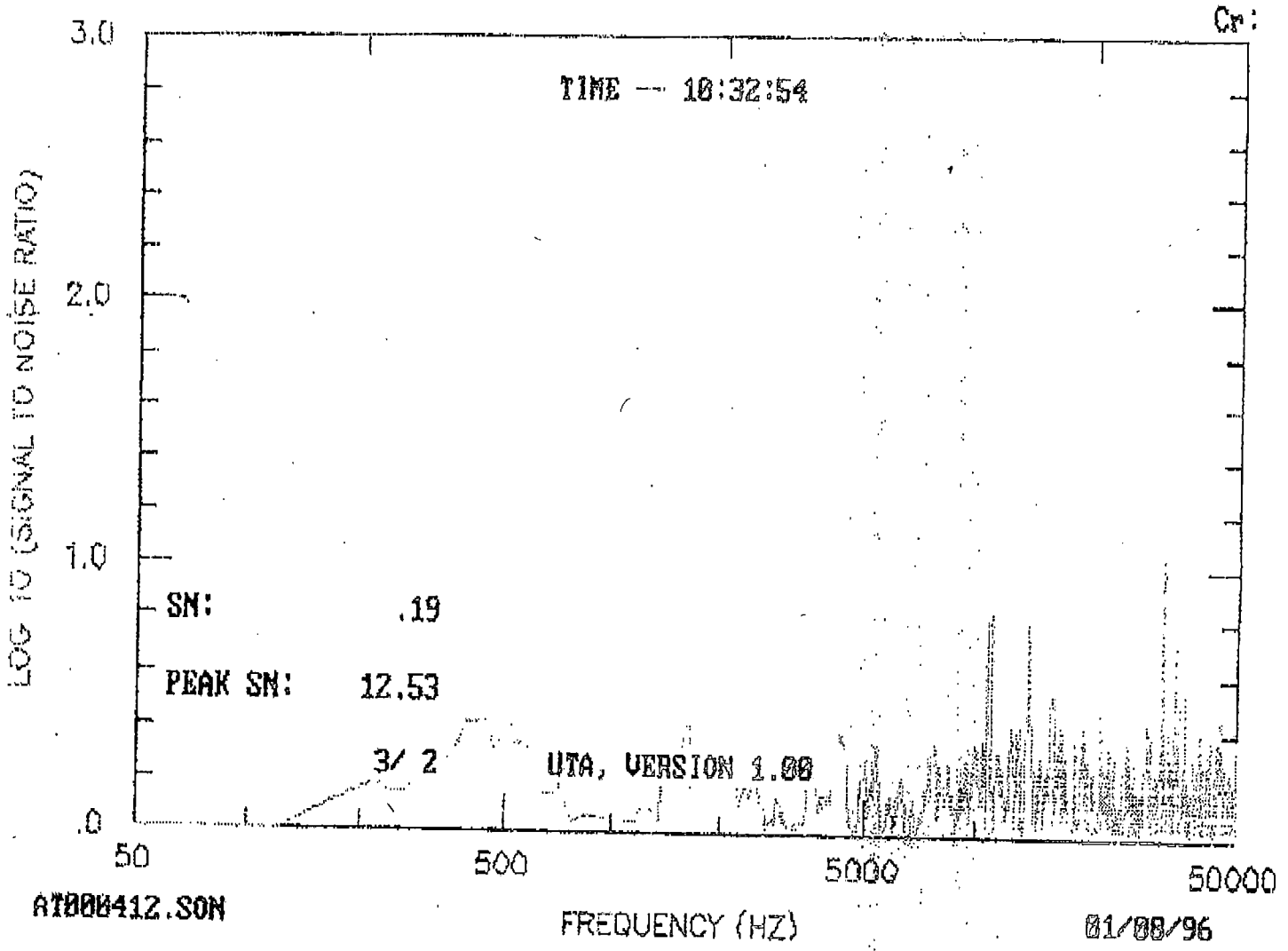

Cr:
TIME -- 10:32:54
3.0
2.0
1.0
.0
LOG 10 (SIGNAL TO NOISE RATIO)
SN: .19
PEAK SN: 12.53
3/ 2
UTA, VERSION 1.00
50
500
5000
50000
AT000412.SON
FREQUENCY (HZ)
01/08/96

INVOICE #AT000412 TEST DATE: 01/08/96

AMERICAN TANK TESTING
24781 MOSQUERO LANE
MISSION VIEJO, CA 92691
(714) 581-7518

TANK STATUS REPORT -- ULLAGE TEST

***** CUSTOMER DATA *****

CHARTER BEHAVIORAL HEALTH SYSTEM
3340 LOS COYOTES DIAGONAL

LONG BEACH, CA
90808

CONTACT: JAMES DAY
PHONE #: 310-421-9311

***** SITE DATA *****

CHARTER BEHAVIORAL HEALTH SYSTEM
3340 LOS COYOTES DIAGONAL

LONG BEACH, CA
90808

CONTACT: JAMES DAY
PHONE #: 310-421-9311

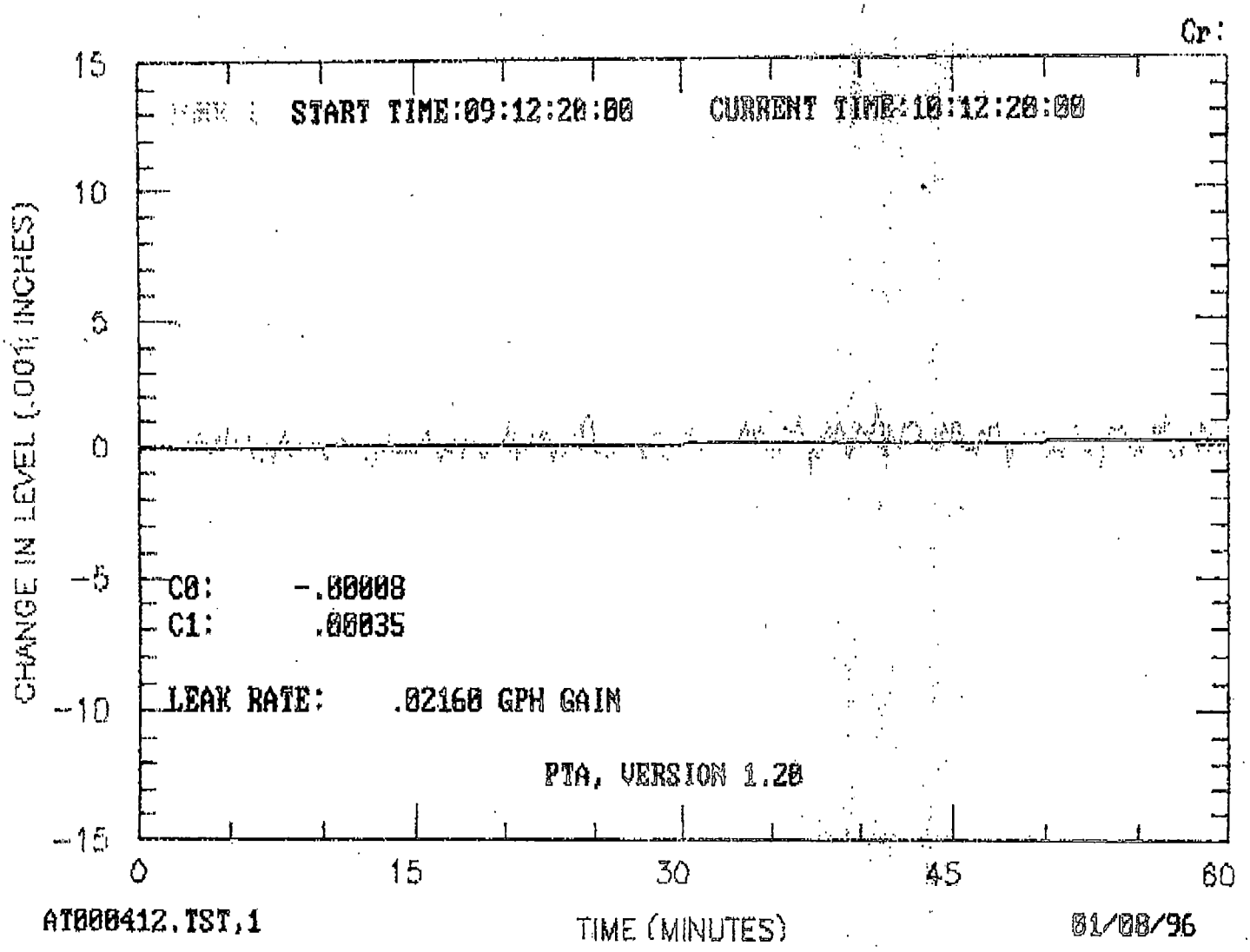
***** COMMENT LINES *****

CURRENT EPA STANDARDS DICTATE
THAT FOR UNDERGROUND FUEL TANKS, THE MAXIMUM ALLOWABLE LEAK/GAIN RATE
OVER THE PERIOD OF ONE HOUR IS .05 GALLONS.
THIS TEST WAS PERFORMED USING THE UST2000/P LEAK DETECTOR METHOD

TANK #1: DIESEL FUEL 1 TYPE: STEEL SN: .19

TANK IS TIGHT.

OPERATOR: Razvan Raicu;90-1185 SIGNATURE: DATE: 1/8/96


Cr:
START TIME:09:12:20:00
CURRENT TIME:10:12:20:00
CHANGE IN LEVEL (.001 INCHES)
15
10
5
0
-5
-10
-15
C0: -.00008
C1: .00035
LEAK RATE: .02160 GPH GAIN
PTA, VERSION 1.20
0
15
30
45
60
AT000412.TST,1
TIME (MINUTES)
01/08/96

******* C U S T O M E R D A T A ********

JOB NUMBER	: 000412
CUSTOMER (COMPANY NAME)	: CHARTER BEHAVIORAL HEALTH SYSTEM
CUSTOMER CONTACT(LAST, FIRST)	: JAMES DAY
ADDRESS - LINE 1	: 3340 LOS COYOTES DIAGONAL
ADDRESS - LINE 2	:
CITY, STATE	: LONG BEACH, CA
ZIP CODE (XXXXX-XXXX)	: 90808
PHONE NUMBER (XXX)XXX-XXXX	: 310-421-9311

******* C O M M E N T L I N E S *******

******* S I T E D A T A ********

SITE NAME (COMPANY NAME)	: CHARTER BEHAVIORAL HEALTH SYSTEM
SITE CONTACT(LAST, FIRST)	: JAMES DAY
ADDRESS - LINE 1	: 3340 LOS COYOTES DIAGONAL
ADDRESS - LINE 2	:
CITY, STATE	: LONG BEACH, CA
ZIP CODE (XXXXX-XXXX)	: 90808
PHONE NUMBER (XXX)XXX-XXXX	: 310-421-9311
GROUND WATER LEVEL (FT)	: 0
NUMBER OF TANKS	: 1
LENGTH OF PRE-TEST (MIN)	: 30
LENGTH OF TEST (MIN)	: 240

******* T A N K D A T A ********

	TANK NO. 1	TANK NO. 2	TANK NO. 3	TANK NO. 4
TANK DIAMETER (IN)	95			
LENGTH (FT)	13.58			
VOLUME (GAL)	5000			
TYPE	ST			
FUEL LEVEL (IN)	66			
FUEL TYPE	DIESEL 1			
dVOL/dy (GAL/IN)	61.72			

CALIBRATION ROD	DISTANCE
1	10.65625
2	26.95313
3	41.93750
4	56.93750
5	74.93750

INVOICE #AT000412

TEST DATE: 01/08/96

AMERICAN TANK TESTING
24781 MOSQUERO LANE
MISSION VIEJO, CA 92691
(714) 581-7518

TANK STATUS EVALUATION REPORT

***** CUSTOMER DATA *****

CHARTER BEHAVIORAL HEALTH SYSTEM
3340 LOS COYOTES DIAGONAL

LONG BEACH, CA
90808

CONTACT: JAMES DAY
PHONE #: 310-421-9311

***** SITE DATA *****

CHARTER BEHAVIORAL HEALTH SYSTEM
3340 LOS COYOTES DIAGONAL

LONG BEACH, CA
90808

CONTACT: JAMES DAY
PHONE #: 310-421-9311

***** COMMENT LINES *****

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OVER THE PERIOD OF ONE HOUR IS .05 GALLONS.
THIS TEST WAS PERFORMED USING THE UST2000/P LEAK DETECTOR METHOD

TANK #1: DIESEL FUEL 1 TYPE: STEEL RATE: .021596 G.P.H. GAIN

TANK IS TIGHT.

OPERATOR: Razvan Raicu; 90-1185 SIGNATURE: DATE: 1/8/96

AMERICAN TANK TESTING

Tank Testing, Monitoring Service, Helium Testing
24781 Mosquero Lane, Mission Viejo, CA 92691
Phone (714) 581-7518 ; Fax (714) 581-3867

CAMPO / MILLER TESTER LOG
PIPING TIGHTNESS DETERMINATION PL-400 FORMAT

TEST LOCATION : Charter Behavioral Health System
3340 Los Coyotes Diagonal
Long Beach, CA 90808

TEST OPERATOR : RAZVAN "ROSS" RAICU

STATE LICENSE # 90-1185

DATE OF TEST : 1-8-96

Tank #	Line Temp. Variance	Tester Temp. Variance	Air Modulus	Test Duration	Initial Pressure	Final Pressure	Volume Displaced	Leak Rate	PASS / FAIL
1 *	1	1	20	30/5	44	42	6	-.005959	PASS

* Suction line to generator day tank line certified to the first check valve.

Temp = Fahrenheit Degree
Air Modulus = CC Units
Test Duration = Minutes
Pressure P.S.I.
Volume Displaced = CC Units
Leak Rate = Gallons Per Hour (GPH)

Tester Signature : Razvan "Ross" Raicu, M.S.E.E. _____

AMERICAN TANK TESTING

Tank Testing , Monitoring Service , Helium Testing
24781 Mosquero Lane , Mission Viejo , CA 92691
Phone (714) 581-7518 ; Fax (714) 581-3867

Charter Behavioral Health System
3340 Los Coyotes Diagonal
Long Beach, CA 90808

Date : January 8, 1996

Attention Mr. James Day.

Subject : **UNDERGROUND TANK TESTING AND CERTIFICATION**

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Our company values your business immensely and we hope you will call us again next year, when testing will become due.

AMERICAN TANK TESTING

Razvan " Ross " Raicu , M.S.E.E.
California State License # 90-1185
President

CHARTER BEHAVIORAL HEALTH SYSTEMS, INC.
WESTERN REGION

16960 E. Bastanchury Road, Suite "E"
Yorba Linda, CA 92886

FACSIMILE COVER SHEET

To: [redacted] YUE RONG
Company: [redacted] L.A. REGIONAL WATER Q.C. BOARD
Phone: [redacted] (213) 266-7500
Fax: [redacted] (213) 266-7600

From: Art Gonzalez
Company: C.B.H.S. - Western Region Office
Phone: [redacted] 1-800-511-2396
Fax: [redacted]

Date: 10-8-97
Pages including this cover page: 7

90808043

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CHARTER SOUTHEAST SERVICE CENTER

Phone: (770) 451-1509
(800) 247-4242

Central Business Office Fax: (770) 452-5884
(770) 452-5804

Central Accounting Office Fax: (770) 452-3983 Ruth Jenkins
(770) 452-3982 Payroll
(770) 452-3994 Accounts Payable

Date: 10/6/97 **# of Pages Inc Cover:** _____

Transmitted to: Robert Becera
① ~~(818) 859-5292~~
② (714) 985-9389

Transmitted from: Becky Mulkerron
Phone: _____

Comments:

FROM: CMD CAO FAX NO.: 4044525804 10-06-97 17:12 P.02

#083-60-5301

DATE: _____ AMOUNT _____

PAY TO THE ORDER OF:

NAME American Tank Testing CHECK # _____

ADDRESS _____ CHECK DATE _____

PURPOSE _____

SPECIAL INSTRUCTIONS: INVOICE THE FOLLOWING _____
OTHER INSTRUCTIONS _____
DELIVER CHECK TO _____
DATE CHECK NEEDED _____

APPROVED FOR PAYMENT _____ REQUEST FOR PAYMENT _____

****

ACCOUNTING USE ONLY

VOUCHER # 28979 VENDOR # 42800 INVOICE # 10K444

TRANS CODE # 01 INV. DATE 1/8/96 INVOICE AMOUNT 350.00

TERMS CODE/DUE DATE 1/23/96 OR _____

ORG CODE	ACCOUNT NUMBER	1099	AMOUNT
401500	63018000	44	350.00

ENTERED JAN 1 2

INVOICE VERIFICATION:
EXT/FOOTING _____
P.O. COMPARISON _____
PAYMENT APPROVAL _____
A/C DISTRIBUTION _____

CMD 222

INVOICE

AMERICAN TANK TESTING

24781 Mosquero Lane
Mission Viejo, California 92691
Phone: (714) 581- 7518
Fax: (714) 581- 3867

Invoice No: 10K444
Invoice Date: 01/08/96
Due Date : Upon Receipt

Bill to : Charter Behavioral health System

3340 Los Coyotes diagonal
Long Beach, CA 90808

Contact : James Day
Phone # 310-421-9311

Order No.	Project	Date Completed	Terms
	USTank Testing	01/08/96	Upon Receipt

Date	Description of Services	Qty	Unit Price	Amount
01/08/96	USTank Testing and certification	1	$350.00	$350.00
	TEST Complete			
			Total	$ 350.00

We appreciate your business!
Pay Today Our Records

AMERICAN TANK TESTING

Tank Testing, Monitoring Service, Helium Testing
24781 Mosquero Lane, Mission Viejo, CA 92691
Phone (714) 581-7516; Fax (714) 581-3867

Client: Charter Behavioral Health System
(owner) **3340 Los Coyotes Diagonal**
Long Beach, CA 90808

Date: December 21, 1995

Attention: Mr. James Day
Subject: **PROPOSAL / AGREEMENT FOR UNDERGROUND TANK TESTING AND CERTIFICATION.**

Thank you for the opportunity to submit our proposal for testing your underground storage tanks. Using the State approved **UST2000/P and PL-400** leak detector method, in conformance with the requirements for U.S.T. Testing pursuant to title 23, chapter 3, subchapter 16, article 4, section 2643, of the California Code and approved by the governing agency, our engineers are able to determine if your systems are in compliance with N.F.P.A. 329.

American Tank Testing will furnish all materials and special equipment to perform volumetric leak tests on 1 (one), 8,000 gal. diesel USTank, located at the above address, for the price of $350.00 per tank. The price include underfilled tank test, ullage test and product line test.

Owner understands and agrees that the tests performed by ATT will determine only whether a specific tank is or is not leaking at the time of the test, and that no representations or guarantee is made by ATT that any of the tanks will not leak at some future time. Owner also understands that the test results may prove to be inconclusive through no fault of ATT, but caused by defective or improper installation of a tank. In any event ATT has fully earned its fee by performance of the tests in accordance with industry standards and Owner agrees to pay said fees.

Owner agrees to clear all refuse and other materials from the work site and to remove all aboveground obstructions, vehicles, etc. If it is necessary for ATT to perform such work, an additional charge of SIXTY-FIVE DOLLARS ($65.00) per hour will be paid to ATT by Owner. Owner also agrees to have each testing site prepared at its own cost and expense in the following manner:

1. Each storage tank must be filled to minimum eighty (80%) percent of the total tank capacity, 24 hours prior to the test. If any tank at the site is not so filled upon the arrival of ATT for a duly scheduled test, the Owner agrees to pay a **reschedule charge** of $200.00. A "duly scheduled" test is hereby defined as a test time which has been arranged between ATT and the managing person of Owner for a specific location, and for which the manager has been informed of Owner's obligation pursuant to this paragraph.
2. Owner will inform ATT with regard to the type of product stored in each tank, the size of each tank, and any known problems with respect to the storage tanks or storage systems and site.

Each party acknowledge that, except as expressly set forth herein, no representations of any kind or character have been made to it by other party, or by any of the other party's agents, representatives or attorneys, to induce the execution of this proposal agreement. All changes, modifications or further agreements must be in writing. Any alteration or deviation from the above specifications, terms and conditions involving extra cost of material or labor will only be performed upon written orders signed by both parties hereto, and will become an additional charge over the sum mentioned in this contract. Certification and test results will be mailed to you upon receipt of your final payment.

The parties agree to the above terms and conditions as evidenced by their signatures below.

Please do not hesitate to call if you need further information.

Very truly yours
AMERICAN TANK TESTING

Razvan "ROSS" Raicu, M.S.F.E.
President
State License # 90-1185

APPROVED AND ACCEPTED

Name

Title

Date

FAX Transmission

From:	**Razvan "Ross" Raicu**	**American Tank Testing**
Questions?	Call : (714) 581 - 7518 Fax : (714) 581 - 3867 Pager : (714) 452-9523	24781 Mosquero Lane Mission Viejo, [illegible]
To:	**Mr. James Day.**	
Company:	**Charter Behavioral Health System**	Fax - (310) [illegible] Phone - (310) [illegible] 9311
Address	3340 Los Coyotes Diagonal Long Beach, CA 90808	
Date	December 2[illegible] 1995	
Time.	4 13 PM	2 Pages (including this one)

Message. Dear Mr. Day.

Enclosed please find the proposal for precision testing of your 5,000 gal Diesel USTank.

If you need other information please call me.

Very truly yours
American Tank Testing
Razvan Raicu

LOS ALTOS HOSPITAL

DEPARTMENT: PLANT OPS / MAINT

MONTH: Dec 1995

	BEGINNING BALANCE
(A) OTHER SUPP	546
(B) MAINT SUPP	5657
(C) REP & MAINT	$2,200

DATE	P.R. / P.O. #	VENDOR NAME	$ AMOUNT OF EXPENDITURE	(A) BALANCE	(B) BALANCE	(C) BALANCE
				546	5657	$2,200
11/29	264377	BAR	15.17	30.83		
11/29	265376	BAR	1.63	29.20		
11/27	25562	O'CONNEL	376.00			1824
	STANDING	TERMINEX	100.00			1724
	STANDING	O'CONNEL	960.00			764
	STANDING	NAT'L CHEMICAL	190			574
	STANDING	LIQUID CARBONIC	78			496
	STANDING	BAI	36			460.
	STANDING	LIEBS	440.69			19.31
12/6	272539	BAR	84.91	ø	640.60	ø
12/6		GRAINGER	22.21		615.39	
12/6		MAINT. WAREHOUSE	155.39		460.00	
12/6		SIL HILL SHEET METAL	75.9		385.00	
12/10	STANDING	POWER SYSTEM	145.83		239.17	
12/10	045429	POWER SYSTEM	219.86		19.31	
12/19	STANDING	HONEY WELL	79.80		(60.19)	
12/22		AMERICAN TANK	850.12 = 29.15		(89.35)	
12/22		TRANS	41.75		(131.10)	
12/22	CREDIT	NAT'L CHEM. CO.	(190)		58.90	

CHARTER BEHAVIORAL HEALTH SYSTEMS, INC.
WESTERN REGION

16960 E. Bastanchury Road, Suite "E"
Yorba Linda, CA 92886

FACSIMILE COVER SHEET

To: [redacted] YUE RONG
Company: [redacted] L.A. REGIONAL WATER Q.C. BOARD
Phone: [redacted] (213) 266-7500
Fax: [redacted] (213) 266-7600

From: Art Gonzalez
Company: C.B.H.S. - Western Region Office
Phone: 714-985-9370
Fax: 714-985-9389

Date: 9-24-97
Pages including this cover page: 7

908080143

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[redacted]

[redacted]

Robert B.
Pls handle
714-985-9385
Thanks
ASAP

Cal/EPA

Pete Wilson
Governor

Los Angeles Regional Water Quality Control Board

101 Centre Plaza Drive
Monterey Park, CA
91754-2156
(213) 266-7500
FAX (213) 266-7600

September 12, 1997

Mr. Larry Drinkard
Charter Hospital
P.O. Box 209
Macon, GA 31298

UNDERGROUND STORAGE TANK PROGRAM
REQUEST FOR ADDITIONAL INFORMATION
CHARTER HOSPITAL FACILITY
3340 LOS COYOTES DIAGONAL, LONG BEACH, CALIFORNIA
(FILE NO. 908080043)

The California Regional Water Quality Control Board, Los Angeles Region, is the public agency with primary responsibility for the protection of ground and surface water quality for all beneficial uses within the Los Angeles and Ventura counties.

Pursuant to Title 23, Division 3, of the California Code of Regulations, the California Underground Storage Tank Regulations, we are reviewing our Leaking Underground Fuel Tank (LUFT) case files for possible closure or further assessment/remediation. The file for the subject site does not contain all the information necessary for us to make a decision.

To facilitate our review, we would appreciate that you provide the following information:

1. Facility contact person's name and telephone number.
2. Facility mailing address.
3. Tank removal and/or repair information.
4. All previous site environmental assessment and/or remediation reports.

Please submit the information to this Regional Board by **October 14, 1997**. If you have any questions concerning this matter, please contact Yue Rong at (213) 266-7604.

HUBERT H. KANG
Senior Water Resource Control Engineer

cc: Mr. David Deaner, State Water Resources Control Board, Underground Storage Tank Cleanup Fund

1.) FACILITY CONTACT PERSON'S NAME AND PHONE #

A.) ART GONZALEZ

B.) PAGER # 1-800-511-2396

2.) FACILITY MAILING ADDRESS.

A.) 16960 E. BASTANCHURY ROAD.
YORBA LINDA, CA 92686

3.) TANK REMOVAL AND/OR REPAIR INFORMATION.

A.) THE TANK IS STILL EXISTING UNDERGROUND

4.) ALL PREVIOUS SIT ENVIRONMENTAL ASSESSMENT AND/OR REMEDIATION REPORTS.

A.) A.Q.M.D - 3 PAGES

B.) STATE BOARD OF EQUALIZATION FUEL TAXES

BOE-429-TK2 (BACK) REV. 2 (3-87) PO BOX 942879 SACRAMENTO, CA 94279-0030

STATE OF CALIFORNIA
BOARD OF EQUALIZATION
(916) 322-9669

DELINQUENT - PLEASE READ NOTICE ON REVERSE
UNDERGROUND STORAGE TANK FEE RETURN

BOARD USE ONLY		
RSD	RR	PR
TR	AUD	NR
REF	GD	PI
FUI		
EPF		

DUE ON OR BEFORE 01/25/97 FOR CALENDAR YEAR, 1996

Account Number: TK HQ 44-038289 | 6

Mail To: USTC RVTK01 6596
STATE BOARD OF EQUALIZATION
FUEL TAXES DIVISION
PO BOX 942879
SACRAMENTO CA 94279-6151

CHARTER BEHAVIORAL HEALTH SYSTEM
CHARTER BEHAVIORAL HEALTH
577 MULBERRY STREET
MACON GA 31201

3340 LOS COYOTES DIAGONAL

READ INSTRUCTIONS BEFORE PREPARING

Make changes if name or address is incorrect.

GENERAL INFORMATION

Every owner of an underground storage tank who is required to obtain a permit to own or operate a tank under Section 25284 of the Health and Safety Code shall pay a storage fee for each gallon of petroleum products placed in the tank.

DEFINITIONS

Owner is defined to include any person as well as any city, county or district or any agency, including departments thereof. Owner does not include the state government, federal government, or an operator who is not an owner.

Petroleum is defined as crude oil or any fraction thereof, which is liquid at standard conditions of temperature (60 degrees Fahrenheit) and pressure (14.7 pounds per square inch).

Underground storage tank means any one or combination of tanks, including pipes connected to the tanks, used for the storage of petroleum and located substantially or totally beneath the surface of the ground.

The fee does not apply to petroleum products placed in underground storage tanks that:

1. Are located on a farm or residence, used to store motor fuel for noncommercial purposes and have a capacity of 1,100 gallons or less; or
2. Store heating oil for consumption on the premises where stored.

FILING REQUIREMENTS

Every owner of an underground storage tank shall file a quarterly storage fee return. This includes tanks that are temporarily empty or not in use. The return is due on or before the 25th day of the month following the end of the reporting period. Late payment results in a penalty of 10% and interest at an adjusted rate established under Section 6591.5 of the Revenue and Taxation Code. The return must be filed even though you have no liability for the fee.

If you have sold any of your tanks or have moved, please notify this office. If you are not the tank owner, please indicate the current owner and their mailing address on an attachment and forward along with this return.

INSTRUCTIONS: Enter total gallons of petroleum placed into all tanks owned by you in Column A; multiply by the rate in Column B; and enter that number in Column C. (Do not report on capacity.)	A WHOLE GALLONS ONLY	B RATE OF FEE	C TOTAL FEE DUE (Column A x B)
1. Total gallons of petroleum placed in all tanks owned by you 1.	5000	0.009	45.00
2. Penalty *(multiply line 1, Column C, by 10% (.10) if payment is made after due date shown above)*		PENALTY 2.	4.50
3. INTEREST OF 12% PER ANNUM (0.010000 PER MONTH) IS DUE IF PAYMENT IS MADE AFTER THE DUE DATE.		INTEREST 3.	5.40
4. TOTAL AMOUNT DUE AND PAYABLE *(add lines 1, 2 and 3)*		4.	54.90

I hereby certify that this return, including any accompanying schedules and statements, has been examined by me and to the best of my knowledge and belief is a true, correct and complete return. 4-11-97

PRINT/TYPE NAME AND TITLE: Deanna Robert SIGNATURE: Deanna Robert PHONE NUMBER: (714) 985-9820 DATE: 4-11-97

South Coast
AIR QUALITY MANAGEMENT DISTRICT
21865 E. Copley Drive, Diamond Bar, CA 91765-4182 (909) 396-2000

SEPTEMBER 19, 1994

ID - 019065
LOS ALTOS HOSPITAL & MENTAL HEALTH CENTE
3340 LOS COYOTES DIAGONAL
LONG BEACH CA 90808

PERMIT RENEWALS

PERMIT NUMBER	DESCRIPTION	APPLIC NUMBER	EXPIRATION DATE
D69661	I C E (50-500 HP) EM ELEC GEN-DIESEL	276466	08/16/95
D69662	I C E (50-500 HP) EM ELEC GEN-DIESEL	276467	08/16/95
M00618	BOILER (<5 MMBTU/HR) COMB GAS-DISTILL	C01038	08/16/95
M00619	BOILER (<5 MMBTU/HR) COMB GAS-DISTILL	C01039	08/16/95

RECEIVED
SEP 27 1994

South Coast
AIR QUALITY MANAGEMENT DISTRICT
21865 E. Copley Drive, Diamond Bar, CA 91765-4182 (909) 396-2000

AUGUST 16, 1993

ID - 019065
LOS ALTOS HOSPITAL & MENTAL HEALTH CENTE
3340 LOS COYOTES DIAGONAL
LONG BEACH CA 90808

PERMIT RENEWALS

PERMIT NUMBER	DESCRIPTION	APPLIC NUMBER	EXPIRATION DATE
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M00619	BOILER (<5 MMBTU/HR) COMB GAS-DISTILL	C01039	08/16/94

South Coast
AIR QUALITY MANAGEMENT DISTRICT
21865 E. Copley Drive, Diamond Bar, CA 91765-4182 (909) 396-2000

AUGUST 01, 1995

ID - 019065
LOS ALTOS HOSPITAL & MENTAL HEALTH CENTE
3340 LOS COYOTES DIAGONAL
LONG BEACH CA 90808

PERMIT RENEWALS

PERMIT NUMBER	DESCRIPTION		APPLIC NUMBER	EXPIRATION DATE
D69661	I C E (50-500 HP) EM DISC	GEN-DIESEL	276466	08/16/96
D69662	I C E (50-500 HP) EM DISC	GEN-DIESEL	276467	08/16/96
M00618	BOILER (<5 MMBTU/HR) COMB	GAS-DISTILLATE	001838	08/16/96
M00619	BOILER (<5 MMBTU/HR) COMB	GAS-DISTILLATE	001839	08/16/96

Cal/EPA

Los Angeles Regional Water Quality Control Board

101 Centre Plaza Drive
Monterey Park, CA
91754-2156
(213) 266-7500
FAX (213) 266-7600

Pete Wilson
Governor

September 12, 1997

Mr. Larry Drinkard
Charter Hospital
P.O. Box 209
Macon, GA 31298

UNDERGROUND STORAGE TANK PROGRAM
REQUEST FOR ADDITIONAL INFORMATION
CHARTER HOSPITAL FACILITY
3340 LOS COYOTES DIAGONAL, LONG BEACH, CALIFORNIA
(FILE NO. 908080043)

The California Regional Water Quality Control Board, Los Angeles Region, is the public agency with primary responsibility for the protection of ground and surface water quality for all beneficial uses within the Los Angeles and Ventura counties.

Pursuant to Title 23, Division 3, of the California Code of Regulations, the California Underground Storage Tank Regulations, we are reviewing our Leaking Underground Fuel Tank (LUFT) case files for possible closure or further assessment/remediation. The file for the subject site does not contain all the information necessary for us to make a decision.

To facilitate our review, we would appreciate that you provide the following information:

1. Facility contact person's name and telephone number.
2. Facility mailing address.
3. Tank removal and/or repair information.
4. All previous site environmental assessment and/or remediation reports.

Please submit the information to this Regional Board by **October 14, 1997**. If you have any questions concerning this matter, please contact Yue Rong at (213) 266-7604.

HUBERT H. KANG
Senior Water Resource Control Engineer

cc: Mr. David Deaner, State Water Resources Control Board, Underground Storage Tank Cleanup Fund

LOS ANGELES REGION
LEAKING UST CASE SUMMARY 09/10/97

Site Name LOS ALTOS HOSPITAL ~~562-498-2800~~ Case Number: 908080043
Address 3340 LOS COYOTES DIAGONAL Staff YR File Loc @ E
LONG BEACH 90808 Status 5C @ 06/20/88
Cross Street Priority MTBE:
Operator Phone: ( ) -

Resp. Party Chester Hospital 562-220-1000 Phone: ( ) -
RP Contact USTCF !!!!! !!!!! !!!!!
RP Address 1-800 342-9660, Georgia Atlanta

Const. Firm Phone: ( ) -
Const. Contact closed facility in Long Beach Date of Last Rpt/Ltr was 06/20/88
Const. Address State:

Date Reported: 01/01/88 Referral Date(s): / / / / / /
Date Discovered: / / How Discovered:
Date Stopped: / / How Stopped:
Source of Leak: Unknown Cause of Leak: Unknown
Substances: DIESEL NOT REPORTED Amts. Leaked; Gals

Leak Being Confirmed	/ /	(1)	Remediation Plan	/ /	(5R)
Pre. Assess. Workplan Sub.	/ /	(3A)	Suspension of Work	/ /	(6)
Pre. Site Assess. Underway	/ /	(3B)	Remedial Action	/ /	(7)
Pollution Characterization	06/20/88	(5C)	Post Action Monitoring	/ /	(8)
			Case Closed	/ /	(9)
Enforcement Type:	(0,1,2,3)		Enforcement Date:	/ /	

Tracking Dates & Comments follow: 03/05/97 DAB ASSIGNED CASE TO EH
08/14/97 HHK ASSIGNED CASE TO YR / /

Case Type: Other Groundwater (O) Status: Pollution Characterization (5C)

Interim Remediation: Abatement Methods:

Local Tank Removal Permit Numbers & Dates:
/ / / / / / / /

Staff Review Date: / / Staff Comments:

Tickler Dates & Comment / / Larry Drinkard
/ /
/ /

Summary: LDP REQUESTED BY LONG BEACH FIRE DEPARTMENT IS INADEQUATE.

Called Karen Cattee 213 680-6400

Date: 6-1-92

CASE NAME & ADDRESS: Los Altos Hospital
3340 Los Coyotes Diagonal, Long Beach.

Summary Sheet for Underground Tank Cases

	Completed	Not Completed
(1) Preliminary Site Assessment Phase:		X

(2) Contamination:	Yes	No	Unknown
(a) Soil			
(b) Ground Water			
(c) Soil & Ground Water			X
(d) Free Product			

(3) Type of Contamination:

	Yes	No
(a) Gasoline		
(b) Diesel		
(c) Solvents		
(d) Waste Oil		
(e) Other		

(4) Definition of Contamination Completed:	Yes	No	Unknown
(a) Soil			X
(b) Ground Water			X

(5) Remedial Actions:

	On-going/ Performed Yes	No
(a) Free product removal		
(b) Soil excavation + treatment		
(c) Soil excavation + disposal		
(d) In-situ soil treatment		
(e) Ground water pumping + treatment		
(f) NPDES and/or WDR permits		

(6) Remediation Completed:	Yes	No
(a) Ground water		X
(b) Soil		X

	Yes	No
(7) Enforcement Action needed:	X	
(8) Site Closure Plan submitted:		X
(9) Site Closed:		X

NOTEs:

McCUTCHEN, DOYLE, BROWN & ENERSEN

SAN FRANCISCO
LOS ANGELES
SAN JOSE
WALNUT CREEK

COUNSELORS AT LAW
355 SOUTH GRAND AVENUE, SUITE 4400
LOS ANGELES, CALIFORNIA 90071-1560
TELEPHONE (213) 680-6400
FACSIMILE (213) 680-6499

WASHINGTON, D.C.
TAIPEI

AFFILIATED OFFICE
BANGKOK

July 28, 1994

DIRECT DIAL NUMBER

(213) 680-6468

Mr. Nhan Bao
Project Manager, Water Resource Control Engineer
Underground Tank Unit
California Regional Water Quality Control Board
Los Angeles Region
101 Centre Plaza Drive
Monterey Park, CA 91754

94 AUG -1 PM 12:18
QUALITY CONTROL BOARD
LOS ANGELES REGION

LUST List Status -- Los Altos Hospital, Long Beach, CA

Dear Mr. Bao:

I am writing on behalf of my client National Medical Enterprises, Inc. ("NME"), whose subsidiary entity, P.I.A. Long Beach, Inc., is the current owner/operator of the Los Altos Hospital and Mental Health Center, located at 3320, 3325 and 3340 Los Coyotes Diagonal in Long Beach, California. It is my understanding that you are the relevant California Regional Water Quality Control Board (CRWQCB) project manager for this site.

As you are aware, during recent environmental investigations relating to the potential sale of this property, our environmental consultants, Dames & Moore, discovered that the portion of the hospital facility located at 3340 Los Coyotes Diagonal, is cited on the list of Leaking Underground Storage Tanks (LUST) maintained by the CRWQCB. Upon Dames & Moore's further investigation of the site, and of agency and facility files, as described below, it is our understanding that no release has ever occurred at this facility, and that no enforcement or remediation action is warranted.

In March 1994, Dames & Moore issued a Phase I environmental assessment of the subject property, including a VISTA database search indicating that the facility was on the LUST list. However, Phase I and subsequent Phase II investigations (June 1994) uncovered no evidence of a UST release at the facility. Dames & Moore's investigation included visual observation of the property, a search of facility records, and interviews with facility personnel, none of whom had any recollection of a release.

On May 23 ,1994, Dames & Moore performed a file review at the CRWQCB to pursue this issue further. According to Dames & Moore the CRWQCB files contain no information confirming a release from the UST at the subject facility. The only information in the file potentially relevant to the LUST listing is a "Summary Sheet for Underground Tank Cases", dated June 1, 1992 (copy attached). As you know this is a summary checklist document usually associated with leaking UST sites. However, the Summary Sheet makes no specific reference to any reported release. Moreover, it lists as "unknown" the type, extent, and required remediation of the unspecified alleged "contamination" at the site. The Summary Sheet also references the site as not having "completed" groundwater and soil remediation, neither of which were ever ordered or planned. Despite the fact that all of the key indicators delineating site conditions are marked "unknown", the Summary Sheet further indicates that an enforcement action is required. No such enforcement action has ever been taken, nor does the record provide any evidence that such action is warranted.

The CRWQCB file also contains two internal memoranda dating from 1984, referencing the facility's submission of a UST Leak Detection Plan ("LDP") in conjunction with a 5,000 UST at the site. The LDP appears to relate to standard City of Long Beach Department of Fire Prevention Bureau compliance requirements. Neither the LDP nor the memoranda make reference to any actual leak or release at the facility.

Upon completion of the file review, Mr. James McNally of Dames & Moore contacted you (on June 22, 1994) regarding the subject site's inclusion in the LUST list. Mr. McNally reports that you agreed that the agency files provide no confirmed basis or explanation for the LUST listing, and that other than the existence of the vague Summary Sheet, there was no indication of a release at the facility. Therefore, based on Dames & Moore's investigations, and the agency's own files, it appears that the Los Altos facility was erroneously included in the LUST listing, and should be removed.

Hey what? who did he spoke with?

Given NME's current efforts to sell the subject property, and the obvious concerns of prospective buyers in the face of a LUST listing, we hereby request information regarding the procedures for having the facility removed from the agency's LUST list. As an immediate interim measure, we request that the CRWQCB issue a letter (copied to the agency's file), indicating: 1) that the agency has no record of a reported release at the subject site, and 2) that no remediation or enforcement action is pending, planned or warranted with respect to this facility. The requested letter is essential to preserving the value and integrity of our client's property.

We appreciate your prompt response to this request. Please give me a call at the number cited above if you should have any questions regarding this matter.

Yours very truly,

McCUTCHEN, DOYLE, BROWN & ENERSEN

Karen A. Caffee

Enclosure

cc: Karen S. Rothberg, Esq.
Mary Ellen Huckabee, Esq.

Date: 6-1-92

CASE NAME & ADDRESS: Los Altos Hospital
3340 Los Coyotes Diagonal, Long Beach.

Summary Sheet for Underground Tank Cases

	Completed	Not Completed
(1) Preliminary Site Assessment Phase:		X

(2) Contamination:	Yes	No	Unknown
(a) Soil			
(b) Ground Water			
(c) Soil & Ground Water			X
(d) Free Product			

(3) Type of Contamination:	Yes	No
(a) Gasoline		
(b) Diesel		
(c) Solvents		
(d) Waste Oil		
(e) Other		

(4) Definition of Contamination Completed:	Yes	No	Unknown
(a) Soil			X
(b) Ground Water			X

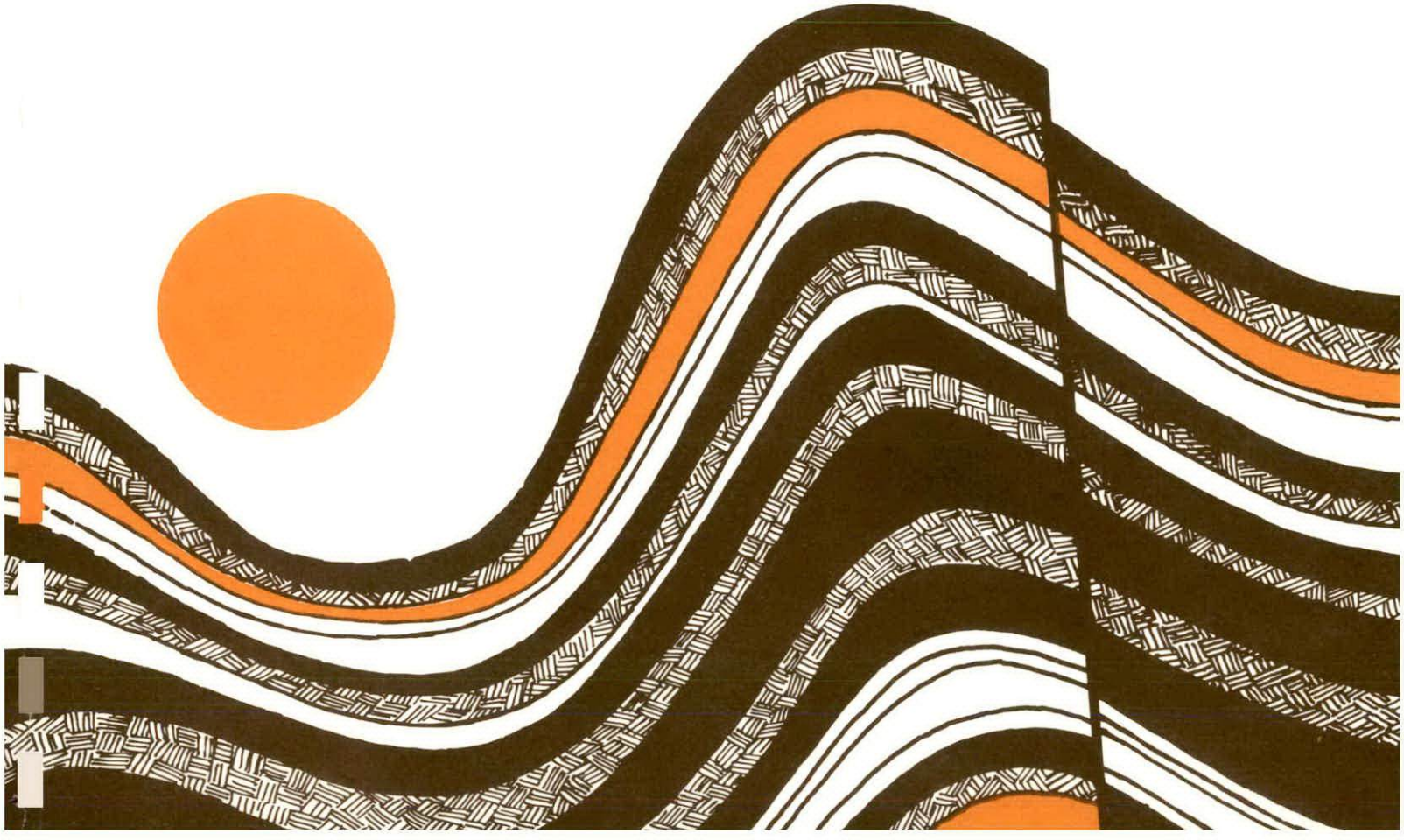
(5) Remedial Actions:	On-going/ Performed Yes	No
(a) Free product removal		
(b) Soil excavation + treatment		
(c) Soil excavation + disposal		
(d) In-situ soil treatment		
(e) Ground water pumping + treatment		
(f) NPDES and/or WDR permits		

(6) Remediation Completed:	Yes	No
(a) Ground water		X
(b) Soil		X

	Yes	No
(7) Enforcement Action needed:	X	
(8) Site Closure Plan submitted:		X
(9) Site Closed:		X

NOTEs:

Leighton and Associates



84 OCT 3 AM 12:08

LEIGHTON and ASSOCIATES
INCORPORATED

SOIL ENGINEERING GEOLOGY GEOPHYSICS GROUND WATER HAZARDOUS WASTES

October 8, 1984

Project No. 1840438-02

TO: Los Altos Hospital
3340 Los Coyotes Diagonal
Long Beach, California 90808

ATTENTION: Mr. Joe Arroyo

SUBJECT: Installation of Monitoring Wells, Hazardous Materials Management Plan, Underground Tank Monitoring for Long Beach Facility at 3340 Los Coyotes Diagonal, City of Long Beach, California

Introduction

In accordance with your authorization, we have overseen the installation of the recommended monitoring wells at the Long Beach Facility at 3340 Los Coyotes Diagonal, in the City of Long Beach, California, in compliance with our recommended Hazardous Materials Management Plan (Reference 3, Appendix A) and the City of Long Beach Department of Fire Prevention Requirement No. 14.5, February 1984 (Rev.), City of Long Beach Municipal Code, Ordinance No. 18-48-232. This report presents a summary of the conditions encountered during installation and the specifications of the installed well.

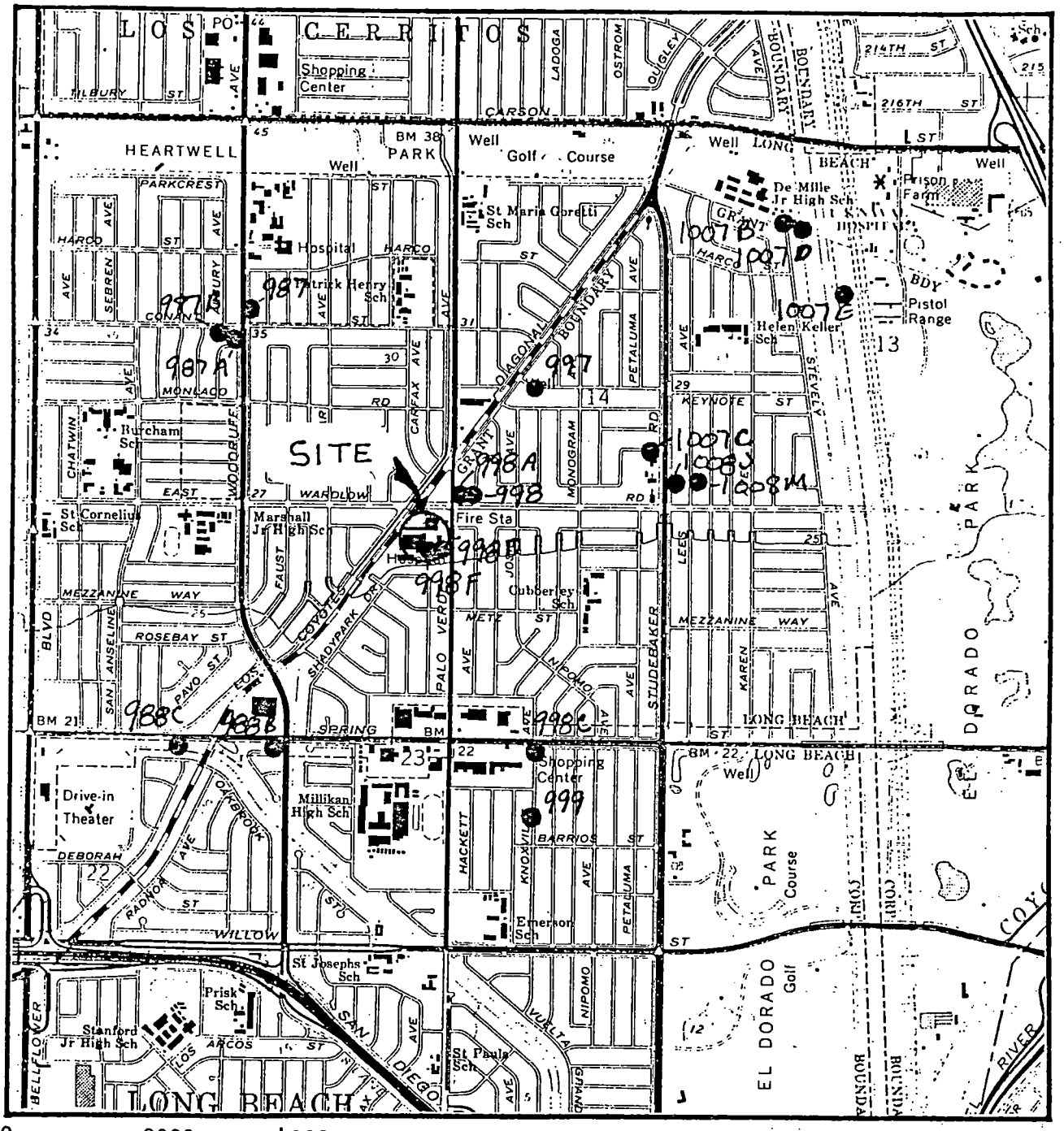
Accompanying Map and Appendices

Index Map - Page 2
Appendix A - References
Appendix B - City of Long Beach Fire Prevention Requirement No. 14.5
Appendix C - Geotechnical Boring Logs/Well Construction Details

4393 VIEWRIDGE AVENUE, SUITE D, SAN DIEGO, CALIFORNIA 92123 (800) 253-4567 • (619) 292-8030

IRVINE • WESTLAKE/VENTURA • DIAMOND BAR/WALNUT • SAN BERNARDINO/RIVERSIDE • SAN DIEGO
PALM DESERT • SANTA CLARITA/VALENCIA

1840438-02



INDEX MAP

OF

LOS ALTOS HOSPITAL

LONG BEACH FACILITY

Showing Nearby Wells (900 and 1000 Series = L.A. County Flood Control District Numbers)

Base Map: USGS 7½-Minute Los Alamitos Quadrangle

Site Description

The subject site is located in the City of Long Beach on Los Coyotes Diagonal just southeast of Wardlow Road and Palo Verde Avenue. The topography in the area is generally flat and the site elevation is approximately 26 feet. The site is occupied by various buildings that make up the hospital complex. The parking area is covered with asphalt pavement adjacent to the storage tank location.

The underground storage facility consists of one 5,000-gallon diesel storage tank located in the parking area adjacent to Los Coyotes Diagonal.

Monitoring Well Locations

Two borings were placed approximately 10 feet northwest and 10 feet southwest of the underground diesel storage tank adjacent to Los Altos Hospital and Los Coyotes Diagonal. Both borings were fitted with monitoring wells for future monitoring.

Subsurface Conditions

The subsurface conditions encountered in the monitoring well borings are detailed in Appendix C - Geotechnical Boring Logs. Presented below is a generalized soil stratigraphy of the site as compiled from the boring data. The ground surface was covered with approximately 3 inches of black asphalt in the hospital parking lot where the first boring was placed. From the ground surface to an approximately 10-foot depth, brown, damp silt and clay with some sand was encountered. From a depth of 10 to 20 feet, damp silty clays were encountered that ranged in color from light brown to dark gray. Ground water was not encountered in either boring and no evidence of contamination in the soil was detected.

Monitoring Well Installation

Both monitoring wells were constructed similarly with 10 feet of slotted 4-inch PVC casing and 9 feet of solid casing in Monitoring Well MW-1, and 4 feet of solid casing in MW-2. The bottoms were capped with slip-on type caps and glued in place. MW-1 was backfilled to a depth of 19 feet with bentonite pellets and both borings were backfilled to a depth of 8 feet with No. 3 sand. A 1-foot layer of bentonite was placed on top of the sand and the remainder of the boring was backfilled with grout. A locking hinge-top pipe was installed over the top of the well casing.

Conclusions

The monitoring well was installed in accordance with the recommendations of our Hazardous Materials Management Plan (Reference 3) and in compliance with the City of Long Beach Department of Fire Prevention Requirement No. 14.5, February 1984 (Rev.), City of Long Beach Municipal Code, Ordinance No. 18-48-232 (Referenced). MW-1 and MW-2 have been designated Well No.'s 00082 and 00083 by the City of Long Beach Fire Department.

Monthly monitoring of the well is required by the provisions of the City of Long Beach Department of Fire Prevention Requirement No. 14.5. A representative or employee of Los Altos Hospital can be instructed by Leighton and Associates, Inc. in the approved testing techniques and equipment. Daily monitoring should be carried out in accordance with the requirements of the City of Long Beach Fire Department as described below:

- Monitoring of the well should be performed on a daily basis. Records of this monitoring should be maintained onsite. The data recorded should indicate the type of monitoring conducted, the date and time, the location of the well and the well I. D. number assigned by the City of Long Beach. The person conducting the monitoring should sign the log and maintain these records on location to be furnished to the Fire Department inspectors whenever the facility is in operation.

- Monitoring records should be submitted to the Long Beach Fire Prevention Bureau annually and should include the signature of the owner or his authorized representative certifying that the information is correct.

It has been a pleasure to have provided these services to Los Altos Hospital. If you have any questions regarding this report, please do not hesitate to contact this office.

Respectfully submitted,

LEIGHTON AND ASSOCIATES, INC.

Thomas E. Mills

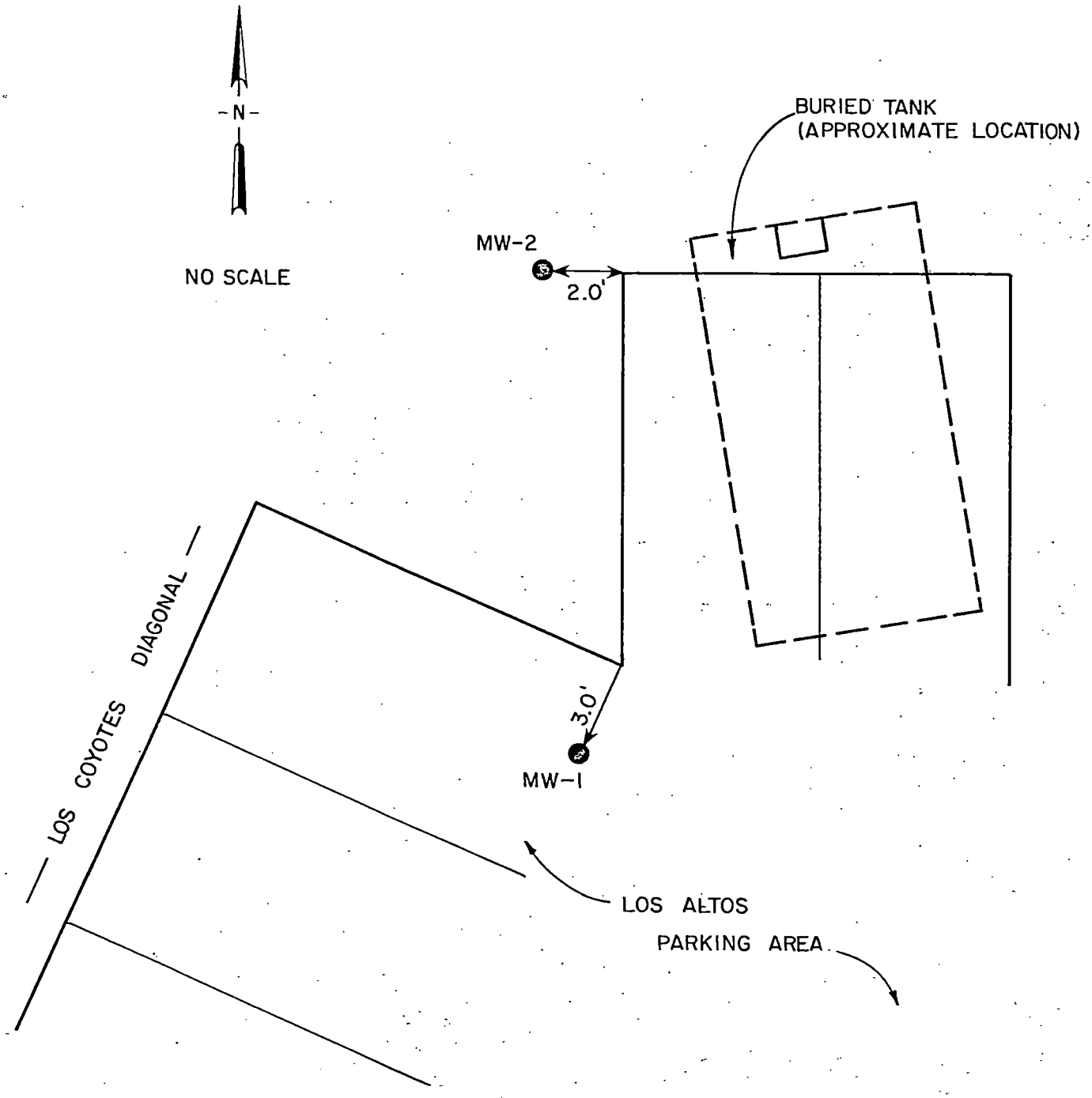
Tom Mills
Project Manager

Jeffery Wiegand

Jeffery Wiegand, EG 331
Vice President

EC/TM/JW/cas

Distribution: (4) Addressee



LEIGHTON and ASSOCIATES INCORPORATED

Project No. 4840438-02

LOCATIONS OF MONITORING WELLS
LOS ALTOS HOSPITAL
UNDERGROUND TANK
LONG BEACH, CALIFORNIA

APPENDIX A

LEIGHTON and ASSOCIATES
INCORPORATED

APPENDIX A

REFERENCES

1. City of Long Beach, 1984, Department of Fire Prevention Requirement No. 14.5, February 1984 (Rev.), City of Long Beach Municipal Code, Ordinance No. 18-48-232.

2. Department of Water Resources, 1961, Ground water geology of the coastal plain of Los Angeles County, Bulletin 104, Appendix A, June 1961.

3. Leighton and Associates, Inc., 1984, Hazardous materials management plan, underground tank monitoring for Long Beach facility at 3340 Los Coyotes Diagonal, City of Long Beach, California, Project No 1840438-02, dated August 29, 1984.

4. Woodward-McNeill and Associates, 1975, Seismic safety element draft, Long Beach City Planning Department, May 1975.

APPENDIX B

LEIGHTON and ASSOCIATES
INCORPORATED

CITY OF LONG BEACH
DEPARTMENT OF FIRE
[illegible] WEST BROADWAY, ROOM [illegible] • LONG BEACH CALIFORNIA [illegible]

ADMINISTRATION
436-2219
FIRE PREVENTION
435-7458
FIRE TRAINING CENTER
597-5488
TECHNICAL SERVICES
599-3679
EMERGENCY PREPAREDNESS
595-1751

FIRE PREVENTION REQUIREMENT
NO. 14.5 2-84 (REV)

UNDERGROUND TANK MONITORING

I. General

A monitoring plan for each storage facility containing hazardous, flammable or combustible liquids shall be submitted to the Fire Department.

Monitoring under such a plan shall include visual inspection of the primary containment integrity whenever practical; however, if the visual inspection is not practical, an alternative method of monitoring each storage facility on a monthly basis may be approved by the department. The preferred method is with monitoring wells of an approved design.

No facility for the storage of hazardous, flammable or combustible liquids shall be abandoned.

Storage facilities which are temporarily out-of-service, and are intended to be returned to use, must continue to be monitored and inspected.

Any storage facility which is not being monitored and inspected must be removed in a manner approved by the Fire Department. Any storage facility not used for a period of one year must be removed. A permit is required for all tank removals.

All storage facilities must be monitored by the owner or one of his authorized representatives on a monthly basis. Such monitoring shall include a monthly log which will show the type of test performed and signed by the person doing the test. Such records will be on location and available to fire department inspection whenever the facility is in operation. Such records will be sent to the Long Beach Fire Prevention Bureau each 12 months and shall include the owners or his authorized representatives signature certifying that the information is accurate.

II. Permits

Permits and/or approval for all monitoring installations shall be required from the following City agencies:

Fire Department - 435-2458
Board of Harbor Commissioners, if applicable - 437-0041

III. Hazardous Materials Management Plan

A H.M.M.P. must be submitted to the Fire Marshal by a licensed and approved Geotechnical/Environmental Firm. This report will include a proposed plan for the effective monitoring of each underground tank. Also required is the estimated type of soil, water level, clay level, or any other subsurface information applicable.

All H.M.M.P.'s will be submitted to the Fire Marshal for approval/denial.

IV. Wells

All monitoring wells will comply with all local and state requirements.

Minimum finished inside diameter allowed for a monitoring well will be 2" (two inches). Wells may be lined with PVC or other well lining material.

All wells shall be permanently identified with a number that will be assigned by the Bureau of Fire Prevention. This number will be used for all future monitoring and identification purposes.

Refer to the monitoring well diagram for an example of a typical well and its required construction features.

APPENDIX C

LEIGHTON and ASSOCIATES
INCORPORATED

GEOTECHNICAL BORING LOG

Date 9/24/84 Drill Hole No. MW-1 Sheet 1 of 1

Project Los Altos Hospital Job No. 1840438-02

Drilling Co. ABC Liovin Type of Rig GVW 50000

Hole Diameter 11-12" Drive Weight 140 lb Drop 30 in.

Elevation Top of Hole Ref. or Datum

Logged by EC

Sampled by EC

Depth Feet	Graphic Log	Attitudes	Tube Sample No.	Blows Per Foot	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	GEOTECHNICAL DESCRIPTION
0								0-3" black asphalt surface
							SM	2' brown, damp, silty sand, no odor
							CL	3' brown, damp, silty clay, micaceous, no odor
5								
10			2	8 13 20			CL	10' light brown, damp, silty clay, inter-layered with dark gray, damp, clayey silt to silty clay, no odors
15			3	13 16 27			CL	15' grayish brown, damp, silty clay, no odor
20			4	8 11 17			CL	20' dark gray, damp, silty clay, no odor
25								Total depth drilled : 20.5' No water encountered

GEOTECHNICAL BORING LOG

Date 9/24/84 Drill Hole No. MW-2 Sheet 1 of 1

Project Los Altos Hospital Job No. 1840438-02

Drilling Co. ABC Liovin Type of Rig GVW-50000

Hole Diameter 11-12" Drive Weight 140 lb Drop 30 in.

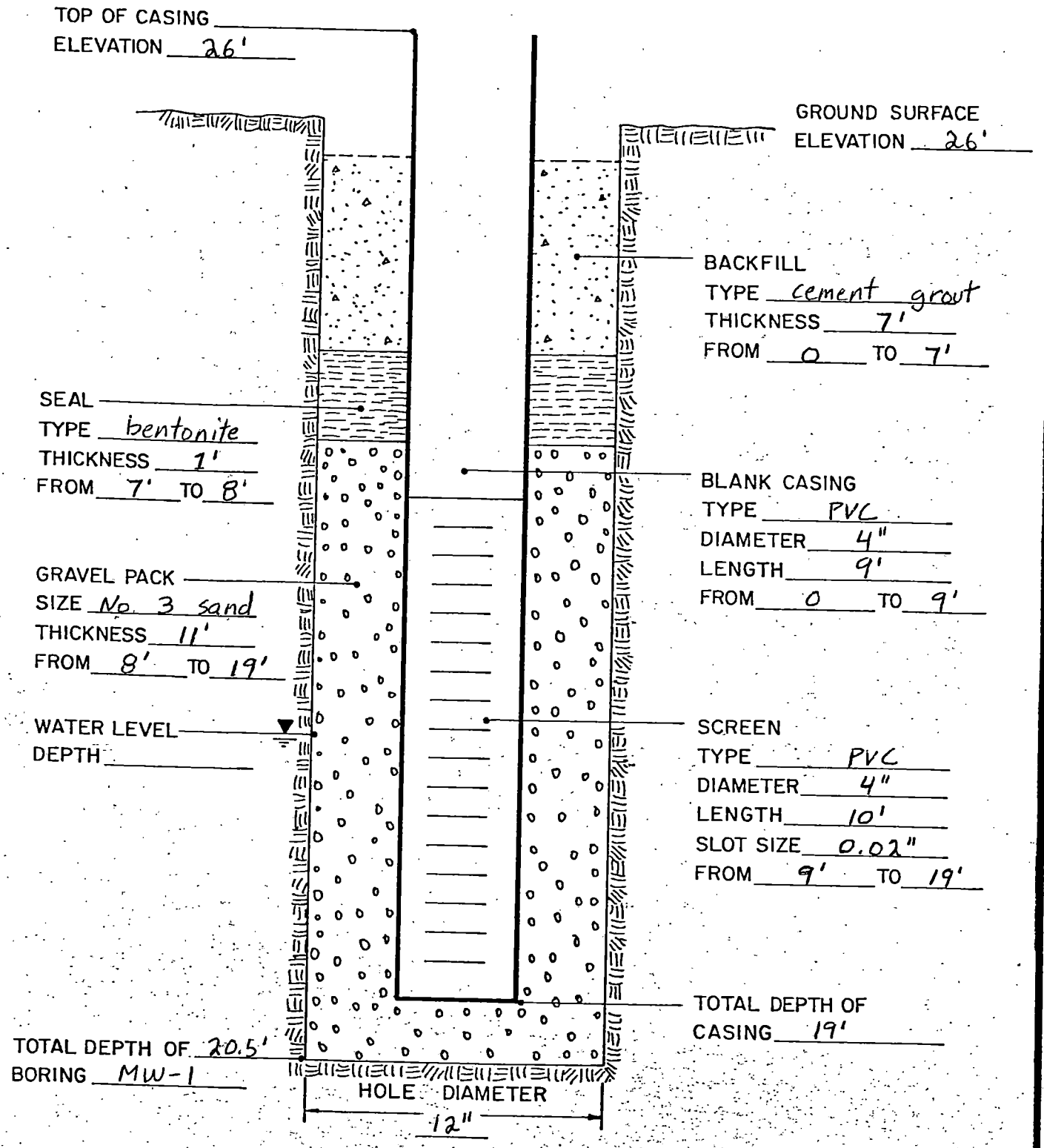
Elevation Top of Hole Ref. or Datum

Logged by EC

Sampled by EC

Depth Feet	Graphic Log	Attitudes	Tube Sample No.	Blows Per Foot	Dry Density pcf	Moisture Content, %	Soil Class. (U.S.C.S.)	GEOTECHNICAL DESCRIPTION
0							CL	dark brown, damp, silty clay, with some sand, no odor.
5			1				ML	6' light brown, damp, sandy silt with some clay, no odor.
10			2	11 16 22			ML/CL	10' light brown, damp, sandy silt, sharp contact with brown, damp silty clay, no odor.
15			3	11 15 19			CL	15' gray, dry to damp, silty clay with little sand, no odor.

Total depth drilled: 15'
No water encountered



LEIGHTON and ASSOCIATES

Project No.
LOS ALTOS HOSPITAL
1840438-02

WELL CONSTRUCTION DETAIL

Well No. MW-1

Figure

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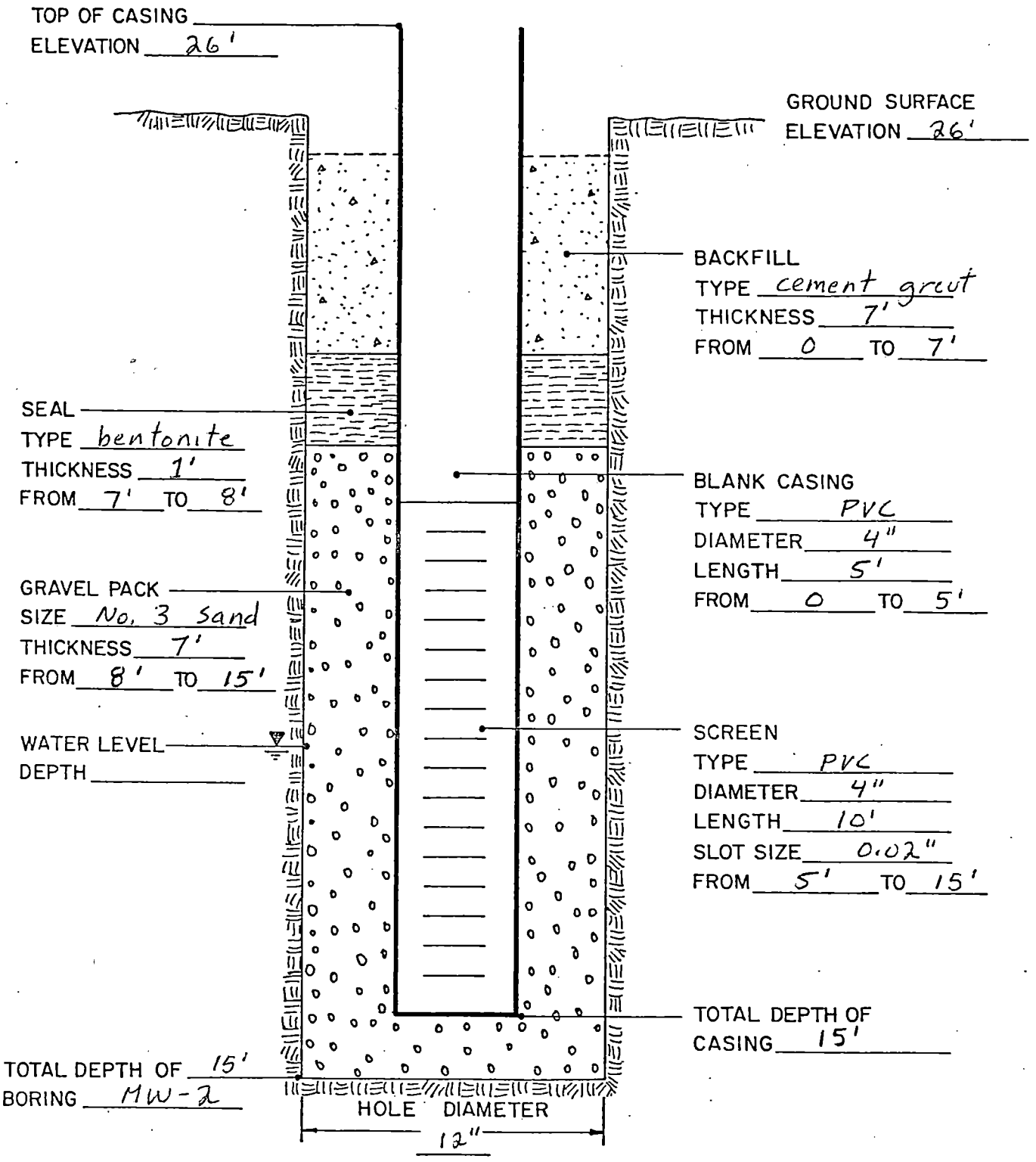


LEIGHTON and ASSOCIATES INCORPORATED

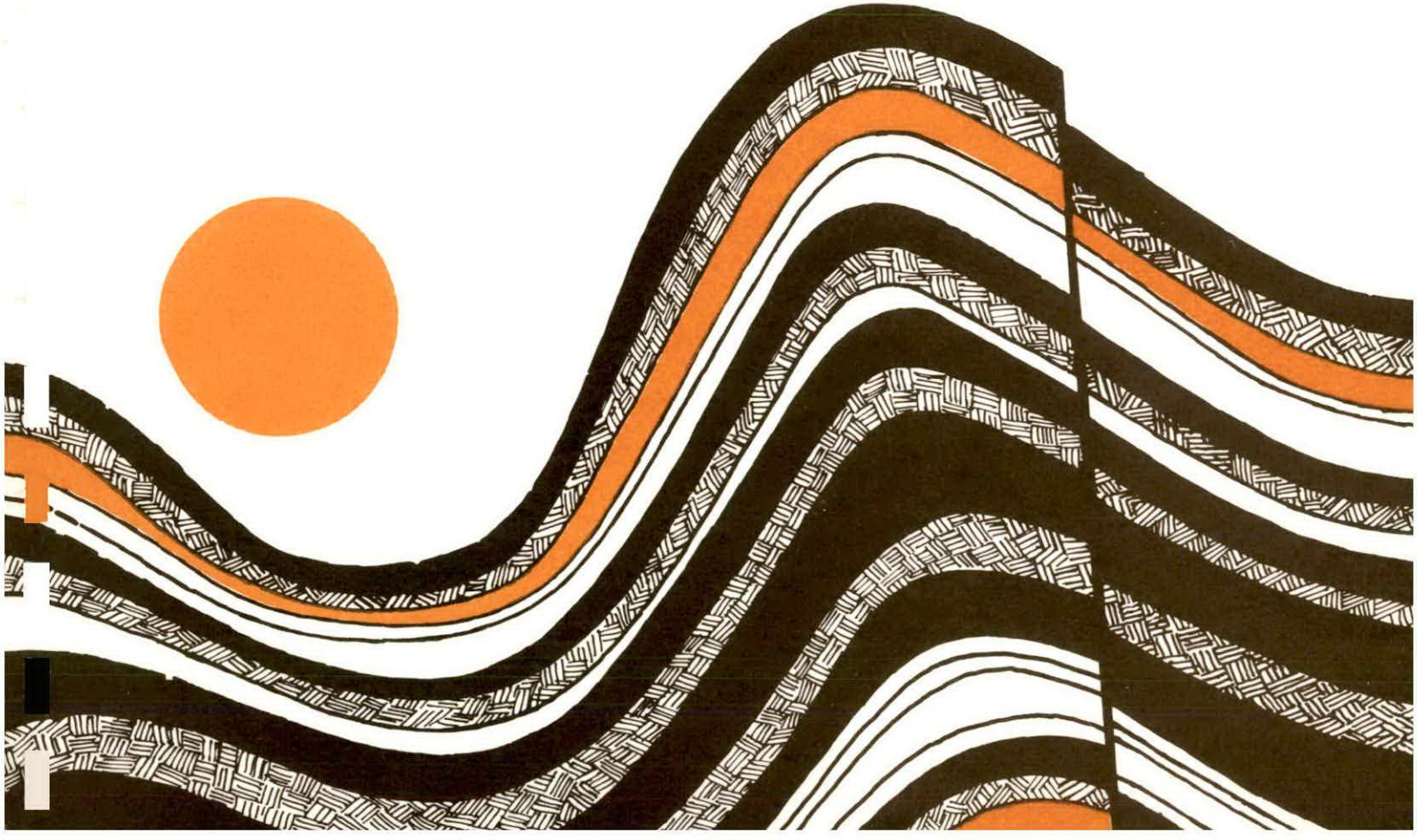
Project No. LOS ALTOS HOSPITAL
1840438-02

WELL CONSTRUCTION DETAIL

Well No. MW-2

Figure

Leighton and Associates



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CALIF. REGIONAL WATER
QUALITY CONTROL BOARD
L.A. REGION

LEIGHTON and ASSOCIATES
INCORPORATED

SOIL ENGINEERING GEOLOGY GEOPHYSICS GROUND WATER HAZARDOUS WASTES

Project No. 1840438-02

TO: Los Altos Hospital
3340 Los Coyotes Diagonal
Long Beach, California 90808

ATTENTION: Mr. Joe Arroyo

SUBJECT: Hazardous Materials Management Plan, Underground Tank Monitoring for Long Beach Facility at 3340 Los Coyotes Diagonal, City of Long Beach, California

References:
(1) Fire Prevention Requirement No. 14.5, February 1984 (Rev.)
(2) City of Long Beach Municipal Code, Ordinance 18.48.232
(3) Seismic Safety Element Draft, Long Beach City Planning Department, dated May 1975, by Woodward-McNeill and Associates
(4) Department of Water Resources Bulletin 104, Appendix A, June 1961, Ground Water Geology of the Coastal Plain of Los Angeles County

Introduction

In accordance with the City of Long Beach Municipal Code and the City of Long Beach Department of Fire Prevention requirements, we herewith present a recommended Hazardous Materials Management Plan for the Los Altos Hospital Long Beach facility at 3340 Los Coyotes Diagonal, City of Long Beach, California. The plan is based upon information gathered during our research of the records of the State Department of Water Resources, Los Angeles County Flood Control District, City of Long Beach Water Department and a review of our own in-house reports and related documents.

Accompanying Map and Illustrations

Index Map - Page 2
Figure 1 - Typical Monitoring Well - Rear of Text
Figure 2 - Plan of Proposed Locations of Monitoring Wells - Rear of Text

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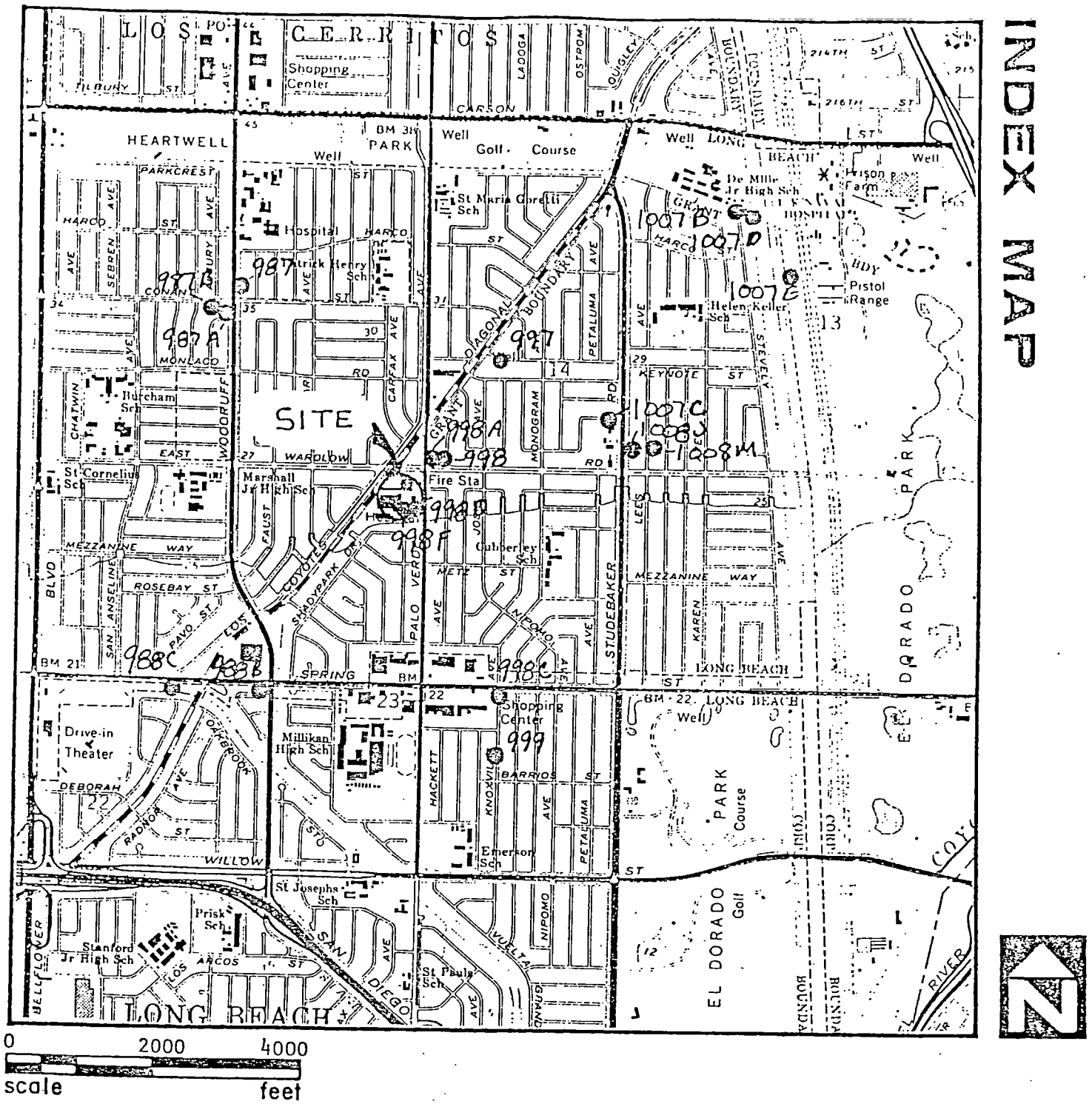
1840438-02



INDEX MAP

OF

LOS ALTOS HOSPITAL

LONG BEACH FACILITY

Showing Nearby Wells (900 and 1000 Series = L.A. County Flood Control District Numbers)

Base Map: USGS 7½-Minute Los Alamitos Quadrangle

Site Description

The subject site is located in the City of Long Beach on Los Coyotes Diagonal just southeast of Wardlow Road and Palo Verde Avenue. The topography in the area is generally flat and the site elevation is approximately 26 feet. The site is occupied by various buildings that make up the hospital complex. The parking area is covered with asphalt pavement adjacent to the storage tank location.

The underground storage facility consists of one 5,000-gallon diesel storage tank located in the parking area adjacent to Los Coyotes Diagonal.

Soils/Geology

Based on our review of published reports and available well data in the vicinity, the near-surface soils underlying the site can be characterized as follows:

1. 0 to 25±-foot depth: Primarily sands, clayey sands and silts of Recent alluvium.
2. 25± to 50±-foot depth: Primarily clays, sandy clays and silts of the Bellflower aquiclude.
3. 50± to 150±-foot depth: Artesia confined aquifer.

Note: From the depth of approximately 260 to 600 feet below the surface, the Gage, Hollydale, Jefferson and Lynwood aquifers, respectively, are in hydraulic continuity.

Ground Water

1. Water well records near the site indicate that water levels are subject to seasonal and annual fluctuations, depending on rainfall, pumping and recharge. The higher levels generally occur in the winter and spring and after years of high rainfall.
2. The Seismic Safety Element for Long Beach indicates the water table in the general area of the site to be at about 20 to 25 feet below the ground surface. This ground water represents the perched phreatic surface within the Recent alluvium and possibly within the Bellflower aquiclude.
3. Ground water contour maps by the Los Angeles County Flood Control District of the aquifers in the vicinity used for domestic pumping show static potentiometric water levels for the confined aquifers at approximately 50 feet beneath the site for the shallow aquifer system (Artesia and Gage aquifers) and 65 feet beneath the site for the deep aquifer system (Hollydale and deeper aquifers), respectively. Domestic pumping for drinking purposes is limited to the Lynwood and deeper aquifer systems.
4. The site is probably underlain by a near-surface (20 to 25 feet deep) perched ground water table and a deeper pumpable confined aquifer with a static potentiometric water level located at a depth of approximately 65 feet or deeper below the ground surface. (Please note that the depth to the top of the Hollydale confined aquifer is approximately 260± feet based on available data.

5. According to available data, the shallow ground water beneath the site probably flows in a northwesterly to westerly direction. The ground water of the aquifers currently being pumped flows westerly beneath the site.

Ground Water Quality

Water quality data available for review generally do not include testing for petroleum products. However, the data we reviewed for ground water from the current pumping aquifers in the general area indicate no contamination problems, and based on our discussions with Long Beach Water Department personnel, there is no known contamination in the subject area.

Recommendations for Monitoring Plan

1. In order to comply with the City of Long Beach Municipal Code and Fire Prevention requirements, it is recommended that a minimum of two monitoring wells be placed around the diesel storage tank, one placed to the northwest and the other to the southwest.

   The depths of the wells should be:

   (a) 5 feet into a competent clay layer (5 feet minimum thickness), or
   (b) to phreatic ground water table, or
   (c) to a maximum depth of 40 feet,
   whichever is first encountered.

2. The borings for the wells should be a minimum of 10 inches in diameter. The well casing should be a minimum of 4 inches in diameter and of a noncorrosive type of material such as PVC. Well screen material should be placed from the bottom of the well to a depth of 1 foot above the bottom of the tank. A layer of bentonite pellets should be placed above the sandpack to form an impervious seal a minimum of 1 foot in thickness. A cement/bentonite grout should be placed above the bentonite pellets to an elevation of 5 feet below the ground surface. The upper 5 feet should be capped with concrete and an approved vented cap and locking surface box installed. See Figure 1 for a Typical Monitoring Well schematic.

3. Monitoring of the well should be performed on a monthly basis. Records of this monitoring should be maintained onsite. The data recorded should indicate the type of monitoring conducted, the date and time, the location of the well and the well I.D. number assigned by the City of Long Beach. The person conducting the monitoring should sign the log and maintain these records on location to be furnished to the Fire Department inspectors whenever the facility is in operation.

4. Details of the required monitoring will be presented in our report of well installation. However, the following should be anticipated:

   a. The well should be checked for vapors by appropriate detection equipment.

   b. The well should be checked for water.

   c. If water is present, a bailer sample should be taken and visually inspected for contamination.

5. Monitoring records should be submitted to the Long Beach Fire Prevention Bureau annually and should include the signature of the owner or his authorized representative certifying that the information is correct.

Leighton and Associates, Inc. appreciates this opportunity to be of service to you on this project. If you have any questions concerning this report, please contact us at your convenience.

Respectfully submitted,

LEIGHTON AND ASSOCIATES, INC.

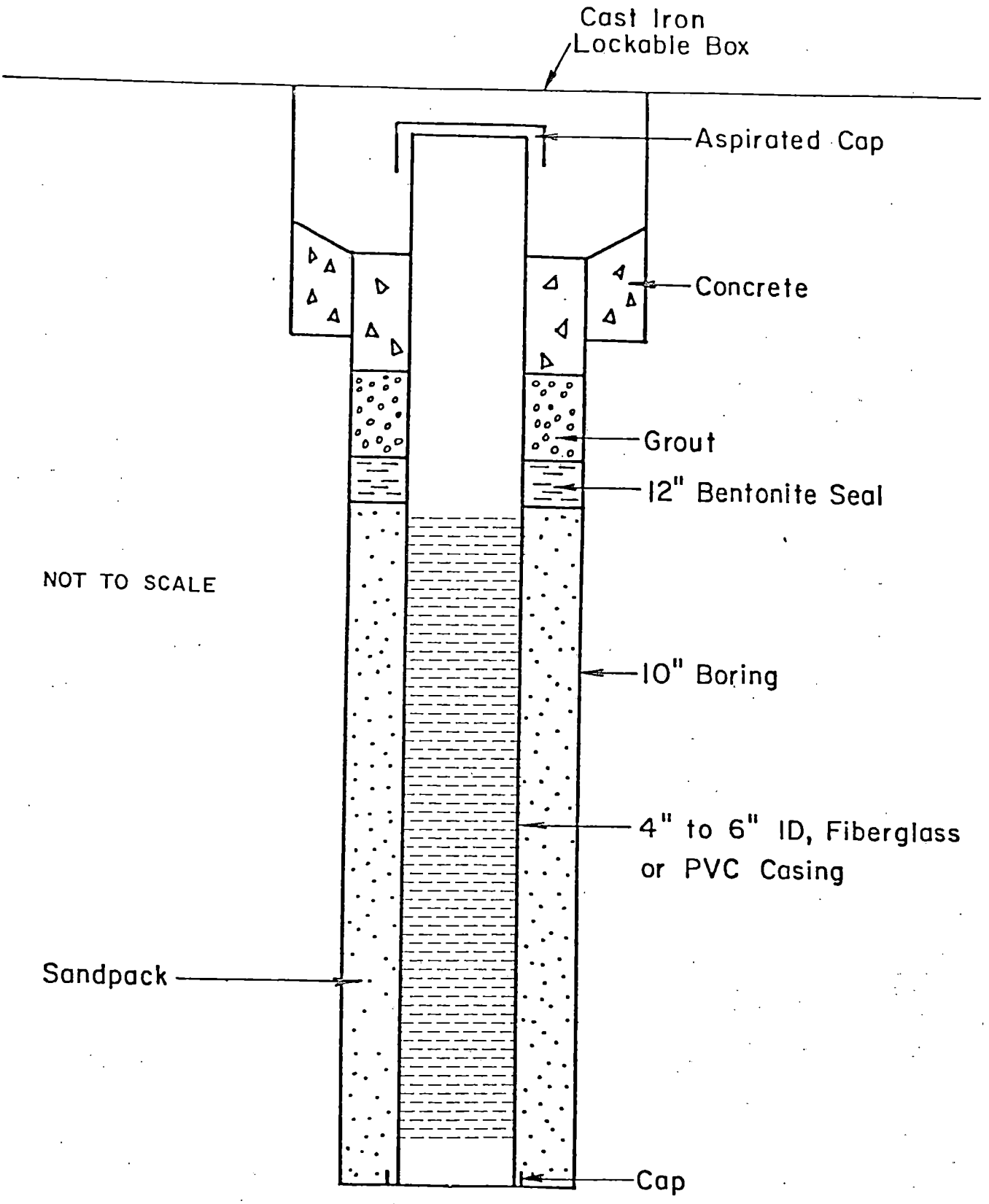
Jeffery Wiegand

Jeffery Wiegand, EG 331
Project Coordinator

WG/JW/ib

Distribution: (2) Addressee
(1) City of Long Beach Fire Department
Attention: Captain Gary Robertson

1840438-02



TYPICAL MONITORING WELL

Figure 1

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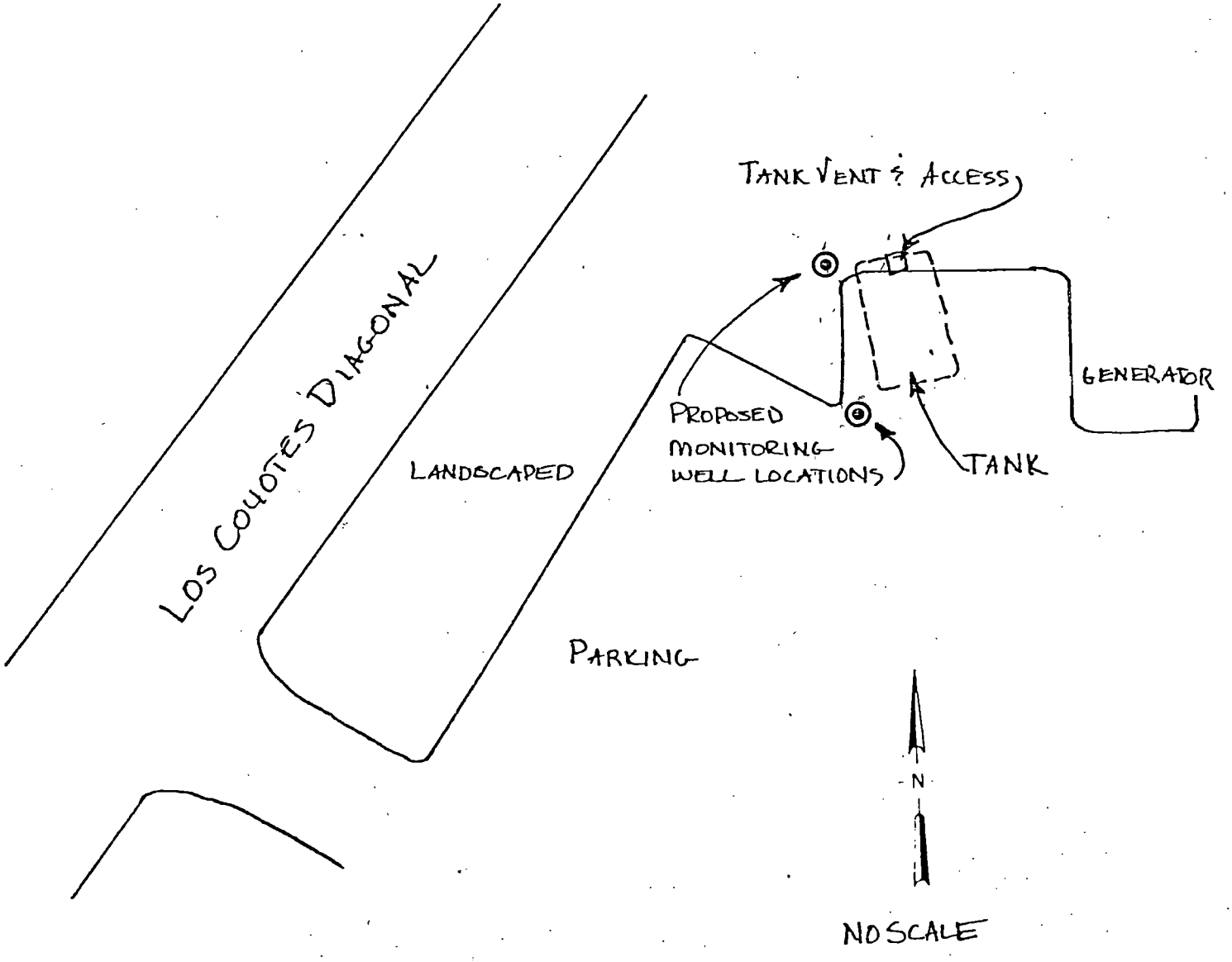

PLAN OF PROPOSED LOCATIONS OF MONITORING WELLS
LOS ALTOS HOSPITAL
UNDERGROUND TANK
LONG BEACH, CALIFORNIA

Figure 2

10/19/84

JTL 9/23/85 - received.

To: ~~JMW~~ 10/19/84

From: ck

Re: Los Altos Hospital LDP, Long Beach, CA 90808
(File 83-8)

- site elevation is ~26'
- facility has one 5000 gallon diesel tank
- two monitoring wells were placed, one at 10' NW (#2), one at 10' SW (#1) of tank.
- well #1 (10' SW of tank) was drilled to 20.5' total, backfilled with bentonite to 19'
- well #2 (10' NW of tank) was drilled to 15' total, no backfill
- no evidence of contamination was found
- no lab analyses performed
- daily monitoring of the wells will be conducted by a Los Altos Hospital representative or employee and a log kept.

Evaluation:

- groundwater depth for the facility is never mentioned. ∴ Do case III guidelines satisfy the minimum criteria? Possibly not.
- diameter of tank and depth of invert are not given. We must assume the invert is less than 15' deep.
- monitoring wells are not located at each end of the tank
- monitoring wells are probably not located in backfill material, based on boring log

- monitoring well construction is satisfactory.
- product inventory logs should also be kept.

Recommendation -

Do not give the approval of the Regional Board for this LOP.

Note:

Through my own research, it appears that regional groundwater below the facility is ~65' deep.

10/19 I called Wiegand's secretary to obtain a copy of the Hazardous Materials Management Plan referenced in their final report. [HMMP is required by LB Fire Dept.]

10/26 84

To: JMW

From: ck

Re: Los Altos Hospital, Long Beach, CA
"Hazardous Materials Management Plan"

- regional aquifer below site is the Artesia, at ~ 50'+-150' depth
→ - perched water at 20'-25' ∴ case I
- as stated in the HMMP.
"depth of the wells should be:
a) 5' into competent clay layer
b) to phreatic ground water table
c) to a max of 40'
whichever is first encountered."

Evaluation -
The LDP for Los Altos Hospital is inadequate by the RWQCB standards.
Wells should have been drilled to 40' depth, as case I of the guidelines dictates.
They should be placed in the backfill, off the ends of the tank.

FILE REVIEW REQUEST

I. TO BE FILLED O[illegible] BY PERSON WHO RECEIVES THE FILE [illegible]IEW REQUEST

Request received by: AEN Date request made: 10/7/86

Person(s) who wish to review file(s)	Phone number	Representing
ANNA BEHRNSFELD	714 535 6535E	Woodward Clyde Consultants

Purpose (if stated. Try to get, but if refuses to give, put "won't say"): Review (& identify) potential environment problem areas surrounding the site being reviewed by our firm. Site addresses: 4826-5032 Los Coyotes Diagonal, Long Beach, Claremont Village Green Apt 630 W Bonita, Claremont

Files desired to be reviewed (name, number):
Los Altos Car Wash 908150034 Magic Minute Car Wash 908040025
Los Altos Hospital 908080043 Chevron #92811 908150052

Appointment Requested For:

Recommended staff contact (proctor) AEN

Date 10/7/86 Time 0945

Assistant Executive Officer Approval & Date: [illegible] 10/7

II. TO BE FILLED OUT BY STAFF CONTACT AFTER FINAL APPOINTMENT

Appointment Final Date & Time: 10/7/86 0945 Staff Contact Was A.E. Norah

Staff time expended: 30 minutes Noted by Supervisor [illegible] 10/9

III. TO [illegible] [illegible]VER IN-HOUSE COPIES ARE REQUESTED

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8-7-89
Inactive / closed case
[illegible]

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Approval _____

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I. TO BE FILLED OUT BY PERSON WHO RECEIVES THE FILE REVIEW REQUEST

Request received by: AEN Date request made: 10/7/86

Person(s) who wish to review file(s)	Phone number	Representing
ANNA BEHRNSFELD	714 535 6538	Woodward Clyde Consultants

Purpose (if stated. Try to get, but if refuses to give, put "won't say"): (identify) Review potential environment problem areas surrounding the site being reviewed by our firm. Site addresses: 4826-5032 Los Coyotes Diagonal, Long Beach, Claremont Village Green Apt 630 W Bonita, Claremont

Files desired to be reviewed (name, number):
Los Altos Car Wash 908150034 Magic Minute Car Wash 908040025
Los Altos Hospital 908080043 Chevron #92811 908150052

Appointment Requested For: Recommended staff contact (proctor) AEN

Date 10/7/86 Time 0945 Assistant Executive Officer Approval & Date: 10/7

II. TO BE FILLED OUT BY STAFF CONTACT AFTER FINAL APPOINTMENT

Appointment Final Date & Time: 10/7/86 0945 Staff Contact Was A. E. Norvell

Staff time expended: 30 minutes Noted by Supervisor JMW 10/9

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In-house copies @ .10 each

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If file(s) are to be taken from office EXCEPT by bonded blueprinter, Executive Officer or Assistant Executive Officer

Approval _____

TO: Al Novak

Date: 6/23/86

From: JTL

Subject: Case I.D. No. Assignment

Please assign an I.D. No. for the case listed below:

Los Altos Hospital
3340 Los Coyotes Diagonal
Long Beach, CA 90808

908080043
AEN
9/26/86

Contact Person:

Mr. Joe Arroyo
Los Altos Hospital
3340 Los Coyotes Diagonal
Long Beach, CA 90808

Thanks

To: File

From: JTL

Case Assigned to JTL in July 1985.

12-20-85

- no soil samples analyzed
- Total depth for monitoring well is too short to encounter G.W.

LEIGHTON and ASSOCIATES
INCORPORATED

SOIL ENGINEERING GEOLOGY GEOPHYSICS GROUND WATER HAZARDOUS WASTES

T R A N S M I T T A L

TO: Los Angeles Regional Water Quality Control Board
107 South Broadway, Room 4027
Los Angeles, California 90012-4596

Date: October 22, 1984

Project No. 1840438-02

ATTENTION: Ms. Carol Kawalmato

Transmitted:	The Following:	For:
X Herewith	____ Draft Report	____ Your Use
____ Via Carrier	____ Final Report	X As Requested
____ Client Pick Up	1 Extra Report	
	____ Other	

SUBJECT: Hazardous Materials Management Plan, Underground Monitoring for Long Beach Facility at 3340 Los Coyotes Diagonal, City of Long Beach, California

Date of Report: August 29, 1984

LEIGHTON AND ASSOCIATES, INC.

By: WG/JW/dlc

Copies to:

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PALM DESERT • SANTA CLARITA/VALENCIA

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QUALITY CONTROL BOARD
L.A. REGION

LEIGHTON and ASSOCIATES
INCORPORATED

SOIL ENGINEERING GEOLOGY GEOPHYSICS GROUND WATER HAZARDOUS WASTES

T R A N S M I T T A L

TO: Los Altos Hospital
3340 Los Coyotes Diagonal
Long Beach, California 90808

Date: October 8, 1984

Project No. 1840438-02

ATTENTION: Mr. Joe Arroyo

Transmitted:	The Following:	For:
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____ Via Carrier	2 Final Report	____ As Requested
____ Client Pick Up	____ Extra Report	
	____ Other	

SUBJECT: Installation of Monitoring Wells, Hazardous Materials Management Plan, Underground Tank Monitoring for Long Beach Facility at 3340 Los Coyotes Diagonal, City of Long Beach, California

Date of Report: October 8, 1984

LEIGHTON AND ASSOCIATES, INC.

By: EC/TM/JW/eb

Copies to: (1) California Regional Water Quality Control Board ✓
Attention: Mr. Josh Workman
(1) Department of Health-City of Long Beach
Attention: Mr. John Schoepf
(1) City of Long Beach Fire Department
Attention: Captain Gary Robertson

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UNDERGROUND STORAGE TANKS
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APPOINTMENT DATE: 8/13/2018	**APPOINTMENT TIME:** 9:00am	**STAFF CONTACT:** JR
CASE FILE LOCATION: W	**CASE FILE PULLED BY:** JR	**CASE FILE PULLED ON:** 8/10/2018

REGIONAL BOARD – UST REQUESTED CASE FILE INFORMATION

REGIONAL BOARD FILE NUMBER:	908080043
SITE ADDRESS:	3340 Los Coyotes Diagonal
NUMBER OF CASE FILE FOLDERS:	0
NUMBER OF CASE FILE WALLETS:	1

SECTION B: TO BE COMPLETED BY REGIONAL BOARD FILE REVIEW STAFF AND/OR FILE REVIEWER

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CASE FILE RETURNED TO: W	**CASE FILE RETURNED BY:** JR	**CASE FILE RETURNED ON:** 8/24/18

UNDERGROUND STORAGE TANKS
FILE REVIEW APPOINTMENT FORM

SECTION A: TO BE COMPLETED BY REGIONAL BOARD FILE REVIEW STAFF.

APPOINTMENT DATE: 8/28/00	APPOINTMENT TIME: 8:00	STAFF CONTACT:
CASE FILE LOCATION: WH	CASE FILE PULLED BY: L.C.	CASE FILE PULLED ON: 8/25/00

REGIONAL BOARD – UGST REQUESTED CASE FILE INFORMATION.

REGIONAL BOARD FILE NUMBER:	
SITE ADDRESS: 3340 Ross Cayetano	
NUMBER OF CASE FILE FOLDERS: 1	
NUMBER OF CASE FILE WALLETS: 1	

SECTION B: TO BE COMPLETED BY REGIONAL BOARD FILE REVIEW STAFF AND/OR FILE REVIEWER.

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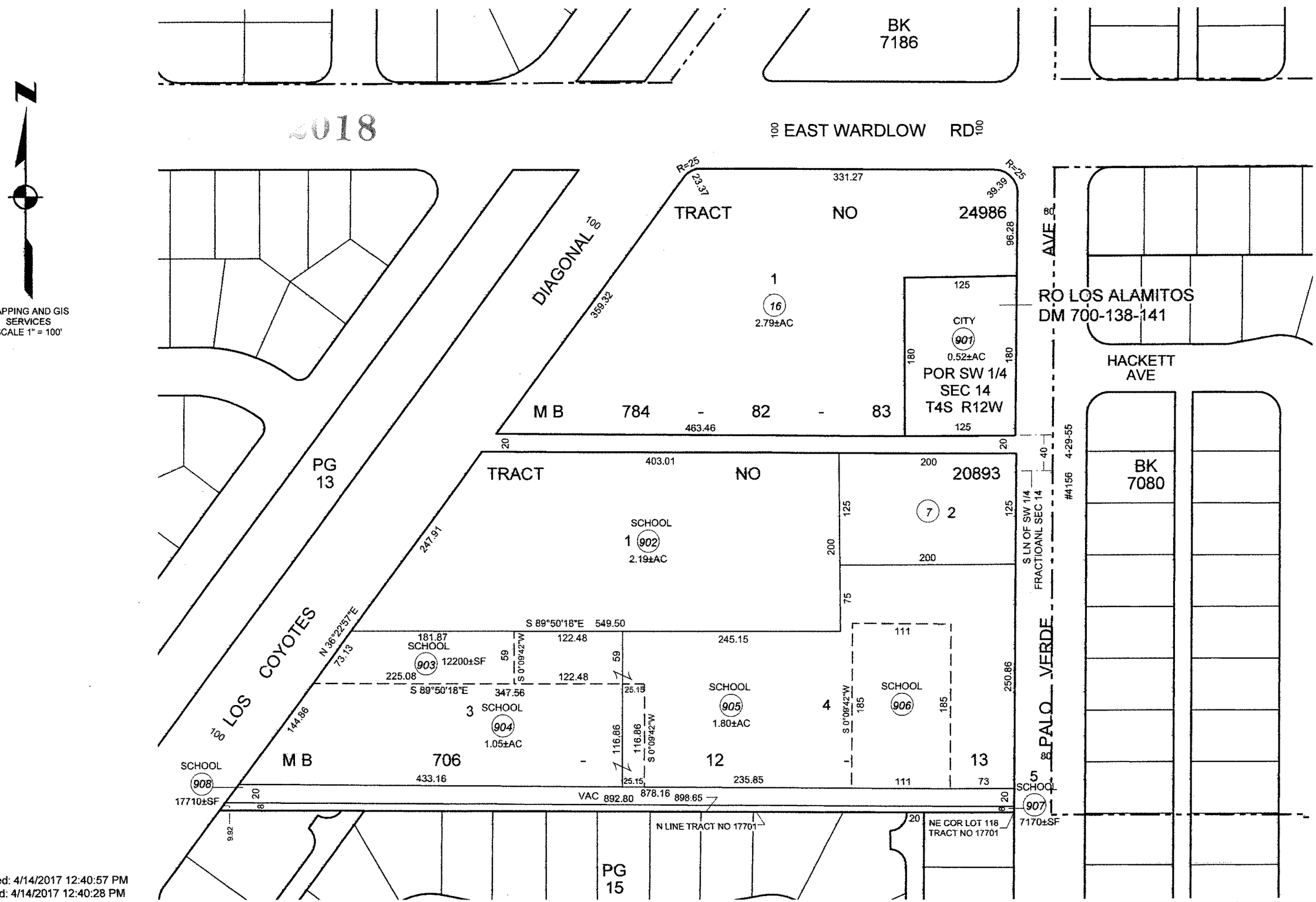

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McAlister
GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, California 90803 (714) 423-3796

February 20, 2018

Los Coyotes Redevelopment, LLC
c/o Sonnocco Real Estate Group
3626 Long Beach Boulevard
Long Beach, California 90807

Attention: Bill Larson

Subject: Phase II Environmental Site Assessment
3320 & 3340 Los Coyotes Diagonal and 3325 Palo Verde Avenue
Long Beach, California 90808

Dear Mr. Larson:

Attached is one electronic copy of the Phase II Environmental Site Assessment report for the property identified by the following Assessor's Parcel Numbers and known as the Los Coyotes Redevelopment (the Subject Property).

- 7191-014-902
- 7191-014-903
- 7191-014-904
- 7191-014-905
- 7191-014-906

McAlister GeoScience appreciates the opportunity to provide this report to Los Coyotes Redevelopment, LLC. Please contact me should you have any questions about the report.

Sincerely,

David McAlister

Phase II Site Assessment Report

Los Coyotes Redevelopment
3320 & 3340 Los Coyotes Diagonal and 3325 Palo Verde Avenue
Long Beach, California 90808

February 20, 2018

Prepared for:

Los Coyotes Redevelopment
c/o Sonnocco Real Estate Group
3626 Long Beach Boulevard
Long Beach, California 90807

Prepared by:

McAlister GeoScience
5030 East 2nd Street, Suite 200
Long Beach, California 90803

David McAlister

EXECUTIVE SUMMARY

McAlister GeoScience was retained by Los Coyotes Redevelopment, LLC (the Client) to conduct a Phase II Environmental Site Assessment (ESA) for the property comprised of approximately 6.3-acres at 3320 & 3340 Los Coyotes Diagonal and 3325 Palo Verde Avenue, Long Beach, California (the Subject Property; Figure 1). McAlister GeoScience understands that the Client is planning to develop an elder care facility on the Subject Property. Site features are identified on Figure 2. Photographs taken during the site assessment are included in Appendix A.

McAlister GeoScience (2017) conducted a Phase I ESA of the Subject Property and found that it used primarily as agricultural land prior to 1952. Aerial photographs indicate that unknown scattered structures were present on the Subject Property from approximately 1952 to the 1960s, then Los Altos Hospital was constructed on the west portion of the Subject Property in approximately the mid 1960s and was torn down in the mid 2000s. This area remained an unpaved dirt lot until approximately 2010, then was asphalt paved thereafter as it remains today. A second medical building was constructed on the southwest portion of the Subject Property in the mid 1960s and is still present. Additional medical offices were developed in the southeast portion of the Subject Property in approximately 1980 and are still present.

McAlister GeoScience identified a former dry cleaning facility by the name of Royalty Cleaners that was present on the adjoining property to the north from at least the late 1960s to the 1990s. This property is now part of the site of a Ralph's grocery store, which was originally developed on the adjoining property to the north in the late 1970s. A release has been reported and the site has been an open case overseen by the Los Angeles Regional Water Quality Control board (LARWQCB) since 1996. The site is a threat to soil and/or groundwater at the Subject Property due to previous investigations revealing soil and groundwater impacts with volatile organic compounds (VOCs). The Royalty Cleaners case at 3378 Los Coyotes Diagonal is considered a Recognized Environmental Condition (REC) at the Subject Property. Due to the groundwater gradient to the south-southeast, the contaminant plume from this case is located underneath the Subject Property.

The purpose of the site investigation was to define the presence and extent of VOC contamination in soil and soil vapor as a result of the Recognized Environmental Condition of the contaminated groundwater plume from the adjoining former Royalty Cleaners below the Subject Property. Seven borings were advanced at the Subject Property utilizing a hydraulic direct-push rig. Boring locations are identified on Figure 3. Six soil borings were advanced in the current parking lot. One soil boring (B3) was advanced in the southeastern corner of the vacant fenced-in lot in the northwest of the Subject Property that is addressed as 3340 Los Coyotes Diagonal. Temporary dual-nested soil vapor wells were installed at each borehole at 5 and 15 feet below ground surface (bgs). The soil and soil vapor samples were analyzed by the laboratory for VOCs.

No constituents were detected in any of the soil samples collected. Tetracholoroethylene (PCE), trichloroethylene (TCE), and benzene were measured above the screening levels in vapor samples collected at the Subject Property. Measured concentrations PCE increased from the location nearest to the historical source of the PCE plume, the former Royalty Cleaners, at boring location B1, downgradient to the southeast at boring location B7. The highest measured concentration of PCE was measured at boring location B2, south-southwest of B1 and the former Royalty Cleaners. TCE was measured above

its screening level in one location at five feet bgs, boring location B7, southeast and downgradient of the former Royalty Cleaners. Measured concentrations of benzene at five feet bgs exceed the screening level of 15 ppbv at boring location B1, closest to the former Royalty Cleaners, and downgradient and southeast at boring locations B5. PCE and benzene were detected above their respective screening levels in soil vapor samples collected from probes installed at 15 feet bgs at three boring locations. Concentrations of contaminants were found to be lowest or non-detect at the most western and southern soil boring locations. These results are consistent with the results obtained from Lindmark's groundwater monitoring reports, which indicate a contaminant plume in groundwater south and southeast of the former Royalty Cleaners location.

Generally speaking, dry cleaning facilities used PCE and TCE during the middle and late part of the 20th century, the time period when Royalty Cleaners was operating. It is clear that the presence of PCE and TCE below the Subject Property is associated with the former Royalty Cleaners and its ongoing environmental case. The source of the benzene may be the result of leaks from the former UST associated with the former hospital.

The presence of PCE, TCE, and benzene in soil vapor samples collected below the Subject Property parking lot indicate that a threat to human health would exist in a facility that were to be built upon it, without proper engineering controls. The Regional Water Quality Control Board of the State of California recommends that an indoor air survey be conducted at sites where the concentrations of contaminants, including benzene, PCE, and TCE, in shallow soil vapor samples have been measured above established environmental screening levels (ESLs).

The soil vapor samples collected from soil boring B7, closest to the building located at 3325 Palo Verde Avenue, displayed elevated concentrations of PCE, TCE, and benzene. Furthermore, since the gradient of this plume is to the south-southeast from the source at the former Royalty Cleaners, it is recommended that an indoor air survey be conducted in the interior of the first floor of this building to determine if concentrations of contaminants in the ambient air at this facility constitute a threat to human health.

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APPENDICES

Appendix A Photographs
Appendix B Health and Safety Plan
Appendix C Boring Logs
Appendix D Laboratory Analytical Reports and Chain of Custody Forms
Appendix E McAlister GeoScience Statement of Qualifications

1.0 Introduction

McAlister GeoScience was retained by Los Coyotes Redevelopment, LLC (the Client) to conduct a Phase II Environmental Site Assessment (ESA) for the property comprised of approximately 6.3-acres at 3320 & 3340 Los Coyotes Diagonal and 3325 Palo Verde Avenue, Long Beach, California (the Subject Property; Figure 1). McAlister GeoScience understands that the Client is planning to develop an elder care facility on the Subject Property. Site features are identified on Figure 2. Photographs taken during the site assessment are included in Appendix A.

This project was conducted pursuant to authorization of the scope of work, estimated costs and schedule, and terms and conditions outlined in the proposal dated December 5, 2017, and in general accordance with the scope of work and limitations of the American Society of Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process, Designation E1903-11, the State of California Environmental Protection Agency (EPA) Department of Toxic Substances Control (DTSC) Advisory Active Soil Gas Investigations dated July 2015, and the United States Environmental Protection Agency (USEPA) OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air dated June, 2015.

All field work was performed under the direct supervision of California Professional Geologist Jay Schneider. Mr. Schneider also reviewed and approved this report.

1.1 Purpose

The purpose of the Site Investigation is to document the vertical and horizontal extent of soil and soil vapor impacts at the Subject Property from Royalty Cleaners, a former dry cleaning facility that was located at 3378 Los Coyotes Diagonal on the adjoining property north of the Subject Property. Royalty Cleaners has since been demolished and the property is currently part of the property of a Ralph's grocery store.

1.2 Limitations and Exceptions of Assessment

The property assessment described in this report should not be construed as a complete characterization of environmental regulatory compliance or of above- and below-ground environmental conditions. McAlister GeoScience utilized standard data collection techniques while completing the work; however, a comprehensive characterization of all environmental conditions is neither appropriate nor feasible at the screening level of this assessment. Therefore, reliance by the Client on the information presented in this report shall be consistent with the limitations expressed herein, and subject to the project scope of work and terms of the contract between McAlister GeoScience and the Client.

The services provided were in accordance with the standard of care and skill ordinarily exercised by members of the profession currently participating in the same locality under similar conditions. No other representation, expressed or implied, and no warranty or guarantee is included or intended in this report.

2.0 Background

2.1 Site Description and Features

The Subject Property consists of an approximately 6.3-acres at 3320 & 3340 Los Coyotes Diagonal and 3325 Palo Verde Avenue, Long Beach, California. The Subject Property lies between Los Coyotes Diagonal and Palo Verde Avenue south of Wardlow Road in Long Beach, California. Located on the Subject Property are of a pair of two-story buildings that are currently used for various medical and dental activities. According to the Los Angeles County Assessor's Office, the building located in the southwestern portion of the Subject Property was constructed in 1964-1965 and is approximately 53,452 square feet in area. The second building, located in the southeastern corner of the Subject Property, was constructed in 1979 and is approximately 20,760 square feet in area. Additionally, a Verizon Wireless cellular equipment area can be found in the northeastern portion of the Subject Property. A large vacant lot that is paved and fenced off is located in the northwestern portion of the Subject Property. This lot was the site of a former mental hospital that was demolished in the mid-2000s. The remainder of the Subject Property is used as driving/parking areas.

2.2 Previous Investigations

McAlister GeoScience performed a Phase I Environmental Site Assessment (ESA) dated December 21, 2017 and identified a former dry cleaning facility by the name of Royalty Cleaners that was present on the adjoining property to the north from at least the late 1960s to the 1990s. This property is now part of the site of a Ralph's grocery store, which was originally developed on the adjoining property to the north in the late 1970s. A release has been reported and the site has been an open case overseen by the Los Angeles Regional Water Quality Control board (LARWQCB) since 1996. The site is a threat to soil and/or groundwater at the Subject Property due to previous investigations revealing soil and groundwater impacts with volatile organic compounds (VOCs). The Royalty Cleaners case at 3378 Los Coyotes Diagonal is considered a Recognized Environmental Condition (REC) at the Subject Property. Due to the groundwater gradient to the south-southeast, the contaminant plume from this case is located underneath the Subject Property. Nine groundwater monitoring wells are associated with this case. All nine of these wells are not located on the release site, five of which are located on the eastern half of the Subject Property. The Royalty Cleaners site was issued a No Further Action (NFA) letter for soil in 2005.

Approximately thirteen groundwater monitoring reports were written for the Subject Property from 2004 to 2018, and groundwater sampling has been conducted since 1996. The most recent groundwater monitoring report, the 2017 annual groundwater monitoring report (Lindmark, 2018), stated that generally, levels of tetrachloroethene (PCE) decreased since the 2016 groundwater monitoring report (Lindmark, 2017) with a range of non-detect (ND) to 38.0 micrograms per liter (µg/L). Concentrations of PCE were generally highest in wells MW-3, MW-4, and MW-5 closest to the former dry cleaners, with lower concentrations in wells further away and crossgradient to the south and east-southeast. Lindmark remarked that the core of the PCE plume in groundwater continues to elongate towards the direction of MW5 and MW9 (to the south-southeast), and PCE concentrations are declining. However, the aerial extent of the PCE plume in groundwater, with concentrations above the California Maximum Contaminant Level (MCL) of 5 µg/L, has remained similar since the last sampling event. The most notable change in the plume from 2016 to 2017 has been the notable decrease in PCE at MW4 (from 36.8 µg/L in 2016, to 4.78 µg/L in 2017) in the alley immediately south of the former dry cleaners.

Lindmark stated that the plume continues to demonstrate steady-state behavior. Trichloroethene (TCE) concentrations generally stayed the same since the last groundwater monitoring report in 2017, and had a range of ND to 26.4 µg/L. Concentrations of TCE were generally highest in wells MW-3, MW-4, and MW-5 closest to the former dry cleaners, with lower concentrations in wells cross-gradient to the south and east-southeast. The greatest change from 2016 to 2017 was the notable decrease in TCE in MW-4 from 39.2 µg/L to 9.95 µg/L . *Cis*-1,2-dichloroethene (*cis*-1,2-DCE), which is a daughter product of TCE, increased in wells MW-3, MW-4, and MW-6, decreased slightly in MW-5, and was non-detect in wells MW-7 through MW-11. P-isopropyltoluene was detected in wells MW-6 and MW-7 in 2016 but was non-detect for these contaminants in 2017. No other VOCs were detected.

Lindmark concluded that the presence of TCE and *cis*-1,2-DCE concentrations at the Subject Property indicated the degradation of the parent compound, PCE. PCE concentrations in down gradient well MW8 continues to be lower than up gradient wells (MW5) or wells close to the source area (MW3). Wells near the source area appear to have stable or decreasing PCE concentrations despite large fluctuations in groundwater elevations. These data support the conclusion that the PCE plume is maintaining steady-state behavior or is decreasing in mass. Based on the historic PCE data from wells MW6, MW8, and MW9, well MW9 is a representative down-gradient well. The authors stated that a long-term trend of attenuation in the downgradient direction and stable or lower PCE concentrations in MW-9 will continue. In view of the long-term trend of PCE attenuation and maximum PCE concentrations below 50 µg/L for the last three events, Lindmark (2018) requested a conference call with the LARWQCB for a discussion of requirements for site closure.

McAlister GeoScience (2017) found that the Subject Property is listed in the Leaking Underground Storage Tank (LUST) database in association with the historical hospital at 3340 Los Coyotes Diagonal. Groundwater was reported to be contaminated by diesel. However, the facility obtained "case-closed" status as of October of 1997. The Subject Property is listed in the Underground Storage Tank (UST) database in association with historical hospital location at 3340 Los Coyotes Diagonal. The tank was reported tested in January of 1996 and no releases were reported, although it is unclear if this tank is the same tank reported leaking at the same location and given case-closed status in 1997. However, the UST was known to be located on the Subject Property and a former closure letter for this UST was not obtained.

3.0 Geology and Hydrogeology

3.1 Geology

The Subject Property is located in Los Angeles's Central Basin just north of the Newport-Inglewood Fault. The Subject Property is located within the Peninsular Ranges Geomorphic Province at an elevation of 88 feet above mean seal level on the central portion of the Downey Plain. It is bound to the southwest by Rosecrans and Dominguez Hills, which are surficial geomorphic features of the Newport-Inglewood Fault; to the southeast by the Orange County Coastal Plain; to the north by Elysian, Repetto, and Merced Hills; and to the northeast by Puente and Coyote Hills.

3.2 Hydrogeology

For the 2017 Former Royalty Cleaners annual groundwater monitoring event, depth to groundwater for the six groundwater monitoring wells located on the Subject Property was 21.92 to 24.00 feet bgs. The regional groundwater flow direction has been to the south-southeast (Lindmark 2016, 2017) but was to the south-southwest for the 2017 monitoring event (Lindmark, 2018). Groundwater was not encountered during the present investigation.

Local geology is characterized by aquifers confined by aquicludes of which only one has been named, the Bellflower Aquiclude. The Bellflower Aquiclude restricts vertical percolation into lower aquifers of the Central Basin Pressure Area. Water levels and pressures within aquifers tend to vary based on which aquifers are used for production. The Bellflower Aquiclude is found throughout the Central Basin Pressure Area and is composed mainly of clay and silt; however, there are numerous areas where it consists mainly of clayey sands and gravels where it tends to diminish the sealing quality of the aquiclude. The Bellflower Aquiclude extends from a few feet to 160 feet in thickness (DWR, 1961).

4.0 Sampling Activities

4.1 Scope of Assessment

The purpose of this scope of work was to assist with the understanding and remediation of the environmental conditions on behalf of the Client. This work was conducted for the exclusive use of the Client. If the Client intends to provide the report to a financier or other party, McAlister GeoScience must be notified upon the selection of the lender or other party. This notification should provide sufficient time to discuss the terms and conditions of a reliance letter from McAlister GeoScience to the lending institution or other party. Issuance of a reliance letter may result in added project costs and is not included in the scope of work provided below, unless otherwise stated.

This scope of work consisted of the following components:

- Pre-field preparation;
- Field mobilization;
- Preparation of an investigation report

4.2 Pre-Field Preparation

Prior to conducting field activities, a project-specific health and safety plan (HASP) was developed outlining the various hazards associated with the proposed scope of work. The HASP was developed to cover risks of exposure to potential contaminants as well as biological and physical hazards associated with the performance of the work and the equipment used to complete the work. The HASP is located in Appendix B.

As required by California law, Underground Service Alert (USA) was contacted more than 48 hours before the commencement of drilling activities. McAlister GeoScience made certain that all utility members listed on the DigAlert ticket USA marked their lines or confirmed that they had no conflict before any drilling activity started. In addition, McAlister GeoScience contracted a private utility locating company to conduct a geophysical survey on the Subject Property to determine that there were no subsurface utilities in the vicinity of the proposed borehole locations.

4.3 Field Explorations and Methods

The purpose of the field exploration was to define the presence and extent of VOC contamination in soil and soil vapor as a result of the Recognized Environmental Condition of the contaminated groundwater plume from the adjoining former Royalty Cleaners below the Subject Property. Seven borings were advanced at the Subject Property utilizing a hydraulic direct-push rig. Boring locations are identified on Figure 3. Six soil borings were advanced in the current parking lot. One soil boring (B3) was advanced in the southeastern corner of the vacant fenced-in lot in the northwest of the Subject Property that is addressed as 3340 Los Coyotes Diagonal.

All borings were advanced to a depth of 15 feet bgs. The soil at each soil boring was logged using the United Soil Classification System (USCS). Soil samples were collected for laboratory analysis at 5, 10, and 15 feet bgs. Soil samples were screened utilizing a photoionization detector (PID) for relative VOC content. The direct-push drill rig collected each soil sample in a new acetate sleeve. Each of these 21 samples were then sealed with Teflon tape and airtight plastic caps at each end, packed in ice, and transported to a State-Certified laboratory for analysis. Soil samples were analyzed for Volatile Organic Compounds (VOCs) by EPA Method 8260B. Boring logs are located in Appendix C.

Temporary dual-nested soil vapor wells were installed at each borehole at 5 and 15 feet bgs. The wells consisted of one-quarter-inch diameter Nylaflow tubing with air diffuser soil vapor probes. Soil vapor well implant construction was performed as per DTSC (2015). Vapor well construction details are shown on the soil boring logs included in Appendix C and Figure 4. Once the sample point was installed and the bentonite seal completed, the sample point was allowed to equilibrate for at least two hours as per DTSC (2015) guidance. Soil vapor samples were collected in certified clean Summa canisters. Three volumes of vapor were pumped from each vapor well as per DTSC (2015) guidance. Isopropyl alcohol was used to test the sampling train for leaks. The canisters were transported to a State-Certified laboratory for analysis. The soil vapor samples were analyzed by the laboratory for VOCs using EPA Method TO-15.

Following collection of the 14 soil vapor samples, the tubing was removed from the Subject Property. The boreholes were backfilled with a mixture of 95% neat cement and 5% bentonite grout. The surface was finished flush with concrete.

4.4 Field Observations

During borehole advancement, the type of soil encountered was typically silt, clayey silt, and silt with clay from the surface to 7-8 feet bgs, and from 12-13 feet bgs to total depth of 15 feet bgs. Soil encountered between approximately 7-8 and 12-13 feet bgs was typically finer, clay with silt or silt with clay. Soils were gray to brown in color. Soil samples screened with the PID exhibited readings ranging from 2.0 parts per million (ppm) to >1,999 ppm.

5.0 Results, Conclusions, and Recommandations

5.1 Results

No constituents were detected in any of the soil samples collected. Detections of constituents in the soil vapor samples are displayed in Table 1. All detected chemicals were compared to the State of California Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) for residential properties, as well as for commercial/industrial properties.

Tetracholoroethylene (PCE), trichloroethylene (TCE), and benzene were measured above the RWQCB ESLs in vapor samples collected at the Subject Property. Concentrations of PCE, TCE, and benzene are plotted on to the Site Map on figures 5 and 6. At five feet bgs, PCE was measured above the ESL of 35 ppbv at boring locations B1, B2, B5, B6, and B7. Measured concentrations PCE increased from the location nearest to the historical source of the PCE plume, the former Royalty Cleaners, at boring location B1 (37 ppbv), downgradient to the southeast to 67 ppmv at boring location B7. The highest measured concentration of PCE was measured at 94 ppbv at boring location B2, south-southwest of B1 and the former Royalty Cleaners. TCE was measured above its ESL of 45 ppbv in one location at five feet bgs, boring location B7, southeast and downgradient of the former Royalty Cleaners. Measured concentrations of benzene at five feet bgs exceed the ESL of 15 ppbv at boring location B1, closest to the former Royalty Cleaners, and downgradient and southeast at boring locations B5. Concentrations of PCE and benzene were detected above their respective ESLs in soil vapor samples collected from probes installed at 15 feet bgs at boring locations B1, B5, and B7. Concentrations of contaminants were found to be lowest or non-detect at the most western (B3) and southern (B4) soil boring locations. These results are consistent with the results obtained from Lindmark's groundwater monitoring reports, which indicate a contaminant plume in groundwater south and southeast of the former Royalty Cleaners location. In addition, the commercial/industrial ESLs were exceeded by benzene (150 ppbv; ESL = 131 ppbv) in the soil vapor sample collected at 15 feet bgs at boring location B7, and by PCE (400 ppbv; ESL = 310 ppbv) in the soil vapor sample collected at 15 feet bgs at boring location B5.

The leak tracer, isopropyl alcohol, was detected in 10 of the 14 soil vapor samples collected. Typically, if the concentration of the leak check exceeds 0.005 % (50,000 parts per billion), the sample integrity is compromised and the results should not be used. Eight of the ten detections of isopropyl alcohol were below 1,000 ppbv (0.0001 %); one detection was 2,000 ppv (0.0002 %), and the highest detection was measured at 23,000 ppbv (0.0023 %), well below 0.005 %. Therefore, sample integrity is considered excellent and indicative of subsurface conditions.

5.2 Conclusions

PCE and TCE were used by dry cleaning facilities during the middle and late part of the 20th century, the time period when Royalty Cleaners was operating. It is clear that the presence of PCE and TCE below the Subject Property is associated with the former Royalty Cleaners and its ongoing environmental case. The presence of the chemicals cyclohexane and tetrahydrofuran in soil vapor samples collected below the Subject Property are also likely to have been the result of dry cleaning activities. Although benzene was used as a dry cleaning chemical from the late 19th century through the early 20th century, benzene was no longer used in this manner by the time Royalty Cleaners is known to have been established in the 1960s. The source of the benzene, along with low concentrations (below their respective ESLs) of the

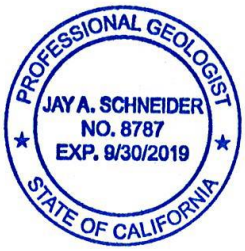
other petroleum hydrocarbons (toluene, xylenes, ethylbenzene) and the presence of the VOCs heptane, 1,2,4-trimethylbenzene, and 4-ethyltoluene, may be the result of leaks from the former UST associated with the former hospital.

5.3 Recommendations

The concentrations of PCE, TCE, and benzene in several soil vapor samples collected below the Subject Property parking lot exceeds the ESLs for residential properties established by the RWQCB. A threat to human health would exist in a facility that was to be built upon it, without proper engineering controls. The soil vapor samples collected from soil boring B7, closest to the building located at 3325 Palo Verde Avenue, displayed concentrations of PCE, TCE, and benzene that exceed RWQCB ESLs for residential properties. Therefore, it is recommended that an indoor air survey be conducted in the interior of the first floor of this building to determine if concentrations of contaminants in the ambient air at this facility constitute a threat to human health.

6.0 Certification

This Phase II Environmental Assessment was conducted under the supervision of California Professional Geologist Jay Schneider. Mr. Schneider supervised the field work, and reviewed the report and boring logs. In addition, McAlister GeoScience's Statement of Qualifications is located in Appendix D.



Jay Schneider

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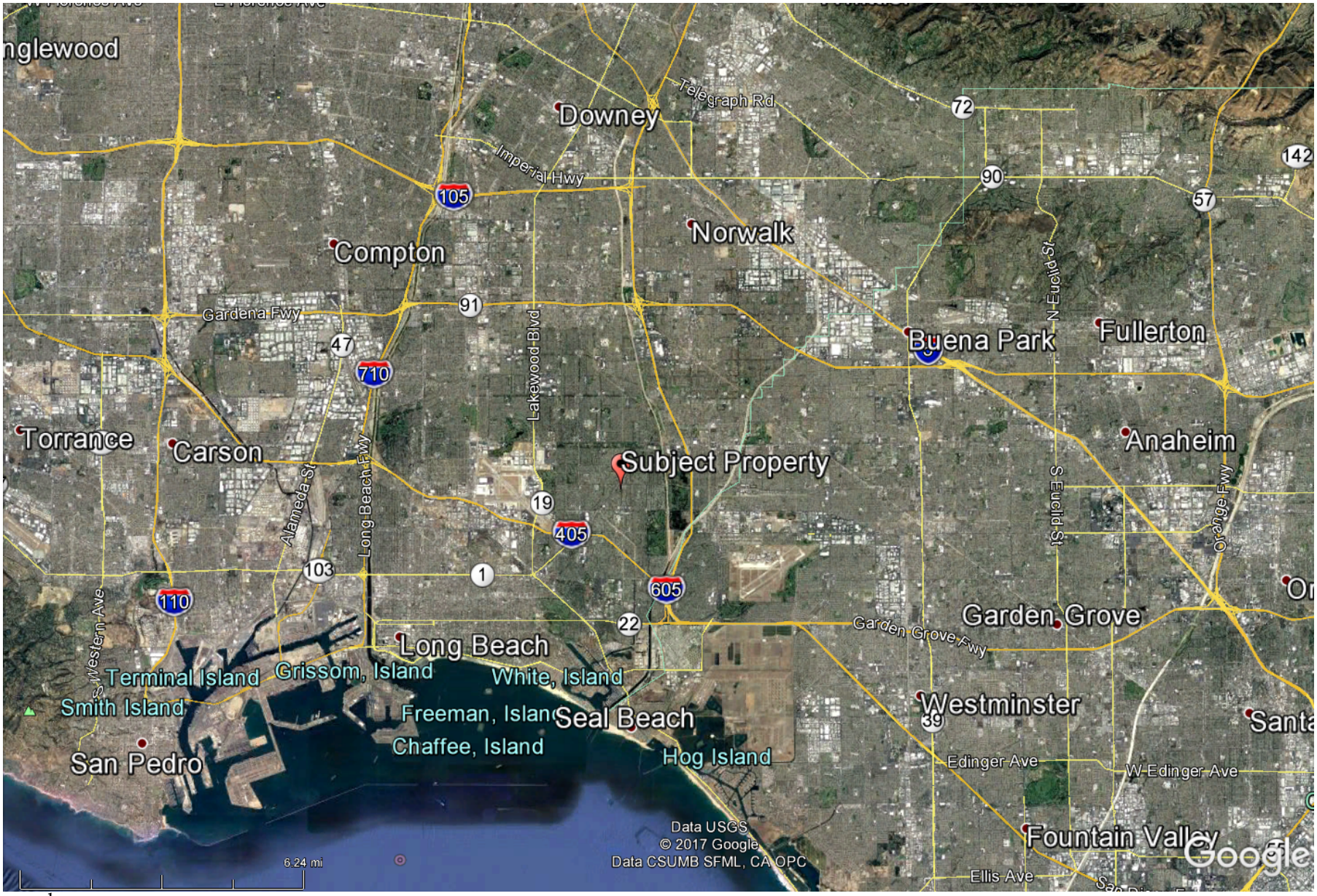
United States Environmental Protection Agency (USEPA), 2015. *OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air*. June.

TABLE

Constituent	Acetone	*Isopropyl alcohol*	Chloroform	*Cyclohexane*	*Heptane*	*Hexane*	PCE	TCE	Benzene	Toluene	m,p-Xylene,	o-Xylene	*Tetrahydrofuran*	*2-Butanone*	Ethylbenzene	*Carbon disulfide*	*1,2,4-trimethylbenzene*	*Trichlorofluro-methane*	*4-ethyltoluene*
Sample																			
B1, 5′	77	260	ND	ND	23	5.5	37	2.5	12	64	15	7.7	4.1	18	7.3	ND	ND	2.5	ND
B1, 15′	ND	ND	ND	ND	76	120	**82**	ND	**65**	170	ND	ND	ND	ND	ND	ND	ND	ND	ND
B2, 5′	ND	23,000	ND	ND	ND	ND	**94**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
B2, 15′	ND	2,000	ND	ND	ND	81	ND	ND	ND	95	ND	ND	ND	ND	ND	ND	ND	ND	ND
B3, 5′	34	25	ND	ND	3.5	ND	3.0	ND	1.8	8.9	ND	1.1	1.8	7.3	1.1	ND	ND	ND	ND
B3, 15′	ND	720	ND	ND	ND	ND	ND	ND	ND	57	ND	ND	ND	ND	ND	ND	ND	ND	ND
B4, 5′	35	610	ND	ND	38	14	11	5.0	8.1	45	6.1	3.4	ND	6.4	ND	ND	ND	ND	ND
B4, 15′	47	38	1.4	ND	26	9.5	3.3	2.2	6.1	41	6.1	3.4	2.5	14	4.3	ND	ND	ND	ND
B5, 5′	83	230	ND	ND	110	47	44	1.8	**54**	120	20	10	8.3	18	11	1.5	ND	12	2.5
B5, 15′	ND	ND	ND	ND	ND	110	**400**	ND	**50**	120	ND	ND	ND	ND	ND	ND	ND	ND	ND
B6, 5′	59	360	ND	ND	31	4.5	**55**	2.5	8.7	45	7.4	4.1	3.0	9.9	4.1	ND	ND	ND	ND
B6, 15′	60	15	ND	ND	150	36	30	1.7	23	120	12	7.0	4.4	21	11	5.6	1.4	ND	ND
B7, 5′	ND	ND	ND	ND	ND	ND	**67**	**190**	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND
B7, 15′	ND	ND	ND	64	220	270	**59**	ND	**150**	510	95	ND	ND	ND	ND	ND	ND	ND	ND

Table 1. Concentrations in parts per billion by volume (ppbv) of detected constituents in soil vapor samples. Those concentrations that exceed the ESL are indicated in red bold type. ND = Not Detected above the Laboratory Reporting Limit. Those constituents indicated in *italics* do not have ESLs established by the State of California RWQCB.

FIGURES



Legend:

Subject Property

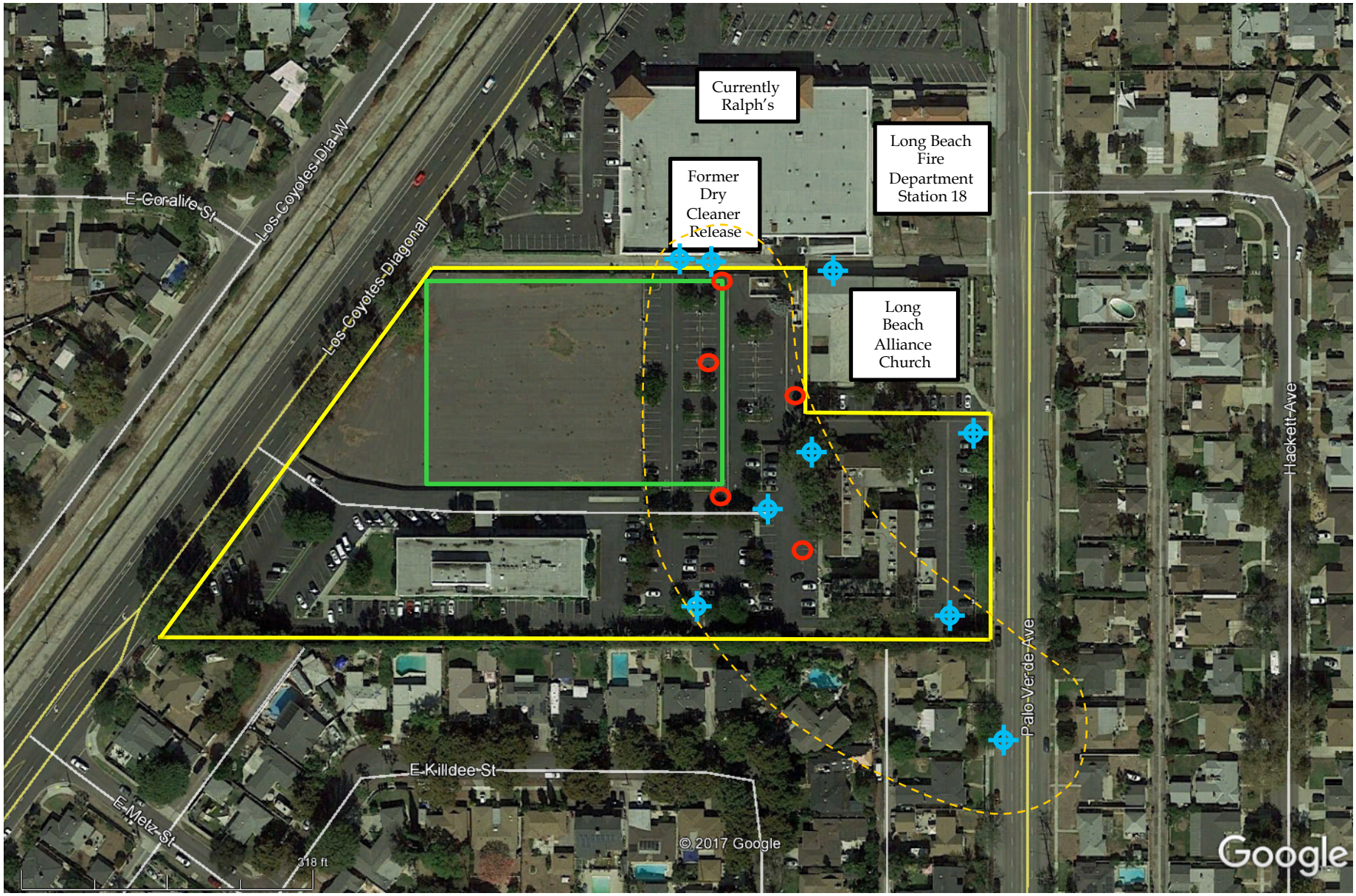
N

SOURCE: *Google Earth, 2017*

TITLE:	**Site Location**
LOCATION:	**Los Coyotes Redevelopment** **Long Beach, California**

McAlister GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, CA 90803
714-423-3796 **DirtyProperty.com**

CHECKED:	D.McAlister	**FIGURE:**
DRAFTED:	J.Kajiyama	**1**
FILE:		
DATE:	12-10-2017	



Legend:

- Property Boundary
- Monitoring Wells
- Previous Soil Borings
- Approximate Location of Former Hospital
- Approximate Boundary of PCE plume

N

SOURCE: *Google Earth, 2018*

TITLE: **Site Plan**

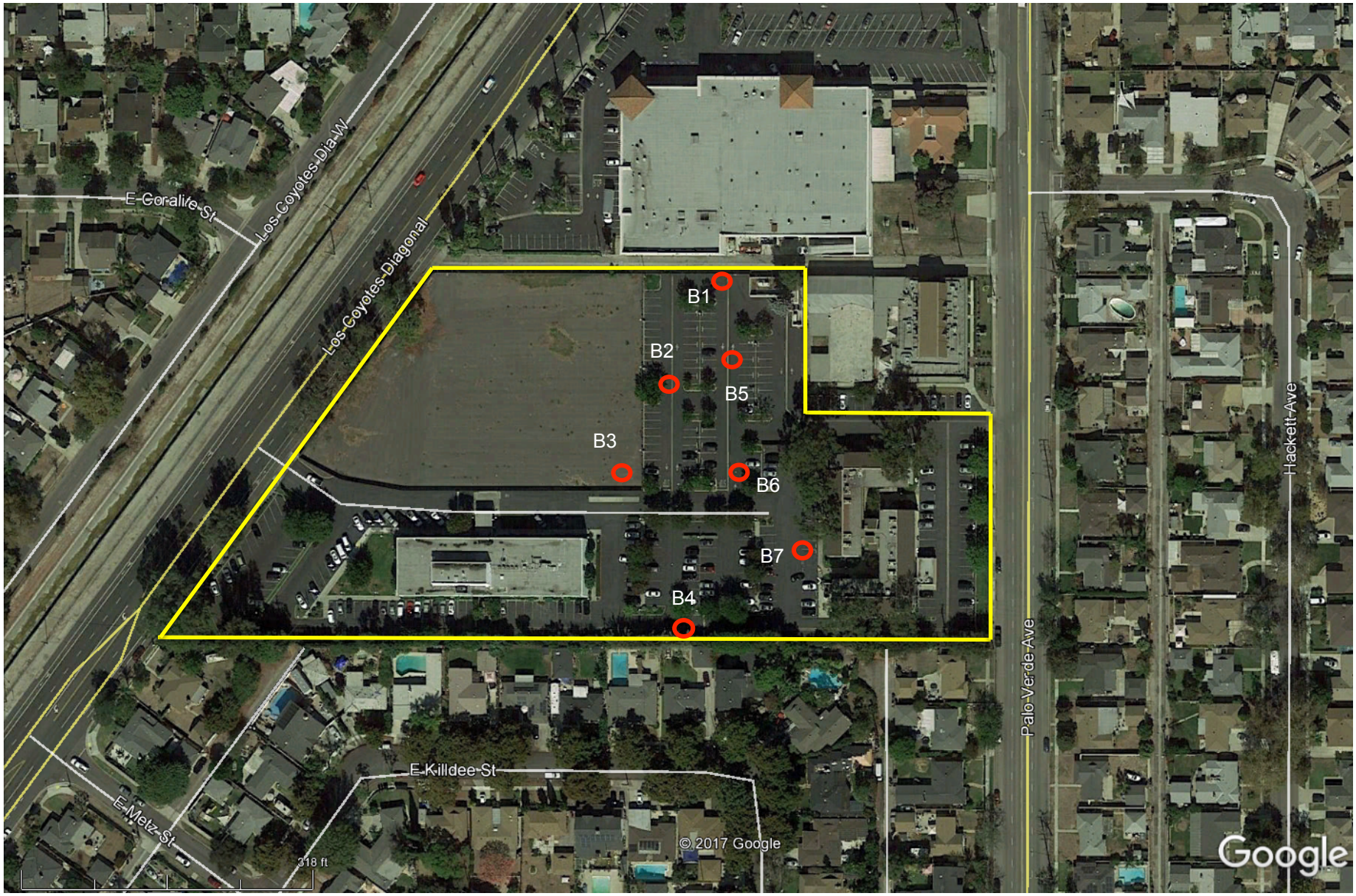
LOCATION: **Los Coyotes Redevelopment**

Long Beach, California

McAlister GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, CA 90803
714-423-3796 DirtyProperty.com

CHECKED:	D.McAlister
DRAFTED:	J.Schneider
FILE:	
DATE:	02-06-2018

FIGURE: **2**



Legend:

Property Boundary

Soil Borings/Vapor Wells

N

SOURCE: *Google Earth, 2018*

TITLE:	**Site Plan with Soil Boring/Vapor Well Locations**
LOCATION:	**Los Coyotes Redevelopment** **Long Beach, California**

McAlister GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, CA 90803
714-423-3796 DirtyProperty.com

CHECKED:	D.McAlister	**FIGURE:**
DRAFTED:	J. Schneider	**3**
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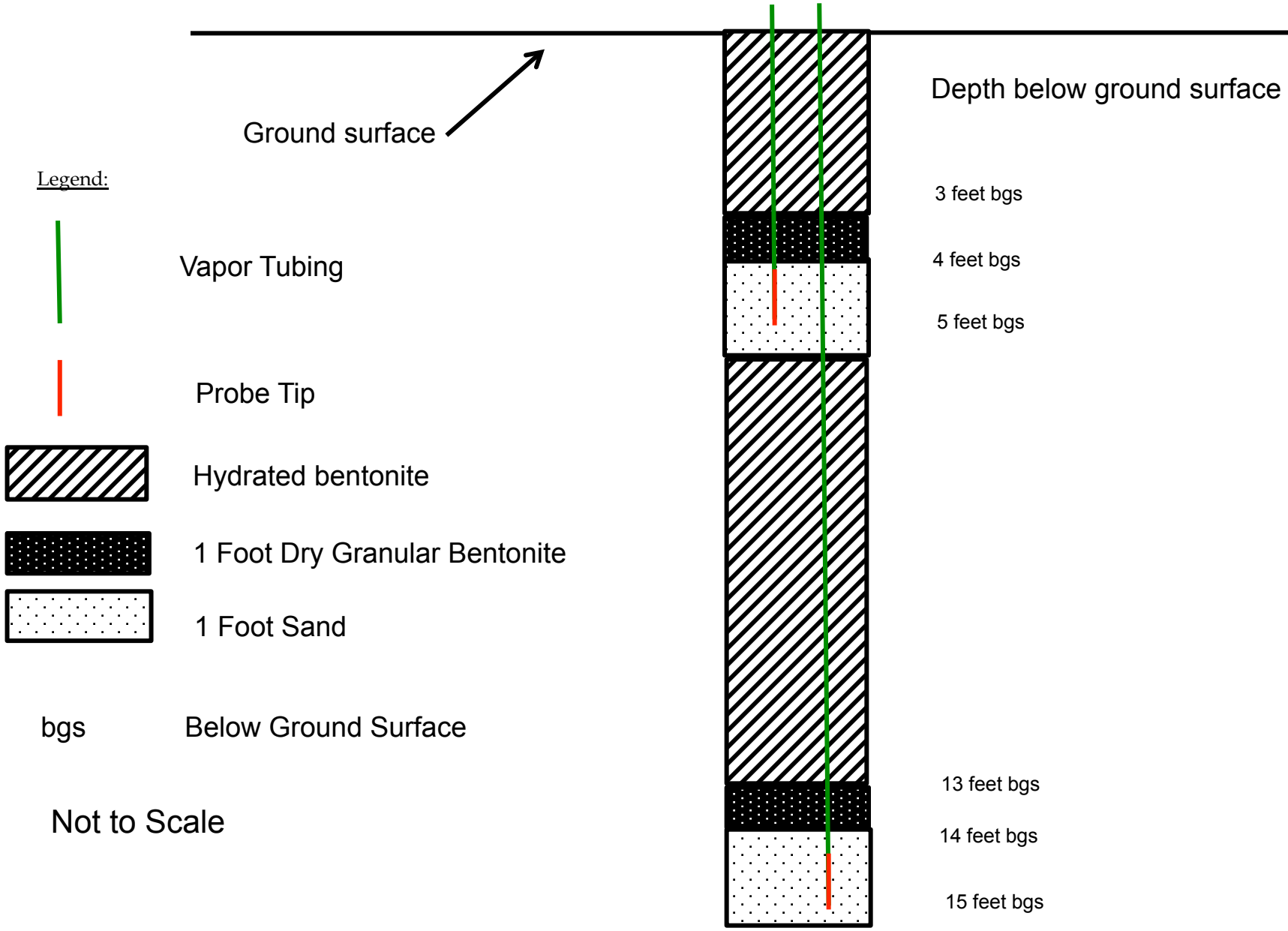
DATE:	02-06-2018	



TITLE:	**Dual-nested Vapor Well Construction Details**
LOCATION:	**Los Coyotes Redevelopment** **Long Beach, California**

McAlister GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, CA 90803
714-423-3796 **DirtyProperty.com**

CHECKED:	D.McAlister	**FIGURE:**
DRAFTED:	J. Schneider	**4**
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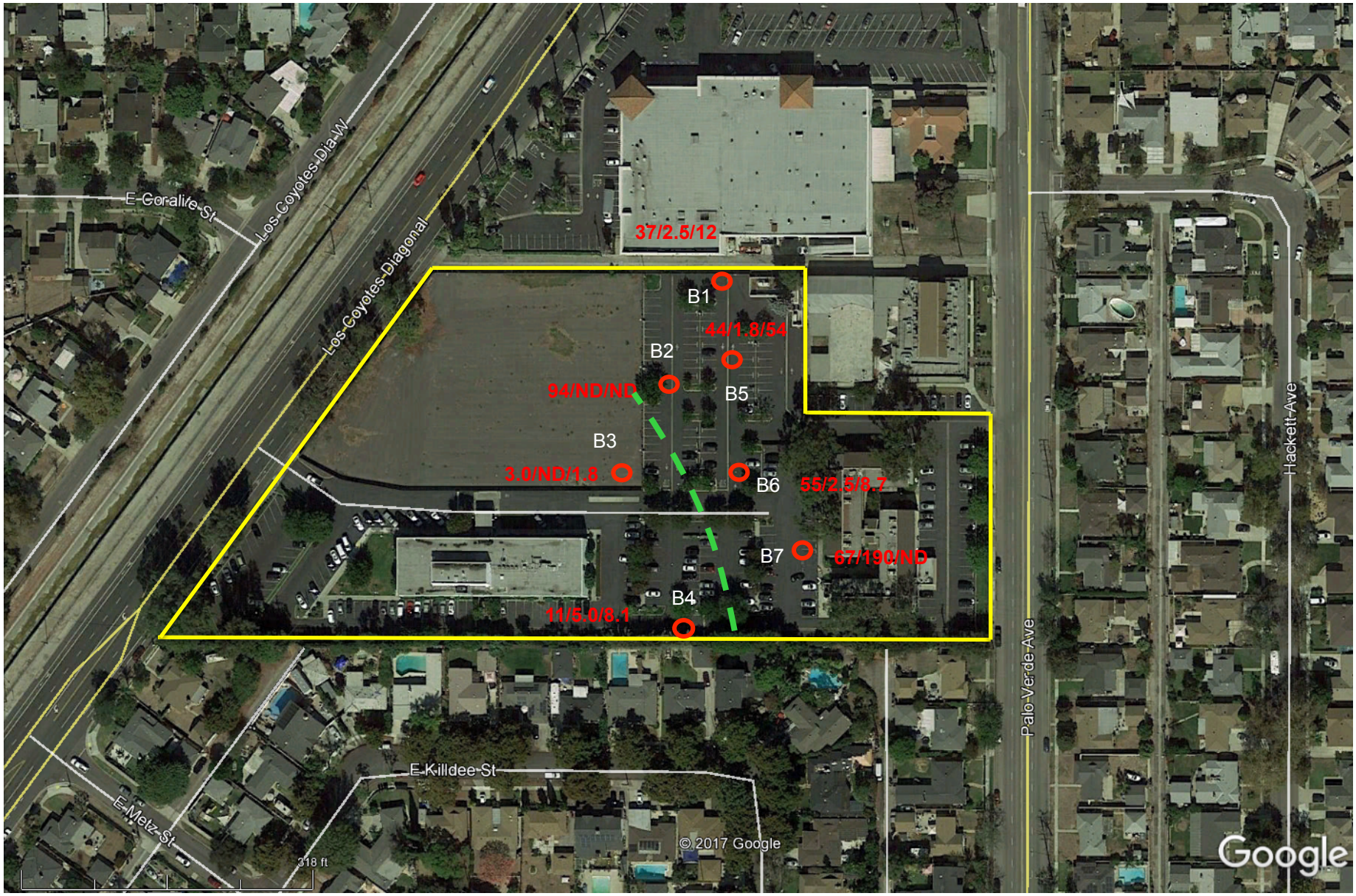
DATE:	02-18-2018	



Legend:

- Property Boundary
- Soil Borings/Vapor Wells
- Approximate PCE ESL (35 ppbv) boundary

N

SOURCE: *Google Earth, 2018*

TITLE: **Concentrations (ppbv) of PCE/TCE/Benzene in 5′ bgs Soil Vapor Samples**

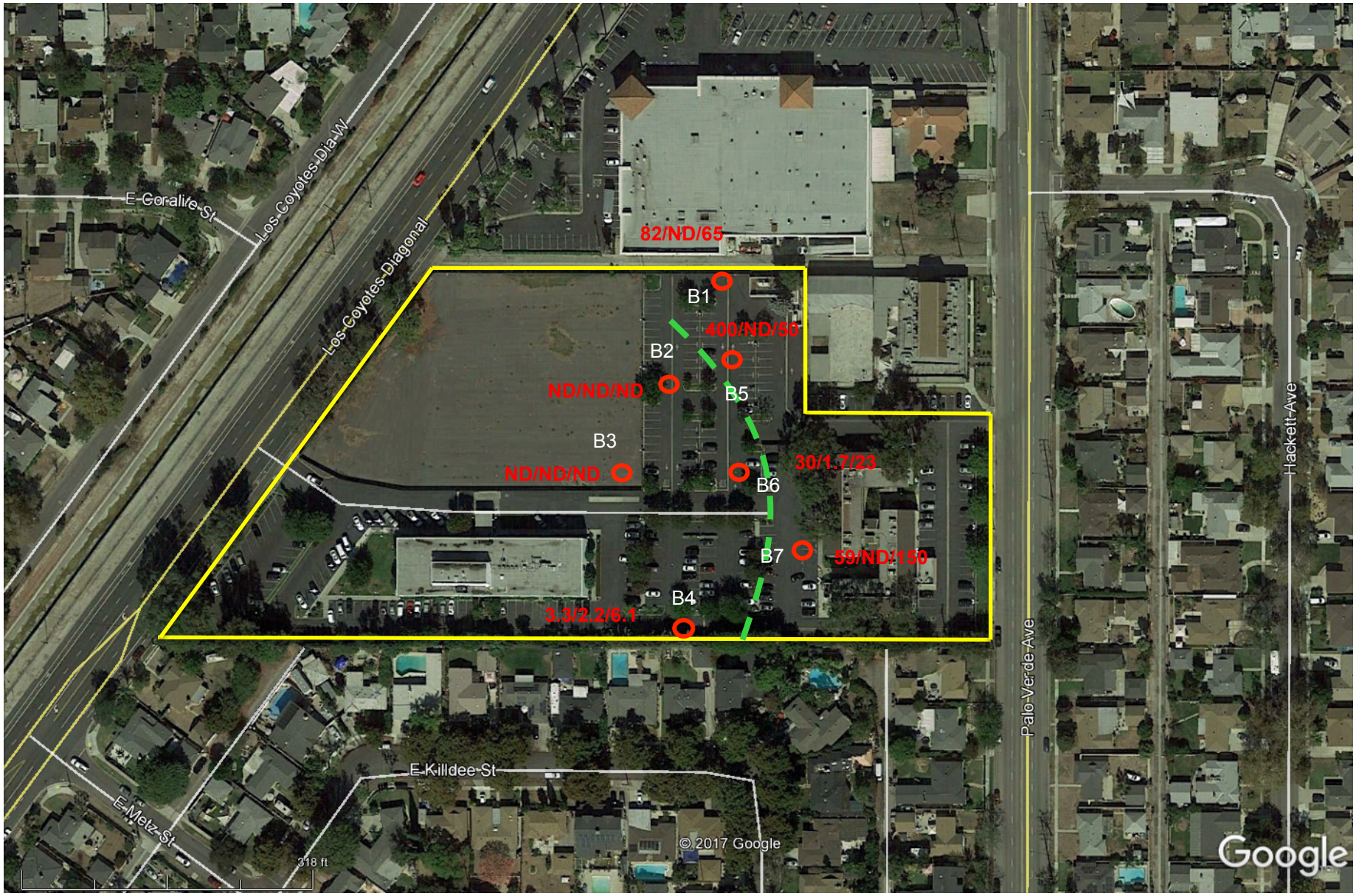
LOCATION: **Los Coyotes Redevelopment**

Long Beach, California

McAlister GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, CA 90803
714-423-3796 DirtyProperty.com

CHECKED:	D.McAlister
DRAFTED:	J. Schneider
FILE:	
DATE:	02-16-2018

FIGURE: 5



Legend:

- Property Boundary
- Soil Borings/Vapor Wells
- Approximate PCE ESL (35 ppbv) boundary

N

SOURCE: *Google Earth, 2018*

TITLE: **Concentrations (ppbv) of PCE/TCE/Benzene in 15′ bgs Soil Vapor Samples**

LOCATION: **Los Coyotes Redevelopment**

Long Beach, California

McAlister GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, CA 90803
714-423-3796 DirtyProperty.com

CHECKED:	D.McAlister
DRAFTED:	J. Schneider
FILE:	
DATE:	02-16-2018

FIGURE: **6**

APPENDIX A

PHOTOGRAPHS

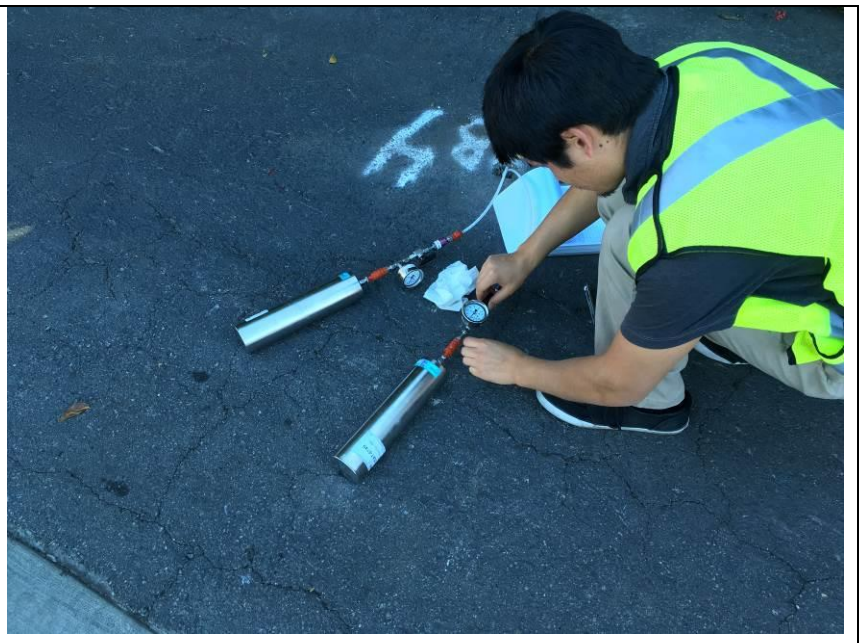
Appendix A – Photographic Log

Photo: 1 **Description:** Drilling of B2 location. **Orientation:** Facing northeast	

Photo: 2 **Description:** Drilling of B3. **Orientation:** Facing east	

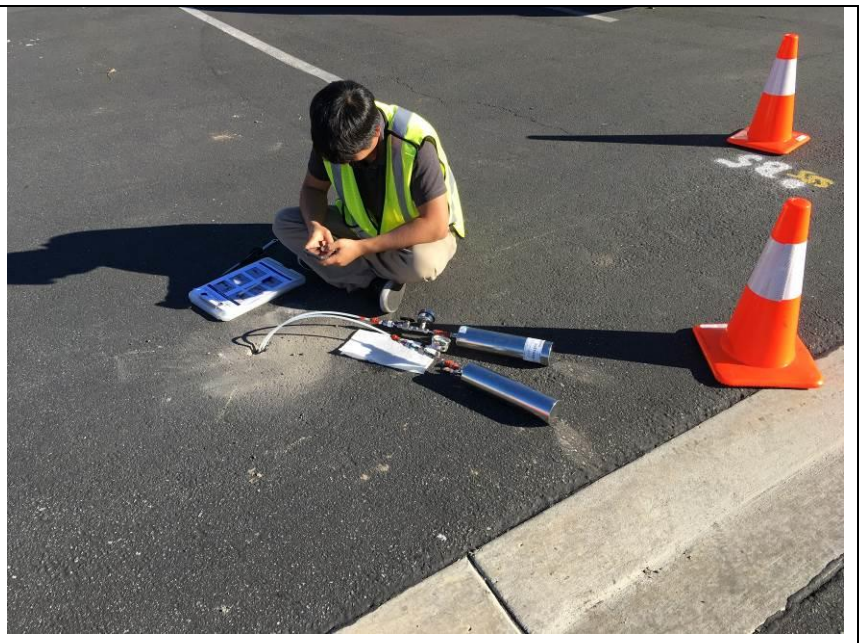
Appendix A – Photographic Log

Photo: 3 **Description:** Soil vapor wells installed at B4 location. **Orientation:** Facing east	

Photo: 4 **Description:** Soil vapor sample collection at B4. **Orientation:** Facing northwest	

Appendix A – Photographic Log

Photo: 5 **Description:** Examining vapor pressure gauge at B4. **Orientation:** Facing down	

Photo: 6 **Description:** Soil vapor sample collection at B5. **Orientation:** Facing southeast	

APPENDIX B

HEALTH AND SAFETY PLAN

Soil and Soil Vapor Sampling
HEALTH AND SAFETY PLAN

3320 & 3340 Los Coyotes Diagonal and 3325 Palo Verde Avenue
Long Beach, California 90808
Phase II Environmental Site Assessment

January 19, 2018

Prepared by:

McAlister GeoScience
5030 East 2nd Street, Suite 200
Long Beach, California

Jay Schneider
Site Supervisor
McAlister GeoScience

Dave McAlister
Project Manager
McAlister GeoScience

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1.0 *INTRODUCTION*

McAlister GeoScience has been contracted to perform a Phase II Environmental Site Assessment (ESA). The Phase II ESA will be performed at the property addressed 3320 & 3340 Los Coyotes Diagonal and 3325 Palo Verde Avenue in Long Beach, California (the Project Site).

This Site-Specific Health and Safety Plan (HASP) has been prepared as part of the remedial design in accordance with the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations at Title 8 California Code of Regulations Section 5192 (8CCR 5192). The purpose of this plan is to establish safe procedures and work practices for McAlister GeoScience personnel and subcontractors engaged in field activities in association with the Project Site.

1.1 *PROJECT ORGANIZATION AND GENERAL SAFETY RULES*

1.2 *Key Personnel and Emergency Numbers*

The following personnel and organizations are associated with the planned activities. The organizational structure will be reviewed and updated as necessary during the course of the project. Typically the Site Supervisor is also the on-Site Health and Safety Officer unless otherwise designated below.

Name/Title	Responsibility	Telephone
McAlister GeoScience		
David McAlister	Project Manager	(714) 423-3796
Jay Schneider	Site Supervisor	(626) 841-2667
Emergency Numbers		
Emergency Services	Ambulance, Fire, Police	911

Subcontractor(s)

Subcontractors will be identified as work progresses and will be required to review, sign, and comply with the provisions of this Health and Safety Plan.

Each of the personnel listed above has 40 hours or more of health and safety training for hazardous waste sites, as well as first aid and CPR training.

1.3 *General Safety Rules*

The following general rules shall apply to all site activities:

- All personnel and visitors shall obey all posted signs and directions;
- All personnel working on the site must read and understand this document and sign the acceptance form (Appendix A) prior to working at the Site;

- All McAlister GeoScience personnel shall have received 40-hour initial HAZWOPER training in accordance with 8 CCR 5192 and possess valid 8-hour annual HAZWOPER refresher training certificates;
- All McAlister GeoScience personnel shall be trained in standard First Aid and adult CPR and possess current certifications;
- Level D PPE including steel-toed safety boots and safety glasses with side shields/goggles will be the standard work uniform on-site. PPE upgrades may be required for work activities;
- The Site Supervisor is responsible for the compliance with all health and safety procedures and work tasks. The Site Supervisor will have the authority to change procedures, stop work and increase levels of protective clothing;
- There shall be no smoking anywhere on site;
- There shall be no eating or drinking within any work zone; and
- Personnel shall not operate any equipment, mechanical or electrical, onsite without proper authorization, instruction, training and, if required, oversight.

2.0 *SCOPE OF WORK*

The following types of work covered by this Health and Safety Plan include: Mobilization and equipment staging, soil and / or groundwater sampling, and restoration of original site condition as detailed in the work plan.

The major safety/health hazards are anticipated to be:

1) Exposure to chemical-contaminated soil;
2) Lifting and movement of heavy equipment;
3) Heavy equipment noise, pinch points, and entanglement; and
4) General site hazards including slips, trips, falls, contusions, and lacerations.

The primary chemicals of concern (COCs) at the Project Site location include potentially volatile organic compounds (VOCs) as well as petroleum hydrocarbons.

2.1 *Sediment Sample and Soil Vapor Sample Collection*

A hydraulic direct-push type rig will be utilized to collect continuous soil samples from ground surface at each of the seven exterior locations. These samples will be advanced to depths of 5, 10, and 15 feet. Temporary Soil Vapor Wells will be installed at depth of 5 and 15 feet. Three subslab temporary soil vapor wells will be installed in the medical building at the southeastern corner of the Subject Property. In the event of detection of the former UST pit during the geophysical survey, two additional direct-push borings will be advanced to a depth of twenty feet in the former pit location. Soil samples collected from the Subject Property will be evaluated for Total Petroleum Hydrocarbons (TPHs), Volatile Organic Compounds (VOCs), and Metals. Soil Vapor will be analyzed for VOCs. This HASP has been developed in accordance with the Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations at Title 8 California Code of Regulations Section 5192 (8CCR 5192)

The laboratory will be requested to analyze each of the collected soil samples for the following:

- United States Environmental Protection Agency (EPA) Method 6010 for Metals.
- United States Environmental Protection Agency (EPA) Method 8015 for Total Petroleum Hydrocarbons (TPHs).
- United States Environmental Protection Agency (EPA) Method 8260 (soil) and TO-15 (soil vapor) for Volatile Organic Compounds (VOCs).

3.0 *HAZARD EVALUATION*

The intent of this section is to identify and describe the chemical and physical hazards associated with project tasks, evaluate the risk from these hazards, and present appropriate control measures for reducing or eliminating the hazard.

3.1 *Chemical Hazard Review*

Chemicals of concern that may be potentially present at the Project Site include aerially-deposited lead (ADL) and potentially volatile organic compounds (VOCs) as well as petroleum hydrocarbons. The chemicals possess various physical, chemical, and toxicological properties including chronic toxicity. Hazard information for the chemicals most likely to be encountered is provided in Appendix B.

Potential routes of exposure to the chemicals include dermal (skin and/or eye contact), inhalation, and ingestion. The overall health risk from exposure to the chemicals is uncertain for several reasons. Actual concentrations are variable, and effects from low-level exposure to the mix of chemicals cannot be predicted. The actual length of time for potential exposure is unknown, and the risk of personnel exposure by project activities may vary. However, the primary health effects of the chemicals of concern are due to chronic exposure, and the project activities are only anticipated to last for a few days. The soil concentrations present the source for chemical exposure, but exposure is easily controlled in these circumstances by minimizing dust and direct contact. Therefore, the specified PPE is to be worn at all times during field activities, and dust control measures will be implemented.

3.2 *Physical Hazard Review*

<u>Hand Injury</u> – Appropriate gloves are to be worn during all drilling and sampling duties.

<u>Drill Rig/Heavy Machinery</u> – High visibility snug-fitting vests are to be worn when working around a drill rig or heavy machinery. When possible keep clear of reversing vehicles and cranes operating overhead. Maintain line of vision with operator and use hand signals.

<u>Lifting and Moving Field Equipment</u> – Warm up prior to performing any field activities. Practice the correct lifting techniques when unloading or loading trucks and moving equipment. Use the buddy system whenever possible to team lift equipment. Use the correct PPE and techniques when utilizing a hand auger to avoid injury.

<u>Heat Stress</u> - Heat stress is a concern when workers are required to wear protective clothing and/or work in hot weather. However, heat stress is one of the most preventable hazards to workers. Appendix C provides guidance for the recognition of and treatment for heat stress. The Site Supervisor will be

responsible for observing personnel for performance-related effects of heat, and for making the necessary adjustments in work/rest periods to maintain a safe body temperature. Cool liquids will be provided for site workers to replace lost body fluids and electrolytes. Furthermore, workers will be instructed to observe each other and communicate suspected heat stress to the Site Supervisor.

Other - Potential natural disasters may include earthquake, floods, etc. Prior to mobilization and during the course of the project, the Project Manager or his designee will verify with local and regional authorities as to the occurrence and locations of such disasters and adhere to the evacuation orders as appropriate. This information and the resulting project suspension will be promptly communicated to all project personnel via telephone.

3.3 *BIOLOGICAL HAZARDS*

Potential exposure to spiders, stinging insects, etc., can occur when on-site. Leather/Kevlar coated gloves and appropriate tools must be used when carrying out all physical duties. All field workers will wear long pants and sturdy work boots, and maintain awareness if there is a need to disturb potential critter habitat.

4.0 *AIR MONITORING REQUIREMENTS*

4.1 AIR MONITORING FREQUENCY

Organic Gas and Vapor Monitoring with PID:

- Monitor ambient air in work zone throughout the duration of work.

4.2 ACTION LEVELS

The following describes actions to be taken by site personnel based upon air monitoring results. Action levels for additional protective equipment levels will be based upon PID readings taken within the breathing zone of McAlister GeoScience or subcontractor personnel. Readings will be taken continuously.

The following PPE levels will be used for the total organic vapor content of the air:

PID Reading	Action
0 - 5 ppm Above Background	Level D
> 5 ppm Above Background	Stop work and reassess

5.0 *SITE CONTROL*

5.1 Site Access

McAlister GeoScience employees and sub-contractors will stay within the designated working locations.

5.2 Site Communication

Communication links must be established and maintained between field team members and between the field team and local emergency contacts. McAlister GeoScience personnel will have a mobile telephone in the field at all times. Calls can be made to or from the mobile telephone for information or emergency purposes. Emergency telephone numbers are listed in Section 1.1 and will be available in the field at all times.

5.3 Work Zone Definition

The work zone will be defined by the temporary chain link fence, cones, signs, and/or cordoned off with flagging, caution tape, or similar methods. The work zone is set up to keep the non-essential personal clear of the equipment. Entry into the work zone requires the use of appropriate PPE at all times.

6.0 *PERSONAL PROTECTIVE REQUIREMENTS*

6.1 *LEVELS OF PROTECTION*

Personal protection equipment includes:

<u>Level D (and modified Level D)</u>

1. Safety boots with steel toe and shank (Meeting 8 CCR 3385 requirements for protective footwear);
2. Safety glasses with side shields/goggles;
3. Leather/Kevlar coated gloves;
4. Nitrile disposable inner gloves (Modified Level D item);
5. Hearing protection;
6. Reflective high-visibility vest; and
7. Hard hat.

All selected PPE meets the requirements of the applicable Cal/OSHA requirements in 8 CCR 3381-3385. It is anticipated that most of the work will be done at Level D and Modified Level D. Requirements to wear additional PPE beyond Level D will require additional guidance from the Health and Safety coordinator and will be implemented as needed.

7.0 *CONFINED SPACE ENTRY OPERATIONS*

The planned work does not include entry into any permit-required or non-permit-required confined spaces at the Project Site. If the scope of work changes to include confined space entry, then the Health and Safety Plan must be modified to address entry procedures, atmospheric testing and employee training.

8.0 *EMERGENCY RESPONSE/CONTINGENCY PLAN*

This section describes contingencies and emergency planning procedures. All project-related emergency incidents will be reported immediately to the Project Manager.

8.1 Personnel Roles and Lines of Authority

The Site Supervisor has primary responsibility for responding to and correcting emergency situations and for taking appropriate measures to ensure the safety of site personnel. Possible actions may involve evacuation of personnel from the site area, or shut down of operations. The Site Supervisor is additionally responsible for ensuring that corrective measures have been implemented, appropriate authorities notified, and follow-up reports completed. The Site Supervisor will direct responses to any medical emergency.

8.2 Emergency Recognition/Prevention

Personnel will be familiar with techniques of hazard recognition from Health and Safety training and site-specific briefings. The Site Supervisor is responsible for ensuring that PPE is available to personnel and utilized properly.

8.3 Directions to Hospital

Directions to the nearest hospital are provided in Appendix D. A copy of the Health and Safety Plan will be kept on site with the Site Supervisor at all times.

8.4 Emergency Procedure

Project related emergency events and procedures are summarized below.

<u>Emergency Medical Treatment Procedures</u>

Any person who becomes ill or injured in the work zone must be decontaminated (if applicable) to the maximum extent possible. If the injury or illness is minor, decontamination will be completed and first aid administered prior to transport. If the patient condition is serious, only partial decontamination will be completed as deemed appropriate (i.e., removal of coveralls from the victim and redressing in clean coveralls or wrapping in a blanket). First aid will be administered while awaiting an ambulance or paramedics. All project-related individuals are authorized to call an ambulance. The first individual responding to the emergency should call the ambulance. All injuries and illnesses will be immediately reported to the Project Manager.

Any person transported to a medical clinic or hospital for treatment will take the list of compounds that they may have been exposed to at the Project Site.

Any vehicle used to transport contaminated personnel will be decontaminated as necessary.

Fires

The local fire department should be notified immediately via the 911 operator by the first individual to observe a fire. Water should only be used in the event the fire is a Class A fire of ordinary combustible materials such as paper, wood, etc. Keep at a safe distance in the event of flare-up, sparking, or explosion. If possible, move equipment and any flammables away from fire area. Site personnel are not fire fighters for anything other than an incipient (small, early stage) fire with a portable fire extinguisher. Otherwise, site personnel need to evacuate the site in the event of a fire.

Spill or Leaks

In the event of a spill or a leak, site personnel will perform the following tasks:

1. Inform the Site Supervisor immediately;
2. Locate the source of the spillage and stop the flow if it can be done safely;
3. Begin containment and recovery of the spilled materials, if this can be done safely; and
4. Inform the Project Manager as soon as practicable of the nature, extent and type of spill along with a description of the actions taken (i.e. stopped flow, spill containment, etc.).

8.5 First Aid and Emergency Equipment

The Site Supervisor is responsible for maintaining a first aid kit, portable fire extinguisher, and a mobile phone.

All field personnel should be informed of the location of the first aid and emergency equipment prior to beginning the field activities. In addition, any visitors to the project site should also be informed of the location of the first aid and emergency equipment.

9.0 *EMPLOYEE EDUCATION AND TRAINING*

9.1 *General Health and Safety*

McAlister GeoScience project personnel have completed Hazardous Waste Operations health and safety training in accordance with 8 CCR 5192(e).

9.2 *Site-Specific Training*

All project personnel will be educated on the potential hazards and control measures at the site. On-site personnel will be instructed on the contents of the Health and Safety Plan, names of qualified first-aid providers and the Site Supervisor, location of first-aid equipment, procedures to be used in contacting emergency response personnel, location of emergency equipment, evacuation procedures to follow in case of emergency and principles of personal hygiene.

On-site personnel will be made aware of the chemical contamination that may be encountered during the investigation. Information will include potential routes of exposure, protective clothing to be worn and precautionary measures to be taken. Personnel will be informed of the signs and symptoms of chemical exposure (Appendix B) and heat stress (see Appendix C).

Prior to working at the site, a pre-work meeting will be held to discuss the content of this HASP, specific site requirements and responsibilities of site members. Daily "tailgate" health and safety meetings will be conducted with site personnel to refresh them on the contents of this plan, site specific requirements and responsibilities of the site members, and daily tasks and PPE requirements. Site personnel will be required to sign the pre-work meeting form and tailgate health and safety forms.

A health and safety meeting will be conducted with all visitors to the project site who enter the work zone area. The health and safety meeting will discuss the content of this plan, specific site requirements and responsibilities of site members and daily activities, risks, and PPE. Visitors will be required to sign the health and safety form, thereby acknowledging the potential risks present at the project site, prior to entering the work zone area.

10.0 *MEDICAL SURVEILLANCE PROGRAM*

On-site personnel involved with this project participate in a medical surveillance program in accordance with 8 CCR 5192(f). Personnel found to have medical conditions which could directly or indirectly be aggravated by exposure to chemical contamination within the work environment or physical demands of the job are informed by the consulting physician of their condition and any restrictions in their activities. Additionally, each employee is evaluated to determine if they are physically able to perform work while using respiratory protective equipment in compliance with 8 CCR 5144.

Subcontractor personnel involved with this project are required to participate in a medical surveillance program in accordance with 8 CCR 5192(f).

APPENDIX A

HEALTH AND SAFETY PLAN ACCEPTANCE FORM

SITE-SPECIFIC TRAINING DOCUMENTATION
HEALTH AND SAFETY PLAN ACCEPTANCE FORM

Project: Los Coyotes Diagonal

My signature below indicates that I am aware of the potential hazardous nature of performing specific tasks within this HASP at Project Site and that I have reviewed the HASP and have received site-specific training which included the elements contained therein.

I further state that I have been given the opportunity to ask questions and that all of my questions have been answered to my satisfaction.

Name	Signature	Company	Date
Bret Herman		SSS	1/19/18
Dustin Reyes		SSS	1-19-2018
Joshua Kujiyama		McA GeoSci	1/19/2018
Jay Schneider		McA GeoScience	1/19/18
Jim Bean		GeoRockers Drlg.	1/31/18
[illegible]		[illegible] Drlg	1-31-18

APPENDIX B

HEAT STRESS INFORMATION SHEET

OSHA® QUICK CARD™

Protecting Workers from Heat Stress

Heat Illness

Exposure to heat can cause illness and death. The most serious heat illness is heat stroke. Other heat illnesses, such as heat exhaustion, heat cramps and heat rash, should also be avoided.

There are precautions that can be taken any time temperatures are high and the job involves physical work.

Risk Factors for Heat Illness

- High temperature and humidity, direct sun exposure, no breeze or wind
- Heavy physical labor
- No recent exposure to hot workplaces
- Low liquid intake
- Waterproof clothing

Symptoms of Heat Exhaustion

- Headache, dizziness, or fainting
- Weakness and wet skin
- Irritability or confusion
- Thirst, nausea, or vomiting

Symptoms of Heat Stroke

- May be confused, unable to think clearly, pass out, collapse, or have seizures (fits)
- May stop sweating

To Prevent Heat Illness:

- Establish a complete heat illness prevention program.
- Provide training about the hazards leading to heat stress and how to prevent them.
- Provide a lot of cool water to workers close to the work area. At least one pint of water per hour is needed.

U.S. Department of Labor

For more information:

OSHA® Occupational Safety and Health Administration

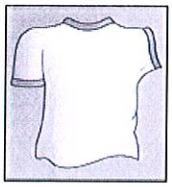
www.osha.gov (800) 321-OSHA (6742)

OSHA 3154-06R 2017

OSHA® QUICK CARD™

- Modify work schedules and arrange frequent rest periods with water breaks in shaded or air-conditioned areas.
- Gradually increase workloads and allow more frequent breaks for workers new to the heat or those that have been away from work to adapt to working in the heat (acclimatization).
- Designate a responsible person to monitor conditions and protect workers who are at risk of heat stress.
- Consider protective clothing that provides cooling.

How to Protect Workers



- Know signs/symptoms of heat illnesses; monitor yourself; use a buddy system.
- Block out direct sun and other heat sources.
- Drink plenty of fluids. Drink often and BEFORE you are thirsty. Drink water every 15 minutes.
- Avoid beverages containing alcohol or caffeine.
- Wear lightweight, light colored, loose-fitting clothes.

What to Do When a Worker is Ill from the Heat

- Call a supervisor for help. If the supervisor is not available, call 911.
- Have someone stay with the worker until help arrives.
- Move the worker to a cooler/shaded area.
- Remove outer clothing.
- Fan and mist the worker with water; apply ice (ice bags or ice towels).
- Provide cool drinking water, if able to drink.

IF THE WORKER IS NOT ALERT or seems confused, this may be a heat stroke. CALL 911 IMMEDIATELY and apply ice as soon as possible.

U.S. Department of Labor

For more information:

OSHA® Occupational Safety and Health Administration

www.osha.gov (800) 321-OSHA (6742)

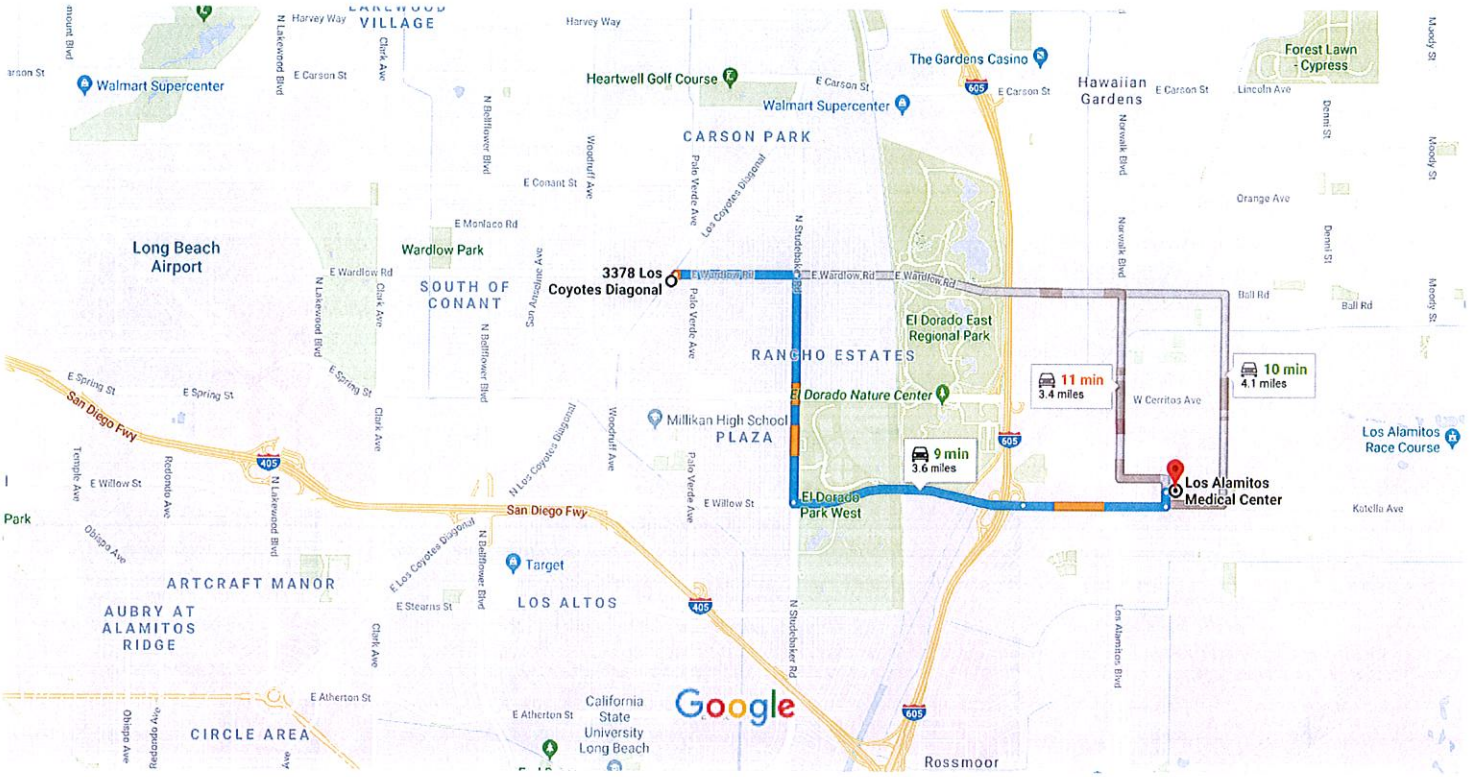
APPENDIX C

HOSPITAL ROUTES

Google Maps

3378 Los Coyotes Diagonal to Los Alamitos Medical Center

Drive 3.6 miles, 9 min



Map data ©2018 Google 2000 ft

3378 Los Coyotes Diagonal

Long Beach, CA 90808

1. Head northeast on N Los Coyotes Diagonal toward E Wardlow Rd

207 ft

2. Turn right onto E Wardlow Rd

0.6 mi

3. Turn right onto N Studebaker Rd

1.1 mi

4. Turn left onto Long Beach Bikeway Rte 40/E Willow St
   Continue to follow E Willow St

1.1 mi

5. Continue onto Katella Ave

0.7 mi

6. Turn left onto Cherry St

364 ft

7. Turn right
   Destination will be on the right

138 ft

Los Alamitos Medical Center

3751 Katella Ave, Los Alamitos, CA 90720

APPENDIX C

BORING LOGS

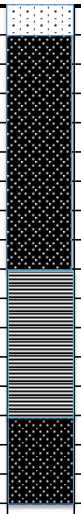
McAlister GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, California 90803
(714) 423-3796 DirtyProperty.com

FIELD SOIL LOG: DRILLING / WELL CONSTRUCTION

Geologist: J. Kajiyama & J. Schneider
Boring No: B1

Client: Sonnoco	Location: Los Coyotes Diagonal	Map:
Project: Loc Coyotes Phase II	Long Beach, California	
Elevation/Datum:	Subcontractor: Fulcrum Resources Environmental	See Attached
Sampling Date(s): 31-Jan-18	Hammer Weight: Hydraulic	
Sampling Method: Direct Push	Memo: 2-foot acetate sleeves	
Drop Height: Hydraulic	Angle: 90	
DTW: 1st____N/A___ Static_____N/A_____		

Depth Below Surface (ft.)	Blows/ 6 in On Sampler Recovery	PID Reading (ppm)	Unified Classification	Soil Description USCS type in all caps followed by the description. [i.e.: SC– CLAYEY SAND. Very Dark Grayish Brown (10YR 3/2) poorly graded sub-angular medium sand with some high plasticity clay. moist. No odor, no staining.]
0				Asphalt Surface
2				
4				
		452	ML	SILT with clay, gray, 7.5 YR 5/1, damp
6				
8				
10		330	CL	CLAY with silt, stiff, dark gray, 7.5 YR 4/1, damp
12				
14				
		11.8	ML	SILT with clay, brown, 7.5 YR 4/2, damp
16				
18				
20				
22				
24				
26				
28				
30				
32				
34				



Boring / MW #: B1

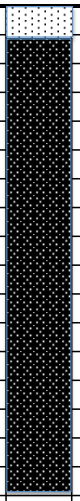
McAlister GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, California 90803
(714) 423-3796 DirtyProperty.com

FIELD SOIL LOG: DRILLING / WELL CONSTRUCTION

Geologist: J. Kajiyama & J. Schneider
Boring No: B2

Client: Sonnoco	Location: Los Coyotes Diagonal	Map:
Project: Loc Coyotes Phase II	Long Beach, California	
Elevation/Datum:	Subcontractor: Fulcrum Resources Environmental	See Attached
Sampling Date(s): 31-Jan-18	Hammer Weight: Hydraulic	
Sampling Method: Direct Push	Memo: 2-foot acetate sleeves	
Drop Height: Hydraulic	Angle: 90	
DTW: 1st N/A Static N/A		

Depth Below Surface (ft.)	Blows/ 6 in On Sampler Recovery	PID Reading (ppm)	Unified Classification	Soil Description USCS type in all caps followed by the description. [i.e.: SC– CLAYEY SAND. Very Dark Grayish Brown (10YR 3/2) poorly graded sub-angular medium sand with some high plasticity clay. moist. No odor, no staining.]	Sampler and Bit
0				Asphalt Surface	
2					
4					
		2.0	ML	SILT, dark gray, 7.5 YR 4/1, damp	
6					
8					
10		>1,999	ML	SILT with clay, brown, 10 YR 4/3, damp	
12					
14					
		31.3	ML	SILT with clay, gray, 7.5 YR 5/1, damp	
16					
18					
20					
22					
24					
26					
28					
30					
32					
34					



Boring / MW #: B2

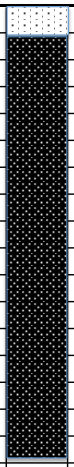
McAlister GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, California
90803
(714) 423-3796 DirtyProperty.com

FIELD SOIL LOG: DRILLING / WELL CONSTRUCTION

Geologist: J. Kajiyama & J. Schneider
Boring No: B3

Client: Sonnoco	Location: Los Coyotes Diagonal	Map:
Project: Loc Coyotes Phase II	Long Beach, California	
Elevation/Datum:	Subcontractor: Fulcrum Resources Environmental	See Attached
Sampling Date(s): 31-Jan-18	Hammer Weight: Hydraulic	
Sampling Method: Direct Push	Memo: 2-foot acetate sleeves	
Drop Height: Hydraulic	Angle: 90	
DTW: 1st____N/A___ Static_____N/A_____		

Depth Below Surface (ft.)	Blows/ 6 in On Sampler Recovery	PID Reading (ppm)	Unified Classification	Soil Description USCS type in all caps followed by the description. [i.e.: SC– CLAYEY SAND. Very Dark Grayish Brown (10YR 3/2) poorly graded sub-angular medium sand with some high plasticity clay, moist. No odor, no staining.]	Sampler and Bit		Details
0				Asphalt Surface			
2							
4							
		10.2	ML	SILT, brown, 7.5 YR 4/3, damp			
6							
8							
10		62.5	ML	SILT with clay, brown, 10 YR 4/3, damp			
12							
14							
		3.0	ML	SILT with clay, dark grayish brown, 10 YR 4/2, damp			
16							
18							
20							
22							
24							
26							
28							
30							
32							
34							



Boring / MW #: B3

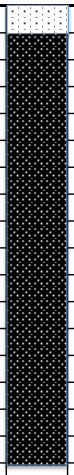
McAlister GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, California
90803
(714) 423-3796 DirtyProperty.com

FIELD SOIL LOG: DRILLING / WELL CONSTRUCTION

Geologist: J. Kajiyama & J. Schneider
Boring No: B4

Client: Sonnoco	Location: Los Coyotes Diagonal	Map:
Project: Loc Coyotes Phase II	Long Beach, California	
Elevation/Datum:	Subcontractor: Fulcrum Resources Environmental	See Attached
Sampling Date(s): 31-Jan-18	Hammer Weight: Hydraulic	
Sampling Method: Direct Push	Memo: 2-foot acetate sleeves	
Drop Height: Hydraulic	Angle: 90	
DTW: 1st____N/A___ Static_____N/A_____		

Depth Below Surface (ft.)	Blows/ 6 in On Sampler Recovery	PID Reading (ppm)	Unified Classification	Soil Description USCS type in all caps followed by the description. [i.e.: SC– CLAYEY SAND. Very Dark Grayish Brown (10YR 3/2) poorly graded sub-angular medium sand with some high plasticity clay, moist. No odor, no staining.]	Sampler and Bit
0				Asphalt Surface	
2					
4					
		262	ML	SILT, grayish brown, 7.5 YR 6/2, damp	
6					
8					
10		1,384	ML	SILT with clay, gray, 7.5 YR 5/1, damp	
12					
14					
		119	ML	SILT, dark gray, 7.5 YR 4/1, damp	
16					
18					
20					
22					
24					
26					
28					
30					
32					
34					



Boring / MW #: B4

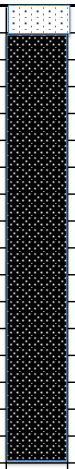
McAlister GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, California
90803
(714) 423-3796 DirtyProperty.com

FIELD SOIL LOG: DRILLING / WELL CONSTRUCTION

Geologist: J. Kajiyama & J. Schneider
Boring No: B5

Client: Sonnoco	Location: Los Coyotes Diagonal	Map:
Project: Loc Coyotes Phase II	Long Beach, California	
Elevation/Datum:	Subcontractor: Fulcrum Resources Environmental	See Attached
Sampling Date(s): 31-Jan-18	Hammer Weight: Hydraulic	
Sampling Method: Direct Push	Memo: 2-foot acetate sleeves	
Drop Height: Hydraulic	Angle: 90	
DTW: 1st____N/A___ Static_____N/A_____		

Depth Below Surface (ft.)	Blows/ 6 in On Sampler Recovery	PID Reading (ppm)	Unified Classification	Soil Description USCS type in all caps followed by the description. [i.e.: SC– CLAYEY SAND. Very Dark Grayish Brown (10YR 3/2) poorly graded sub-angular medium sand with some high plasticity clay, moist. No odor, no staining.]	Sampler and Bit
0				Asphalt Surface	
2					
4					
		5.4	ML	SILT, brown, 10 YR 4/3, damp	
6					
8					
10		10.2	ML	SILT with clay, brown, 7.5 YR 4/2, damp	
12					
14					
		>1,999	ML	SILT with clay, very dark gray, 7.5 YR 3/1, damp	
16					
18					
20					
22					
24					
26					
28					
30					
32					
34					



Boring / MW #: B5

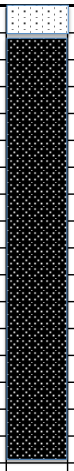
McAlister GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, California
90803
(714) 423-3796 DirtyProperty.com

FIELD SOIL LOG: DRILLING / WELL CONSTRUCTION

Geologist: J. Kajiyama & J. Schneider
Boring No: B6

Client: Sonnoco	Location: Los Coyotes Diagonal	Map:
Project: Loc Coyotes Phase II	Long Beach, California	
Elevation/Datum:	Subcontractor: Fulcrum Resources Environmental	See Attached
Sampling Date(s): 31-Jan-18	Hammer Weight: Hydraulic	
Sampling Method: Direct Push	Memo: 2-foot acetate sleeves	
Drop Height: Hydraulic	Angle: 90	
DTW: 1st____N/A___ Static_____N/A_____		

Depth Below Surface (ft.)	Blows/ 6 in On Sampler Recovery	PID Reading (ppm)	Unified Classification	Soil Description USCS type in all caps followed by the description. [i.e.: SC– CLAYEY SAND. Very Dark Grayish Brown (10YR 3/2) poorly graded sub-angular medium sand with some high plasticity clay, moist. No odor, no staining.]	Sampler and Bit
0				Asphalt Surface	
2					
4					
		> 1,999	ML	SILT, brown, 7.5 YR 4/2, damp	
6					
8					
10		> 1,999	ML	SILT with clay, dark gray, 7.5 YR 4/1, damp	
12					
14					
		1,802	ML	SILT with clay, dark gray, 7.5 YR 4/1, damp	
16					
18					
20					
22					
24					
26					
28					
30					
32					
34					



Boring / MW #: B6

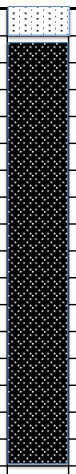
McAlister GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, California
90803
(714) 423-3796 DirtyProperty.com

FIELD SOIL LOG: DRILLING / WELL CONSTRUCTION

Geologist: J. Kajiyama & J. Schneider
Boring No: B7

Client: Sonnoco	Location: Los Coyotes Diagonal	Map:
Project: Loc Coyotes Phase II	Long Beach, California	
Elevation/Datum:	Subcontractor: Fulcrum Resources Environmental	See Attached
Sampling Date(s): 31-Jan-18	Hammer Weight: Hydraulic	
Sampling Method: Direct Push	Memo: 2-foot acetate sleeves	
Drop Height: Hydraulic	Angle: 90	
DTW: 1st____N/A___ Static____N/A_____		

Depth Below Surface (ft.)	Blows/ 6 in On Sampler Recovery	PID Reading (ppm)	Unified Classification	Soil Description USCS type in all caps followed by the description. [i.e.: SC– CLAYEY SAND. Very Dark Grayish Brown (10YR 3/2) poorly graded sub-angular medium sand with some high plasticity clay, moist. No odor, no staining.]	Sampler and Bit
0				Asphalt Surface	
2					
4					
		217	ML	Clayey SILT, brown, 7.5 YR 5/4, damp	
6					
8					
10		98.2	ML	SILT with clay, brown, 7.5 YR 5/4, damp	
12					
14					
		153	ML	SILT, brown, 7.5 YR 4/2, damp	
16					
18					
20					
22					
24					
26					
28					
30					
32					
34					



Boring / MW #: B7

APPENDIX D

LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY FORMS

Performance Analytical Laboratories, Inc.

ELAP 2960

February 09, 2018

McAlister Geoscience

5030 E. 2nd St, Ste 200

Long Beach, CA 90803

Re: Los Coyotes Diagonal

Project No. : Los Coyotes Diagonal

Work Order: P801014

Dear Jay Schneider

Enclosed are the results of analyses for samples received by our laboratory on 1/31/2018. The contents of this report apply to the sample(s) analyzed in accordance with the chain-of-custody document supplied with the sample(s).

No duplication of this report is allowed, except in its entirety. Please do not hesitate to call if you have any questions and thank you very much for using Performance Analytical Laboratories for your analytical needs.

Regards,

Marycarol Valenzuela
Project Manager

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Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Samples in this Report

Lab ID	Sample	Qualifier	Matrix	Date Sampled	Date Received
P801014-01	B7,5'		Solid	01/31/2018	01/31/2018
P801014-02	B7,10'		Solid	01/31/2018	01/31/2018
P801014-03	B7,15'		Solid	01/31/2018	01/31/2018
P801014-04	B4,5'		Solid	01/31/2018	01/31/2018
P801014-05	B4,10'		Solid	01/31/2018	01/31/2018
P801014-06	B4,15'		Solid	01/31/2018	01/31/2018
P801014-07	B6,5'		Solid	01/31/2018	01/31/2018
P801014-08	B6,10'		Solid	01/31/2018	01/31/2018
P801014-09	B6,15'		Solid	01/31/2018	01/31/2018
P801014-10	B5,5'		Solid	01/31/2018	01/31/2018
P801014-11	B5,10'		Solid	01/31/2018	01/31/2018
P801014-12	B5,15'		Solid	01/31/2018	01/31/2018
P801014-13	B1,5'		Solid	01/31/2018	01/31/2018
P801014-14	B1,10'		Solid	01/31/2018	01/31/2018
P801014-15	B1,15'		Solid	01/31/2018	01/31/2018
P801014-16	B2,5'		Solid	01/31/2018	01/31/2018
P801014-17	B2,10'		Solid	01/31/2018	01/31/2018
P801014-18	B2,15'		Solid	01/31/2018	01/31/2018
P801014-19	B3,5'		Solid	01/31/2018	01/31/2018
P801014-20	B3,10'		Solid	01/31/2018	01/31/2018
P801014-21	B3,15'		Solid	01/31/2018	01/31/2018

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B7,5' **P801014-01 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B7,5' (Continued) **P801014-01 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B7,5' (Continued) **P801014-01 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	103%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	89.1%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	99.2%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	97.8%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B7,10' **P801014-02 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B7,10' (Continued) **P801014-02 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B7,10' (Continued) **P801014-02 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	105%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	89.1%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	103%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	99.5%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B7,15' **P801014-03 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B7,15' (Continued) **P801014-03 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	9.9	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	9.9	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B7,15' (Continued) **P801014-03 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	109%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	88.8%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	102%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	100%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B4,5' **P801014-04 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B4,5' (Continued) **P801014-04 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	9.9	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	9.9	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B4,5' (Continued) **P801014-04 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	105%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	89.3%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	104%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	98.6%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B4,10' **P801014-05 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B4,10' (Continued) **P801014-05 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	9.8	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	9.8	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B4,10' (Continued) **P801014-05 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	2.9	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	107%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	90.9%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	104%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	98.8%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B4,15' **P801014-06 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B4,15' (Continued) **P801014-06 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B4,15' (Continued) **P801014-06 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	106%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	92.4%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	102%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	99.7%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B6,5' **P801014-07 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0007)							
Acetone	ND	µg/Kg	1	20	02/05/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/05/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/05/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/05/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/05/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/05/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/05/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B6,5' (Continued) **P801014-07 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0007) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/05/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/05/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	10	02/05/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/05/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	10	02/05/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/05/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/05/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B6,5' (Continued) **P801014-07 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0007) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	1.0	02/05/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/05/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/05/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	102%			60-140	02/05/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	93.6%			60-140	02/05/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	95.4%			60-140	02/05/2018	EPA 8260B	
Surrogate: Toluene-d8	98.2%			60-140	02/05/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B6,10' **P801014-08 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B6,10' (Continued) **P801014-08 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B6,10' (Continued) **P801014-08 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	106%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	92.4%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	99.5%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	99.2%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B6,15' **P801014-09 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B6,15' (Continued) **P801014-09 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B6,15' (Continued) **P801014-09 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	106%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	90.2%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	100%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	98.5%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B5,5' **P801014-10 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B5,5' (Continued) **P801014-10 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	9.8	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	9.8	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B5,5' (Continued) **P801014-10 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	2.9	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	107%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	89.1%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	100%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	98.9%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B5,10' **P801014-11 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B5,10' (Continued) **P801014-11 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B5,10' (Continued) **P801014-11 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	107%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	90.1%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	98.7%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	97.5%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B5,15' **P801014-12 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B5,15' (Continued) **P801014-12 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	9.9	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	9.9	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B5,15' (Continued) **P801014-12 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	106%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	91.6%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	102%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	99.8%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B1,5' **P801014-13 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B1,5' (Continued) **P801014-13 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	9.9	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	9.9	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B1,5' (Continued) **P801014-13 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	0.99	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	107%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	89.9%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	102%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	99.9%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B1,10' **P801014-14 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B1,10' (Continued) **P801014-14 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B1,10' (Continued) **P801014-14 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	106%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	89.4%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	101%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	98.8%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B1,15' **P801014-15 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B1,15' (Continued) **P801014-15 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	4.9	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	9.8	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	9.8	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B1,15' (Continued) **P801014-15 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	0.98	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	2.9	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	107%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	90.4%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	100%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	99.0%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B2,5' **P801014-16 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B2,5' (Continued) **P801014-16 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B2,5' (Continued) **P801014-16 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	108%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	89.6%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	101%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	99.7%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B2,10' **P801014-17 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B2,10' (Continued) **P801014-17 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B2,10' (Continued) **P801014-17 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	107%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	92.0%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	105%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	100%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B2,15' **P801014-18 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B2,15' (Continued) **P801014-18 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B2,15' (Continued) **P801014-18 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	105%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	89.3%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	103%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	98.7%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B3,5' **P801014-19 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B3,5' (Continued) **P801014-19 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B3,5' (Continued) **P801014-19 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	108%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	91.1%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	100%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	99.9%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B3,10' **P801014-20 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.1	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.1	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.1	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.1	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B3,10' (Continued) **P801014-20 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.1	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.1	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B3,10' (Continued) **P801014-20 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	107%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	91.8%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	102%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	98.1%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B3,15' **P801014-21 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004)							
Acetone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Acetonitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Allyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Benzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromodichloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromoform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Bromomethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
2-Butanone (Methyl Ethyl Ketone - MEK)	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Carbon Disulfide	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Carbon Tetrachloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloroethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroform	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Chloromethane	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Chloroprene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Chlorotoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromo-3-Chloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromochloromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dibromoethane (EDB)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dibromomethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
cis-1,4-dichloro-2-butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,4-Dichloro-2-Butene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,4-Dichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Dichlorodifluoromethane (Freon 12)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2-Dichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
c-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,2-Dichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B3,15' (Continued) **P801014-21 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
1,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2,2-Dichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
t-1,3-Dichloropropene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diethyl Ether	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Diisopropyl Ether (DIPE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Ethyl-tert-butyl-ether (ETBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Hexachloro-1,3-Butadiene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
2-Hexanone	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Isopropylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p-Isopropyltoluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Methacrylonitrile	ND	µg/Kg	1	5.0	02/02/2018	EPA 8260B	
Methylene Chloride	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Methyl Methacrylate	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
4-Methyl-2-Pentanone	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
Methyl-t-Butyl Ether (MTBE)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Naphthalene	ND	µg/Kg	1	10	02/02/2018	EPA 8260B	
Propionitrile	ND	µg/Kg	1	20	02/02/2018	EPA 8260B	
n-Propylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
sec-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Styrene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-amyl-Methyl Ether (TAME)	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tert-Butyl Alcohol (TBA)	ND	µg/Kg	1	25	02/02/2018	EPA 8260B	
tert-Butylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2,2-Tetrachloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Tetrachloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Toluene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trichlorobenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,1-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Trichloroethene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Sample: B3,15' (Continued) **P801014-21 (Solid)**

Analyte	Result	Units	DF	Reporting Limit	Date Analyzed	Method	Qual
Volatile Organic Compounds (Batch ID: B8B0004) (Continued)							
Trichlorofluoromethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,3-Trichloropropane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,2,4-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
1,3,5-Trimethylbenzene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
Vinyl Chloride	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
o-Xylene	ND	µg/Kg	1	1.0	02/02/2018	EPA 8260B	
p/m-Xylene	ND	µg/Kg	1	2.0	02/02/2018	EPA 8260B	
Total Xylenes	ND	µg/Kg	1	3.0	02/02/2018	EPA 8260B	
Surrogate: Dibromofluoromethane	106%			60-140	02/02/2018	EPA 8260B	
Surrogate: 4-Bromofluorobenzene	89.0%			60-140	02/02/2018	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	102%			60-140	02/02/2018	EPA 8260B	
Surrogate: Toluene-d8	99.0%			60-140	02/02/2018	EPA 8260B	

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Quality Control

Volatile Organic Compounds

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8B0004										
Blank (B8B0004-BLK1)				Prepared & Analyzed: 02/02/2018						
Acetone	ND		20	µg/Kg						
Acetonitrile	ND		20	µg/Kg						
Allyl Chloride	ND		1.0	µg/Kg						
Benzene	ND		1.0	µg/Kg						
Bromobenzene	ND		1.0	µg/Kg						
Bromochloromethane	ND		1.0	µg/Kg						
Bromodichloromethane	ND		1.0	µg/Kg						
Bromoform	ND		1.0	µg/Kg						
Bromomethane	ND		5.0	µg/Kg						
2-Butanone (Methyl Ethyl Ketone - MEK)	ND		20	µg/Kg						
n-Butylbenzene	ND		1.0	µg/Kg						
Carbon Disulfide	ND		5.0	µg/Kg						
Carbon Tetrachloride	ND		1.0	µg/Kg						
Chlorobenzene	ND		1.0	µg/Kg						
Chloroethane	ND		5.0	µg/Kg						
Chloroform	ND		1.0	µg/Kg						
Chloromethane	ND		5.0	µg/Kg						
Chloroprene	ND		1.0	µg/Kg						
2-Chlorotoluene	ND		1.0	µg/Kg						
4-Chlorotoluene	ND		1.0	µg/Kg						
1,2-Dibromo-3-Chloropropane	ND		1.0	µg/Kg						
Dibromochloromethane	ND		1.0	µg/Kg						
1,2-Dibromoethane (EDB)	ND		1.0	µg/Kg						
Dibromomethane	ND		1.0	µg/Kg						
cis-1,4-dichloro-2-butene	ND		1.0	µg/Kg						
t-1,4-Dichloro-2-Butene	ND		1.0	µg/Kg						
1,2-Dichlorobenzene	ND		1.0	µg/Kg						
1,3-Dichlorobenzene	ND		1.0	µg/Kg						
1,4-Dichlorobenzene	ND		1.0	µg/Kg						
Dichlorodifluoromethane (Freon 12)	ND		1.0	µg/Kg						
1,1-Dichloroethane	ND		1.0	µg/Kg						
1,2-Dichloroethane	ND		1.0	µg/Kg						
1,1-Dichloroethene	ND		1.0	µg/Kg						
c-1,2-Dichloroethene	ND		1.0	µg/Kg						
c-1,3-Dichloropropene	ND		1.0	µg/Kg						
t-1,2-Dichloroethene	ND		1.0	µg/Kg						
1,2-Dichloropropane	ND		1.0	µg/Kg						
1,3-Dichloropropane	ND		1.0	µg/Kg						
2,2-Dichloropropane	ND		1.0	µg/Kg						
1,1-Dichloropropene	ND		1.0	µg/Kg						
t-1,3-Dichloropropene	ND		1.0	µg/Kg						
Diethyl Ether	ND		1.0	µg/Kg						
Diisopropyl Ether (DIPE)	ND		1.0	µg/Kg						
Ethylbenzene	ND		1.0	µg/Kg						
Ethyl Methacrylate	ND		1.0	µg/Kg						

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Quality Control
(Continued)

Volatile Organic Compounds (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8B0004 (Continued)										
Blank (B8B0004-BLK1)				Prepared & Analyzed: 02/02/2018						
Ethyl-tert-butyl-ether (ETBE)	ND		1.0	µg/Kg						
Hexachloro-1,3-Butadiene	ND		1.0	µg/Kg						
2-Hexanone	ND		5.0	µg/Kg						
Isopropylbenzene	ND		1.0	µg/Kg						
p-Isopropyltoluene	ND		1.0	µg/Kg						
Methacrylonitrile	ND		5.0	µg/Kg						
Methylene Chloride	ND		10	µg/Kg						
Methyl Methacrylate	ND		1.0	µg/Kg						
4-Methyl-2-Pentanone	ND		20	µg/Kg						
Methyl-t-Butyl Ether (MTBE)	ND		1.0	µg/Kg						
Naphthalene	ND		10	µg/Kg						
Propionitrile	ND		20	µg/Kg						
n-Propylbenzene	ND		1.0	µg/Kg						
sec-Butylbenzene	ND		1.0	µg/Kg						
Styrene	ND		1.0	µg/Kg						
Tert-amyl-Methyl Ether (TAME)	ND		1.0	µg/Kg						
Tert-Butyl Alcohol (TBA)	ND		25	µg/Kg						
tert-Butylbenzene	ND		1.0	µg/Kg						
1,1,1,2-Tetrachloroethane	ND		1.0	µg/Kg						
1,1,2,2-Tetrachloroethane	ND		1.0	µg/Kg						
Tetrachloroethene	ND		1.0	µg/Kg						
Toluene	ND		1.0	µg/Kg						
1,2,3-Trichlorobenzene	ND		1.0	µg/Kg						
1,2,4-Trichlorobenzene	ND		1.0	µg/Kg						
1,1,1-Trichloroethane	ND		1.0	µg/Kg						
1,1,2-Trichloroethane	ND		1.0	µg/Kg						
Trichloroethene	ND		1.0	µg/Kg						
Trichlorofluoromethane	ND		1.0	µg/Kg						
1,2,3-Trichloropropane	ND		1.0	µg/Kg						
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1.0	µg/Kg						
1,2,4-Trimethylbenzene	ND		1.0	µg/Kg						
1,3,5-Trimethylbenzene	ND		1.0	µg/Kg						
Vinyl Chloride	ND		1.0	µg/Kg						
o-Xylene	ND		1.0	µg/Kg						
p/m-Xylene	ND		2.0	µg/Kg						
Total Xylenes	ND		3.0	µg/Kg						
Surrogate: Dibromofluoromethane	52			µg/Kg	50.0		104	60-140		
Surrogate: 4-Bromofluorobenzene	45			µg/Kg	50.0		90.4	60-140		
Surrogate: 1,2-Dichloroethane-d4	49			µg/Kg	50.0		98.0	60-140		
Surrogate: Toluene-d8	49			µg/Kg	50.0		98.7	60-140		

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Quality Control
(Continued)

Volatile Organic Compounds (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8B0004 (Continued)										
LCS (B8B0004-BS1)				Prepared & Analyzed: 02/02/2018						
Allyl Chloride	65		1.0	µg/Kg	50.0		130	60-140		
Benzene	56		1.0	µg/Kg	50.0		112	70-130		
Bromobenzene	54		1.0	µg/Kg	50.0		108	70-130		
Bromodichloromethane	54		1.0	µg/Kg	50.0		108	70-130		
Bromoform	54		1.0	µg/Kg	50.0		109	70-130		
Chlorobenzene	53		1.0	µg/Kg	50.0		105	70-130		
Chloroethane	44		5.0	µg/Kg	50.0		88.6	70-130		
Chloroform	55		1.0	µg/Kg	50.0		109	70-130		
4-Chlorotoluene	52		1.0	µg/Kg	50.0		104	70-130		
Dibromomethane	54		1.0	µg/Kg	50.0		107	70-130		
1,2-Dichlorobenzene	49		1.0	µg/Kg	50.0		98.8	70-130		
1,1-Dichloroethene	48		1.0	µg/Kg	50.0		96.2	70-130		
1,2-Dichloropropane	51		1.0	µg/Kg	50.0		102	70-130		
2,2-Dichloropropane	60		1.0	µg/Kg	50.0		119	70-130		
1,1-Dichloropropene	54		1.0	µg/Kg	50.0		108	70-130		
Diethyl Ether	40		1.0	µg/Kg	50.0		79.1	70-130		
Diisopropyl Ether (DIPE)	47		1.0	µg/Kg	50.0		93.6	70-130		
Ethylbenzene	54		1.0	µg/Kg	50.0		109	70-130		
Hexachloro-1,3-Butadiene	57		1.0	µg/Kg	50.0		114	70-130		
Methylene Chloride	64		10	µg/Kg	50.0		128	70-130		
Methyl-t-Butyl Ether (MTBE)	50		1.0	µg/Kg	50.0		99.5	70-130		
Naphthalene	48		10	µg/Kg	50.0		96.5	70-130		
Styrene	56		1.0	µg/Kg	50.0		111	70-130		
tert-Butylbenzene	56		1.0	µg/Kg	50.0		112	70-130		
Tetrachloroethene	58		1.0	µg/Kg	50.0		116	70-130		
Toluene	56		1.0	µg/Kg	50.0		112	70-130		
1,2,3-Trichlorobenzene	53		1.0	µg/Kg	50.0		107	70-130		
Trichloroethene	56		1.0	µg/Kg	50.0		111	70-130		
1,3,5-Trimethylbenzene	57		1.0	µg/Kg	50.0		114	70-130		
Vinyl Chloride	46		1.0	µg/Kg	50.0		91.1	70-130		
Surrogate: Dibromofluoromethane	53			µg/Kg	50.0		106	60-140		
Surrogate: 4-Bromofluorobenzene	50			µg/Kg	50.0		99.6	60-140		
Surrogate: 1,2-Dichloroethane-d4	47			µg/Kg	50.0		94.5	60-140		
Surrogate: Toluene-d8	51			µg/Kg	50.0		101	60-140		

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Quality Control
(Continued)

Volatile Organic Compounds (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8B0004 (Continued)										
LCS Dup (B8B0004-BSD1)				Prepared & Analyzed: 02/02/2018						
Allyl Chloride	61		1.0	µg/Kg	50.0		123	60-140	5.49	20
Benzene	53		1.0	µg/Kg	50.0		106	70-130	5.47	20
Bromobenzene	52		1.0	µg/Kg	50.0		105	70-130	3.50	20
Bromodichloromethane	52		1.0	µg/Kg	50.0		104	70-130	4.21	20
Bromoform	54		1.0	µg/Kg	50.0		108	70-130	0.664	20
Chlorobenzene	51		1.0	µg/Kg	50.0		102	70-130	3.50	20
Chloroethane	42		5.0	µg/Kg	50.0		84.1	70-130	5.21	20
Chloroform	51		1.0	µg/Kg	50.0		103	70-130	6.19	20
4-Chlorotoluene	51		1.0	µg/Kg	50.0		101	70-130	2.62	20
Dibromomethane	53		1.0	µg/Kg	50.0		106	70-130	0.824	20
1,2-Dichlorobenzene	49		1.0	µg/Kg	50.0		98.3	70-130	0.447	20
1,1-Dichloroethene	46		1.0	µg/Kg	50.0		92.6	70-130	3.86	20
1,2-Dichloropropane	49		1.0	µg/Kg	50.0		98.8	70-130	3.03	20
2,2-Dichloropropane	54		1.0	µg/Kg	50.0		109	70-130	8.98	20
1,1-Dichloropropene	52		1.0	µg/Kg	50.0		103	70-130	5.03	20
Diethyl Ether	39		1.0	µg/Kg	50.0		78.4	70-130	0.863	20
Diisopropyl Ether (DIPE)	46		1.0	µg/Kg	50.0		91.1	70-130	2.68	20
Ethylbenzene	52		1.0	µg/Kg	50.0		104	70-130	4.04	20
Hexachloro-1,3-Butadiene	54		1.0	µg/Kg	50.0		108	70-130	4.88	20
Methylene Chloride	64		10	µg/Kg	50.0		128	70-130	0.0469	20
Methyl-t-Butyl Ether (MTBE)	50		1.0	µg/Kg	50.0		99.6	70-130	0.0804	20
Naphthalene	49		10	µg/Kg	50.0		97.6	70-130	1.07	20
Styrene	53		1.0	µg/Kg	50.0		106	70-130	4.53	20
tert-Butylbenzene	53		1.0	µg/Kg	50.0		106	70-130	5.76	20
Tetrachloroethene	55		1.0	µg/Kg	50.0		110	70-130	4.81	20
Toluene	54		1.0	µg/Kg	50.0		107	70-130	4.97	20
1,2,3-Trichlorobenzene	53		1.0	µg/Kg	50.0		105	70-130	1.08	20
Trichloroethene	53		1.0	µg/Kg	50.0		106	70-130	4.52	20
1,3,5-Trimethylbenzene	54		1.0	µg/Kg	50.0		107	70-130	5.61	20
Vinyl Chloride	45		1.0	µg/Kg	50.0		89.5	70-130	1.68	20
Surrogate: Dibromofluoromethane	53			µg/Kg	50.0		105	60-140		
Surrogate: 4-Bromofluorobenzene	50			µg/Kg	50.0		99.8	60-140		
Surrogate: 1,2-Dichloroethane-d4	46			µg/Kg	50.0		92.5	60-140		
Surrogate: Toluene-d8	50			µg/Kg	50.0		101	60-140		

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Quality Control
(Continued)

Volatile Organic Compounds (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8B0007										
Blank (B8B0007-BLK1)				Prepared & Analyzed: 02/05/2018						
Acetone	ND		20	µg/Kg						
Acetonitrile	ND		20	µg/Kg						
Allyl Chloride	ND		1.0	µg/Kg						
Benzene	ND		1.0	µg/Kg						
Bromobenzene	ND		1.0	µg/Kg						
Bromochloromethane	ND		1.0	µg/Kg						
Bromodichloromethane	ND		1.0	µg/Kg						
Bromoform	ND		1.0	µg/Kg						
Bromomethane	ND		5.0	µg/Kg						
2-Butanone (Methyl Ethyl Ketone - MEK)	ND		20	µg/Kg						
n-Butylbenzene	ND		1.0	µg/Kg						
Carbon Disulfide	ND		5.0	µg/Kg						
Carbon Tetrachloride	ND		1.0	µg/Kg						
Chlorobenzene	ND		1.0	µg/Kg						
Chloroethane	ND		5.0	µg/Kg						
Chloroform	ND		1.0	µg/Kg						
Chloromethane	ND		5.0	µg/Kg						
Chloroprene	ND		1.0	µg/Kg						
2-Chlorotoluene	ND		1.0	µg/Kg						
4-Chlorotoluene	ND		1.0	µg/Kg						
1,2-Dibromo-3-Chloropropane	ND		1.0	µg/Kg						
Dibromochloromethane	ND		1.0	µg/Kg						
1,2-Dibromoethane (EDB)	ND		1.0	µg/Kg						
Dibromomethane	ND		1.0	µg/Kg						
cis-1,4-dichloro-2-butene	ND		1.0	µg/Kg						
t-1,4-Dichloro-2-Butene	ND		1.0	µg/Kg						
1,2-Dichlorobenzene	ND		1.0	µg/Kg						
1,3-Dichlorobenzene	ND		1.0	µg/Kg						
1,4-Dichlorobenzene	ND		1.0	µg/Kg						
Dichlorodifluoromethane (Freon 12)	ND		1.0	µg/Kg						
1,1-Dichloroethane	ND		1.0	µg/Kg						
1,2-Dichloroethane	ND		1.0	µg/Kg						
1,1-Dichloroethene	ND		1.0	µg/Kg						
c-1,2-Dichloroethene	ND		1.0	µg/Kg						
c-1,3-Dichloropropene	ND		1.0	µg/Kg						
t-1,2-Dichloroethene	ND		1.0	µg/Kg						
1,2-Dichloropropane	ND		1.0	µg/Kg						
1,3-Dichloropropane	ND		1.0	µg/Kg						
2,2-Dichloropropane	ND		1.0	µg/Kg						
1,1-Dichloropropene	ND		1.0	µg/Kg						
t-1,3-Dichloropropene	ND		1.0	µg/Kg						
Diethyl Ether	ND		1.0	µg/Kg						
Diisopropyl Ether (DIPE)	ND		1.0	µg/Kg						
Ethylbenzene	ND		1.0	µg/Kg						
Ethyl Methacrylate	ND		1.0	µg/Kg						

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Quality Control
(Continued)

Volatile Organic Compounds (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8B0007 (Continued)										
Blank (B8B0007-BLK1)				Prepared & Analyzed: 02/05/2018						
Ethyl-tert-butyl-ether (ETBE)	ND		1.0	µg/Kg						
Hexachloro-1,3-Butadiene	ND		1.0	µg/Kg						
2-Hexanone	ND		5.0	µg/Kg						
Isopropylbenzene	ND		1.0	µg/Kg						
p-Isopropyltoluene	ND		1.0	µg/Kg						
Methacrylonitrile	ND		5.0	µg/Kg						
Methylene Chloride	ND		10	µg/Kg						
Methyl Methacrylate	ND		1.0	µg/Kg						
4-Methyl-2-Pentanone	ND		20	µg/Kg						
Methyl-t-Butyl Ether (MTBE)	ND		1.0	µg/Kg						
Naphthalene	ND		10	µg/Kg						
Propionitrile	ND		20	µg/Kg						
n-Propylbenzene	ND		1.0	µg/Kg						
sec-Butylbenzene	ND		1.0	µg/Kg						
Styrene	ND		1.0	µg/Kg						
Tert-amyl-Methyl Ether (TAME)	ND		1.0	µg/Kg						
Tert-Butyl Alcohol (TBA)	ND		25	µg/Kg						
tert-Butylbenzene	ND		1.0	µg/Kg						
1,1,1,2-Tetrachloroethane	ND		1.0	µg/Kg						
1,1,2,2-Tetrachloroethane	ND		1.0	µg/Kg						
Tetrachloroethene	ND		1.0	µg/Kg						
Toluene	ND		1.0	µg/Kg						
1,2,3-Trichlorobenzene	ND		1.0	µg/Kg						
1,2,4-Trichlorobenzene	ND		1.0	µg/Kg						
1,1,1-Trichloroethane	ND		1.0	µg/Kg						
1,1,2-Trichloroethane	ND		1.0	µg/Kg						
Trichloroethene	ND		1.0	µg/Kg						
Trichlorofluoromethane	ND		1.0	µg/Kg						
1,2,3-Trichloropropane	ND		1.0	µg/Kg						
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1.0	µg/Kg						
1,2,4-Trimethylbenzene	ND		1.0	µg/Kg						
1,3,5-Trimethylbenzene	ND		1.0	µg/Kg						
Vinyl Chloride	ND		1.0	µg/Kg						
o-Xylene	ND		1.0	µg/Kg						
p/m-Xylene	ND		2.0	µg/Kg						
Total Xylenes	ND		3.0	µg/Kg						
Surrogate: Dibromofluoromethane	54			µg/Kg	50.0		107	60-140		
Surrogate: 4-Bromofluorobenzene	45			µg/Kg	50.0		90.4	60-140		
Surrogate: 1,2-Dichloroethane-d4	51			µg/Kg	50.0		101	60-140		
Surrogate: Toluene-d8	50			µg/Kg	50.0		99.4	60-140		

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Quality Control
(Continued)

Volatile Organic Compounds (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8B0007 (Continued)										
LCS (B8B0007-BS1)				Prepared & Analyzed: 02/05/2018						
Allyl Chloride	61		1.0	µg/Kg	50.0		122	60-140		
Benzene	53		1.0	µg/Kg	50.0		106	70-130		
Bromobenzene	51		1.0	µg/Kg	50.0		102	70-130		
Bromodichloromethane	53		1.0	µg/Kg	50.0		105	70-130		
Bromoform	53		1.0	µg/Kg	50.0		106	70-130		
Chlorobenzene	50		1.0	µg/Kg	50.0		100	70-130		
Chloroethane	44		5.0	µg/Kg	50.0		88.9	70-130		
Chloroform	52		1.0	µg/Kg	50.0		104	70-130		
4-Chlorotoluene	50		1.0	µg/Kg	50.0		99.7	70-130		
Dibromomethane	54		1.0	µg/Kg	50.0		108	70-130		
1,2-Dichlorobenzene	48		1.0	µg/Kg	50.0		96.3	70-130		
1,1-Dichloroethene	46		1.0	µg/Kg	50.0		91.4	70-130		
1,2-Dichloropropane	49		1.0	µg/Kg	50.0		98.3	70-130		
2,2-Dichloropropane	53		1.0	µg/Kg	50.0		106	70-130		
1,1-Dichloropropene	51		1.0	µg/Kg	50.0		102	70-130		
Diethyl Ether	41		1.0	µg/Kg	50.0		82.1	70-130		
Diisopropyl Ether (DIPE)	47		1.0	µg/Kg	50.0		93.8	70-130		
Ethylbenzene	50		1.0	µg/Kg	50.0		100	70-130		
Hexachloro-1,3-Butadiene	52		1.0	µg/Kg	50.0		104	70-130		
Methylene Chloride	55		10	µg/Kg	50.0		110	70-130		
Methyl-t-Butyl Ether (MTBE)	50		1.0	µg/Kg	50.0		99.5	70-130		
Naphthalene	48		10	µg/Kg	50.0		95.5	70-130		
Styrene	52		1.0	µg/Kg	50.0		104	70-130		
tert-Butylbenzene	53		1.0	µg/Kg	50.0		105	70-130		
Tetrachloroethene	54		1.0	µg/Kg	50.0		107	70-130		
Toluene	53		1.0	µg/Kg	50.0		105	70-130		
1,2,3-Trichlorobenzene	52		1.0	µg/Kg	50.0		104	70-130		
Trichloroethene	51		1.0	µg/Kg	50.0		103	70-130		
1,3,5-Trimethylbenzene	51		1.0	µg/Kg	50.0		102	70-130		
Vinyl Chloride	48		1.0	µg/Kg	50.0		95.6	70-130		
Surrogate: Dibromofluoromethane	54			µg/Kg	50.0		108	60-140		
Surrogate: 4-Bromofluorobenzene	49			µg/Kg	50.0		97.8	60-140		
Surrogate: 1,2-Dichloroethane-d4	48			µg/Kg	50.0		95.6	60-140		
Surrogate: Toluene-d8	51			µg/Kg	50.0		101	60-140		

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Quality Control
(Continued)

Volatile Organic Compounds (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: B8B0007 (Continued)										
LCS Dup (B8B0007-BSD1)				Prepared & Analyzed: 02/05/2018						
Allyl Chloride	58		1.0	µg/Kg	50.0		117	60-140	4.67	20
Benzene	50		1.0	µg/Kg	50.0		101	70-130	5.04	20
Bromobenzene	50		1.0	µg/Kg	50.0		99.7	70-130	2.67	20
Bromodichloromethane	50		1.0	µg/Kg	50.0		101	70-130	4.57	20
Bromoform	53		1.0	µg/Kg	50.0		107	70-130	0.639	20
Chlorobenzene	49		1.0	µg/Kg	50.0		97.1	70-130	3.24	20
Chloroethane	40		5.0	µg/Kg	50.0		80.3	70-130	10.2	20
Chloroform	50		1.0	µg/Kg	50.0		100	70-130	3.83	20
4-Chlorotoluene	47		1.0	µg/Kg	50.0		94.4	70-130	5.44	20
Dibromomethane	54		1.0	µg/Kg	50.0		108	70-130	0.704	20
1,2-Dichlorobenzene	47		1.0	µg/Kg	50.0		94.8	70-130	1.61	20
1,1-Dichloroethene	44		1.0	µg/Kg	50.0		87.3	70-130	4.54	20
1,2-Dichloropropane	49		1.0	µg/Kg	50.0		97.2	70-130	1.15	20
2,2-Dichloropropane	50		1.0	µg/Kg	50.0		100	70-130	6.04	20
1,1-Dichloropropene	47		1.0	µg/Kg	50.0		93.2	70-130	8.96	20
Diethyl Ether	41		1.0	µg/Kg	50.0		81.3	70-130	1.00	20
Diisopropyl Ether (DIPE)	46		1.0	µg/Kg	50.0		91.3	70-130	2.66	20
Ethylbenzene	47		1.0	µg/Kg	50.0		94.9	70-130	5.49	20
Hexachloro-1,3-Butadiene	48		1.0	µg/Kg	50.0		95.4	70-130	8.80	20
Methylene Chloride	52		10	µg/Kg	50.0		103	70-130	5.88	20
Methyl-t-Butyl Ether (MTBE)	50		1.0	µg/Kg	50.0		99.5	70-130	0.0201	20
Naphthalene	48		10	µg/Kg	50.0		96.9	70-130	1.50	20
Styrene	51		1.0	µg/Kg	50.0		101	70-130	2.92	20
tert-Butylbenzene	48		1.0	µg/Kg	50.0		95.9	70-130	9.23	20
Tetrachloroethene	49		1.0	µg/Kg	50.0		98.8	70-130	8.01	20
Toluene	50		1.0	µg/Kg	50.0		100	70-130	4.90	20
1,2,3-Trichlorobenzene	50		1.0	µg/Kg	50.0		101	70-130	3.09	20
Trichloroethene	48		1.0	µg/Kg	50.0		96.1	70-130	6.68	20
1,3,5-Trimethylbenzene	50		1.0	µg/Kg	50.0		99.7	70-130	2.67	20
Vinyl Chloride	42		1.0	µg/Kg	50.0		83.6	70-130	13.4	20
Surrogate: Dibromofluoromethane	54			µg/Kg	50.0		108	60-140		
Surrogate: 4-Bromofluorobenzene	49			µg/Kg	50.0		99.0	60-140		
Surrogate: 1,2-Dichloroethane-d4	49			µg/Kg	50.0		97.4	60-140		
Surrogate: Toluene-d8	50			µg/Kg	50.0		100	60-140		

Performance Analytical Laboratories, Inc.

ELAP 2960

McAlister Geoscience	Project: Los Coyotes Diagonal
5030 E. 2nd St, Ste 200	Project Number: Los Coyotes Diagonal
Long Beach, CA 90803	Project Manager: Jay Schneider

Notes and Definitions

Item	Definition
Dry	Sample results reported on a dry weight basis.
ND	Analyte NOT DETECTED at or above the reporting limit.
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.
(R)	Re-run for dilution or confirmation.

Performance Analytical Laboratories, Inc.
2702 East Willow Street, Signal Hill, CA 90755
310-809-1041

CHAIN-OF-CUSTODY

PAL WO#: P801014

Client Name	McAlister Geoscience
Address	5030 E 2nd St, Ste. 200 Long Beach, CA 90803
Project Manager	Jay Schneider
Email	jschneider@mcageosci.com
Phone	626-541-2668
Project Name/Number	Los Coyotes Diagonal
P.O. Number	
Sampled By	Jay Schneider

REQUESTED ANALYSIS: VOC 8260 Full Scan

	Client Sample ID / Description	Sample Date	Sample Time	Sample Matrix*	Container** Quantity/ Type/ Preservation	VOC 8260 Full Scan
1	B7, 5'	1/31/18	0826	soil	1 acetate sleeve	X
2	B7, 10'		0835			X
3	B7, 15'		0841			X
4	B4, 5'		0907			X
5	B4, 10'		0914			X
6	B4, 15'		0922			X
7	B6, 5'		0945			X
8	B6, 10'		0953			X
9	B6, 15'		1000			X
10	B5, 5'		1020			X

PAL Containers used:	Yes	No	
Type of Ice used:	Wet	Blue	None
Sample Preservative:	Yes	No	
TAT Needed (circle one)	STD 5 day	RUSH 24	48 / 72
EDD Required - Circle one:	Yes	No	
Type of EDD:			
Reciept Temp./ Initials: (Temp recorded is not corrected)	0.2°C MW		

RELINQUISHED BY
Signature: [signature]
Print: Joshua Kajiyama
Company: McAlister Geoscience
DATE: 1/31/2018
TIME: 15:44

RECEIVED BY
Signature: [signature]
Print: M Valenzuela
Company: PAL
DATE: 1/31/18
TIME: 1544

RELINQUISHED BY
Signature:
Print:
Company:
DATE:
TIME:

RECEIVED BY
Signature:
Print:
Company:
DATE:
TIME:

*Matrix Codes: (S = Soils); (P = Product); (SED = Sediment); (FW = Freshwater); (WW = Wastewater); (STRMW = Stormwater); (W = Other Water); (O = Other)
**Container Code: (V = VOA); (P = Poly); (G = Glass); (L = Sleeve); (J = Jar)
**Preservation Code: (H = HCl); (N = HNO3); (S = H2SO4); (O = NaOH); (Z = Zinc Acetate)

Performance Analytical Laboratories, Inc.
2702 East Willow Street, Signal Hill, CA 90755
310-809-1041

CHAIN-OF-CUSTODY

PAL WO#: P801014

Client Name	McAlister GeoScience
Address	5030 E 2nd St. Ste. 200, Long Beach, CA 90803
Project Manager	Jay Schneider
Email	jschneider@mcageosci.com
Phone	626-841-2667
Project Name/Number	Los Coyotes Diagonal
P.O. Number	
Sampled By	Jay Schneider

REQUESTED ANALYSIS: 8260 VOCs, Full scan

	Client Sample ID / Description	Sample Date	Sample Time	Sample Matrix*	Container** Quantity/ Type/ Preservation	8260 VOCs, Full scan
1	B5, 10'	1/31/18	1026	soil	1 acetate sleeve	X
2	B5, 15'		1035			X
3	B1, 5'		1053			X
4	B1, 10'		1100			X
5	B1, 15'		1109			X
6	B2, 5'		1123			X
7	B2, 10'		1134			X
8	B2, 15'		1142			X
9	B3, 5'		1213			X
10	B3, 10'		1219			X

PAL Containers used:	Yes	No	
Type of Ice used:	Wet	Blue	None
Sample Preservative:	Yes	No	

TAT Needed (circle one)	STD	RUSH		
	5 day	24	48	72

EDD Required - Circle one:	Yes	No
Type of EDD:		

Reciept Temp./ Initials:
(Temp recorded is not corrected)

RELINQUISHED BY
Signature: [signature]
Print: Joshua Kajiyama
Company: McAlister GeoScience
DATE: 1/31/18
TIME: 15:44

RECEIVED BY
Signature: M Valenzuela
Print: M Valenzuela
Company: PAL
DATE: 1/31/18
TIME: 1544

RELINQUISHED BY
Signature:
Print:
Company:
DATE:
TIME:

RECEIVED BY
Signature:
Print:
Company:
DATE:
TIME:

***Matrix Codes:** (**S** = Soils); (**P** = Product); (**SED** = Sediment); (**FW** = Freshwater); (**WW** = Wastewater); (**STRMW** = Stormwater); (**W** = Other Water); (O = Other)
****Container Code:** (**V** = VOA); (**P** = Poly); (**G** = Glass); (**L** = Sleeve); (**J** = Jar)
****Preservation Code:** (**H** = HCl); (**N** = HNO3); (**S** = H2SO4); (**O** = NaOH); (**Z** = Zinc Acetate)

Performance Analytical Laboratories, Inc.
2702 East Willow Street, Signal Hill, CA 90755
310-809-1041

CHAIN-OF-CUSTODY

PAL WO#: P801014

Client Name	McAlister GeoScience
Address	5030 E. 2nd St., Ste. 200, Long Beach, CA 90803
Project Manager	Jay Schneider
Email	jschneider@mcageosci.com
Phone	626-841-8672
Project Name/Number	Los Coyotes Diagonal
P.O. Number	
Sampled By	Jay Schneider

REQUESTED ANALYSIS: 8260 VOCs Full Scan

	Client Sample ID / Description	Sample Date	Sample Time	Sample Matrix*	Container** Quantity/ Type/ Preservation	8260 VOCs Full Scan
1	B3, 15'	1/31/18	1228	soil	1 acetate sleeve	X
2						
3						
4						
5						
6						
7						
8						
9						
10						

PAL Containers used:	Yes	No	
Type of Ice used:	Wet	Blue	None
Sample Preservative:	Yes	No	
TAT Needed (circle one)	STD 5 day	RUSH 24	48 / 72
EDD Required - Circle one:	Yes	No	
Type of EDD:			
Reciept Temp./ Initials: (Temp recorded is not corrected)	0.2°C MV		

RELINQUISHED BY
Signature: [signature]
Print: Joshua Kajiyama
Company: McAlister GeoScience
DATE: 1/31/2018
TIME: 15:44

RECEIVED BY
Signature: M Valenzuela
Print: M Valenzuela
Company: PAL
DATE: 1/31/18
TIME: 1544

RELINQUISHED BY
Signature:
Print:
Company:
DATE:
TIME:

RECEIVED BY
Signature:
Print:
Company:
DATE:
TIME:

***Matrix Codes:** (**S** = Soils); (**P** = Product); (**SED** = Sediment); (**FW** = Freshwater); (**WW** = Wastewater); (**STRMW** = Stormwater); (**W** = Other Water); (O = Other)
****Container Code:** (**V** = VOA); (**P** = Poly); (**G** = Glass); (**L** = Sleeve); (**J** = Jar)
****Preservation Code:** (**H** = HCl); (**N** = HNO3); (**S** = H2SO4); (**O** = NaOH); (**Z** = Zinc Acetate)

Performance Analytical Laboratories, Inc.

SAMPLE RECIEPT FORM

WORK ORDER ID: P801014

Cooler 1 OF 1

Client McAlister GeoScience

Date Received: 1/31/18

Courier ☒ CLIENT ○ PALI ○ OTHER _____ ○ FEDEX ○ UPS Tracking # _____

TEMPERATURE: Criteria 0.0°C - 6.0°C

Cooler ID	Temperature Reading	Temperature w/o CF (°C)	Correction Factor (CF) (°C)	Temperature with CF (°C)	Thermometer ID
	○ Blank ◉ Sample	0.2	0.0	0.2	TM-12

☒ WET ICE ○ BLUE ICE ○ AMBIENT ○ OTHER _____

○ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

CUSTODY SEALS

Cooler Seal ○ Present and Intact ○ Present and **NOT** Intact ○ Seals signed and dated ☒ Not Present

Sample Seal ○ Present and Intact ○ Present and **NOT** Intact ○ Seals signed and dated ☒ Not Present

CLIENT COC

☒ INCLUDED ☒ Complete ○ Incomplete, See Notes/ Discrepancy Form

○ NOT INCLUDED

SAMPLE MATRIX

☒ SOLID ○ LIQUID ○ AIR ○ OTHER _____

SAMPLE CONDITION

	YES	NO	N/A
All sample containers received intact and in good condition	☒	☐	☐
All samples listed on COC(s) are present	☒	☐	☐
All sample info on containers are consistent with sample info on COC(s)	☒	☐	☐
Correct containers for analyses requested	☒	☐	☐
Sufficient volume for analyses requested	☒	☐	☐
Proper preservation chemical(s) noted on COC and/or sample container	☒	☐	☐
All samples received within method holding time	☒	☐	☐
Volatile analysis containers free of headspace larger than 6mm	☐	☐	☒

NOTES

Initials	Date	Initials	Date
MV	1/31/18		

Print Form

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

08 February 2018

Jay Schneider
Mcalister Geoscience
5030 E. 2nd St (Suite #200)
Long Beach, CA 90803

RE: Los Coyotes Diagonal

Enclosed are the results of analyses for samples received by the laboratory on 02/01/18 15:47. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Alexandra Huerta
Project Manager Assistant

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B7,15'	T180406-01	Air	01/31/18 13:24	02/01/18 15:47
B7,5'	T180406-02	Air	01/31/18 13:35	02/01/18 15:47
B4,15'	T180406-03	Air	01/31/18 13:59	02/01/18 15:47
B4,5'	T180406-04	Air	01/31/18 14:02	02/01/18 15:47
B6,15'	T180406-05	Air	01/31/18 14:25	02/01/18 15:47
B6,5'	T180406-06	Air	01/31/18 14:27	02/01/18 15:47
B5,15'	T180406-07	Air	01/31/18 14:48	02/01/18 15:47
B5,5'	T180406-08	Air	01/31/18 14:50	02/01/18 15:47
B1,15'	T180406-09	Air	01/31/18 15:09	02/01/18 15:47
B1,5'	T180406-10	Air	01/31/18 15:13	02/01/18 15:47
B2,15'	T180406-11	Air	01/31/18 15:31	02/01/18 15:47
B2,5'	T180406-12	Air	01/31/18 15:34	02/01/18 15:47
B3,15'	T180406-13	Air	01/31/18 16:00	02/01/18 15:47
B3,5'	T180406-14	Air	01/31/18 16:00	02/01/18 15:47

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Alexandra Huerta, Project Manager Assistant

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

DETECTIONS SUMMARY

Sample ID: B7,15' **Laboratory ID:** T180406-01

Analyte	Result	Reporting Limit	Units	Method	Notes
Cyclohexane	**64**	50	ppb(v)	TO-15	TO-14
Heptane	**220**	50	ppb(v)	TO-15	TO-14
Hexane	**270**	50	ppb(v)	TO-15	TO-14
Tetrachloroethene	**59**	50	ppb(v)	TO-15	TO-14
Benzene	**150**	50	ppb(v)	TO-15	TO-14
Toluene	**510**	50	ppb(v)	TO-15	TO-14
m,p-Xylene	**95**	50	ppb(v)	TO-15	TO-14

Sample ID: B7,5' **Laboratory ID:** T180406-02

Analyte	Result	Reporting Limit	Units	Method	Notes
Tetrachloroethene	**67**	50	ppb(v)	TO-15	TO-14
Trichloroethene	**190**	50	ppb(v)	TO-15	TO-14
Toluene	**100**	50	ppb(v)	TO-15	TO-14

Sample ID: B4,15' **Laboratory ID:** T180406-03

Analyte	Result	Reporting Limit	Units	Method	Notes
Acetone	**47**	5.0	ppb(v)	TO-15	
Isopropyl alcohol	**38**	5.0	ppb(v)	TO-15	
Chloroform	**1.4**	1.0	ppb(v)	TO-15	
Heptane	**26**	1.0	ppb(v)	TO-15	
Hexane	**9.5**	1.0	ppb(v)	TO-15	
Tetrahydrofuran	**2.5**	1.0	ppb(v)	TO-15	
Tetrachloroethene	**3.3**	1.0	ppb(v)	TO-15	
Trichloroethene	**2.2**	1.0	ppb(v)	TO-15	
2-Butanone (MEK)	**14**	5.0	ppb(v)	TO-15	
Benzene	**6.1**	1.0	ppb(v)	TO-15	
Toluene	**41**	1.0	ppb(v)	TO-15	
Ethylbenzene	**4.3**	1.0	ppb(v)	TO-15	
m,p-Xylene	**6.1**	2.0	ppb(v)	TO-15	

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949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

Sample ID: B4,15' **Laboratory ID:** T180406-03

Analyte	Result	Reporting Limit	Units	Method	Notes
o-Xylene	**3.4**	1.0	ppb(v)	TO-15	

Sample ID: B4,5' **Laboratory ID:** T180406-04

Analyte	Result	Reporting Limit	Units	Method	Notes
Acetone	**35**	5.0	ppb(v)	TO-15	
Isopropyl alcohol	**610**	5.0	ppb(v)	TO-15	
Heptane	**38**	1.0	ppb(v)	TO-15	
Hexane	**14**	1.0	ppb(v)	TO-15	
Tetrahydrofuran	**2.1**	1.0	ppb(v)	TO-15	
Tetrachloroethene	**11**	1.0	ppb(v)	TO-15	
Trichloroethene	**5.0**	1.0	ppb(v)	TO-15	
2-Butanone (MEK)	**6.4**	5.0	ppb(v)	TO-15	
Benzene	**8.1**	1.0	ppb(v)	TO-15	
Toluene	**45**	1.0	ppb(v)	TO-15	
Ethylbenzene	**3.6**	1.0	ppb(v)	TO-15	
m,p-Xylene	**6.1**	2.0	ppb(v)	TO-15	
o-Xylene	**3.4**	1.0	ppb(v)	TO-15	

Sample ID: B6,15' **Laboratory ID:** T180406-05

Analyte	Result	Reporting Limit	Units	Method	Notes
Acetone	**60**	5.0	ppb(v)	TO-15	
Carbon Disulfide	**5.6**	1.0	ppb(v)	TO-15	
Isopropyl alcohol	**15**	5.0	ppb(v)	TO-15	
Heptane	**150**	1.0	ppb(v)	TO-15	
Hexane	**36**	1.0	ppb(v)	TO-15	
Tetrahydrofuran	**4.4**	1.0	ppb(v)	TO-15	
Tetrachloroethene	**30**	1.0	ppb(v)	TO-15	
Trichloroethene	**1.7**	1.0	ppb(v)	TO-15	
1,2,4-Trimethylbenzene	**1.4**	1.0	ppb(v)	TO-15	
2-Butanone (MEK)	**21**	5.0	ppb(v)	TO-15	
Benzene	**23**	1.0	ppb(v)	TO-15	
Toluene	**120**	1.0	ppb(v)	TO-15	
Ethylbenzene	**11**	1.0	ppb(v)	TO-15	

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949.297.5020 Phone
949.297.5027 Fax

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5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

Sample ID: B6,15' **Laboratory ID:** T180406-05

Analyte	Result	Reporting Limit	Units	Method	Notes
m,p-Xylene	**12**	2.0	ppb(v)	TO-15	
o-Xylene	**7.0**	1.0	ppb(v)	TO-15	

Sample ID: B6,5' **Laboratory ID:** T180406-06

Analyte	Result	Reporting Limit	Units	Method	Notes
Acetone	**59**	5.0	ppb(v)	TO-15	
Isopropyl alcohol	**360**	5.0	ppb(v)	TO-15	
Heptane	**31**	1.0	ppb(v)	TO-15	
Hexane	**4.5**	1.0	ppb(v)	TO-15	
Tetrahydrofuran	**3.0**	1.0	ppb(v)	TO-15	
Tetrachloroethene	**55**	1.0	ppb(v)	TO-15	
Trichloroethene	**2.5**	1.0	ppb(v)	TO-15	
2-Butanone (MEK)	**9.9**	5.0	ppb(v)	TO-15	
Benzene	**8.7**	1.0	ppb(v)	TO-15	
Toluene	**45**	1.0	ppb(v)	TO-15	
Ethylbenzene	**4.1**	1.0	ppb(v)	TO-15	
m,p-Xylene	**7.4**	2.0	ppb(v)	TO-15	
o-Xylene	**4.1**	1.0	ppb(v)	TO-15	

Sample ID: B5,15' **Laboratory ID:** T180406-07

Analyte	Result	Reporting Limit	Units	Method	Notes
Hexane	**110**	50	ppb(v)	TO-15	TO-14
Tetrachloroethene	**400**	50	ppb(v)	TO-15	TO-14
Benzene	**50**	50	ppb(v)	TO-15	TO-14
Toluene	**120**	50	ppb(v)	TO-15	TO-14

Sample ID: B5,5' **Laboratory ID:** T180406-08

Analyte	Result	Reporting Limit	Units	Method	Notes
Acetone	**83**	5.0	ppb(v)	TO-15	
Carbon Disulfide	**1.5**	1.0	ppb(v)	TO-15	
Isopropyl alcohol	**230**	5.0	ppb(v)	TO-15	

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

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5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

Sample ID: B5,5' **Laboratory ID:** T180406-08

Analyte	Result	Reporting Limit	Units	Method	Notes
Heptane	**110**	1.0	ppb(v)	TO-15	
Hexane	**47**	1.0	ppb(v)	TO-15	
4-Ethyltoluene	**2.5**	1.0	ppb(v)	TO-15	
Tetrahydrofuran	**8.3**	1.0	ppb(v)	TO-15	
Tetrachloroethene	**44**	1.0	ppb(v)	TO-15	
Trichloroethene	**1.8**	1.0	ppb(v)	TO-15	
Trichlorofluoromethane	**12**	1.0	ppb(v)	TO-15	
2-Butanone (MEK)	**18**	5.0	ppb(v)	TO-15	
Benzene	**54**	1.0	ppb(v)	TO-15	
Toluene	**120**	1.0	ppb(v)	TO-15	
Ethylbenzene	**11**	1.0	ppb(v)	TO-15	
m,p-Xylene	**20**	2.0	ppb(v)	TO-15	
o-Xylene	**10**	1.0	ppb(v)	TO-15	

Sample ID: B1,15' **Laboratory ID:** T180406-09

Analyte	Result	Reporting Limit	Units	Method	Notes
Heptane	**76**	50	ppb(v)	TO-15	TO-14
Hexane	**120**	50	ppb(v)	TO-15	TO-14
Tetrachloroethene	**82**	50	ppb(v)	TO-15	TO-14
Benzene	**65**	50	ppb(v)	TO-15	TO-14
Toluene	**170**	50	ppb(v)	TO-15	TO-14

Sample ID: B1,5' **Laboratory ID:** T180406-10

Analyte	Result	Reporting Limit	Units	Method	Notes
Acetone	**77**	5.0	ppb(v)	TO-15	
Isopropyl alcohol	**260**	5.0	ppb(v)	TO-15	
Heptane	**23**	1.0	ppb(v)	TO-15	
Hexane	**5.5**	1.0	ppb(v)	TO-15	
Tetrahydrofuran	**4.1**	1.0	ppb(v)	TO-15	
Tetrachloroethene	**37**	1.0	ppb(v)	TO-15	
Trichlorofluoromethane	**2.5**	1.0	ppb(v)	TO-15	
2-Butanone (MEK)	**18**	5.0	ppb(v)	TO-15	
Benzene	**12**	1.0	ppb(v)	TO-15	

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

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Sample ID: B1,5' **Laboratory ID:** T180406-10

Analyte	Result	Reporting Limit	Units	Method	Notes
Toluene	**64**	1.0	ppb(v)	TO-15	
Ethylbenzene	**7.3**	1.0	ppb(v)	TO-15	
m,p-Xylene	**15**	2.0	ppb(v)	TO-15	
o-Xylene	**7.7**	1.0	ppb(v)	TO-15	

Sample ID: B2,15' **Laboratory ID:** T180406-11

Analyte	Result	Reporting Limit	Units	Method	Notes
Isopropyl alcohol	**2000**	50	ppb(v)	TO-15	TO-14
Hexane	**81**	50	ppb(v)	TO-15	TO-14
Toluene	**95**	50	ppb(v)	TO-15	TO-14

Sample ID: B2,5' **Laboratory ID:** T180406-12

Analyte	Result	Reporting Limit	Units	Method	Notes
Isopropyl alcohol	**23000**	50	ppb(v)	TO-15	TO-14
Tetrachloroethene	**94**	50	ppb(v)	TO-15	TO-14

Sample ID: B3,15' **Laboratory ID:** T180406-13

Analyte	Result	Reporting Limit	Units	Method	Notes
Isopropyl alcohol	**720**	50	ppb(v)	TO-15	TO-14
Toluene	**57**	50	ppb(v)	TO-15	TO-14

Sample ID: B3,5' **Laboratory ID:** T180406-14

Analyte	Result	Reporting Limit	Units	Method	Notes
Acetone	**34**	5.0	ppb(v)	TO-15	
Isopropyl alcohol	**25**	5.0	ppb(v)	TO-15	
Heptane	**3.5**	1.0	ppb(v)	TO-15	
Tetrahydrofuran	**1.8**	1.0	ppb(v)	TO-15	
Tetrachloroethene	**3.0**	1.0	ppb(v)	TO-15	
2-Butanone (MEK)	**7.3**	5.0	ppb(v)	TO-15	

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949.297.5027 Fax

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5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

Sample ID: B3,5' **Laboratory ID:** T180406-14

Analyte	Result	Reporting Limit	Units	Method	Notes
Benzene	**1.8**	1.0	ppb(v)	TO-15	
Toluene	**8.9**	1.0	ppb(v)	TO-15	
Ethylbenzene	**1.1**	1.0	ppb(v)	TO-15	
o-Xylene	**1.1**	1.0	ppb(v)	TO-15	

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

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5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B7,15'

T180406-01 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Acetone	ND	50	ppb(v)	1.73	8020218	02/02/18	02/02/18	TO-15	TO-14
1,3-Butadiene	ND	50	"	"	"	"	"	"	TO-14
Carbon Disulfide	ND	50	"	"	"	"	"	"	TO-14
1,1,2-trichloro-1,2,2-trifluoroethane (CFC 113)	ND	50	"	"	"	"	"	"	TO-14
Isopropyl alcohol	ND	50	"	"	"	"	"	"	TO-14
Bromodichloromethane	ND	50	"	"	"	"	"	"	TO-14
Bromoform	ND	50	"	"	"	"	"	"	TO-14
Bromomethane	ND	50	"	"	"	"	"	"	TO-14
Carbon tetrachloride	ND	50	"	"	"	"	"	"	TO-14
Chlorobenzene	ND	50	"	"	"	"	"	"	TO-14
Chloroethane	ND	50	"	"	"	"	"	"	TO-14
Chloroform	ND	50	"	"	"	"	"	"	TO-14
Chloromethane	ND	50	"	"	"	"	"	"	TO-14
Cyclohexane	**64**	50	"	"	"	"	"	"	TO-14
Heptane	**220**	50	"	"	"	"	"	"	TO-14
Hexane	**270**	50	"	"	"	"	"	"	TO-14
Dibromochloromethane	ND	50	"	"	"	"	"	"	TO-14
1,2-Dibromoethane (EDB)	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
1,3-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
1,4-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
Dichlorodifluoromethane	ND	50	"	"	"	"	"	"	TO-14
1,1-Dichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,1-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
cis-1,2-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
trans-1,2-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichloropropane	ND	50	"	"	"	"	"	"	TO-14
cis-1,3-Dichloropropene	ND	50	"	"	"	"	"	"	TO-14
trans-1,3-Dichloropropene	ND	50	"	"	"	"	"	"	TO-14
4-Ethyltoluene	ND	50	"	"	"	"	"	"	TO-14

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949.297.5020 Phone
949.297.5027 Fax

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5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B7,15'

T180406-01 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Methylene chloride	ND	50	ppb(v)	1.73	8020218	02/02/18	02/02/18	TO-15	TO-14
Styrene	ND	50	"	"	"	"	"	"	TO-14
1,1,2,2-Tetrachloroethane	ND	50	"	"	"	"	"	"	TO-14
Tetrahydrofuran	ND	50	"	"	"	"	"	"	TO-14
Tetrachloroethene	**59**	50	"	"	"	"	"	"	TO-14
1,1,2-Trichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,1,1-Trichloroethane	ND	50	"	"	"	"	"	"	TO-14
Trichloroethene	ND	50	"	"	"	"	"	"	TO-14
Trichlorofluoromethane	ND	50	"	"	"	"	"	"	TO-14
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	TO-14
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	TO-14
Vinyl acetate	ND	50	"	"	"	"	"	"	TO-14
Vinyl chloride	ND	50	"	"	"	"	"	"	TO-14
1,4-Dioxane	ND	50	"	"	"	"	"	"	TO-14
2-Butanone (MEK)	ND	50	"	"	"	"	"	"	TO-14
Methyl isobutyl ketone	ND	50	"	"	"	"	"	"	TO-14
Benzene	**150**	50	"	"	"	"	"	"	TO-14
Toluene	**510**	50	"	"	"	"	"	"	TO-14
Ethylbenzene	ND	50	"	"	"	"	"	"	TO-14
m,p-Xylene	**95**	50	"	"	"	"	"	"	TO-14
o-Xylene	ND	50	"	"	"	"	"	"	TO-14

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949.297.5020 Phone
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5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B7,5'

T180406-02 (Air)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TO-15									
Acetone	ND	50	ppb(v)	1.71	8020218	02/02/18	02/02/18	TO-15	TO-14
1,3-Butadiene	ND	50	"	"	"	"	"	"	TO-14
Carbon Disulfide	ND	50	"	"	"	"	"	"	TO-14
1,1,2-trichloro-1,2,2-trifluoroethane (CFC 113)	ND	50	"	"	"	"	"	"	TO-14
Isopropyl alcohol	ND	50	"	"	"	"	"	"	TO-14
Bromodichloromethane	ND	50	"	"	"	"	"	"	TO-14
Bromoform	ND	50	"	"	"	"	"	"	TO-14
Bromomethane	ND	50	"	"	"	"	"	"	TO-14
Carbon tetrachloride	ND	50	"	"	"	"	"	"	TO-14
Chlorobenzene	ND	50	"	"	"	"	"	"	TO-14
Chloroethane	ND	50	"	"	"	"	"	"	TO-14
Chloroform	ND	50	"	"	"	"	"	"	TO-14
Chloromethane	ND	50	"	"	"	"	"	"	TO-14
Cyclohexane	ND	50	"	"	"	"	"	"	TO-14
Heptane	ND	50	"	"	"	"	"	"	TO-14
Hexane	ND	50	"	"	"	"	"	"	TO-14
Dibromochloromethane	ND	50	"	"	"	"	"	"	TO-14
1,2-Dibromoethane (EDB)	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
1,3-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
1,4-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
Dichlorodifluoromethane	ND	50	"	"	"	"	"	"	TO-14
1,1-Dichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,1-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
cis-1,2-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
trans-1,2-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichloropropane	ND	50	"	"	"	"	"	"	TO-14
cis-1,3-Dichloropropene	ND	50	"	"	"	"	"	"	TO-14
trans-1,3-Dichloropropene	ND	50	"	"	"	"	"	"	TO-14
4-Ethyltoluene	ND	50	"	"	"	"	"	"	TO-14

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949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B7,5'

T180406-02 (Air)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TO-15									
Methylene chloride	ND	50	ppb(v)	1.71	8020218	02/02/18	02/02/18	TO-15	TO-14
Styrene	ND	50	"	"	"	"	"	"	TO-14
1,1,2,2-Tetrachloroethane	ND	50	"	"	"	"	"	"	TO-14
Tetrahydrofuran	ND	50	"	"	"	"	"	"	TO-14
Tetrachloroethene	**67**	50	"	"	"	"	"	"	TO-14
1,1,2-Trichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,1,1-Trichloroethane	ND	50	"	"	"	"	"	"	TO-14
Trichloroethene	**190**	50	"	"	"	"	"	"	TO-14
Trichlorofluoromethane	ND	50	"	"	"	"	"	"	TO-14
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	TO-14
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	TO-14
Vinyl acetate	ND	50	"	"	"	"	"	"	TO-14
Vinyl chloride	ND	50	"	"	"	"	"	"	TO-14
1,4-Dioxane	ND	50	"	"	"	"	"	"	TO-14
2-Butanone (MEK)	ND	50	"	"	"	"	"	"	TO-14
Methyl isobutyl ketone	ND	50	"	"	"	"	"	"	TO-14
Benzene	ND	50	"	"	"	"	"	"	TO-14
Toluene	**100**	50	"	"	"	"	"	"	TO-14
Ethylbenzene	ND	50	"	"	"	"	"	"	TO-14
m,p-Xylene	ND	50	"	"	"	"	"	"	TO-14
o-Xylene	ND	50	"	"	"	"	"	"	TO-14

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B4,15'

T180406-03 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Acetone	**47**	5.0	ppb(v)	1.61	8020218	02/02/18	02/06/18	TO-15	
1,3-Butadiene	ND	2.0	"	"	"	"	"	"	
Carbon Disulfide	ND	1.0	"	"	"	"	"	"	
1,1,2-trichloro-1,2,2-trifluoroethane (CFC 113)	ND	1.0	"	"	"	"	"	"	
Isopropyl alcohol	**38**	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	**1.4**	1.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
Cyclohexane	ND	1.0	"	"	"	"	"	"	
Heptane	**26**	1.0	"	"	"	"	"	"	
Hexane	**9.5**	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
4-Ethyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B4,15'

T180406-03 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Styrene	ND	1.0	ppb(v)	1.61	8020218	02/02/18	02/06/18	TO-15	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrahydrofuran	**2.5**	1.0	"	"	"	"	"	"	
Tetrachloroethene	**3.3**	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**2.2**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Vinyl acetate	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
1,4-Dioxane	ND	5.0	"	"	"	"	"	"	
2-Butanone (MEK)	**14**	5.0	"	"	"	"	"	"	
Methyl isobutyl ketone	ND	10	"	"	"	"	"	"	
Benzene	**6.1**	1.0	"	"	"	"	"	"	
Toluene	**41**	1.0	"	"	"	"	"	"	
Ethylbenzene	**4.3**	1.0	"	"	"	"	"	"	
m,p-Xylene	**6.1**	2.0	"	"	"	"	"	"	
o-Xylene	**3.4**	1.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*78.6 %*	*40-160*		"	"	"	"	

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B4,5'

T180406-04 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Acetone	**35**	5.0	ppb(v)	1.62	8020218	02/02/18	02/06/18	TO-15	
1,3-Butadiene	ND	2.0	"	"	"	"	"	"	
Carbon Disulfide	ND	1.0	"	"	"	"	"	"	
1,1,2-trichloro-1,2,2-trifluoroethane (CFC 113)	ND	1.0	"	"	"	"	"	"	
Isopropyl alcohol	**610**	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
Cyclohexane	ND	1.0	"	"	"	"	"	"	
Heptane	**38**	1.0	"	"	"	"	"	"	
Hexane	**14**	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
4-Ethyltoluene	ND	1.0	"	"	"	"	"	"	

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B4,5'

T180406-04 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Methylene chloride	ND	1.0	ppb(v)	1.62	8020218	02/02/18	02/06/18	TO-15	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrahydrofuran	**2.1**	1.0	"	"	"	"	"	"	
Tetrachloroethene	**11**	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**5.0**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Vinyl acetate	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
1,4-Dioxane	ND	5.0	"	"	"	"	"	"	
2-Butanone (MEK)	**6.4**	5.0	"	"	"	"	"	"	
Methyl isobutyl ketone	ND	10	"	"	"	"	"	"	
Benzene	**8.1**	1.0	"	"	"	"	"	"	
Toluene	**45**	1.0	"	"	"	"	"	"	
Ethylbenzene	**3.6**	1.0	"	"	"	"	"	"	
m,p-Xylene	**6.1**	2.0	"	"	"	"	"	"	
o-Xylene	**3.4**	1.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*76.8 %*	*40-160*		*"*	*"*	*"*	*"*	

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949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B6,15'

T180406-05 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Acetone	**60**	5.0	ppb(v)	1.62	8020218	02/02/18	02/06/18	TO-15	
1,3-Butadiene	ND	2.0	"	"	"	"	"	"	
Carbon Disulfide	**5.6**	1.0	"	"	"	"	"	"	
1,1,2-trichloro-1,2,2-trifluoroethane (CFC 113)	ND	1.0	"	"	"	"	"	"	
Isopropyl alcohol	**15**	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
Cyclohexane	ND	1.0	"	"	"	"	"	"	
Heptane	**150**	1.0	"	"	"	"	"	"	
Hexane	**36**	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
4-Ethyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B6,15'

T180406-05 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Styrene	ND	1.0	ppb(v)	1.62	8020218	02/02/18	02/06/18	TO-15	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrahydrofuran	**4.4**	1.0	"	"	"	"	"	"	
Tetrachloroethene	**30**	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**1.7**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**1.4**	1.0	"	"	"	"	"	"	
Vinyl acetate	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
1,4-Dioxane	ND	5.0	"	"	"	"	"	"	
2-Butanone (MEK)	**21**	5.0	"	"	"	"	"	"	
Methyl isobutyl ketone	ND	10	"	"	"	"	"	"	
Benzene	**23**	1.0	"	"	"	"	"	"	
Toluene	**120**	1.0	"	"	"	"	"	"	
Ethylbenzene	**11**	1.0	"	"	"	"	"	"	
m,p-Xylene	**12**	2.0	"	"	"	"	"	"	
o-Xylene	**7.0**	1.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*80.6 %*	*40-160*		*"*	*"*	*"*	*"*	

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25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B6,5'

T180406-06 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Acetone	**59**	5.0	ppb(v)	1.66	8020218	02/02/18	02/06/18	TO-15	
1,3-Butadiene	ND	2.0	"	"	"	"	"	"	
Carbon Disulfide	ND	1.0	"	"	"	"	"	"	
1,1,2-trichloro-1,2,2-trifluoroethane (CFC 113)	ND	1.0	"	"	"	"	"	"	
Isopropyl alcohol	**360**	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
Cyclohexane	ND	1.0	"	"	"	"	"	"	
Heptane	**31**	1.0	"	"	"	"	"	"	
Hexane	**4.5**	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
4-Ethyltoluene	ND	1.0	"	"	"	"	"	"	

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25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B6,5'

T180406-06 (Air)

SunStar Laboratories, Inc.

TO-15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Methylene chloride	ND	1.0	ppb(v)	1.66	8020218	02/02/18	02/06/18	TO-15	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrahydrofuran	**3.0**	1.0	"	"	"	"	"	"	
Tetrachloroethene	**55**	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**2.5**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Vinyl acetate	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
1,4-Dioxane	ND	5.0	"	"	"	"	"	"	
2-Butanone (MEK)	**9.9**	5.0	"	"	"	"	"	"	
Methyl isobutyl ketone	ND	10	"	"	"	"	"	"	
Benzene	**8.7**	1.0	"	"	"	"	"	"	
Toluene	**45**	1.0	"	"	"	"	"	"	
Ethylbenzene	**4.1**	1.0	"	"	"	"	"	"	
m,p-Xylene	**7.4**	2.0	"	"	"	"	"	"	
o-Xylene	**4.1**	1.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*78.7 %*	*40-160*		"	"	"	"	

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Alexandra Huerta, Project Manager Assistant

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B5,15'

T180406-07 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Acetone	ND	50	ppb(v)	1.6	8020218	02/02/18	02/02/18	TO-15	TO-14
1,3-Butadiene	ND	50	"	"	"	"	"	"	TO-14
Carbon Disulfide	ND	50	"	"	"	"	"	"	TO-14
1,1,2-trichloro-1,2,2-trifluoroethane (CFC 113)	ND	50	"	"	"	"	"	"	TO-14
Isopropyl alcohol	ND	50	"	"	"	"	"	"	TO-14
Bromodichloromethane	ND	50	"	"	"	"	"	"	TO-14
Bromoform	ND	50	"	"	"	"	"	"	TO-14
Bromomethane	ND	50	"	"	"	"	"	"	TO-14
Carbon tetrachloride	ND	50	"	"	"	"	"	"	TO-14
Chlorobenzene	ND	50	"	"	"	"	"	"	TO-14
Chloroethane	ND	50	"	"	"	"	"	"	TO-14
Chloroform	ND	50	"	"	"	"	"	"	TO-14
Chloromethane	ND	50	"	"	"	"	"	"	TO-14
Cyclohexane	ND	50	"	"	"	"	"	"	TO-14
Heptane	ND	50	"	"	"	"	"	"	TO-14
Hexane	**110**	50	"	"	"	"	"	"	TO-14
Dibromochloromethane	ND	50	"	"	"	"	"	"	TO-14
1,2-Dibromoethane (EDB)	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
1,3-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
1,4-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
Dichlorodifluoromethane	ND	50	"	"	"	"	"	"	TO-14
1,1-Dichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,1-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
cis-1,2-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
trans-1,2-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichloropropane	ND	50	"	"	"	"	"	"	TO-14
cis-1,3-Dichloropropene	ND	50	"	"	"	"	"	"	TO-14
trans-1,3-Dichloropropene	ND	50	"	"	"	"	"	"	TO-14
4-Ethyltoluene	ND	50	"	"	"	"	"	"	TO-14

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B5,15'

T180406-07 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Methylene chloride	ND	50	ppb(v)	1.6	8020218	02/02/18	02/02/18	TO-15	TO-14
Styrene	ND	50	"	"	"	"	"	"	TO-14
1,1,2,2-Tetrachloroethane	ND	50	"	"	"	"	"	"	TO-14
Tetrahydrofuran	ND	50	"	"	"	"	"	"	TO-14
Tetrachloroethene	**400**	50	"	"	"	"	"	"	TO-14
1,1,2-Trichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,1,1-Trichloroethane	ND	50	"	"	"	"	"	"	TO-14
Trichloroethene	ND	50	"	"	"	"	"	"	TO-14
Trichlorofluoromethane	ND	50	"	"	"	"	"	"	TO-14
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	TO-14
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	TO-14
Vinyl acetate	ND	50	"	"	"	"	"	"	TO-14
Vinyl chloride	ND	50	"	"	"	"	"	"	TO-14
1,4-Dioxane	ND	50	"	"	"	"	"	"	TO-14
2-Butanone (MEK)	ND	50	"	"	"	"	"	"	TO-14
Methyl isobutyl ketone	ND	50	"	"	"	"	"	"	TO-14
Benzene	**50**	50	"	"	"	"	"	"	TO-14
Toluene	**120**	50	"	"	"	"	"	"	TO-14
Ethylbenzene	ND	50	"	"	"	"	"	"	TO-14
m,p-Xylene	ND	50	"	"	"	"	"	"	TO-14
o-Xylene	ND	50	"	"	"	"	"	"	TO-14

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25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B5,5'

T180406-08 (Air)

SunStar Laboratories, Inc.

TO-15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acetone	**83**	5.0	ppb(v)	1.69	8020218	02/02/18	02/06/18	TO-15	
1,3-Butadiene	ND	2.0	"	"	"	"	"	"	
Carbon Disulfide	**1.5**	1.0	"	"	"	"	"	"	
1,1,2-trichloro-1,2,2-trifluoroethane (CFC 113)	ND	1.0	"	"	"	"	"	"	
Isopropyl alcohol	**230**	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
Cyclohexane	ND	1.0	"	"	"	"	"	"	
Heptane	**110**	1.0	"	"	"	"	"	"	
Hexane	**47**	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
4-Ethyltoluene	**2.5**	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B5,5'

T180406-08 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Styrene	ND	1.0	ppb(v)	1.69	8020218	02/02/18	02/06/18	TO-15	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrahydrofuran	**8.3**	1.0	"	"	"	"	"	"	
Tetrachloroethene	**44**	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	**1.8**	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	**12**	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Vinyl acetate	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
1,4-Dioxane	ND	5.0	"	"	"	"	"	"	
2-Butanone (MEK)	**18**	5.0	"	"	"	"	"	"	
Methyl isobutyl ketone	ND	10	"	"	"	"	"	"	
Benzene	**54**	1.0	"	"	"	"	"	"	
Toluene	**120**	1.0	"	"	"	"	"	"	
Ethylbenzene	**11**	1.0	"	"	"	"	"	"	
m,p-Xylene	**20**	2.0	"	"	"	"	"	"	
o-Xylene	**10**	1.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*79.8 %*	*40-160*		"	"	"	"	

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B1,15'

T180406-09 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Acetone	ND	50	ppb(v)	1.6	8020218	02/02/18	02/02/18	TO-15	TO-14
1,3-Butadiene	ND	50	"	"	"	"	"	"	TO-14
Carbon Disulfide	ND	50	"	"	"	"	"	"	TO-14
1,1,2-trichloro-1,2,2-trifluoroethane (CFC 113)	ND	50	"	"	"	"	"	"	TO-14
Isopropyl alcohol	ND	50	"	"	"	"	"	"	TO-14
Bromodichloromethane	ND	50	"	"	"	"	"	"	TO-14
Bromoform	ND	50	"	"	"	"	"	"	TO-14
Bromomethane	ND	50	"	"	"	"	"	"	TO-14
Carbon tetrachloride	ND	50	"	"	"	"	"	"	TO-14
Chlorobenzene	ND	50	"	"	"	"	"	"	TO-14
Chloroethane	ND	50	"	"	"	"	"	"	TO-14
Chloroform	ND	50	"	"	"	"	"	"	TO-14
Chloromethane	ND	50	"	"	"	"	"	"	TO-14
Cyclohexane	ND	50	"	"	"	"	"	"	TO-14
Heptane	**76**	50	"	"	"	"	"	"	TO-14
Hexane	**120**	50	"	"	"	"	"	"	TO-14
Dibromochloromethane	ND	50	"	"	"	"	"	"	TO-14
1,2-Dibromoethane (EDB)	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
1,3-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
1,4-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
Dichlorodifluoromethane	ND	50	"	"	"	"	"	"	TO-14
1,1-Dichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,1-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
cis-1,2-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
trans-1,2-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichloropropane	ND	50	"	"	"	"	"	"	TO-14
cis-1,3-Dichloropropene	ND	50	"	"	"	"	"	"	TO-14
trans-1,3-Dichloropropene	ND	50	"	"	"	"	"	"	TO-14
4-Ethyltoluene	ND	50	"	"	"	"	"	"	TO-14

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B1,15'

T180406-09 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Methylene chloride	ND	50	ppb(v)	1.6	8020218	02/02/18	02/02/18	TO-15	TO-14
Styrene	ND	50	"	"	"	"	"	"	TO-14
1,1,2,2-Tetrachloroethane	ND	50	"	"	"	"	"	"	TO-14
Tetrahydrofuran	ND	50	"	"	"	"	"	"	TO-14
Tetrachloroethene	**82**	50	"	"	"	"	"	"	TO-14
1,1,2-Trichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,1,1-Trichloroethane	ND	50	"	"	"	"	"	"	TO-14
Trichloroethene	ND	50	"	"	"	"	"	"	TO-14
Trichlorofluoromethane	ND	50	"	"	"	"	"	"	TO-14
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	TO-14
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	TO-14
Vinyl acetate	ND	50	"	"	"	"	"	"	TO-14
Vinyl chloride	ND	50	"	"	"	"	"	"	TO-14
1,4-Dioxane	ND	50	"	"	"	"	"	"	TO-14
2-Butanone (MEK)	ND	50	"	"	"	"	"	"	TO-14
Methyl isobutyl ketone	ND	50	"	"	"	"	"	"	TO-14
Benzene	**65**	50	"	"	"	"	"	"	TO-14
Toluene	**170**	50	"	"	"	"	"	"	TO-14
Ethylbenzene	ND	50	"	"	"	"	"	"	TO-14
m,p-Xylene	ND	50	"	"	"	"	"	"	TO-14
o-Xylene	ND	50	"	"	"	"	"	"	TO-14

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B1,5'

T180406-10 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Acetone	**77**	5.0	ppb(v)	1.6	8020218	02/02/18	02/06/18	TO-15	
1,3-Butadiene	ND	2.0	"	"	"	"	"	"	
Carbon Disulfide	ND	1.0	"	"	"	"	"	"	
1,1,2-trichloro-1,2,2-trifluoroethane (CFC 113)	ND	1.0	"	"	"	"	"	"	
Isopropyl alcohol	**260**	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
Cyclohexane	ND	1.0	"	"	"	"	"	"	
Heptane	**23**	1.0	"	"	"	"	"	"	
Hexane	**5.5**	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
4-Ethyltoluene	ND	1.0	"	"	"	"	"	"	

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25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B1,5'

T180406-10 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Methylene chloride	ND	1.0	ppb(v)	1.6	8020218	02/02/18	02/06/18	TO-15	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrahydrofuran	**4.1**	1.0	"	"	"	"	"	"	
Tetrachloroethene	**37**	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	**2.5**	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Vinyl acetate	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
1,4-Dioxane	ND	5.0	"	"	"	"	"	"	
2-Butanone (MEK)	**18**	5.0	"	"	"	"	"	"	
Methyl isobutyl ketone	ND	10	"	"	"	"	"	"	
Benzene	**12**	1.0	"	"	"	"	"	"	
Toluene	**64**	1.0	"	"	"	"	"	"	
Ethylbenzene	**7.3**	1.0	"	"	"	"	"	"	
m,p-Xylene	**15**	2.0	"	"	"	"	"	"	
o-Xylene	**7.7**	1.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*80.2 %*	*40-160*		*"*	*"*	*"*	*"*	

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25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B2,15'

T180406-11 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Acetone	ND	50	ppb(v)	1.64	8020218	02/02/18	02/02/18	TO-15	TO-14
1,3-Butadiene	ND	50	"	"	"	"	"	"	TO-14
Carbon Disulfide	ND	50	"	"	"	"	"	"	TO-14
1,1,2-trichloro-1,2,2-trifluoroethane (CFC 113)	ND	50	"	"	"	"	"	"	TO-14
Isopropyl alcohol	**2000**	50	"	"	"	"	"	"	TO-14
Bromodichloromethane	ND	50	"	"	"	"	"	"	TO-14
Bromoform	ND	50	"	"	"	"	"	"	TO-14
Bromomethane	ND	50	"	"	"	"	"	"	TO-14
Carbon tetrachloride	ND	50	"	"	"	"	"	"	TO-14
Chlorobenzene	ND	50	"	"	"	"	"	"	TO-14
Chloroethane	ND	50	"	"	"	"	"	"	TO-14
Chloroform	ND	50	"	"	"	"	"	"	TO-14
Chloromethane	ND	50	"	"	"	"	"	"	TO-14
Cyclohexane	ND	50	"	"	"	"	"	"	TO-14
Heptane	ND	50	"	"	"	"	"	"	TO-14
Hexane	**81**	50	"	"	"	"	"	"	TO-14
Dibromochloromethane	ND	50	"	"	"	"	"	"	TO-14
1,2-Dibromoethane (EDB)	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
1,3-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
1,4-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
Dichlorodifluoromethane	ND	50	"	"	"	"	"	"	TO-14
1,1-Dichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,1-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
cis-1,2-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
trans-1,2-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichloropropane	ND	50	"	"	"	"	"	"	TO-14
cis-1,3-Dichloropropene	ND	50	"	"	"	"	"	"	TO-14
trans-1,3-Dichloropropene	ND	50	"	"	"	"	"	"	TO-14
4-Ethyltoluene	ND	50	"	"	"	"	"	"	TO-14

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B2,15'

T180406-11 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Methylene chloride	ND	50	ppb(v)	1.64	8020218	02/02/18	02/02/18	TO-15	TO-14
Styrene	ND	50	"	"	"	"	"	"	TO-14
1,1,2,2-Tetrachloroethane	ND	50	"	"	"	"	"	"	TO-14
Tetrahydrofuran	ND	50	"	"	"	"	"	"	TO-14
Tetrachloroethene	ND	50	"	"	"	"	"	"	TO-14
1,1,2-Trichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,1,1-Trichloroethane	ND	50	"	"	"	"	"	"	TO-14
Trichloroethene	ND	50	"	"	"	"	"	"	TO-14
Trichlorofluoromethane	ND	50	"	"	"	"	"	"	TO-14
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	TO-14
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	TO-14
Vinyl acetate	ND	50	"	"	"	"	"	"	TO-14
Vinyl chloride	ND	50	"	"	"	"	"	"	TO-14
1,4-Dioxane	ND	50	"	"	"	"	"	"	TO-14
2-Butanone (MEK)	ND	50	"	"	"	"	"	"	TO-14
Methyl isobutyl ketone	ND	50	"	"	"	"	"	"	TO-14
Benzene	ND	50	"	"	"	"	"	"	TO-14
Toluene	**95**	50	"	"	"	"	"	"	TO-14
Ethylbenzene	ND	50	"	"	"	"	"	"	TO-14
m,p-Xylene	ND	50	"	"	"	"	"	"	TO-14
o-Xylene	ND	50	"	"	"	"	"	"	TO-14

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B2,5'

T180406-12 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Acetone	ND	50	ppb(v)	1.65	8020218	02/02/18	02/02/18	TO-15	TO-14
1,3-Butadiene	ND	50	"	"	"	"	"	"	TO-14
Carbon Disulfide	ND	50	"	"	"	"	"	"	TO-14
1,1,2-trichloro-1,2,2-trifluoroethane (CFC 113)	ND	50	"	"	"	"	"	"	TO-14
Isopropyl alcohol	**23000**	50	"	"	"	"	"	"	TO-14
Bromodichloromethane	ND	50	"	"	"	"	"	"	TO-14
Bromoform	ND	50	"	"	"	"	"	"	TO-14
Bromomethane	ND	50	"	"	"	"	"	"	TO-14
Carbon tetrachloride	ND	50	"	"	"	"	"	"	TO-14
Chlorobenzene	ND	50	"	"	"	"	"	"	TO-14
Chloroethane	ND	50	"	"	"	"	"	"	TO-14
Chloroform	ND	50	"	"	"	"	"	"	TO-14
Chloromethane	ND	50	"	"	"	"	"	"	TO-14
Cyclohexane	ND	50	"	"	"	"	"	"	TO-14
Heptane	ND	50	"	"	"	"	"	"	TO-14
Hexane	ND	50	"	"	"	"	"	"	TO-14
Dibromochloromethane	ND	50	"	"	"	"	"	"	TO-14
1,2-Dibromoethane (EDB)	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
1,3-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
1,4-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
Dichlorodifluoromethane	ND	50	"	"	"	"	"	"	TO-14
1,1-Dichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,1-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
cis-1,2-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
trans-1,2-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichloropropane	ND	50	"	"	"	"	"	"	TO-14
cis-1,3-Dichloropropene	ND	50	"	"	"	"	"	"	TO-14
trans-1,3-Dichloropropene	ND	50	"	"	"	"	"	"	TO-14
4-Ethyltoluene	ND	50	"	"	"	"	"	"	TO-14

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B2,5'

T180406-12 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Methylene chloride	ND	50	ppb(v)	1.65	8020218	02/02/18	02/02/18	TO-15	TO-14
Styrene	ND	50	"	"	"	"	"	"	TO-14
1,1,2,2-Tetrachloroethane	ND	50	"	"	"	"	"	"	TO-14
Tetrahydrofuran	ND	50	"	"	"	"	"	"	TO-14
Tetrachloroethene	**94**	50	"	"	"	"	"	"	TO-14
1,1,2-Trichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,1,1-Trichloroethane	ND	50	"	"	"	"	"	"	TO-14
Trichloroethene	ND	50	"	"	"	"	"	"	TO-14
Trichlorofluoromethane	ND	50	"	"	"	"	"	"	TO-14
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	TO-14
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	TO-14
Vinyl acetate	ND	50	"	"	"	"	"	"	TO-14
Vinyl chloride	ND	50	"	"	"	"	"	"	TO-14
1,4-Dioxane	ND	50	"	"	"	"	"	"	TO-14
2-Butanone (MEK)	ND	50	"	"	"	"	"	"	TO-14
Methyl isobutyl ketone	ND	50	"	"	"	"	"	"	TO-14
Benzene	ND	50	"	"	"	"	"	"	TO-14
Toluene	ND	50	"	"	"	"	"	"	TO-14
Ethylbenzene	ND	50	"	"	"	"	"	"	TO-14
m,p-Xylene	ND	50	"	"	"	"	"	"	TO-14
o-Xylene	ND	50	"	"	"	"	"	"	TO-14

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B3,15'

T180406-13 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Acetone	ND	50	ppb(v)	1.62	8020218	02/02/18	02/02/18	TO-15	TO-14
1,3-Butadiene	ND	50	"	"	"	"	"	"	TO-14
Carbon Disulfide	ND	50	"	"	"	"	"	"	TO-14
1,1,2-trichloro-1,2,2-trifluoroethane (CFC 113)	ND	50	"	"	"	"	"	"	TO-14
Isopropyl alcohol	**720**	50	"	"	"	"	"	"	TO-14
Bromodichloromethane	ND	50	"	"	"	"	"	"	TO-14
Bromoform	ND	50	"	"	"	"	"	"	TO-14
Bromomethane	ND	50	"	"	"	"	"	"	TO-14
Carbon tetrachloride	ND	50	"	"	"	"	"	"	TO-14
Chlorobenzene	ND	50	"	"	"	"	"	"	TO-14
Chloroethane	ND	50	"	"	"	"	"	"	TO-14
Chloroform	ND	50	"	"	"	"	"	"	TO-14
Chloromethane	ND	50	"	"	"	"	"	"	TO-14
Cyclohexane	ND	50	"	"	"	"	"	"	TO-14
Heptane	ND	50	"	"	"	"	"	"	TO-14
Hexane	ND	50	"	"	"	"	"	"	TO-14
Dibromochloromethane	ND	50	"	"	"	"	"	"	TO-14
1,2-Dibromoethane (EDB)	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
1,3-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
1,4-Dichlorobenzene	ND	50	"	"	"	"	"	"	TO-14
Dichlorodifluoromethane	ND	50	"	"	"	"	"	"	TO-14
1,1-Dichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,1-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
cis-1,2-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
trans-1,2-Dichloroethene	ND	50	"	"	"	"	"	"	TO-14
1,2-Dichloropropane	ND	50	"	"	"	"	"	"	TO-14
cis-1,3-Dichloropropene	ND	50	"	"	"	"	"	"	TO-14
trans-1,3-Dichloropropene	ND	50	"	"	"	"	"	"	TO-14
4-Ethyltoluene	ND	50	"	"	"	"	"	"	TO-14

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B3,15'

T180406-13 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Methylene chloride	ND	50	ppb(v)	1.62	8020218	02/02/18	02/02/18	TO-15	TO-14
Styrene	ND	50	"	"	"	"	"	"	TO-14
1,1,2,2-Tetrachloroethane	ND	50	"	"	"	"	"	"	TO-14
Tetrahydrofuran	ND	50	"	"	"	"	"	"	TO-14
Tetrachloroethene	ND	50	"	"	"	"	"	"	TO-14
1,1,2-Trichloroethane	ND	50	"	"	"	"	"	"	TO-14
1,1,1-Trichloroethane	ND	50	"	"	"	"	"	"	TO-14
Trichloroethene	ND	50	"	"	"	"	"	"	TO-14
Trichlorofluoromethane	ND	50	"	"	"	"	"	"	TO-14
1,3,5-Trimethylbenzene	ND	50	"	"	"	"	"	"	TO-14
1,2,4-Trimethylbenzene	ND	50	"	"	"	"	"	"	TO-14
Vinyl acetate	ND	50	"	"	"	"	"	"	TO-14
Vinyl chloride	ND	50	"	"	"	"	"	"	TO-14
1,4-Dioxane	ND	50	"	"	"	"	"	"	TO-14
2-Butanone (MEK)	ND	50	"	"	"	"	"	"	TO-14
Methyl isobutyl ketone	ND	50	"	"	"	"	"	"	TO-14
Benzene	ND	50	"	"	"	"	"	"	TO-14
Toluene	**57**	50	"	"	"	"	"	"	TO-14
Ethylbenzene	ND	50	"	"	"	"	"	"	TO-14
m,p-Xylene	ND	50	"	"	"	"	"	"	TO-14
o-Xylene	ND	50	"	"	"	"	"	"	TO-14

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B3,5'

T180406-14 (Air)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
TO-15									
Acetone	**34**	5.0	ppb(v)	1.62	8020218	02/02/18	02/06/18	TO-15	
1,3-Butadiene	ND	2.0	"	"	"	"	"	"	
Carbon Disulfide	ND	1.0	"	"	"	"	"	"	
1,1,2-trichloro-1,2,2-trifluoroethane (CFC 113)	ND	1.0	"	"	"	"	"	"	
Isopropyl alcohol	**25**	5.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	5.0	"	"	"	"	"	"	
Cyclohexane	ND	1.0	"	"	"	"	"	"	
Heptane	**3.5**	1.0	"	"	"	"	"	"	
Hexane	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.0	"	"	"	"	"	"	
4-Ethyltoluene	ND	1.0	"	"	"	"	"	"	

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

B3,5'

T180406-14 (Air)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TO-15									
Methylene chloride	ND	1.0	ppb(v)	1.62	8020218	02/02/18	02/06/18	TO-15	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrahydrofuran	**1.8**	1.0	"	"	"	"	"	"	
Tetrachloroethene	**3.0**	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Vinyl acetate	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
1,4-Dioxane	ND	5.0	"	"	"	"	"	"	
2-Butanone (MEK)	**7.3**	5.0	"	"	"	"	"	"	
Methyl isobutyl ketone	ND	10	"	"	"	"	"	"	
Benzene	**1.8**	1.0	"	"	"	"	"	"	
Toluene	**8.9**	1.0	"	"	"	"	"	"	
Ethylbenzene	**1.1**	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	**1.1**	1.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*77.4 %*	*40-160*		*"*	*"*	*"*	*"*	

SunStar Laboratories, Inc.

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Alexandra Huerta, Project Manager Assistant

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

TO-15 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020218 - Canister Analysis										
Blank (8020218-BLK1)				Prepared: 02/02/18 Analyzed: 02/06/18						
Acetone	ND	5.0	ppb(v)							
1,3-Butadiene	ND	2.0	"							
Carbon Disulfide	ND	1.0	"							
1,1,2-trichloro-1,2,2-trifluoroethane (CFC 113)	ND	1.0	"							
Isopropyl alcohol	ND	5.0	"							
Bromodichloromethane	ND	1.0	"							
Bromoform	ND	1.0	"							
Bromomethane	ND	1.0	"							
Carbon tetrachloride	ND	1.0	"							
Chlorobenzene	ND	1.0	"							
Chloroethane	ND	1.0	"							
Chloroform	ND	1.0	"							
Chloromethane	ND	5.0	"							
Cyclohexane	ND	1.0	"							
Heptane	ND	1.0	"							
Hexane	ND	1.0	"							
Dibromochloromethane	ND	1.0	"							
1,2-Dibromoethane (EDB)	ND	1.0	"							
1,2-Dichlorobenzene	ND	1.0	"							
1,3-Dichlorobenzene	ND	1.0	"							
1,4-Dichlorobenzene	ND	1.0	"							
Dichlorodifluoromethane	ND	1.0	"							
1,1-Dichloroethane	ND	1.0	"							
1,2-Dichloroethane	ND	1.0	"							
1,1-Dichloroethene	ND	1.0	"							
cis-1,2-Dichloroethene	ND	1.0	"							
trans-1,2-Dichloroethene	ND	1.0	"							
1,2-Dichloropropane	ND	1.0	"							
cis-1,3-Dichloropropene	ND	1.0	"							
trans-1,3-Dichloropropene	ND	1.0	"							
4-Ethyltoluene	ND	1.0	"							
Methylene chloride	ND	1.0	"							
Styrene	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
Tetrahydrofuran	ND	1.0	"							

SunStar Laboratories, Inc.

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Alexandra Huerta, Project Manager Assistant

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

TO-15 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020218 - Canister Analysis										
Blank (8020218-BLK1)				Prepared: 02/02/18 Analyzed: 02/06/18						
Tetrachloroethene	ND	1.0	ppb(v)							
1,1,2-Trichloroethane	ND	1.0	"							
1,1,1-Trichloroethane	ND	1.0	"							
Trichloroethene	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
Vinyl acetate	ND	1.0	"							
Vinyl chloride	ND	1.0	"							
1,4-Dioxane	ND	5.0	"							
2-Butanone (MEK)	ND	5.0	"							
Methyl isobutyl ketone	ND	10	"							
Benzene	ND	1.0	"							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
m,p-Xylene	ND	2.0	"							
o-Xylene	ND	1.0	"							
Surrogate: 4-Bromofluorobenzene	*4.85*		*"*	*6.25*		*77.6*	*40-160*			
Duplicate (8020218-DUP1)		**Source: T180405-01**		Prepared: 02/02/18 Analyzed: 02/06/18						
Acetone	ND	5.0	ppb(v)		ND				30	
1,3-Butadiene	ND	2.0	"		ND				30	
Carbon Disulfide	ND	1.0	"		ND				30	
1,1,2-trichloro-1,2,2-trifluoroethane (CFC 113)	ND	1.0	"		ND				30	
Isopropyl alcohol	ND	5.0	"		ND				30	
Bromodichloromethane	ND	1.0	"		ND				30	
Bromoform	ND	1.0	"		ND				30	
Bromomethane	ND	1.0	"		ND				30	
Carbon tetrachloride	ND	1.0	"		ND				30	
Chlorobenzene	ND	1.0	"		ND				30	
Chloroethane	ND	1.0	"		ND				30	
Chloroform	0.904	1.0	"		0.965			6.45	30	
Chloromethane	ND	5.0	"		ND				30	
Cyclohexane	ND	1.0	"		ND				30	
Heptane	ND	1.0	"		ND				30	

SunStar Laboratories, Inc.

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Alexandra Huerta, Project Manager Assistant

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

TO-15 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020218 - Canister Analysis										
Duplicate (8020218-DUP1)		**Source: T180405-01**		Prepared: 02/02/18 Analyzed: 02/06/18						
Hexane	ND	1.0	ppb(v)		ND				30	
Dibromochloromethane	ND	1.0	"		ND				30	
1,2-Dibromoethane (EDB)	ND	1.0	"		ND				30	
1,2-Dichlorobenzene	ND	1.0	"		ND				30	
1,3-Dichlorobenzene	ND	1.0	"		ND				30	
1,4-Dichlorobenzene	ND	1.0	"		ND				30	
Dichlorodifluoromethane	ND	1.0	"		ND				30	
1,1-Dichloroethane	ND	1.0	"		ND				30	
1,2-Dichloroethane	ND	1.0	"		ND				30	
1,1-Dichloroethene	ND	1.0	"		ND				30	
cis-1,2-Dichloroethene	6.73	1.0	"		6.73			0.00	30	
trans-1,2-Dichloroethene	ND	1.0	"		ND				30	
1,2-Dichloropropane	ND	1.0	"		ND				30	
cis-1,3-Dichloropropene	ND	1.0	"		ND				30	
trans-1,3-Dichloropropene	ND	1.0	"		ND				30	
4-Ethyltoluene	ND	1.0	"		ND				30	
Methylene chloride	ND	1.0	"		ND				30	
Styrene	ND	1.0	"		ND				30	
1,1,2,2-Tetrachloroethane	ND	1.0	"		ND				30	
Tetrahydrofuran	2.69	1.0	"		2.75			2.21	30	
Tetrachloroethene	3.34	1.0	"		3.44			2.97	30	
1,1,2-Trichloroethane	ND	1.0	"		ND				30	
1,1,1-Trichloroethane	ND	1.0	"		ND				30	
Trichloroethene	1.97	1.0	"		2.01			2.02	30	
Trichlorofluoromethane	ND	1.0	"		ND				30	
1,3,5-Trimethylbenzene	ND	1.0	"		ND				30	
1,2,4-Trimethylbenzene	ND	1.0	"		ND				30	
Vinyl acetate	ND	1.0	"		ND				30	
Vinyl chloride	ND	1.0	"		ND				30	
1,4-Dioxane	ND	5.0	"		ND				30	
2-Butanone (MEK)	ND	5.0	"		ND				30	
Methyl isobutyl ketone	ND	10	"		ND				30	
Benzene	ND	1.0	"		ND				30	
Toluene	ND	1.0	"		ND				30	
Ethylbenzene	ND	1.0	"		ND				30	
m,p-Xylene	ND	2.0	"		ND				30	

SunStar Laboratories, Inc.

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Alexandra Huerta, Project Manager Assistant

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

TO-15 - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8020218 - Canister Analysis										
Duplicate (8020218-DUP1)		**Source: T180405-01**		Prepared: 02/02/18 Analyzed: 02/06/18						
o-Xylene	ND	1.0	ppb(v)		ND				30	
Surrogate: 4-Bromofluorobenzene	*4.77*		*"*	*6.25*		*76.3*	*40-160*			

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Providing Quality Analytical Services Nationwide

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Mcalister Geoscience	Project: Los Coyotes Diagonal	
5030 E. 2nd St (Suite #200)	Project Number: [none]	**Reported:**
Long Beach CA, 90803	Project Manager: Jay Schneider	02/08/18 15:27

Notes and Definitions

TO-14	TO-15 analysis of sample was not performed due to high concentration of analyte(s). Sample was analyzed utilizing method TO-14 and reporting limit has been adjusted accordingly.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

AIR LABORATORY

Chain of Custody Record

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE
25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Client: McAlister GeoScience
Address: 5030 E 2nd St., LB, CA 90803
Phone: 626-841-2667 Fax: 562-433-8384
Project Manager: Jay Schneider
jschneider@mcageosci.com

Date: 1/31/18 Page: 1 Of 1
Project Name: Los Coyotes Diagonal
Collector: Jay Schneider Client Project #: —
Batch #: — / T180406 EDF #: —

Sample ID	Date Sampled	Start Time	Finish Time	Sample Type: Soil Gas / Indoor Air	Container Type: Summa Can / Tedlar	Initial Pressure	Final Pressure	TO-3	TO-14	TO-15	8015m Methane	8015m Gasoline	Fixed Gases by TCD		Summa Can # / Comments	Laboratory ID #
B7, 15'	1/31/18	1324	1336			30	3			X					SSAT-0294 -	01
B7, 5'		1335	1344							X					-0728 -	02
B4, 15'		1359	1411							X					-0749 -	03
B4, 5'		1402	1412							X					-0262 -	04
B6, 15'		1425	1437							X					-0822 -	05
B6, 5'		1427	1436							X					-0273 -	06
B3, 15'		1448	1500							X					-0263 -	07
B3, 5'		1450	1501							X					-0242 -	08
B1, 15'		1509	1521							X					-0260 -	09
B1, 5'		1513	1522							X					-0874 -	10
B2, 15'		1534	1543							X					-694 -	11
B2, 5'		1534	1543							X					-635 -	12
B3, 15'		1600	1612							X					-0871 -	13
B3, 5'		1600	1610							X					-0410 -	14

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
[signature]	2/1/18 1418	[signature]	2-1-18 1418
[signature]	2-1-18 1547	[signature]	2/1/18 15:47

Total # of containers: 14
Chain of Custody seals Y/N/NA
Seals intact? Y/N/NA
Received good condition/cold

Turn around time: Standard

Notes

* TO-15 SIM analysis available upon prior notification. **(Precertified Summa cans needed)**

COCAL 145127

SunStar Laboratories — Celebrating 20 Years!

SAMPLE RECEIVING REVIEW SHEET

Batch/Work Order #:	T180406		
Client Name:	McAlister GeoScience	Project:	Los Coyotes Diagonal
Delivered by:	☐ **Client** ☒ **SunStar Courier** ☐ **GSO** ☐ **FedEx** ☐ **Other**		
If Courier, Received by:	Dan	Date/Time Courier Received:	2-1-18 14:18
Lab Received by:	Brian	Date/Time Lab Received:	2-1-18 15:47

Total number of coolers received: 0

Temperature:	Cooler #1 -	°C +/- the CF (- 0.2°C) =	-	°C corrected temperature
Temperature:	Cooler #2	°C +/- the CF (- 0.2°C) =		°C corrected temperature
Temperature:	Cooler #3	°C +/- the CF (- 0.2°C) =		°C corrected temperature
Temperature criteria = ≤ 6°C (no frozen containers)		Within criteria?	☐**Yes**	☐**No**
If NO:				
Samples received on ice?		☐Yes	☐**No → Complete Non-Conformance Sheet**	
If on ice, samples received same day collected?		☐Yes → Acceptable	☐**No → Complete Non-Conformance Sheet**	

Custody seals intact on cooler/sample	☐Yes	☐No*	☒N/A
Sample containers intact	☒Yes	☐No*	
Sample labels match Chain of Custody IDs	☒Yes	☐No*	
Total number of containers received match COC	☒Yes	☐No*	
Proper containers received for analyses requested on COC	☒Yes	☐No*	
Proper preservative indicated on COC/containers for analyses requested	☐Yes	☐No*	☒N/A
Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times	☒ **Yes**	☐**No***	

* Complete Non-Conformance Receiving Sheet if checked

Cooler/Sample Review - Initials and date: DM 2-1-18

Comments:

(949) 297-5020 ■ www.sunstarlabs.com ■ 25712 Commercentre Drive ■ Lake Forest, CA 92630

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T180406

Project Name: LOS COYOTES DIAGONAL				KATHERINE
Company: MACALLISTER GEO.				
Name: JAY SCHENEIDER				
Item		Quantity	Unit	
2 oz Jars 24/CS				
4 oz Jars 24/CS				
8 oz Jars 12/CS				
40 ml unpreserved VOAs 100/box				
40 ml HCL-preserved VOAs 72/box				
250 ml Poly 24/CS				
1 Liter Poly 12/CS				
500 ml Poly 16/CS				
500 ml Amber Bottle Wide 12/CS				
1 Liter Amber Bottle 12/CS				
1 Gallon Poly 4/box				
5035 kits:(2)Sodium Bisulfate VOAs 72/box				
	(1) Methanol VOA 72/box			
	(1)Syringe 50/pack			
Lock-N-Load Handle 1/pack				
Tedlar Bags 10/pack				
Sub Slab Insert w/ washer & N/F				
Soil Gas SS 16" Drop Tubes				
Gas Extraction Fittings				
Soil Gas Filters				
		# Sent	Used	Unused	Unreturned
Batch Certified Summa Canisters	400cc				
	1L	28(10-P,4-N)	14	14 (10-P,4-N)	
	3L				
	6L				
Individually Certified Summa Canisters	400cc				
	1L				
	3L				
	6L				
ManifoldS: Inst. Sampler, Variable Sampler		4-MANIFOLDS (150)		CHARGE FOR 3	
Swagelok Fittings: Nuts/Ferrules, Ts		16 NUTS/FERRULES		CHARGE FOR 13	
Cooler (Sm, Med, Lrg) Number & Quantity					
Other: Poly Tube, Valves,Silicon Tape, etc.		1-SILICON TAPE		CHARGE FOR 1	
Prepared By: JOEY		Date: 1/23/18			
Reviewed By:		Date:			

Asset Check-In Receipt

SunStar Laboratories Inc.

T180406

Check-In Date: 2/1/2018

User Name: Marteski, Dan

Asset Tag	Asset Type	Serial No	Location	Customer No.	Customer Name
0242	1000cc: 1000cc Summa	0242	Sunstar Labs, Lake Forest Air Lab	McAllister Geo-Jay	Jay Schneider
0260	1000cc: 1000cc Summa	0260	Sunstar Labs, Lake Forest Air Lab	McAllister Geo-Jay	Jay Schneider
0262	1000cc: 1000cc Summa	0262	Sunstar Labs, Lake Forest Air Lab	McAllister Geo-Jay	Jay Schneider
0265	1000cc: 1000cc Summa	0265	Sunstar Labs, Lake Forest Air Lab	McAllister Geo-Jay	Jay Schneider
0273	1000cc: 1000cc Summa	0273	Sunstar Labs, Lake Forest Air Lab	McAllister Geo-Jay	Jay Schneider
0294	1000cc: 1000cc Summa	0294	Sunstar Labs, Lake Forest Air Lab	McAllister Geo-Jay	Jay Schneider
0410	1000cc: 1000cc Summa	0410	Sunstar Labs, Tustin Air Lab	McAllister Geo-Jay	Jay Schneider
0728	1000cc: 1000cc Summa	0728	Sunstar Labs, SunStar Labs - South	McAllister Geo-Jay	Jay Schneider
0749	1000cc: 1000cc Summa	0749	Sunstar Labs, SunStar Labs - South	McAllister Geo-Jay	Jay Schneider
0822	1000cc: 1000cc Summa	0822	Sunstar Labs, SunStar Labs - South	McAllister Geo-Jay	Jay Schneider
0871	1000cc: 1000cc Summa	0871	Sunstar Labs, SunStar Labs - South	McAllister Geo-Jay	Jay Schneider
0874	1000cc: 1000cc Summa	0874	Sunstar Labs, SunStar Labs - South	McAllister Geo-Jay	Jay Schneider
2053	Vapor Manifold: Vapor Manifold	2053	Sunstar Labs, Lake Forest Air Lab	McAllister Geo-Jay	Jay Schneider
2071	Vapor Manifold: Vapor Manifold	2071	Sunstar Labs, Lake Forest Air Lab	McAllister Geo-Jay	Jay Schneider
3035	Vapor Manifold: Vapor Manifold	3035	Sunstar Labs, SunStar Labs - South	McAllister Geo-Jay	Jay Schneider
3038	Vapor Manifold: Vapor Manifold	3038	Sunstar Labs, SunStar Labs - South	McAllister Geo-Jay	Jay Schneider
635	1000cc: 1000cc Summa		Sunstar Labs, Tustin Air Lab	McAllister Geo-Jay	Jay Schneider
699	1000cc: 1000cc Summa		Sunstar Labs, Tustin Air Lab	McAllister Geo-Jay	Jay Schneider

Asset Check-In Receipt

SunStar Laboratories Inc.

T180406

Check-In Date: 2/1/2018

User Name: Marteski, Dan

Asset Tag	Asset Type	Serial No	Location	Customer No.	Customer Name
0022 - P - unused	1000cc: 1000cc Summa	0022	Sunstar Labs, Tustin Air Lab	McAllister Geo-Jay	Jay Schneider
0074 - N - unused	1000cc: 1000cc Summa	0074	Sunstar Labs, Tustin Air Lab	McAllister Geo-Jay	Jay Schneider
0080 - N - unused	1000cc: 1000cc Summa	0080	Sunstar Labs, Tustin Air Lab	McAllister Geo-Jay	Jay Schneider
0118 - N - unused	1000cc: 1000cc Summa	0118	Sunstar Labs, Tustin Air Lab	McAllister Geo-Jay	Jay Schneider
0121 - P - unused	1000cc: 1000cc Summa	0121	Sunstar Labs, Tustin Air Lab	McAllister Geo-Jay	Jay Schneider
0152 - P - unused	1000cc: 1000cc Summa	0152	Sunstar Labs, Tustin Air Lab	McAllister Geo-Jay	Jay Schneider
0170 - P - unused	1000cc: 1000cc Summa	0170	Sunstar Labs, Tustin Air Lab	McAllister Geo-Jay	Jay Schneider
0215 - N - unused	1000cc: 1000cc Summa	0215	Sunstar Labs, Tustin Air Lab	McAllister Geo-Jay	Jay Schneider
0254 - P - unused	1000cc: 1000cc Summa	0254	Sunstar Labs, Lake Forest Air Lab	McAllister Geo-Jay	Jay Schneider
0272 - P - unused	1000cc: 1000cc Summa	0272	Sunstar Labs, Lake Forest Air Lab	McAllister Geo-Jay	Jay Schneider
0446 - P - unused	1000cc: 1000cc Summa	0446	Sunstar Labs, Tustin Air Lab	McAllister Geo-Jay	Jay Schneider
0767 - P - unused	1000cc: 1000cc Summa	0767	Sunstar Labs, SunStar Labs - South	McAllister Geo-Jay	Jay Schneider
0781 - P - unused	1000cc: 1000cc Summa	0781	Sunstar Labs, SunStar Labs - South	McAllister Geo-Jay	Jay Schneider
649 - P - unused	1000cc: 1000cc Summa		Sunstar Labs, Tustin Air Lab	McAllister Geo-Jay	Jay Schneider

+3 Nuts / Ferrules

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

Printed: 2/2/2018 8:46:00AM

WORK ORDER

T180406

Client:	**Mcalister Geoscience**	**Project Manager:**	**Alexandra Huerta**
Project:	**Los Coyotes Diagonal**	**Project Number:**	**[none]**

Report To:

Mcalister Geoscience
Jay Schneider
5030 E. 2nd St (Suite #200)
Long Beach, CA 90803

Date Due:	02/08/18 17:00 (5 day TAT)		
Received By:	Dan Marteski	Date Received:	02/01/18 15:47
Logged In By:	Dan Marteski	Date Logged In:	02/01/18 17:25

Samples Received at:

Custody Seals	No	Received On Ice	No
Containers Intact	Yes		
COC/Labels Agree	Yes		
Preservation Confirme	No		

Analysis	Due	TAT	Expires	Comments
T180406-01 B7,15' [Air] Sampled 01/31/18 13:24 (GMT-08:00) Pacific Time (US &				
TO-15	02/08/18 15:00	5	03/02/18 13:24	
T180406-02 B7,5' [Air] Sampled 01/31/18 13:35 (GMT-08:00) Pacific Time (US &				
TO-15	02/08/18 15:00	5	03/02/18 13:35	
T180406-03 B4,15' [Air] Sampled 01/31/18 13:59 (GMT-08:00) Pacific Time (US &				
TO-15	02/08/18 15:00	5	03/02/18 13:59	
T180406-04 B4,5' [Air] Sampled 01/31/18 14:02 (GMT-08:00) Pacific Time (US &				
TO-15	02/08/18 15:00	5	03/02/18 14:02	
T180406-05 B6,15' [Air] Sampled 01/31/18 14:25 (GMT-08:00) Pacific Time (US &				
TO-15	02/08/18 15:00	5	03/02/18 14:25	
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TO-15	02/08/18 15:00	5	03/02/18 14:27	
T180406-07 B5,15' [Air] Sampled 01/31/18 14:48 (GMT-08:00) Pacific Time (US &				
TO-15	02/08/18 15:00	5	03/02/18 14:48	

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

Printed: 2/2/2018 8:46:00AM

WORK ORDER

T180406

Client:	**Mcalister Geoscience**	**Project Manager:**	**Alexandra Huerta**
Project:	**Los Coyotes Diagonal**	**Project Number:**	**[none]**

Analysis	Due	TAT	Expires	Comments
T180406-08 B5,5' [Air] Sampled 01/31/18 14:50 (GMT-08:00) Pacific Time (US &				
TO-15	02/08/18 15:00	5	03/02/18 14:50	
T180406-09 B1,15' [Air] Sampled 01/31/18 15:09 (GMT-08:00) Pacific Time (US &				
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T180406-10 B1,5' [Air] Sampled 01/31/18 15:13 (GMT-08:00) Pacific Time (US &				
TO-15	02/08/18 15:00	5	03/02/18 15:13	
T180406-11 B2,15' [Air] Sampled 01/31/18 15:31 (GMT-08:00) Pacific Time (US &				
TO-15	02/08/18 15:00	5	03/02/18 15:31	
T180406-12 B2,5' [Air] Sampled 01/31/18 15:34 (GMT-08:00) Pacific Time (US &				
TO-15	02/08/18 15:00	5	03/02/18 15:34	
T180406-13 B3,15' [Air] Sampled 01/31/18 16:00 (GMT-08:00) Pacific Time (US &				
TO-15	02/08/18 15:00	5	03/02/18 16:00	
T180406-14 B3,5' [Air] Sampled 01/31/18 16:00 (GMT-08:00) Pacific Time (US &				
TO-15	02/08/18 15:00	5	03/02/18 16:00	

Reviewed By

Date

APPENDIX E

McALISTER GeoSCIENCE STATEMENT OF QUALIFICATIONS

McAlister GeoScience

Environmental
Site Investigation and Remediation

multiple, creative, and technically sound solutions for challenges facing property owners and property managers.

Turn-Key Solutions for complex sub-surface challenges

Phase I Site Investigations

Phase I environmental site investigations are routinely conducted to support pre-development property transactions, developed property transfers, and site closures. Lending institutions, realty corporations, landholders, and private individuals must consider environmental contamination as a potential risk when considering properties for acquisition. Purchase of contaminated property can result in assumption of significant cost for cleanup. To address this issue, purchasers of real estate consider an environmental assessment as a routine component of an acquisition.

Phase II Site Investigations

Phase II environmental site investigations are performed to delineate horizontal and vertical extent of volatile organics, metals, petroleum hydrocarbons, and other chemicals of concern. The McAlister GeoScience team has effectively managed field activities, coordinated with analytical laboratories, evaluated data, and prepared reports associated with ongoing groundwater monitoring programs.

Agency Interaction

The regulatory framework of California is diverse. Multiple agencies including regional water quality control boards, Federal EPA, CalEPA, city, county, and numerous other local agencies may oversee the same site at any given time. You need an experienced technical practitioner.

Regional Coverage

McAlister GeoScience has strong teaming ties in several metro areas including New Jersey; New York; North Carolina; Connecticut; Montana; Seattle; Phoenix, AZ; Denver, CO; Dallas, TX; Houston, TX; and Florida. Several locations are led by personnel with over 40 years of varied experience.

McAlister GeoScience is an effective and results-focused team possessing extensive experience with the successful design and implementation of Phase I and II environmental site assessments. McAlister GeoScience is well-versed in activities associated with the implementation of remedial action including agency interaction and all aspects of project management. McAlister GeoScience has also proven to be an effective team performing data analysis and reporting, remedial action, and compliance activities obtaining regulatory closure at numerous facilities located in Southern California.

- Environmental Site Investigation
- Environmental Remediation
- Regulatory Closure

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5030 E. 2nd Street, Suite 200
Long Beach, CA 90803
(714) 423-3796
dave@davemcalister.com

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McAlister GeoScience

McAlister GeoScience

- Environmental
- Geotechnical
- Seismic

Assessment

Phase I and II environmental site investigations. Characterization and rough order of magnitude (ROM) cost development. All performed on a timeframe and teaming fashion to facilitate commercial real estate transactions.

Remediation

Technically sound and legally defensible solutions performed in a teaming fashion to meet regulatory requirements, schedule, and budget.

ALTA Surveys

Teaming relationships with multiple civil engineers experienced in the performance of ALTA, topographic, and boundary surveys. Survey information can feed directly into assessment and remediation documentation.

Asbestos / Lead-based Paint

Surveys and abatement performed by licensed experts in a teaming fashion. All services provided on a turn-key basis with one point of contact for ease of management.

In Situ Chemical Oxidation (ISCO)

McAlister GeoScience has managed and performed ISCO (potassium permanganate and activated persulfate) injection for the treatment of chlorinated solvents in groundwater at various facilities in Southern California including the Cities of Industry, Bell, Los Angeles, Long Beach, Huntington Beach and Costa Mesa, California. Numerous ISCO reagents have been utilized including permanganate, hydrogen peroxide, and various proprietary reagents.

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5030 E. 2nd Street, Suite 200
Long Beach, California 90803
(714) 423-3796
dave@davemcalister.com

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Southern California | New Jersey | New York | North Carolina | Connecticut | Montana
Seattle | Phoenix, AZ | Denver, CO | Dallas, TX | Houston, TX | Florida

Environmental Site Investigation & Remediation | Agency Interaction | Asbestos | Lead | Mold | GeoTechnical Investigations

Curriculum Vitae – David C. McAlister

Environmental Site Investigation and Remediation Professional

5030 E. 2nd Street, Suite 200
Long Beach, California
90803

(714) 423-3796
dmcalister@mcageosci.com
dirtyproperty.com

Mr. McAlister is an effective and results-focused professional possessing extensive experience with the successful design and implementation of Phase I and II environmental site assessments. Mr. McAlister is well-versed in activities associated with the implementation of remedial action including agency interaction, scope, schedule, and budget management. Mr. McAlister has also proven to be effective at the design, performance, and management of a team performing data analysis and reporting, remedial action, and compliance activities obtaining regulatory closure at numerous facilities located in Southern California.

Selected Project Descriptions:

United States Air Force Reserves – Mr. McAlister managed and performed the field tasks associated with Groundwater remediation involving *in-situ* chemical oxidation (ISCO - potassium permanganate) for the remediation of groundwater impacted with chlorinated solvents at an operating air force base in Spokane, Washington.

Gardena Business Park, LLC. – Mr. McAlister achieved regulatory closure of an industrial property that had been entered into the Spills, Leaks, Investigations, and Cleanup (SLIC) program of the Los Angeles Regional Water Quality Control Board. Contaminants of Concern included trichloroethylene (TCE) and tetrachloroethylene (PCE).

Lockheed Martin Corporation – Mr. McAlister was part of a team performing environmental due diligence reviews associated with the acquisition of a military vehicle manufacturer. Due diligence file reviews were completed on hundreds of sites located across the United States and Europe under an extremely compressed timeframe. Ultimately, two sites were identified with higher than acceptable environmental liability risk and the deal was not consummated due to these recommendations.

Various Industrial and Commercial Real Estate Clients – Mr. McAlister managed and performed ISCO injection for the treatment of chlorinated solvents in groundwater at various facilities in Southern California including the Cities of Industry, Bell, Los Angeles, Huntington Beach and Costa Mesa, California. Numerous ISCO reagents were evaluated for these projects including permanganate, hydrogen peroxide, and various proprietary reagents.

Carson Marketplace, LLC. – Mr. McAlister managed the field implementation of an aquifer pump test at a former landfill in Carson, California. The goal of the project was to redevelop the landfill for residential, retail, and other purposes. Through this process, remediation of soil and groundwater was required along with the implementation of landfill gas mitigation and management practices. The scope of the aquifer pump test included a constant rate and step-flow test in three discrete areas and the management of impacted groundwater generated during the process.

Education:

B.S., Soil Science, California State Polytechnic University, San Luis Obispo, 2001

Specialized Training:

OSHA 40-hour Hazwoper Health and Safety Training

OSHA 8-hour Hazwoper refresher course (annual)

OSHA 8-hour Supervisor Training

American Red Cross First Aid and CPR Certified (annual)

Asbestos Building Inspector Initial Course.

Years of Experience:

Fourteen

Employment History:

ERM-West Inc. (2001-2005)
Staff Scientist

Tetra Tech, Inc. (2005-2013)

Curriculum Vitae – David C. McAlister

Environmental Site Investigation and Remediation Professional

Selected Project Descriptions (Continued):

Baker Hughes – Mr. McAlister performed the evaluation of effectiveness and final agency reporting of an ISCO (activated persulfate) injection conducted in Huntington Beach, California. The agency review of the report and remediation progress following Mr. McAlister's involvement resulted in significant adjustments to the remedial approach and advanced the project significantly toward regulatory closure.

Union Pacific Rail Road – Mr. McAlister achieved regulatory closure of an Underground Storage Tank (UST) site in the city of Colton, California. Contaminants of Concern included, lead, arsenic, and "Bunker C" fuel oil. The regulatory agency providing oversight was the San Bernardino County Fire Department Hazardous Materials Division.

Lockheed Martin, Torrance, CA – Mr. McAlister has held various management and technical support positions due to his extensive experience with the project, regulatory environment, and hydrogeology of the area. Mr. McAlister attended meetings with the regulatory community, neighboring property owners, and various other stakeholders on behalf of Lockheed Martin Corporation. Additionally, Mr. McAlister attended quarterly meetings and briefed Lockheed senior management on the scope, schedule, remedial options, remedial approach, risks, and opportunities associated with the remediation of a groundwater plume at a facility immediately adjacent to a federal Superfund site.

ExxonMobil Global Remediation – Mr. McAlister improved LNAPL recovery at the Torrance refinery from approximately 30,000 gallons per month to approximately 91,000 gallons of per month, a 300% improvement in extraction efficiency within eight months. Installation of five new extraction wells and associated skimming systems contributed 40% of the increase in extraction efficiency. Optimization of currently existing infrastructure contributed 60% of the increase in extraction efficiency.

Los Angeles Department of Water and Power – Mr. McAlister coordinated and performed the field implementation of a sodium permanganate ISCO injection at a maintenance facility in Silver Lake area of Los Angeles, California.

Alcoa, Inc. – Mr. McAlister performed phase II soil, soil vapor, and groundwater investigations including the planning, implementation, and reporting of investigation activities at five separate facilities located in southern California for the acquisition of an aerospace fastener company.

Various Clients – Mr. McAlister has performed numerous soil and groundwater investigations to delineate horizontal and vertical extent of VOCs, metals, TPH, and other chemicals of concern at various rail yards and manufacturing plants throughout California. Site investigation activities included monitoring well installation, soil boring advancement, and sampling using various drilling techniques. Drilling techniques utilized include hollow-stem auger, air rotary casing hammer (ARCH), mud rotary, mud rotary with reverse circulation, and hydraulic direct-push. Mr. McAlister has effectively managed field activities, coordinated with analytical laboratories, evaluated data, and prepared reports associated with ongoing groundwater monitoring programs.

Curriculum Vitae – Jay Schneider, P.G.

Environmental Site Investigation and Remediation Professional

5030 E. 2nd Street, Suite 200
Long Beach, California
90803

(626) 841-2667
jschneider@mcageosci.com
dirtyproperty.com

Mr. Schneider is a Professional Geologist with extensive experience in environmental remediation, subsurface investigations, storm water compliance, and project management for numerous sites in southern and Central California. Evaluated data, supervised fieldwork, prepared technical reports, managed projects, supervised junior staff, and interacted with clients and regulatory agencies. Managed and inspected traditional and LUP projects. Phase I, II, and III investigations. Have prepared and managed environmental health and safety programs for corporate clients, including Hazardous Waste Management, Hazardous Material Business Plans, chemical inventories, CERS uploads, and Toxic Organic Management Plans. Experienced with USTs, ASTs, chlorinated hydrocarbons, vapor intrusion, and reopened cases.

Selected Project Descriptions:

Independent Contractor – Performed numerous Phase I and Phase II investigations for Citadel, Tetra Tech, Phase 1 Environmental (San Jose, CA), All Appropriates Inquiries (Ashland City, TN), and McAlister GeoSciences (Long Beach, CA), and UST investigations/removals and QSD/QSP duties for Citadel. • Reviewed and signed paleontological resource reports for Cogstone Resource Management. • Taught geology courses at Saddleback College, Mission Viejo.

Project Geologist – Design of methane mitigation systems and soil vapor extraction (SVE) systems. UST removals, especially of fugitive tanks. SWPPP implementation, including inspections, reports, and sampling. Investigation of sites in Los Angeles Methane and Methane Buffer Zones.

Senior Environmental Scientist – Hazardous Materials Business Plans and Chemical Inventory management. Preparation and implementation of SWPPPs, especially for Caltrans and US military. Business Development and Project Management.

Paleontologist - Paleontological resource consultant for large highway, railway, and desalination plant construction projects. Prepared cost analyses, assessment reports, mitigation reports, and compliance reports.

Senior Project Geologist - Project Manager for a 16.2-mile linear 70 kV reconductoring project between San Luis Obispo and Atascadero for a major utility company. Conducted SWPPP/BMP inspections on utility company transmission, distribution, and solar stations, as well as LUPs; prepared SWPPPs and SWPPP amendments. Installed numerous wells (groundwater monitoring, soil vapor extraction [SVE], air sparge) and supervised the advancement of a multitude of soil borings at leaking underground fuel tank sites throughout southern and central California.

Education:

M.S. Geology, University of Cincinnati, Cincinnati, OH 1988

B.A. Earth and Planetary Sciences, Johns Hopkins University, Baltimore, MD 1985

Certifications:

California Professional Geologist #8787, California Qualified SWPPP Developer and Qualified SWPPP Practitioner #20608, OSHA 40hr HAZWOPER, First Aid, and CPR.

Years of Experience:

Ten

Employment History:

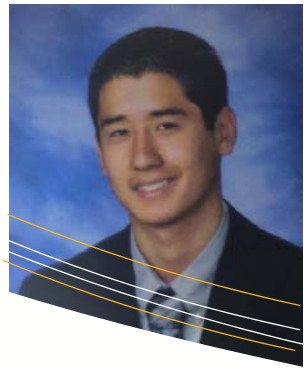
Project Geologist (2015-2016), Citadel Environmental Services

Senior Environmental Scientist (2013-2015), MLM & Associates Engineering

Paleontologist (2012-2013), Cogstone Resource Management

Sr Project Geologist (2008-2012), ETIC Engineering, Inc.

Staff Geologist (2006-2008), Delta Environmental Consultants



Curriculum Vitae – Joshua Kajiyama

Environmental Site Investigation and Remediation Professional

5030 E. 2nd Street, Suite 200
Long Beach, California
90803

joshkaj1991@gmail.com
(310) 561-7750
dirtyproperty.com

Mr. Kajiyama is a geologist with experience in the environmental consulting field. Mr. Kajiyama has experience conducting Phase I due diligence for clients including banks, institutional investors, portfolio managers, and solar power developers. Mr. Kajiyama possesses direct experience with the investigation, historical research, and hydrogeologic modeling of subsurface soil and groundwater impacts.

Selected Project Descriptions:

Various Commercial Lending Clients – Hands-on and in-depth involvement in the field, data acquisition, and data evaluation aspects of Phase I Environmental Site Assessments. Investigations are successfully conducted on an accelerated time frame with tight budget constraints.

S Power, LLC – Successfully performed several portfolio projects for the acquisition of land in the San Joaquin Valley and Antelope Valley for the purpose of developing the properties in to photovoltaic solar power generating facilities. Projects consist of several adjoining properties with varied owners and former uses.

Various Clients – Performed soil and groundwater investigations to delineate horizontal and vertical extent of VOCs, metals, TPH, and other chemicals of concern at various sites throughout California. Other responsibilities included the effective design, implementation and reporting of Phase I and Phase II investigations, Remedial Action, and general environmental compliance activities.

Del Rey Fuel, LLC. – Implemented a Remedial Action Work Plan submitted to the Los Angeles Regional Water Quality Control Board (RWQCB) for the implementation of *in situ* chemical oxidation to treat residual soil and groundwater impacts; predominantly Total Petroleum Hydrocarbons (TPH) in the gasoline and diesel range, various Volatile Organic Compounds (VOCs) including Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) and various volatile breakdown products as well as fuel oxygenates.

Education:

B.S. Geology, California State University, Long Beach
Cum Laude Honors / Dean's List

Specialized Training:

OSHA 40-hour HAZWOPER Health and Safety Training

OSHA 8-hour HAZWOPER annual refresher

American Red Cross First Aid and CPR Certified (annual)

Years of Experience:

One

Memberships:

- Geological Society of America
- AAPG Student Chapter
- ASBOG California Licensing Exam Volunteer

McAlister
GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, California 90803 (714) 423-3796

December 27, 2017

Los Coyotes Redevelopment, LLC
Sonnocco Real Estate Group
3626 Long Beach Boulevard
Long Beach, California 90807

Attention: Bill Larson

Subject: Phase I Environmental Site Assessment
3320 & 3340 Los Coyotes Diagonal and 3325 Palo Verde Avenue
Long Beach, California 90808

Dear Mr. Larson:

Attached is one electronic copy of the Phase I Environmental Site Assessment report for the property identified by the following Assessor's Parcel Numbers and known as the Los Coyotes Redevelopment (the Subject Property).

- 7191-014-902
- 7191-014-903
- 7191-014-904
- 7191-014-905
- 7191-014-906

McAlister GeoScience appreciates the opportunity to provide this report to Sonocco Real Estate Group and Los Coyotes Redevelopment, LLC. Please contact me should you have any questions about the report.

Sincerely,

David McAlister

Phase I Environmental Site Assessment Report

Los Coyotes Redevelopment
3320 & 3340 Los Coyotes Diagonal and 3325 Palo Verde Avenue
Long Beach, California 90808

December 27, 2017

Prepared for:

Sonnocco Real Estate Group
3626 Long Beach Boulevard
Long Beach, California 90807

Prepared by:

McAlister GeoScience
5030 E. 2nd Street, Suite 200
Long Beach, California 90803

David McAlister

Executive Summary

McAlister GeoScience was retained by Los Coyotes Redevelopment, LLC and Sonnocco Real Estate Group (collectively, the Client) to conduct a Phase I Environmental Site Assessment (Phase I ESA) for the property comprised of approximately 6.3-acres at 3320 & 3340 Los Coyotes Diagonal and 3325 Palo Verde Avenue, Long Beach, California (the Subject Property; Figure 1). McAlister GeoScience understands that the Client is planning to develop an elder care facility on the Subject Property. Site features are identified on Figure 2. Photographs taken during the site reconnaissance are included in Appendix A.

Historical data reviewed indicates that the Subject Property was used primarily as agricultural land prior to 1952. Aerial photographs indicate that unknown scattered structures were present on the Subject Property from approximately 1952 to the 1960s, then Los Altos Hospital was constructed on the west portion of the Subject Property in approximately the mid 1960s and was torn down in the mid 2000s. This area remained an unpaved dirt lot until approximately 2010, then was asphalt paved thereafter as it remains today. A second medical building was constructed on the southwest portion of the Subject Property in the mid 1960s and is still present. Additional medical offices were developed in the southeast portion of the Subject Property in approximately 1980 and are still present.

Historical data reviewed indicates that a dry cleaners by the name of Royalty Cleaners was present on the adjacent property to the north form at least the late 1960s to the 1990s. A release has been reported and the site is currently an open case overseen by the Los Angeles Regional Water Quality Control board (LA RWQCB). The site is a threat to soil and/or groundwater at the Subject Property due to previous investigations revealing soil and groundwater impacts with volatile organic compounds (VOCs). The Royalty Cleaners case at 3378 Los Coyotes Diagonal is considered a Recognized Environmental Condition (REC) at the Subject Property.

The Subject Property is listed in the Leaking Underground Storage Tank (LUST) database in association with the historical Charter Hospital Facility at 3340 Los Coyotes Diagonal. Groundwater was reported to be contaminated by diesel. However, the facility obtained "case-closed" status as of October of 1997. Therefore, this facility is considered a Historical Recognized Environmental Condition (HREC) for the Subject Property.

The Subject Property is listed in the Underground Storage Tank (UST) database in association with CBHS at the historical hospital location at 3340 Los Coyotes Diagonal. The tank was reported tested in January of 1996 and no releases were reported, although it is unclear if this tank is the same tank reported leaking at the same location and given case-closed status in 1997. However, the UST was known to be located on the Subject Property and a former closure letter for this UST was not obtained. Therefore, the UST at 3340 Los Coyotes Diagonal is a threat to soils and/or groundwater at the Subject Property and considered a Recognized Environmental Condition (REC).

McAlister GeoScience has performed a Phase I ESA of the Subject Property in conformance with the scope and limitations of American Society for Testing and Materials Practice E 1527. Any exceptions to, or deletions from, this practice are described in the *Limiting Factors, Project Limitations,* and *Data Gaps* sections of this report. This assessment has revealed evidence of two

Recognized Environmental Conditions (RECs) and one Historical Recognized Environmental Condition (HREC) in connection with the Subject Property.

Based on the information gathered during the performance of this assessment, and the understanding of current regulatory guidelines and judgment, the following recommendations are presented for consideration:

- Royalty Cleaners (REC) – McAlister GeoScience recommends soil gas sampling to further delineate the extent of the Tetrachloroethene (PCE) plume beneath the Subject Property due to the release at the former Royalty Cleaners at 3378 Los Coyotes Diagonal.

- CBHS UST unknown status (REC) – McAlister GeoScience recommends further public record research into the unknown status of the CBHS UST. If no records are obtained, despite a reasonable attempt to do so, McAlister GeoScience recommends a geophysical survey in the potential locations of the UST to determine if it was removed or not.

- Former Onsite LUST (HREC) – Due to the regulatory status (in October of 1997) of the former LUST in association with CBHS at the historic hospital location at 3340 Los Coyotes Diagonal, McAlister GeoScience recommends no further action.

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FIGURES

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Appendix E Statement of Qualifications

1.0 Introduction

McAlister GeoScience was retained by Los Coyotes Redevelopment, LLC and Sonnocco Real Estate Group (collectively, the Client) to conduct a Phase I Environmental Site Assessment (Phase I ESA) for the property comprised of approximately 6.3-acres at 3320 & 3340 Los Coyotes Diagonal and 3325 Palo Verde Avenue, Long Beach, California (the Subject Property; Figure 1). McAlister GeoScience understands that the Client is planning to development an elder care facility on the Subject Property. Site features are identified on Figure 2. Photographs taken during the site reconnaissance are included in Appendix A.

The Phase I ESA work for this project was conducted pursuant to authorization of the scope of work, assumptions, and terms and conditions set forth in the contract documents between the Client and McAlister GeoScience and in accordance with the scope of work and limitations of the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, designation E1527-13.

The purpose of this Phase I ESA was to assess, to the extent feasible, *Recognized Environmental Conditions* (RECs) in connection with the Subject Property. RECs are defined as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimis* conditions are not RECs.

Figures depicting the Subject Property and vicinity are found in the "Figures" section at the end of this report. Figure 1 is a site location map showing the location of the Property. Figure 2 is a site plan showing additional detail and site features. Color copies of photographs taken during the site reconnaissance are found in Appendix A.

1.1 Limiting Factors

There was limited access to areas of the Subject Property due to construction activities and onsite roads being blocked.

1.2 Assumptions

For the purposes of this assessment, McAlister GeoScience has made the following assumptions:

- Information provided during any interview (written or oral) was accurate and correct;
- Database information reviewed was accurate and correct;
- Historical information reviewed was accurate and correct;
- Information reviewed at any governmental agency was accurate and correct;
- Groundwater flow and depth to groundwater, unless otherwise specified by on-site well data, or well data from adjacent sites are assumed based on contours depicted on the United States Geological Survey Topographic Maps; and
- The property has been correctly and accurately identified by the client, client representatives, property contact, property owner, and/or property representatives.

1.3 Project Limitations

This assessment is limited to the standards set forth in 40 Code of Federal Regulations (CFR) Part 312. This assessment specifically excludes assessment of the following:

- Asbestos and asbestos-containing materials;
- Lead and lead-containing materials;
- Radon;
- Indoor air quality;
- Wetlands;
- Regulatory compliance;
- Cultural and historic resources;
- Air emissions;
- Industrial hygiene;
- Health and safety;
- Ecological resources;
- Endangered species;
- Biological agents, Mold; and
- Noise.

There are other limitations on completeness of information for this assessment. They are provided and documented on a case-by-case basis throughout this document.

The conclusions and findings set forth in this report are strictly limited in time and scope to the date of the evaluation. The conclusions presented in this report are based solely on the services described herein, and not on scientific tasks or procedures beyond the scope of agreed-upon services or the time and budgeting restraints imposed by the Client. No subsurface exploratory drilling or sampling of any kind was done under the scope of this work. Unless specifically stated otherwise in the report, no chemical or physical analyses have been performed during the course of this Phase I ESA.

Some of the information provided in this report is based upon personal interviews, and research of available documents, records, and maps held by the appropriate government and private agencies. This is subject to the limitations of historical documentation, availability, and accuracy of pertinent records and the personal recollections of those persons contacted. As applicable, McAlister GeoScience has relied in good faith upon representations and information furnished by individuals with respect to operations and existing property conditions, to the extent that they have not been contradicted by data obtained from other sources. Accordingly, McAlister GeoScience accepts no responsibility for any deficiencies, omissions, misrepresentations, or fraudulent acts of persons interviewed.

Property conditions, as well as local, state, tribal, and federal regulations can change significantly over time. Therefore, the recommendations and conclusions presented as a result of this study apply strictly to the environmental regulations and property conditions existing at the time the study was performed. Available information has been analyzed using currently accepted assessment techniques and it is believed that the inferences made are reasonably representative of the property. McAlister GeoScience makes no warranty, express or implied,

except that the services have been performed in accordance with generally accepted environmental property assessment practices applicable at the time and location of the study.

Considerations identified by ASTM as beyond the scope of a Phase I ESA that may affect business environmental risk at a given property include the following: asbestos-containing materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, mold, vapor intrusion, and high voltage lines. These environmental issues or conditions may warrant assessment based on the type of property transaction; however, they are considered non-scope issues under ASTM Standard Practice E1527-13.

This Phase I ESA is not, and should not be construed as, a warranty or guarantee about the presence or absence of environmental contaminants that may affect the property. The assessment is not intended to assure clear title to the property in question. The sole purpose of investigation into property title records is to ascertain a historical basis of prior land use and environmental liens. All findings, conclusions, and recommendations stated in this report are based upon facts, circumstances, and industry-accepted procedures for such services as they existed at the time this report was prepared (i.e., federal, state, and local laws, rules, regulations, market conditions, economic conditions, political climate, and other applicable matters). All findings, conclusions, and recommendations stated in this report are based on the data and information provided, and observations and conditions that existed on the date and time of the property visit. Responses received from local, state, or federal agencies or other secondary sources of information after the issuance of this report may change certain facts, findings, conclusions, or circumstances to the report. A change in any fact, circumstance, or industry-accepted procedure upon which this report was based may adversely affect the findings, conclusions, and recommendations expressed in this report.

1.4 Professionals

This document has been prepared by an Environmental Professional as defined by the Environmental Protection Agency, 40 CFR Part 312.10. All work performed for this assessment was performed by or under the direct supervision of an Environmental Professional.

1.5 Data Gaps

The ASTM Standard defines a data gap as "a lack of or inability to obtain information required by the practice despite good faith efforts by the environmental professional to gather such information." A data gap is only significant if other information obtained during the ESA, or professional experience, raises reasonable concerns and affects the ability of the environmental professional to identify whether a given issue is a REC. The ASTM Standard requires that the ESA report identify and comment on significant data gaps. McAlister GeoScience did not identify any significant data gaps associated with the assessment.

2.0 Property Description

2.1 Property Location and Description

Approximately 6.3-acres at 3320 & 3340 Los Coyotes Diagonal and 3325 Palo Verde Avenue, Long Beach, California. Assessor's Parcel Numbers:

- 7191-014-902
- 7191-014-903
- 7191-014-904
- 7191-014-905
- 7191-014-906

2.2 Site and Vicinity Characteristics

2.2.1 General Property Type and Use

The Subject Property lies between Los Coyotes Diagonal and Palo Verde Avenue south of Wardlow Road in Long Beach, California. The Subject Property consists of two, two-story buildings that are currently used for various medical and dental activities. Additionally, a Verizon Wireless cellular equipment area can be found in the northeastern portion of the Subject Property. A large vacant lot that is paved and fenced off is located in the northwestern portion of the Subject Property and was the site of the former mental hospital that was demolished. The remainder of the Subject Property is used as driving/parking areas. Five soil boring and three groundwater monitoring wells were observed in the driving/parking area of the Subject Property. Site features are identified on Figure 2. Photographs taken during the site reconnaissance are included in Appendix A.

2.2.2 General Type and Use of Surrounding Areas

The surrounding property is primarily single-family residences in all directions except north/northeast. To the north of the Subject Property is Ralph's grocery store at 3380 Los Coyotes Diagonal. Long Beach Alliance Church can be found directly to the north/northeast of the Subject Property, beyond which is Long Beach Fire Department Station 18. Photographs of adjacent properties taken during the site reconnaissance are included in Appendix A.

2.2.3 Subject Property Size

Approximately 6.3-acres.

2.2.4 Number and Size of Buildings on Site

Two two-story buildings were observed during the site reconnaissance. According to the Los Angeles County Assessor's Office, building one is approximately 53,452 square feet and is located in the southwest portion of the Subject Property, and building two is approximately 20,760 square feet and is located in the southeast portion of the Subject Property.

2.2.5 Construction Date

According to the Los Angeles County Assessor's Office, building one in the southwest portion of the Subject Property was constructed in 1964-1965, with an additional improvement

constructed in 1965-1966. Building two in the southeast portion of the Subject Property was constructed in 1979.

2.2.6 Tenants

The Subject Property is used for medical and dental offices and consists of numerous individual doctors and dentists. X-ray film processing has likely taken place at numerous units in the past prior to the rise of digital radiography. No releases or spills associated with x-ray film processing chemicals have been reported; therefore, it is unlikely the former use of x-ray film processing chemicals has impacted soil and/or groundwater at the Subject Property.

2.2.7 Areas Assessed

The Subject Property and adjacent land was visually assessed to the extent practical from perimeter locations and roads on the Subject Property. Additional observations, as necessary, were made on-foot. There was limited access to some medical/dental office units of the Subject Property; however, it is not expected access to those units would change the conclusion of this assessment.

2.2.8 Topography

The surface of the Subject Property is approximately 27 feet above mean sea level. The Subject Property gradually slopes slightly down to the south-southeast.

2.2.9 Surface Water

Surface water was not present on the Subject Property at the time of the site reconnaissance.

2.2.10 Groundwater

Depth to First Groundwater:	Depth to groundwater at the Subject Property is 23-26 feet below ground surface (bgs).
Regional Flow Direction:	The regional groundwater flow direction is to the south-southeast based on groundwater monitoring wells located on the east portion of the Subject Property.
Information Sources:	7.5-minute Environmental Data Resources, Inc. (EDR) Topographic Maps and the GeoTracker online database.

2.2.11 Geologic Setting

The Subject Property is located in Los Angeles's Central Basin just north of the Newport-Inglewood Fault. The Subject Property is located within the Peninsular Ranges Geomorphic Province at an elevation of 88 feet above mean seal level on the central portion of the Downey Plain. It is bound to the southwest by Rosecrans and Dominguez Hills, which are surficial geomorphic features of the Newport-Inglewood Fault; to the southeast by the Orange County Coastal Plain; to the north by Elysian, Repetto, and Merced Hills; and to the northeast by Puente and Coyote Hills.

Local geology is characterized by aquifers confined by aquicludes of which only one has been

named, the Bellflower Aquiclude. The Bellflower Aquiclude restricts vertical percolation into lower aquifers of the Central Basin Pressure Area. Water levels and pressures within aquifers tend to vary based on which aquifers are used for production. The Bellflower Aquiclude is found throughout the Central Basin Pressure Area and is composed mainly of clay and silt; however, there are numerous areas where it consists mainly of clayey sands and gravels where it tends to diminish the sealing quality of the aquiclude. The Bellflower Aquiclude extends from a few feet to 160 feet in thickness (DWR, 1961).

2.2.12 Potable Water Supply

Potable water appears to be supplied to the Subject Property by the City of Long Beach.

2.2.13 Sanitary Sewer System

Sanitary Sewer service appears to be supplied to the Subject Property by the City of Long Beach.

3.0 Historic Use Information

The following is a list of historical site use information sources reviewed as part of this Assessment.

- Aerial Photographs: 1928 – 2012 Provided by EDR (Appendix B);
- Topographic Maps: 1896 – 2012 Provided by EDR (Appendix B);
- City Directories: 1954 – 2014 Provided by EDR (Appendix B);
- Sanborn Fire Insurance Maps: Sanborn Fire Insurance Maps were not available; and
- Interviews: Deputy Director Purchasing and Contracts at Long Beach Community College District and Real Estate Manager at Pacific Coast Commercial Real Estate

3.1 Summary of Prior Uses – The Property

The historic aerial photographs, topographic maps, and street directories indicated that the Subject Property was used primarily as agricultural land prior to 1952. Aerial photographs indicate that unknown scattered structures were present on the Subject Property from approximately 1952 to the 1960s, then Los Altos Hospital was constructed on the west portion of the Subject Property in approximately the mid 1960s and was torn down in the mid 2000s. This area remained an unpaved dirt lot until approximately 2010, then was asphalt paved thereafter as it remains today. A second medical building was constructed on the southwest portion of the Subject Property in the mid 1960s and is still present. Additional medical offices were developed in the southeast portion of the Subject Property in approximately 1980 and are still present.

3.2 Summary of Prior Uses – Adjacent and Surrounding Properties

The historic aerial photographs, topographic maps, and street directories indicate that prior to 1952, the area surrounding the Subject Property was primarily agricultural land. In 1952, areas to the west and east of the Subject Property were developed with single-family homes, the adjacent property to the north was a graded vacant lot with a small structure, and the adjacent property to the south was vacant land. In approximately 1963, adjacent areas to the east, south, and west of the Subject Property were developed with single-family homes, and the adjacent property to the north was a graded vacant lot. In approximately the mid to late 1960s, the adjacent property to the north was developed with various small businesses including food retail, video rental, a barber shop, and a theater. A dry cleaners by the name of Royalty Cleaners was present on the adjacent property to the north form at least the late 1960s to the 1990s, and is a threat to soils and/or groundwater at the Subject Property. A Ralph's grocery was developed on the adjacent property to the north in approximately the late 1970s, and is still currently present. Historical topographic maps and street directories indicate that a fire station was on the adjacent property to the northeast from approximately the mid 1960s to the present day. Street directories indicated that a church has been present on the adjacent east-northeast property from approximately 1964 to the current day.

3.3 *Previous Environmental Reports*

Approximately twelve groundwater monitoring reports were written for the Subject Property from 2004 to 2016, and groundwater sampling has been conducted since 1996. Information from the most recent report is summarized below.

- Lindmark Engineering. January 13, 2017. *2016 Annual Groundwater Monitoring Report, Former Royalty Cleaners, 3378 Los Coyotes Diagonal, Long Beach, California, SLIC No. 537.*

The most recent groundwater monitoring report stated that generally, levels of Tetrachloroethene (PCE) decreased since the last groundwater monitoring report of 2015 with a range of ND to 36.8 µg/L. PCE concentrations were generally highest in wells MW-3, MW-4, and MW-5 closest to the former dry cleaners, with smaller levels in wells further away and down gradient to the south-southeast. The authors remarked that the core of the PCE plume in groundwater continues to elongate towards the direction of MW5 and MW9 (to the south-southeast), and PCE concentrations are declining. However, the aerial extent of the PCE plume in groundwater, with concentrations above the California maximum Contaminant Level (MCL) of 5 µg/L, has remained similar since the last sampling event. The authors stated that the plume continues to demonstrate steady-state behavior. Trichloroethene (TCE) concentrations generally stayed the same sine the last groundwater monitoring report in 2015, and had a range of ND to 39.2 µg/L. TCE concentrations were generally highest in wells MW-3, MW-4, and MW-5 closest to the former dry cleaners, with smaller levels in wells farther away to the south-southeast. *Cis*-1,2-dichloroethene (cis-1,2-DCE), which is a daughter product of TCE, increased in wells MW-3, MW-4, and MW-5, and was non-detect in wells MW-6 through MW-11. P-isopropyltoluene was detected in wells MW-6 and MW-7 each at a concentration of 20.3 µg/L, which was a historical maximum for this VOC. No other VOCs were detected.

The authors concluded that the presence of TCE and cis-1,2-DCE concentrations at the Subject Property indicated the degradation of the parent compound, PCE. PCE concentrations in down gradient well MW8 continues to be lower than up gradient wells (MW5) or wells close to the source area (MW3 and MW4). Wells near the source area appear to have stable or decreasing PCE concentrations despite large fluctuations in groundwater elevations. These data support the conclusion that the PCE plume is maintaining steady-state behavior or is decreasing in mass. Based on the historic PCE data from wells MW6, MW8, and MW9, well MW9 is a representative down gradient well. The authors stated that a long-term trend of attenuation in the down gradient direction and stable or lower PCE concentrations in this well will continue. In view of the long term trend of PCE attenuation and maximum PCE concentrations below 50 µg/L for the last two events, the authors believed the site should be considered for closure. This report is included in Appendix D.

Based on the observed soil borings throughout the Subject Property parking area, McAlister GeoScience believes a previous Phase I Environmental Site Assessment and Phase II Environmental Site Assessment have been performed at the Subject Property. However, McAlister GeoScience did not obtain a previous Phase I/II Environmental Site Assessment by the completion of this assessment, despite a reasonable attempt to do so.

3.4 Other Sources of Information

Several state and local information sources were reviewed for the Subject Property through a review of online sources and Freedom of Information Act requests.

3.4.1 California Environmental Protection Agency, Department of Toxic Substances Control

The online Department of Toxic Substances Control database, EnviroStor was reviewed. There were no sites listed within one half mile of the Subject Property.

3.4.2 California Regional Water Quality Control Board – Los Angeles

The online Regional Water Quality Control Board database, GeoTracker was reviewed and seven properties were within one-half mile of the Subject Property. The property at 3378 Los Coyotes Diagonal, was a former Royalty Cleaners, is discussed in the SLIC section of the Radius Search below and in the 2016 Groundwater Monitoring Report above. This property is a threat to soils and/or groundwater at the Subject Property and is considered a Recognized Environmental Condition (REC). The property at 3340 Los Coyotes Diagonal on the Subject Property was a former hospital and is discussed in the LUST section of the Radius Search below. This historical facility on the Subject Property is a Historical Recognized Environmental Condition (HREC). The remaining five properties are gas stations with leaking underground storage tanks and are discussed in the LUST section of the Radius Search below, and are not threats to soils and/or groundwater at the Subject Property.

Two documents from the LA RWQCB were obtained via GeoTracker and include:

- California Regional Water Quality Control Board Los Angeles. May 18, 2005. *No Further Action Status for Soil Only - Former Royalty Cleaners, 3378 Los Coyotes Diagonal, Long Beach, California (Site ID No. 1843000; SLIC No. 0537).*
- California Regional Water Quality Control Board Los Angeles. December 7, 2011. *Approval of Request for Reducing Monitoring Frequency Pursuant to California Water Code Section 13267 Order, Former Royalty Cleaners, 3378 Los Coyotes Diagonal, Long Beach, California (Site ID No. 1843000; SCP No. 0537).*

On May 18, 2005, the LA RWQCB stated that the removal of 502 tons of soil around the former dry cleaning machine located at 3378 Los Coyotes Diagonal in 2001, and the air sparging and soil vapor extraction system that operated for one year in 2001, reduced soils levels of PCE and its daughter VOCs to below health screening levels. Therefore, soils impacted with VOCs from the previous dry cleaning operation was determined to require No Further Action, and the case was closed for soils in May of 2005. The LA RWQCB stated that Freon-12 and Freon-22 was detected in soil gas samples at 3378 Los Coyotes Diagonal and was thought to be from a separate leak from the cooling system from the current Ralphs facility. This facility may pose a threat to soils and/or groundwater at the Subject Property. However, since it appears only soils were affected (not groundwater), the release of Freon-12 and Freon-22 is considered a *de minimis* condition at the Subject Property.

On December 7, 2011, the LA RWQCB reviewed ground monitoring data and concluded that PCE had been relatively stable or decreasing over the last several years and the presence of TCE

and cis-1,2-dichloroethene indicated degradation of the parent compound PCE. Therefore, annual and not semi-annual groundwater monitoring, was deemed sufficient.

3.4.3 California State Fire Marshal, Pipeline Safety Division

The online National Pipeline Mapping System database was reviewed. There is a hazardous liquid pipeline approximately 0.45 miles to the south of the Subject Property. This pipeline is nearly one-half mile from, and down gradient to the Subject Property with respect to groundwater flow direction. Therefore, this pipeline does not pose a threat to soils and/or groundwater at the Subject Property.

3.4.4 State of California Department of Conservation Department of Oil, Gas, and Geothermal Resources

The online mapping system maintained by the State of California Department of Oil, Gas, and Geothermal Resources for the immediate vicinity of the Subject Property was reviewed. There were no wells listed within one half mile of the Subject Property.

3.4.5 Los Angeles County Public Health Department

A Freedom of Information Act (FOIA) request was sent to the Los Angeles County Public Health Department. No records exist for the Subject Property at Los Angeles County Public Health Department.

3.4.6 City of Long Beach Certified Unified Program Agency (CUPA)

McAlister GeoScience contacted local agencies including the Los Angeles County Health Hazardous Materials Division who referred McAlister GeoScience to the City of Long Beach Certified Unified Program Agency (CUPA) regarding the former UST at the CBHS hospital location. The Long Beach CUPA responded to McAlister GeoScience's Freedom of Information Act (FOIA) request and said they had no records for the Subject Property. McAlister GeoScience believes a post-removal UST report exists; however, a post-removal UST report was not obtained by the completion of this assessment, despite a reasonable attempt to do so.

4.0 Interviews

Interviews were conducted in accordance with 40 CFR Section (§) 312.30 requiring the Environmental Professional conducting the Phase I ESA to take into account commonly known info, including that of the user of the report. Additionally, 40 CFR §§ 312.22(a)(2) and (a)(4), and 40 CFR §§ 312.28, 312.30, and 312.31, require reviewing knowledge of the buyer. Also included in the interview, in accordance with 40 CFR §§ 312.22(a)(3) and 312.29, interviews included consideration of the relationship of the purchase price to the fair market value as an indicator of RECs. The Subject Property is comprised of several individual owners, each of which was supplied with a questionnaire. A summary of the various responses is summarized below and copies of the completed questionnaires are included in Appendix D.

4.1 Deputy Director Purchasing and Contracts

An interview questionnaire was submitted to the current Deputy Director Purchasing and Contracts, Alan Moloney, at the Long Beach Community College District to evaluate the potential for soil and/or groundwater impacts at the Subject Property. The questionnaire was received and potential soil and groundwater impacts were not identified. The completed questionnaire is included in Appendix D.

4.2 Real Estate Manager

An onsite interview was conducted with Ashley Cardo, a Real Estate Manager at Pacific Coast Commercial Real Estate during the site reconnaissance. Ms. Cardo was not aware of any potential impacts to soil and/or groundwater at the Subject Property.

5.0 Information from Site Reconnaissance

The following is a summary of observations made during the site reconnaissance.

5.1 Date of Reconnaissance

December 7, 2017.

5.2 Activities/Processes Conducted at the Property

The Subject Property consists of two, two-story buildings that are currently used for various medical and dental offices. One unit is vacant at 3320 Los Coyotes Diagonal and four units are vacant at 3325 Palo Verde Avenue. Storage of janitorial supplies is found in various vacant units. The northwestern portion of the Subject Property is a vacant lot that is currently fenced off. The remainder of the Subject Property is used as a parking area. Site features are identified on Figure 2. Photographs taken during the site reconnaissance are included in Appendix A.

5.3 Adjacent Property Uses

The areas immediately adjacent to the Subject Property are summarized below.

North: The Subject Property is bordered to the north by Ralph's grocery store at 3380 Los Coyotes Diagonal. Additionally, Long Beach Alliance Church is located directly to the north of the Subject Property at 3331 Palo Verde Avenue, beyond which is Long Beach Fire Department Station 18.

West: The Subject Property is bordered to the west by Los Coyotes Diagonal, a small man-made wash, and Los Coyotes Diagonal West, beyond which is single-family residential housing units.

East: The Subject Property is bordered to the east by Palo Verde Avenue, beyond which is single-family residential housing units.

South: The Subject Property is bordered to the south by single-family residential housing units.

At the time of the site reconnaissance, none of the adjacent properties appeared to be of concern for soil and/or groundwater impacts at the Subject Property.

5.4 Potentially Hazardous Chemicals Observed or Known to be Present at the Subject Property

Potentially hazardous chemicals were not observed or known to be present at the Subject Property.

5.4.1 Petroleum Products Observed or Known to be Present at the Subject Property

Petroleum products were not observed on the Subject Property during the site reconnaissance.

5.5 On-site Roads and Parking Areas

All roads and parking areas on the Subject Property are paved asphalt. A large paved vacant lot that is fenced off can be found in the northwestern portion of the Subject Property.

5.6 Above Ground Tanks

There were no indications of aboveground storage tanks observed during the site reconnaissance. However, a diesel AST may likely be associated with the Verizon Wireless cellular equipment area in the northeastern portion of the Subject Property. Nevertheless, no evidence of a tank was observed and no leaks or releases have been reported; therefore, the potential presence of an AST is not considered a threat to soil and/or groundwater at the Subject Property.

5.7 Underground Tanks

There were no indications of underground storage tanks observed during the site reconnaissance.

5.8 Unusual or Noxious Odors

Unusual or noxious odors were not noticed during the site reconnaissance.

5.9 Pools of Liquid

Pools of liquid were not observed during the site reconnaissance.

5.10 Pits/Ponds/Lagoons – Exterior, On-site or Neighboring

Pits/ponds/lagoons were not observed during the site reconnaissance.

5.11 Transformers or Polychlorinated Biphenyl-Suspect Hydraulic Systems

Two pad-mounted transformers were observed on the south side of both Subject Property buildings. No evidence of spills, leaks, or releases of any kind was observed and the transformers appeared to be in good working condition.

5.12 Stained Soil or Pavement

Stained soil or pavement was not observed during the site reconnaissance on the Subject Property.

5.13 Stressed Vegetation

Stressed vegetation was not observed during the site reconnaissance on the Subject Property.

5.14 Discharges to Drains, Ditches, or Streams

Storm water at the Subject Property will flow into natural drainages throughout the Subject Property and flow to the northeast with topography.

5.15 Wells

Three groundwater monitoring wells were observed in the driving/parking area of the Subject Property during the site reconnaissance. One was observed along the eastern property boundary at the Palo Verde Avenue driveway entrance. Another was observed directly northwest of 3325 Palo Verde Avenue in the driving area. The last observed monitoring well was observed to the west of 3325 Palo Verde Avenue in the driving area. Two more monitoring wells (MW7 and MW8) are known to present in the southeastern portion of the Subject Property, however, they were not observed during the site reconnaissance. Additionally, five borings were observed on the Subject Property in the driving/parking area between the vacant lot, 3320 Los Coyotes Diagonal, 3325 Palo Verde Avenue, and Long Beach Alliance Church.

5.16 Leach Fields/Septic Tanks/Cesspools

Leach fields, septic tanks, or cesspools were not observed during the site reconnaissance.

5.17 Indication of Fill Sites or Dumping

Indication of fill sites or dumping was not observed during the site reconnaissance.

5.18 Sumps/Pits/Floor Drains

Typical storm water floor drains were observed in the courtyard area of 3325 Palo Verde Avenue.

5.19 Buildings or Portions of Buildings

Two, two-story buildings with medical and dental offices was observed on the Subject Property during the site reconnaissance. Additionally, a Verizon Wireless cellular equipment area with a shed-like building was observed in the northeastern portion of the Subject Property. 3320 Los Coyotes Diagonal is located in the southwestern portion of the Subject Property and its units are accessible via interior hallways. 3325 Palo Verde Avenue is located in the southeastern portion of the Subject Property and is accessible via hallways from the exterior. Both buildings contained one hydraulic elevator as well as stair for second-story access.

6.0 Regulatory Agency Search/Agency File Review

6.1 Regulatory Agency Database Review

McAlister GeoScience retained EDR Corporation to provide federal, state, and local regulatory agency databases for sites, including the Subject Property, listed within the search distances described in the ASTM Standard Practice for Environmental Site Assessments E 1527-13. These databases provide lists of facilities that use, store or dispose of hazardous substances, as well as sites with known or suspected contaminated soil or groundwater.

The regulatory agency review consisted of acquisition and review of a regulatory agency database search report of regulatory agency files for sites of interest. Selection of sites considered to have a potential to impact the Subject Property was based on the location of a reported release site with respect to its distance from the Subject Property and the reported groundwater flow direction. Generally, reported release sites within one quarter of one mile up-gradient, or one eighth of one mile cross-gradient or down-gradient of the Subject Property are selected for follow-up file review. Sites listed in the database search report but not identified as a release site (for example, a site listed as a hazardous waste generator but not as having had a release) are not considered to have a potential to impact the soil and/or groundwater at the Subject Property.

The database search report is presented in Appendix C and includes a description of the electronic files searched and associated search distances. Refer to Appendix C for all databases searched by EDR Corporation.

The Subject Property was listed in the RCRA Small Quantity Generators (SQG) list in association with Los Atos Foot Health located at 3325 Palo Verde Avenue on the southeast portion of the Subject Property. The RCRA-SGQ database only lists properties that use and store small amounts of hazardous waste and does not report release sites. No violations were reported for the listed facility and therefore, this listing in itself does not pose a threat to soil and/or groundwater at the Subject Property.

The Subject Property was listed in the RCRA-SQG, FINDS, ECHO, and HAZNET databases in association with the facility Andrew James Manos DO Inc., located at 3320 Los Coyotes Diagonal in the southwest portion of the Subject Property. The listing appears to be a result of photochemical waste used at a physician's office and is very unlikely to pose a threat to soils and/or groundwater at the Subject Property.

The Subject Property is listed in the Leaking Underground Storage Tank (LUST) database in association with the historical Charter Hospital Facility at 3340 Los Coyotes Diagonal. Groundwater was reported to be contaminated by diesel. However, the facility obtained "case-closed" status as of October of 1997. Therefore, this facility is considered a Historical Recognized Environmental Condition (HREC) for the Subject Property.

The Subject Property is listed in the Underground Storage Tank (UST) database in association with CBHS at the historical hospital location at 3340 Los Coyotes Diagonal. The tank was reported tested in January of 1996 and no releases were reported, although it is unclear if this tank is the same tank reported leaking at the same location and given case-closed status in 1997.

However, the UST was located on the Subject Property and a former closure letter for this UST was not obtained. Therefore, the UST at 3340 Los Coyotes Diagonal is a threat to soils and/or groundwater at the Subject Property and considered a Recognized Environmental Condition (REC).

No National Priorities List (Superfund) sites are listed within one mile of the Subject Property, and no Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) sites are listed within one half mile of the Subject Property.

The Subject Property was not listed on the Emergency Response Notification System database.

There was one RCRA Large Quantity Generator (LQGs) on the adjacent property to the north of the Subject Property, in association with a Ralphs at 3380 Los Coyotes Diagonal. No violations were reported for this listing and the property is a grocery store, which is a low risk site for pollutant releases. However, a letter from the LA RWQCB dated May 18, 2005, stated that Freon-12 and Freon-22 was detected in soil gas but not groundwater in 2003 at the Ralph's facility from cooling equipment. Therefore, this facility may pose a threat to soils and/or groundwater at the Subject Property. However, since it appears only soils were affected (not groundwater), the release of Freon-12 and Freon-22 is considered a *de minimis* condition at the Subject Property.

There were two State and Tribal Equivalent CERCLIS sites within one-half mile of the Subject Property in association with Los Coyotes Center at 3378 Coyotes Diagonal 0.043 miles to the north-northwest, and Creighton's Cleansers at 5951 Spring Street 0.495 miles to the southwest. The property at 3378 Coyotes Diagonal is discussed below in the SLIC section. The Property at 5951 Spring Street is a dry-cleaners with soils impacted with volatile organic compounds (VOCs). However, the property is located nearly one-half mile from the Subject Property, down gradient to groundwater flow direction (to the south). Therefore, this property is not a threat to soils and/or groundwater at the Subject Property.

There were five Leaking Underground Storage Tank (LUSTs) within one-half mile of the Subject Property. Four of the five properties were listed with the regulatory status "case-closed" and are over one-fourth mile away. Therefore, they do not pose threats to soils and/or groundwater at the Subject Property. The property at 3100 Los Coyotes Diagonal in association with a Thrifty Service Station, reported groundwater impacts with chlorinated solvents. However, the property is located over one-fourth mile from, and down gradient to the Subject Property with respect to groundwater flow direction. Therefore, this property is not a threat to soils and/or groundwater at the Subject Property.

There was one Spills, Leaks, Investigation, and Cleanup (SLIC) site within one-half mile from the Subject Property in association with Los Coyotes Center located at 3378 Los Coyotes Diagonal (the adjacent property to the north). This property was a dry cleaners known as Royalty Cleaners that operated from 1970 until the mid to late 1990s. The former Royalty Cleaners operated one dry cleaning machine using Tetrachloroethene (PCE). The facility was one of eleven former retail spaces that were demolished during construction of the Ralphs Grocery store in October 2000. Previous environmental assessments conducted on the property indicated soil and groundwater beneath the site (18 feet to 20 feet below ground surface (bgs)), were contaminated by halogenated organic compounds (HVOCs), principally PCE. The

maximum concentration of PCE was detected near-surface soil (one foot bgs) at 30,000 milligrams per kilogram (mg/Kg). Peak PCE concentration in groundwater was detected at 3,700 micrograms per liter (µg/L) down gradient of the site at MW-1 (20 feet north of the Subject Property). Site cleanup actions were taken following the initial assessment. In October of 2001, a total of 502 tons of soil was excavated from a 40-foot by 30-foot area to a depth of approximately 6 feet within the former dry cleaning boundary. The excavation was backfilled with clean, decomposed granite, and an air sparging (AS) well and soil vapor extraction (SVE) wells were installed to address residual contaminants in soils and groundwater, and operated from January 1 2001 to December 26, 2001. In March of 2005, it was determined that no further action (NFA) was required for impacted soils. Approximately eleven groundwater monitoring wells (MW-1 through MW-11) were installed in the mid to late 1990s. MW-1 and MW-2 were installed closest to the former dry cleaning facility, and were abandoned in the September/October of 2000. The remaining wells (MW-3 through MW-11), were installed south of the former facility on the east portion of the Subject Property. The most recent groundwater monitoring report on 12/20/16, showed all levels of VOCs to be below 50 µg /L, with levels stable and/or decreasing. Since VOC impacted groundwater under the east portion of the Subject Property from the former Royal Cleaners is confirmed to be above screening levels for residential properties (5 µg/L), the historical Dry Cleaners on the adjacent property to the north poses a threat to soils and/or groundwater at the Subject Property and is considered a Recognized Environmental Condition (REC).

One underground storage tank (UST) site was listed within one half mile of the Subject Property. The listing is an underground storage tank at Long Beach Fire Station 18 at 3361 Palo Verde Ave., on the adjacent property to the north/northeast. This property has no other information associated with it and no releases have been reported; therefore, this listing likely does not pose a threat to soil and/or groundwater at the Subject Property.

7.0 Vapor Encroachment

7.1 Evaluation

McAlister GeoScience performed a Tier 1 vapor encroachment assessment at the Subject Property in accordance with ASTM Standard E 2600-08, *Standard Practice for Assessment of Vapor Intrusion into Structures on Property Involved in Real Estate Transactions.* The purpose of the vapor encroachment assessment is to evaluate the potential for migration of vapors into existing or planned structures on the Subject Property due to contaminated soil and / or groundwater on the property or within close proximity to the Subject Property.

The objective of a Tier 1 vapor encroachment assessment is to conduct an initial screen to determine if a potential vapor intrusion condition (pVIC) exists in connection with the Subject Property. When used as a screening tool, a Tier 1 vapor encroachment assessment uses non-numerical information designed to identify conditions and/or physical settings where a pVIC is unlikely to occur. The minimum information needed to conduct a Tier 1 screen includes:

- Existing / planned use of the Subject Property;
- Type of structures existing or planned for the Subject Property;
- Surrounding area description;
- Federal, state, local, and tribal government records on the Subject Property and surrounding areas;
- Historical records;
- General physical setting including soil type, geological, hydrological, hydrogeological, and topographical information;
- Significant natural or man-made conduits; and
- Specialized user knowledge;

A pVIC is defined as the potential for the presence or likely presence of any compound of concern (COC) in the indoor air environment of existing or planned structures on a property caused by the release of vapor from contaminated soil or groundwater either on the property or within close proximity to the property at a concentration that presents or may present an unacceptable health risk to occupants. A pVIC exists when the screening defined by the vapor encroachment assessment indicates the potential for a Vapor Intrusion Condition but where there is insufficient data to ascertain the presence or likely presence of COC in the indoor air environment of existing or planned structures on a target property. A condition determined to be *de minimis* is not a pVIC.

A vapor intrusion condition (VIC) is defined as the presence or likely presence of an COC in the indoor air environment of existing or planned structures on a property caused by the release of vapor from contaminated soil or groundwater either on the property or within close proximity to the property at a concentration that presents or may present an unacceptable health risk to occupants.

7.2 Findings

Several properties located within close proximity to the Subject Property are listed with releases or potential releases to soil, soil vapor, and/or groundwater. These properties include the former Royalty Cleaners at 3378 Los Coyotes Diagonal on the adjoining property to the north, the former LUST at the Charter Hospital Facility of the Subject Property, and the Underground Storage Tank (UST) in association with CBHS at the historical hospital location at 3340 Los Coyotes Diagonal.

7.3 Opinions

The properties listed on or within close proximity (to the north) of the Subject Property consisting of former dry cleaning operations to the north, former Leaking Underground Storage Tank (LUST) site, and unknown status of the UST in association with CBHS at the former hospital location indicate a pVIC at the Subject Property.

The dry cleaning property adjoining to the north of the Subject Property has a reported release with the plume extending northwest to southeast across the Subject Property and poses a high risk of a vapor intrusion condition at buildings located in the central to southeastern portion of the Subject Property.

7.4 Conclusions

A pVIC exists for the Subject Property due to a release to soil and/or groundwater that was identified associated with the dry cleaning properties adjoining to the north of the Subject Property.

8.0 Summary, Conclusion, and Recommendations

8.1 Summary

McAlister GeoScience was retained by Los Coyotes Redevelopment, LLC and Sonnocco Real Estate Group (collectively, the Client) to conduct a Phase I Environmental Site Assessment (Phase I ESA) for the property comprised of approximately 6.3-acres at 3320 & 3340 Los Coyotes Diagonal and 3325 Palo Verde Avenue, Long Beach, California (the Subject Property; Figure 1). McAlister GeoScience understands that the Client is planning to development an elder care facility on the Subject Property. Site features are identified on Figure 2. Photographs taken during the site reconnaissance are included in Appendix A.

Historical data reviewed indicated that the Subject Property was used primarily as agricultural land prior to 1952. Aerial photographs indicate that unknown scattered structures were present on the Subject Property from approximately 1952 to the 1960s, then Los Altos Hospital was constructed on the west portion of the Subject Property in approximately the mid 1960s and was torn down in the mid 2000s. This area remained an unpaved dirt lot until approximately 2010, then was asphalt paved thereafter as it remains today. A second medical building was constructed on the southwest portion of the Subject Property in the mid 1960s and is still present. Additional medical offices were developed in the southeast portion of the Subject Property in approximately 1980 and are still present.

Historical data reviewed indicated that a dry cleaners by the name of Royalty Cleaners was present on the adjacent property to the north form at least the late 1960s to the 1990s. A release has been reported and the site is currently an open case overseen by the Los Angeles Regional Water Quality Control board (LA RWQCB). The site is a threat to soil and/or groundwater at the Subject Property due to previous investigations revealing soil and groundwater impacts with volatile organic compounds (VOCs). The Royalty Cleaners case at 3378 Los Coyotes Diagonal is considered a Recognized Environmental Condition (REC) at the Subject Property.

The Subject Property is listed in the Leaking Underground Storage Tank (LUST) database in association with the historical Charter Hospital Facility at 3340 Los Coyotes Diagonal. Groundwater was reported to be contaminated by diesel. However, the facility obtained "case-closed" status as of October of 1997. Therefore, this facility is considered a Historical Recognized Environmental Condition (HREC) for the Subject Property.

The Subject Property is listed in the Underground Storage Tank (UST) database in association with CBHS at the historical hospital location at 3340 Los Coyotes Diagonal. The tank was reported tested in January of 1996 and no releases were reported, although it is unclear if this tank is the same tank reported leaking at the same location and given case-closed status in 1997. However, the UST was known to be located on the Subject Property and a former closure letter for this UST was not obtained. Therefore, the UST at 3340 Los Coyotes Diagonal is a threat to soils and/or groundwater at the Subject Property and considered a Recognized Environmental Condition (REC).

8.1 Conclusion

McAlister GeoScience has performed a Phase I ESA of the Subject Property in conformance with the scope and limitations of American Society for Testing and Materials Practice E 1527. Any exceptions to, or deletions from, this practice are described in the *Limiting Factors, Project Limitations,* and *Data Gaps* sections of this report. This assessment has revealed evidence of two RECs and one HREC in connection with the Subject Property.

8.2 Recommendations

Based on the information gathered during the performance of this assessment, and the understanding of current regulatory guidelines and judgment, the following recommendations are presented for consideration:

- Royalty Cleaners (REC) – McAlister GeoScience recommends soil gas sampling to further delineate the extent of the Tetrachloroethene (PCE) plume beneath the Subject Property due to the release at the former Royalty Cleaners at 3378 Los Coyotes Diagonal.

- CBHS UST unknown status (REC) – McAlister GeoScience recommends further public record research into the unknown status of the CBHS UST. If no records are obtained, despite a reasonable attempt to do so, McAlister GeoScience recommends a geophysical survey in the potential locations of the UST to determine if it was removed or not.

- Former Onsite LUST (HREC) – Due to the regulatory status (in October of 1997) of the former LUST in association with CBHS at the historic hospital location at 3340 Los Coyotes Diagonal, McAlister GeoScience recommends no further action.

9.0 Signatures of Environmental Professionals

Mr. Joshua Kajiyama performed the site reconnaissance, compiled report data, and wrote portions of the Phase I ESA report. Mr. David McAlister provided technical review. The signatures of Mr. Kajiyama and Mr. McAlister are included in this Section of the report.

Joshua Kajiyama
Staff Scientist

David C. McAlister
Environmental Professional

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in ASTM Standard Practice E 1527-13 and 40 CFR § 312.10 in accordance with 40 CFR § 312.21(d). We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the Site. We have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in ASTM Standard Practice E 1527-13.

10.0 References

American Society for Testing and Materials (ASTM) 2013. Practice E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

Department of Water Resources (DWR). 2003. California's Groundwater. Bulletin No. 118. October.

EDR. *Certified Sanborn® Map Report,* Inquiry No. 5092799.3 October 31, 2017.

EDR. *The EDR – Aerial Photography Print Service*, Inquiry No. 5092799.9 November 1, 2017.

EDR. *The EDR – City Directory Abstract*, Inquiry No. 5092799.5 November 1, 2017.

EDR. *The EDR –Historical Topographic Map Report with QuadMatch (USGS Los Angeles CA 7.5 minute)*, Inquiry No. 5092799.4 October 31, 2017.

EDR. *The EDR Radius Map Report with GeoCheck*, Inquiry No. 5092799.2s October 31, 2017.

Google Earth - http://earth.google.com/

Lindmark Engineering. *2016 Annual Groundwater Monitoring Report, Former Royalty Cleaners, 3378 Los Coyotes Diagonal, Long Beach, California, SLIC No. 537.* January 13, 2017.

Los Angeles County Office of the Assessor - http://maps.assessor.lacounty.gov/

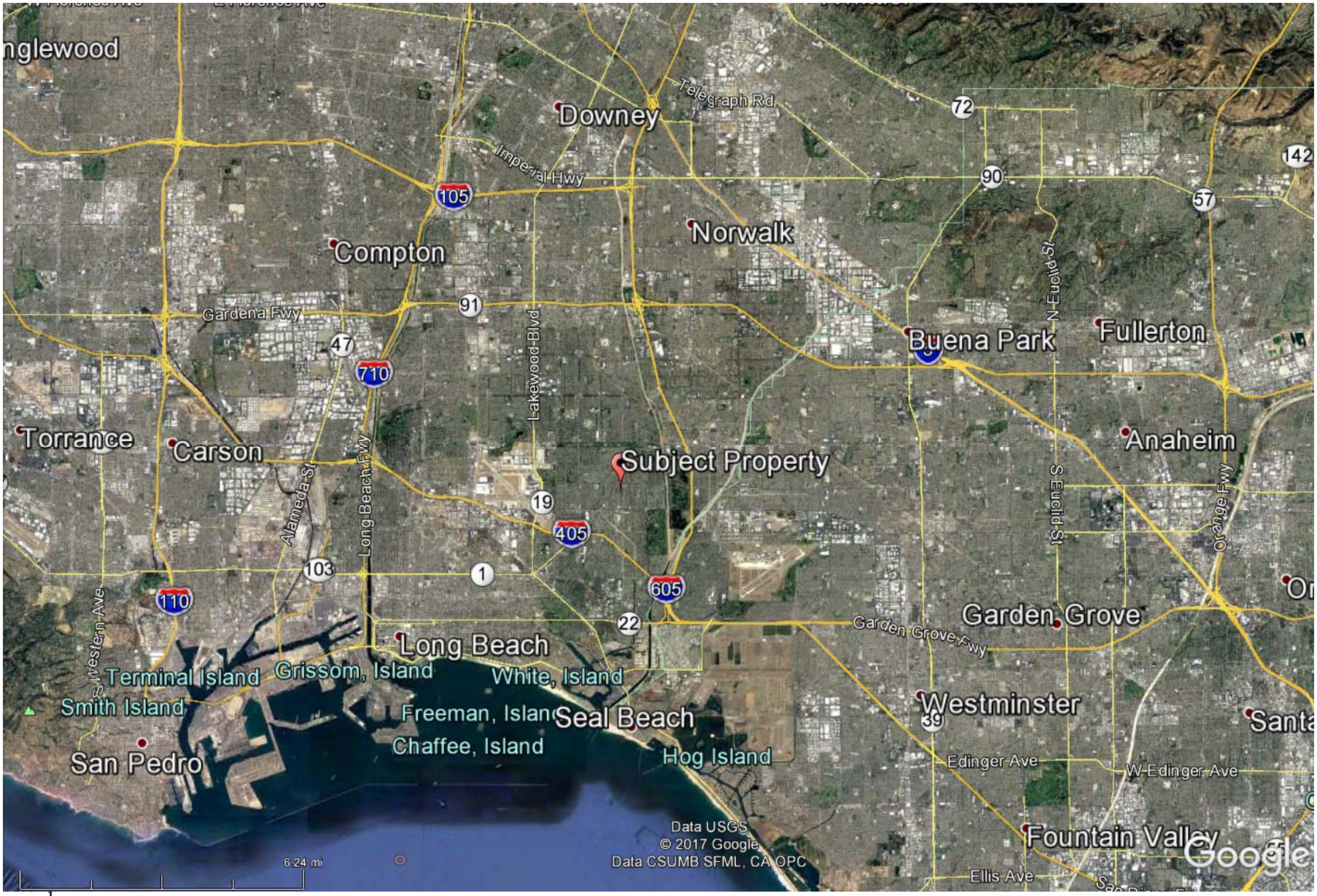
State of California Water Resources Control Board, GeoTracker Online Database - http://geotracker.swrcb.ca.gov/

State of California Department of Toxic Substances Control, EnviroStor online Database – http://envirostor.dtsc.ca.gov/

State of California Department of Conservation, Division of Oil, Gas, & Geothermal Resources (DOGGR) online Well Finder Database – maps.conservation.ca.gov/doggr/index.html

United States Department of Transportation Pipeline and Hazardous Materials Safety Administration (PHMSA) online database – www.npms.phmsa.dot.gov/

FIGURES



Legend:

Subject Property

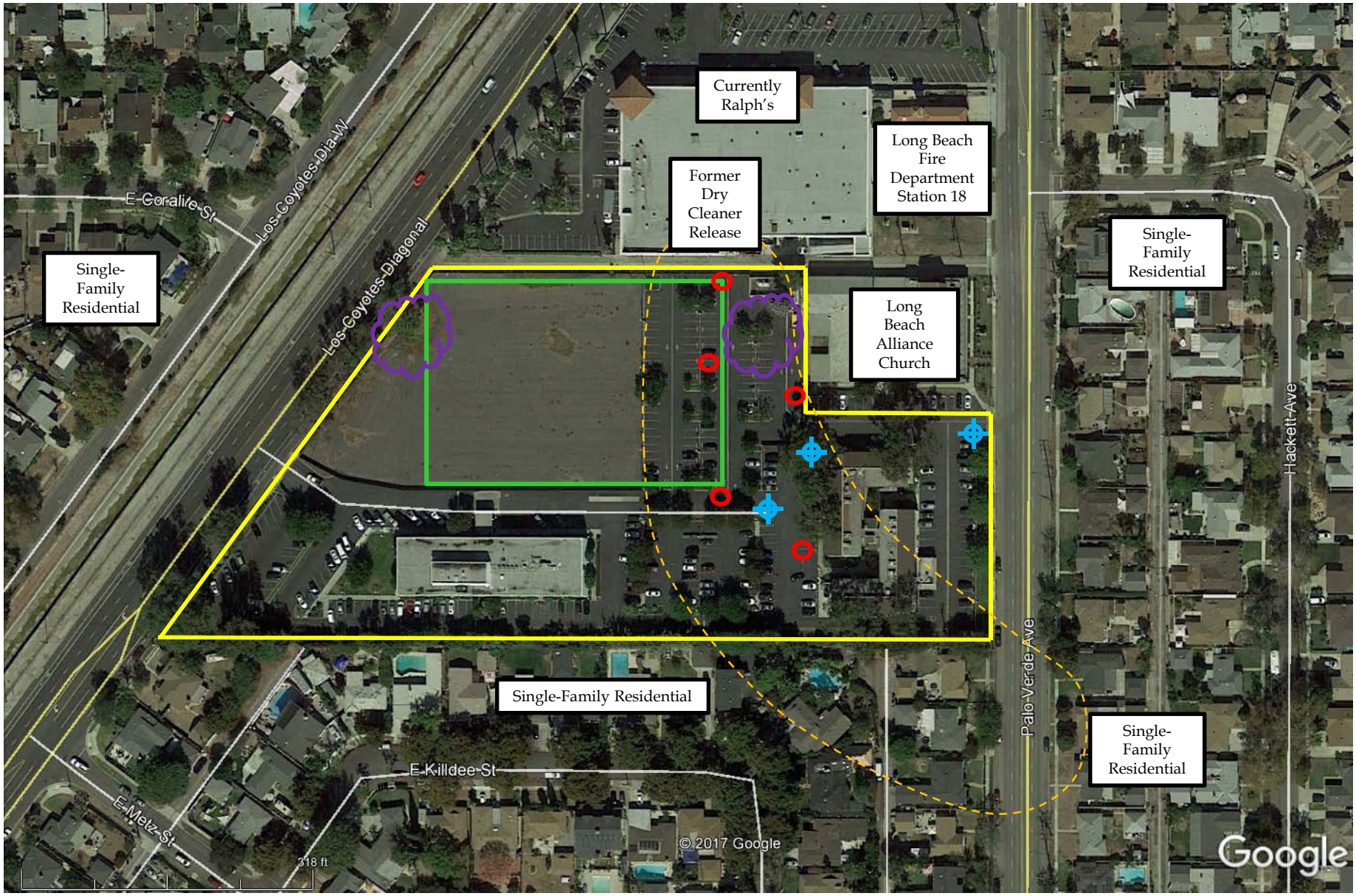
SOURCE: *Google Earth, 2017*

N

TITLE:	**Site Location**
LOCATION:	**Los Coyotes Redevelopment** **Long Beach, California**

McAlister GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, CA 90803
714-423-3796 **DirtyProperty.com**

CHECKED:	D.McAlister	**FIGURE:**
DRAFTED:	J.Kajiyama	**1**
FILE:		
DATE:	12-27-2017	



Legend:

- Property Boundary
- Monitoring Wells
- Former Soil Borings
- Approximate MCL Contour for PCE
- Approximate Former Hospital
- Potential UST Location
- N

SOURCE: *Google Earth, 2017*

TITLE:	**Site Plan**
LOCATION:	**Los Coyotes Redevelopment** **Long Beach, California**

McAlister GeoScience
5030 E. 2nd Street, Suite 200 Long Beach, CA 90803
714-423-3796 **DirtyProperty.com**

CHECKED:	D.McAlister	FIGURE:
DRAFTED:	J.Kajiyama	2
FILE:		
DATE:	12-27-2017	

APPENDIX A

SITE PHOTOGRAPHS

Appendix A – Photographic Log

Photo: 1 **Description:** Western elevation of 3325 Palo Verde Avenue. **Orientation:** Facing east	

Photo: 2 **Description:** Southern elevation of 3325 Palo Verde Avenue. **Orientation:** Facing northeast	

Appendix A – Photographic Log

Photo: 3 **Description:** Eastern elevation of 3325 Palo Verde Avenue. **Orientation:** Facing west	

Photo: 4 **Description:** Northern elevation of 3325 Palo Verde Avenue. **Orientation:** Facing southwest	

Appendix A – Photographic Log

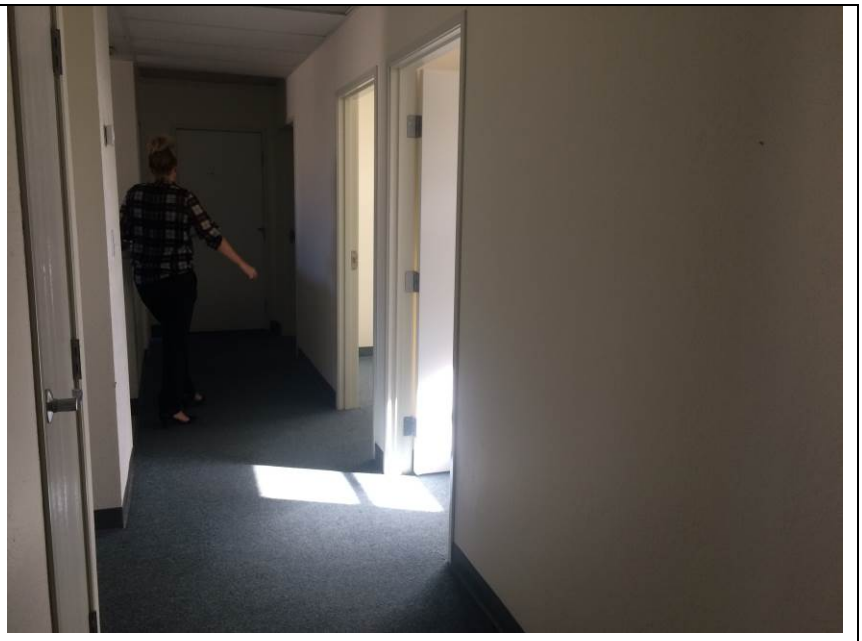
Photo: 5 **Description:** Typical hallway of units of 3325 Palo Verde Avenue (Unit 204). **Orientation:** Facing east	

Photo: 6 **Description:** Typical restroom within 3325 Palo Verde Avenue. **Orientation:** Facing southwest	

Appendix A – Photographic Log

Photo: 7 **Description:** Biohazardous blood and urine specimen containers outside LabCorp units. **Orientation:** Facing west	

Photo: 8 **Description:** File storage unit of 3325 Palo Verde Avenue. **Orientation:** Facing northwest	

Appendix A – Photographic Log

Photo: 9 **Description:** Paint storage in file storage room of 3325 Palo Verde Avenue. **Orientation:** Facing southeast	

Photo: 10 **Description:** Minor ground staining within electrical room. **Orientation:** Facing down	

Appendix A – Photographic Log

Photo: 11 **Description:** Hydraulic elevator equipment of 3325 Palo Verde Avenue. Difficult to see in photo but secondary containment appears to have oily substance that leaked from hydraulic equipment. **Orientation:** Facing down	

Photo: 12 **Description:** 5-gallon hydraulic oil bucket next to hydraulic elevator equipment. **Orientation:** Facing east	

Appendix A – Photographic Log

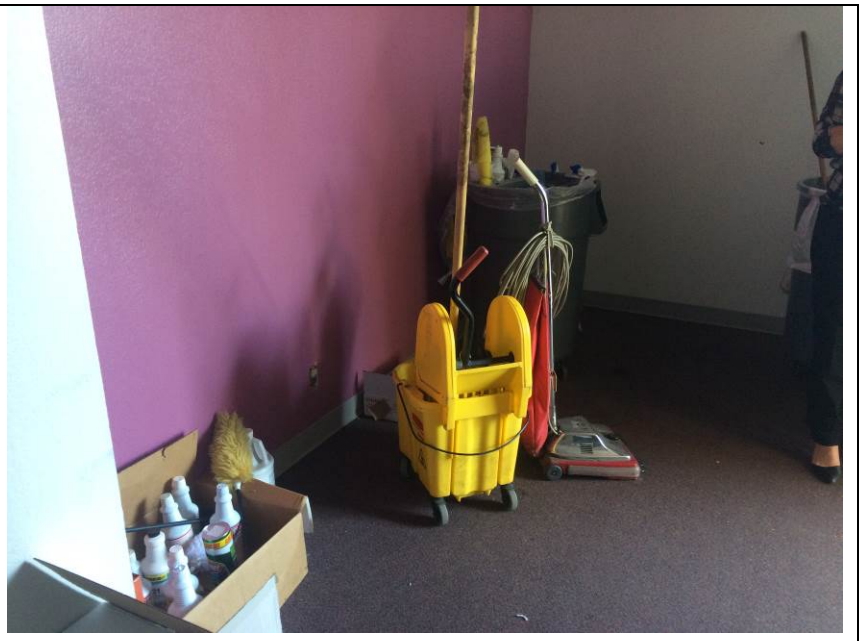
Photo: 13 **Description:** Janitorial supply storage unit of 3325 Palo Verde Avenue. **Orientation:** Facing northeast	

Photo: 14 **Description:** Western elevation of 3320 Los Coyotes Diagonal. **Orientation:** Facing east	

Appendix A – Photographic Log

Photo: 15 **Description:** Northern elevation of 3320 Los Coyotes Diagonal. **Orientation:** Facing southeast	

Photo: 16 **Description:** Eastern elevation of 3320 Los Coyotes Diagonal. **Orientation:** Facing southwest	

Appendix A – Photographic Log

Photo: 17 **Description:** Southern elevation of 3320 Los Coyotes Diagonal. **Orientation:** Facing northeast	

Photo: 18 **Description:** Main hallway of first floor within 3320 Los Coyotes Diagonal. **Orientation:** Facing east	

Appendix A – Photographic Log

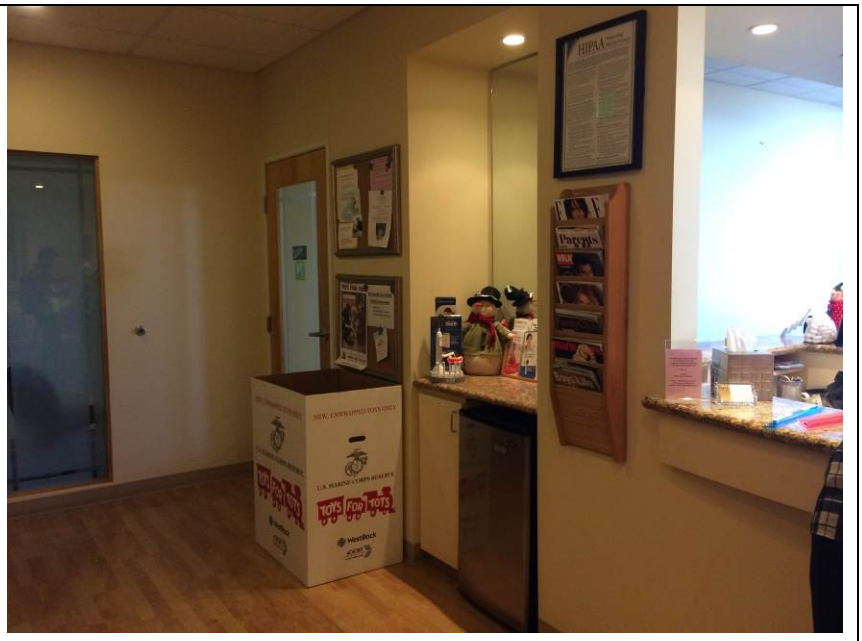
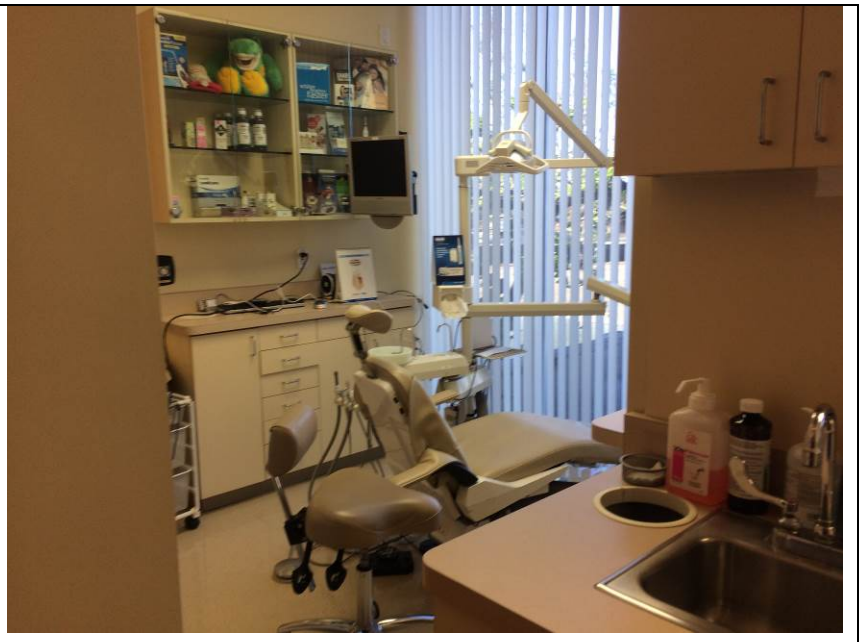
Photo: 19 **Description:** Typical medical office unit lobby of 3320 Los Coyotes Diagonal. (Unit 220, a dentistry unit) **Orientation:** Facing northwest	

Photo: 20 **Description:** Dentistry office within Unit 220 of 3320 Los Coyotes Diagonal. **Orientation:** Facing northwest	

Appendix A – Photographic Log

Photo: 21 **Description:** 5-gallon storage container for 5-chloro-2-methyl-4-isothiazolin-3-one, a corrosive liquid within a vacant unit of 3320 Los Coyotes Diagonal. No leaks or floor staining was observed **Orientation:** Facing northwest	

Photo: 22 **Description:** Electrical equipment room within first floor of 3320 Los Coyotes Diagonal. **Orientation:** Facing southeast	

Appendix A – Photographic Log

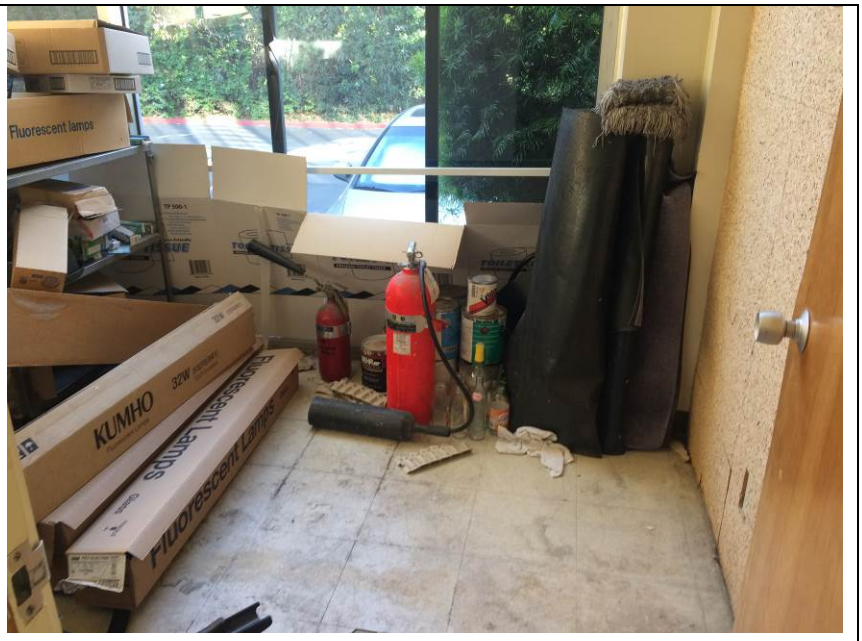
Photo: 23 **Description:** Typical "junk" storage within vacant unit of 3320 Los Coyotes Diagonal. **Orientation:** Facing south	

Photo: 24 **Description:** Typical floor drain outside units of 3325 Palo Verde Avenue. **Orientation:** Facing south	

Appendix A – Photographic Log

Photo: 25 **Description:** Trash storage area of 3325 Palo Verde Avenue. **Orientation:** Facing northeast	

Photo: 26 **Description:** Pad-mounted transformer for 3325 Palo Verde Avenue. No evidence of leaks or staining was observed. **Orientation:** Facing northwest	

Appendix A – Photographic Log

Photo: 27 **Description:** Pad-mounted transformer area for 3320 Los Coyotes Diagonal. No evidence of leaks or staining was observed. **Orientation:** Facing northwest	

Photo: 28 **Description:** Verizon Wireless cellular equipment area in the northeastern-most corner of the Subject Property. It is addressed 3340 Los Coyotes Diagonal. No evidences of leaks or staining was observed. **Orientation:** Facing northeast	

Appendix A – Photographic Log

Photo: 29 **Description:** NFPA placards associated with the Verizon Wireless cellular equipment area. **Orientation:** Facing north	

Photo: 30 **Description:** One of five observed soil borings within the parking area between the vacant lot and 3325 Palo Verde Avenue. **Orientation:** Facing southeast	

Appendix A – Photographic Log

Photo: 31 **Description:** One of three observed groundwater monitoring wells within the parking area between the vacant lot, Long Beach Alliance Church, and 3325 Palo Verde Avenue. **Orientation:** Facing southeast	

Photo: 32 **Description:** Long Beach Alliance Church directly to the north of the Subject Property at 3331 Palo Verde Avenue. **Orientation:** Facing northwest	

Appendix A – Photographic Log

Photo: 33 **Description:** Rear (south) of Ralphs grocery store directly to the north of the Subject Property. Was the site of the former Royal Dry Cleaners **Orientation:** Facing north	

Photo: 34 **Description:** Single-family residential housing units to the west of the Subject Property beyond Los Coyotes Diagonal, a small man-made creek, and Los Coyotes Diagonal West. **Orientation:** Facing west	

Appendix A – Photographic Log

Photo: 35 **Description:** One of the many single-family residential housing units directly to the south of the Subject Property. **Orientation:** Facing west	

Photo: 36 **Description:** Single-family residential housing units to east of the Subject Property beyond Palo Verde Avenue. **Orientation:** Facing southeast	

Appendix A – Photographic Log

Photo: 37 **Description:** The large vacant lot of the Subject Property. **Orientation:** Facing northwest	

APPENDIX B

HISTORICAL AERIAL PHOTOGRAPHS, TOPOGRAPHIC MAPS, AND FIRE INSURANCE MAPS

Los Coyotes Redevelopment

3235/3325 Palo Verde Ave & 3320 Los Coyotes Diag

Long Beach, CA 90808

Inquiry Number: 5092799.9

November 01, 2017

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

11/01/17

Site Name:

Los Coyotes Redevelopment
3235/3325 Palo Verde Ave & 3
Long Beach, CA 90808
EDR Inquiry # 5092799.9

Client Name:

David McAlister
1724 East 1st Street
Long Beach, CA 90802
Contact: Joshua Kajiyama

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	***Scale***	***Details***	***Source***
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
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2005	1"=500'	Flight Year: 2005	USDA/NAIP
2002	1"=500'	Flight Date: June 11, 2002	USDA
1994	1"=500'	Acquisition Date: May 31, 1994	USGS/DOQQ
1989	1"=500'	Flight Date: August 22, 1989	USDA
1981	1"=500'	Flight Date: February 21, 1981	EDR Proprietary Brewster Pacific
1977	1"=500'	Flight Date: January 18, 1977	EDR Proprietary Brewster Pacific
1972	1"=500'	Flight Date: November 24, 1972	EDR Proprietary Brewster Pacific
1963	1"=500'	Flight Date: February 28, 1963	USGS
1952	1"=500'	Flight Date: November 18, 1952	USDA
1947	1"=500'	Flight Date: June 17, 1947	USGS
1938	1"=500'	Flight Date: June 21, 1938	USDA
1928	1"=500'	Flight Date: January 01, 1928	USGS

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INQUIRY #: 5092799.9

YEAR: 2012

= 500'

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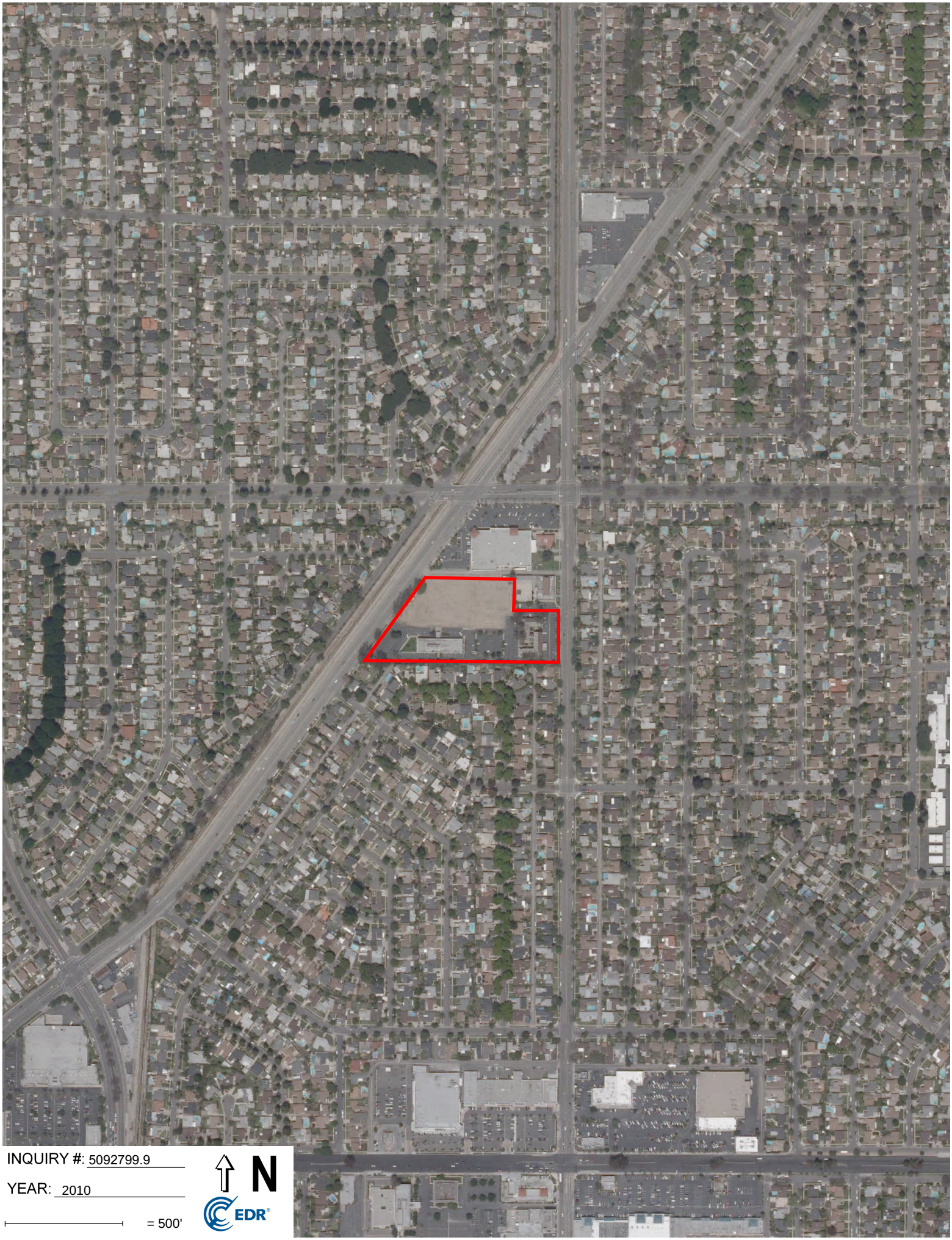
EDR



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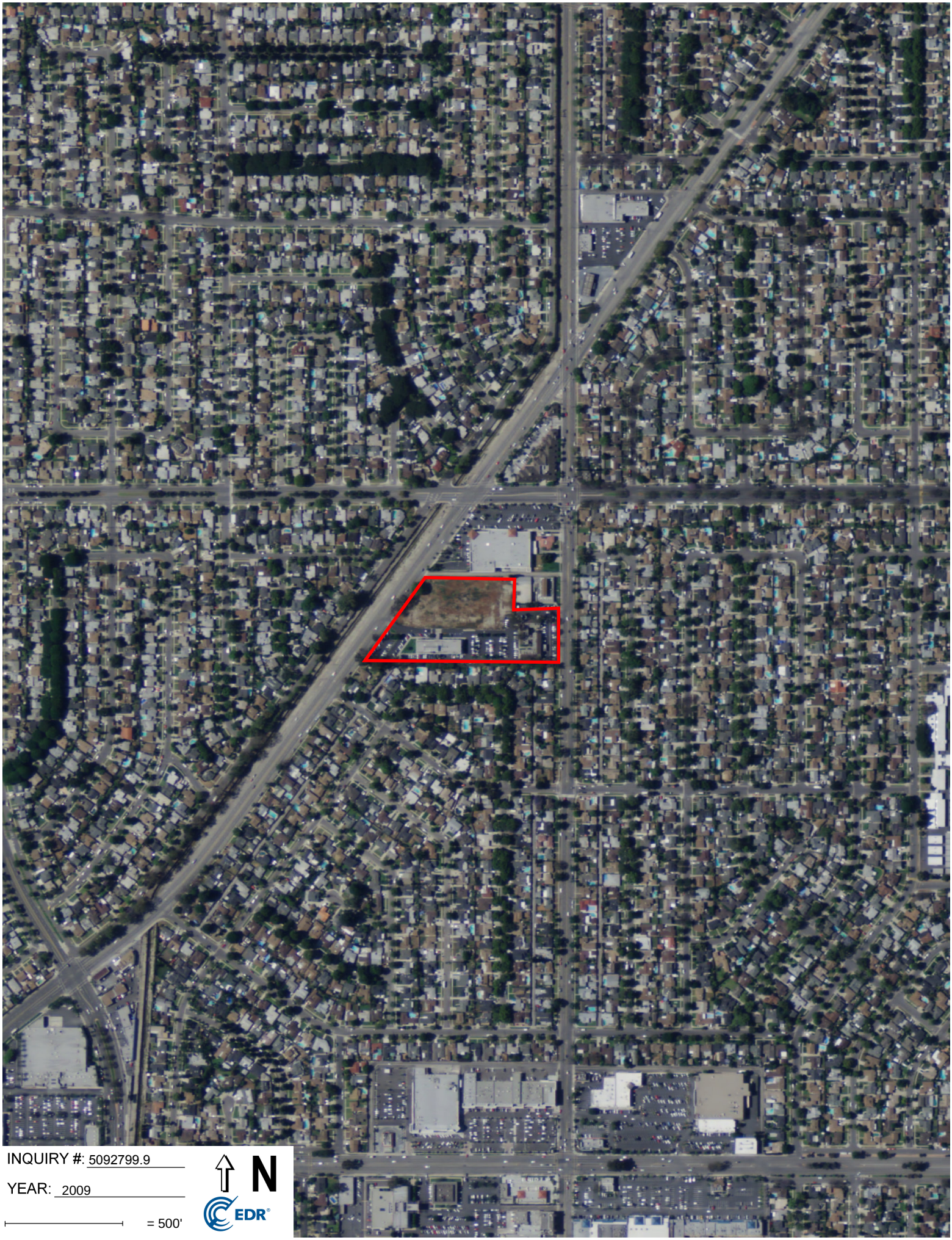
EDR



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YEAR: 2009

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EDR

INQUIRY #: 5092799.9

YEAR: 2005

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EDR

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INQUIRY #: 5092799.9

YEAR: 1994

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INQUIRY #: 5092799.9

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EDR

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EDR

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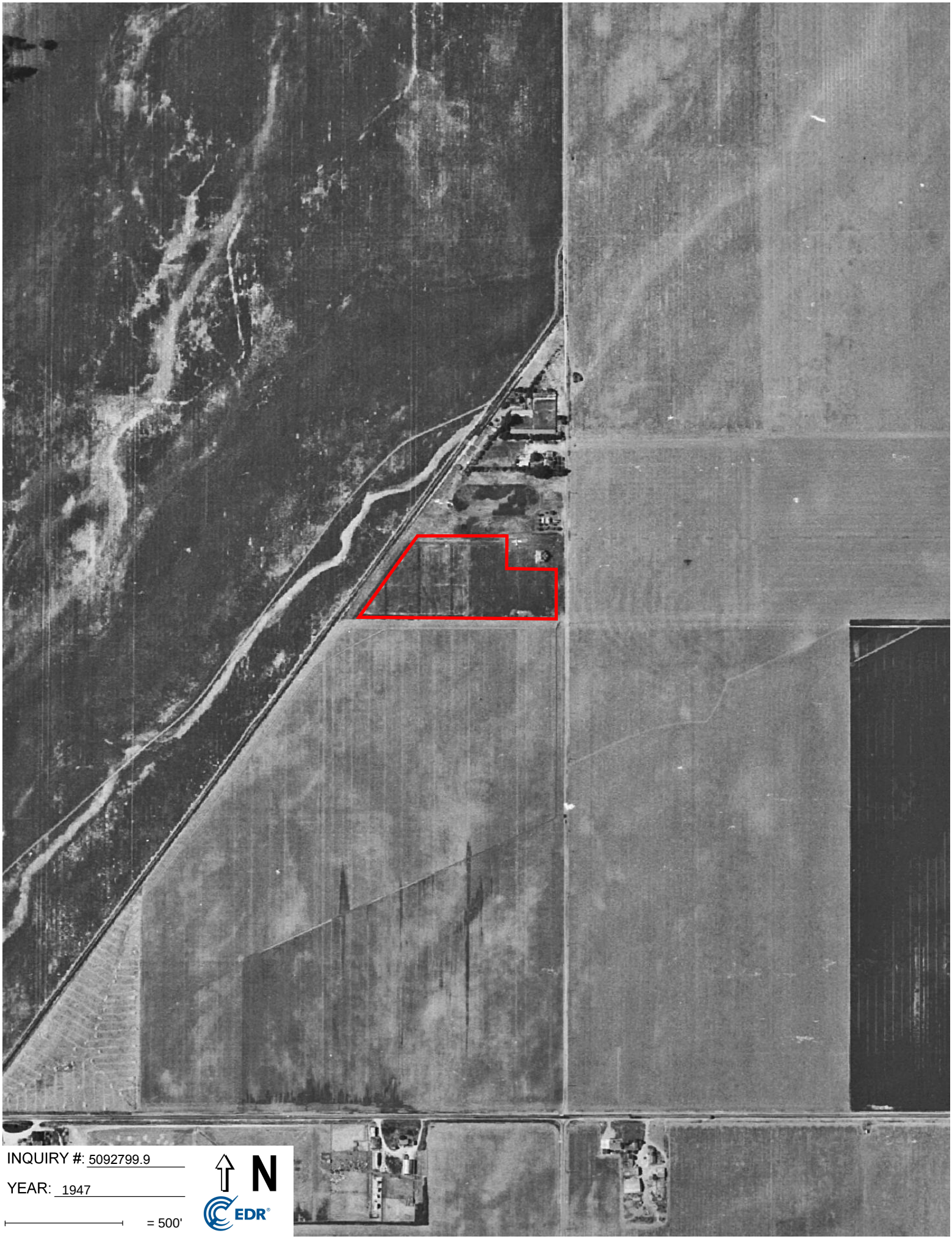
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EDR

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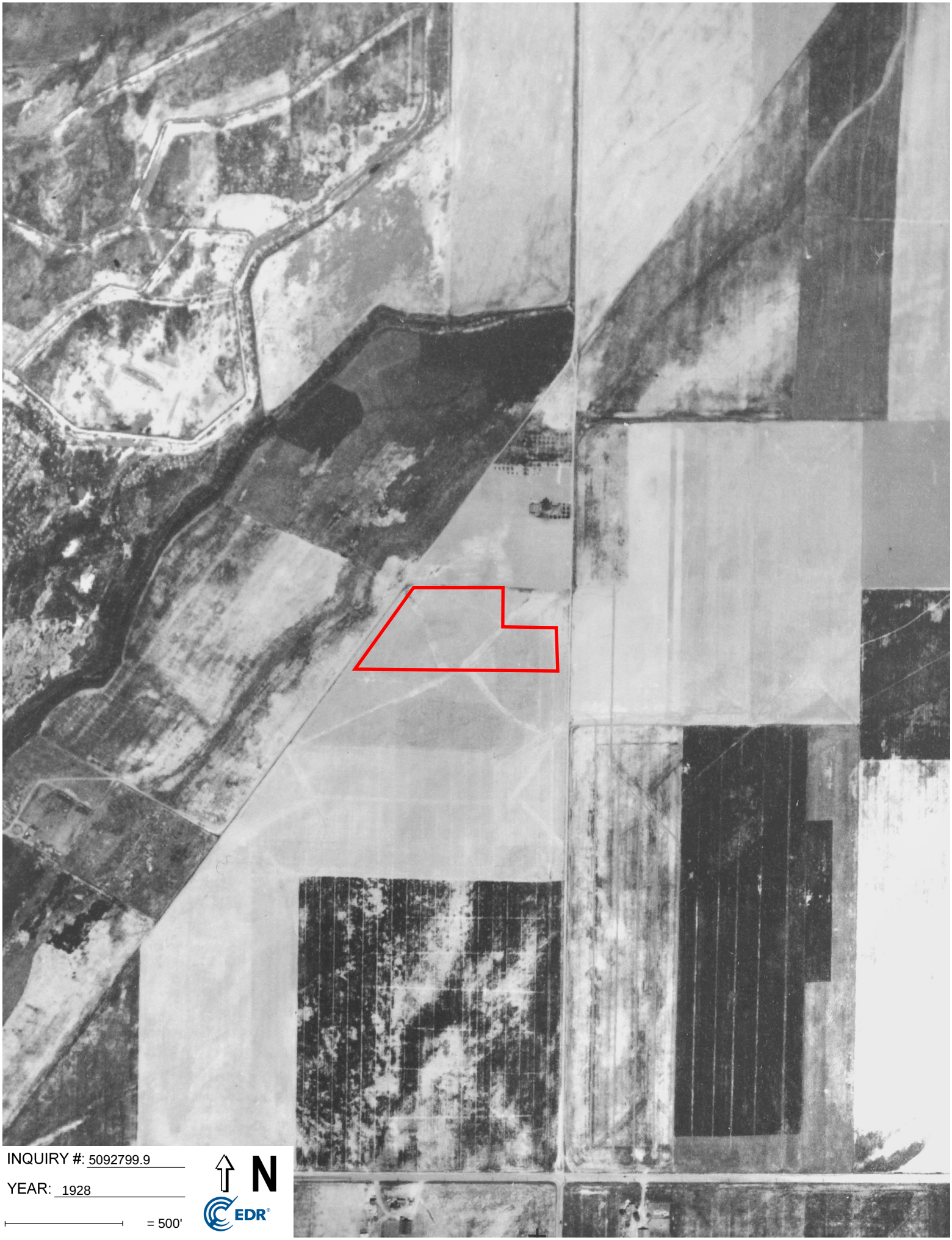

INQUIRY #: 5092799.9

YEAR: 1928

= 500'

N

EDR

Los Coyotes Redevelopment

3235/3325 Palo Verde Ave & 3320 Los Coyotes Diag

Long Beach, CA 90808

Inquiry Number: 5092799.4

October 31, 2017

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

10/31/17

Site Name:	Client Name:
Los Coyotes Redevelopment	David McAlister
3235/3325 Palo Verde Ave & 3	1724 East 1st Street
Long Beach, CA 90808	Long Beach, CA 90802
EDR Inquiry # 5092799.4	Contact: Joshua Kajiyama

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by David McAlister were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:		*Coordinates:*	
P.O.#	NA	**Latitude:**	33.817312 33° 49' 2" North
Project:	Los Coyotes Redevelopment	**Longitude:**	-118.109047 -118° 6' 33" West
		UTM Zone:	Zone 11 North
		UTM X Meters:	397360.72
		UTM Y Meters:	3742453.09
		Elevation:	27.00' above sea level

Maps Provided:

2012	1942
1981	1935
1972	1925
1964	1902
1950	1899
1949	1896
1947	
1943	

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Topo Sheet Key

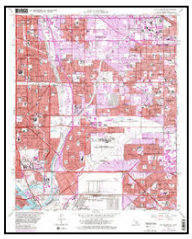
This EDR Topo Map Report is based upon the following USGS topographic map sheets:

2012 Source Sheets

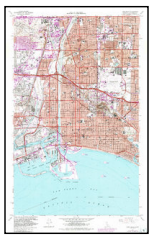
Los Alamitos
2012
7.5-minute, 24000

Long Beach
2012
7.5-minute, 24000

1981 Source Sheets

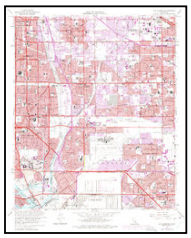


Los Alamitos
1981
7.5-minute, 24000
Aerial Photo Revised 1978



Long Beach
1981
7.5-minute, 24000
Aerial Photo Revised 1978

1972 Source Sheets

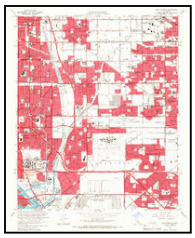


Los Alamitos
1972
7.5-minute, 24000
Aerial Photo Revised 1972

Long Beach
1972
7.5-minute, 24000
Aerial Photo Revised 1972

1964 Source Sheets

Long Beach
1964
7.5-minute, 24000
Aerial Photo Revised 1963



Los Alamitos
1964
7.5-minute, 24000
Aerial Photo Revised 1963

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets:

1950 Source Sheets

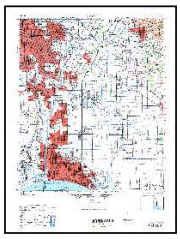
Los Alamitos
1950
7.5-minute, 24000
Aerial Photo Revised 1947

1949 Source Sheets

Long Beach
1949
7.5-minute, 24000

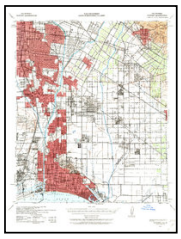
Los Alamitos
1949
7.5-minute, 24000
Aerial Photo Revised 1947

1947 Source Sheets



DOWNEY
1947
15-minute, 50000

1943 Source Sheets



Downey
1943
15-minute, 62500
Aerial Photo Revised 1939

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets:

1942 Source Sheets

Downey
1942
15-minute, 62500

1935 Source Sheets

Los Alamitos
1935
7.5-minute, 31680

1925 Source Sheets

Long Beach
1925
7.5-minute, 24000

Clearwater
1925
7.5-minute, 24000

Artesia
1925
7.5-minute, 24000

1902 Source Sheets

Downey
1902
15-minute, 62500

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets:

1899 Source Sheets

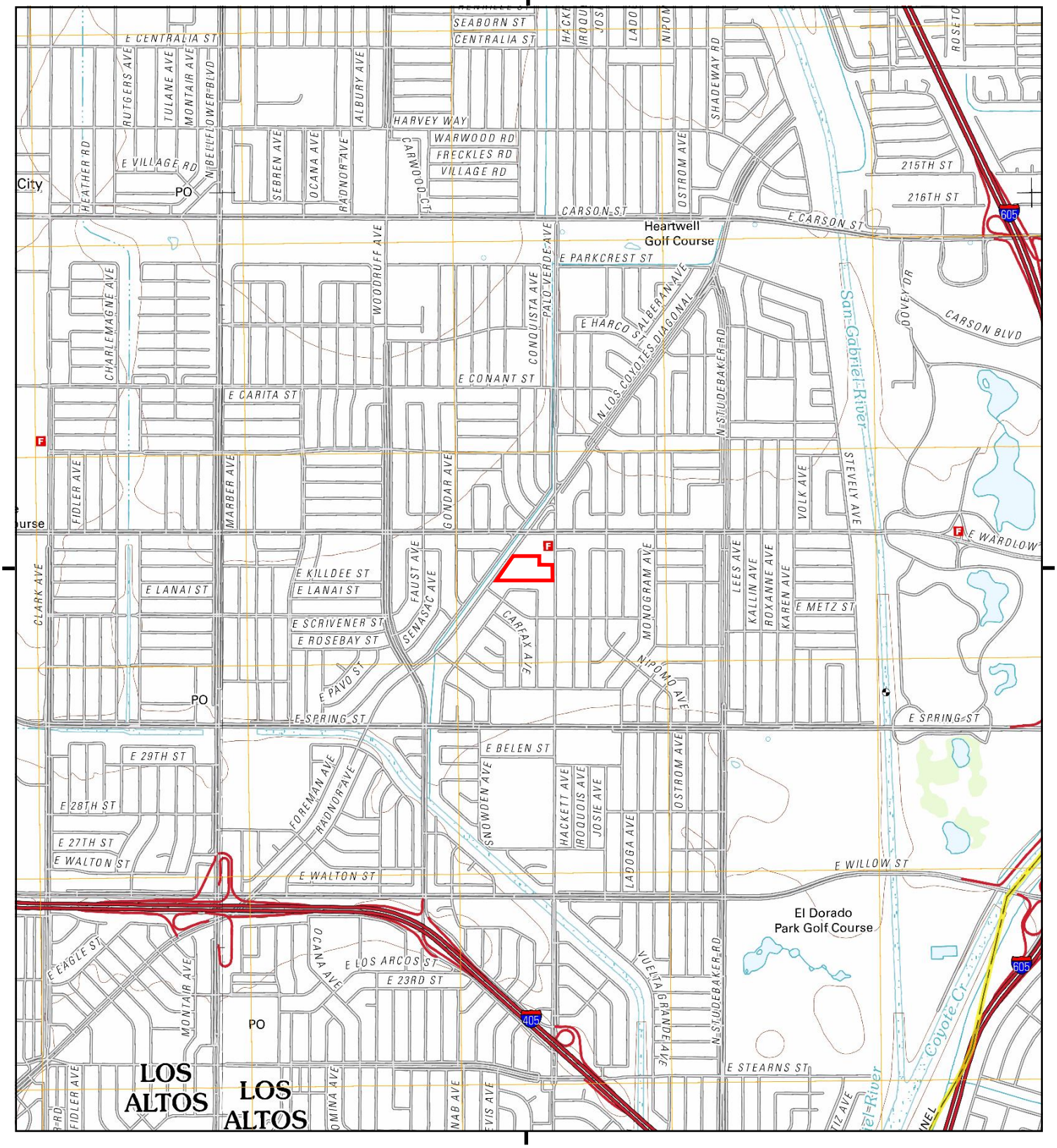
Downey
1899
15-minute, 62500

1896 Source Sheets

Downey
1896
15-minute, 62500

Historical Topo Map

2012



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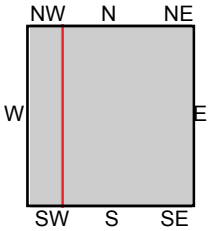


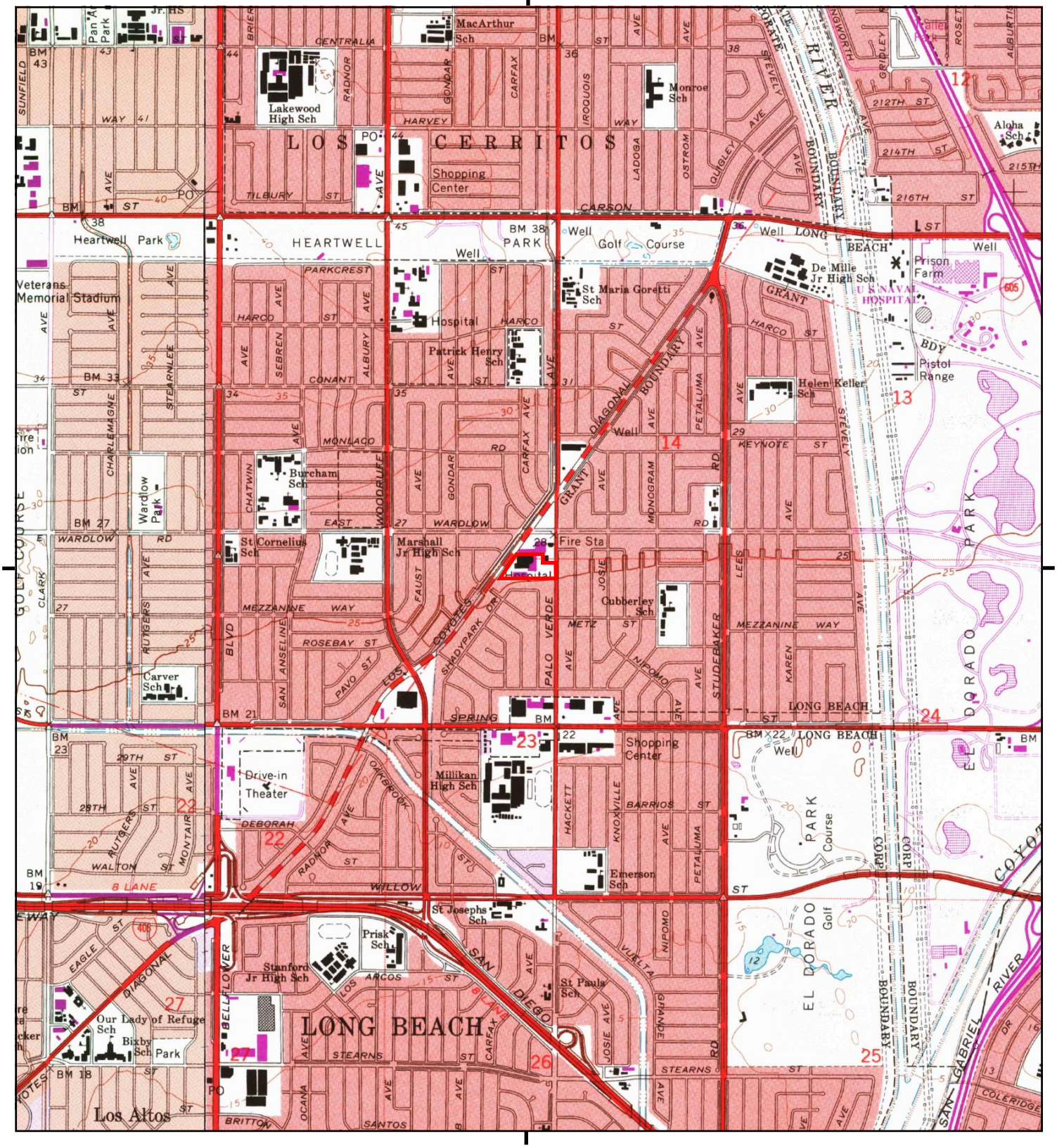
TP, Los Alamitos, 2012, 7.5-minute
W, Long Beach, 2012, 7.5-minute

SITE NAME: Los Coyotes Redevelopment
ADDRESS: 3235/3325 Palo Verde Ave & 3320 Los C
Long Beach, CA 90808
CLIENT: David McAlister

N

Historical Topo Map

1981



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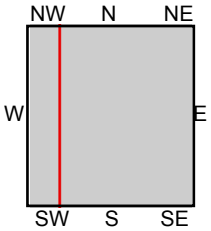
0 Miles 0.25 0.5 1 1.5



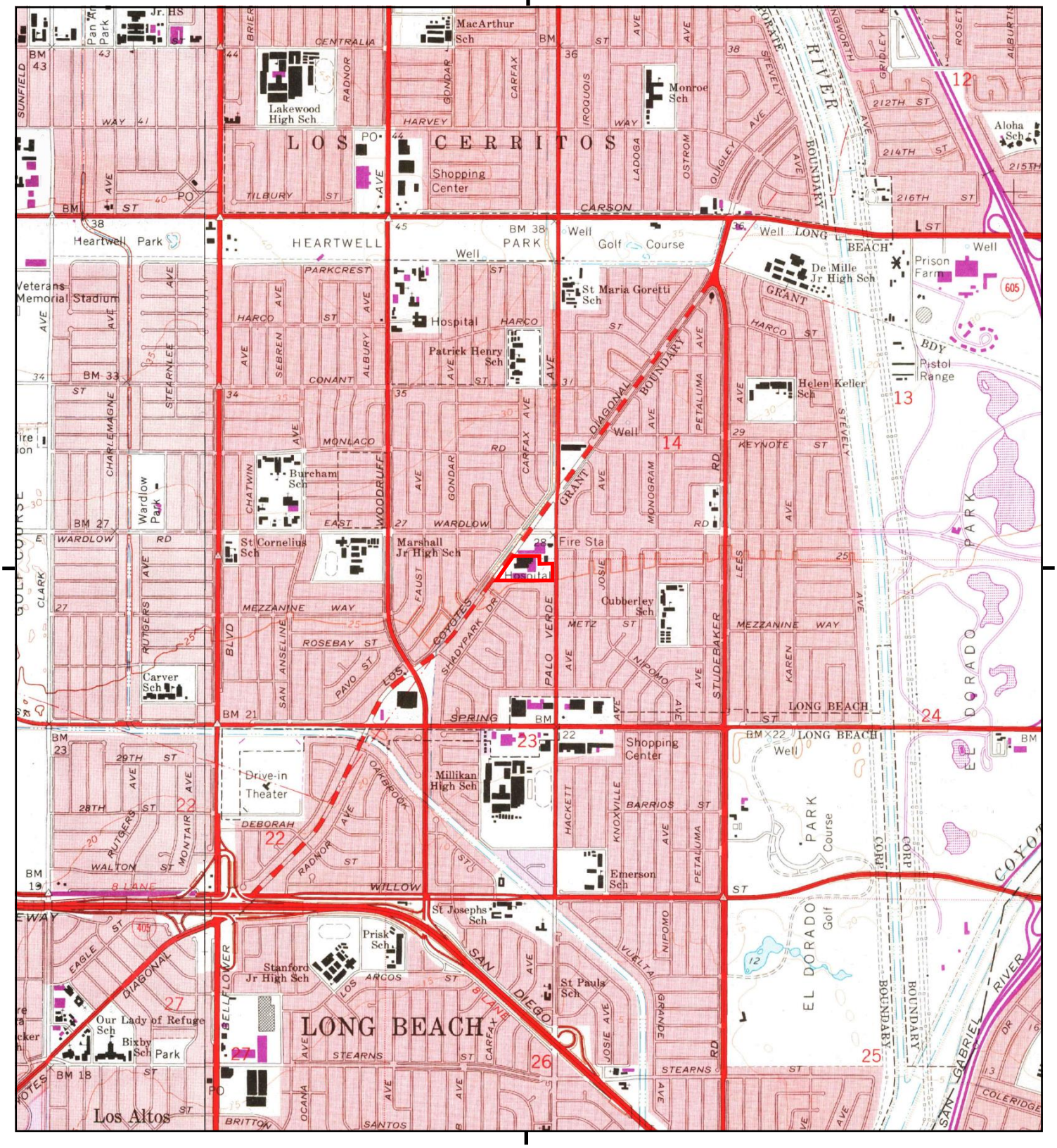
TP, Los Alamitos, 1981, 7.5-minute
W, Long Beach, 1981, 7.5-minute

SITE NAME: Los Coyotes Redevelopment
ADDRESS: 3235/3325 Palo Verde Ave & 3320 Los C
Long Beach, CA 90808
CLIENT: David McAlister

N

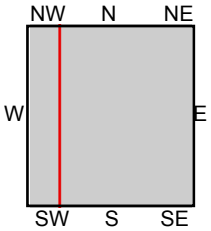
Historical Topo Map

1972



This report includes information from the following map sheet(s):

0 Miles 0.25 0.5 1 1.5



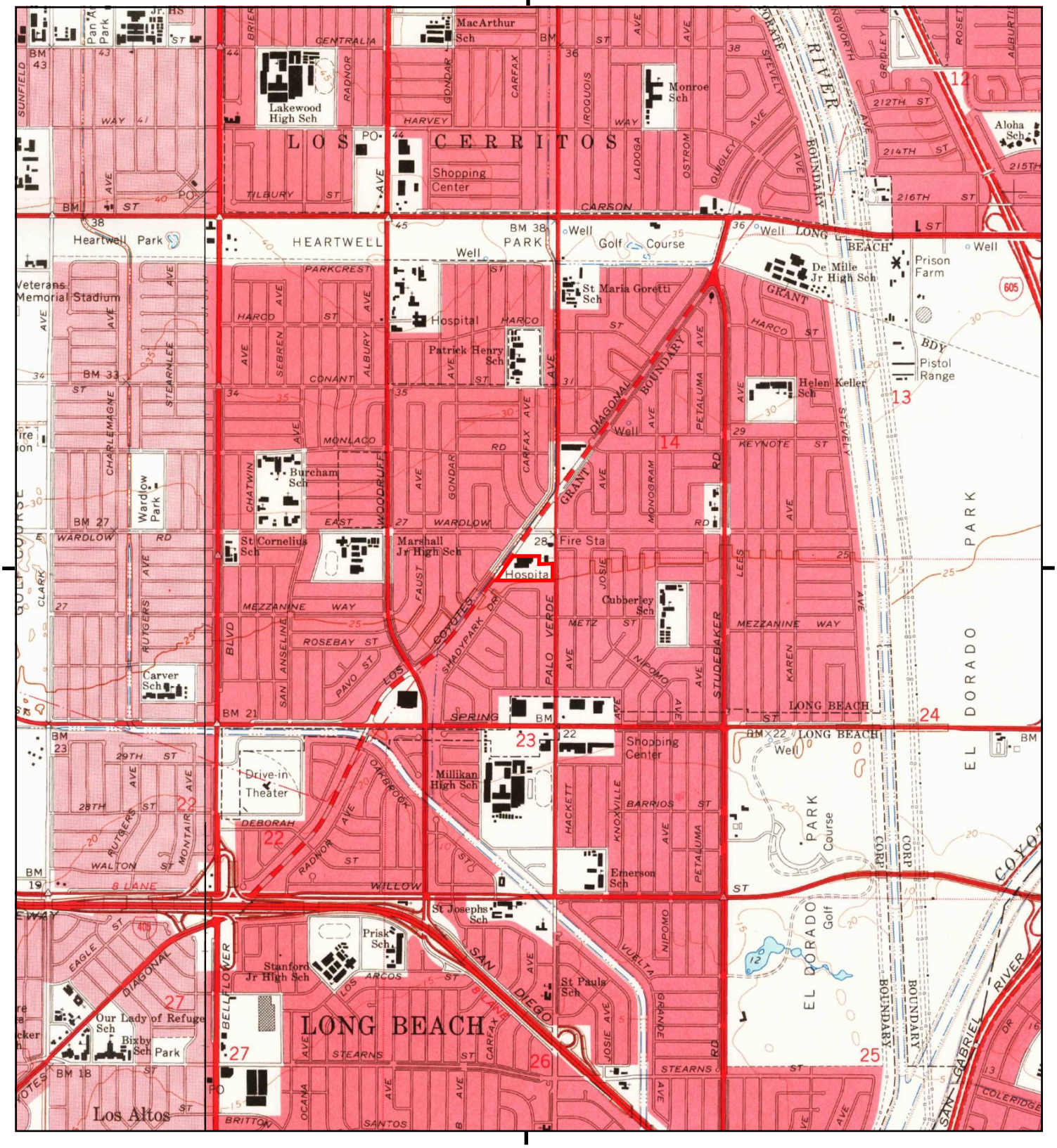
TP, Los Alamitos, 1972, 7.5-minute
W, Long Beach, 1972, 7.5-minute

SITE NAME: Los Coyotes Redevelopment
ADDRESS: 3235/3325 Palo Verde Ave & 3320 Los C
Long Beach, CA 90808
CLIENT: David McAlister

N

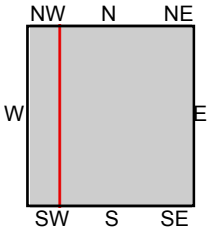
Historical Topo Map

1964



This report includes information from the following map sheet(s):

0 Miles 0.25 0.5 1 1.5



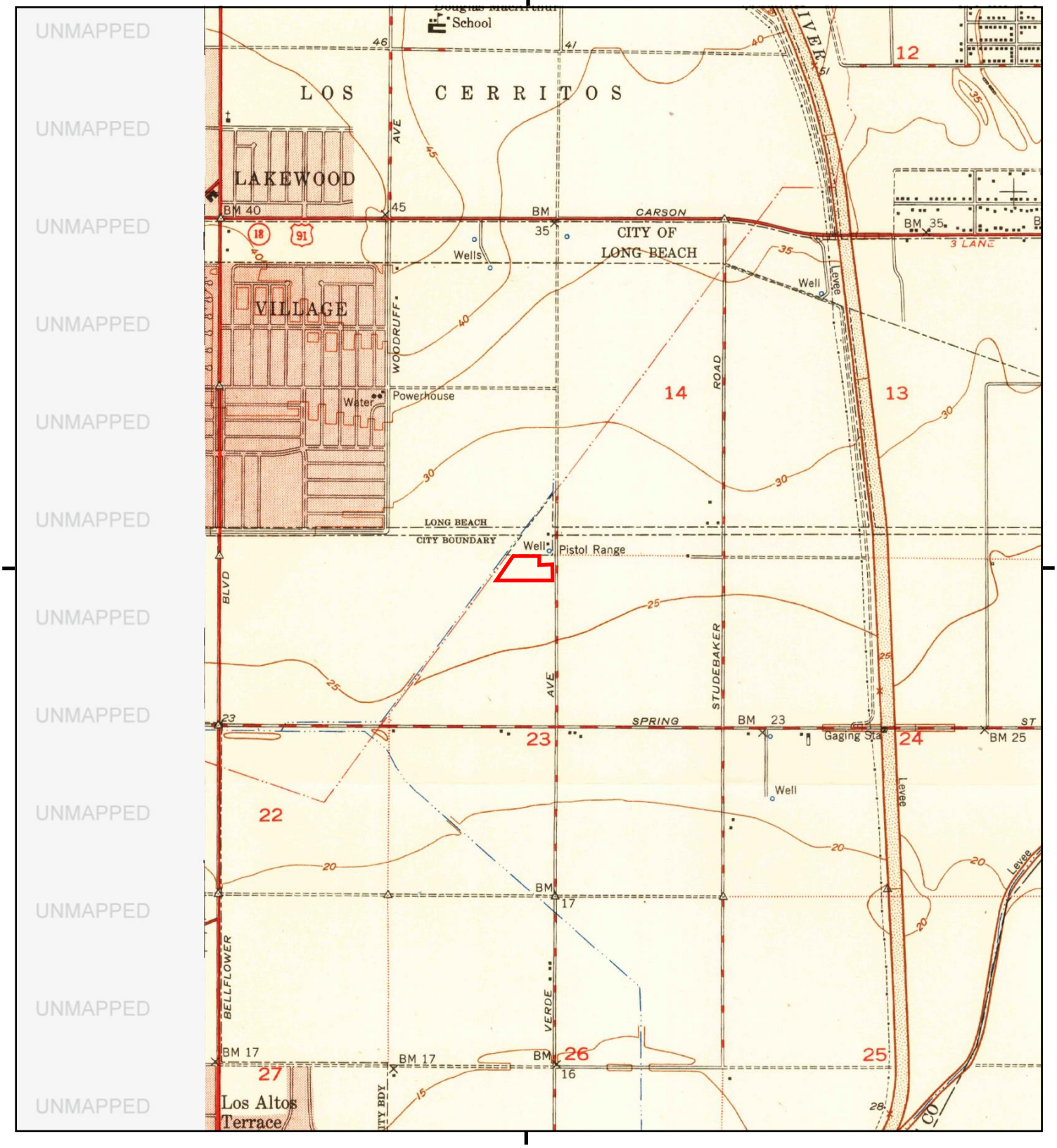
TP, Los Alamitos, 1964, 7.5-minute
W, Long Beach, 1964, 7.5-minute

SITE NAME: Los Coyotes Redevelopment
ADDRESS: 3235/3325 Palo Verde Ave & 3320 Los C
Long Beach, CA 90808
CLIENT: David McAlister

N

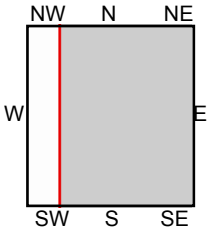
Historical Topo Map

1950



This report includes information from the following map sheet(s):

0 Miles 0.25 0.5 1 1.5



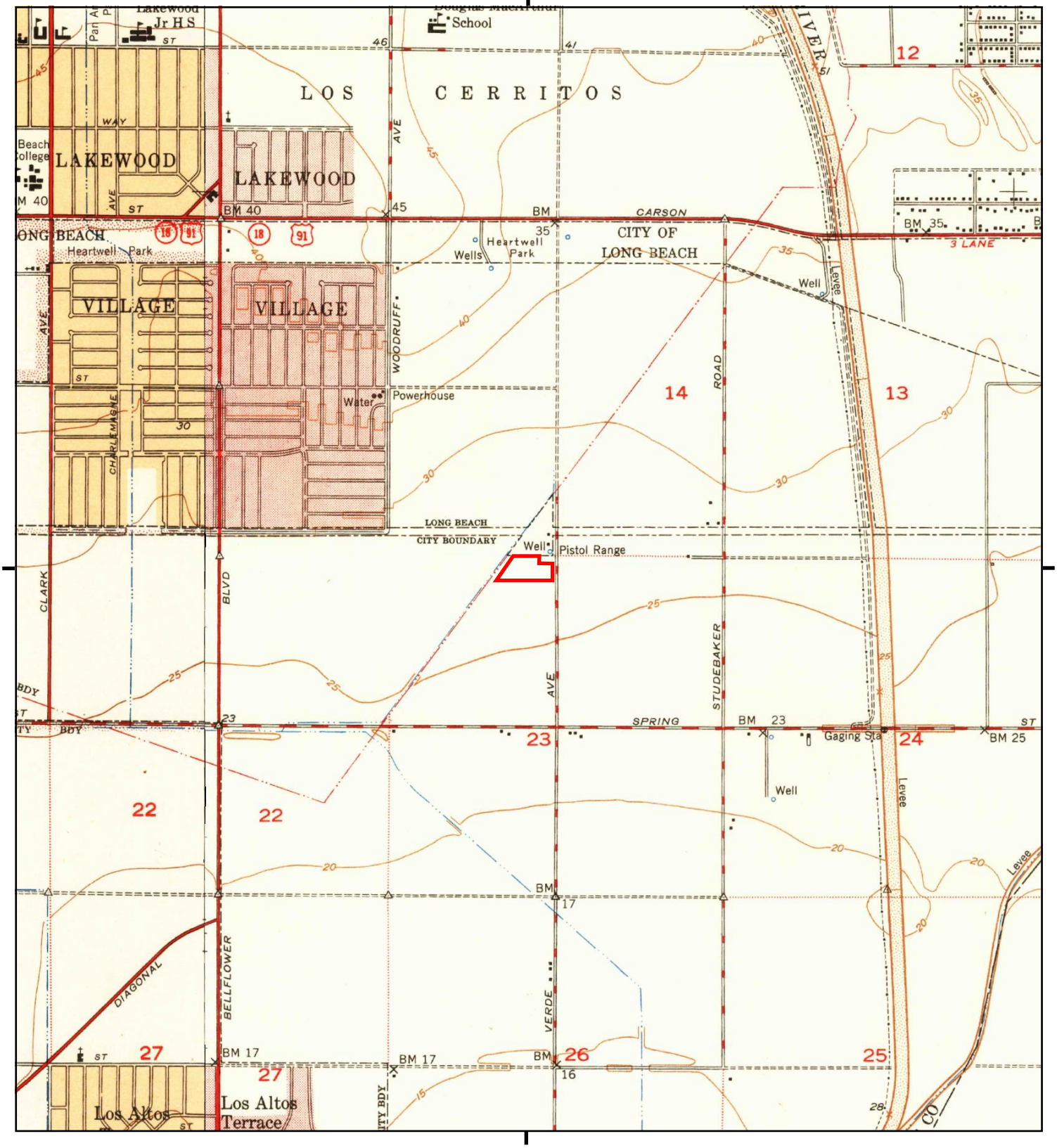
TP, Los Alamitos, 1950, 7.5-minute

SITE NAME: Los Coyotes Redevelopment
ADDRESS: 3235/3325 Palo Verde Ave & 3320 Los C
Long Beach, CA 90808
CLIENT: David McAlister

N

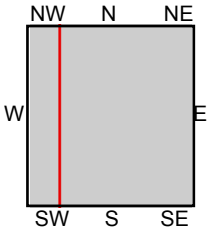
Historical Topo Map

1949



This report includes information from the following map sheet(s)

0 Miles 0.25 0.5 1 1.5



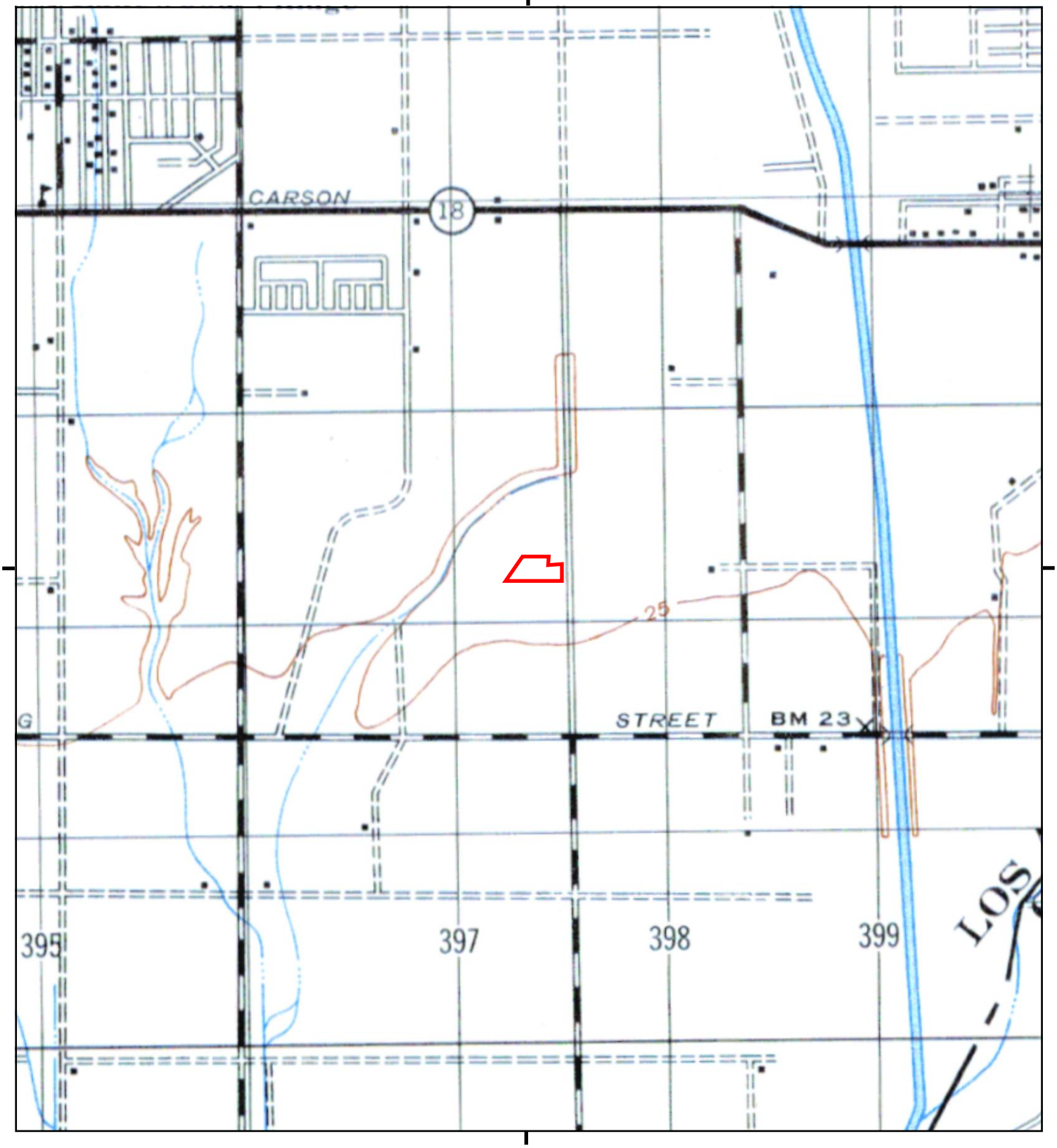
TP, Los Alamitos, 1949, 7.5-minute
W, Long Beach, 1949, 7.5-minute

SITE NAME: Los Coyotes Redevelopment
ADDRESS: 3235/3325 Palo Verde Ave & 3320 Los C
Long Beach, CA 90808
CLIENT: David McAlister

N

Historical Topo Map

1947



This report includes information from the following map sheet(s):

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

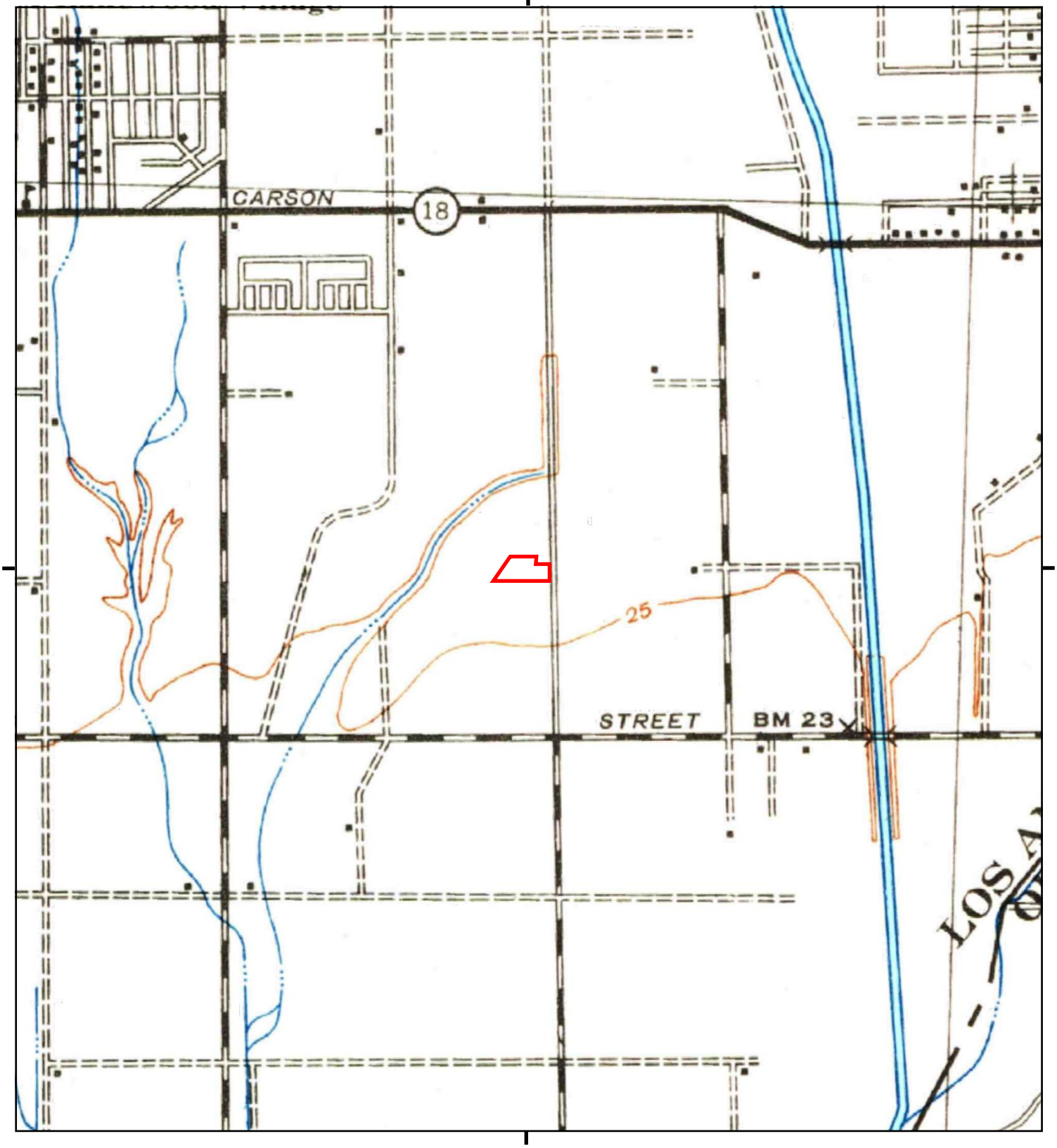
TP, DOWNEY, 1947, 15-minute

SITE NAME: Los Coyotes Redevelopment
ADDRESS: 3235/3325 Palo Verde Ave & 3320 Los C
Long Beach, CA 90808
CLIENT: David McAlister

N

Historical Topo Map

1943



This report includes information from the following map sheet(s):

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

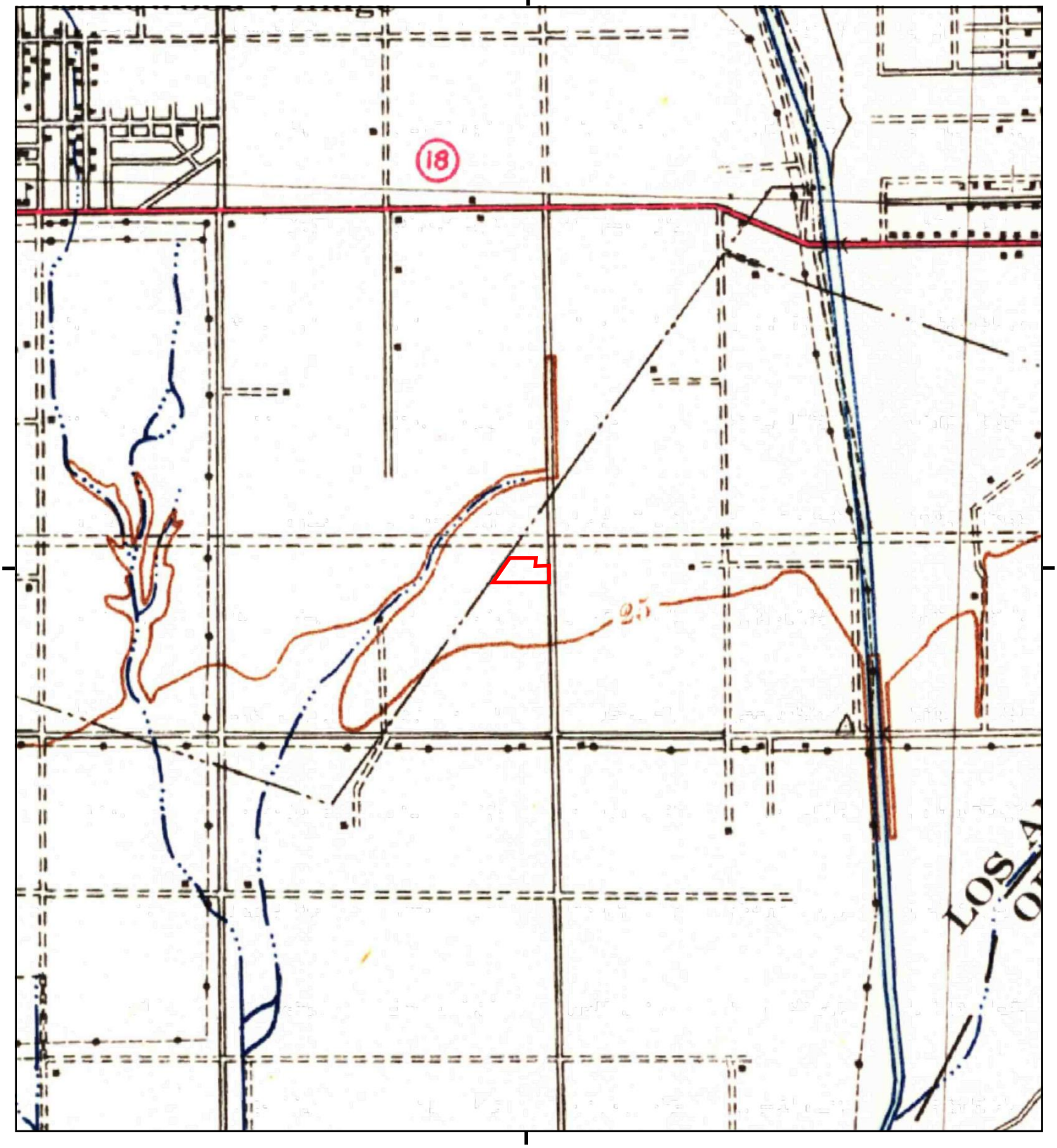
TP, Downey, 1943, 15-minute

SITE NAME: Los Coyotes Redevelopment
ADDRESS: 3235/3325 Palo Verde Ave & 3320 Los C
Long Beach, CA 90808
CLIENT: David McAlister

N

Historical Topo Map

1942



This report includes information from the following map sheet(s):

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

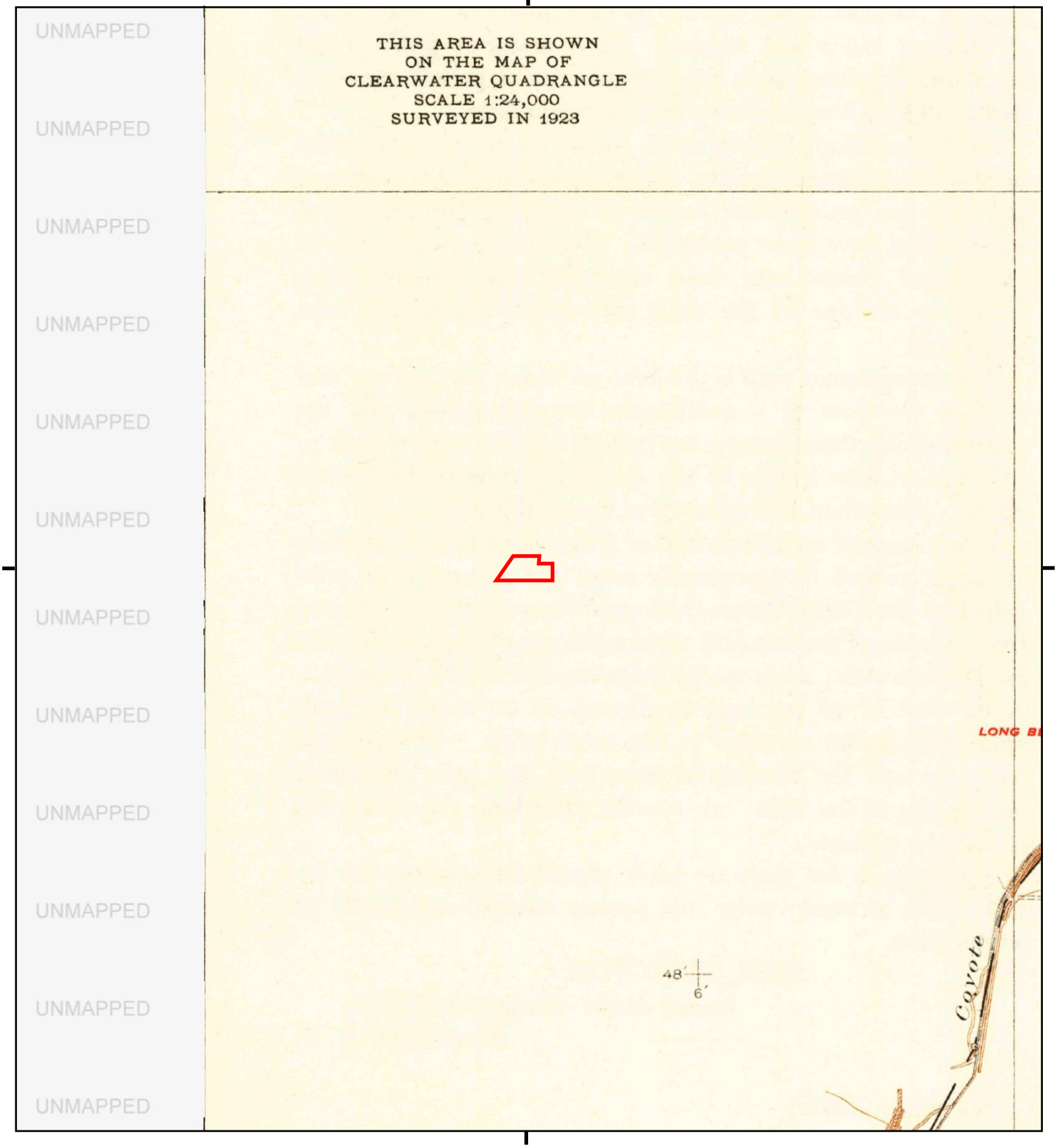
TP, Downey, 1942, 15-minute

SITE NAME: Los Coyotes Redevelopment
ADDRESS: 3235/3325 Palo Verde Ave & 3320 Los C
Long Beach, CA 90808
CLIENT: David McAlister

N

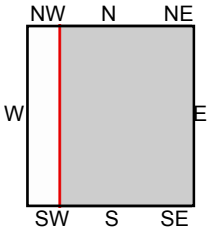
Historical Topo Map

1935



This report includes information from the following map sheet(s):

0 Miles 0.25 0.5 1 1.5



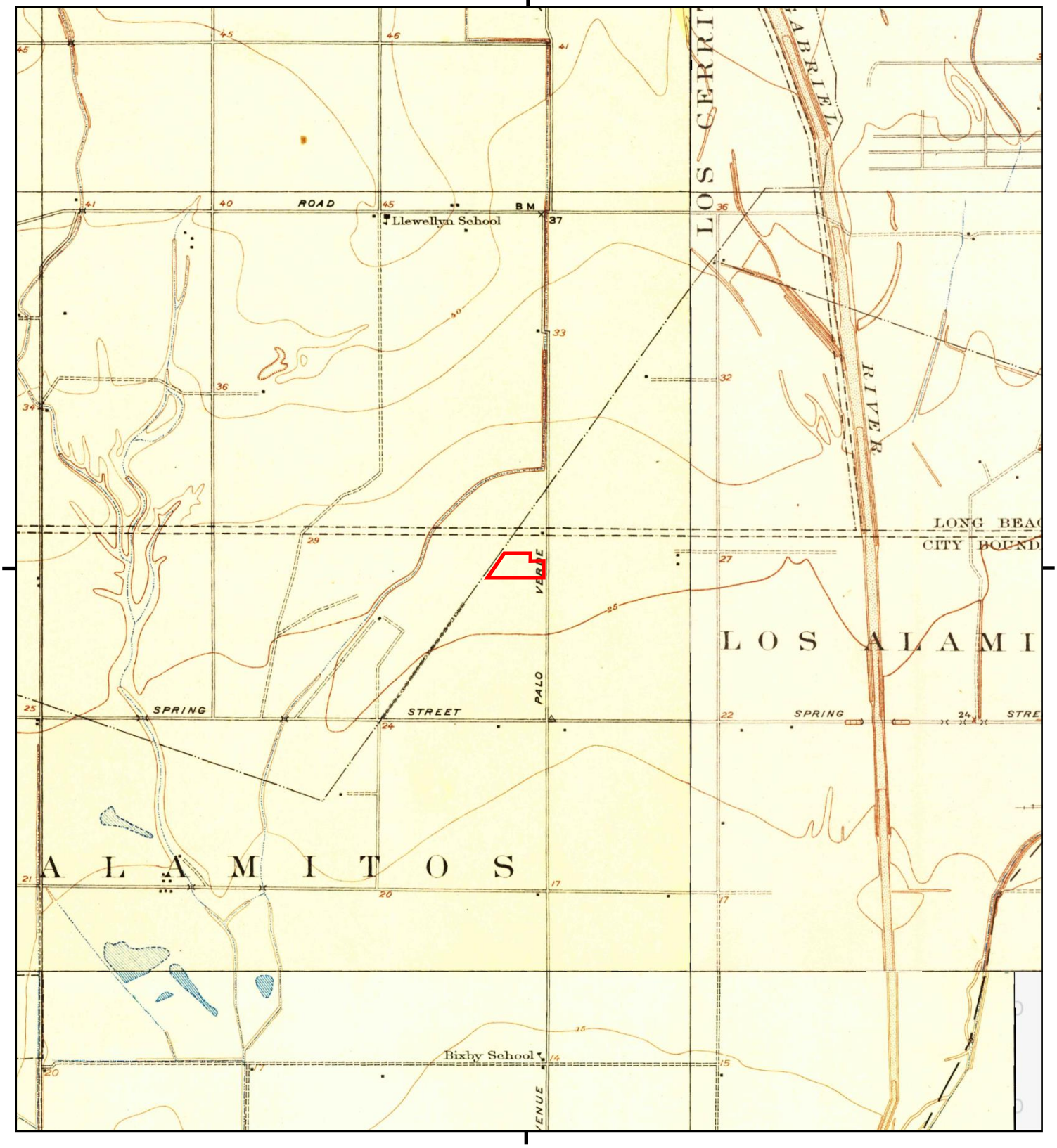
TP, Los Alamitos, 1935, 7.5-minute

SITE NAME: Los Coyotes Redevelopment
ADDRESS: 3235/3325 Palo Verde Ave & 3320 Los C
Long Beach, CA 90808
CLIENT: David McAlister

N

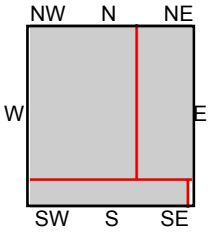
Historical Topo Map

1925



This report includes information from the following map sheet(s)

0 Miles 0.25 0.5 1 1.5



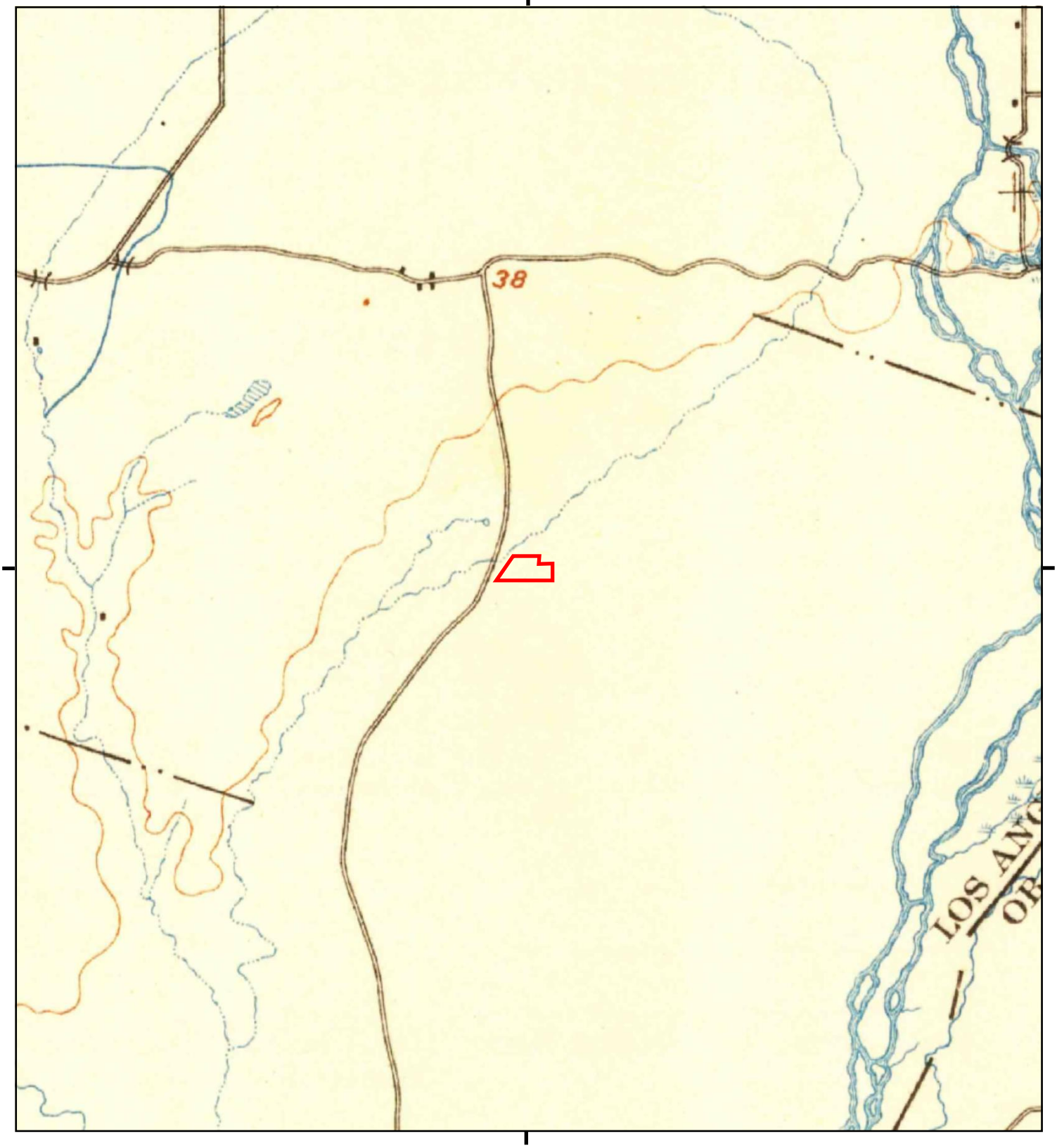
TP, Clearwater, 1925, 7.5-minute
NE, Artesia, 1925, 7.5-minute
SW, Long Beach, 1925, 7.5-minute

SITE NAME: Los Coyotes Redevelopment
ADDRESS: 3235/3325 Palo Verde Ave & 3320 Los C
Long Beach, CA 90808
CLIENT: David McAlister

N

Historical Topo Map

1902



This report includes information from the following map sheet(s):

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

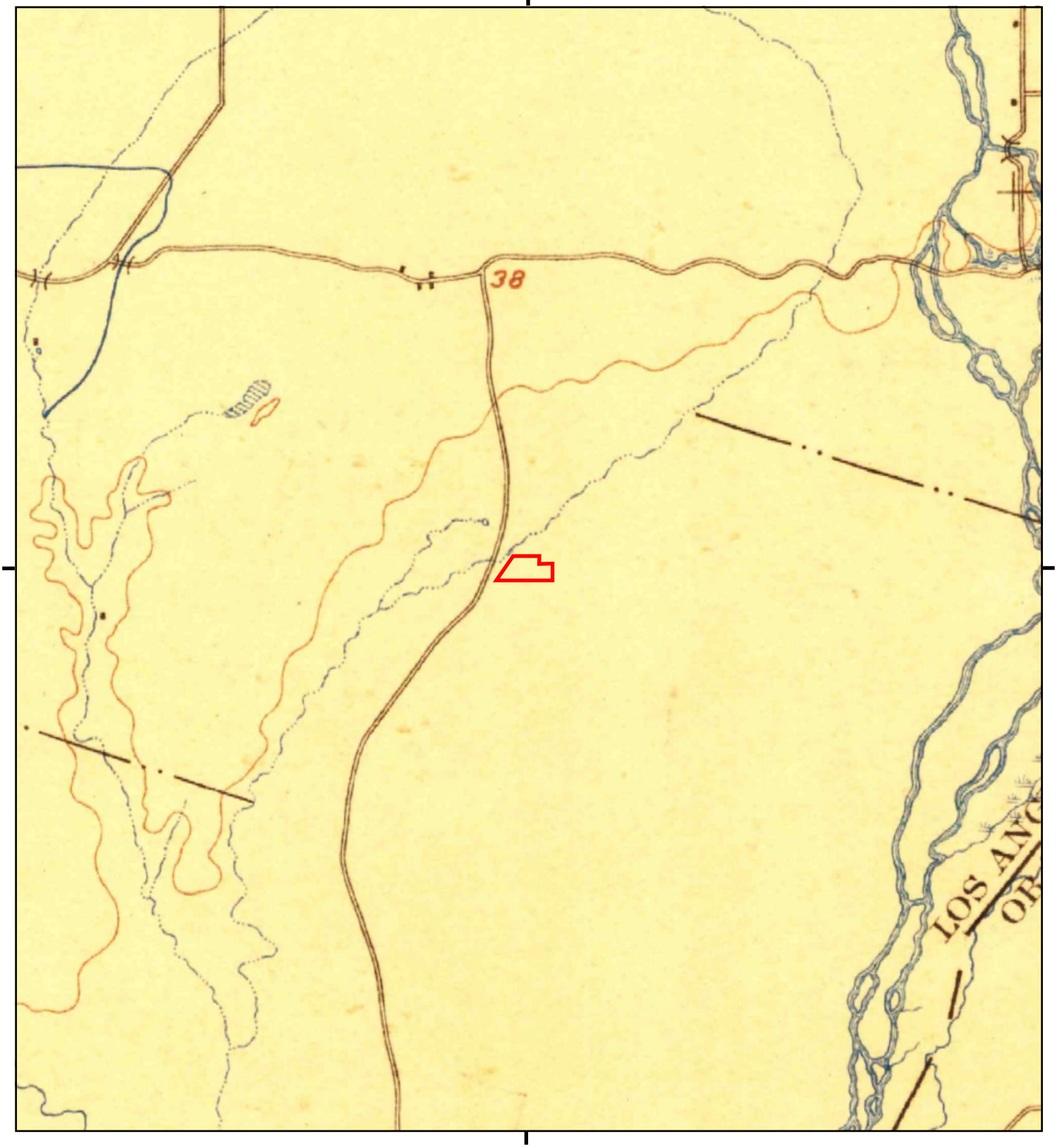
TP, Downey, 1902, 15-minute

SITE NAME: Los Coyotes Redevelopment
ADDRESS: 3235/3325 Palo Verde Ave & 3320 Los C
Long Beach, CA 90808
CLIENT: David McAlister

N

Historical Topo Map

1899



This report includes information from the following map sheet(s):

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

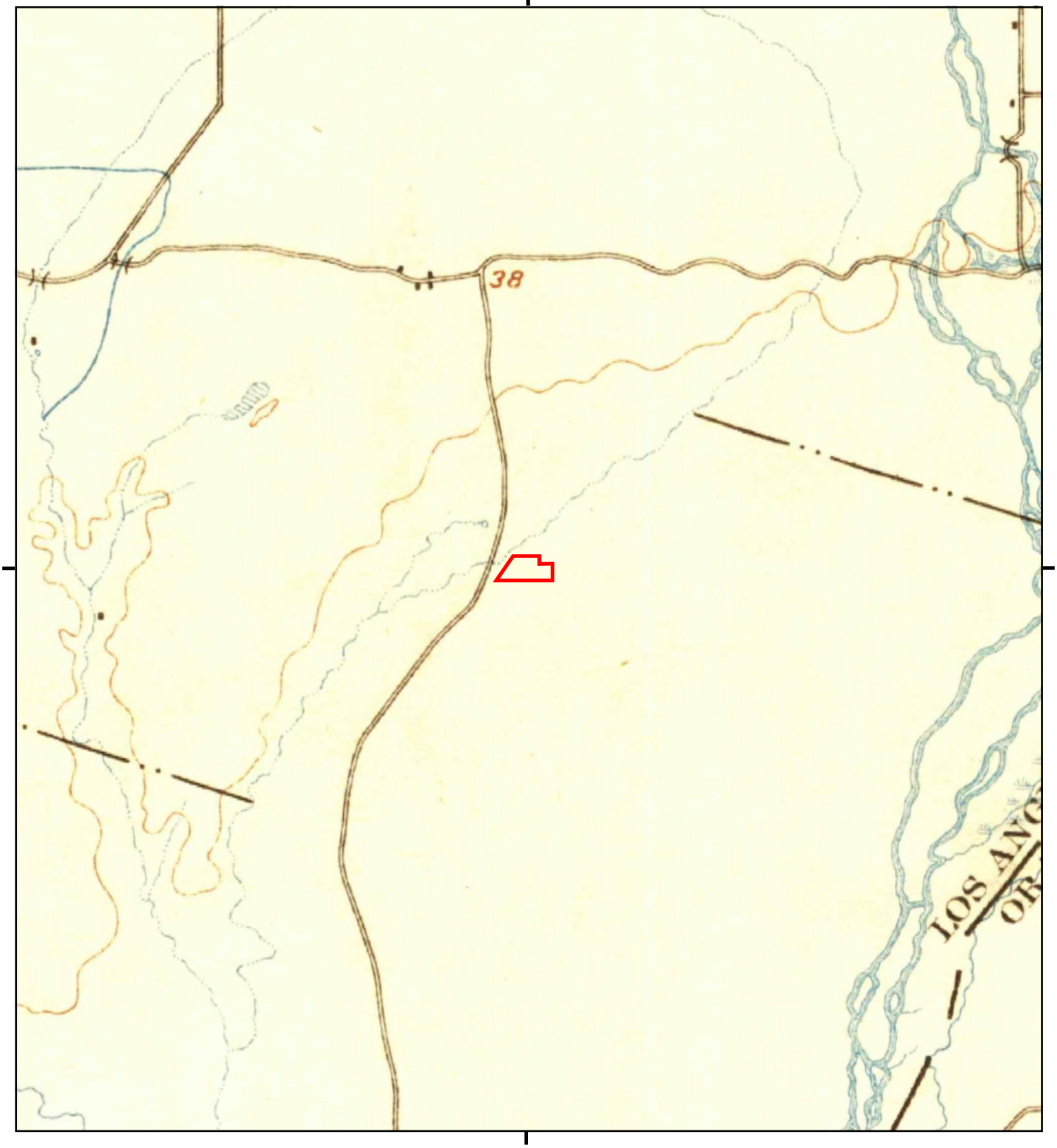
TP, Downey, 1899, 15-minute

SITE NAME: Los Coyotes Redevelopment
ADDRESS: 3235/3325 Palo Verde Ave & 3320 Los C
Long Beach, CA 90808
CLIENT: David McAlister

N

Historical Topo Map

1896



This report includes information from the following map sheet(s):

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Downey, 1896, 15-minute

SITE NAME: Los Coyotes Redevelopment
ADDRESS: 3235/3325 Palo Verde Ave & 3320 Los C
Long Beach, CA 90808
CLIENT: David McAlister

N

Los Coyotes Redevelopment

3235/3325 Palo Verde Ave & 3320 Los Coyotes Diag

Long Beach, CA 90808

Inquiry Number: 5092799.3

October 31, 2017

Certified Sanborn® Map Report

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Shelton, CT 06484
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www.edrnet.com

Certified Sanborn® Map Report

10/31/17

Site Name:	Client Name:
Los Coyotes Redevelopment	David McAlister
3235/3325 Palo Verde Ave & 3	1724 East 1st Street
Long Beach, CA 90808	Long Beach, CA 90802
EDR Inquiry # 5092799.3	Contact: Joshua Kajiyama

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Certified Sanborn Results:

Certification # 3283-4C64-9FDB

PO # NA

Project Los Coyotes Redevelopment

UNMAPPED PROPERTY

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Sanborn® Library search results

Certification #: 3283-4C64-9FDB

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- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

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APPENDIX C

EDR RADIUS MAP WITH GEOCHECK

Los Coyotes Redevelopment
3235/3325 Palo Verde Ave & 3320 Los Coyotes Diag
Long Beach, CA 90808

Inquiry Number: 5092799.2s
October 31, 2017

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	74
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting Source Map	A-8
Physical Setting Source Map Findings	A-9
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

3235/3325 PALO VERDE AVE & 3320 LOS COYOTES DIAG
LONG BEACH, CA 90808

COORDINATES

Latitude (North):	33.8173120 - 33˚ 49' 2.32''
Longitude (West):	118.1090470 - 118˚ 6' 32.56''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	397358.4
UTM Y (Meters):	3742259.2
Elevation:	27 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5633745 LOS ALAMITOS, CA
Version Date:	2012
West Map:	5652670 LONG BEACH, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140513
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
3235/3325 PALO VERDE AVE & 3320 LOS COYOTES DIAG
LONG BEACH, CA 90808

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	LARRY HILLHOUSE	3331 PALO VERDE AVE	HAZNET	Higher	1 ft.
A2	LONG BEACH ALLIANCE	3331 PALO VERDE AVE	HAZNET	Higher	1 ft.
A3	LOS ATOS FOOT HEALTH	3325 PALO VERDE AVE	RCRA-SQG, FINDS, ECHO	Higher	1 ft.
A4	CA COMMERCIAL REAL E	3325 PALO VERDE AVE	HAZNET	Higher	1 ft.
B5	VERIZON WIRELESS: KN	3340 N LOS COYOTES D	FINDS	Higher	1 ft.
B6	CHARTER HOSPITAL FAC	3340 LOS COYOTES DIA	LUST, EMI, HIST CORTESE	Higher	31, 0.006, West
A7	FIRE STATION 18	3361 PALO VERDE AVE	UST	Higher	70, 0.013, NE
B8	ANDREW JAMES MANOS D	3320 LOS COYOTES DIA	RCRA-SQG, FINDS, ECHO, HAZNET	Lower	85, 0.016, West
C9	RALPHS #0058-703	3380 LOS COYOTES DIA	RCRA-LQG	Higher	192, 0.036, NNW
C10	RALPHS NO 0058 703	3380 LOS COYOTES DIA	RCRA-LQG	Higher	192, 0.036, NNW
C11	CBHS @ LOS ALTOS - 1	3340 LOS COYOTES DIA	UST	Higher	220, 0.042, NNE
C12	LOS COYOTES CENTER	3378 LOS COYOTES DIA	RCRA-SQG, ENVIROSTOR, SLIC, FINDS, ECHO, EMI	Higher	229, 0.043, NNW
13	TEXACO SERVICE STATI	3565 LOS COYOTES DIA	LUST, HIST CORTESE	Higher	1358, 0.257, NNE
14	THRIFTY SERVICE STAT	3100 LOS COYOTES DIA	LUST, HIST CORTESE	Lower	1737, 0.329, SW
D15	SHELL #204-4482-3205	6407 SPRING ST E	LUST, HIST CORTESE	Lower	2241, 0.424, South
D16	SHELL SERVICE STATIO	6407 SPRING ST E	LUST	Lower	2241, 0.424, South
D17	CHEVRON #9-4055	6340 SPRING ST E	LUST, HIST CORTESE	Lower	2399, 0.454, South
D18	CHEVRON STATION 9-40	6340 E. SPRING ST.	Notify 65	Lower	2399, 0.454, South
19	CREIGHTON'S CLEANERS	5951 SPRING STREET	ENVIROSTOR, VCP	Lower	2611, 0.495, SW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ..... National Priority List
Proposed NPL ..... Proposed National Priority List Sites
NPL LIENS ..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ..... National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ..... Federal Facility Site Information listing
SEMS ..... Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ..... Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-CESQG ..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ..... Land Use Control Information System
US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROL ..... Sites with Institutional Controls

Federal ERNS list

ERNS ..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE..... State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST..... Underground Storage Tank Listing
AST..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS..... Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT..... Waste Management Unit Database
SWRCY..... Recycler Database
HAULERS..... Registered Waste Tire Haulers Listing
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
ODI..... Open Dump Inventory
IHS OPEN DUMPS..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register
AOCONCERN..... San Gabriel Valley Areas of Concern
HIST Cal-Sites..... Historical Calsites Database
SCH..... School Property Evaluation Program
CDL..... Clandestine Drug Labs
Toxic Pits..... Toxic Pits Cleanup Act Sites
US CDL..... National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

SWEEPS UST..... SWEEPS UST Listing

HIST UST ..... Hazardous Substance Storage Container Database
CA FID UST ..... Facility Inventory Database

Local Land Records

LIENS ..... Environmental Liens Listing
LIENS 2 ..... CERCLA Lien Information
DEED ..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
CHMIRS ..... California Hazardous Material Incident Report System
LDS ..... Land Disposal Sites Listing
MCS ..... Military Cleanup Sites Listing
SPILLS 90 ..... SPILLS 90 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR ..... RCRA - Non Generators / No Longer Regulated
FUDS ..... Formerly Used Defense Sites
DOD ..... Department of Defense Sites
SCRD DRYCLEANERS ..... State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ..... Financial Assurance Information
EPA WATCH LIST ..... EPA WATCH LIST
2020 COR ACTION ..... 2020 Corrective Action Program List
TSCA ..... Toxic Substances Control Act
TRIS ..... Toxic Chemical Release Inventory System
SSTS ..... Section 7 Tracking Systems
ROD ..... Records Of Decision
RMP ..... Risk Management Plans
RAATS ..... RCRA Administrative Action Tracking System
PRP ..... Potentially Responsible Parties
PADS ..... PCB Activity Database System
ICIS ..... Integrated Compliance Information System
FTTS ..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ..... Material Licensing Tracking System
COAL ASH DOE ..... Steam-Electric Plant Operation Data
COAL ASH EPA ..... Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ..... PCB Transformer Registration Database
RADINFO ..... Radiation Information Database
HIST FTTS ..... FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ..... Incident and Accident Data
CONSENT ..... Superfund (CERCLA) Consent Decrees
INDIAN RESERV ..... Indian Reservations
FUSRAP ..... Formerly Utilized Sites Remedial Action Program
UMTRA ..... Uranium Mill Tailings Sites
LEAD SMELTERS ..... Lead Smelter Sites
US AIRS ..... Aerometric Information Retrieval System Facility Subsystem
US MINES ..... Mines Master Index File
ABANDONED MINES ..... Abandoned Mines
UXO ..... Unexploded Ordnance Sites
DOCKET HWC ..... Hazardous Waste Compliance Docket Listing
FUELS PROGRAM ..... EPA Fuels Program Registered Listing

EXECUTIVE SUMMARY

CA BOND EXP. PLAN	Bond Expenditure Plan
Cortese	"Cortese" Hazardous Waste & Substances Sites List
CUPA Listings	CUPA Resources List
DRYCLEANERS	Cleaner Facilities
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
ICE	ICE
LOS ANGELES CO. HMS	HMS: Street Number List
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
NPDES	NPDES Permits Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database
LA Co. Site Mitigation	Site Mitigation List
UIC	UIC Listing
WASTEWATER PITS	Oil Wastewater Pits Listing
WDS	Waste Discharge System
WIP	Well Investigation Program Case List

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR Hist Auto	EDR Exclusive Historic Auto Stations
EDR Hist Cleaner	EDR Exclusive Historic Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	Recovered Government Archive Solid Waste Facilities List
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 09/13/2017 has revealed that there are 2 RCRA-LQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RALPHS #0058-703	3380 LOS COYOTES DIA	NNW 0 - 1/8 (0.036 mi.)	C9	16
RALPHS NO 0058 703	3380 LOS COYOTES DIA	NNW 0 - 1/8 (0.036 mi.)	C10	20

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 09/13/2017 has revealed that there are 3 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOS ATOS FOOT HEALTH	***3325 PALO VERDE AVE***	***0 - 1/8 (0.000 mi.)***	***A3***	***9***
LOS COYOTES CENTER	***3378 LOS COYOTES DIA***	***NNW 0 - 1/8 (0.043 mi.)***	***C12***	***26***

Lower Elevation	Address	Direction / Distance	Map ID	Page
ANDREW JAMES MANOS D	***3320 LOS COYOTES DIA***	***W 0 - 1/8 (0.016 mi.)***	***B8***	***14***

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 07/31/2017 has revealed that there are

EXECUTIVE SUMMARY

2 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOS COYOTES CENTER	***3378 LOS COYOTES DIA***	***NNW 0 - 1/8 (0.043 mi.)***	***C12***	***26***
Facility Id: 19720015				
Status: Inactive - Needs Evaluation				

Lower Elevation	Address	Direction / Distance	Map ID	Page
CREIGHTON'S CLEANERS	***5951 SPRING STREET***	***SW 1/4 - 1/2 (0.495 mi.)***	***19***	***70***
Facility Id: 60001903				
Status: Active				

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there are 6 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CHARTER HOSPITAL FAC	***3340 LOS COYOTES DIA***	***W 0 - 1/8 (0.006 mi.)***	***B6***	***11***
Database: LUST REG 4, Date of Government Version: 09/07/2004				
Database: LUST, Date of Government Version: 06/12/2017				
Status: Completed - Case Closed				
Facility Id: 908080043				
Status: Case Closed				
Global Id: T0603701883				
Global ID: T0603701883				
TEXACO SERVICE STATI	***3565 LOS COYOTES DIA***	***NNE 1/4 - 1/2 (0.257 mi.)***	***13***	***30***
Database: LUST REG 4, Date of Government Version: 09/07/2004				
Database: LUST, Date of Government Version: 06/12/2017				
Status: Completed - Case Closed				
Facility Id: 908080225				
Status: Remediation Plan				
Global Id: T0603701902				
Global ID: T0603701902				

Lower Elevation	Address	Direction / Distance	Map ID	Page
THRIFTY SERVICE STAT	***3100 LOS COYOTES DIA***	***SW 1/4 - 1/2 (0.329 mi.)***	***14***	***38***
Database: LUST REG 4, Date of Government Version: 09/07/2004				
Database: LUST, Date of Government Version: 06/12/2017				
Status: Open - Remediation				
Facility Id: 908080098				
Status: Remedial action (cleanup) Underway				
Global Id: T0603701889				
Global ID: T0603701889				
SHELL #204-4482-3205	***6407 SPRING ST E***	***S 1/4 - 1/2 (0.424 mi.)***	***D15***	***56***
Database: LUST REG 4, Date of Government Version: 09/07/2004				

Facility Id: 908080061
Status: Case Closed
Global ID: T0603701885

SHELL SERVICE STATIO	6407 SPRING ST E	S 1/4 - 1/2 (0.424 mi.)	D16	57

Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/12/2017
Status: Completed - Case Closed
Facility Id: 908080061A
Status: Remedial action (cleanup) Underway
Global Id: T0603701886
Global Id: T0603701885
Global ID: T0603701886

CHEVRON #9-4055	***6340 SPRING ST E***	***S 1/4 - 1/2 (0.454 mi.)***	***D17***	***64***

Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 06/12/2017
Status: Completed - Case Closed
Facility Id: 908150216
Status: Case Closed
Global Id: T0603701997
Global ID: T0603701997

SLIC: Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the SLIC list, as provided by EDR, has revealed that there is 1 SLIC site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOS COYOTES CENTER	***3378 LOS COYOTES DIA***	***NNW 0 - 1/8 (0.043 mi.)***	***C12***	***26***

Database: SLIC REG 4, Date of Government Version: 11/17/2004
Database: SLIC, Date of Government Version: 06/12/2017
Facility Status: Open - Verification Monitoring
Facility Status: Post Remediation Monitoring
Global Id: SL184301413

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FIRE STATION 18	3361 PALO VERDE AVE	NE 0 - 1/8 (0.013 mi.)	A7	14

Database: LONG BEACH UST, Date of Government Version: 03/09/2017

CBHS @ LOS ALTOS - 1	3340 LOS COYOTES DIA	NNE 0 - 1/8 (0.042 mi.)	C11	26

Database: LONG BEACH UST, Date of Government Version: 03/09/2017

EXECUTIVE SUMMARY

State and tribal voluntary cleanup sites

VCP: Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

A review of the VCP list, as provided by EDR, and dated 07/31/2017 has revealed that there is 1 VCP site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
CREIGHTON'S CLEANERS Status: Active Facility Id: 60001903	***5951 SPRING STREET***	***SW 1/4 - 1/2 (0.495 mi.)***	***19***	***70***

ADDITIONAL ENVIRONMENTAL RECORDS

Other Ascertainable Records

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 07/23/2017 has revealed that there are 2 FINDS sites within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOS ATOS FOOT HEALTH	***3325 PALO VERDE AVE***	***0 - 1/8 (0.000 mi.)***	***A3***	***9***
VERIZON WIRELESS: KN	3340 N LOS COYOTES D	0 - 1/8 (0.000 mi.)	B5	11

ECHO: ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

A review of the ECHO list, as provided by EDR, and dated 09/02/2017 has revealed that there is 1 ECHO site within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOS ATOS FOOT HEALTH	***3325 PALO VERDE AVE***	***0 - 1/8 (0.000 mi.)***	***A3***	***9***

EXECUTIVE SUMMARY

HAZNET: The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000-1,000,000 annually, representing approximately 350,000-500,000 shipments. Data from non-California manifests & continuation sheets are not included at the present time. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, & disposal method. The source is the Department of Toxic Substance Control is the agency. This database begins with calendar year 1993.

A review of the HAZNET list, as provided by EDR, and dated 12/31/2016 has revealed that there are 3 HAZNET sites within approximately 0.001 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LARRY HILLHOUSE GEPAID: CAC002750080	3331 PALO VERDE AVE	0 - 1/8 (0.000 mi.)	A1	8
LONG BEACH ALLIANCE GEPAID: CAC002724673 GEPAID: CAC002873145	3331 PALO VERDE AVE	0 - 1/8 (0.000 mi.)	A2	8
CA COMMERCIAL REAL E GEPAID: CAC002565407	3325 PALO VERDE AVE	0 - 1/8 (0.000 mi.)	A4	10

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 5 HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CHARTER HOSPITAL FAC Reg Id: 908080043	***3340 LOS COYOTES DIA***	***W 0 - 1/8 (0.006 mi.)***	***B6***	***11***
TEXACO SERVICE STATI Reg Id: 908080225	***3565 LOS COYOTES DIA***	***NNE 1/4 - 1/2 (0.257 mi.)***	***13***	***30***

Lower Elevation	Address	Direction / Distance	Map ID	Page
THRIFTY SERVICE STAT Reg Id: 908080098	***3100 LOS COYOTES DIA***	***SW 1/4 - 1/2 (0.329 mi.)***	***14***	***38***
SHELL #204-4482-3205 Reg Id: 908080061 Reg Id: 908080061A	***6407 SPRING ST E***	***S 1/4 - 1/2 (0.424 mi.)***	***D15***	***56***
CHEVRON #9-4055 Reg Id: 908150216	***6340 SPRING ST E***	***S 1/4 - 1/2 (0.454 mi.)***	***D17***	***64***

Notify 65: Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

A review of the Notify 65 list, as provided by EDR, and dated 06/16/2017 has revealed that there is 1 Notify 65 site within approximately 1 mile of the target property.

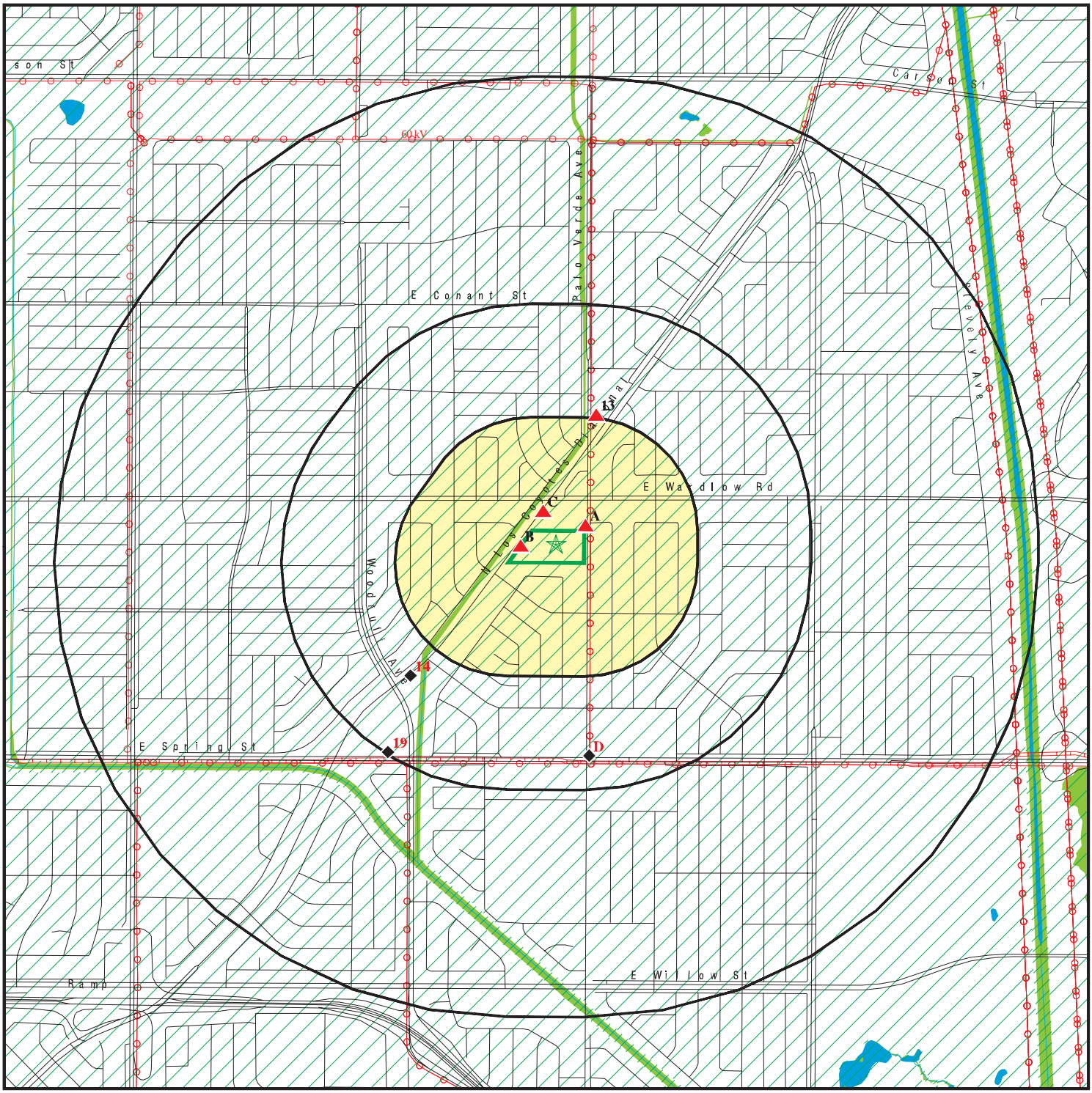
Lower Elevation	Address	Direction / Distance	Map ID	Page
CHEVRON STATION 9-40	6340 E. SPRING ST.	S 1/4 - 1/2 (0.454 mi.)	D18	69

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 1 records.

Site Name	Database(s)
JOHNEL CORP	RCRA-SQG, FINDS, ECHO, DRYCLEANERS, HAZNET

OVERVIEW MAP - 5092799.2S



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Upgradient Area
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Los Coyotes Redevelopment	CLIENT:	David McAlister
ADDRESS:	3235/3325 Palo Verde Ave & 3320 Los Coyotes Diag Long Beach CA 90808	CONTACT:	Joshua Kajiyama
LAT/LONG:	33.817312 / 118.109047	INQUIRY #:	5092799.2s
		DATE:	October 31, 2017 3:22 pm

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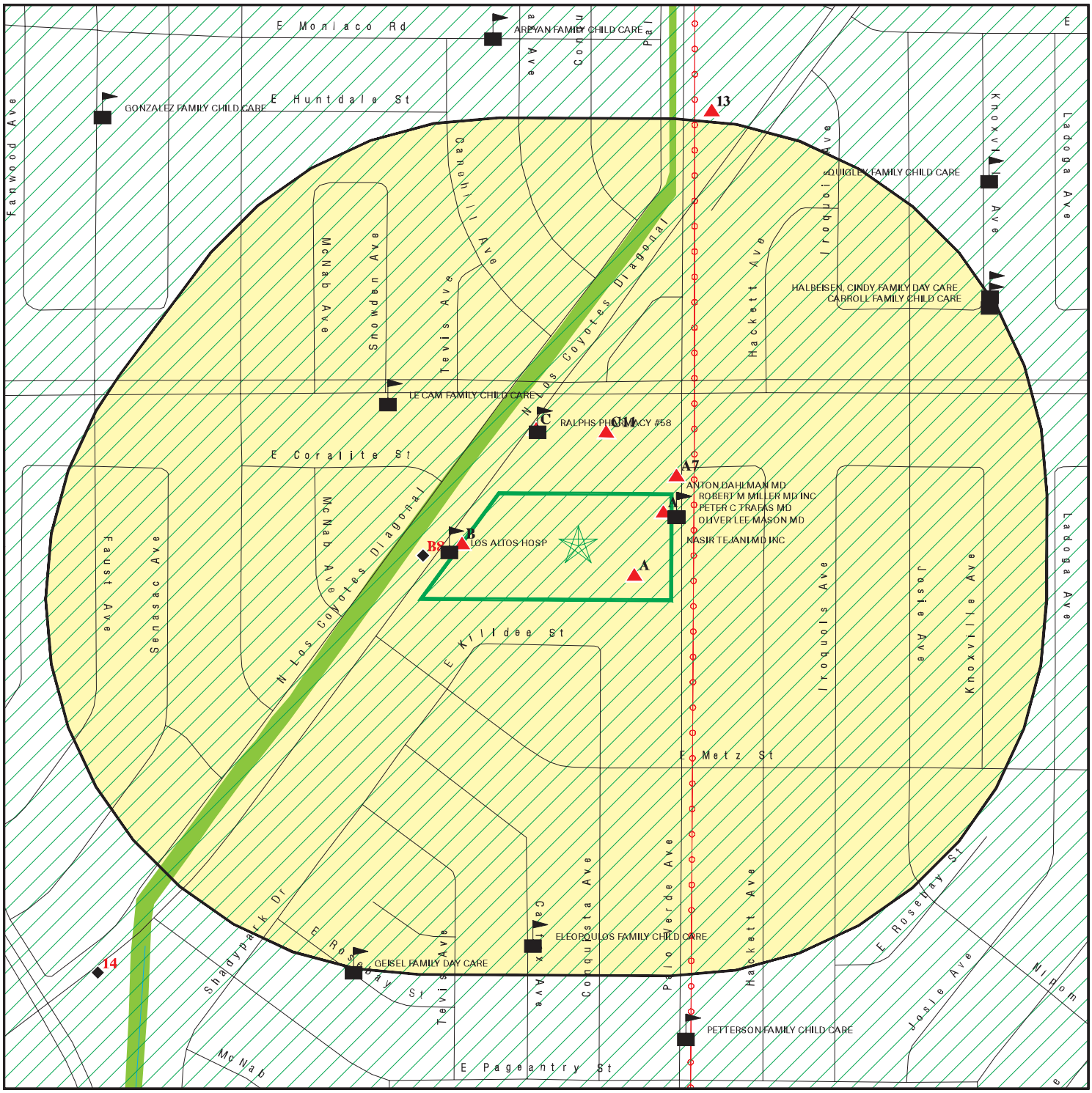
DETAIL MAP - 5092799.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Power transmission lines

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Los Coyotes Redevelopment	CLIENT:	David McAlister
ADDRESS:	3235/3325 Palo Verde Ave & 3320 Los Coyotes Diag Long Beach CA 90808	CONTACT:	Joshua Kajiyama
LAT/LONG:	33.817312 / 118.109047	INQUIRY #:	5092799.2s
		DATE:	October 31, 2017 3:24 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	0.001		0	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		2	0	NR	NR	NR	2
RCRA-SQG	0.250		3	0	NR	NR	NR	3
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	0.001		0	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		1	0	1	0	NR	2
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		1	0	5	NR	NR	6

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
SLIC	0.500		1	0	0	NR	NR	1
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		2	0	NR	NR	NR	2
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	1	NR	NR	1
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	0.001		0	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	0.001		0	NR	NR	NR	NR	0
AOCONCERN	1.000		0	0	0	0	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	0.001		0	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	0.001		0	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	0.001		0	NR	NR	NR	NR	0
LIENS 2	0.001		0	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
Records of Emergency Release Reports								
HMIRS	0.001		0	NR	NR	NR	NR	0
CHMIRS	0.001		0	NR	NR	NR	NR	0
LDS	0.001		0	NR	NR	NR	NR	0
MCS	0.001		0	NR	NR	NR	NR	0
SPILLS 90	0.001		0	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	0.001		0	NR	NR	NR	NR	0
EPA WATCH LIST	0.001		0	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	0.001		0	NR	NR	NR	NR	0
TRIS	0.001		0	NR	NR	NR	NR	0
SSTS	0.001		0	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	0.001		0	NR	NR	NR	NR	0
RAATS	0.001		0	NR	NR	NR	NR	0
PRP	0.001		0	NR	NR	NR	NR	0
PADS	0.001		0	NR	NR	NR	NR	0
ICIS	0.001		0	NR	NR	NR	NR	0
FTTS	0.001		0	NR	NR	NR	NR	0
MLTS	0.001		0	NR	NR	NR	NR	0
COAL ASH DOE	0.001		0	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	0.001		0	NR	NR	NR	NR	0
RADINFO	0.001		0	NR	NR	NR	NR	0
HIST FTTS	0.001		0	NR	NR	NR	NR	0
DOT OPS	0.001		0	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	0.001		0	NR	NR	NR	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	0.001		0	NR	NR	NR	NR	0
US AIRS	0.001		0	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.001		0	NR	NR	NR	NR	0
FINDS	0.001		2	NR	NR	NR	NR	2
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	0.001		0	NR	NR	NR	NR	0
ECHO	0.001		1	NR	NR	NR	NR	1
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		0	0	0	NR	NR	0
CUPA Listings	0.250		0	0	NR	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	0.001		0	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
ENF	0.001		0	NR	NR	NR	NR	0
Financial Assurance	0.001		0	NR	NR	NR	NR	0
HAZNET	0.001		3	NR	NR	NR	NR	3
ICE	0.001		0	NR	NR	NR	NR	0
HIST CORTESE	0.500		1	0	4	NR	NR	5
LOS ANGELES CO. HMS	0.001		0	NR	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.001		0	NR	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	0.001		0	NR	NR	NR	NR	0
PEST LIC	0.001		0	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	1	0	NR	1
LA Co. Site Mitigation	0.001		0	NR	NR	NR	NR	0
UIC	0.001		0	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	0.001		0	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	0.001		0	NR	NR	NR	NR	0
RGA LUST	0.001		0	NR	NR	NR	NR	0
- Totals --		0	17	0	12	0	0	29

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **LARRY HILLHOUSE** **HAZNET** **S117305366**
3331 PALO VERDE AVE **N/A**
< 1/8 **LONG BEACH, CA 90808**
1 ft.

Site 1 of 5 in cluster A

Relative:
Higher

Actual:
28 ft.

HAZNET:

envid:	S117305366
Year:	2013
GEPAID:	CAC002750080
Contact:	LARRY HILLHOUSE
Telephone:	5624201478
Mailing Name:	Not reported
Mailing Address:	3331 PALO VERDE AVE
Mailing City,St,Zip:	LONG BEACH, CA 908084113
Gen County:	Los Angeles
TSD EPA ID:	AZC950823111
TSD County:	99
Waste Category:	Not reported
Disposal Method:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	0.8
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Not reported

A2 **LONG BEACH ALLIANCE CHURCH** **HAZNET** **S117288205**
3331 PALO VERDE AVE **N/A**
< 1/8 **LONG BEACH, CA 90808**
1 ft.

Site 2 of 5 in cluster A

Relative:
Higher

Actual:
28 ft.

HAZNET:

envid:	S117288205
Year:	2016
GEPAID:	CAC002873145
Contact:	LARRY HILLHOUSE
Telephone:	5624201478
Mailing Name:	Not reported
Mailing Address:	3331 PALO VERDE AVE
Mailing City,St,Zip:	LONG BEACH, CA 908084113
Gen County:	Los Angeles
TSD EPA ID:	CAD009007626
TSD County:	Los Angeles
Waste Category:	Asbestos containing waste
Disposal Method:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	0.23
Cat Decode:	Asbestos containing waste
Method Decode:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Facility County:	Los Angeles

envid:	S117288205
Year:	2013
GEPAID:	CAC002724673
Contact:	LARRY HILLHOUSE
Telephone:	5624201478
Mailing Name:	Not reported
Mailing Address:	3331 PALO VERDE AVE

LONG BEACH ALLIANCE CHURCH (Continued) **S117288205**

Mailing City,St,Zip:	LONG BEACH, CA 908084113
Gen County:	Los Angeles
TSD EPA ID:	CAD009007626
TSD County:	Los Angeles
Waste Category:	Not reported
Disposal Method:	Landfill Or Surface Impoundment That Will Be Closed As Landfill(To Include On-Site Treatment And/Or Stabilization)
Tons:	0.8
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Not reported

A3 **LOS ATOS FOOT HEALTH CORP** **RCRA-SQG** **1000820475**
3325 PALO VERDE AVE UNIT 205 **FINDS** **CAD983665134**
< 1/8 **LONG BEACH, CA 90808** **ECHO**
1 ft.

Site 3 of 5 in cluster A

Relative:
Higher

Actual:
27 ft.

RCRA-SQG:

Date form received by agency:	04/13/1993
Facility name:	LOS ATOS FOOT HEALTH CORP
Facility address:	3325 PALO VERDE AVE UNIT 205 LONG BEACH, CA 90808
EPA ID:	CAD983665134
Mailing address:	PALO VERDE AVE UNIT 205 LONG BEACH, CA 90808
Contact:	KAREN COOPER
Contact address:	3325 PALO VERDE AVE UNIT 205 LONG BEACH, CA 90808
Contact country:	US
Contact telephone:	310-420-6888
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	GUY D DANON DPM
Owner/operator address:	3325 PALO VERDE UNIT 205 LONG BEACH, CA 90808
Owner/operator country:	Not reported
Owner/operator telephone:	310-420-6888
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No

LOS ATOS FOOT HEALTH CORP (Continued) **1000820475**

Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002896992

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000820475
Registry ID:	110002896992
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110002896992

A4 **CA COMMERCIAL REAL ESTATE SER** **HAZNET** **S112929921**
3325 PALO VERDE AVE **N/A**
< 1/8 **LONG BEACH, CA 90808**
1 ft.

Site 4 of 5 in cluster A

Relative: Higher

Actual: 27 ft.

HAZNET:

envid:	S112929921
Year:	2003
GEPAID:	CAC002565407
Contact:	LESLIE SCHILLING
Telephone:	9492246050
Mailing Name:	Not reported
Mailing Address:	41 CORP PARK DR STE 230
Mailing City,St,Zip:	IRVINE, CA 92614
Gen County:	Not reported
TSD EPA ID:	CAD028409019
TSD County:	Not reported
Waste Category:	Unspecified oil-containing waste
Disposal Method:	Treatment, Tank
Tons:	0.7

CA COMMERCIAL REAL ESTATE SER (Continued) **S112929921**

Cat Decode: Not reported
Method Decode: Not reported
Facility County: Los Angeles

B5 **VERIZON WIRELESS: KNOXVILLE** **FINDS** **1016422871**
3340 N LOS COYOTES DIAGONAL **N/A**
< 1/8 **LONG BEACH, CA 90808**
1 ft.

Site 1 of 3 in cluster B

Relative: Higher

Actual: 27 ft.

FINDS:

Registry ID: 110055710529

Environmental Interest/Information System
STATE MASTER

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

B6 **CHARTER HOSPITAL FACILITY** **LUST** **S103281805**
West **3340 LOS COYOTES DIAGONAL** **EMI** **N/A**
< 1/8 **LONG BEACH, CA 90808** **HIST CORTESE**
0.006 mi.
31 ft.

Site 2 of 3 in cluster B

Relative: Higher

Actual: 27 ft.

LUST:

Region:	STATE
Global Id:	T0603701883
Latitude:	33.8177425
Longitude:	-118.1100894
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	10/15/1997
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	YL
Local Agency:	LONG BEACH, CITY OF
RB Case Number:	908080043
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Diesel
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603701883
Contact Type:	Local Agency Caseworker
Contact Name:	CARMEN PIRO
Organization Name:	LONG BEACH, CITY OF
Address:	2525 GRAND AVE.
City:	LONG BEACH
Email:	carmen.piro@longbeach.gov
Phone Number:	5625704137

CHARTER HOSPITAL FACILITY (Continued) **S103281805**

Global Id:	T0603701883
Contact Type:	Regional Board Caseworker
Contact Name:	YI LU
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	Not reported
City:	R4 UNKNOWN
Email:	ylu@waterboards.ca.gov
Phone Number:	Not reported

Status History:

Global Id:	T0603701883
Status:	Completed - Case Closed
Status Date:	10/15/1997
Global Id:	T0603701883
Status:	Open - Case Begin Date
Status Date:	01/01/1988
Global Id:	T0603701883
Status:	Open - Site Assessment
Status Date:	06/20/1988

Regulatory Activities:

Global Id:	T0603701883
Action Type:	Other
Date:	01/01/1988
Action:	Leak Reported

LUST REG 4:

Region:	4	
Regional Board:	04	
County:	Los Angeles	
Facility Id:	908080043	
Status:	Case Closed	
Substance:	Diesel	
Substance Quantity:	Not reported	
Local Case No:	Not reported	
Case Type:	Groundwater	
Abatement Method Used at the Site:		Not reported
Global ID:	T0603701883	
W Global ID:	Not reported	
Staff:	UNK	
Local Agency:	19060	
Cross Street:	Not reported	
Enforcement Type:	Not reported	
Date Leak Discovered:	Not reported	
Date Leak First Reported:		1/1/1988
Date Leak Record Entered:	12/31/1986	
Date Confirmation Began:	Not reported	
Date Leak Stopped:	Not reported	
Date Case Last Changed on Database:		6/20/1988
Date the Case was Closed:		10/15/1997
How Leak Discovered:	Not reported	
How Leak Stopped:	Not reported	
Cause of Leak:	UNK	

CHARTER HOSPITAL FACILITY (Continued) **S103281805**

Leak Source:	UNK
Operator:	1-800-511-2396
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	588.4790523911778610473688568 9
Source of Cleanup Funding:	UNK
Preliminary Site Assessment Workplan Submitted:	Not reported
Preliminary Site Assessment Began:	Not reported
Pollution Characterization Began:	6/20/1988
Remediation Plan Submitted:	Not reported
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	Not reported
Enforcement Action Date:	Not reported
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Owner Contact:	Not reported
Responsible Party:	CHARTER HOSPITAL
RP Address:	16960 E. BASTANCHURY RD, STE E, YORBA LINDA, CA 92886
Program:	LUST
Lat/Long:	33.8175292 / -1
Local Agency Staff:	Not reported
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Assigned Name:	Not reported
Summary:	LDP REQUESTED BY LONG BEACH FIRE DEPARTMENT IS INADEQUATE. SITE HAS BEEN CLOSED BY CHARTER HOSPITAL SINCE 1996.

EMI:

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	19065
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1990
County Code:	19
Air Basin:	SC
Facility ID:	19065
Air District Name:	SC

CHARTER HOSPITAL FACILITY (Continued) **S103281805**

SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

HIST CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	908080043

A7
NE
< 1/8
0.013 mi.
70 ft.

FIRE STATION 18 **UST** **U003661277**
3361 PALO VERDE AVE **N/A**
LONG BEACH, CA

Site 5 of 5 in cluster A

Relative:
Higher

Actual:
28 ft.

LONG BEACH UST:

DATA AS OF 02/25/2014:

Region:	LONG BEACH
Tanks:	0T
Tank Test:	Not reported
Leak Test:	Not reported
Tank Status:	Not reported

B8
West
< 1/8
0.016 mi.
85 ft.

ANDREW JAMES MANOS DO INC **RCRA-SQG** **1000685863**
3320 LOS COYOTES DIAG STE 112 **FINDS** **CAD983625401**
LONG BEACH, CA 90808 **ECHO**
HAZNET

Site 3 of 3 in cluster B

Relative:
Lower

Actual:
25 ft.

RCRA-SQG:

Date form received by agency:	03/25/1992
Facility name:	ANDREW JAMES MANOS DO INC
Facility address:	3320 LOS COYOTES DIAG STE 112 LONG BEACH, CA 90808-3918
EPA ID:	CAD983625401
Contact:	ANDREW MANOS
Contact address:	3320 LOS COYOTES DIAG STE 112 LONG BEACH, CA 90808-3918
Contact country:	US
Contact telephone:	310-420-1466
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous

ANDREW JAMES MANOS DO INC (Continued) **1000685863**

waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	ANDREW JAMES MANOS DO
Owner/operator address:	3320 LOS COYOTES DIAG STE 112 LONG BEACH, CA 90808
Owner/operator country:	Not reported
Owner/operator telephone:	310-420-1466
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002872295

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000685863
Registry ID:	110002872295
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110002872295

ANDREW JAMES MANOS DO INC (Continued) **1000685863**

HAZNET:

envid:	1000685863
Year:	1994
GEPAID:	CAD983625401
Contact:	ANDREW JAMES MANOS DO
Telephone:	5624201466
Mailing Name:	Not reported
Mailing Address:	1760 TERMINO STE 222
Mailing City,St,Zip:	LONG BEACH, CA 908040000
Gen County:	Not reported
TSD EPA ID:	CAD982524613
TSD County:	Not reported
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Recycler
Tons:	.0208
Cat Decode:	Not reported
Method Decode:	Not reported
Facility County:	Los Angeles

C9 **RALPHS #0058-703** **RCRA-LQG** **1016954085**
NNW **3380 LOS COYOTES DIAGONAL** **CAD981580665**
< 1/8 **LONG BEACH, CA 90808**
0.036 mi.
192 ft. **Site 1 of 4 in cluster C**

Relative:
Higher

Actual:
27 ft.

RCRA-LQG:

Date form received by agency:	03/03/2014
Facility name:	RALPHS #0058-703
Facility address:	3380 LOS COYOTES DIAGONAL LONG BEACH, CA 90808
EPA ID:	CAD981580665
Mailing address:	LOS COYOTES DIAGONAL LONG BEACH, CA 90808
Contact:	MELISSA PENA
Contact address:	LOS COYOTES DIAGONAL LONG BEACH, CA 90808
Contact country:	Not reported
Contact telephone:	310-884-4016
Contact email:	MELISSA.PENA@RALPHS.COM
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	RALPHS GROCERY CO
Owner/operator address:	Not reported

RALPHS #0058-703 (Continued) **1016954085**

Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 04/11/1961
Owner/Op end date: Not reported

Owner/operator name: SLAUSON & CRENSHAW ASSOCIATES, ACLP
Owner/operator address: W 6RH ST 6TH FL
LOS ANGELES, CA 90017
Owner/operator country: Not reported
Owner/operator telephone: 213-683-0500
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 12/16/1968
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008

RALPHS #0058-703 (Continued) **1016954085**

. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D011
. Waste name: SILVER

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D022
. Waste name: CHLOROFORM

. Waste code: D024
. Waste name: M-CRESOL

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

. Waste code: U001
. Waste name: ACETALDEHYDE (I) (OR) ETHANAL (I)

. Waste code: U002
. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U010
. Waste name: AZIRINO [2',3':3,4]PYRROLO[1,2-A]INDOLE-4,7-DIONE, 6-AMINO-8-[[(AMINOCARBONYL)OXY]METHYL]-1,1A,2,8,8A,8B-HEXAHYDRO-8A-MET HOXY-5-METHYL-, [1AS-(1AALPHA, 8BETA, 8AALPHA, 8BALPHA)]- (OR) MITOMYCIN C

. Waste code: U035
. Waste name: BENZENEBUTANOIC ACID, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) CHLORAMBUCIL

. Waste code: U044
. Waste name: CHLOROFORM (OR) METHANE, TRICHLORO-

. Waste code: U058
. Waste name: 2H-1,3,2-OXAZAPHOSPHORIN-2-AMINE, N,N-BIS(2-CHLOROETHYL)TETRAHYDRO-, 2-OXIDE (OR) CYCLOPHOSPHAMIDE

RALPHS #0058-703 (Continued) **1016954085**

. Waste code: U059
. Waste name: 5,12-NAPHTHACENEDIONE, 8-ACETYL-10-[(3-AMINO-2,3,6-TRIDEOXY)-ALPHA-L-LYXO-HEXOPYRANOSYL)OXY]-7,8,9,10-TETRAHYDRO-6,8,11-TRIHYDROXY-1-METHOXY-, (8S-CIS)- (OR) DAUNOMYCIN

. Waste code: U089
. Waste name: DIETHYLSTILBESTEROL (OR) PHENOL, 4,4'-(1,2-DIETHYL-1,2-ETHENEDIYL)BIS, (E)-

. Waste code: U129
. Waste name: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE

. Waste code: U132
. Waste name: HEXACHLOROPHENE (OR) PHENOL, 2,2'-METHYLENEBIS[3,4,6-TRICHLORO-

. Waste code: U144
. Waste name: ACETIC ACID, LEAD(2+) SALT (OR) LEAD ACETATE

. Waste code: U150
. Waste name: L-PHENYLALANINE, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) MELPHALAN

. Waste code: U187
. Waste name: ACETAMIDE, N-(4-ETHOXYPHENYL)- (OR) PHENACETIN

. Waste code: U188
. Waste name: PHENOL

. Waste code: U200
. Waste name: RESERPINE (OR) YOHIMBAN-16-CARBOXYLIC ACID, 11,17-DIMETHOXY-18-[(3,4,5-TRIMETHOXYBENZOYL)OXY]-, METHYL ESTER, (3BETA, 16BETA, 17ALPHA, 18BETA, 20ALPHA)-

. Waste code: U201
. Waste name: 1,3-BENZENEDIOL (OR) RESORCINOL

. Waste code: U202
. Waste name: 1,2-BENZISOTHIAZOL-3(2H)-ONE, 1,1-DIOXIDE, & SALTS (OR) SACCHARIN, & SALTS

. Waste code: U204
. Waste name: SELENIOUS ACID (OR) SELENIUM DIOXIDE

. Waste code: U205
. Waste name: SELENIUM SULFIDE (OR) SELENIUM SULFIDE SES2 (R,T)

Violation Status: No violations found

C10 NNW < 1/8 0.036 mi. 192 ft. | **RALPHS NO 0058 703**
3380 LOS COYOTES DIAGONAL
LONG BEACH, CA 90808 | **RCRA-LQG** | **1016674859**
CAR000244590

Site 2 of 4 in cluster C

Relative: Higher

Actual: 27 ft.

RCRA-LQG:

Date form received by agency:	05/20/2014
Facility name:	RALPHS NO 0058 703
Facility address:	3380 LOS COYOTES DIAGONAL LONG BEACH, CA 90808
EPA ID:	CAR000244590
Mailing address:	1100 W ARTESIA BLVD COMPTON, CA 90220
Contact:	MELISSA PENA
Contact address:	1100 W ARTESIA BLVD COMPTON, CA 90220
Contact country:	US
Contact telephone:	310-884-4016
Contact email:	MELISSA.PENA@RALPHS.COM
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	RALPHS GROCERY CO
Owner/operator address:	Not reported Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	04/11/1961
Owner/Op end date:	Not reported
Owner/operator name:	SLAUSON AND CRENSHAW ASSOCIATES ACLP
Owner/operator address:	800 W 6TH ST 6TH FLOOR LOS ANGELES, CA 90017
Owner/operator country:	US
Owner/operator telephone:	213-683-0500
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner

RALPHS NO 0058 703 (Continued) **1016674859**

Owner/Op start date: 12/16/1968
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: 122
. Waste name: Alkaline solution without metals (pH > 12.5)

. Waste code: 141
. Waste name: Off-specification, aged, or surplus inorganics

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 214
. Waste name: Unspecified solvent mixture

. Waste code: 311
. Waste name: Pharmaceutical waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 791
. Waste name: Liquids with pH < 2

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007

RALPHS NO 0058 703 (Continued) **1016674859**

. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D011
. Waste name: SILVER

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D022
. Waste name: CHLOROFORM

. Waste code: D024
. Waste name: M-CRESOL

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

. Waste code: U002
. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U010
. Waste name: AZIRINO [2',3':3,4]PYRROLO[1,2-A]INDOLE-4,7-DIONE, 6-AMINO-8-[[(AMINOCARBONYL)OXY]METHYL]-1,1A,2,8,8A,8B-HEXAHYDRO-8A-MET HOXY-5-METHYL-, [1AS-(1AALPHA, 8BETA, 8AALPHA, 8BALPHA)]- (OR) MITOMYCIN C

. Waste code: U035
. Waste name: BENZENEBUTANOIC ACID, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) CHLORAMBUCIL

. Waste code: U044
. Waste name: CHLOROFORM (OR) METHANE, TRICHLORO-

. Waste code: U058
. Waste name: 2H-1,3,2-OXAZAPHOSPHORIN-2-AMINE, N,N-BIS(2-CHLOROETHYL)TETRAHYDRO-, 2-OXIDE (OR) CYCLOPHOSPHAMIDE

RALPHS NO 0058 703 (Continued) **1016674859**

. Waste code: U059
. Waste name: 5,12-NAPHTHACENEDIONE, 8-ACETYL-10-[(3-AMINO-2,3,6-TRIDEOXY)-ALPHA-L-LYXO-HEXOPYRANOSYL)OXY]-7,8,9,10-TETRAHYDRO-6,8,11-TRIHYDROXY-1-METHOXY-, (8S-CIS)- (OR) DAUNOMYCIN

. Waste code: U089
. Waste name: DIETHYLSTILBESTEROL (OR) PHENOL, 4,4'-(1,2-DIETHYL-1,2-ETHENEDIYL)BIS, (E)-

. Waste code: U129
. Waste name: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE

. Waste code: U132
. Waste name: HEXACHLOROPHENE (OR) PHENOL, 2,2'-METHYLENEBIS[3,4,6-TRICHLORO-

. Waste code: U144
. Waste name: ACETIC ACID, LEAD(2+) SALT (OR) LEAD ACETATE

. Waste code: U150
. Waste name: L-PHENYLALANINE, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) MELPHALAN

. Waste code: U187
. Waste name: ACETAMIDE, N-(4-ETHOXYPHENYL)- (OR) PHENACETIN

. Waste code: U188
. Waste name: PHENOL

. Waste code: U200
. Waste name: RESERPINE (OR) YOHIMBAN-16-CARBOXYLIC ACID, 11,17-DIMETHOXY-18-[(3,4,5-TRIMETHOXYBENZOYL)OXY]-, METHYL ESTER, (3BETA, 16BETA, 17ALPHA, 18BETA, 20ALPHA)-

. Waste code: U201
. Waste name: 1,3-BENZENEDIOL (OR) RESORCINOL

. Waste code: U202
. Waste name: 1,2-BENZISOTHIAZOL-3(2H)-ONE, 1,1-DIOXIDE, & SALTS (OR) SACCHARIN, & SALTS

. Waste code: U204
. Waste name: SELENIOUS ACID (OR) SELENIUM DIOXIDE

. Waste code: U205
. Waste name: SELENIUM SULFIDE (OR) SELENIUM SULFIDE SES2 (R,T)

Historical Generators:
Date form received by agency: 03/05/2014
Site name: RALPHS NO 0058 703
Classification: Large Quantity Generator

. Waste code: 122
. Waste name: Alkaline solution without metals (pH > 12.5)

. Waste code: 141
. Waste name: Off-specification, aged, or surplus inorganics

RALPHS NO 0058 703 (Continued) **1016674859**

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 214
. Waste name: Unspecified solvent mixture

. Waste code: 311
. Waste name: Pharmaceutical waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 791
. Waste name: Liquids with pH < 2

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D011
. Waste name: SILVER

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D022
. Waste name: CHLOROFORM

. Waste code: D024
. Waste name: M-CRESOL

RALPHS NO 0058 703 (Continued) **1016674859**

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

. Waste code: U002
. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U010
. Waste name: AZIRINO [2',3':3,4]PYRROLO[1,2-A]INDOLE-4,7-DIONE, 6-AMINO-8-[[(AMINOCARBONYL)OXY]METHYL]-1,1A,2,8,8A,8B-HEXAHYDRO-8A-MET HOXY-5-METHYL-, [1AS-(1AALPHA, 8BETA, 8AALPHA, 8BALPHA)]- (OR) MITOMYCIN C

. Waste code: U035
. Waste name: BENZENEBUTANOIC ACID, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) CHLORAMBUCIL

. Waste code: U044
. Waste name: CHLOROFORM (OR) METHANE, TRICHLORO-

. Waste code: U058
. Waste name: 2H-1,3,2-OXAZAPHOSPHORIN-2-AMINE, N,N-BIS(2-CHLOROETHYL)TETRAHYDRO-, 2-OXIDE (OR) CYCLOPHOSPHAMIDE

. Waste code: U059
. Waste name: 5,12-NAPHTHACENEDIONE, 8-ACETYL-10-[(3-AMINO-2,3,6-TRIDEOXY)-ALPHA-L-LYXO-HEXOPYRANOSYL)OXY]-7,8,9,10-TETRAHYDRO-6,8,11-TRIHYDROXY-1-METHOXY-, (8S-CIS)- (OR) DAUNOMYCIN

. Waste code: U089
. Waste name: DIETHYLSTILBESTEROL (OR) PHENOL, 4,4'-(1,2-DIETHYL-1,2-ETHENEDIYL)BIS, (E)-

. Waste code: U129
. Waste name: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE

. Waste code: U132
. Waste name: HEXACHLOROPHENE (OR) PHENOL, 2,2'-METHYLENEBIS[3,4,6-TRICHLORO-

. Waste code: U144
. Waste name: ACETIC ACID, LEAD(2+) SALT (OR) LEAD ACETATE

. Waste code: U150
. Waste name: L-PHENYLALANINE, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) MELPHALAN

. Waste code: U187
. Waste name: ACETAMIDE, N-(4-ETHOXYPHENYL)- (OR) PHENACETIN

RALPHS NO 0058 703 (Continued) **1016674859**

. Waste code: U188
. Waste name: PHENOL

. Waste code: U200
. Waste name: RESERPINE (OR) YOHIMBAN-16-CARBOXYLIC ACID, 11,17-DIMETHOXY-18-[(3,4,5-TRIMETHOXYBENZOYL)OXY]-, METHYL ESTER, (3BETA, 16BETA, 17ALPHA, 18BETA, 20ALPHA)-

. Waste code: U201
. Waste name: 1,3-BENZENEDIOL (OR) RESORCINOL

. Waste code: U202
. Waste name: 1,2-BENZISOTHIAZOL-3(2H)-ONE, 1,1-DIOXIDE, & SALTS (OR) SACCHARIN, & SALTS

. Waste code: U204
. Waste name: SELENIOUS ACID (OR) SELENIUM DIOXIDE

. Waste code: U205
. Waste name: SELENIUM SULFIDE (OR) SELENIUM SULFIDE SES2 (R,T)

Violation Status: No violations found

C11 NNE < 1/8 0.042 mi. 220 ft. | **CBHS @ LOS ALTOS - 1 S/W STEEL** | **UST** | **U003660994**
3340 LOS COYOTES DIAG | **N/A**
LONG BEACH, CA

Site 3 of 4 in cluster C

Relative: Higher

Actual: 28 ft.

LONG BEACH UST:

DATA AS OF 02/25/2014:

Region: LONG BEACH
Tanks: 1T
Tank Test: 01/08/96
Leak Test: 01/08/96
Tank Status: Not reported

C12 NNW < 1/8 0.043 mi. 229 ft. | **LOS COYOTES CENTER** | **RCRA-SQG** | **1000149356**
3378 LOS COYOTES DIAGONAL | **ENVIROSTOR** | **CAD981620461**
LONG BEACH, CA 90808 | **SLIC**
FINDS
ECHO
EMI

Site 4 of 4 in cluster C

Relative: Higher

Actual: 27 ft.

RCRA-SQG:

Date form received by agency: 09/08/2000
Facility name: LOS COYOTES CENTER
Facility address: 3378 LOS COYOTES DIAGONAL
LONG BEACH, CA 90808
EPA ID: CAD981620461
Mailing address: 9676 WENDOVER DR
BEVERLY HILLS, CA 90210
Contact: SALLY FORSTER JONES
Contact address: 9676 WENDOVER DR
BEVERLY HILLS, CA 90210
Contact country: US
Contact telephone: 310-281-3999

LOS COYOTES CENTER (Continued) **1000149356**

Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: PANOS SKLAVENITIS
Owner/operator address: 9676 WENDOVER DR
BEVERLY HILLS, CA 90210
Owner/operator country: Not reported
Owner/operator telephone: 310-281-3999
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Owner/operator name: NOT REQUIRED
Owner/operator address: NOT REQUIRED
NOT REQUIRED, ME 99999
Owner/operator country: Not reported
Owner/operator telephone: 415-555-1212
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: F002
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE,

LOS COYOTES CENTER (Continued) **1000149356**

CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

ENVIROSTOR:

Facility ID:	19720015
Status:	Inactive - Needs Evaluation
Status Date:	10/02/1995
Site Code:	Not reported
Site Type:	Historical
Site Type Detailed:	* Historical
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	* Mmonroy
Division Branch:	Cleanup Chatsworth
Assembly:	54
Senate:	Not reported
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported
Latitude:	33.81828
Longitude:	-118.1097
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	* HALOGENATED ORGANIC COMPOUNDS * HALOGENATED SOLVENTS
Confirmed COC:	NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	LOS COYOTES SHOPPING CENTER
Alias Type:	Alternate Name
Alias Name:	ROYALTY CLEANERS
Alias Type:	Alternate Name
Alias Name:	110002726621
Alias Type:	EPA (FRS #)
Alias Name:	19720015
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	10/02/1995
Comments:	The Department received a Non-Emergency Hazardous Substance Release Report dated September 21, 1995. Soil and ground- water at the site are contaminated with PCE. Due to evidence of a hazardous substance release, DTSC recommended a PEA and notified the RP thereof.
Future Area Name:	Not reported
Future Sub Area Name:	Not reported

LOS COYOTES CENTER (Continued) **1000149356**

Future Document Type: Not reported
Future Due Date: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported

SLIC:

Region: STATE
Facility Status: Open - Verification Monitoring
Status Date: 11/15/2011
Global Id: SL184301413
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number: Not reported
Latitude: 33.8181264997505
Longitude: -118.108820915222
Case Type: Cleanup Program Site
Case Worker: JL
Local Agency: Not reported
RB Case Number: 0537
File Location: Regional Board
Potential Media Affected: Aquifer used for drinking water supply, Soil, Soil Vapor
Potential Contaminants of Concern: Tetrachloroethylene (PCE)
Site History: A dry cleaning operation operated at the site from 1970 until 1990. The former dry cleaner is one of 11 former retail spaces that were demolished during construction of the Ralphs Grocery store in October 2000. Site investigations conducted indicated that soil and groundwater beneath the site was impacted by volatile organic compounds. A soil vapor extraction and air sparing system operation at the site between January 1 and December 26, 2001 to remediate the subsurface soil. Groundwater monitoring is currently being implemented.

Click here to access the California GeoTracker records for this facility:

SLIC REG 4:

Region: 4
Facility Status: Post Remediation Monitoring
SLIC: 0537
Substance: VOCs
Staff: GJH

FINDS:

Registry ID: 110002726621

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

LOS COYOTES CENTER (Continued) **1000149356**

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000149356
Registry ID:	110002726621
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110002726621

EMI:

Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	53927
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Year:	1990
County Code:	19
Air Basin:	SC
Facility ID:	53927
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

---

13 **TEXACO SERVICE STATION (FORMER)** **LUST** **S104406358**
NNE **3565 LOS COYOTES DIAG N** **HIST CORTESE** **N/A**
1/4-1/2 **LONG BEACH, CA 90808**
0.257 mi.
1358 ft.

Relative:
Higher

Actual:
27 ft.

LUST:

Region:	STATE
Global Id:	T0603701902
Latitude:	33.8220291
Longitude:	-118.1065831
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed

TEXACO SERVICE STATION (FORMER) (Continued) **S104406358**

Status Date:	12/15/2009
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	NC
Local Agency:	LONG BEACH, CITY OF
RB Case Number:	908080225
LOC Case Number:	Not reported
File Location:	Regional Board
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603701902
Contact Type:	Local Agency Caseworker
Contact Name:	CARMEN PIRO
Organization Name:	LONG BEACH, CITY OF
Address:	2525 GRAND AVE.
City:	LONG BEACH
Email:	carmen.piro@longbeach.gov
Phone Number:	5625704137

Global Id:	T0603701902
Contact Type:	Regional Board Caseworker
Contact Name:	NOMAN CHOWDHURY
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 WEST 4TH STREET, SUITE 200
City:	LOS ANGELES
Email:	nchowdhury@waterboards.ca.gov
Phone Number:	2135766704

Status History:

Global Id:	T0603701902
Status:	Completed - Case Closed
Status Date:	12/15/2009

Global Id:	T0603701902
Status:	Open - Case Begin Date
Status Date:	01/11/1999

Global Id:	T0603701902
Status:	Open - Remediation
Status Date:	03/13/2001

Global Id:	T0603701902
Status:	Open - Remediation
Status Date:	08/25/2003

Global Id:	T0603701902
Status:	Open - Remediation
Status Date:	05/14/2007

Global Id:	T0603701902
Status:	Open - Site Assessment
Status Date:	04/25/2000

TEXACO SERVICE STATION (FORMER) (Continued) **S104406358**

Global Id: T0603701902
Status: Open - Site Assessment
Status Date: 05/15/2000

Global Id: T0603701902
Status: Open - Site Assessment
Status Date: 08/21/2000

Regulatory Activities:

Global Id: T0603701902
Action Type: ENFORCEMENT
Date: 11/30/2009
Action: Notification - Preclosure

Global Id: T0603701902
Action Type: ENFORCEMENT
Date: 12/15/2009
Action: Closure/No Further Action Letter

Global Id: T0603701902
Action Type: ENFORCEMENT
Date: 11/30/2009
Action: Site Visit / Inspection / Sampling

Global Id: T0603701902
Action Type: Other
Date: 01/11/1999
Action: Leak Reported

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2008
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2006

TEXACO SERVICE STATION (FORMER) (Continued) **S104406358**

Action: Interim Remedial Action Plan

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2007
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2006
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2006
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2007
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: ENFORCEMENT
Date: 08/23/2004
Action: Site Visit / Inspection / Sampling

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2008
Action: Monitoring Report - Quarterly

TEXACO SERVICE STATION (FORMER) (Continued) **S104406358**

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2008
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: ENFORCEMENT
Date: 05/23/2005
Action: Site Visit / Inspection / Sampling

Global Id: T0603701902
Action Type: ENFORCEMENT
Date: 06/26/2006
Action: Staff Letter

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2009
Action: Conceptual Site Model

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2007
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: REMEDIATION
Date: 11/26/2001
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0603701902
Action Type: REMEDIATION
Date: 12/10/2000
Action: Excavation

Global Id: T0603701902
Action Type: RESPONSE

TEXACO SERVICE STATION (FORMER) (Continued) **S104406358**

Date: 07/15/2009
Action: Monitoring Report - Semi-Annually

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2008
Action: Conceptual Site Model

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2008
Action: Conceptual Site Model

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2009
Action: Conceptual Site Model

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: ENFORCEMENT
Date: 03/13/2001
Action: 13267 Requirement

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2003
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2003
Action: Monitoring Report - Quarterly

TEXACO SERVICE STATION (FORMER) (Continued) **S104406358**

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: Other
Date: 11/19/1999
Action: Leak Discovery

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: ENFORCEMENT
Date: 06/15/2009
Action: Staff Letter

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2007
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2007
Action: Monitoring Report - Quarterly

TEXACO SERVICE STATION (FORMER) (Continued) **S104406358**

LUST REG 4:

Region:	4
Regional Board:	04
County:	Los Angeles
Facility Id:	908080225
Status:	Remediation Plan
Substance:	Gasoline
Substance Quantity:	Not reported
Local Case No:	Not reported
Case Type:	Groundwater
Abatement Method Used at the Site:	Not reported
Global ID:	T0603701902
W Global ID:	Not reported
Staff:	NC
Local Agency:	19060
Cross Street:	PALO VERDE AVE
Enforcement Type:	DLLET
Date Leak Discovered:	11/19/1999
Date Leak First Reported:	1/11/1999
Date Leak Record Entered:	Not reported
Date Confirmation Began:	Not reported
Date Leak Stopped:	Not reported
Date Case Last Changed on Database:	9/9/2002
Date the Case was Closed:	Not reported
How Leak Discovered:	OM
How Leak Stopped:	Not reported
Cause of Leak:	UNK
Leak Source:	UNK
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	876.3535816914817571817044354
Source of Cleanup Funding:	UNK
Preliminary Site Assessment Workplan Submitted:	4/25/2000
Preliminary Site Assessment Began:	5/15/2000
Pollution Characterization Began:	8/21/2000
Remediation Plan Submitted:	8/25/2003
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	Not reported
Enforcement Action Date:	3/13/2001
Historical Max MTBE Date:	1/1/1965
Hist Max MTBE Conc in Groundwater:	170000
Hist Max MTBE Conc in Soil:	12
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Owner Contact:	Not reported
Responsible Party:	EVERETT FERGUSON
RP Address:	P.O. BOX 7869
Program:	LUST
Lat/Long:	33.8220291 / -1
Local Agency Staff:	Not reported
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported

TEXACO SERVICE STATION (FORMER) (Continued) **S104406358**

Assigned Name: Not reported
Summary: 12-13-99 GROUNDWATER CONCENTRATION REPORTED FOR TEMPORARY WELLS; 5/15/00 WP TO CONDUCT ADD'L SITE INVESTIGATION; 12/20/00 ADDL SITE ASSESSMENT RPT; 1/18/01 4TH QTR GW MON RPT 2000

HIST CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: 908080225

---

14 SW 1/4-1/2 0.329 mi. 1737 ft. | **THRIFTY SERVICE STATION #023** | **LUST** | **S103891216**
3100 LOS COYOTES DIAGONAL | **HIST CORTESE** | **N/A**
LONG BEACH, CA 90808

Relative: Lower

Actual: 26 ft.

LUST:
Region: STATE
Global Id: T0603701889
Latitude: 33.8127959963793
Longitude: -118.114711046219
Case Type: LUST Cleanup Site
Status: Open - Remediation
Status Date: 06/03/2014
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Worker: ALT
Local Agency: LONG BEACH, CITY OF
RB Case Number: 908080098
LOC Case Number: Not reported
File Location: Regional Board
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Contact:
Global Id: T0603701889
Contact Type: Regional Board Caseworker
Contact Name: ADAM TAING
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 West 4th Street
City: LOS ANGELES
Email: adam.taing@waterboards.ca.gov
Phone Number: 2135766752

Global Id: T0603701889
Contact Type: Local Agency Caseworker
Contact Name: CARMEN PIRO
Organization Name: LONG BEACH, CITY OF
Address: 2525 GRAND AVE.
City: LONG BEACH
Email: carmen.piro@longbeach.gov
Phone Number: 5625704137

Status History:

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Global Id: T0603701889
Status: Open - Case Begin Date
Status Date: 03/06/1987

Global Id: T0603701889
Status: Open - Eligible for Closure
Status Date: 08/13/2013

Global Id: T0603701889
Status: Open - Remediation
Status Date: 08/25/1999

Global Id: T0603701889
Status: Open - Remediation
Status Date: 01/18/2001

Global Id: T0603701889
Status: Open - Remediation
Status Date: 01/15/2003

Global Id: T0603701889
Status: Open - Remediation
Status Date: 04/13/2003

Global Id: T0603701889
Status: Open - Remediation
Status Date: 04/16/2003

Global Id: T0603701889
Status: Open - Remediation
Status Date: 06/18/2003

Global Id: T0603701889
Status: Open - Remediation
Status Date: 07/15/2003

Global Id: T0603701889
Status: Open - Remediation
Status Date: 10/15/2003

Global Id: T0603701889
Status: Open - Remediation
Status Date: 01/09/2004

Global Id: T0603701889
Status: Open - Remediation
Status Date: 04/16/2004

Global Id: T0603701889
Status: Open - Remediation
Status Date: 07/19/2004

Global Id: T0603701889
Status: Open - Remediation
Status Date: 10/07/2004

Global Id: T0603701889

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Status: Open - Remediation
Status Date: 01/18/2005

Global Id: T0603701889
Status: Open - Remediation
Status Date: 04/19/2005

Global Id: T0603701889
Status: Open - Remediation
Status Date: 08/03/2005

Global Id: T0603701889
Status: Open - Remediation
Status Date: 10/21/2005

Global Id: T0603701889
Status: Open - Remediation
Status Date: 01/17/2006

Global Id: T0603701889
Status: Open - Remediation
Status Date: 04/17/2006

Global Id: T0603701889
Status: Open - Remediation
Status Date: 07/17/2006

Global Id: T0603701889
Status: Open - Remediation
Status Date: 10/16/2006

Global Id: T0603701889
Status: Open - Remediation
Status Date: 01/12/2007

Global Id: T0603701889
Status: Open - Remediation
Status Date: 04/16/2007

Global Id: T0603701889
Status: Open - Remediation
Status Date: 07/13/2007

Global Id: T0603701889
Status: Open - Remediation
Status Date: 10/17/2007

Global Id: T0603701889
Status: Open - Remediation
Status Date: 01/15/2008

Global Id: T0603701889
Status: Open - Remediation
Status Date: 04/11/2008

Global Id: T0603701889
Status: Open - Remediation

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Status Date: 06/03/2014

Global Id: T0603701889
Status: Open - Site Assessment
Status Date: 03/06/1987

Global Id: T0603701889
Status: Open - Site Assessment
Status Date: 08/25/1999

Global Id: T0603701889
Status: Open - Site Assessment
Status Date: 12/02/2002

Regulatory Activities:

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 08/25/1999
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 12/02/2002
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 06/18/2003
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 10/13/2000
Action: Staff Letter

Global Id: T0603701889
Action Type: Other
Date: 02/26/1988
Action: Leak Reported

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2005
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2006
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Date: 10/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2005
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2007
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2008
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2007
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2007
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2005
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2006
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2006
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2012
Action: Conceptual Site Model

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE
Date: 03/06/1987
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2017
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2017
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 05/06/2002
Action: Site Visit / Inspection / Sampling

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 04/19/2004
Action: Site Visit / Inspection / Sampling

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 06/09/2014
Action: Staff Letter

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/12/2007
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2006
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2006
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2006
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Date: 10/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 09/07/2017
Action: Soil Vapor Intrusion Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2007
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2007
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2008
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2008
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2008
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 12/09/1985
Action: Site Assessment Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/02/1987
Action: CAP/RAP - Other Report

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Global Id: T0603701889
Action Type: RESPONSE
Date: 12/27/2012
Action: Request for Closure

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2013
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 08/30/1985
Action: Tank Removal Report / UST Sampling Report

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 02/21/2017
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 04/07/2017
Action: Staff Letter

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2009
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2009
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2007
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2002
Action: Interim Remedial Action Plan

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2005
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Date: 07/15/2003
Action: Sensitive Receptor Survey Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 05/20/2009
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2013
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2013
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2015
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2015
Action: Sensitive Receptor Survey Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 05/29/2013
Action: Request for Closure - Regulator Responded

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2016
Action: Monitoring Report - Quarterly - Regulator Responded

Global Id: T0603701889
Action Type: RESPONSE
Date: 12/22/2015
Action: Request for Closure - Regulator Responded

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2016
Action: Request for Closure - Regulator Responded

Global Id: T0603701889
Action Type: RESPONSE
Date: 11/09/2016
Action: Request for Closure - Regulator Responded

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Global Id: T0603701889
Action Type: RESPONSE
Date: 05/22/2017
Action: Soil Vapor Intrusion Investigation Workplan - Regulator Responded

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/13/2017
Action: Request for Closure - Regulator Responded

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/21/2017
Action: Corrective Action Plan / Remedial Action Plan - Regulator Responded

Global Id: T0603701889
Action Type: REMEDIATION
Date: 07/01/1992
Action: Free Product Removal

Global Id: T0603701889
Action Type: REMEDIATION
Date: 12/06/2001
Action: Dual Phase Extraction

Global Id: T0603701889
Action Type: REMEDIATION
Date: 12/01/2001
Action: Dual Phase Extraction

Global Id: T0603701889
Action Type: REMEDIATION
Date: 10/01/2014
Action: Dual Phase Extraction

Global Id: T0603701889
Action Type: REMEDIATION
Date: 10/16/2014
Action: Dual Phase Extraction

Global Id: T0603701889
Action Type: REMEDIATION
Date: 04/01/1985
Action: Pump & Treat (P&T) Groundwater

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2008
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Date: 10/15/2009
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/19/2010
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2010
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2014
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2014
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2015
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2015
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 03/24/2008
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 03/22/2017
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2008
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2002
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2003
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2009
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/16/2009
Action: Clean Up Fund - 5-Year Review Summary

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2002
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Date: 07/15/2015
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2015
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 06/07/2017
Action: Staff Letter

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2002
Action: Interim Remedial Action Plan

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2002
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2002
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 11/15/2002
Action: CAP/RAP - Final Remediation / Design Plan

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2007
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2003
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2003
Action: Monitoring Report - Quarterly

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2010
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2016
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2004
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2003
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2004
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Date: 10/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2003
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2010
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2009
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE
Date: 11/03/2010
Action: Request for Closure

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2015
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2004
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2005
Action: Remedial Progress Report

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2005
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2005
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2004
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2011
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 01/14/2002
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Date: 09/06/2002
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 06/15/2009
Action: Staff Letter

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2005
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2005
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2006
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2006
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2011
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2012
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2012
Action: Monitoring Report - Semi-Annually

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

LUST REG 4:

Region:	4
Regional Board:	04
County:	Los Angeles
Facility Id:	908080098
Status:	Remedial action (cleanup) Underway
Substance:	Gasoline
Substance Quantity:	Not reported
Local Case No:	Not reported
Case Type:	Groundwater
Abatement Method Used at the Site:	Pump and Treat Groundwater
Global ID:	T0603701889
W Global ID:	Not reported
Staff:	JLC
Local Agency:	19060
Cross Street:	PAGEANTRY
Enforcement Type:	SI
Date Leak Discovered:	Not reported
Date Leak First Reported:	2/26/1988
Date Leak Record Entered:	6/20/1988
Date Confirmation Began:	Not reported
Date Leak Stopped:	Not reported
Date Case Last Changed on Database:	7/12/2002
Date the Case was Closed:	Not reported
How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	Not reported
Leak Source:	Not reported
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	2769.514518232599077950924049 2
Source of Cleanup Funding:	Not reported
Preliminary Site Assessment Workplan Submitted:	3/6/1987
Preliminary Site Assessment Began:	Not reported
Pollution Characterization Began:	8/25/1999
Remediation Plan Submitted:	8/25/1999
Remedial Action Underway:	7/19/2004
Post Remedial Action Monitoring Began:	2/26/1988
Enforcement Action Date:	1/18/2001
Historical Max MTBE Date:	6/6/2000
Hist Max MTBE Conc in Groundwater:	166000
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Yes
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Owner Contact:	Not reported
Responsible Party:	RICHARD VOGL
RP Address:	3151 AIRWAY AVE., BLDG. H1
Program:	LUST
Lat/Long:	33.8127824 / -1
Local Agency Staff:	Not reported
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Assigned Name: Not reported
Summary: 12/21/00 ADDENDUM TO CORRECTIVE ACTION PLAN; 1/8/01 4TH QTR GW MON RPT 2000; 4/3/01 SITE HEALTH & SAFETY PLAN; 4/11/01 1ST QTR GW MON PRT 2001

HIST CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: 908080098

D15
South
1/4-1/2
0.424 mi.
2241 ft.

SHELL #204-4482-3205 **LUST** **U003058424**
6407 SPRING ST E **HIST CORTESE** **N/A**
LONG BEACH, CA 90808

Site 1 of 4 in cluster D

Relative:
Lower

Actual:
19 ft.

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: 908080061
Status: Case Closed
Substance: Gasoline
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Groundwater
Abatement Method Used at the Site: FPED
Global ID: T0603701885
W Global ID: Not reported
Staff: UNK
Local Agency: 19060
Cross Street: PALO VERDE AVE
Enforcement Type: Not reported
Date Leak Discovered: Not reported
Date Leak First Reported: 2/25/1988
Date Leak Record Entered: 3/23/1988
Date Confirmation Began: Not reported
Date Leak Stopped: Not reported
Date Case Last Changed on Database: 9/6/1996
Date the Case was Closed: 8/2/1996
How Leak Discovered: Not reported
How Leak Stopped: Not reported
Cause of Leak: Not reported
Leak Source: Not reported
Operator: Not reported
Water System: Not reported
Well Name: Not reported
Approx. Dist To Production Well (ft): 1314.2736348067152570716890948
Source of Cleanup Funding: Not reported
Preliminary Site Assessment Workplan Submitted: Not reported
Preliminary Site Assessment Began: Not reported
Pollution Characterization Began: 6/27/1991
Remediation Plan Submitted: 2/24/1992
Remedial Action Underway: Not reported
Post Remedial Action Monitoring Began: Not reported
Enforcement Action Date: Not reported

SHELL #204-4482-3205 (Continued) **U003058424**

Historical Max MTBE Date: Not reported
Hist Max MTBE Conc in Groundwater: Not reported
Hist Max MTBE Conc in Soil: Not reported
Significant Interim Remedial Action Taken: Yes
GW Qualifier: Not reported
Soil Qualifier: Not reported
Organization: Not reported
Owner Contact: Not reported
Responsible Party: SHELL OIL COMPANY
RP Address: PO BOX 25370, SANTA ANA, CA 92799
Program: LUST
Lat/Long: 33.8105483 / -1
Local Agency Staff: Not reported
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: INITIAL SA WORK DONE BY LONG BEACH HEALTH DEPARTMENT

HIST CORTESE:
Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: 908080061

Region: CORTESE
Facility County Code: 19
Reg By: LTNKA
Reg Id: 908080061A

D16 **SHELL SERVICE STATION (FORMER)** **LUST** **S104406356**
South **6407 SPRING ST E** **N/A**
1/4-1/2 **LONG BEACH, CA 90808**
0.424 mi.
2241 ft. **Site 2 of 4 in cluster D**

Relative:
Lower

Actual:
19 ft.

LUST:
Region: STATE
Global Id: T0603701886
Latitude: 33.8106763
Longitude: -118.1077319
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 01/11/2005
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Worker: HDN
Local Agency: LONG BEACH, CITY OF
RB Case Number: 908080061A
LOC Case Number: Not reported
File Location: Not reported
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

SHELL SERVICE STATION (FORMER) (Continued) **S104406356**

Contact:

Global Id:	T0603701886
Contact Type:	Local Agency Caseworker
Contact Name:	CARMEN PIRO
Organization Name:	LONG BEACH, CITY OF
Address:	2525 GRAND AVE.
City:	LONG BEACH
Email:	carmen.piro@longbeach.gov
Phone Number:	5625704137

Global Id:	T0603701886
Contact Type:	Regional Board Caseworker
Contact Name:	HA D. NGUYEN
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 W. 4th Street, Suite 200
City:	LOS ANGELES
Email:	hnguyen@waterboards.ca.gov
Phone Number:	2135766658

Status History:

Global Id:	T0603701886
Status:	Completed - Case Closed
Status Date:	01/11/2005

Global Id:	T0603701886
Status:	Open - Case Begin Date
Status Date:	05/07/1999

Global Id:	T0603701886
Status:	Open - Remediation
Status Date:	01/15/2002

Global Id:	T0603701886
Status:	Open - Remediation
Status Date:	03/06/2003

Global Id:	T0603701886
Status:	Open - Site Assessment
Status Date:	01/25/2000

Global Id:	T0603701886
Status:	Open - Site Assessment
Status Date:	04/28/2000

Global Id:	T0603701886
Status:	Open - Site Assessment
Status Date:	01/15/2002

Regulatory Activities:

Global Id:	T0603701886
Action Type:	ENFORCEMENT
Date:	11/05/2002
Action:	Staff Letter

Global Id:	T0603701886
Action Type:	ENFORCEMENT

SHELL SERVICE STATION (FORMER) (Continued) **S104406356**

Date: 07/02/2002
Action: 13267 Requirement

Global Id: T0603701886
Action Type: ENFORCEMENT
Date: 02/22/2000
Action: Site Visit / Inspection / Sampling

Global Id: T0603701886
Action Type: ENFORCEMENT
Date: 01/28/2003
Action: Site Visit / Inspection / Sampling

Global Id: T0603701886
Action Type: ENFORCEMENT
Date: 03/06/2003
Action: Staff Letter

Global Id: T0603701886
Action Type: ENFORCEMENT
Date: 01/12/2001
Action: 13267 Requirement

Global Id: T0603701886
Action Type: Other
Date: 11/02/1999
Action: Leak Reported

Global Id: T0603701886
Action Type: ENFORCEMENT
Date: 11/01/2004
Action: Notification - Preclosure

Global Id: T0603701886
Action Type: ENFORCEMENT
Date: 01/11/2005
Action: Closure/No Further Action Letter

Global Id: T0603701886
Action Type: ENFORCEMENT
Date: 10/15/2004
Action: Site Visit / Inspection / Sampling

Global Id: T0603701886
Action Type: REMEDIATION
Date: 02/21/2000
Action: Excavation

Global Id: T0603701886
Action Type: RESPONSE
Date: 10/15/2002
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2004
Action: Monitoring Report - Quarterly

SHELL SERVICE STATION (FORMER) (Continued) **S104406356**

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2002
Action: Soil and Water Investigation Workplan

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2002
Action: Interim Remedial Action Plan

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2002
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 07/15/2002
Action: Other Report / Document

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2002
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 10/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701886
Action Type: RESPONSE
Date: 01/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 01/15/2003
Action: Interim Remedial Action Plan

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 01/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701886
Action Type: RESPONSE
Date: 01/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701886
Action Type: RESPONSE

SHELL SERVICE STATION (FORMER) (Continued) **S104406356**

Date: 04/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701886
Action Type: RESPONSE
Date: 07/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 07/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 07/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701886
Action Type: RESPONSE
Date: 07/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701886
Action Type: RESPONSE
Date: 07/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 01/15/2003
Action: CAP/RAP - Final Remediation / Design Plan

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 10/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701886
Action Type: RESPONSE
Date: 10/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 01/15/2004
Action: Soil and Water Investigation Report

SHELL SERVICE STATION (FORMER) (Continued) **S104406356**

Global Id:	T0603701886
Action Type:	Other
Date:	05/10/1999
Action:	Leak Discovery

Global Id:	T0603701886
Action Type:	RESPONSE
Date:	10/15/2004
Action:	Monitoring Report - Quarterly

Global Id:	T0603701886
Action Type:	RESPONSE
Date:	10/15/2004
Action:	Soil and Water Investigation Report

Global Id:	T0603701886
Action Type:	Other
Date:	05/07/1999
Action:	Leak Stopped

Region:	STATE
Global Id:	T0603701885
Latitude:	33.8105705
Longitude:	-118.1069679
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	08/02/1996
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	YR
Local Agency:	LONG BEACH, CITY OF
RB Case Number:	908080061
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

Global Id:	T0603701885
Contact Type:	Local Agency Caseworker
Contact Name:	CARMEN PIRO
Organization Name:	LONG BEACH, CITY OF
Address:	2525 GRAND AVE.
City:	LONG BEACH
Email:	carmen.piro@longbeach.gov
Phone Number:	5625704137

Global Id:	T0603701885
Contact Type:	Regional Board Caseworker
Contact Name:	YUE RONG
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 W. 4TH ST., SUITE 200
City:	Los Angeles
Email:	yrong@waterboards.ca.gov
Phone Number:	Not reported

SHELL SERVICE STATION (FORMER) (Continued) **S104406356**

Status History:

Global Id:	T0603701885
Status:	Completed - Case Closed
Status Date:	08/02/1996
Global Id:	T0603701885
Status:	Open - Case Begin Date
Status Date:	02/25/1988
Global Id:	T0603701885
Status:	Open - Remediation
Status Date:	02/24/1992
Global Id:	T0603701885
Status:	Open - Site Assessment
Status Date:	06/27/1991

Regulatory Activities:

Global Id:	T0603701885
Action Type:	Other
Date:	02/25/1988
Action:	Leak Reported

LUST REG 4:

Region:	4
Regional Board:	04
County:	Los Angeles
Facility Id:	908080061A
Status:	Remedial action (cleanup) Underway
Substance:	Gasoline
Substance Quantity:	Not reported
Local Case No:	Not reported
Case Type:	Groundwater
Abatement Method Used at the Site:	OT
Global ID:	T0603701886
W Global ID:	Not reported
Staff:	HDN
Local Agency:	19060
Cross Street:	PALO VERDE AVE
Enforcement Type:	DLSEL
Date Leak Discovered:	5/10/1999
Date Leak First Reported:	11/2/1999
Date Leak Record Entered:	Not reported
Date Confirmation Began:	Not reported
Date Leak Stopped:	5/7/1999
Date Case Last Changed on Database:	7/18/2002
Date the Case was Closed:	Not reported
How Leak Discovered:	Repair Tank
How Leak Stopped:	Not reported
Cause of Leak:	UNK
Leak Source:	UNK
Operator:	EQUILON ENTERPRISES LLC
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	1328.4520934450621167675070751

SHELL SERVICE STATION (FORMER) (Continued) **S104406356**

Source of Cleanup Funding:	UNK
Preliminary Site Assessment Workplan Submitted:	1/25/2000
Preliminary Site Assessment Began:	4/28/2000
Pollution Characterization Began:	1/15/2002
Remediation Plan Submitted:	1/23/2003
Remedial Action Underway:	3/6/2003
Post Remedial Action Monitoring Began:	11/2/1999
Enforcement Action Date:	Not reported
Historical Max MTBE Date:	9/13/2000
Hist Max MTBE Conc in Groundwater:	960
Hist Max MTBE Conc in Soil:	41
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Owner Contact:	Not reported
Responsible Party:	LAURA MENDOZA
RP Address:	8281 COMMONWEALTH AVE.
Program:	LUST
Lat/Long:	33.8106763 / -1
Local Agency Staff:	Not reported
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Assigned Name:	Not reported
Summary:	CONCENTRATIONS OF FUEL HYDROCARBON (HCS) AND/OR MTBE WERE DETECTED IN SOIL SAMPLES FROM BENEATH ONE FUEL DISPENSER AND FROM THE BOTTOM OF THE FUEL TANK EXCAVATION. ELEVATED TRPH WAS DETECTED BENEATH THE CLARIFIER AND SELECT H

D17 **CHEVRON #9-4055** **LUST** **U003700275**
South **6340 SPRING ST E** **HIST CORTESE** **N/A**
1/4-1/2 **LONG BEACH, CA 90815**
0.454 mi.
2399 ft. **Site 3 of 4 in cluster D**

Relative:
Lower

Actual:
19 ft.

LUST:

Region:	STATE
Global Id:	T0603701997
Latitude:	33.8102633
Longitude:	-118.1086339
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	04/26/2004
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Worker:	Not reported
Local Agency:	LONG BEACH, CITY OF
RB Case Number:	908150216
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

Click here to access the California GeoTracker records for this facility:

Contact:

CHEVRON #9-4055 (Continued) **U003700275**

Global Id: T0603701997
Contact Type: Local Agency Caseworker
Contact Name: CARMEN PIRO
Organization Name: LONG BEACH, CITY OF
Address: 2525 GRAND AVE.
City: LONG BEACH
Email: carmen.piro@longbeach.gov
Phone Number: 5625704137

Status History:
Global Id: T0603701997
Status: Completed - Case Closed
Status Date: 04/26/2004

Global Id: T0603701997
Status: Open - Case Begin Date
Status Date: 03/14/1991

Global Id: T0603701997
Status: Open - Remediation
Status Date: 01/02/2003

Global Id: T0603701997
Status: Open - Site Assessment
Status Date: 03/19/1991

Global Id: T0603701997
Status: Open - Site Assessment
Status Date: 09/15/1999

Global Id: T0603701997
Status: Open - Verification Monitoring
Status Date: 03/19/1991

Regulatory Activities:
Global Id: T0603701997
Action Type: ENFORCEMENT
Date: 09/15/1999
Action: Staff Letter

Global Id: T0603701997
Action Type: ENFORCEMENT
Date: 09/03/2002
Action: Staff Letter

Global Id: T0603701997
Action Type: ENFORCEMENT
Date: 04/12/2002
Action: Staff Letter

Global Id: T0603701997
Action Type: Other
Date: 03/19/1991
Action: Leak Reported

Global Id: T0603701997

CHEVRON #9-4055 (Continued) **U003700275**

Action Type: ENFORCEMENT
Date: 05/06/2002
Action: Site Visit / Inspection / Sampling

Global Id: T0603701997
Action Type: ENFORCEMENT
Date: 04/02/2004
Action: Staff Letter

Global Id: T0603701997
Action Type: ENFORCEMENT
Date: 04/19/2004
Action: Site Visit / Inspection / Sampling

Global Id: T0603701997
Action Type: ENFORCEMENT
Date: 04/26/2004
Action: Closure/No Further Action Letter

Global Id: T0603701997
Action Type: RESPONSE
Date: 01/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701997
Action Type: RESPONSE
Date: 04/30/2002
Action: Soil and Water Investigation Report

Global Id: T0603701997
Action Type: RESPONSE
Date: 01/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701997
Action Type: RESPONSE
Date: 04/30/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701997
Action Type: RESPONSE
Date: 07/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701997
Action Type: RESPONSE
Date: 07/15/2002
Action: Interim Remedial Action Plan

Global Id: T0603701997
Action Type: RESPONSE
Date: 07/15/2002
Action: Soil and Water Investigation Report

Global Id: T0603701997
Action Type: RESPONSE
Date: 10/15/2002

CHEVRON #9-4055 (Continued) **U003700275**

Action: Soil and Water Investigation Report

Global Id: T0603701997
Action Type: RESPONSE
Date: 04/15/2003
Action: CAP/RAP - Final Remediation / Design Plan

Global Id: T0603701997
Action Type: RESPONSE
Date: 10/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701997
Action Type: RESPONSE
Date: 04/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701997
Action Type: RESPONSE
Date: 04/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701997
Action Type: Other
Date: 03/14/1991
Action: Leak Discovery

Global Id: T0603701997
Action Type: RESPONSE
Date: 04/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701997
Action Type: RESPONSE
Date: 04/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701997
Action Type: RESPONSE
Date: 01/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701997
Action Type: RESPONSE
Date: 07/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701997
Action Type: RESPONSE
Date: 07/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701997
Action Type: RESPONSE
Date: 10/15/2003
Action: Soil and Water Investigation Report

CHEVRON #9-4055 (Continued) **U003700275**

Global Id:	T0603701997
Action Type:	RESPONSE
Date:	07/15/2004
Action:	Unknown

Global Id:	T0603701997
Action Type:	RESPONSE
Date:	01/15/2004
Action:	Soil and Water Investigation Report

Global Id:	T0603701997
Action Type:	RESPONSE
Date:	10/15/2003
Action:	Monitoring Report - Quarterly

Global Id:	T0603701997
Action Type:	RESPONSE
Date:	10/15/2003
Action:	Soil and Water Investigation Report

LUST REG 4:

Region:	4
Regional Board:	04
County:	Los Angeles
Facility Id:	908150216
Status:	Case Closed
Substance:	Gasoline
Substance Quantity:	Not reported
Local Case No:	Not reported
Case Type:	Groundwater
Abatement Method Used at the Site:	Not reported
Global ID:	T0603701997
W Global ID:	Not reported
Staff:	JLC
Local Agency:	19060
Cross Street:	PALOS VERDES AVE
Enforcement Type:	CLOS
Date Leak Discovered:	3/14/1991
Date Leak First Reported:	3/19/1991
Date Leak Record Entered:	5/7/1991
Date Confirmation Began:	Not reported
Date Leak Stopped:	Not reported
Date Case Last Changed on Database:	7/12/2002
Date the Case was Closed:	4/26/2004
How Leak Discovered:	Tank Test
How Leak Stopped:	Not reported
Cause of Leak:	UNK
Leak Source:	UNK
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	1593.90129150646645019598465 72
Source of Cleanup Funding:	UNK
Preliminary Site Assessment Workplan Submitted:	3/19/1991
Preliminary Site Assessment Began:	3/19/1991
Pollution Characterization Began:	9/15/1999

CHEVRON #9-4055 (Continued) **U003700275**

Remediation Plan Submitted:	1/2/2003
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	3/19/1991
Enforcement Action Date:	Not reported
Historical Max MTBE Date:	9/20/1997
Hist Max MTBE Conc in Groundwater:	14000
Hist Max MTBE Conc in Soil:	.035
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	<
Organization:	Not reported
Owner Contact:	Not reported
Responsible Party:	Y M TUAN
RP Address:	P.O. BOX 2292
Program:	LUST
Lat/Long:	33.8102633 / -1
Local Agency Staff:	Not reported
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Assigned Name:	Not reported
Summary:	5/16/00 ADD'L. SITE ASSESSMENT RPT; 7/12/00 2ND QTR GW MON RPT 2000; 3RD QTR GW MON RPT; 1/16/01 4TH QTR GW MON RPT 2000; 4/10/01 1ST QTR GW MON RPT 2001

HIST CORTESE:

Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	908150216

D18 **CHEVRON STATION 9-4055** **Notify 65** **S100179597**
South **6340 E. SPRING ST.** **N/A**
1/4-1/2 **LONG BEACH, CA 90815**
0.454 mi.
2399 ft. **Site 4 of 4 in cluster D**

Relative:
Lower

Actual:
19 ft.

NOTIFY 65:

Date Reported:	Not reported
Staff Initials:	Not reported
Board File Number:	Not reported
Facility Type:	Not reported
Discharge Date:	Not reported
Issue Date:	Not reported
Incident Description:	Not reported

19 SW 1/4-1/2 0.495 mi. 2611 ft. | **CREIGHTON'S CLEANERS 5951 SPRING STREET LONG BEACH, CA 90808** | **ENVIROSTOR VCP** | **S113804699 N/A**

Relative: Lower

Actual: 23 ft.

ENVIROSTOR:

Facility ID:	60001903
Status:	Active
Status Date:	07/18/2013
Site Code:	401650
Site Type:	Voluntary Cleanup
Site Type Detailed:	Voluntary Cleanup
Acres:	7.5
NPL:	NO
Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Poonam Acharya
Supervisor:	Emad Yemut
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	70
Senate:	33
Special Program:	Voluntary Cleanup Program
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Responsible Party
Latitude:	33.81152
Longitude:	-118.1153
APN:	NONE SPECIFIED
Past Use:	DRY CLEANING
Potential COC:	Tetrachloroethylene (PCE Trichloroethylene (TCE
Confirmed COC:	Tetrachloroethylene (PCE Trichloroethylene (TCE
Potential Description:	IA, SOIL, SV
Alias Name:	401650
Alias Type:	Project Code (Site Code)
Alias Name:	60001903
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	09/13/2016
Comments:	FY 1617 Annual Oversight Cost Estimate completed and mailed.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	07/21/2014
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	04/06/2017
Comments:	Notification of new project manager assignment.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence

CREIGHTON'S CLEANERS (Continued) **S113804699**

Completed Date:	04/25/2017
Comments:	Proponent TRC Spring Street emailed regarding a change in contact person and address as well as update to billing address.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Workplan
Completed Date:	11/06/2014
Comments:	Final Workplan was approved

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Report
Completed Date:	02/22/2017
Comments:	Additional Characterization Workplan for vertical extent.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Technical Workplan
Completed Date:	09/09/2013
Comments:	Workplan was approved with comments including additional scope to be implemented during fieldwork

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fieldwork
Completed Date:	09/27/2013
Comments:	The Indoor Air Assessment Work plan was implemented on field.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Voluntary Cleanup Agreement
Completed Date:	07/18/2013
Comments:	VCA was executed.

Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

VCP:

Facility ID:	60001903
Site Type:	Voluntary Cleanup
Site Type Detail:	Voluntary Cleanup
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	7.5
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Poonam Acharya
Supervisor:	Emad Yemut

CREIGHTON'S CLEANERS (Continued) **S113804699**

Division Branch:	Southern California Schools & Brownfields Outreach
Site Code:	401650
Assembly:	70
Senate:	33
Special Programs Code:	Voluntary Cleanup Program
Status:	Active
Status Date:	07/18/2013
Restricted Use:	NO
Funding:	Responsible Party
Lat/Long:	33.81152 / -118.1153
APN:	NONE SPECIFIED
Past Use:	DRY CLEANING
Potential COC:	30022, 30027
Confirmed COC:	30022,30027
Potential Description:	IA, SOIL, SV
Alias Name:	401650
Alias Type:	Project Code (Site Code)
Alias Name:	60001903
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	09/13/2016
Comments:	FY 1617 Annual Oversight Cost Estimate completed and mailed.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	07/21/2014
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	04/06/2017
Comments:	Notification of new project manager assignment.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Correspondence
Completed Date:	04/25/2017
Comments:	Proponent TRC Spring Street emailed regarding a change in contact person and address as well as update to billing address.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Workplan
Completed Date:	11/06/2014
Comments:	Final Workplan was approved

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Characterization Report
Completed Date:	02/22/2017
Comments:	Additional Characterization Workplan for vertical extent.

CREIGHTON'S CLEANERS (Continued) **S113804699**

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Technical Workplan
Completed Date:	09/09/2013
Comments:	Workplan was approved with comments including additional scope to be implemented during fieldwork

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Fieldwork
Completed Date:	09/27/2013
Comments:	The Indoor Air Assessment Work plan was implemented on field.

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Voluntary Cleanup Agreement
Completed Date:	07/18/2013
Comments:	VCA was executed.

Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported
Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

Count: 1 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
LONG BEACH	1004676807	JOHNEL CORP	8777 E WARDLOW RD	90808	RCRA-SQG, FINDS, ECHO, DRYCLEANERS, HAZNET

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 06/08/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 99

Source: EPA
Telephone: N/A
Last EDR Contact: 10/05/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 98

Source: EPA
Telephone: N/A
Last EDR Contact: 10/05/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 05/30/2017	Source: EPA
Date Data Arrived at EDR: 06/09/2017	Telephone: N/A
Date Made Active in Reports: 09/15/2017	Last EDR Contact: 10/05/2017
Number of Days to Update: 98	Next Scheduled EDR Contact: 01/15/2018
	Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016	Source: Environmental Protection Agency
Date Data Arrived at EDR: 01/05/2017	Telephone: 703-603-8704
Date Made Active in Reports: 04/07/2017	Last EDR Contact: 10/06/2017
Number of Days to Update: 92	Next Scheduled EDR Contact: 01/15/2018
	Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 07/11/2017	Source: EPA
Date Data Arrived at EDR: 07/21/2017	Telephone: 800-424-9346
Date Made Active in Reports: 10/06/2017	Last EDR Contact: 10/20/2017
Number of Days to Update: 77	Next Scheduled EDR Contact: 01/29/2018
	Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 07/11/2017
Date Data Arrived at EDR: 07/28/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 70

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 10/20/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 09/13/2017
Date Data Arrived at EDR: 09/26/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 10

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 09/13/2017
Date Data Arrived at EDR: 09/26/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 10

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/13/2017
Date Data Arrived at EDR: 09/26/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 10

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 09/13/2017
Date Data Arrived at EDR: 09/26/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 10

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 09/13/2017
Date Data Arrived at EDR: 09/26/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 10

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/22/2017
Date Data Arrived at EDR: 06/13/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 94

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/10/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/10/2017
Date Data Arrived at EDR: 08/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/10/2017
Date Data Arrived at EDR: 08/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 09/18/2017
Date Data Arrived at EDR: 09/21/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 22

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 07/31/2017
Date Data Arrived at EDR: 08/01/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 14

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/01/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 07/31/2017
Date Data Arrived at EDR: 08/01/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 14

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/01/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 08/14/2017
Date Data Arrived at EDR: 08/17/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 35

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/17/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/12/2017
Date Data Arrived at EDR: 06/14/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 69

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Varies

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/24/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/14/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 05/01/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/13/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/07/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/14/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/26/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/14/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 98

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Semi-Annually

SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/12/2017
Date Data Arrived at EDR: 06/14/2017
Date Made Active in Reports: 08/23/2017
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: Annually

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 10/13/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 06/12/2017
Date Data Arrived at EDR: 06/14/2017
Date Made Active in Reports: 08/23/2017
Number of Days to Update: 70

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/26/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/14/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 98

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 05/02/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/25/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/13/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 05/01/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/01/2016
Date Data Arrived at EDR: 01/26/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 99

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/14/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 07/31/2017
Date Data Arrived at EDR: 08/01/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 14

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/01/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 06/27/2017
Date Data Arrived at EDR: 06/28/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 85

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/19/2017
Date Data Arrived at EDR: 06/20/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/20/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database
Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 09/11/2017
Date Data Arrived at EDR: 09/12/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 9

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 05/31/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 76

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/10/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/30/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/20/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 08/29/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 07/13/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 30

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database
The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program

This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 07/31/2017
Date Data Arrived at EDR: 08/01/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 14

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/01/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2017
Date Data Arrived at EDR: 08/18/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 34

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Varies

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/13/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 30

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Quarterly

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database
A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 06/02/2017
Date Data Arrived at EDR: 06/06/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 80

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 08/24/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 06/02/2017
Date Data Arrived at EDR: 06/06/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 77

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 07/11/2017
Date Data Arrived at EDR: 07/26/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 06/05/2017
Date Data Arrived at EDR: 06/06/2017
Date Made Active in Reports: 08/10/2017
Number of Days to Update: 65

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/21/2017
Date Data Arrived at EDR: 09/21/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 22

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System
California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 05/09/2017
Date Data Arrived at EDR: 07/26/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 57

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing (GEOTRACKER)
Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/12/2017
Date Data Arrived at EDR: 06/14/2017
Date Made Active in Reports: 08/18/2017
Number of Days to Update: 65

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)
Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 06/12/2017
Date Data Arrived at EDR: 06/14/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 69

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 09/13/2017
Date Data Arrived at EDR: 09/26/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 10

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 08/25/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/13/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/11/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 05/10/2017
Date Data Arrived at EDR: 05/17/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 121

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/07/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/24/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2012
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/22/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 133

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/23/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/27/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 09/27/2017
Date Data Arrived at EDR: 10/12/2017
Date Made Active in Reports: 10/20/2017
Number of Days to Update: 8

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/08/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 02/01/2017
Date Data Arrived at EDR: 02/09/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 08/08/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 126

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/13/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 10/11/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 10/03/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 09/08/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 10/26/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 10/02/2017
Date Data Arrived at EDR: 10/05/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 8

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/05/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/01/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2017
Date Data Arrived at EDR: 08/03/2017
Date Made Active in Reports: 10/20/2017
Number of Days to Update: 78

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/11/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 98

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 10/05/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 07/31/2017
Date Data Arrived at EDR: 08/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 44

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/30/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 09/01/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 09/01/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/25/2017
Date Data Arrived at EDR: 09/26/2017
Date Made Active in Reports: 10/20/2017
Number of Days to Update: 24

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/23/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 9

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 10/25/2016
Date Data Arrived at EDR: 06/02/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 133

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/02/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 10/20/2017
Number of Days to Update: 44

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 06/02/2016
Date Data Arrived at EDR: 06/03/2016
Date Made Active in Reports: 09/02/2016
Number of Days to Update: 91

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/17/2017
Date Data Arrived at EDR: 08/17/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 29

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/17/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 09/21/2017
Date Data Arrived at EDR: 09/21/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 22

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Quarterly

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 08/02/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 69

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 08/08/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Annually

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 03/21/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 147

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 09/22/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Varies

ENF: Enforcement Action Listing

A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 08/18/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/24/2017
Number of Days to Update: 63

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 07/21/2017
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 84

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 08/15/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/25/2017
Number of Days to Update: 64

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/10/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/12/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 97

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 08/21/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/25/2017
Number of Days to Update: 64

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 08/22/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing
Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 08/21/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/25/2017
Number of Days to Update: 64

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/22/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database
A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 10/10/2017
Date Data Arrived at EDR: 10/10/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 7

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 09/12/2016
Date Data Arrived at EDR: 09/14/2016
Date Made Active in Reports: 10/14/2016
Number of Days to Update: 30

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Varies

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 05/25/2017
Date Data Arrived at EDR: 06/06/2017
Date Made Active in Reports: 08/23/2017
Number of Days to Update: 78

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 08/14/2017
Date Data Arrived at EDR: 08/17/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 61

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/17/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 06/05/2017
Date Data Arrived at EDR: 06/07/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 79

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 09/11/2017
Date Data Arrived at EDR: 09/12/2017
Date Made Active in Reports: 10/18/2017
Number of Days to Update: 36

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 06/16/2017
Date Data Arrived at EDR: 06/20/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 119

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 09/18/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 01/20/2017
Date Data Arrived at EDR: 03/14/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 50

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water board?s review found that more than one-third of the region?s active disposal pits are operating without permission.

Date of Government Version: 04/15/2015
Date Data Arrived at EDR: 04/17/2015
Date Made Active in Reports: 06/23/2015
Number of Days to Update: 67

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 10/13/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historic Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historic Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 09/22/2017
Date Data Arrived at EDR: 09/22/2017
Date Made Active in Reports: 10/10/2017
Number of Days to Update: 18

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 09/21/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 07/07/2017
Date Data Arrived at EDR: 07/11/2017
Date Made Active in Reports: 08/23/2017
Number of Days to Update: 43

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 06/20/2017
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 49

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA Facility Listing

Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 09/18/2017
Next Scheduled EDR Contact: 10/23/2017
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 04/25/2017
Date Data Arrived at EDR: 04/27/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 104

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 09/05/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 69

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 08/17/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/25/2017
Number of Days to Update: 64

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 10/30/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 08/02/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 66

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 10/25/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 08/18/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/24/2017
Number of Days to Update: 63

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 10/30/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA Resources List

Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 06/30/2017
Date Data Arrived at EDR: 07/05/2017
Date Made Active in Reports: 08/04/2017
Number of Days to Update: 30

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 09/27/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 07/26/2017
Date Data Arrived at EDR: 07/28/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 77

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

HUMBOLDT COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 08/03/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 69

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 07/21/2017
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 83

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/08/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 08/04/2017
Number of Days to Update: 56

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 44

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 09/22/2017
Date Data Arrived at EDR: 09/22/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 24

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 09/22/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 08/03/2017
Date Data Arrived at EDR: 08/03/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 74

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 07/24/2017
Date Data Arrived at EDR: 07/26/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 82

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 09/18/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 10/11/2017
Date Data Arrived at EDR: 10/12/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 5

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 07/17/2017
Date Data Arrived at EDR: 07/18/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 65

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 10/17/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 04/21/2017
Date Made Active in Reports: 10/09/2017
Number of Days to Update: 171

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 06/21/2017
Date Data Arrived at EDR: 06/23/2017
Date Made Active in Reports: 10/30/2017
Number of Days to Update: 129

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 10/24/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/09/2017
Date Data Arrived at EDR: 03/10/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 54

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 07/11/2017
Date Data Arrived at EDR: 07/14/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 69

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 10/10/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 06/01/2017
Date Data Arrived at EDR: 06/02/2017
Date Made Active in Reports: 08/04/2017
Number of Days to Update: 63

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 10/26/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 07/03/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 15

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 09/27/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 10/02/2017
Date Data Arrived at EDR: 10/03/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 14

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 09/27/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/06/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 40

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 08/08/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 06/22/2017
Date Data Arrived at EDR: 06/23/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 47

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 08/21/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/24/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 08/24/2017
Date Data Arrived at EDR: 08/25/2017
Date Made Active in Reports: 10/27/2017
Number of Days to Update: 63

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 08/24/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 08/04/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 69

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 10/25/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/11/2017
Date Made Active in Reports: 10/11/2017
Number of Days to Update: 61

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/11/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 41

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/07/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/09/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 43

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/09/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 06/02/2017
Date Data Arrived at EDR: 06/06/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 77

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 06/19/2017
Date Data Arrived at EDR: 07/05/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 35

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 07/11/2017
Date Data Arrived at EDR: 07/14/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 69

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/18/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 07/11/2017
Date Data Arrived at EDR: 07/14/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 69

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 09/18/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 08/02/2017
Date Data Arrived at EDR: 10/03/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 3

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/03/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List

Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 05/03/2017
Date Data Arrived at EDR: 07/06/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 47

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/03/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 08/11/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 66

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

Hazardous Material Permits

This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 05/30/2017
Date Data Arrived at EDR: 06/01/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 85

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 08/07/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database

The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 06/05/2017
Date Data Arrived at EDR: 06/07/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 69

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 09/06/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Quarterly

Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2015
Date Data Arrived at EDR: 11/07/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 58

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 08/07/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 05/03/2017
Date Data Arrived at EDR: 05/08/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 109

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 08/21/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 10/03/2017
Date Data Arrived at EDR: 10/06/2017
Date Made Active in Reports: 10/10/2017
Number of Days to Update: 4

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 08/28/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 08/18/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/25/2017
Number of Days to Update: 64

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 09/15/2017
Date Data Arrived at EDR: 09/19/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 28

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/07/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/07/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List
Cupa facility list

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/10/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 67

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 08/07/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 08/24/2017
Next Scheduled EDR Contact: 12/11/2017
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 08/07/2017
Date Data Arrived at EDR: 08/15/2017
Date Made Active in Reports: 10/24/2017
Number of Days to Update: 70

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 08/21/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/20/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 63

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 08/29/2017
Number of Days to Update: 69

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 06/27/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 43

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/01/2018
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 07/05/2017
Date Data Arrived at EDR: 07/06/2017
Date Made Active in Reports: 08/22/2017
Number of Days to Update: 47

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 09/25/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 08/17/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/25/2017
Number of Days to Update: 64

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Varies

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 06/02/2017
Date Data Arrived at EDR: 06/06/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 80

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 08/31/2017
Next Scheduled EDR Contact: 12/18/2017
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA Facility List
Cupa facilities

Date of Government Version: 07/19/2017
Date Data Arrived at EDR: 08/11/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 66

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 07/21/2017
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 83

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

TULARE COUNTY:

CUPA Facility List
Cupa program facilities

Date of Government Version: 09/27/2017
Date Data Arrived at EDR: 09/28/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 18

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 09/22/2017
Next Scheduled EDR Contact: 11/20/2017
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 08/21/2017
Date Data Arrived at EDR: 08/22/2017
Date Made Active in Reports: 10/25/2017
Number of Days to Update: 64

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Varies

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 06/26/2017
Date Data Arrived at EDR: 08/03/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 74

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/27/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/10/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: Quarterly

Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 06/26/2017
Date Data Arrived at EDR: 08/03/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 75

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 10/23/2017
Next Scheduled EDR Contact: 02/05/2018
Data Release Frequency: Quarterly

Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 08/28/2017
Date Data Arrived at EDR: 09/12/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 9

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/12/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 06/29/2017
Date Data Arrived at EDR: 07/05/2017
Date Made Active in Reports: 08/25/2017
Number of Days to Update: 51

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 09/27/2017
Next Scheduled EDR Contact: 01/15/2018
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 07/31/2017
Date Data Arrived at EDR: 08/03/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 74

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 10/25/2017
Next Scheduled EDR Contact: 02/12/2018
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 11/27/2017
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/11/2017
Date Made Active in Reports: 07/27/2017
Number of Days to Update: 107

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/05/2017
Next Scheduled EDR Contact: 01/22/2018
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 07/31/2017
Date Data Arrived at EDR: 08/03/2017
Date Made Active in Reports: 10/12/2017
Number of Days to Update: 70

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/03/2017
Next Scheduled EDR Contact: 11/13/2017
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 09/25/2017
Number of Days to Update: 62

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/16/2017
Next Scheduled EDR Contact: 01/29/2018
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/19/2015
Date Made Active in Reports: 07/15/2015
Number of Days to Update: 26

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/21/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/13/2017
Date Made Active in Reports: 07/14/2017
Number of Days to Update: 92

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/11/2017
Next Scheduled EDR Contact: 12/25/2017
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

LOS COYOTES REDEVELOPMENT
3235/3325 PALO VERDE AVE & 3320 LOS COYOTES DIAG
LONG BEACH, CA 90808

TARGET PROPERTY COORDINATES

Latitude (North):	33.817312 - 33˚ 49' 2.32''
Longitude (West):	118.109047 - 118˚ 6' 32.57''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	397358.4
UTM Y (Meters):	3742259.2
Elevation:	27 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5633745 LOS ALAMITOS, CA
Version Date:	2012
West Map:	5652670 LONG BEACH, CA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

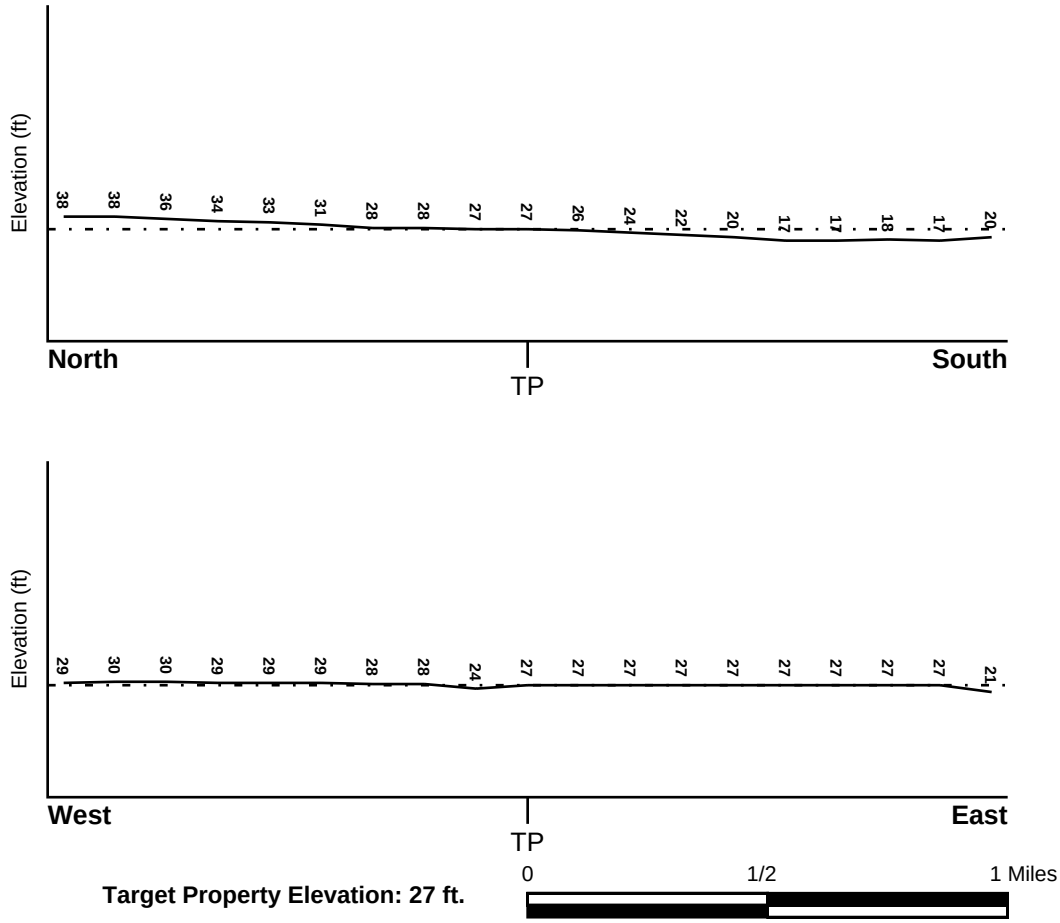
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 27 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06037C1980F	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06037C1960F	FEMA FIRM Flood data
06037C1970F	FEMA FIRM Flood data
06037C1990F	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
LOS ALAMITOS	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	URBAN LAND
Soil Surface Texture:	variable
Hydrologic Group:	Not reported
Soil Drainage Class:	Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	Not Reported
Depth to Bedrock Min:	> 10 inches
Depth to Bedrock Max:	> 10 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	6 inches	variable	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: loam
clay
silt loam
loamy sand
sandy loam
fine sand
clay loam
gravelly - sandy loam
coarse sand
gravelly - sand
sand

Surficial Soil Types: loam
clay
silt loam
loamy sand
sandy loam
fine sand
clay loam
gravelly - sandy loam
coarse sand
gravelly - sand
sand

Shallow Soil Types: fine sandy loam
gravelly - loam
sand
silty clay

Deeper Soil Types: stratified
clay loam
silty clay loam
gravelly - sandy loam
coarse sand
sand
weathered bedrock
very fine sandy loam

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 0.001 miles
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	USGS40000138404	0 - 1/8 Mile SSE
A2	USGS40000138403	0 - 1/8 Mile SE
7	USGS40000138451	1/4 - 1/2 Mile NNE
C8	USGS40000138433	1/2 - 1 Mile ENE
9	USGS40000138365	1/2 - 1 Mile SE
C10	USGS40000138427	1/2 - 1 Mile ENE
C11	USGS40000138434	1/2 - 1 Mile ENE
12	USGS40000138327	1/2 - 1 Mile SSE
13	USGS40000138369	1/2 - 1 Mile SE
14	USGS40000138361	1/2 - 1 Mile SE
D15	USGS40000138482	1/2 - 1 Mile North
D17	USGS40000138484	1/2 - 1 Mile North
E18	USGS40000138489	1/2 - 1 Mile North
19	USGS40000138349	1/2 - 1 Mile SE
E20	USGS40000138495	1/2 - 1 Mile North
21	USGS40000138453	1/2 - 1 Mile WNW
22	USGS40000138496	1/2 - 1 Mile NNW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

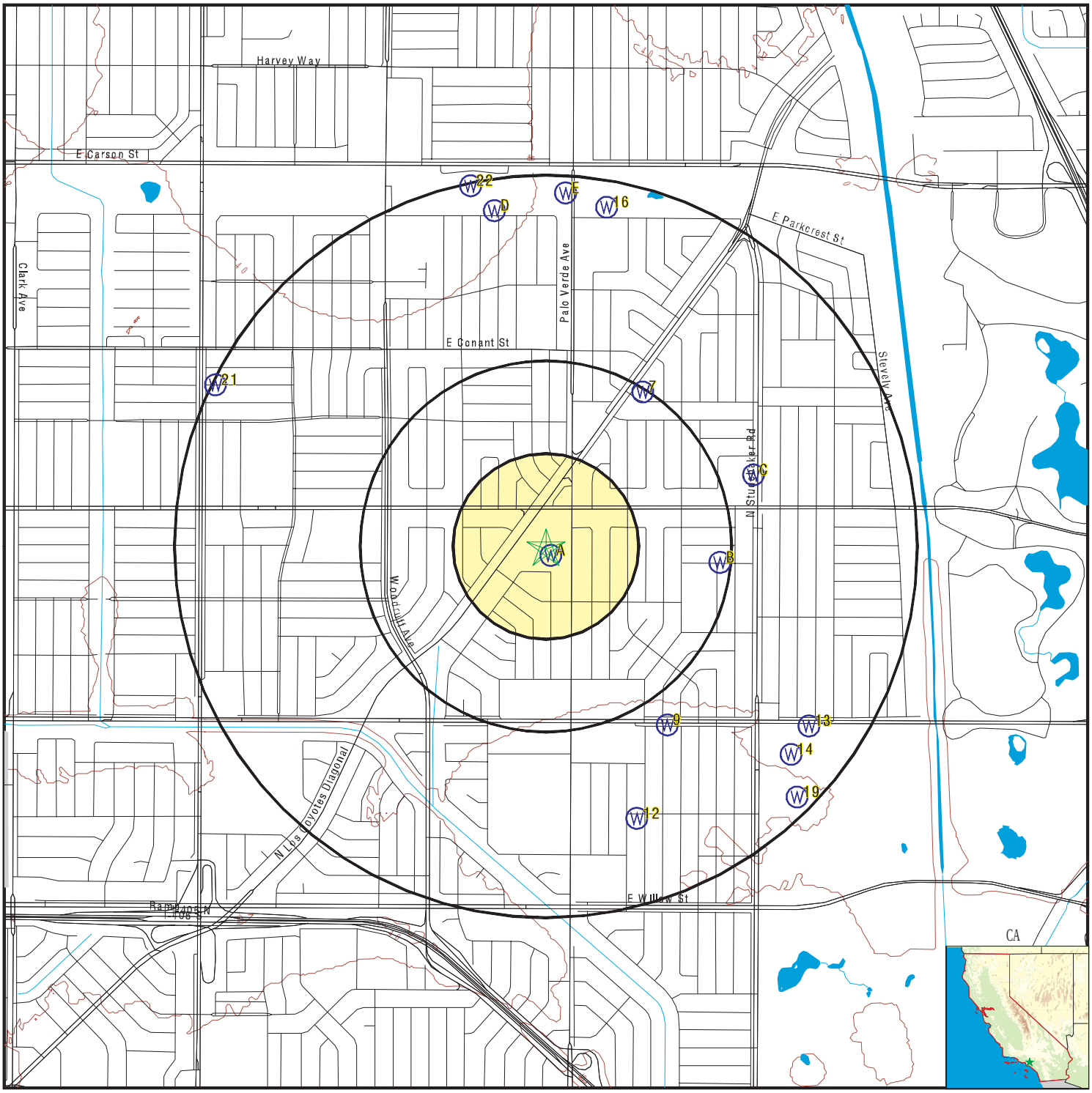
MAP ID	WELL ID	LOCATION FROM TP
B3	5315	1/4 - 1/2 Mile East
B4	5307	1/4 - 1/2 Mile East
B5	5334	1/4 - 1/2 Mile East
B6	5316	1/4 - 1/2 Mile East

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
16	5311	1/2 - 1 Mile North

PHYSICAL SETTING SOURCE MAP - 5092799.2s



County Boundary
Major Roads
Contour Lines
Earthquake Fault Lines
Airports
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location
HD Closest Hydrogeological Data
Oil, gas or related wells

N

SITE NAME:	Los Coyotes Redevelopment	CLIENT:	David McAlister
ADDRESS:	3235/3325 Palo Verde Ave & 3320 Los Coyotes Diag Long Beach CA 90808	CONTACT:	Joshua Kajiyama
LAT/LONG:	33.817312 / 118.109047	INQUIRY #:	5092799.2s
		DATE:	October 31, 2017 3:25 pm

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Map ID Direction Distance Elevation	Database	EDR ID Number
A1 **SSE** **0 - 1/8 Mile** **Higher**	**FED USGS**	**USGS40000138404**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334901118062901		
Monloc name:	004S012W23C001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8169607
Longitude:	-118.1089546	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	1367
Welldepth units:	ft	Wellholedepth:	1367
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

A2 **SE** **0 - 1/8 Mile** **Higher**	**FED USGS**	**USGS40000138403**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334901118062801		
Monloc name:	004S012W14P001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8169607
Longitude:	-118.1086768	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		

Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	1232
Welldepth units:	ft	Wellholedepth:	1706
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

B3
East **CA WELLS** **5315**
1/4 - 1/2 Mile
Lower

Water System Information:

Prime Station Code:	04S/12W-14K01 S	User ID:	MET
FRDS Number:	1910065008	County:	Los Angeles
District Number:	15	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Inactive Raw
Source Lat/Long:	334900.0 1180600.0	Precision:	Undefined
Source Name:	ANNEX WELL 206 - INACTIVE		
System Number:	1910065		
System Name:	LONG BEACH-CITY, WATER DEPT.		
Organization That Operates System:			
	1800 E WARDLOW ROAD		
	LONG BEACH, CA 90807		
Pop Served:	424276	Connections:	85818
Area Served:	LONG BEACH		

B4
East **CA WELLS** **5307**
1/4 - 1/2 Mile
Lower

Water System Information:

Prime Station Code:	04S/12W-13N02 S	User ID:	MET
FRDS Number:	1910065022	County:	Los Angeles
District Number:	15	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	334900.0 1180600.0	Precision:	Undefined
Source Name:	COMMISSION WELL 13		
System Number:	1910065		
System Name:	LONG BEACH-CITY, WATER DEPT.		
Organization That Operates System:			
	1800 E WARDLOW ROAD		
	LONG BEACH, CA 90807		
Pop Served:	424276	Connections:	85818
Area Served:	LONG BEACH		
Sample Collected:	21-JUN-07	Findings:	28.6 C
Chemical:	SOURCE TEMPERATURE C		

B5
East **CA WELLS** **5334**
1/4 - 1/2 Mile
Lower

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Water System Information:

Prime Station Code:	04S/12W-23C01 S	User ID:	MET
FRDS Number:	1910065041	County:	Los Angeles
District Number:	15	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	334900.0 1180600.0	Precision:	Undefined
Source Name:	WILSON WELL 01-A		
System Number:	1910065		
System Name:	LONG BEACH-CITY, WATER DEPT.		
Organization That Operates System:			
	1800 E WARDLOW ROAD		
	LONG BEACH, CA 90807		
Pop Served:	424276	Connections:	85818
Area Served:	LONG BEACH		
Sample Collected:	29-AUG-12	Findings:	29.4 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	29-AUG-12	Findings:	81. UNITS
Chemical:	COLOR		
Sample Collected:	29-AUG-12	Findings:	351. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	29-AUG-12	Findings:	8.59
Chemical:	PH, FIELD		
Sample Collected:	29-AUG-12	Findings:	131.4 MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	29-AUG-12	Findings:	130.9 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	29-AUG-12	Findings:	0.5 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	29-AUG-12	Findings:	2.84 MG/L
Chemical:	TOTAL ORGANIC CARBON (TOC)		
Sample Collected:	29-AUG-12	Findings:	0.44 MG/L
Chemical:	SULFIDE		
Sample Collected:	29-AUG-12	Findings:	27. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	29-AUG-12	Findings:	10.3 MG/L
Chemical:	CALCIUM		
Sample Collected:	29-AUG-12	Findings:	0.31 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	29-AUG-12	Findings:	68. MG/L
Chemical:	SODIUM		
Sample Collected:	29-AUG-12	Findings:	5.39
Chemical:	SODIUM ABSORPTION RATIO		
Sample Collected:	29-AUG-12	Findings:	0.8 MG/L
Chemical:	POTASSIUM		
Sample Collected:	29-AUG-12	Findings:	14.8 MG/L
Chemical:	CHLORIDE		

Sample Collected:	29-AUG-12	Findings:	13.4 MG/L
Chemical:	SULFATE		
Sample Collected:	29-AUG-12	Findings:	0.49 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	29-AUG-12	Findings:	20. MG/L
Chemical:	SILICA		
Sample Collected:	29-AUG-12	Findings:	224. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	29-AUG-12	Findings:	0.4
Chemical:	LANGELIER INDEX AT SOURCE TEMP.		
Sample Collected:	29-AUG-12	Findings:	0.19 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	29-AUG-12	Findings:	0.1 MG/L
Chemical:	BROMIDE		
Sample Collected:	29-AUG-12	Findings:	12.12
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	24-JUN-13	Findings:	30.4 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	24-JUN-13	Findings:	64. UNITS
Chemical:	COLOR		
Sample Collected:	24-JUN-13	Findings:	353. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	24-JUN-13	Findings:	8.72
Chemical:	PH, FIELD		
Sample Collected:	24-JUN-13	Findings:	3.52 MG/L
Chemical:	TOTAL ORGANIC CARBON (TOC)		
Sample Collected:	24-JUN-13	Findings:	10.4 MG/L
Chemical:	CALCIUM		
Sample Collected:	24-JUN-13	Findings:	0.271 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	24-JUN-13	Findings:	67. MG/L
Chemical:	SODIUM		
Sample Collected:	24-JUN-13	Findings:	0.725 MG/L
Chemical:	POTASSIUM		
Sample Collected:	24-JUN-13	Findings:	14.6 MG/L
Chemical:	CHLORIDE		
Sample Collected:	24-JUN-13	Findings:	12.9 MG/L
Chemical:	SULFATE		
Sample Collected:	24-JUN-13	Findings:	0.47 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	24-JUN-13	Findings:	18.4 MG/L
Chemical:	SILICA		
Sample Collected:	24-JUN-13	Findings:	232. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Sample Collected:	24-JUN-13	Findings:	0.123 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	24-JUN-13	Findings:	12.2
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	24-JUN-13	Findings:	4. TON
Chemical:	ODOR THRESHOLD @ 60 C		
Sample Collected:	24-JUN-13	Findings:	130. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	24-JUN-13	Findings:	2.4 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	24-JUN-13	Findings:	3. PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	13-NOV-14	Findings:	18.4 MG/L
Chemical:	CHLORIDE		
Sample Collected:	13-NOV-14	Findings:	23.1 MG/L
Chemical:	SULFATE		
Sample Collected:	20-AUG-15	Findings:	31.5 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	20-AUG-15	Findings:	76. UNITS
Chemical:	COLOR		
Sample Collected:	20-AUG-15	Findings:	363. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	20-AUG-15	Findings:	8.82
Chemical:	PH, FIELD		
Sample Collected:	20-AUG-15	Findings:	130. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	20-AUG-15	Findings:	160. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	20-AUG-15	Findings:	2.92 MG/L
Chemical:	TOTAL ORGANIC CARBON (TOC)		
Sample Collected:	20-AUG-15	Findings:	29.6 MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	20-AUG-15	Findings:	11. MG/L
Chemical:	CALCIUM		
Sample Collected:	20-AUG-15	Findings:	0.583 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	20-AUG-15	Findings:	66.4 MG/L
Chemical:	SODIUM		
Sample Collected:	20-AUG-15	Findings:	5.28
Chemical:	SODIUM ABSORPTION RATIO		
Sample Collected:	20-AUG-15	Findings:	0.81 MG/L
Chemical:	POTASSIUM		
Sample Collected:	20-AUG-15	Findings:	16.3 MG/L
Chemical:	CHLORIDE		

Sample Collected:	20-AUG-15	Findings:	17.3 MG/L
Chemical:	SULFATE		
Sample Collected:	20-AUG-15	Findings:	0.51 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	20-AUG-15	Findings:	17. MG/L
Chemical:	SILICA		
Sample Collected:	20-AUG-15	Findings:	256. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	20-AUG-15	Findings:	0.69
Chemical:	LANGELIER INDEX AT SOURCE TEMP.		
Sample Collected:	20-AUG-15	Findings:	0.17 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	20-AUG-15	Findings:	12.38
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	20-AUG-15	Findings:	8.8
Chemical:	PH, FIELD		
Sample Collected:	20-AUG-15	Findings:	130. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	20-AUG-15	Findings:	160. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	20-AUG-15	Findings:	6.9 MG/L
Chemical:	CARBONATE ALKALINITY		
Sample Collected:	20-AUG-15	Findings:	2.7 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	20-AUG-15	Findings:	3. PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	23-SEP-15	Findings:	8.76
Chemical:	PH, LABORATORY		
Sample Collected:	04-AUG-16	Findings:	30.9 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	04-AUG-16	Findings:	67. UNITS
Chemical:	COLOR		
Sample Collected:	04-AUG-16	Findings:	354. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	04-AUG-16	Findings:	8.74
Chemical:	PH, FIELD		
Sample Collected:	04-AUG-16	Findings:	6.5
Chemical:	PH, LABORATORY		
Sample Collected:	04-AUG-16	Findings:	131. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	04-AUG-16	Findings:	158. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	04-AUG-16	Findings:	1.64 MG/L
Chemical:	TOTAL ORGANIC CARBON (TOC)		

Sample Collected:	04-AUG-16	Findings:	30.2 MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	04-AUG-16	Findings:	11.2 MG/L
Chemical:	CALCIUM		
Sample Collected:	04-AUG-16	Findings:	0.506 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	04-AUG-16	Findings:	69.9 MG/L
Chemical:	SODIUM		
Sample Collected:	04-AUG-16	Findings:	0.84 MG/L
Chemical:	POTASSIUM		
Sample Collected:	04-AUG-16	Findings:	17.3 MG/L
Chemical:	CHLORIDE		
Sample Collected:	04-AUG-16	Findings:	17.2 MG/L
Chemical:	SULFATE		
Sample Collected:	04-AUG-16	Findings:	0.55 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	04-AUG-16	Findings:	22.4 MG/L
Chemical:	SILICA		
Sample Collected:	04-AUG-16	Findings:	234. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	04-AUG-16	Findings:	0.179 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	04-AUG-16	Findings:	3. TON
Chemical:	ODOR THRESHOLD @ 60 C		
Sample Collected:	04-AUG-16	Findings:	2.5 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	04-AUG-16	Findings:	0.57 PCI/L
Chemical:	RADIUM 228 COUNTING ERROR		
Sample Collected:	04-AUG-16	Findings:	3. PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	04-AUG-16	Findings:	0.54 PCI/L
Chemical:	RADIUM 226 MDA95		
Sample Collected:	04-AUG-16	Findings:	0.8 PCI/L
Chemical:	RADIUM 228 MDA95		

B6
East **CA WELLS** **5316**
1/4 - 1/2 Mile
Lower

Water System Information:

Prime Station Code:	04S/12W-14R01 S	User ID:	MET
FRDS Number:	1910065007	County:	Los Angeles
District Number:	15	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Inactive Raw
Source Lat/Long:	334900.0 1180600.0	Precision:	Undefined
Source Name:	ANNEX WELL 205 - INACTIVE		

System Number: 1910065
System Name: LONG BEACH-CITY, WATER DEPT.
Organization That Operates System:
1800 E WARDLOW ROAD
LONG BEACH, CA 90807
Pop Served: 424276 Connections: 85818
Area Served: LONG BEACH

7
NNE **FED USGS** **USGS40000138451**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334924118061301		
Monloc name:	004S012W14K001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8233494
Longitude:	-118.1045101	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	1170
Welldepth units:	ft	Wellholedepth:	1170
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

C8
ENE **FED USGS** **USGS40000138433**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334913118055601		
Monloc name:	004S012W14R001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8202939
Longitude:	-118.0997877	Sourcemap scale:	24000

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	557
Welldepth units:	ft	Wellholedepth:	720
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

9
SE **FED USGS** **USGS40000138365**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334836118061201		
Monloc name:	004S012W23K003S		
Monloc type:	Well		
Monloc desc:	LA WATER REPLENISHMENT DIST GPS LAT/LONG		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8103333
Longitude:	-118.103361	Sourcemap scale:	24000
Horiz Acc measure:	.5	Horiz Acc measure units:	seconds
Horiz Collection method:	Global positioning system (GPS), uncorrected		
Horiz coord refsys:	NAD83	Vert measure val:	19
Vert measure units:	feet	Vertacc measure val:	2.5
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from digital elevation model (DEM)		
Vert coord refsys:	NAVD88	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	838
Welldepth units:	ft	Wellholedepth:	854
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

C10
ENE **FED USGS** **USGS40000138427**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334910118055301		
Monloc name:	004S012W13N002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8194605
Longitude:	-118.0989543	Sourcemap scale:	24000

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	1539
Welldepth units:	ft	Wellholedepth:	1634
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

C11
ENE **FED USGS** **USGS40000138434**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334914118055401		
Monloc name:	004S012W13N001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8205716
Longitude:	-118.099232	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	451
Welldepth units:	ft	Wellholedepth:	508
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

12
SSE **FED USGS** **USGS40000138327**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334824118061401		
Monloc name:	004S012W23K002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.806683
Longitude:	-118.1047876	Sourcemap scale:	24000

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	1103
Welldepth units:	ft	Wellholedepth:	1186
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

13
SE **FED USGS** **USGS40000138369**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334837118054501		
Monloc name:	004S012W24M002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.810294
Longitude:	-118.0967318	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	980
Welldepth units:	ft	Wellholedepth:	1086
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

14
SE **FED USGS** **USGS40000138361**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334833118054801		
Monloc name:	004S012W24M008S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8091829
Longitude:	-118.0975652	Sourcemap scale:	24000

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	1100
Welldepth units:	ft	Wellholedepth:	1100
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

D15
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000138482**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334949118063901		
Monloc name:	004S012W14C001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8302938
Longitude:	-118.1108994	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	300
Welldepth units:	ft	Wellholedepth:	324
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

16
North
1/2 - 1 Mile
Higher

CA WELLS **5311**

Water System Information:

Prime Station Code:	04S/12W-14B02 S	User ID:	MET
FRDS Number:	1910065027	County:	Los Angeles
District Number:	15	Station Type:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Water Type:	Well/Groundwater	Well Status:	Active Raw
Source Lat/Long:	334950.8 1180619.1	Precision:	1,000 Feet (10 Seconds)
Source Name:	COMMISSION WELL 17		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

System Number: 1910065
System Name: LONG BEACH-CITY, WATER DEPT.
Organization That Operates System:
1800 E WARDLOW ROAD
LONG BEACH, CA 90807

Pop Served:	424276	Connections:	85818
Area Served:	LONG BEACH		
Sample Collected:	29-AUG-12	Findings:	24.5 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	29-AUG-12	Findings:	26. UNITS
Chemical:	COLOR		
Sample Collected:	29-AUG-12	Findings:	353. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	29-AUG-12	Findings:	8.36
Chemical:	PH, FIELD		
Sample Collected:	29-AUG-12	Findings:	139.9 MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	29-AUG-12	Findings:	139.9 MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	29-AUG-12	Findings:	99.7 MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	29-AUG-12	Findings:	33.7 MG/L
Chemical:	CALCIUM		
Sample Collected:	29-AUG-12	Findings:	3.81 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	29-AUG-12	Findings:	36. MG/L
Chemical:	SODIUM		
Sample Collected:	29-AUG-12	Findings:	1.57
Chemical:	SODIUM ABSORPTION RATIO		
Sample Collected:	29-AUG-12	Findings:	2.02 MG/L
Chemical:	POTASSIUM		
Sample Collected:	29-AUG-12	Findings:	7. MG/L
Chemical:	CHLORIDE		
Sample Collected:	29-AUG-12	Findings:	20.4 MG/L
Chemical:	SULFATE		
Sample Collected:	29-AUG-12	Findings:	0.33 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	29-AUG-12	Findings:	21.5 MG/L
Chemical:	SILICA		
Sample Collected:	29-AUG-12	Findings:	216. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	29-AUG-12	Findings:	0.6
Chemical:	LANGELIER INDEX AT SOURCE TEMP.		
Sample Collected:	29-AUG-12	Findings:	12.43
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		

Sample Collected:	24-JUN-13	Findings:	22. C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	24-JUN-13	Findings:	5. UNITS
Chemical:	COLOR		
Sample Collected:	24-JUN-13	Findings:	317. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	24-JUN-13	Findings:	8.19
Chemical:	PH, FIELD		
Sample Collected:	24-JUN-13	Findings:	0.11 MG/L
Chemical:	PHOSPHATE, ORTHO		
Sample Collected:	24-JUN-13	Findings:	35.6 MG/L
Chemical:	CALCIUM		
Sample Collected:	24-JUN-13	Findings:	3.77 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	24-JUN-13	Findings:	34.3 MG/L
Chemical:	SODIUM		
Sample Collected:	24-JUN-13	Findings:	2.11 MG/L
Chemical:	POTASSIUM		
Sample Collected:	24-JUN-13	Findings:	6.63 MG/L
Chemical:	CHLORIDE		
Sample Collected:	24-JUN-13	Findings:	18.7 MG/L
Chemical:	SULFATE		
Sample Collected:	24-JUN-13	Findings:	0.34 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	24-JUN-13	Findings:	17.9 MG/L
Chemical:	SILICA		
Sample Collected:	24-JUN-13	Findings:	220. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	24-JUN-13	Findings:	0.279 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	24-JUN-13	Findings:	12.3
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)		
Sample Collected:	24-JUN-13	Findings:	140. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	24-JUN-13	Findings:	11. UG/L
Chemical:	ARSENIC		
Sample Collected:	24-JUN-13	Findings:	2.3 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	24-JUN-13	Findings:	3. PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	15-DEC-14	Findings:	6.7 PCI/L
Chemical:	GROSS ALPHA		
Sample Collected:	15-DEC-14	Findings:	3.4 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		

Sample Collected:	15-DEC-14	Findings:	2.1 UG/L
Chemical:	CHLOROFORM (THM)		
Sample Collected:	15-DEC-14	Findings:	1.7 UG/L
Chemical:	TOLUENE		
Sample Collected:	15-DEC-14	Findings:	2.2 UG/L
Chemical:	BENZENE		
Sample Collected:	15-DEC-14	Findings:	0.64 UG/L
Chemical:	1,2,4-TRIMETHYLBENZENE		
Sample Collected:	15-DEC-14	Findings:	2.1 UG/L
Chemical:	TOTAL TRIHALOMETHANES		
Sample Collected:	15-DEC-14	Findings:	3. PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	22-JAN-16	Findings:	2.6 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	22-JAN-16	Findings:	0.56 UG/L
Chemical:	XYLENES (TOTAL)		
Sample Collected:	22-JAN-16	Findings:	0.56 UG/L
Chemical:	M,P-XYLENE		
Sample Collected:	22-JAN-16	Findings:	3. PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	22-JAN-16	Findings:	0.41 PCI/L
Chemical:	RADIUM 226 MDA95		
Sample Collected:	22-JAN-16	Findings:	0.87 PCI/L
Chemical:	RADIUM 228 MDA95		
Sample Collected:	04-AUG-16	Findings:	23.8 C
Chemical:	SOURCE TEMPERATURE C		
Sample Collected:	04-AUG-16	Findings:	7. UNITS
Chemical:	COLOR		
Sample Collected:	04-AUG-16	Findings:	329. US
Chemical:	SPECIFIC CONDUCTANCE		
Sample Collected:	04-AUG-16	Findings:	8.03
Chemical:	PH, FIELD		
Sample Collected:	04-AUG-16	Findings:	6.5
Chemical:	PH, LABORATORY		
Sample Collected:	04-AUG-16	Findings:	150. MG/L
Chemical:	ALKALINITY (TOTAL) AS CACO3		
Sample Collected:	04-AUG-16	Findings:	183. MG/L
Chemical:	BICARBONATE ALKALINITY		
Sample Collected:	04-AUG-16	Findings:	0.58 MG/L
Chemical:	PHOSPHATE, ORTHO		
Sample Collected:	04-AUG-16	Findings:	116. MG/L
Chemical:	HARDNESS (TOTAL) AS CACO3		
Sample Collected:	04-AUG-16	Findings:	38.4 MG/L
Chemical:	CALCIUM		

Sample Collected:	04-AUG-16	Findings:	4.77 MG/L
Chemical:	MAGNESIUM		
Sample Collected:	04-AUG-16	Findings:	32.1 MG/L
Chemical:	SODIUM		
Sample Collected:	04-AUG-16	Findings:	2.49 MG/L
Chemical:	POTASSIUM		
Sample Collected:	04-AUG-16	Findings:	9.7 MG/L
Chemical:	CHLORIDE		
Sample Collected:	04-AUG-16	Findings:	17.8 MG/L
Chemical:	SULFATE		
Sample Collected:	04-AUG-16	Findings:	0.48 MG/L
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)		
Sample Collected:	04-AUG-16	Findings:	21.7 MG/L
Chemical:	SILICA		
Sample Collected:	04-AUG-16	Findings:	6. UG/L
Chemical:	ARSENIC		
Sample Collected:	04-AUG-16	Findings:	229. UG/L
Chemical:	IRON		
Sample Collected:	04-AUG-16	Findings:	208. MG/L
Chemical:	TOTAL DISSOLVED SOLIDS		
Sample Collected:	04-AUG-16	Findings:	0.178 NTU
Chemical:	TURBIDITY, LABORATORY		
Sample Collected:	04-AUG-16	Findings:	2. TON
Chemical:	ODOR THRESHOLD @ 60 C		
Sample Collected:	04-AUG-16	Findings:	2.6 PCI/L
Chemical:	GROSS ALPHA COUNTING ERROR		
Sample Collected:	04-AUG-16	Findings:	3. PCI/L
Chemical:	GROSS ALPHA MDA95		
Sample Collected:	04-AUG-16	Findings:	0.43 PCI/L
Chemical:	RADIUM 226 MDA95		
Sample Collected:	04-AUG-16	Findings:	0.74 PCI/L
Chemical:	RADIUM 228 MDA95		

D17
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000138484**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334950118064001		
Monloc name:	004S012W14C002S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8305716
Longitude:	-118.1120106	Sourcemap scale:	24000

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	2000
Welldepth units:	ft	Wellholedepth:	2250
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

E18
North **FED USGS** **USGS40000138489**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334951118062701		
Monloc name:	004S012W14C006S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8308493
Longitude:	-118.1083993	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	1411
Welldepth units:	ft	Wellholedepth:	1715
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

19
SE **FED USGS** **USGS40000138349**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334827118054701		
Monloc name:	004S012W24M004S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8075163
Longitude:	-118.0972873	Sourcemap scale:	24000

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	22.72
Vert measure units:	feet	Vertacc measure val:	.01
Vert accmeasure units:	feet		
Vertcollection method:	Reported		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	952
Welldepth units:	ft	Wellholedepth:	1010
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 487

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1944-10-21	30.7		1944-10-14	31.0	
1944-10-07	31.4		1944-10-02	31.3	
1944-09-23	33.9		1944-09-16	31.2	
1944-09-08	34.9		1944-09-01	34.0	
1944-08-26	33.1		1944-08-19	32.1	
1944-08-12	27.5		1944-07-31	27.0	
1944-07-22	27.4		1944-07-15	26.6	
1944-07-08	27.7		1944-07-01	29.0	
1944-06-24	28.9		1944-06-17	27.3	
1944-06-10	26.4		1944-05-31	25.4	
1944-05-20	23.8		1944-05-13	23.3	
1944-05-06	21.4		1944-04-29	23.3	
1944-04-22	23.2		1944-04-15	22.6	
1944-04-08	23.7		1944-04-01	23.4	
1944-03-25	23.2		1944-03-18	21.4	
1944-03-11	17.2		1944-03-01	18.4	
1944-02-19	22.1		1944-02-11	17.4	
1944-01-31	18.4		1944-01-22	18.8	
1944-01-15	18.7		1944-01-08	19.2	
1943-12-31	20.2		1943-12-24	21.7	
1943-12-18	22.8		1943-12-11	24.5	
1943-12-01	25.9		1943-11-20	27.4	
1943-11-13	29.0		1943-11-06	29.1	
1943-10-29	29.7		1943-10-23	29.5	
1943-10-16	33.2		1943-10-09	33.4	
1943-10-01	35.0				
1943-09-25	55.5				
Note: The site was being pumped.					
1943-09-01	35.8		1943-08-03	35.3	
1943-07-10	50.5				
Note: The site was being pumped.					
1943-06-30	26.8		1943-06-19	25.1	
1943-06-12	25.2		1943-06-01	23.0	
1943-05-22	25.0		1943-05-15	21.8	
1943-05-08	21.7		1943-04-30	19.1	
1943-04-24	18.3		1943-04-17	17.8	
1943-04-10	15.0		1943-03-31	13.8	
1943-03-20	15.1		1943-03-13	15.4	
1943-03-06	16.7		1943-03-01	15.3	
1943-02-20	17.6		1943-02-13	17.1	
1943-02-06	17.7		1943-01-29	18.4	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1943-01-16	17.3	
1942-12-31	20.8	
1942-12-12	21.4	
1942-11-21	25.7	
1942-11-07	28.7	
1942-09-30	33.4	
1942-07-31	34.5	
1942-06-13	45.4	
Note: The site was being pumped.		
1942-06-06	45.3	
Note: The site was being pumped.		
1942-06-01	23.0	
1942-05-23	40.8	
Note: The site was being pumped.		
1942-05-16	36.7	
Note: The site was being pumped.		
1942-05-09	36.8	
Note: The site was being pumped.		
1942-04-30	15.5	
1942-04-24	18.3	
1942-04-17	17.8	
1942-04-10	15.0	
1942-03-21	14.9	
1942-03-14	15.4	
1942-03-07	13.6	
1942-03-01	15.3	
1942-02-21	36.0	
Note: The site was being pumped.		
1942-02-20	17.6	
1942-02-14	34.3	
Note: The site was being pumped.		
1942-02-13	17.1	
1942-02-07	33.9	
Note: The site was being pumped.		
1942-02-06	17.7	
1942-01-24	35.2	
Note: The site was being pumped.		
1942-01-17	35.8	
Note: The site was being pumped.		
1942-01-16	17.3	
1942-01-10	36.6	
Note: The site was being pumped.		
1942-01-09	21.1	
1941-12-20	38.0	
Note: The site was being pumped.		
1941-12-13	38.7	
Note: The site was being pumped.		
1941-11-15	43.0	
Note: The site was being pumped.		
1941-11-08	44.4	
Note: The site was being pumped.		
1941-10-31	25.9	
1941-10-25	47.8	
Note: The site was being pumped.		
1941-10-18	28.0	
1941-10-11	47.0	
Note: The site was being pumped.		

Date	Feet below Surface	Feet to Sealevel
1943-01-09	21.1	
1942-12-19	22.6	
1942-12-01	23.3	
1942-11-14	27.8	
1942-11-02	31.1	
1942-09-01	36.0	
1942-07-01	26.4	
1942-04-25	20.0	
1942-04-18	19.4	
1942-04-11	17.3	
1942-03-31	18.2	
1942-03-20	15.1	
1942-03-13	15.4	
1942-03-06	16.7	
1942-02-27	14.8	
1942-01-29	18.4	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1941-10-01	26.0	
1941-09-13	25.0	
1941-08-23	48.0	
Note: The site was being pumped.		
1941-08-09	47.1	
Note: The site was being pumped.		
1941-08-01	25.9	
1941-07-26	44.6	
Note: The site was being pumped.		
1941-07-19	49.0	
1941-07-12	41.4	
Note: The site was being pumped.		
1941-07-07	39.8	
Note: The site was being pumped.		
1941-07-01	19.3	
1941-06-21	39.9	
Note: The site was being pumped.		
1941-06-14	38.4	
Note: The site was being pumped.		
1941-06-07	38.4	
Note: The site was being pumped.		
1941-06-02	16.1	
1941-05-24	37	
Note: The site was being pumped.		
1941-05-17	36.3	
Note: The site was being pumped.		
1941-05-10	36.2	
Note: The site was being pumped.		
1941-04-30	11.4	
1941-04-12	11.4	
1941-03-22	14.1	
1941-03-08	13.9	
1941-02-21	15.4	
1941-02-08	17.0	
1941-01-25	17.7	
1941-01-11	18.7	
1940-12-21	21.8	
1940-12-07	27.4	
1940-11-23	48.9	
Note: The site was being pumped.		
1940-11-16	50.4	
Note: The site was being pumped.		
1940-11-09	29.8	
1940-10-26	51.9	
Note: The site was being pumped.		
1940-10-19	54.5	
Note: The site was being pumped.		
1940-10-11	53.8	
Note: The site was being pumped.		
1940-10-01	39.7	
1940-09-21	54.4	
Note: The site was being pumped.		
1940-09-14	54.7	
Note: The site was being pumped.		
1940-09-07	54.7	
Note: The site was being pumped.		

Date	Feet below Surface	Feet to Sealevel
1941-09-20	24.6	
1941-09-02	29.1	
1941-04-19	11.0	
1941-03-31	13.3	
1941-03-15	13.6	
1941-02-28	14.58	
1941-02-15	15.8	
1941-01-31	17.1	
1941-01-18	18.4	
1941-01-02	19.0	
1940-12-13	24.5	
1940-12-02	29.7	
1940-11-01	31.8	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1940-08-30	36.4	
1940-08-24	54.4	
Note: The site was being pumped.		
1940-08-17	43.5	
Note: The site was being pumped.		
1940-08-10	53.5	
Note: The site was being pumped.		
1940-08-01	35.4	
1940-07-20	51.3	
Note: The site was being pumped.		
1940-07-13	49.5	
Note: The site was being pumped.		
1940-07-06	47.9	
Note: The site was being pumped.		
1940-07-01	29.2	
1940-06-22	46.4	
Note: The site was being pumped.		
1940-06-15	44.6	
Note: The site was being pumped.		
1940-06-08	44.8	
Note: The site was being pumped.		
1940-05-31	25.8	
1940-05-24	43.7	
Note: The site was being pumped.		
1940-05-18	46.1	
Note: The site was being pumped.		
1940-05-11	40.4	
Note: The site was being pumped.		
1940-05-01	17.5	
1940-04-13	38.6	
Note: The site was being pumped.		
1940-04-06	37.5	
Note: The site was being pumped.		
1940-04-01	20.8	
1940-03-23	41.9	
Note: The site was being pumped.		
1940-03-16	42.2	
Note: The site was being pumped.		
1940-03-09	41.3	
Note: The site was being pumped.		
1940-03-01	19.4	
1940-02-23	39.7	
Note: The site was being pumped.		
1940-02-16	36.0	
Note: The site was being pumped.		
1940-02-09	36.1	
Note: The site was being pumped.		
1940-01-30	19.6	
1940-01-19	37.1	
Note: The site was being pumped.		
1940-01-12	37.0	
Note: The site was being pumped.		
1940-01-06	37.4	
Note: The site was being pumped.		
1940-01-02	20.9	
1939-12-23	38.3	
Note: The site was being pumped.		

Date	Feet below Surface	Feet to Sealevel
1940-04-20	18.0	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1939-12-15	38.8	
Note: The site was being pumped.		
1939-12-08	40.7	
Note: The site was being pumped.		
1939-12-01	25.0	
1939-11-25	42.3	
Note: The site was being pumped.		
1939-11-18	45.3	
Note: The site was being pumped.		
1939-11-13	22.2	
1939-10-21	44.8	
Note: The site was being pumped.		
1939-10-14	45.1	
Note: The site was being pumped.		
1939-10-07	45.8	
Note: The site was being pumped.		
1939-09-30	32.3	
1939-09-23	52.2	
Note: The site was being pumped.		
1939-09-16	49.2	
Note: The site was being pumped.		
1939-09-11	48.5	
Note: The site was being pumped.		
1939-09-01	32.5	
1939-08-26	47.8	
Note: The site was being pumped.		
1939-08-19	47.4	
Note: The site was being pumped.		
1939-08-12	47.5	
Note: The site was being pumped.		
1939-08-05	47.0	
Note: The site was being pumped.		
1939-07-31	28.8	
1939-07-22	45.4	
Note: The site was being pumped.		
1939-07-15	44.1	
Note: The site was being pumped.		
1939-07-08	41.2	
Note: The site was being pumped.		
1939-06-30	26.6	
1939-06-24	39.9	
Note: The site was being pumped.		
1939-06-17	39.0	
Note: The site was being pumped.		
1939-06-10	36.2	
Note: The site was being pumped.		
1939-05-31	17.4	
1939-05-13	11.2	
1939-05-01	9.9	
1939-04-15	10.1	
1939-03-31	9.1	
1939-03-18	10.1	
1939-03-01	10.5	
1939-02-11	10.3	
1939-01-21	13.0	

Date	Feet below Surface	Feet to Sealevel
1939-11-01	29.0	
1939-05-20	11.6	
1939-05-06	10.0	
1939-04-22	9.9	
1939-04-08	7.1	
1939-03-25	9.1	
1939-03-11	11.0	
1939-02-20	10.1	
1939-01-31	13.0	
1939-01-14	14.2	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1939-01-07	14.7	
1938-12-24	15.0	
1938-12-10	19.9	
1938-11-19	22.0	
1938-11-05	24.4	
1938-10-22	25.0	
1938-10-08	27.1	
1938-09-24	29.1	
1938-09-12	27.7	
1938-08-22	26.1	
1938-08-08	24.8	
1938-07-25	22.5	
1938-07-11	20.0	
1938-06-20	34.9	
Note: The site was being pumped.		
1938-06-13	35.7	
Note: The site was being pumped.		
1938-06-01	19.0	
1938-04-18	37.9	
Note: The site was being pumped.		
1938-04-11	38.5	
Note: The site was being pumped.		
1938-04-01	12.8	
1938-03-23	33.0	
Note: The site was being pumped.		
1938-03-16	32.2	
Note: The site was being pumped.		
1938-03-14	12.7	
1938-03-09	37.9	
Note: The site was being pumped.		
1938-03-07	12.6	
1938-03-01	13.4	
1938-02-14	14.4	
1938-01-31	16.2	
1938-01-17	17.9	
1938-01-03	18.4	
1937-12-20	22.0	
1937-11-30	22.6	
1937-11-15	22.3	
1937-11-01	21.9	
1937-10-18	25.3	
1937-09-30	25.8	
1937-09-13	27.0	
1937-08-31	28.0	
1937-08-16	25.5	
1937-08-02	24.5	
1937-07-19	22.1	
1937-06-21	20.0	
1937-06-07	18.0	
1937-05-24	15.9	
1937-05-10	12.1	
1937-04-26	16.0	
1937-04-12	12.4	
1937-03-22	15.6	
1937-03-08	18.1	

Date	Feet below Surface	Feet to Sealevel
1938-12-31	14.4	
1938-12-17	16.8	
1938-12-01	22.0	
1938-11-12	24.2	
1938-10-31	23.2	
1938-10-15	27.1	
1938-10-01	27.6	
1938-09-17	27.3	
1938-08-31	26.5	
1938-08-15	25.8	
1938-08-01	23.5	
1938-07-18	20.5	
1938-06-30	21.0	
1938-04-25	18.4	
1938-03-28	12.0	
1938-03-02	17.0	
1938-02-21	13.8	
1938-02-07	15.6	
1938-01-24	16.6	
1938-01-10	20.3	
1937-12-27	19.0	
1937-12-06	21.1	
1937-11-22	22.0	
1937-11-08	22.7	
1937-10-25	23.2	
1937-10-11	24.2	
1937-09-20	26.7	
1937-09-07	26.0	
1937-08-23	27.2	
1937-08-09	25.8	
1937-07-26	23.3	
1937-07-01	21.0	
1937-06-14	18.8	
1937-06-01	16.0	
1937-05-17	14.6	
1937-05-01	16.3	
1937-04-19	15.2	
1937-04-01	14.5	
1937-03-15	15.7	
1937-03-01	16.80	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1937-02-23	17.83	
1937-02-08	18.50	
1937-01-25	19.75	
1937-01-02	20.83	
1936-12-21	24.00	
1936-12-07	25.83	
1936-11-23	45.58	
Note: The site was being pumped.		
1936-11-16	46.00	
Note: The site was being pumped.		
1936-11-09	45.66	
Note: The site was being pumped.		
1936-11-02	33.66	
1936-10-26	49.33	
Note: The site was being pumped.		
1936-10-19	31.17	
1936-10-14	47.00	
Note: The site was being pumped.		
1936-10-01	34.00	
1936-09-21	49.33	
Note: The site was being pumped.		
1936-09-14	47.00	
Note: The site was being pumped.		
1936-09-08	47.50	
Note: The site had been pumped recently.		
1936-08-31	29.66	
1936-08-24	46.50	
Note: The site was being pumped.		
1936-08-17	46.83	
Note: The site was being pumped.		
1936-08-10	47.00	
Note: The site was being pumped.		
1936-08-03	33.92	
1936-07-27	47.58	
Note: The site was being pumped.		
1936-07-20	46.25	
Note: The site was being pumped.		
1936-07-13	45.00	
Note: The site was being pumped.		
1936-07-07	45.00	
Note: The site was being pumped.		
1936-06-30	30.08	
1936-06-22	42.25	
Note: The site was being pumped.		
1936-06-15	40.58	
Note: The site was being pumped.		
1936-06-08	39.42	
Note: The site was being pumped.		
1936-06-01	23.92	
1936-05-12	35.17	
Note: The site was being pumped.		
1936-04-30	16.00	
1936-04-20	33.75	
Note: The site was being pumped.		
1936-04-13	33.00	
Note: The site was being pumped.		
1936-05-25	22.42	

Date	Feet below Surface	Feet to Sealevel
1937-02-15	19.58	
1937-02-04	17.17	
1937-01-11	20.42	
1936-12-28	22.33	
1936-12-14	25.42	
1936-11-30	32.00	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel
1936-04-02	18.58	
1936-03-23	31.17	
Note: The site was being pumped.		
1936-03-16	30.66	
Note: The site was being pumped.		
1936-03-09	31.17	
Note: The site was being pumped.		
1936-03-01	16.83	
1936-02-24	32.08	
Note: The site was being pumped.		
1936-02-18	32.33	
Note: The site was being pumped.		
1936-02-10	31.25	
Note: The site was being pumped.		
1936-02-03	16.58	
1936-01-27	31.66	
Note: The site was being pumped.		
1936-01-20	30.50	
Note: The site was being pumped.		
1936-01-13	14.17	
1935-12-23	16.25	
1935-12-09	16.50	
1935-11-25	18.92	
1935-11-12	18.92	
1935-10-21	21.42	
1935-10-07	35.75	
Note: The site was being pumped.		
1935-09-30	20.00	
1935-09-16	35.33	
Note: The site was being pumped.		
1935-09-10	21.83	
1935-08-26	35.83	
Note: The site was being pumped.		
1935-08-20	36.75	
Note: The site was being pumped.		
1935-08-12	36.50	
Note: The site was being pumped.		
1935-07-31	23.33	
1935-07-22	33.66	
Note: The site was being pumped.		
1935-07-15	32.50	
Note: The site was being pumped.		
1935-07-01	14.16	
1935-05-31	11.0	
1935-03-31	9.5	
1935-01-31	10.5	
1934-11-30	18.8	
1934-09-30	25.0	
1934-06-30	18.8	
1934-05-22	19.32	
1934-05-09	17.20	
1934-04-30	13.5	
1934-04-18	14.68	
1934-04-04	13.29	
1934-03-28	12.44	

Date	Feet below Surface	Feet to Sealevel
1935-12-30	12.17	
1935-12-16	16.25	
1935-12-02	17.66	
1935-11-18	18.50	
1935-11-01	19.83	
1935-10-14	20.33	
1935-09-23	20.00	
1935-09-03	22.08	
1935-06-30	14.5	
1935-04-30	6.8	
1935-02-28	11.2	
1934-12-31	16.0	
1934-10-31	20.5	
1934-08-31	24.1	
1934-05-31	18.7	
1934-05-16	18.75	
1934-05-02	16.09	
1934-04-25	15.28	
1934-04-11	14.33	
1934-03-31	10.7	
1934-03-24	11.81	

Ground-water levels, continued.

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1934-03-21	11.25		1934-03-14	10.18	
1934-03-10	9.41		1934-03-07	9.03	
1934-02-28	9.57		1934-02-21	10.09	
1934-02-14	10.36		1934-02-07	9.96	
1934-02-01	10.1		1934-01-31	10.01	
1934-01-25	10.34		1934-01-18	9.9	
1933-12-31	15.0		1933-11-30	20.2	
1933-11-02	15.84		1933-10-31	18	
1933-09-30	18.2		1933-08-31	20	
1933-07-31	19.5		1933-07-17	29.82	
1933-06-30	16		1933-05-31	17.3	
1933-04-30	9.0		1933-04-24	9.55	
1933-03-31	5		1933-02-28	8.7	
1933-01-31	11.2		1932-12-31	11.2	
1932-12-27	10.0		1932-11-30	15	
1932-10-31	19.5		1932-09-30	20.3	
1932-08-31	20		1932-07-31	21.9	
1932-06-30	19.2		1932-01-31	11.2	

E20
North
1/2 - 1 Mile
Higher

FED USGS **USGS40000138495**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334953118062501		
Monloc name:	004S012W14B001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8314049
Longitude:	-118.1078437	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	628
Welldepth units:	ft	Wellholedepth:	1080
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

21
WNW
1/2 - 1 Mile
Higher

FED USGS **USGS40000138453**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334925118072501		
Monloc name:	004S012W15K003S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8236274
Longitude:	-118.1245109	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	66
Welldepth units:	ft	Wellholedepth:	1066
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

22
NNW
1/2 - 1 Mile
Higher

FED USGS **USGS40000138496**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-334953118064201		
Monloc name:	004S012W14D001S		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18070106	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	33.8314049
Longitude:	-118.1125661	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	Not Reported
Vert measure units:	Not Reported	Vertacc measure val:	Not Reported
Vert accmeasure units:	Not Reported		
Vertcollection method:	Not Reported		
Vert coord refsys:	Not Reported	Countrycode:	US
Aquifername:	California Coastal Basin aquifers		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	1655
Welldepth units:	ft	Wellholedepth:	1668
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 0

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
90808	24	0

Federal EPA Radon Zone for LOS ANGELES County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for LOS ANGELES COUNTY, CA

Number of sites tested: 63

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.711 pCi/L	98%	2%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.933 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish & Game
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX D

ADDITIONAL INFORMATION

Los Coyotes Redevelopment
3235/3325 Palo Verde Ave and 3320 Los Coyotes Diag
Long Beach, CA 90808

Inquiry Number: 5092799.5
November 01, 2017

The EDR-City Directory Abstract

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1920 through 2014. This report compiles information gathered in this review by geocoding the latitude and longitude of properties identified and gathering information about properties within 660 feet of the target property.

A summary of the information obtained is provided in the text of this report.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Year	Source	TP	Adjoining	Text Abstract	Source Image
2014	EDR Digital Archive	-	X	X	-
	EDR Digital Archive	X	X	X	-
2010	EDR Digital Archive	-	X	X	-
	EDR Digital Archive	X	X	X	-
2006	Haines Company, Inc.	-	X	X	-
	Haines Company, Inc.	X	X	X	-
2004	Haines Company	-	-	-	-
2003	Haines & Company	-	-	-	-
2001	Haines Company, Inc.	-	-	-	-
2000	Haines	-	X	X	-
	Haines	X	X	X	-
1999	Haines Company	-	-	-	-

EXECUTIVE SUMMARY

Year	Source	TP	Adjoining	Text Abstract	Source Image
1996	GTE	-	-	-	-
1995	Pacific Bell	-	X	X	-
	Pacific Bell	X	X	X	-
1992	PACIFIC BELL WHITE PAGES	-	-	-	-
1991	Pacific Bell	-	X	X	-
	Pacific Bell	X	X	X	-
1990	Pacific Bell	-	X	X	-
1986	Pacific Bell	-	X	X	-
1985	Pacific Bell	-	X	X	-
	Pacific Bell	X	X	X	-
1981	Pacific Telephone	-	X	X	-
1980	Pacific Telephone	-	X	X	-
	Pacific Telephone	X	X	X	-
1976	Pacific Telephone	-	X	X	-
1975	Pacific Telephone	-	X	X	-
	Pacific Telephone	X	X	X	-
1972	R. L. Polk & Co.	-	-	-	-
1971	R. L. Polk & Co.	-	-	-	-
1970	Pacific Telephone	-	-	-	-
1969	Pacific Telephone	-	X	X	-
	Pacific Telephone	X	X	X	-
1967	R. L. Polk & Co.	-	-	-	-
1966	Pacific Telephone	-	-	-	-
1965	GTE	-	-	-	-
1964	Pacific Telephone	-	X	X	-
1963	Pacific Telephone	-	-	-	-
1962	Pacific Telephone	-	-	-	-
1961	R. L. Polk & Co.	-	-	-	-
1960	Pacific Telephone	-	X	X	-
1958	Pacific Telephone	-	-	-	-
1957	Pacific Telephone	-	X	X	-
1956	Pacific Telephone	-	-	-	-
1955	R. L. Polk & Co.	-	-	-	-
1954	R. L. Polk & Co.	-	X	X	-
1952	Los Angeles Directory Co.	-	-	-	-
1951	Los Angeles Directory Co.	-	-	-	-
1950	Pacific Telephone	-	-	-	-
1949	Los Angeles Directory Co.	-	-	-	-
1948	Associated Telephone Company, Ltd.	-	-	-	-
1947	Pacific Directory Co.	-	-	-	-
1946	Southern California Telephone Co	-	-	-	-
1945	R. L. Polk & Co.	-	-	-	-

EXECUTIVE SUMMARY

Year	Source	TP	Adjoining	Text Abstract	Source Image
1944	R. L. Polk & Co.	-	-	-	-
1942	Los Angeles Directory Co.	-	-	-	-
1940	Los Angeles Directory Co.	-	-	-	-
1939	Los Angeles Directory Co.	-	-	-	-
1938	Los Angeles Directory Company Publishers	-	-	-	-
1937	Los Angeles Directory Co.	-	-	-	-
1936	Los Angeles Directory Co.	-	-	-	-
1935	Los Angeles Directory Co.	-	-	-	-
1934	Los Angeles Directory Co.	-	-	-	-
1933	Los Angeles Directory Co.	-	-	-	-
1932	Los Angeles Directory Co.	-	-	-	-
1931	TRIBUNE-NEWS PUBLISHING CO.	-	-	-	-
1930	Los Angeles Directory Co.	-	-	-	-
1929	Los Angeles Directory Co.	-	-	-	-
1928	Los Angeles Directory Co.	-	-	-	-
1927	Los Angeles Directory Co.	-	-	-	-
1926	Los Angeles Directory Co.	-	-	-	-
1925	Los Angeles Directory Co.	-	-	-	-
1924	Los Angeles Directory Co.	-	-	-	-
1923	Los Angeles Directory Co.	-	-	-	-
1921	Los Angeles Directory Co.	-	-	-	-
1920	Los Angeles Directory Co.	-	-	-	-

EXECUTIVE SUMMARY

SELECTED ADDRESSES

The following addresses were selected by the client, for EDR to research. An "X" indicates where information was identified.

Address	***Type***	***Findings***
3331 Palo Verde Ave	Client Entered	X

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

3235/3325 Palo Verde Ave and 3320 Los Coyotes Diag
Long Beach, CA 90808

FINDINGS DETAIL

Target Property research detail.

Los Coyotes Diagonal

3320 Los Coyotes Diagonal

Year	*Uses*	*Source*
2010	LOSCOYOTES IMAGING CENTER	EDR Digital Archive

LOS COYOTES DIAGONAL

3320 LOS COYOTES DIAGONAL

Year	*Uses*	*Source*
1991	Andries Carol Roth MFCC	Pacific Bell
	Associated Occupational Therapists	Pacific Bell
	BAY PSYCHIATRIC MEDICAL GROUP	Pacific Bell
	Bellflower Mental Health Group	Pacific Bell
	BLACK MAURICE MD	Pacific Bell
	Brandis Alan D Ph D	Pacific Bell
	Brown Payton Gordon MD Inc	Pacific Bell
	California Center For Family Counseling	Pacific Bell
	FRIEDMANN CLAUDE MD INC	Pacific Bell
	GELLERMAN G LEE MD	Pacific Bell
	Golden State Physical Therapy Services	Pacific Bell
	Harris & Gellerman Medical Group A Professional Corporation	Pacific Bell
	Jacobson Everett Dr	Pacific Bell
	Lee Susan Shin Y MD	Pacific Bell
	Linden Robt D MD	Pacific Bell
	Lindquist Douglas S Ph D	Pacific Bell
	Murphy Denis M MD	Pacific Bell
	Perez Vincent MD	Pacific Bell
	Perez Vincent S MD	Pacific Bell
	Prover Stephen D MD Inc	Pacific Bell

FINDINGS

Year	Uses	Source
1991	Rogers Howard K MFCC	Pacific Bell
	Stolzberg Saul LCSW MFCC	Pacific Bell
1985	Ahmadi Behrooz MD Inc	Pacific Bell
	ARTHRITIS CONSULTANTS INC	Pacific Bell
	Bickel Yale B MD	Pacific Bell
	Carlstroem Charles M MD	Pacific Bell
	Coast Psychiatric Associates	Pacific Bell
	Daswani Moti S MD	Pacific Bell
	Domanchich Aurelius MD	Pacific Bell
	Faries Robt P MD	Pacific Bell
	Gellerman G Lee MD	Pacific Bell
	Gokaldas Ray MD	Pacific Bell
	Harris & Gellerman Medical Group A Professional Corporation	Pacific Bell
	Harris William D MD	Pacific Bell
	Hunter Carol P Ph D	Pacific Bell
	Jenkins Charles E MD	Pacific Bell
	Koenker Rolf J MD	Pacific Bell
	Kotlewski Geo MD	Pacific Bell
	Manasantivongs Suthep MD	Pacific Bell
	Martinho Antone Inc ND	Pacific Bell
	Moskowitz Joseph MD	Pacific Bell
	Murphy Denis M MD	Pacific Bell
	Pathology Consultants Medical Group	Pacific Bell
	Romano Thos J MD	Pacific Bell
	Seitelman Jeffrey K MD	Pacific Bell
	Silverstein Ronald T MD	Pacific Bell
	Sleiman Raymond MD A Medical Corp	Pacific Bell
1980	Ahmadi Behrooz MD Inc	Pacific Telephone
	ARTHRITIS CONSULTANTS INC	Pacific Telephone
	Backhau David	Pacific Telephone
	Bickel Yale B MD	Pacific Telephone
	Coast Learning Center	Pacific Telephone
	COAST PSYCHIATRIC ASSOCIATES	Pacific Telephone
	Domanchich Aurelius MD	Pacific Telephone
	Faries Robt P MD	Pacific Telephone
	Frankel Geo W MD	Pacific Telephone
	Gellerman G Lee MD	Pacific Telephone
	Gokaldas Ray MD	Pacific Telephone

FINDINGS

Year	Uses	Source
1980	Harris & Gellerman Medical Group A Professional Corporation	Pacific Telephone
	Harris William D MD	Pacific Telephone
	Hunter Carol P Ph D	Pacific Telephone
	JENKINS CHARLES E MD	Pacific Telephone
	Koenker Rolf J MD	Pacific Telephone
	Kotlewski Geo MD	Pacific Telephone
	Krishnamurthy Savithri MD	Pacific Telephone
	Martinho Antone Inc MD	Pacific Telephone
	Moskowitz Joseph MD	Pacific Telephone
	Moskowitz Joseph MD Inc	Pacific Telephone
	Murphy Denis M MD	Pacific Telephone
	Navarro O Manuel MD	Pacific Telephone
	Romano Thos J MD	Pacific Telephone
	Russell John K Ph D	Pacific Telephone
	Russell Ken Dr	Pacific Telephone
	Silverstein Ronald T MD	Pacific Telephone
	Silverthorne John D MD A Professional Corporation	Pacific Telephone
1975	Abarbanel A R Medical Corp	Pacific Telephone
	Ahmadi Behrooz MD Inc	Pacific Telephone
	Coast Learning Center	Pacific Telephone
	COAST PSYCHIATRIC MEDICAL GROUP	Pacific Telephone
	David Laurence MD	Pacific Telephone
	Domanchich Aurelius MD	Pacific Telephone
	E R Physicians Medical Group Inc	Pacific Telephone
	ERDA Energy Systems Inc PO Box 182 Cyp	Pacific Telephone
	ERDA Energy Systems Inc PO Box 182 Cypress	Pacific Telephone
	Fagan Philip J Jr MD	Pacific Telephone
	Frankel Geo W MD	Pacific Telephone
	Gatov M L dntst	Pacific Telephone
	Gelfand Ben MD	Pacific Telephone
	Hales E Leroy MD	Pacific Telephone
	Havekorst Walter B DDS	Pacific Telephone
	Held Carl MD	Pacific Telephone
	Hoffeld Harvey MD	Pacific Telephone
	Hoffeld Medical Corp	Pacific Telephone
	Hunter Carol P Ph D	Pacific Telephone
	Jennings Herbert D MD	Pacific Telephone

FINDINGS

Year	Uses	Source
1975	Koenker Rolf J MD	Pacific Telephone
	Krishnamurthy Savithri MD	Pacific Telephone
	Last Edward C Inc DDS	Pacific Telephone
	Legge Robt F MD	Pacific Telephone
	Marshall J Richard MD	Pacific Telephone
	Martinho Antone Inc MD	Pacific Telephone
	Moskowitz Joseph MD	Pacific Telephone
	Murphy & Naughton MDs	Pacific Telephone
	Murphy Denis M MD	Pacific Telephone
	Naughton Kevin P MD	Pacific Telephone
	Russell John Dr	Pacific Telephone
	Russell John K Ph D	Pacific Telephone
	Russell Ken Dr	Pacific Telephone
	Silverstein Ronald T MD	Pacific Telephone
	Silverthorne John D MD A Professional Corporation	Pacific Telephone
	Steele Dennis D Ph D	Pacific Telephone
	Weiner Stanley I MD	Pacific Telephone

LOS COYOTES DIAGONAL ST

3320 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	ABARBANEL A R PHYS	Pacific Telephone
	FABIAN DENIS PHYS	Pacific Telephone
	FRANKEL GEO V PHYS	Pacific Telephone
	GATOV MAX L DENTIST	Pacific Telephone
	GELFAND 8 EN PHYS	Pacific Telephone
	HAYEKORST WALTER 8 DENTIST	Pacific Telephone
	HOFFELD HARVEY PHYS	Pacific Telephone
	KOENKER ROLF J PHYS	Pacific Telephone
	LEGGE ROST F PHYS LAST EDW C DENTIST	Pacific Telephone
	LOS ALTOS MEDICAL BUILDING	Pacific Telephone
	MARTINHO ANTONE PHYS	Pacific Telephone
	MURPHY DENNIS M OYS	Pacific Telephone
	NAIUGHTON KEVIN P PHYS	Pacific Telephone
	NOSKOWITZ JOSEPH PHYS	Pacific Telephone
	PENNOCK CAMERON D PHYS	Pacific Telephone
	SILVERTHORNE JOHN 0 PHYS	Pacific Telephone

FINDINGS

Year	Uses	Source
1969	ZAHN WILLARD F 00 YS	Pacific Telephone

Palo Verde Ave

3325 Palo Verde Ave

Year	Uses	Source
2014	ALLERGY & ASTHMA CARE CENTER	EDR Digital Archive
	EYE PHYSICIANS OF LONG BEACH	EDR Digital Archive
	HERTZOG LARS H MD	EDR Digital Archive
	INTEGRTED DRMTLOGY DRMTPTHLOGY	EDR Digital Archive
	MASON OLIVER	EDR Digital Archive
	MELTZER LAURENCE MD	EDR Digital Archive
	MILLER ROBERT M MD INC	EDR Digital Archive
	PEDIATRIX	EDR Digital Archive
	PERCER THOMAS L	EDR Digital Archive
	RONLOV CARSTEN S M D	EDR Digital Archive
	SABIRA TEJANI MD INC	EDR Digital Archive
	TEJANI NASIR	EDR Digital Archive
	TEJANI SABIRA MD A PROF	EDR Digital Archive
	TRAN KIMLY OD	EDR Digital Archive
	UNIVERSAL CARE INC	EDR Digital Archive
	VIJAYALAKSHMI MALAYATTIL	EDR Digital Archive
	WEST COAST ORTHOPEDICS	EDR Digital Archive
	YVONNE MEDICAL ASSISTANT	EDR Digital Archive
2010	ALLERGY & ASTHMA CARE CENTER	EDR Digital Archive
	COLE STUART H MD INC	EDR Digital Archive
	EYE PHYSICIANS OF LONG BEACH	EDR Digital Archive
	MAGELLA MEDICAL GROUP INC	EDR Digital Archive
	MASON OLIVER	EDR Digital Archive
	MELTZER LAURENCE MD	EDR Digital Archive
	PEDIATRIX MEDICAL GROUP	EDR Digital Archive
	PERCER THOMAS L	EDR Digital Archive
	RONLOV CARSTEN S M D	EDR Digital Archive
	SABIRA TEJANI MD INC	EDR Digital Archive
	STOKES CHIROPRACTIC OFFICE INC	EDR Digital Archive
	TEJANI NASIR	EDR Digital Archive
	TEJANI SABIRA MD A PROF	EDR Digital Archive
	TRAN KIMLY OD	EDR Digital Archive
	ULTRASONIX MEDICAL	EDR Digital Archive

FINDINGS

Year	Uses	Source
2010	UNIVERSAL CARE INC	EDR Digital Archive
	WEST COAST ORTHOPEDICS	EDR Digital Archive

PALO VERDE AVE

3325 PALO VERDE AVE

Year	Uses	Source
2006	AVALSOHEIL M MD	Haines Company, Inc.
	BARTLOW	Haines Company, Inc.
	CRADEMICHAEL	Haines Company, Inc.
	EMD MASON OUVER MD	Haines Company, Inc.
	EYEPHYSCNSOF	Haines Company, Inc.
	FREDRIC R MD SIMPKINS ALBERT	Haines Company, Inc.
	GMD INC MARTINEZCARLOS	Haines Company, Inc.
	GREGORYAMD COLE STUART H MD	Haines Company, Inc.
	GROUP RONLOVCARSTEN	Haines Company, Inc.
	JRMD SPARKS KENNETH	Haines Company, Inc.
	KRAMER EDWARD	Haines Company, Inc.
	LNG BCH HIRSCHMANEYE	Haines Company, Inc.
	MARIA D OD TEJANI NASIR DR	Haines Company, Inc.
	MD +STEINLEITNER	Haines Company, Inc.
	MDINC MOBAYEN M M MD	Haines Company, Inc.
	MILLERROBERTM	Haines Company, Inc.
	MMD +KUSHNER ARNOLD	Haines Company, Inc.
	ORTHOPEDICS	Haines Company, Inc.
	PEDIATRIX MEDICAL	Haines Company, Inc.
	S MD INC ROSENBERG	Haines Company, Inc.
	SRGRY KIMDAVIDSMD	Haines Company, Inc.
	TEJANI NASIR MD	Haines Company, Inc.
	WESTCST	Haines Company, Inc.
2000	ADVANCED DERMATOLGY	Haines
	ALLERGY & ASTHMA CARE	Haines
	BARTLOW GREGORY MD	Haines
	COLE STUART H MD	Haines
	HIRSCHMAN EYE SRGRY	Haines
	MARTINEZ CARLOS E MD	Haines
	MASON OLIVER MD	Haines
	MELTZER STEVEN MD	Haines
	MILLER ROBERT M MD	Haines

FINDINGS

Year	Uses	Source
2000	MOBAYEN M M MD	Haines
	ROSENBERG F R MD	Haines
	SPARKS KENNETH MD	Haines
	STOUT R CRAIG OD	Haines
	TAMAROFF MARC MD	Haines
	TEJANI NASIR MD	Haines
	TEJANI SABIRA N MD	Haines
1995	Bartlow Gregory A MD	Pacific Bell
	Direct Office	Pacific Bell
	Kramer Edward M MD	Pacific Bell
	Miller Robert M MD	Pacific Bell
	Mobayen MIRALESTEM MD	Pacific Bell
	Or Call	Pacific Bell
	Rosenberg Fredric R MD	Pacific Bell
1991	ALLERGY & ASTHMA CARE CENTER OF SOUTHERN CALIFORNIA	Pacific Bell
	Bartlow Gregory A MD	Pacific Bell
	Berke Meyer MD	Pacific Bell
	Chin C F MD	Pacific Bell
	Coast Cardio Pulmonary Medical Group Inc	Pacific Bell
	Coast Diabetes & Endocrinology Medical Group	Pacific Bell
	COLE STUART H MD INC	Pacific Bell
	Dahlman Anton MD General Vascular & Oncologic Surgery	Pacific Bell
	Danon Guy	Pacific Bell
	Kurshenbaum Howard A MD	Pacific Bell
	Lakewood Cerriots & Los Altos Long Beach Dermatology Surgical & Medical Group Inc	Pacific Bell
	Lewis Cleveland Jr Inc MD	Pacific Bell
	Liechti Robt MD	Pacific Bell
	Long Beach	Pacific Bell
	Los Altos Long Beach Dermatology Medical Group	Pacific Bell
	Lutzker Steven W MD	Pacific Bell
	Mason Oliver MD	Pacific Bell
	Meltzer Steven MD	Pacific Bell
	MENTER MURRAY MD	Pacific Bell
	Miller Robert M MD	Pacific Bell
	Mobayen M M MD	Pacific Bell

FINDINGS

Year	Uses	Source
1991	Myopia Treatment Center	Pacific Bell
	Rosenberg Fredric R MD	Pacific Bell
	Sury B V MD FACP	Pacific Bell
	Tamaroff Marc MD	Pacific Bell
1985	Allergy & Clinical Immunology Consultants	Pacific Bell
	Bartlow Gregory A MD	Pacific Bell
	Barton Cornelia N MD	Pacific Bell
	Berke Meyer MD	Pacific Bell
	Chin C F MD	Pacific Bell
	COAST CARDIO PULMONARY MEDICAL GROUP INC	Pacific Bell
	COLE STUART H MD INC	Pacific Bell
	King Laura A MD	Pacific Bell
	Lakewood Cerritos & Los Altos Long Beach Dermatology Surgical & Medical Group Inc	Pacific Bell
	Lewis Cleveland Jr Inc MD	Pacific Bell
	Liechti Robt E MD	Pacific Bell
	LOS ALTOS LONG BEACH DERMATOLOGY MEDICAL GROUP	Pacific Bell
	Lutzker Steven W MD	Pacific Bell
	Maznavi M H MD	Pacific Bell
	Meltzer Laurence Dr	Pacific Bell
	Menter Murray MD	Pacific Bell
	Miller Robert M MD	Pacific Bell
	Rizza Joseph MD	Pacific Bell
	Roberts Stephen R DPM	Pacific Bell
	Rosenberg Fredric R MD	Pacific Bell
	Sury B V MD	Pacific Bell
	TAMAROFF MARC MD	Pacific Bell
	TEJANI NASIR MD	Pacific Bell
	TEJANI SABIRA N MD	Pacific Bell
	Warner Margaret MD	Pacific Bell
1980	Allergy & Clinical Immunology Consultants	Pacific Telephone
	Bartlow Gregory A MD	Pacific Telephone
	Berke Meyer MD	Pacific Telephone
	Coast Cardio Pulmonary	Pacific Telephone
	Cole Stuart H MD	Pacific Telephone
	Ginsburg Samuel B MD	Pacific Telephone
	King Laura A MD	Pacific Telephone
	Liechti Robt E MD	Pacific Telephone

FINDINGS

Year	Uses	Source
1980	Los Altos Long Beach Dermatology Group	Pacific Telephone
	Los Altos Radiology Services	Pacific Telephone
	Meltzer Laurence Dr	Pacific Telephone
	Menter Murray MD	Pacific Telephone
	Miller Robt M MD	Pacific Telephone
	Pedarsani M H MD	Pacific Telephone
	Rizza Jos MD	Pacific Telephone
	Robboy Stanley G MD	Pacific Telephone
	Roberts Stephen R DPM	Pacific Telephone
	Rosenberg Fredric R MD	Pacific Telephone
	Tamaroff Marc MD	Pacific Telephone
	Warner Margaret MD	Pacific Telephone
	Zamost Marvin A MD	Pacific Telephone

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

CONQUISTA AVE

3225 CONQUISTA AVE

Year	Uses	Source
2006	TIMBOELyle P	Haines Company, Inc.
2000	TIMBOE Lyle P	Haines
1991	Timboe Lyle P	Pacific Bell
1985	Timboe Lyle P	Pacific Bell
1980	Timboe Lyle P	Pacific Telephone
1975	Timboe Lyle P	Pacific Telephone
1969	MOAD MARY MRS 0 H	Pacific Telephone
1964	MOAD RALPH J	Pacific Telephone
1960	MOAD RALPH J	Pacific Telephone
1957	MOAD RALPH J	Pacific Telephone

3226 CONQUISTA AVE

Year	Uses	Source
2006	FRANK Terrnence	Haines Company, Inc.
2000	XXXX	Haines
1991	Liedke John H	Pacific Bell
1985	Liedke John H	Pacific Bell
1980	Liedke John H	Pacific Telephone
1975	Liedke John H	Pacific Telephone
1969	LIEDKE JOHN H 0 HAI 5551	Pacific Telephone
1964	LIEDKE JOHN H	Pacific Telephone
1960	BERGMAN LOUIS	Pacific Telephone
1957	BERGMAN LOUIS	Pacific Telephone

3232 CONQUISTA AVE

Year	Uses	Source
2006	BECK Chrisltopher	Haines Company, Inc.
2000	BECH Cristopher	Haines
1969	HERRING CHARLES S	Pacific Telephone
1964	KILGOUR W C	Pacific Telephone
1960	LAMBROSE WM R	Pacific Telephone

FINDINGS

Year	Uses	Source
1960	LAMBROSE WM R	Pacific Telephone
1957	WHITE CEDRIC A JR	Pacific Telephone

3235 CONQUISTA AVE

Year	Uses	Source
2000	XXXX	Haines

3236 CONQUISTA AVE

Year	Uses	Source
2006	THIESSEN Frank	Haines Company, Inc.
2000	THIESSEN Frank	Haines
1985	Thiessen Frank	Pacific Bell
1980	Thiessen Frank	Pacific Telephone
1975	Thiessen Frank	Pacific Telephone
1969	BLACK DENNIS S	Pacific Telephone
1964	GREENE RICHARD A	Pacific Telephone
1960	BAIRD ARTHUR M	Pacific Telephone
1957	BAIRD ARTHUR N	Pacific Telephone

Conquista Ave

3240 Conquista Ave

Year	Uses	Source
2014	ANGEL OVER YOU LIFE CNSLTNG	EDR Digital Archive
	ANGEL OVER YOU LIFE CNSLTNG	EDR Digital Archive
2010	ANGEL OVER YOU LIFE CNSLTNG	EDR Digital Archive
	ANGEL OVER YOU LIFE CNSLTNG	EDR Digital Archive

CONQUISTA AVE

3240 CONQUISTA AVE

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
2000	MESSERSMITH Andrea	Haines
	X KILLDEE E	Haines
	X LOS COYOTES DIGNL N	Haines
1985	Messersmith Don L	Pacific Bell
1980	Messersmith Don L	Pacific Telephone
1975	Messersmith Don L	Pacific Telephone
1969	MESSERSMITH DONALD	Pacific Telephone

FINDINGS

Year	Uses	Source
1960	MUISE DANL H	Pacific Telephone
1957	AHRENS CITAS F	Pacific Telephone
1954	AHRENS CHAS F	R. L. Polk & Co.

3286 CONQUISTA AVE

Year	Uses	Source
2000	GEORGE Ben	Haines
	CONQUISTA AV 90808 CONT	Haines

CORALITE ST

6165 CORALITE ST

Year	Uses	Source
1969	LEWELLYN B	Pacific Telephone

E CORALITE ST

6165 E CORALITE ST

Year	Uses	Source
2006	a MORTON Michael	Haines Company, Inc.

E KILLDEE ST

6230 E KILLDEE ST

Year	Uses	Source
2006	FERINACJohn	Haines Company, Inc.

6231 E KILLDEE ST

Year	Uses	Source
2006	o PIERCEJeffrey	Haines Company, Inc.
1964	KENNEDY MAXINE	Pacific Telephone
1960	PARKS PEGGY	Pacific Telephone
1957	COX ALEX T	Pacific Telephone
1954	COX NORMAN L	R. L. Polk & Co.

6237 E KILLDEE ST

Year	Uses	Source
2006	HOWELLLarry	Haines Company, Inc.
1964	HARTER GARY G	Pacific Telephone
1960	HARTER GARY G	Pacific Telephone

FINDINGS

6238 E KILLDEE ST

Year	Uses	Source
1964	ROBIDEAUX ANNEETTE	Pacific Telephone
1957	MORENUS RICHARD C	Pacific Telephone
1954	FITZGIBBONS J F	R. L. Polk & Co.

E Killdee St

6243 E Killdee St

Year	Uses	Source
2014	PAULS PIT STOP	EDR Digital Archive
	PAULS PIT STOP	EDR Digital Archive
2010	PAULS PIT STOP	EDR Digital Archive
	PAULS PIT STOP	EDR Digital Archive

E KILLDEE ST

6243 E KILLDEE ST

Year	Uses	Source
2006	MOLINAPaul	Haines Company, Inc.
1960	JAMES VIRGINIA F	Pacific Telephone
1957	ANDERSON RALPH P	Pacific Telephone
1954	NIONDCIKE FRANK J	R. L. Polk & Co.

6253 E KILLDEE ST

Year	Uses	Source
2006	MAHERJane	Haines Company, Inc.
1964	SITSER LINDA	Pacific Telephone
1960	SITSER FRED E	Pacific Telephone

6256 E KILLDEE ST

Year	Uses	Source
2006	LEBEAU 0 T	Haines Company, Inc.
1964	KENNARD MABEL	Pacific Telephone
1957	KENNARD J E	Pacific Telephone
1954	KENNARD J E	R. L. Polk & Co.

6259 E KILLDEE ST

Year	Uses	Source
2006	WILLIAMS Lee	Haines Company, Inc.
1964	SHUMWAY CARLTON L	Pacific Telephone

FINDINGS

Year	Uses	Source
1960	SHUMWAY CARLTON L	Pacific Telephone
1957	SHUMWAY CARLTON L	Pacific Telephone
1954	SHUMWAY CARNTON L	R. L. Polk & Co.

6262 E KILLDEE ST

Year	Uses	Source
1964	PETERSON ROSEMARY	Pacific Telephone
1957	SUSANKA ALBERT J JR	Pacific Telephone
1954	SUSANKA ALBERT J JR	R. L. Polk & Co.

6265 E KILLDEE ST

Year	Uses	Source
2006	MACNEALThaddeus	Haines Company, Inc.
1960	PUGH ROBT W	Pacific Telephone
1957	STEPHENSON JOS B JR	Pacific Telephone
1954	STEPHENSON JOS B JR	R. L. Polk & Co.

E Killdee St

6266 E Killdee St

Year	Uses	Source
2010	HILL TILE CO	EDR Digital Archive
	HILL TILE CO	EDR Digital Archive

E KILLDEE ST

6266 E KILLDEE ST

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.

6271 E KILLDEE ST

Year	Uses	Source
2006	o HENRYWayne	Haines Company, Inc.
1964	LAW WALLACE J SR	Pacific Telephone
1960	PASSAVANT TONY J	Pacific Telephone
1957	PASSAVANT TONY J	Pacific Telephone
1954	PASSAVANT TONY J	R. L. Polk & Co.

FINDINGS

E Killdee St

6272 E Killdee St

Year	Uses	Source
2014	ENTERLINE LILIAN D	EDR Digital Archive
	ENTERLINE LILIAN D	EDR Digital Archive
2010	ENTERLINE LILIAN D	EDR Digital Archive
	ENTERLINE LILIAN D	EDR Digital Archive

E KILLDEE ST

6272 E KILLDEE ST

Year	Uses	Source
2006	ENTERLINE Larry	Haines Company, Inc.
1964	FERREIRA LOUIS L	Pacific Telephone
1960	FERREIRA LOUIS L	Pacific Telephone
1957	FERREIRA LOUIS L	Pacific Telephone

6277 E KILLDEE ST

Year	Uses	Source
2006	JANDA Collie	Haines Company, Inc.
1964	BONN RUTH R	Pacific Telephone
1960	BONN HENRY A	Pacific Telephone
1957	BONN HENRY A	Pacific Telephone
1954	BONN HENRY A	R. L. Polk & Co.

6278 E KILLDEE ST

Year	Uses	Source
1964	BENCH EDWIN K JR	Pacific Telephone
1960	BENCH EDWIN K JR	Pacific Telephone
1954	BENCH EDWIN K JR	R. L. Polk & Co.

6283 E KILLDEE ST

Year	Uses	Source
2006	SCHMIDT Ronald	Haines Company, Inc.
1960	HULPKE JOHN E	Pacific Telephone
1957	HULPKE JOHN E	Pacific Telephone
1954	HULPHE JOHN E	R. L. Polk & Co.

FINDINGS

6284 E KILLDEE ST

Year	Uses	Source
2006	9 YAMAMOTOChieko	Haines Company, Inc.
1957	LEASER LAWRENCE R	Pacific Telephone

6289 E KILLDEE ST

Year	Uses	Source
2006	NELSON Byron	Haines Company, Inc.
1964	KRACHT FRED H	Pacific Telephone
1960	KRACHT FRED H	Pacific Telephone
1954	KRACHT FRED H	R. L. Polk & Co.

E METZ ST

6230 E METZ ST

Year	Uses	Source
2006	BARISOFFWm	Haines Company, Inc.
1964	MCGUIRE DAYTON E	Pacific Telephone
1960	MC GUIRE D E	Pacific Telephone
1957	MCGUIRE D E	Pacific Telephone

6236 E METZ ST

Year	Uses	Source
2006	SANDOVALl Ivan	Haines Company, Inc.
1964	HEIM WILLI	Pacific Telephone
1960	HEIM WILLI	Pacific Telephone
1954	ZEISE CARL H	R. L. Polk & Co.

6241 E METZ ST

Year	Uses	Source
1964	BIRCH THOS E	Pacific Telephone
1960	BIRCH THOS E	Pacific Telephone
1957	BIRCH THOS E	Pacific Telephone
1954	BIRCH THOS E	R. L. Polk & Co.

6242 E METZ ST

Year	Uses	Source
2006	Bus H Nancy	Haines Company, Inc.
1964	VOTROUBEK WALTER P	Pacific Telephone
1960	VOTROUBEK WALTER P	Pacific Telephone

FINDINGS

6247 E METZ ST

Year	Uses	Source
2006	NAVARRO Frederick	Haines Company, Inc.
1964	NEWSOM VIVIAN M	Pacific Telephone
1960	NEWSOM C K DOUG	Pacific Telephone
1957	NEWSOM C K DOUG	Pacific Telephone
1954	NEWSOM C K DOUG	R. L. Polk & Co.

6248 E METZ ST

Year	Uses	Source
2006	REYNOLDS Gary	Haines Company, Inc.
1964	STIPAC CHAS J	Pacific Telephone
1960	STIPAC CHAS J	Pacific Telephone
1957	STIPAC CHAS J HARIST9-8671	Pacific Telephone
1954	STIPAC CHAS J	R. L. Polk & Co.

6253 E METZ ST

Year	Uses	Source
2006	KURT James	Haines Company, Inc.
1960	WALTERS RAY T	Pacific Telephone

6254 E METZ ST

Year	Uses	Source
2006	GIAVANTI Margaret	Haines Company, Inc.
1960	GLAAB GEO W	Pacific Telephone
1957	FONNER JEAN B	Pacific Telephone
	BURDICK ROBT W	Pacific Telephone

6259 E METZ ST

Year	Uses	Source
1957	LAING RICHARD L	Pacific Telephone
1954	LAINGIVY L IVMRS	R. L. Polk & Co.

6260 E METZ ST

Year	Uses	Source
1954	IVEY RICHARD L	R. L. Polk & Co.

FINDINGS

E WARDLOW RD

6202 E WARDLOW RD

Year	Uses	Source
2006	a GIBBS Michael	Haines Company, Inc.
1980	Caro Sylvian M	Pacific Telephone
1975	Caro Sylvian M	Pacific Telephone
1964	CARO SYLVIAN M	Pacific Telephone
1960	CARO SYLVIAN M	Pacific Telephone
1957	CARS SYLVIAN M	Pacific Telephone

6208 E WARDLOW RD

Year	Uses	Source
2006	a BURGOYNE Jeanne	Haines Company, Inc.
1980	Gill David	Pacific Telephone
	Gill David & Linda	Pacific Telephone
1975	Kainz Anton	Pacific Telephone
1960	CARTER HENRY J	Pacific Telephone
1957	CARTER HENRY J	Pacific Telephone
1954	CARTER HENRY J	R. L. Polk & Co.
	CARTER HENRY J	R. L. Polk & Co.

6212 E WARDLOW RD

Year	Uses	Source
2006	OCHOAEmesto	Haines Company, Inc.
	ROBLES Emeslo	Haines Company, Inc.
1991	Sorenson Dennis L	Pacific Bell
1985	Sorenson Dennis L	Pacific Bell
1980	Sorenson Dennis L	Pacific Telephone
1960	WATERS HERMAN G	Pacific Telephone
1957	HOENSON EDW	Pacific Telephone
1954	ARNDT LEONARD A	R. L. Polk & Co.

6218 E WARDLOW RD

Year	Uses	Source
2006	BAXTERWamer	Haines Company, Inc.
1991	Lawrence John A	Pacific Bell
1985	Harris C R	Pacific Bell
1980	Otero Edw J	Pacific Telephone
1975	Otero Edw J	Pacific Telephone

FINDINGS

Year	Uses	Source
1964	MADDAMS WM G	Pacific Telephone
1960	MADDAMS WM G	Pacific Telephone
1957	MADDAMS WM G HARISN9-1361	Pacific Telephone
1954	MADDAMS WM G	R. L. Polk & Co.

6221 E WARDLOW RD

Year	Uses	Source
1964	CARTER ROBT L	Pacific Telephone

6228 E WARDLOW RD

Year	Uses	Source
2006	GOL	Haines Company, Inc.
1991	Golgart G	Pacific Bell
1960	WERNER CHAS E	Pacific Telephone
1957	WERNER CHAS E	Pacific Telephone
1954	WERNER CHAS E	R. L. Polk & Co.

6229 E WARDLOW RD

Year	Uses	Source
2006	FREEMAN Stanley	Haines Company, Inc.
1991	Kranidas Mary O	Pacific Bell
1980	Worthley Wm	Pacific Telephone
1964	MYL JAS A	Pacific Telephone
1960	MYL JAS A	Pacific Telephone
1957	LUND ROBT H ATTY	Pacific Telephone
1954	LUND ROBT H ATTY	R. L. Polk & Co.

6235 E WARDLOW RD

Year	Uses	Source
2006	a HARMAN Comelia	Haines Company, Inc.
1957	BLODGETT A L	Pacific Telephone
1954	BLODETT A L	R. L. Polk & Co.

6402 E WARDLOW RD

Year	Uses	Source
2006	o JOHNSONTimothy	Haines Company, Inc.
1991	Johnson Alan	Pacific Bell
1985	Johnson Alan	Pacific Bell
1980	Johnson Alan	Pacific Telephone
1975	Johnson Alan	Pacific Telephone

FINDINGS

Year	Uses	Source
1960	PEUGH DIGHTON LT USN	Pacific Telephone
1954	PARK MAN GEO L	R. L. Polk & Co.

6408 E WARDLOW RD

Year	Uses	Source
2006	a GUZMAN Orando	Haines Company, Inc.
1985	FOASBERG INDUSTRIAL SERVICES	Pacific Bell
	FOASBERG LAUNDRY AND CLEANERS	Pacific Bell
1964	GALLUP FRANK M	Pacific Telephone
1960	GALLUP FRANK M	Pacific Telephone
1957	BREWER TWAIN M	Pacific Telephone
1954	BREWER TWAIN M	R. L. Polk & Co.

6414 E WARDLOW RD

Year	Uses	Source
1954	WILLIAMS JOHN E	R. L. Polk & Co.

HACKETT AVE

3302 HACKETT AVE

Year	Uses	Source
2006	o VIVILACQUAJudy	Haines Company, Inc.
2000	GABA Harold	Haines
	COSEK Judy	Haines
1991	Cano Danl A	Pacific Bell
1985	Cano Danl A	Pacific Bell
1980	Cano Danl A	Pacific Telephone
1975	Wallace Ralph E	Pacific Telephone
1969	WALLACE RALPH E	Pacific Telephone
1964	SINNER LARRY W	Pacific Telephone
1960	SHANAHAN DANL L	Pacific Telephone
1957	STANNELDMERLE A	Pacific Telephone

3303 HACKETT AVE

Year	Uses	Source
2006	BELL Gordon H	Haines Company, Inc.
2000	BELL Gordon H	Haines
1991	Bell Gordon H	Pacific Bell
1985	Bell Gordon H	Pacific Bell
	Bell Gordon H	Pacific Bell

FINDINGS

Year	Uses	Source
1980	Bell Gordon H	Pacific Telephone
1975	Bell Gordon H	Pacific Telephone
1969	BELL GORDON H	Pacific Telephone
1964	BELL GORDON H	Pacific Telephone
1957	KERNER JACK	Pacific Telephone

3308 HACKETT AVE

Year	Uses	Source
1969	ISEMAN ROBT G a	Pacific Telephone

3309 HACKETT AVE

Year	Uses	Source
1969	AEZER TED	Pacific Telephone
1957	AEZER THEODORE B	Pacific Telephone

3314 HACKETT AVE

Year	Uses	Source
2006	YOUSSEF Sameh	Haines Company, Inc.
2000	YOUSSEF Sameh	Haines
1991	Minor Robt	Pacific Bell
1985	Harlan Saml P	Pacific Bell
1969	JOHNSON JAMES R	Pacific Telephone
1964	JOHNSON JAS R	Pacific Telephone

Hackett Ave

3315 Hackett Ave

Year	Uses	Source
2010	COWBOY DANS LLC	EDR Digital Archive
	STEPHENS DANIEL F & PAMELA A	EDR Digital Archive
	STEPHENS DANIEL F & PAMELA A	EDR Digital Archive
	COWBOY DANS LLC	EDR Digital Archive

HACKETT AVE

3315 HACKETT AVE

Year	Uses	Source
2006	HAYGOOD Amnanda	Haines Company, Inc.
2000	LENZEN Gerard	Haines
1991	Gores John F	Pacific Bell

FINDINGS

Year	Uses	Source
1985	Gores John F	Pacific Bell
1980	Gores John F	Pacific Telephone
1975	Gores John F	Pacific Telephone
1969	GORES JOHN F	Pacific Telephone
1964	GORES JOHN F	Pacific Telephone
1960	GORES JOHN F	Pacific Telephone
1957	ORES JOHN F	Pacific Telephone

3320 HACKETT AVE

Year	Uses	Source
2006	FITZPATRICK VWilliam	Haines Company, Inc.
2000	FITZPATRICK Wm	Haines
1991	Fitzpatrick Wm	Pacific Bell
1985	Fitzpatrick Wm	Pacific Bell
1980	Fitzpatrick Wm	Pacific Telephone
1969	NELSON GEO B	Pacific Telephone
1964	NELSON GEO V	Pacific Telephone
1960	NELSON GEE V	Pacific Telephone
1957	NELSON GEO V	Pacific Telephone

3321 HACKETT AVE

Year	Uses	Source
2006	WALTERS Gail	Haines Company, Inc.
2000	SAITOH Fumihiro	Haines
1991	Saitoh Fumihiro	Pacific Bell
1969	SPARGUR JOHN	Pacific Telephone
1964	BRENNAN TOM W	Pacific Telephone

3326 HACKETT AVE

Year	Uses	Source
2006	HANSEN Robert	Haines Company, Inc.
2000	HANSEN Chester L	Haines
1991	Hansen Chester L	Pacific Bell
1985	Hansen Chester L	Pacific Bell
1980	Hansen Chester L	Pacific Telephone
1975	Hansen Chester L	Pacific Telephone
1969	HANSEN CHESTER L	Pacific Telephone
1964	HANSEN CHESTER L	Pacific Telephone
1960	HANSEN CHESTER L	Pacific Telephone

FINDINGS

Year	Uses	Source
1957	MANSAN CHESTER L	Pacific Telephone

3327 HACKETT AVE

Year	Uses	Source
2006	HADJIMARKOS	Haines Company, Inc.
	Annetle	Haines Company, Inc.
2000	BOSETTI Edward	Haines
1980	Bogard Tom W	Pacific Telephone
1969	RILEY FRED R 0 HA 9 7 S	Pacific Telephone
1964	RILEY FRED R	Pacific Telephone
1960	ISLEY VICTOR	Pacific Telephone
1957	MCCUNE DONALD A	Pacific Telephone

3332 HACKETT AVE

Year	Uses	Source
2006	DAVIS Rodney	Haines Company, Inc.
2000	DAVIS Rodney	Haines
1969	MC KIM JOHN F	Pacific Telephone
1964	MCKIM LILLIN M	Pacific Telephone
	MC KIM JOHN F & ASSOCIATES BLDG DESGNR	Pacific Telephone
1960	MCKIM JOHN F DRFTSMN	Pacific Telephone
1957	MCKIM JOHN F DRFTSMN	Pacific Telephone

3333 HACKETT AVE

Year	Uses	Source
2006	WINLAND Phelcharal	Haines Company, Inc.
2000	HURT Jo	Haines
1991	Grogan Jerome F	Pacific Bell
1985	Grogan Jerome F	Pacific Bell
1980	Grogan Jerome F	Pacific Telephone
1975	Grogan Jerome F	Pacific Telephone
1969	GROGAN JEROME F	Pacific Telephone
1964	GROGAN JEROME F	Pacific Telephone
1960	GROGAN JEROME F	Pacific Telephone
1957	GROGAN JEROME F	Pacific Telephone

3336 HACKETT AVE

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.

FINDINGS

Year	Uses	Source
2000	LACHAINE Dennis	Haines
1991	Bravo Ray	Pacific Bell
1985	Rivas Fred	Pacific Bell
1980	Hollingsworth Jerome & Joanne	Pacific Telephone
1975	Badouin Walter S	Pacific Telephone
1969	BADOUIN WALTER S	Pacific Telephone
1964	HOYT ONIS O	Pacific Telephone
1960	WITT ROBT W	Pacific Telephone
1957	WITT ROBT W	Pacific Telephone

3339 HACKETT AVE

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
2000	BUKSA Michael	Haines
1991	Nardi Diana & Stephen	Pacific Bell
	Nardi Diana	Pacific Bell
1985	Buksa Michael	Pacific Bell
1980	Buksa Michael	Pacific Telephone
1975	Buksa Michael	Pacific Telephone
1969	NO RETURN	Pacific Telephone

3342 HACKETT AVE

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
1969	CASTANON JULIO R	Pacific Telephone
1964	CASTANON JULIO R	Pacific Telephone
1960	CASTANON JULIO R	Pacific Telephone
1957	CASTANON JULIO R	Pacific Telephone

3345 HACKETT AVE

Year	Uses	Source
2006	MONTOYA Donald	Haines Company, Inc.
2000	BASSETT Louis	Haines
1991	Put Emiel J	Pacific Bell
1985	Put Emiel J	Pacific Bell
1980	Put Emiel J	Pacific Telephone
1975	Put Emiel J	Pacific Telephone
1969	PUT EMIEL J	Pacific Telephone
1964	PUT EMIEL J	Pacific Telephone

FINDINGS

Year	Uses	Source
1960	BANN SIDNEY S	Pacific Telephone
1957	BANN SIDNEY S	Pacific Telephone

3347 HACKETT AVE

Year	Uses	Source
1964	NELSON HARVEY J	Pacific Telephone

3348 HACKETT AVE

Year	Uses	Source
2006	GREENSTEIN Dann	Haines Company, Inc.
2000	GREENSTEIN Darrin	Haines
1991	Dawson Estel L	Pacific Bell
1985	Dawson Estel L	Pacific Bell
1980	Dawson Estel L	Pacific Telephone
1975	Dawson Estel L	Pacific Telephone
1969	DAWSON ESTEL L	Pacific Telephone
1964	IDEMA PETE	Pacific Telephone
1960	IDEMA PETE	Pacific Telephone
1957	IDEMA PETE	Pacific Telephone

3354 HACKETT AVE

Year	Uses	Source
2006	STANGJos	Haines Company, Inc.
2000	STANG Jos	Haines
1991	Stang Jos	Pacific Bell
1985	Stang Jos	Pacific Bell
1980	Stang Jos	Pacific Telephone
1975	Stang Jos	Pacific Telephone
1969	STANG JOSEPH F	Pacific Telephone
1964	STANG JOS	Pacific Telephone
1960	STANG JOS	Pacific Telephone
1957	SLANG JOS	Pacific Telephone

3358 HACKETT AVE

Year	Uses	Source
2006	OPITZ Timolhy	Haines Company, Inc.
2000	OPITZ Timothy	Haines
1991	Jennings W A	Pacific Bell
1985	Jennings W A	Pacific Bell
1980	Jennings W A	Pacific Telephone

FINDINGS

Year	Uses	Source
1975	Jennings W A	Pacific Telephone
1969	JENNINGS WM A 0 H	Pacific Telephone
1964	JENNINGS W A	Pacific Telephone
1960	JENNINGS W A	Pacific Telephone
1957	NGS W A	Pacific Telephone

3364 HACKETT AVE

Year	Uses	Source
2006	PAWELCZAK Edw M	Haines Company, Inc.
2000	PAWELCZAK Edw M	Haines
1991	Pawelczak Edw M	Pacific Bell
1985	Pawelczak Edw M	Pacific Bell
1980	Pawelczak Edw M	Pacific Telephone
1975	Pawelczak Edw M	Pacific Telephone
1969	PAWELCZAK EDW M	Pacific Telephone
1964	PAWELCZAK EDW M	Pacific Telephone
1960	PAWELCZAK EDW M	Pacific Telephone
1957	PAWELCZAK EDW M	Pacific Telephone

3370 HACKETT AVE

Year	Uses	Source
2006	REED Donald W	Haines Company, Inc.
2000	REED Donald W	Haines
1991	Reed Donald W	Pacific Bell
1985	Reed Donald W	Pacific Bell
1980	Reed Donald W	Pacific Telephone
1975	Reed Donald W	Pacific Telephone
1969	REED DONALD W	Pacific Telephone
1964	REED DONALD W	Pacific Telephone
1960	REED DONALD W	Pacific Telephone
1957	TAUH MAURICE	Pacific Telephone

3376 HACKETT AVE

Year	Uses	Source
2006	WIT 1 Kenneth R	Haines Company, Inc.
2000	X WARDLOW RD E	Haines
	WITT Kenneth R	Haines
1991	Witt Kenneth R	Pacific Bell
1985	Witt Kenneth R	Pacific Bell

Year	Uses	Source
1980	Witt Kenneth R	Pacific Telephone
1975	Witt Kenneth R	Pacific Telephone
1969	WITT KENNETH R	Pacific Telephone
1964	WITT KENNETH R	Pacific Telephone
1960	STATLAND JOS	Pacific Telephone
1957	STATLAND JOS	Pacific Telephone

KILLDEE ST

6230 KILLDEE ST

Year	Uses	Source
1969	KRAMER RPBT H S	Pacific Telephone

6231 KILLDEE ST

Year	Uses	Source
1969	COX EUNICE MRS	Pacific Telephone

6237 KILLDEE ST

Year	Uses	Source
1969	HARTER HOLLY	Pacific Telephone

6238 KILLDEE ST

Year	Uses	Source
1969	ROBIDEAUX GENE L S	Pacific Telephone

6243 KILLDEE ST

Year	Uses	Source
1969	KENNEDY ALF	Pacific Telephone

6249 KILLDEE ST

Year	Uses	Source
1969	HOEFLER NORMAN L S	Pacific Telephone

6253 KILLDEE ST

Year	Uses	Source
1969	REYNARD ORSON S	Pacific Telephone

6256 KILLDEE ST

Year	Uses	Source
1969	KENNARD MABEL	Pacific Telephone

FINDINGS

6259 KILLDEE ST

Year	Uses	Source
1969	NO RETURN	Pacific Telephone

6262 KILLDEE ST

Year	Uses	Source
1969	D 08 BS FRED C	Pacific Telephone

6265 KILLDEE ST

Year	Uses	Source
1969	PUGH ROBT W 0 H	Pacific Telephone

6266 KILLDEE ST

Year	Uses	Source
1969	NO RETURN	Pacific Telephone

6271 KILLDEE ST

Year	Uses	Source
1969	FOGLESONG CURTIS L	Pacific Telephone

6272 KILLDEE ST

Year	Uses	Source
1969	FERREIRA LOUIS L S	Pacific Telephone

6277 KILLDEE ST

Year	Uses	Source
1969	BONN RUTH R MRS S	Pacific Telephone

6278 KILLDEE ST

Year	Uses	Source
1969	BENCH EDWIN K JR S HAS 5819	Pacific Telephone

6283 KILLDEE ST

Year	Uses	Source
1969	CLAY DOUGLAS L S	Pacific Telephone

6284 KILLDEE ST

Year	Uses	Source
1969	WALLACE RAYMOND	Pacific Telephone

6289 KILLDEE ST

Year	Uses	Source
1969	KRACHT FRED H	Pacific Telephone

LOS COYOTES DIAGONAL

3302 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Sramek David	Pacific Bell
1985	Thomlison Cecil L	Pacific Bell
1975	Witt Sherman	Pacific Telephone
	Witt J L	Pacific Telephone

3310 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Pressley Leone Ratcliffe	Pacific Bell
1985	Pressley Leone Ratcliffe	Pacific Bell
1980	Pressley Leone Ratcliffe	Pacific Telephone
1975	Pressley Leone Ratcliffe	Pacific Telephone

3333 LOS COYOTES DIAGONAL

Year	Uses	Source
1980	Miller Todd E	Pacific Telephone

3339 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Cornelius Donald R Rev	Pacific Bell
1985	Cornelius Donald R Rev	Pacific Bell
1975	Matthews Grady A	Pacific Telephone

3340 LOS COYOTES DIAGONAL

Year	Uses	Source
1995	LOS ALTOS HOSPITAL & MENTAL HEALTH CENTER	Pacific Bell
1991	Los Altos Hospital And Mental Health Center	Pacific Bell
	Los Altos Hospital And Mental Health Center	Pacific Bell
1985	LOS ALTOS HOSPITAL	Pacific Bell
1980	LOS ALTOS HOSPITAL	Pacific Telephone
1975	LOS ALTOS HOSPI TAL	Pacific Telephone

3350 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Block Buster Video	Pacific Bell
1985	Little Js	Pacific Bell

FINDINGS

Year	Uses	Source
1980	Little Js	Pacific Telephone
1975	Little Js Barbering Service	Pacific Telephone

3354 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Long Beach	Pacific Bell
	Melodies Dance Theatre	Pacific Bell
1980	Long Beach	Pacific Telephone
	Melodies Dance Theatre	Pacific Telephone
1975	CAROLES DANCE THEATRE	Pacific Telephone
	Long Beach	Pacific Telephone

3356 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Mr Fish & Chips	Pacific Bell
1980	Mr Fish & Chips	Pacific Telephone
1975	Long Beach	Pacific Telephone
	Mr Foto Corp	Pacific Telephone

3358 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Cost Cutters	Pacific Bell
1985	Flowers By Morris	Pacific Bell
	Oceans Away Cruises & Travel	Pacific Bell
1980	FLOWERS BY MORRIS	Pacific Telephone
	Long Beach	Pacific Telephone
1975	Long Beach	Pacific Telephone
	FLOWERS BY MORRIS	Pacific Telephone

3360 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Long Beach	Pacific Bell
1985	Medicine Shoppe The	Pacific Bell
1980	Medicine Shoppe The	Pacific Telephone
1975	United Properties & Investments Inc	Pacific Telephone

3362 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Rays Tailoring	Pacific Bell
1985	Rays Tailoring	Pacific Bell

Year	Uses	Source
1980	Rays Tailoring	Pacific Telephone
1975	Rays Tailoring	Pacific Telephone

3364 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Help U Sell Of East Long Beach	Pacific Bell
1985	Dependable Income Tax Service	Pacific Bell
	Flatto Herbert D Tax Service	Pacific Bell
	Alert Tax Service	Pacific Bell
1980	Flatto Herbert D Tax Service	Pacific Telephone
	Dependable Income Tax Service	Pacific Telephone
	Alert Tax Service	Pacific Telephone
1975	Long Beach	Pacific Telephone

3366 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Tenni Mocs Shoe Saloon	Pacific Bell
	Tenni Mocs Athletes Corner	Pacific Bell
1980	Tenni Mocs Shoe Saloon	Pacific Telephone
	Tenni Mocs Athletes Corner	Pacific Telephone
1975	Tenni Mocs Shoe Saloon	Pacific Telephone
	Tenni Mocs Athletes Corner	Pacific Telephone

3368 LOS COYOTES DIAGONAL

Year	Uses	Source
1975	Skeltons Card & Gift Shop	Pacific Telephone

3371 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Young Jack M	Pacific Bell
1980	Young Jack M	Pacific Telephone

3374 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Hair Unlimited	Pacific Bell
1980	Hair Unlimited	Pacific Telephone
1975	Hair Unlimited	Pacific Telephone

FINDINGS

3376 LOS COYOTES DIAGONAL

Year	Uses	Source
1985	Backstage Video	Pacific Bell
1980	Vitamin City Inc	Pacific Telephone
1975	Art Line Frames	Pacific Telephone

3378 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Royalty Cleaners	Pacific Bell
1985	Royalty Cleaners	Pacific Bell
1980	Royalty Cleaners	Pacific Telephone
1975	Royalty Cleaners	Pacific Telephone

Los Coyotes Diagonal

3380 Los Coyotes Diagonal

Year	Uses	Source
2014	RALPHS GROCERY COMPANY	EDR Digital Archive
	US BANK NATIONAL ASSOCIATION	EDR Digital Archive
	US BANK NATIONAL ASSOCIATION	EDR Digital Archive
	RALPHS GROCERY COMPANY	EDR Digital Archive
2010	RALPHS GROCERY COMPANY	EDR Digital Archive
	US BANK NATIONAL ASSOCIATION	EDR Digital Archive
	US BANK NATIONAL ASSOCIATION	EDR Digital Archive
	RALPHS GROCERY COMPANY	EDR Digital Archive

LOS COYOTES DIAGONAL

3380 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Long Beach	Pacific Bell
1990	RALPHS GROCERY COMPANY OTHER STORES	Pacific Bell
1986	RALPHS GROCERY COMPANY OTHER STORES-	Pacific Bell
1985	Long Beach	Pacific Bell
1981	RALPH S GROCERY COMPANY OTHER STORES	Pacific Telephone
1980	Long Beach	Pacific Telephone
1976	Ralphs Grocery Co	Pacific Telephone
1975	Long Beach	Pacific Telephone
	Lucky Jewelers	Pacific Telephone

FINDINGS

Los Coyotes Diagonal

3410 Los Coyotes Diagonal

Year	Uses	Source
2014	COHEN JEFFREY M DDS	EDR Digital Archive
	COHEN JEFFREY M DDS	EDR Digital Archive
2010	COHEN JEFFREY M DDS	EDR Digital Archive
	COHEN JEFFREY M DDS	EDR Digital Archive

LOS COYOTES DIAGONAL

3411 LOS COYOTES DIAGONAL

Year	Uses	Source
1980	Berry L	Pacific Telephone
1975	Konrath Jas A	Pacific Telephone

3418 LOS COYOTES DIAGONAL

Year	Uses	Source
1995	Carrie Sue Dolls & Supplies	Pacific Bell

3420 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	Pacific View Realty	Pacific Bell

3424 LOS COYOTES DIAGONAL

Year	Uses	Source
1991	CLARKE CHIROPRACTIC CENTER	Pacific Bell
	CLARKE DONALD A DC	Pacific Bell

LOS COYOTES DIAGONAL N

3302 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	ABREGO Ralph	Haines

3310 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	LANGE Staven	Haines

3320 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	RUSSO LEONARD R	Haines

FINDINGS

Year	Uses	Source
2000	ROSE JOHN DDS INC	Haines
	MANOS ANDREW DO INC	Haines
	CORTEZ SANTOS DDS	Haines
	DDS PRO CORP	Haines

3333 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	SOBH Haldar	Haines

3339 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	XXXX	Haines

3340 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	XXXX	Haines

3350 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	X CORALITE E	Haines
	BLOCKBUSTER	Haines

3358 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	COST CU	Haines

3360 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	GO DOGS GO	Haines

3364 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	UNITD STUDIOS OF SELF DE	Haines

3366 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	PIZZA HUT	Haines

3368 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	CIGARETTE CHEAPER	Haines

FINDINGS

Year	Uses	Source
2000	CIGARETTES CH	Haines

3371 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	HANNA Sally	Haines

3374 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	XXXX	Haines

3376 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	XXXX	Haines

3378 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	XXXX	Haines

3380 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	X WARDLOW RD E	Haines
	SKLAVENITIS Panos	Haines
	RALPHS GROCERY CO STORE	Haines

3410 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	COHEN JEFFREY M DDS	Haines

3411 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	SHAVER M A	Haines

3414 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	X CANEHILL AV	Haines
	CUTTING S	Haines

3418 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	CENTER STAGE	Haines

3420 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	XXXX	Haines

3422 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	XXXX	Haines

3424 LOS COYOTES DIAGONAL N

Year	Uses	Source
2000	SYLVAN LEARNING C	Haines

LOS COYOTES DIAGONAL ST

3302 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	THOMLISON CECIL L 0 HA 9 46 S	Pacific Telephone

3310 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	PRESSLEY LEONE MRS	Pacific Telephone

3333 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	STEIN MEYER	Pacific Telephone

3339 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	WALTERS 41 CNL	Pacific Telephone

3340 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	LOS ALTOS HOSPITAL	Pacific Telephone

3366 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	UNDER CONSTN	Pacific Telephone

3368 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	UDEP CONSTN	Pacific Telephone

3371 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	YGLU D JACK M 0 425 82 S	Pacific Telephone

3372 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	PETERSON LAUNDROMAT	Pacific Telephone

3374 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	RAIP UNLIMITED BEAUTY SHOP	Pacific Telephone

3378 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	ROYALTY CLEANERS	Pacific Telephone

3380 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	RALPNS MARKET GRO	Pacific Telephone

3403 LOS COYOTES DIAGONAL ST

Year	Uses	Source
1969	SREEN JESS D	Pacific Telephone

METZ ST

6230 METZ ST

Year	Uses	Source
1969	PELDO GORDON L	Pacific Telephone

6236 METZ ST

Year	Uses	Source
1969	WHITNEY ART	Pacific Telephone

6241 METZ ST

Year	Uses	Source
1969	BIRCH THOMAS E	Pacific Telephone

6242 METZ ST

Year	Uses	Source
1969	VOTROUBEK WALTER P 0 H	Pacific Telephone

6247 METZ ST

Year	Uses	Source
1969	NEWSOM C K	Pacific Telephone

6248 METZ ST

Year	Uses	Source
1969	STIPAC CHARLES J 0 HA 9 B	Pacific Telephone

6253 METZ ST

Year	Uses	Source
1969	NO RETURN	Pacific Telephone

6254 METZ ST

Year	Uses	Source
1969	NO RETURN	Pacific Telephone

6259 METZ ST

Year	Uses	Source
1969	LAING IVY L MRS	Pacific Telephone

N LOS COYOTES DIAGONAL

3302 N LOS COYOTES DIAGONAL

Year	Uses	Source
2006	e ABREGO Ralph	Haines Company, Inc.

3310 N LOS COYOTES DIAGONAL

Year	Uses	Source
2006	a HARMORKristin	Haines Company, Inc.

N Los Coyotes Diagonal

3320 N Los Coyotes Diagonal

Year	Uses	Source
2014	ZOOKEVITCH RONY DO MFCC	EDR Digital Archive
	ZOOKEVITCH RONY DO MFCC	EDR Digital Archive
2010	ZOOKEVITCH RONY DO MFCC	EDR Digital Archive
	ROSE JOHN DDS INC	EDR Digital Archive
	MCGUIRE JOHN B DDS	EDR Digital Archive
	DUSTIN L ROWE DDS	EDR Digital Archive
	RUSSO LEONARD R DDS	EDR Digital Archive
	ZOOKEVITCH RONY DO MFCC	EDR Digital Archive

Year	Uses	Source
2010	ROSE JOHN DDS INC	EDR Digital Archive
	MCGUIRE JOHN B DDS	EDR Digital Archive
	DUSTIN L ROWE DDS	EDR Digital Archive
	RUSSO LEONARD R DDS	EDR Digital Archive

N LOS COYOTES DIAGONAL

3320 N LOS COYOTES DIAGONAL

Year	Uses	Source
2006	DDS ROSE JOHN DDS	Haines Company, Inc.
	INC ROWE DUSTIN L	Haines Company, Inc.
	DDS RUSSO LEONARD R	Haines Company, Inc.
	DDS PRO CORP	Haines Company, Inc.
	DDS LOS COYOTES	Haines Company, Inc.
	CORTEZSANTOS	Haines Company, Inc.
	IMAGING MCGUIREJOHNB	Haines Company, Inc.
	BRIGHT SMILE	Haines Company, Inc.

N Los Coyotes Diagonal

3329 N Los Coyotes Diagonal

Year	Uses	Source
2014	LEONHARDT TRUCKING	EDR Digital Archive
	LEONHARDT TRUCKING	EDR Digital Archive
2010	LEONHARDT TRUCKING	EDR Digital Archive
	LEONHARDT TRUCKING	EDR Digital Archive

N LOS COYOTES DIAGONAL

3333 N LOS COYOTES DIAGONAL

Year	Uses	Source
2006	SOBHHaidar	Haines Company, Inc.

3339 N LOS COYOTES DIAGONAL

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.

3340 N LOS COYOTES DIAGONAL

Year	Uses	Source
2006	TRAVEL & TRADE	Haines Company, Inc.

FINDINGS

Year	Uses	Source
2006	CAREER INST	Haines Company, Inc.

3371 N LOS COYOTES DIAGONAL

Year	Uses	Source
2006	HANNASally	Haines Company, Inc.

3380 N LOS COYOTES DIAGONAL

Year	Uses	Source
2006	COMPANY	Haines Company, Inc.
	&LOAN RALPHSGROCERY	Haines Company, Inc.
	DOWNEYSAVINGS	Haines Company, Inc.

3403 N LOS COYOTES DIAGONAL

Year	Uses	Source
2006	CORTEZ Aleandra	Haines Company, Inc.

3410 N LOS COYOTES DIAGONAL

Year	Uses	Source
2006	COHENJEFFREYM	Haines Company, Inc.

3411 N LOS COYOTES DIAGONAL

Year	Uses	Source
2006	o MATTAZAROTeresa	Haines Company, Inc.

3418 N LOS COYOTES DIAGONAL

Year	Uses	Source
2006	DANCE	Haines Company, Inc.
	CENTERSTAGE	Haines Company, Inc.

3424 N LOS COYOTES DIAGONAL

Year	Uses	Source
2006	CENTER	Haines Company, Inc.
	SYLVAN LEARNING	Haines Company, Inc.

N Los Coyotes Diagonal

3500 N Los Coyotes Diagonal

Year	Uses	Source
2010	SHAUNS	EDR Digital Archive
	SHAUNS	EDR Digital Archive

FINDINGS

N LOS COYOTES DIAGONAL

3500 N LOS COYOTES DIAGONAL

Year	Uses	Source
2006	ITALIANA	Haines Company, Inc.
	FERRAROS CUCINA	Haines Company, Inc.

PALO VERDE AVE

3220 PALO VERDE AVE

Year	Uses	Source
2006	o ARDRON George	Haines Company, Inc.
2000	DOMINELLO Lucy	Haines
1969	DOMINELLO SAM A	Pacific Telephone
1964	DOMINELLO SAM	Pacific Telephone
1960	GOETZ FAY M	Pacific Telephone

3221 PALO VERDE AVE

Year	Uses	Source
2006	DAVIS Sarah	Haines Company, Inc.
2000	XXXX	Haines
1975	Miller Mary E	Pacific Telephone
1969	CAIRNS GEO	Pacific Telephone
1964	KANEY WILFRED E SR	Pacific Telephone
1960	KANEY WILFRED E SR	Pacific Telephone
1957	KANEY WILFRED E SR	Pacific Telephone

3225 PALO VERDE AVE

Year	Uses	Source
2000	ADVANCED DERMATOLGY	Haines

3226 PALO VERDE AVE

Year	Uses	Source
2006	SIONGRenato	Haines Company, Inc.
2000	SIONG Alexia	Haines
1969	VACANT	Pacific Telephone
1964	DUREN JAS REV	Pacific Telephone
1957	GARRISON CLIFTON F	Pacific Telephone

FINDINGS

3227 PALO VERDE AVE

Year	Uses	Source
2006	a POLAND Jeffrey	Haines Company, Inc.
2000	POLAND Jeffrey	Haines
1969	MILLER J W	Pacific Telephone

3232 PALO VERDE AVE

Year	Uses	Source
2006	a KELLYJohn	Haines Company, Inc.
2000	KELLY John	Haines
1991	Kelly John C	Pacific Bell
1985	Kelly John C	Pacific Bell
1980	Kelly John C	Pacific Telephone
1975	Kelly John C	Pacific Telephone
1969	KELLY JOHN C H	Pacific Telephone
1964	KELLY JOHN C	Pacific Telephone
1960	KELLY JOHN C	Pacific Telephone
1957	KELLY JOHN C	Pacific Telephone

3233 PALO VERDE AVE

Year	Uses	Source
2006	GONSER Gregory	Haines Company, Inc.
2000	GONSER Gregory	Haines
1980	Murdock Norma	Pacific Telephone
1969	HERMAN MARIAN MRS	Pacific Telephone
1964	HERMAN MARIAN D	Pacific Telephone
1960	HERMON A E	Pacific Telephone
1957	HERMON A E	Pacific Telephone

Palo Verde Ave

3238 Palo Verde Ave

Year	Uses	Source
2014	LONG BEACH YELLOW CAB	EDR Digital Archive
	LONG BEACH YELLOW CAB	EDR Digital Archive
2010	KL PROFESSIONAL SVCS	EDR Digital Archive
	KL PROFESSIONAL SVCS	EDR Digital Archive

FINDINGS

PALO VERDE AVE

3238 PALO VERDE AVE

Year	Uses	Source
2006	KARNES SIeve	Haines Company, Inc.
2000	KARNES Steve	Haines
	WASHLE Dean	Haines
	X HACKETT AV	Haines
1991	Johnson Sara	Pacific Bell
1980	Cormody Laverne	Pacific Telephone
1975	Kjos Glenn L	Pacific Telephone
1969	NO RETURN	Pacific Telephone
1960	WEAVER KENNETH C	Pacific Telephone
1957	WEAVER KENNETH C	Pacific Telephone

3239 PALO VERDE AVE

Year	Uses	Source
2006	a TYLER James	Haines Company, Inc.
2000	FLIEHMANN Bradley	Haines
	BACIGALUPI Florencia	Haines
1985	Vineyard Rachel	Pacific Bell
1980	Vineyard Rachal	Pacific Telephone
1975	Vineyard Guy S	Pacific Telephone
1969	HESTON LYLE B	Pacific Telephone
1960	PANKEY FRED R	Pacific Telephone

3244 PALO VERDE AVE

Year	Uses	Source
2006	No Current Listing	Haines Company, Inc.
2000	CIRAMELLA Mario	Haines
1969	CIRAMELLA MARIO	Pacific Telephone
1960	CIRAMELLA MARIO	Pacific Telephone
1957	CIRAMELLA MARIO	Pacific Telephone

3245 PALO VERDE AVE

Year	Uses	Source
2000	FRANK Elizabeth	Haines
1985	Frank Terry R	Pacific Bell
1980	Frank Terry R	Pacific Telephone
1975	Frank Terry R	Pacific Telephone

Year	Uses	Source
1969	VOGEL GRACE P MRS	Pacific Telephone
1964	ROSILLO JAS O	Pacific Telephone
1957	TAYLOR BETTY E	Pacific Telephone

Palo Verde Ave

3250 Palo Verde Ave

Year	Uses	Source
2010	CU WEB SERVICES	EDR Digital Archive
	CU WEB SERVICES	EDR Digital Archive

PALO VERDE AVE

3250 PALO VERDE AVE

Year	Uses	Source
2006	MALLON Michael 00 n	Haines Company, Inc.
2000	STAUCH Richard	Haines
1991	Westmoreland Marvin E	Pacific Bell
1985	Westmoreland Marvin E	Pacific Bell
1980	Westmoreland Marvin E	Pacific Telephone
1975	Westmoreland Marvin E	Pacific Telephone
1969	WESTMORELAND MARVIN E	Pacific Telephone
1964	WESTMORELAND MARVIN E	Pacific Telephone
1960	WESTMORELAND MARVIN E	Pacific Telephone
1957	WESTMORELAND MARVIN E	Pacific Telephone

3251 PALO VERDE AVE

Year	Uses	Source
2006	DESANTI Teresa	Haines Company, Inc.
2000	LEE Wm M	Haines
1991	Lee Wm M	Pacific Bell
1985	Lee Wm M	Pacific Bell
1980	Lee Wm M	Pacific Telephone
1975	Lee Wm M	Pacific Telephone
1969	LEE WM M	Pacific Telephone
1964	LEE WM M	Pacific Telephone
1960	LEE WM M	Pacific Telephone

FINDINGS

3302 PALO VERDE AVE

Year	Uses	Source
2006	o ROCHAAugusto	Haines Company, Inc.
2000	STAVROU Vamavas	Haines
1980	Pearson Monty	Pacific Telephone
1975	Pearson Monty	Pacific Telephone
1969	PEARSON MONTY	Pacific Telephone
1964	SULLIVAN JAS P	Pacific Telephone
1957	RAASVELD M J	Pacific Telephone

Palo Verde Ave

3308 Palo Verde Ave

Year	Uses	Source
2014	JAMIE MCDONALD AND ASSOCIATES	EDR Digital Archive
	JAMIE MCDONALD AND ASSOCIATES	EDR Digital Archive

PALO VERDE AVE

3308 PALO VERDE AVE

Year	Uses	Source
2006	MCDONALD Matthew	Haines Company, Inc.
2000	FRANTZ R	Haines
1991	Marroche Robt	Pacific Bell
1975	Blazevich Robt	Pacific Telephone
1969	FAYLE HARRY R	Pacific Telephone
1964	FAYLE H R	Pacific Telephone
1960	FAYLE H R	Pacific Telephone
1957	FAYLE H R	Pacific Telephone

Palo Verde Ave

3314 Palo Verde Ave

Year	Uses	Source
2014	ALISON S INVESTMENT MANAGEMENT	EDR Digital Archive
	ALISON S INVESTMENT MANAGEMENT	EDR Digital Archive

FINDINGS

PALO VERDE AVE

3314 PALO VERDE AVE

Year	Uses	Source
2006	o HUNTAlison	Haines Company, Inc.
2000	XXXX	Haines
1991	Frandberg Chris & Chae	Pacific Bell
1980	Bair David W	Pacific Telephone
1975	Bair David W	Pacific Telephone
1969	LEGITT FLOYD C	Pacific Telephone
1964	VINCIGUERRA ALFONSO	Pacific Telephone
1960	HODSON THOS D	Pacific Telephone
1957	PELLAND CLILFORD B	Pacific Telephone

3320 PALO VERDE AVE

Year	Uses	Source
2006	BOYCE Charles	Haines Company, Inc.
1969	GILL NORMAN P	Pacific Telephone
1964	GILL NORMAN P	Pacific Telephone
1960	GILL NORMAN P	Pacific Telephone
1957	GILL NORNAN P	Pacific Telephone

3326 PALO VERDE AVE

Year	Uses	Source
2006	MILLER Rebecc	Haines Company, Inc.
2000	MILLER Rebecca	Haines
1991	Evans M R	Pacific Bell
1975	Grantham Medford M	Pacific Telephone
1969	KITTILSON FAYETTE K S H	Pacific Telephone
1964	KITTILSON FAYETTE K	Pacific Telephone
1960	KITTILSON FAYETTE K	Pacific Telephone
1957	VAN SS AVE	Pacific Telephone

3330 PALO VERDE AVE

Year	Uses	Source
2006	Chrysoslo	Haines Company, Inc.
	e DOMINICUS	Haines Company, Inc.
2000	ONDRICK Geraldine	Haines
1969	ROBB MYRTLE A MRS	Pacific Telephone
1960	REINHARDT CARL W	Pacific Telephone

Year	Uses	Source
1957	ROBB EARL T	Pacific Telephone

Palo Verde Ave

3331 Palo Verde Ave

Year	Uses	Source
2014	LONG BEACH ALLIANCE CHURCH	EDR Digital Archive
	LONG BEACH ALLIANCE CHURCH	EDR Digital Archive
2010	LONG BEACH ALLIANCE CHURCH	EDR Digital Archive
	LONG BEACH ALLIANCE CHURCH	EDR Digital Archive
2006	ALLIANCECHURCH	Haines Company, Inc.
	CHRISTIAN&	Haines Company, Inc.
	MSSNRYALNCECH	Haines Company, Inc.
2000	ALLIANCE CHURCH	Haines
1991	Alliance Church	Pacific Bell
	Christian & Missionary Alliance Church	Pacific Bell
1985	Alliance Church	Pacific Bell
	Christian & Missionary Alliance Church	Pacific Bell
	Vietnamese Alliance Church	Pacific Bell
1980	Vietnamese Alliance Church	Pacific Telephone
	Alliance Church	Pacific Telephone
	Christian & Missionary Alliance Church	Pacific Telephone
1975	Christian & Missionary Alliance Church	Pacific Telephone
1969	CHRISTIAN 6 MISSIONARY ALLIANCE	Pacific Telephone
	CHURCH	Pacific Telephone
	PALO VERDE AV Contd	Pacific Telephone
1964	CHRISTIAN & MISSIONARY ALLIANCE CHURCH	Pacific Telephone

PALO VERDE AVE

3336 PALO VERDE AVE

Year	Uses	Source
2006	CHAPMAN Thomas	Haines Company, Inc.
2000	DIGIACOMO Giuseppe	Haines
1969	BELL JOSEPH S	Pacific Telephone
1964	BELL JOS S	Pacific Telephone
1960	RUMMANS CHAS L	Pacific Telephone

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3344 PALO VERDE AVE

Year	Uses	Source
2006	LAPUZ Donate	Haines Company, Inc.
2000	BRENNAN William	Haines
	X WARDLOW RD E	Haines
1969	BRENNAN WM J S	Pacific Telephone
1964	BRANDNER R V	Pacific Telephone
1960	BRANDNER R V	Pacific Telephone
1957	BRANDNER R V	Pacific Telephone

3345 PALO VERDE AVE

Year	Uses	Source
1957	PROUSEJAS R FT	Pacific Telephone

Palo Verde Ave

3361 Palo Verde Ave

Year	Uses	Source
2014	LONG BEACH CITY OF	EDR Digital Archive
	LONG BEACH CITY OF	EDR Digital Archive
2010	LONG BEACH FIRE DEPT 18	EDR Digital Archive
	LONG BEACH FIRE DEPT 18	EDR Digital Archive

PALO VERDE AVE

3361 PALO VERDE AVE

Year	Uses	Source
1969	LONG BEACH FIRE DEPT STA	Pacific Telephone

3402 PALO VERDE AVE

Year	Uses	Source
2006	SMITH Charles	Haines Company, Inc.
2000	GLENEWINKEL G	Haines
1964	GANGEL ROBT	Pacific Telephone
1960	COBB MACK W	Pacific Telephone

3408 PALO VERDE AVE

Year	Uses	Source
2006	LICATA Charles	Haines Company, Inc.
2000	LICATA Charles	Haines

FINDINGS

TEVIS AVE

3403 TEVIS AVE

Year	Uses	Source
2006	BAGUINDOC Gloin	Haines Company, Inc.
	YUJUICO Glona	Haines Company, Inc.
2000	BAGUINDOC Gloria	Haines
	YUJUICO Gloria	Haines
1980	Babiak Timothy	Pacific Telephone
1975	Roberts Geo F	Pacific Telephone
1969	ROBERTS GEO 0 H	Pacific Telephone
1960	ROBERTS GEO F	Pacific Telephone
1957	ROBERTS GEAO F	Pacific Telephone

3409 TEVIS AVE

Year	Uses	Source
1964	HOOVEN ROBT G	Pacific Telephone
1960	HOOVEN ROBT G	Pacific Telephone
1957	HOOVEN ROBT G	Pacific Telephone
1954	HOOVEN ROBT G	R. L. Polk & Co.

WARDLOW RD E

6202 WARDLOW RD E

Year	Uses	Source
2000	DYER Meryle	Haines
1969	CARO LEANOR 0 HAS 8930	Pacific Telephone

6208 WARDLOW RD E

Year	Uses	Source
2000	BURGOYNE Jeanne	Haines
1969	KAINZ ANTON	Pacific Telephone

6212 WARDLOW RD E

Year	Uses	Source
2000	ROBLES Ernesto	Haines
1969	RIFFLE FRANCIS M MRS	Pacific Telephone

6218 WARDLOW RD E

Year	Uses	Source
2000	HAWKINS Blois	Haines

FINDINGS

Year	Uses	Source
1969	SIMS ALICE J MRS	Pacific Telephone

6228 WARDLOW RD E

Year	Uses	Source
2000	GOLGART G	Haines
1969	WERNER CHARLES	Pacific Telephone

6229 WARDLOW RD E

Year	Uses	Source
2000	FREEMAN Stanley	Haines
1969	VACANT	Pacific Telephone

6235 WARDLOW RD E

Year	Uses	Source
2000	HARMAN Louis 00 V	Haines
	X PALO VERDE AV	Haines
	X LOS COYOTES DIGNL N	Haines
1969	HARMAN LEWIS A	Pacific Telephone

6402 WARDLOW RD E

Year	Uses	Source
2000	JOHNSON Alan	Haines
1969	JOHNSON ALAN H	Pacific Telephone

6408 WARDLOW RD E

Year	Uses	Source
2000	GUZMAN Orlando	Haines
1969	GALLUP FRANK M 0 H	Pacific Telephone

FINDINGS

TARGET PROPERTY: ADDRESS NOT IDENTIFIED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not identified in the research source.

Address Researched	Address Not Identified in Research Source
3235/3325 Palo Verde Ave and 3320 Los Coyotes Diag	2004, 2003, 2001, 1999, 1996, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

ADJOINING PROPERTY: ADDRESSES NOT IDENTIFIED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not identified in research source.

Address Researched	Address Not Identified in Research Source
3220 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3221 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3225 CONQUISTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3225 PALO VERDE AVE	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3226 CONQUISTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3226 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3227 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
3232 CONQUISTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3232 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3233 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3235 CONQUISTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3236 CONQUISTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3238 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3238 Palo Verde Ave	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3238 Palo Verde Ave	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3239 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3240 CONQUISTA AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3240 Conquista Ave	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
3240 Conquista Ave	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3244 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3245 PALO VERDE AVE	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3250 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3250 Palo Verde Ave	2014, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3250 Palo Verde Ave	2014, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3251 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3286 CONQUISTA AVE	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3302 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3302 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3302 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3302 LOS COYOTES DIAGONAL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3302 N LOS COYOTES DIAGONAL	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3302 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3303 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3308 HACKETT AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3308 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3308 Palo Verde Ave	2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3308 Palo Verde Ave	2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3309 HACKETT AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3310 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3310 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
3310 LOS COYOTES DIAGONAL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3310 N LOS COYOTES DIAGONAL	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3314 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3314 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3314 Palo Verde Ave	2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3314 Palo Verde Ave	2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3315 Hackett Ave	2014, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3315 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3315 Hackett Ave	2014, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3320 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3320 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
3320 N LOS COYOTES DIAGONAL	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3320 N Los Coyotes Diagonal	2014, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3320 N Los Coyotes Diagonal	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3320 N Los Coyotes Diagonal	2014, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3320 N Los Coyotes Diagonal	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3320 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3321 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3326 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3326 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3327 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3329 N Los Coyotes Diagonal	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3329 N Los Coyotes Diagonal	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3330 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3331 Palo Verde Ave	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3331 Palo Verde Ave	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3331 Palo Verde Ave	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3332 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3333 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3333 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3333 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3333 LOS COYOTES DIAGONAL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3333 N LOS COYOTES DIAGONAL	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
3336 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3336 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3339 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3339 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3339 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3339 LOS COYOTES DIAGONAL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3339 N LOS COYOTES DIAGONAL	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3340 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3340 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3340 LOS COYOTES DIAGONAL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3340 N LOS COYOTES DIAGONAL	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3342 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3344 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3345 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3345 PALO VERDE AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3347 HACKETT AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3348 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3350 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3350 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3354 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3354 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3356 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3358 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3358 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3358 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3360 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3360 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3361 PALO VERDE AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3361 Palo Verde Ave	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3361 Palo Verde Ave	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3362 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3364 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3364 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3364 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3366 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3366 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3366 LOS COYOTES DIAGONAL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3368 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3368 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3368 LOS COYOTES DIAGONAL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3370 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3371 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3371 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3371 LOS COYOTES DIAGONAL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3371 N LOS COYOTES DIAGONAL	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3372 LOS COYOTES DIAGONAL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3374 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3374 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3374 LOS COYOTES DIAGONAL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3376 HACKETT AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3376 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3376 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3378 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3378 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3378 LOS COYOTES DIAGONAL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3380 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3380 Los Coyotes Diagonal	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3380 Los Coyotes Diagonal	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3380 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3380 LOS COYOTES DIAGONAL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3380 N LOS COYOTES DIAGONAL	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3402 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3403 LOS COYOTES DIAGONAL ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3403 N LOS COYOTES DIAGONAL	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3403 TEVIS AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3408 PALO VERDE AVE	2014, 2010, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3409 TEVIS AVE	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3410 Los Coyotes Diagonal	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3410 Los Coyotes Diagonal	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3410 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3410 N LOS COYOTES DIAGONAL	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3411 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3411 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3411 N LOS COYOTES DIAGONAL	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3414 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3418 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3418 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
3418 N LOS COYOTES DIAGONAL	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3420 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3420 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3422 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3424 LOS COYOTES DIAGONAL	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3424 LOS COYOTES DIAGONAL N	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3424 N LOS COYOTES DIAGONAL	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3500 N LOS COYOTES DIAGONAL	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3500 N Los Coyotes Diagonal	2014, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
3500 N Los Coyotes Diagonal	2014, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6165 CORALITE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6165 E CORALITE ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6202 E WARDLOW RD	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6202 WARDLOW RD E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6208 E WARDLOW RD	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6208 WARDLOW RD E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6212 E WARDLOW RD	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6212 WARDLOW RD E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6218 E WARDLOW RD	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6218 WARDLOW RD E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6221 E WARDLOW RD	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6228 E WARDLOW RD	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6228 WARDLOW RD E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6229 E WARDLOW RD	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1985, 1981, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6229 WARDLOW RD E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6230 E KILLDEE ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6230 E METZ ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6230 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6230 METZ ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6231 E KILLDEE ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6231 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6235 E WARDLOW RD	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6235 WARDLOW RD E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6236 E METZ ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6236 METZ ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6237 E KILLDEE ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6237 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6238 E KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6238 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6241 E METZ ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6241 METZ ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6242 E METZ ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6242 METZ ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6243 E KILLDEE ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6243 E Killdee St	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6243 E Killdee St	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6243 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6247 E METZ ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6247 METZ ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6248 E METZ ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6248 METZ ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6249 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6253 E KILLDEE ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6253 E METZ ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6253 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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Address Researched	Address Not Identified in Research Source
6253 METZ ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6254 E METZ ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6254 METZ ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6256 E KILLDEE ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6256 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6259 E KILLDEE ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6259 E METZ ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6259 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6259 METZ ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6260 E METZ ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6262 E KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

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6265 E KILLDEE ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6265 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6266 E KILLDEE ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6266 E Killdee St	2014, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6266 E Killdee St	2014, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6266 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6271 E KILLDEE ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6271 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6272 E KILLDEE ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6272 E Killdee St	2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

Address Researched	Address Not Identified in Research Source
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6272 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6277 E KILLDEE ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6277 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6278 E KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6278 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6283 E KILLDEE ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6283 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6284 E KILLDEE ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6284 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6289 E KILLDEE ST	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

FINDINGS

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6289 KILLDEE ST	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6402 E WARDLOW RD	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1990, 1986, 1981, 1976, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6402 WARDLOW RD E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6408 E WARDLOW RD	2014, 2010, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1963, 1962, 1961, 1958, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6408 WARDLOW RD E	2014, 2010, 2006, 2004, 2003, 2001, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1954, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920
6414 E WARDLOW RD	2014, 2010, 2006, 2004, 2003, 2001, 2000, 1999, 1996, 1995, 1992, 1991, 1990, 1986, 1985, 1981, 1980, 1976, 1975, 1972, 1971, 1970, 1969, 1967, 1966, 1965, 1964, 1963, 1962, 1961, 1960, 1958, 1957, 1956, 1955, 1952, 1951, 1950, 1949, 1948, 1947, 1946, 1945, 1944, 1942, 1940, 1939, 1938, 1937, 1936, 1935, 1934, 1933, 1932, 1931, 1930, 1929, 1928, 1927, 1926, 1925, 1924, 1923, 1921, 1920

January 13, 2017
Project No. 2016-170
By Email

Ms. Jillian Ly
California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, California 90013

Re: 2016 Annual Groundwater Monitoring Report, Former Royalty Cleaners, 3378 Los Coyotes Diagonal, Long Beach, California, SLIC No. 537

Dear Ms. Ly:

Lindmark Engineering (LE) has prepared the attached report to present the results of the 2016 annual groundwater monitoring event at the subject site. The report has been uploaded to Geotracker.

In view of the long term trend of PCE attenuation and maximum PCE concentrations below 50 µg/L for the last two events, LE believes the site should be considered for closure. Therefore, LE recommends a conference call with the RWQCB to discuss the requirements for site closure.

Please call us at 818-707-6100 if you have any questions.

Best regards,

PROFESSIONAL GEOLOGIST
DAVID WAYNE SMITH
NO. 8817
EXP. NOV. 30, 2018
STATE OF CALIFORNIA

David W. Smith, PG
Senior Project Geologist

and,

REGISTERED PROFESSIONAL ENGINEER
ULF M. LINDMARK
NO. 36787
EXPIRATION JUNE 30, 2018
CIVIL
STATE OF CALIFORNIA

Ulf Lindmark, PE, BCEE
President

cc: Maya Lopez Grasse/Alston+Bird (pdf)

Groundwater Monitoring Report
2016 Annual Sampling Event
Former Royalty Cleaners
3378 Los Coyotes Diagonal, Long Beach, California

13-Jan-17

GENERAL SITE INFORMATION

Site name:	Former Royalty Cleaners	**On-site groundwater wells:**	0
Site address	3378 Los Coyotes Diagonal, Long Beach, California	**Off-site groundwater wells:**	9

AGENCY INFORMATION

Local Agenc California Regional Water Quality Control Board, LA Region
Case Officer Ms. Jillian Ly
State Agenc State Water Resources Control Board

WORK PERFORMED IN 2015

Conducted 2016 annual groundwater gauging and sampling on December 20, 2016.

GROUNDWATER GAUGING AND SAMPLING FIELD ACTIVITIES

Groundwater monitoring wells gauging date:	20-Dec-16
Groundwater monitoring wells sampling date:	20-Dec-16
Number of wells gauged:	9
Number of wells sampled:	9
Method of purging/volume purged:	Submersible pump; approximately 78.75 gallons purged
Purged water disposal:	Crosby and Overton, Long Beach, California
Amount of LNAPL recovered during purging:	Not applicable
LNAPL disposal/treatment:	Not applicable
Field observations/notes:	No light non-aqueous phase liquid (LNAPL) was detected in wells. Tree roots observed in MW5, MW6, and MW7

RESULTS OF GROUNDWATER GAUGING

Minimum depth to groundwater (feet below ground surface [bgs]):	23.81	in well	MW9
Maximum depth to groundwater (feet bgs):	26.28	in well	MW5
Lowest groundwater elevation (feet above mean sea level):	0.15	in well	MW9
Highest groundwater elevation (feet above mean sea level):	1.11	in well	MW10
Average change in groundwater elevation since previous event (feet):	-1.42		
Recent groundwater gradient and flow direction and date:	0.0023	SSE on	12/20/16
Previous groundwater gradient, flow direction and date:	0.0017	SSE on	12/23/15

LABORATORY RESULTS OF GROUNDWATER SAMPLES

Laboratory name:	American Scientific Laboratories, LLC, Los Angeles, California		
List of analyses performed:	Volatile organic compounds by EPA Method 8260B		
Maximum PCE concentration (µg/L):	36.8	in well	MW4
Maximum TCE concentration (µg/L):	39.2	in well	MW4

FINDINGS

Groundwater elevation data collected during this monitoring event show an average 2.66-foot decrease compared with data reported during the previous sampling event (2015 Annual Groundwater Monitoring Event). As during last year's monitoring event, groundwater elevations at all wells were the lowest on record, with a gradient of approximately 0.0023, which is typical for the site. However, the groundwater contours form an unusual feature toward the western portion of the site. The field data sheets during this sampling event indicate tree roots in wells MW5, MW6, and MW7, which are located in the western portion of the site. Tree roots at this site have been known to influence depth to water readings during previous sampling events, therefore the unusual groundwater contours in the western portion of the site are likely the result of the tree roots observed in these wells.

Since the previous sampling event, tetrachloroethene (PCE) concentrations generally decreased. Increases in PCE concentrations were recorded in wells MW3, MW6, and MW10, while decreases were recorded in wells in MW4, MW5, MW6, MW7, MW8, and MW9, and remained non-detect in well MW7, and MW11. PCE concentrations were within the historical range except for well MW8 which was the lowest PCE concentration at this well in site records. It appears the core of the PCE plume in groundwater continues to elongate toward the direction of MW5 and MW9, however PCE concentrations are declining. The aerial extent of the PCE plume in groundwater, with concentrations above the California Maximum Contaminant Level (MCL) of 5 µg/L, has remained approximately similar since the last sampling event. Concentrations indicate the plume continues to demonstrate steady-state behavior.

Trichloroethene (TCE) concentrations above the method detection limit (MDL) were detected in seven wells (MW3, MW4, MW5, MW6, MW8, MW9, and MW10). Some TCE concentrations increased slightly while others decreased or remained below detection limits, with the exception of MW3 and MW4 where TCE concentrations increased more significantly (from 4.22 µg/L to 19.0 µgL in MW3, and from

18.7µg/L to 39.2 µg/L). The highest TCE concentration was detected in MW4, and for the first time, the TCE concentration in a well was higher than the PCE concentration. *Cis*-1,2-dichloroethene (cis-1,2-DCE), which is a daughter product of TCE, increased in wells MW3, MW4, and MW5. Cis-1,2-DCE was not detected in wells MW6 through MW11. P-isopropyltoluene was detected in wells MW6 and MW7 each at a concentration of 20.3 µg/L., which is a historical maximum for each well for this VOC. No other VOCs were detected.

The PCE concentration in the most downgradient well, MW9, decreased from a historical high of 22.5 µg/L during the previous sampling event to 19.4 µg/L during this event. The same historical high PCE concentration in this well was recorded on December 20, 2012. Well MW9 is approximately 140 feet downgradient of well MW8. Since 2006, the PCE concentrations in MW8 have shown a declining trend after reaching a peak of 178 µg/L on December 13, 2005. The reduction in maximum PCE concentrations from well MW6, which is 266 feet upgradient of MW8, to MW8 (maximum of 1,550 µg/L at MW6 to a maximum of 178 µg/L at MW8) and from MW8 to MW9 (a maximum of 178 µg/L at MW8 to a maximum of 22.5 µg/L at MW9) indicates very significant attenuation in the downgradient direction.

CONCLUSIONS

If roots continue to influence depth to groundwater measurements at MW5, MW6, and MW7, excessive root growth could prevent groundwater sampling during subsequent sampling events.

The presence of TCE and cis-1,2-DCE concentrations at the site indicates the degradation of the parent compound, PCE.

PCE concentrations found during this sampling event increased at three wells, but generally decreased at other wells, and were similar to the previous event and fell within the historic range with the exception of MW8 which was the lowest PCE concentration recorded for this well. PCE concentrations in downgradient well MW8 continues to be lower than upgradient wells (MW5) or wells close to the source area (MW3 and MW4). Wells near the source area appear to have stable or decreasing PCE concentrations despite large fluctuations in groundwater elevations. These data support the conclusion that the PCE plume is maintaining steady-state behavior or is decreasing in mass.

Based on the historic PCE data from wells MW6, MW8, and MW9, well MW9 is a representative downgradient well. LE expects that a long-term trend of attenuation in the downgradient direction and stable or lower PCE concentrations in this well will continue.

In view of the long term trend of PCE attenuation and maximum PCE concentrations below 50 µg/L for the last two events, LE believes the site should be considered for closure.

RECOMMENDATIONS

Lindmark Engineering recommends a conference call with the RWQCB to discuss the requirements for site closure.

STATEMENT OF LIMITATIONS

This report has been prepared for the exclusive use of the client and may not be relied upon by any other person or entity without Lindmark Engineering's express written permission.

The services described in this report were performed in a manner consistent with Lindmark Engineering's agreement with the client and in accordance with generally accepted professional consulting principles and practices.

Opinions and recommendations contained in this report apply to conditions existing at certain locations when services were performed and are intended only for the specific purposes, locations, time frames, and project parameters indicated. Lindmark Engineering cannot be responsible for the impact of any changes in environmental standards, practices, or regulations after performance of services.

Lindmark Engineering has not attempted to verify information/data provided to it by our client or other third parties, except as explicitly noted in our report, and makes no express representations to the accuracy of such information/data by the inclusion of it in our report.

This report is issued with the understanding that the client, the property owner, or its representative is responsible for ensuring that the information, conclusions and recommendations contained herein are brought to the attention of the appropriate regulatory agencies, as required.

ATTACHMENTS

Tables

Table 1	Summary of Groundwater Monitoring Results
Table 2	Summary of Groundwater Analytical Results
Table 3	Historic Groundwater Elevations
Table 4	Historic Groundwater Analytical Results – Organic Contaminants

Figures

Figure 1	Site Vicinity Map
Figure 2	Groundwater Contour Map (12/20/16)
Figure 3	PCE, TCE, and cis-1,2-DCE Concentration Map in Groundwater (12/20/16)

Appendices

Appendix A	Field Methodology
Appendix B	Graphs of Detected Concentrations & Groundwater Elevations versus Time
Appendix C	Well Purging Records
Appendix D	Laboratory Analytical Reports and Chain-of-Custody Records
Appendix E	Non-Hazardous Waste Manifest

TABLES

Table 1
Summary of Groundwater Monitoring Results
Former Royalty Cleaners

Well ID	Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)
MW1	12/20/16		Abandoned	
MW2	12/20/16		Abandoned	
MW3	12/20/16	26.07	25.10	0.97
MW4	12/20/16	26.11	25.12	0.99
MW5	12/20/16	26.71	26.28	0.43
MW6	12/20/16	26.47	25.74	0.73
MW7	12/20/16	25.02	24.54	0.48
MW8	12/20/16	24.67	24.50	0.17
MW9	12/20/16	23.96	23.81	0.15
MW10	12/20/16	25.50	24.39	1.11
MW11	12/20/16	24.97	24.31	0.66

AMSL = Above mean sea level

Table 2
Summary of Groundwater Analytical Results
2016 Annual Monitoring Event

Well ID	Date	PCE (µg/L)	TCE (µg/L)	Other (µg/L)
MW1	12/20/16	—	—	—
MW2	12/20/16	—	—	—
MW3	12/20/16	34.0	19.0	3.60 *
MW4	12/20/16	36.8	39.2	9.34 *
MW5	12/20/16	33.2	10.5	1.43 *
MW6	12/20/16	7.92	1.90	20.30 **
MW7	12/20/16	ND	ND	20.30 **
MW8	12/20/16	5.55	0.845J	ND
MW9	12/20/16	19.4	2.88	ND
MW10	12/20/16	0.635J	0.140J	ND
MW11	12/20/16	ND	ND	ND
MDL		0.421	0.117	—
PQL		1.00	1.00	—
Cal MCL		5.00	5.00	—

Notes:

Cal MCL = California Department of Health Services Maximum Contaminant Leve

PQL = Practical quantitation limit

MDL = Method detection limit

µg/L = Micrograms per liter

ND = Not detected at or above stated PQL

PCE Tetrachloroethene

TCE Trichloroethene

* Cis-1,2-dichloroethene

** p-Isopropyltoluene

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)		Notes
MW1					
02/03/00	26.01	18.33	7.68		
04/13/00	26.01	17.62	8.39	(H)	
07/03/00	26.01	18.37	7.64		
09/11/00	26.01	19.66	6.35	(L)	
10/10/00	26.01	abandoned			
MW2					
02/03/00	28.53	20.67	7.86		
04/13/00	28.53	19.94	8.59	(H)	
07/03/00	28.53	20.72	7.81		
09/11/00	28.53	22.00	6.53	(L)	
10/10/00	28.53	abandoned			
MW3					
02/03/00	26.07	18.36	7.71		
04/13/00	26.07	17.64	8.43		
07/03/00	26.07	18.39	7.68		
09/11/00	26.07	19.74	6.33		
11/03/00	26.07	20.06	6.01		
02/05/01	26.07	19.48	6.59		
07/02/01	26.07	17.41	8.66		
01/29/02	26.07	19.09	6.98		
03/28/02	26.07	18.97	7.10		
04/12/02	26.07	18.93	7.14		
06/27/02	26.07	20.11	5.96		
11/03/02	26.07	21.76	4.31		
01/02/03	26.07	20.99	5.08		
03/17/03	26.07	19.69	6.38		
09/03/03	26.07	19.75	6.32		
03/19/04	26.07	18.90	7.17		
09/17/04	26.07	20.97	5.10		
05/27/05	26.07	13.41	12.66	(H)	
12/13/05	26.07	15.52	10.55		
06/13/06	26.07	14.19	11.88		
12/18/06	26.07	16.53	9.54		
06/05/07	26.07	16.78	9.29		

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
12/13/07	26.07	19.65	6.42	
12/22/08	26.07	20.99	5.08	
06/10/09	26.07	21.15	4.92	
11/24/09	26.07	22.32	3.75	
06/25/10	26.07	20.94	5.13	
12/16/10	26.07	21.56	4.51	
12/20/11	26.07	17.38	8.69	
12/20/12	26.07	19.05	7.02	
12/30/13	26.07	20.31	5.76	
02/13/15	26.07	22.32	3.75	
12/23/15	26.07	23.60	2.47	
12/20/16	26.07	25.10	0.97 (L)	
MW4				
02/03/00	26.11	18.42	7.69	
04/13/00	26.11	17.70	8.41	
07/03/00	26.11	18.46	7.65	
09/11/00	26.11	19.80	6.31	
11/03/00	26.11	20.12	5.99	
02/05/01	26.11	19.56	6.55	
07/02/01	26.11	17.49	8.62	
01/29/02	26.11	19.15	6.96	
03/28/02	26.11	19.05	7.06	
04/12/02	26.11	18.99	7.12	
06/27/02	26.11	20.19	5.92	
11/03/02	26.11	21.83	4.28	
01/02/03	26.11	21.05	5.06	
03/17/03	26.11	19.74	6.37	
09/03/03	26.11	19.80	6.31	
03/19/04	26.11	18.97	7.14	
09/17/04	26.11	21.04	5.07	
05/27/05	26.11	13.48	12.63 (H)	
12/13/05	26.11	15.57	10.54	
06/13/06	26.11	14.25	11.86	
12/18/06	26.11	16.60	9.51	
06/05/07	26.11	16.85	9.26	
12/13/07	26.11	19.72	6.39	
12/22/08	26.11	21.06	5.05	
06/10/09	26.11	21.21	4.90	
11/24/09	26.11	22.37	3.74	

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
06/25/10	26.11	21.00	5.11	
12/16/10	26.11	21.62	4.49	
12/20/11	26.11	17.44	8.67	
12/20/12	26.11	19.15	6.96	
12/30/13	26.11	20.35	5.76	
02/13/15	26.11	22.41	3.70	
12/23/15	26.11	23.54	2.57	
12/20/16	26.11	25.12	0.99 (L)	
MW5				
02/03/00	26.71	19.55	7.16	
04/13/00	26.71	18.85	7.86	
07/03/00	26.71	19.56	7.15	
09/11/00	26.71	20.94	5.77	
11/03/00	26.71	21.29	5.42	
02/05/01	26.71	20.68	6.03	
07/02/01	26.71	18.61	8.10	
01/29/02	26.71	20.28	6.43	
03/28/02	26.71	20.16	6.55	
04/12/02	26.71	20.13	6.58	
06/27/02	26.71	21.34	5.37	
11/03/02	26.71	22.98	3.73	
01/02/03	26.71	22.14	4.57	
03/17/03	26.71	20.80	5.91	
09/03/03	26.71	20.94	5.77	
03/19/04	26.71	20.06	6.65	
09/17/04	26.71	22.20	4.51	
05/27/05	26.71	14.59	12.12 (H)	
12/13/05	26.71	16.47	10.24	
06/13/06	26.71	15.37	11.34	
12/18/06	26.71	17.71	9.00	
06/05/07	26.71	17.98	8.73	
12/13/07	26.71	20.81	5.90	
12/22/08	26.71	22.16	4.55	
06/10/09	26.71	22.27	4.44	
11/24/09	26.71	23.50	3.21	
06/25/10	26.71	22.02	4.69	
12/16/10	26.71	22.72	3.99	
12/20/11	26.71	18.62	8.09	
12/20/12	26.71	20.26	6.45	

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
12/30/13	26.71	21.65	5.06	
02/13/15	26.71	23.52	3.19	
12/23/15	26.71	24.76	1.95	
12/20/16	26.71	26.18	0.53 (L)	
MW6				
04/13/00	26.47	18.55	7.92	
07/03/00	26.47	19.34	7.13	
09/11/00	26.47	20.72	5.75	
11/03/00	26.47	21.05	5.42	
02/05/01	26.47	20.40	6.07	
07/02/01	26.47	18.38	8.09	
01/29/02	26.47	20.02	6.45	
03/28/02	26.47	19.88	6.59	
04/12/02	26.47	19.85	6.62	
06/27/02	26.47	21.11	5.36	
11/03/02	26.47	22.72	3.75	
01/02/03	26.47	21.84	4.63	
03/17/03	26.47	20.51	5.96	
09/03/03	26.47	20.70	5.77	
03/19/04	26.47	19.75	6.72	
09/17/04	26.47	21.96	4.51	
05/27/05	26.47	14.37	12.10 (H)	
12/13/05	26.47	16.45	10.02	
06/13/06	26.47	15.08	11.39	
12/18/06	26.47	17.35	9.12	
06/05/07	26.47	17.71	8.76	
12/13/07	26.47	20.51	5.96	
12/22/08	26.47	21.88	4.59	
06/10/09	26.47	21.88	4.59	
11/24/09	26.47	23.21	3.26	
06/25/10	26.47	21.74	4.73	
12/16/10	26.47	22.41	4.06	
12/20/11	26.47	18.23	8.24	
12/20/12	26.47	20.04	6.43	
12/30/13	26.47	21.14	5.33	
02/13/15	26.47	23.14	3.33	
12/23/15	26.47	24.45	2.02	
12/20/16	26.47	25.74	0.73 (L)	

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
MW7				
03/28/02	25.02	18.66	6.36	
04/12/02	25.02	18.62	6.40	
06/27/02	25.02	19.87	5.15	
11/03/02	25.02	21.53	3.49	
01/02/03	25.02	20.65	4.37	
03/17/03	25.02	19.28	5.74	
09/03/03	25.02	19.44	5.58	
03/19/04	25.02	18.56	6.46	
09/17/04	25.02	20.72	4.30	
05/27/05	25.02	13.13	11.89 (H)	
12/13/05	25.02	15.19	9.83	
06/13/06	25.02	14.10	10.92	
12/18/06	25.02	16.34	8.68	
06/05/07	25.02	16.50	8.52	
12/13/07	25.02	19.37	5.65	
12/22/08	25.02	20.73	4.29	
06/10/09	25.02	20.77	4.25	
11/24/09	25.02	21.94	3.08	
06/25/10	25.02	20.52	4.50	
12/16/10	25.02	21.38	3.64	
12/20/11	25.02	17.05	7.97	
12/20/12	25.02	20.70	4.32	
12/30/13	25.02	20.05	4.97	
02/13/15	25.02	22.52	2.50	
12/23/15	25.02	23.24	1.78	
12/20/16	25.02	24.54	0.48 (L)	
MW8				
03/28/02	24.67	18.49	6.18	
04/12/02	24.67	18.51	6.16	
06/27/02	24.67	19.92	4.75	
11/03/02	24.67	21.52	3.15	
01/02/03	24.67	20.41	4.26	
03/17/03	24.67	19.10	5.57	
09/02/03	24.67	19.39	5.28	
03/19/04	24.67	18.34	6.33	
09/17/04	24.67	20.75	3.92	
05/27/05	24.67	13.18	11.49 (H)	
12/13/05	24.67	15.17	9.50	

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
06/13/06	24.67	13.82	10.85	
12/18/06	24.67	16.17	8.50	
06/05/07	24.67	16.40	8.27	
12/13/07	24.67	19.33	5.34	
12/22/08	24.67	20.65	4.02	
06/10/09	24.67	20.71	3.96	
11/24/09	24.67	21.91	2.76	
06/25/10	24.67	20.28	4.39	
12/16/10	24.67	21.05	3.62	
12/20/11	24.67	16.81	7.86	
12/20/12	24.67	18.56	6.11	
12/30/13	24.67	19.70	4.97	
02/13/15	24.67	21.71	2.96	
12/23/15	24.67	23.00	1.67	
12/20/16	24.67	24.50	0.17 (L)	
MW9				
01/02/03	23.96	19.87	4.09	
03/17/03	23.96	18.47	5.49	
09/02/03	23.96	18.87	5.09	
03/19/04	23.96	17.79	6.17	
09/17/04	23.96	20.22	3.74	
05/27/05	23.96	12.72	11.24 (H)	
12/13/05	23.96	14.7	9.26	
06/13/06	23.96	13.33	10.63	
12/18/06	23.96	15.68	8.28	
06/05/07	23.96	15.90	8.06	
12/13/07	23.96	18.84	5.12	
12/22/08	23.96	20.18	3.78	
06/10/09	23.96	20.16	3.80	
11/24/09	23.96	21.33	2.63	
06/25/10	23.96	19.71	4.25	
12/16/10	23.96	20.46	3.50	
12/20/11	23.96	16.32	7.64	
12/20/12	23.96	17.96	6.00	
12/30/13	23.96	19.18	4.78	
02/13/15	23.96	21.07	2.89	
12/23/15	23.96	22.49	1.47	
12/20/16	23.96	23.81	0.15 (L)	

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
MW10				
12/13/05	25.50	15.15	10.35	
06/13/06	25.50	13.80	11.70 (H)	
12/18/06	25.50	16.15	9.35	
06/05/07	25.50	16.42	9.08	
12/13/07	25.50	19.28	6.22	
12/22/08	25.50	20.62	4.88	
06/10/09	25.50	20.73	4.77	
11/24/09	25.50	21.92	3.58	
06/25/10	25.50	20.42	5.08	
12/16/10	25.50	21.10	4.40	
12/20/11	25.50	16.88	8.62	
12/20/12	25.50	18.53	6.97	
12/30/13	25.50	19.91	5.59	
02/13/15	25.50	21.70	3.80	
12/23/15	25.50	23.07	2.43	
12/20/16	25.50	24.39	1.11 (L)	

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
MW11				
12/13/05	24.97	15.07	9.90	
06/13/06	24.97	13.68	11.29 (H)	
12/18/06	24.97	16.04	8.93	
06/05/07	24.97	16.30	8.67	
12/13/07	24.97	19.18	5.79	
12/22/08	24.97	20.52	4.45	
06/10/09	24.97	20.51	4.46	
11/24/09	24.97	21.72	3.25	
06/25/10	24.97	20.14	4.83	
12/16/10	24.97	21.46	3.51	
12/20/11	24.97	16.67	8.30	
12/20/12	24.97	18.81	6.16	
12/30/13	24.97	19.65	5.32	
02/13/15	24.97	21.49	3.48	
12/23/15	24.97	22.83	2.14	
12/20/16	24.97	24.31	0.66 (L)	

Notes:

(H) = Highest historical groundwater elevation
(L) = Lowest historical groundwater elevation
AMSL = Above mean sea level

Table 4

Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
MW1				
05/06/96	3,700.0	ND	ND	
02/03/00	1,980.0	65.0	13.0	Other was *cis*- 1,2-dichloroethene
07/03/00	1,990.0	ND	ND	
09/11/00	3,560.0	118.0	ND	
10/10/00	abandoned			
MW2				
05/06/96	8.3	2.6	ND	
02/03/00	ND	ND	ND	
07/03/00	ND	ND	ND	
09/11/00	ND	ND	ND	
09/27/00	abandoned			
MW3				
05/06/96	2,200.0	ND	ND	
02/03/00	72.0	19.0	ND	
07/03/00	60.4	14.9	ND	
09/11/00	50.5	29.0	0.7	Other was *cis*- 1,2-dichloroethene
11/03/00	26.5	26.3	1.0	Other was *cis*- 1,2-dichloroethene
02/05/01	23.6	5.0	ND	
07/02/01	94.7	3.8	0.7	
07/02/01	–	–	0.5	Other was chloroform (trichloromethane)
01/29/02	4.0	7.6	ND	
03/28/02	19.4	2.7	ND	
06/27/02	377.0	39.0	ND	
11/13/02	55.1	25.0	4.2	Other was *cis*- 1,2-dichloroethene
01/02/03	20.9	25.6	1.6	Other was *cis*- 1,2-dichloroethene
03/17/03	31.7	4.3	ND	
09/02/03	95.5	16.3	0.7	Other was *cis*- 1,2-dichloroethene
03/19/04	17.1	2.2	ND	
09/17/04	150.0	33.0	ND	
05/27/05	10.0	17.0	1.4	Other was *cis*- 1,2-dichloroethene
12/13/05	14.4	4.0	ND	
06/13/06	13.3	5.1	ND	

Table 4

Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
12/18/06	29.0	26.0	1.8	Other was *cis*- 1,2-dichloroethene
06/05/07	81.1	17.2	1.0	Other was *cis*- 1,2-dichloroethene
12/13/07	145.0	58.5	4.9	Other was *cis*- 1,2-dichloroethene
12/22/08	63.8	44.2	3.1	Other was *cis*- 1,2-dichloroethene
06/10/09	142.0	33.8	2.6	Other was *cis*- 1,2-dichloroethene
11/24/09	152.0	78.7	10.1	Other was *cis*- 1,2-dichloroethene
06/25/10	37.1	9.4	ND	
12/16/10	14.2	2.7	ND	
12/21/11	89.6	37.3	4.39	Other was *cis*- 1,2-dichloroethene
12/20/12	14.1	3.96	ND	
12/30/13	12.8	2.70	ND	
02/13/15	53.7	18.3	1.85	Other was *cis*- 1,2-dichloroethene
12/23/15	14.3	4.22	0.37 J	Other was *cis*- 1,2-dichloroethene
12/20/16	34.0	19.0	3.60	Other was *cis*- 1,2-dichloroethene
MW4				
05/06/96	1,300.0	ND	ND	
02/03/00	1,540.0	59.0	ND	
07/03/00	2,200.0	ND	ND	
09/11/00	1,280.0	ND	ND	
11/03/00	830.0	78.0	ND	
02/05/01	2,630.0	59.0	ND	
07/02/01	975.0	45.0	ND	
01/29/02	820.0	49.0	ND	
03/28/02	559.0	14.0	ND	
06/27/02	147.0	6.0	ND	
11/13/02	792.0	93.0	ND	
01/02/03	410.0	49.0	ND	
03/17/03	109.0	6.8	ND	
09/02/03	645.0	31.0	ND	
03/19/04	97.1	7.6	ND	
09/17/04	410.0	34.0	ND	
05/27/05	81.0	19.0	0.90 J	Other was *cis*- 1,2-dichloroethene
12/13/05	110.0	13.6	ND	
06/13/06	516.0	67.0	ND	
12/18/06	740.0	71.0	1.7	Other was *cis*- 1,2-dichloroethene

Table 4

Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
06/05/07	131.0	12.1	ND	
12/13/07	1,440.0	108.0	ND	
12/22/08	960.0	121.0	ND	
06/10/09	165.0	18.6	ND	
11/24/09	851.0	102.0	ND	
06/25/10	69.9	15.8	1.35	Other was *cis*- 1,2-dichloroethene
12/16/10	79.5	27.4	2.91	Other was *cis*- 1,2-dichloroethene
12/21/11	21.7	4.3	0.540 J	Other was *cis*- 1,2-dichloroethene
12/20/12	96.8	48.1	4.37	Other was *cis*- 1,2-dichloroethene
12/30/13	133.0	67.0	7.41	Other was *cis*- 1,2-dichloroethene
02/13/15	73.3	53.2	8.57	Other was *cis*- 1,2-dichloroethene
12/23/15	37.4	18.7	2.67	Other was *cis*- 1,2-dichloroethene
12/20/16	36.8	39.2	9.34	Other was *cis*- 1,2-dichloroethene
MW5				
02/03/00	29.0	2.2	ND	
07/03/00	8.7	ND	ND	
09/11/00	15.0	0.6	ND	
11/03/00	14.9	ND	ND	
02/05/01	7.7	ND	ND	
07/02/01	6.2	ND	ND	
01/29/02	5.4	ND	ND	
03/28/02	25.3	2.1	ND	
06/27/02	16.7	1.3	ND	
11/13/02	11.2	0.9	ND	
01/02/03	6.1	0.7	ND	
03/17/03	15.6	1.1	ND	
09/02/03	11.2	0.8	ND	
03/19/04	9.5	ND	ND	
09/17/04	5.8	ND	ND	
05/27/05	3.5	0.39 J	ND	
12/13/05	15.6	0.85 J	ND	
06/13/06	16.6	2.3	ND	
12/18/06	9.8	1.0	ND	
06/05/07	4.5	ND	ND	
12/13/07	9.3	ND	ND	
12/22/08	8.45	ND	ND	
06/10/09	6.62	ND	ND	

Table 4

Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
11/24/09	5.37	ND	ND	
06/25/10	3.21	ND	ND	
12/16/10	4.05	ND	ND	
12/21/11	2.46	1.5	0.325 J	Other was *cis*- 1,2-dichloroethene
12/20/12	19.30	9.26	1.23	Other was *cis*- 1,2-dichloroethene
12/30/13	25.60	5.39	ND	
02/13/15	67.2	25.0	4.06	Other was *cis*- 1,2-dichloroethene
12/23/15	40.5	10.2	1.29	Other was *cis*- 1,2-dichloroethene
12/20/16	33.2	10.5	1.43	Other was *cis*- 1,2-dichloroethene
MW6				
04/13/00	84.5	3.2	ND	
07/03/00	66.8	2.3	ND	
09/11/00	1,550.0	ND	ND	
11/03/00	115.0	4.9	ND	
02/05/01	77.6	5.6	ND	
07/02/01	48.2	2.8	ND	
01/29/02	44.4	2.2	ND	
03/28/02	19.8	1.5	ND	
06/27/02	82.4	7.0	ND	
11/13/02	61.2	4.1	ND	
01/02/03	41.9	2.5	ND	
03/17/03	128.0	5.3	ND	
09/02/03	147.0	5.5	6.8	Other was dichlorodifluoromethane
03/19/04	140.0	8.7	ND	
09/17/04	89.0	7.2	ND	
05/27/05	38.0	3.8	ND	
12/13/05	86.5	6.8	0.76 J	Other was *cis*- 1,2-dichloroethene
06/13/06	65.4	8.1	ND	
12/18/06	80.0	9.9	0.8	Other was *cis*- 1,2-dichloroethene
06/05/07	121.0	10.9	1.4	Other was *cis*- 1,2-dichloroethene
12/13/07	64.1	6.6	ND	
12/22/08	72.3	7.72	ND	
06/10/09	103.0	13.50	ND	
11/24/09	144.0	17.70	ND	
06/25/10	86.3	12.50	ND	
12/16/10	95.7	12.40	ND	
12/21/11	26.3	3.66	0.510 J	

Table 4

Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
12/20/12	29.9	4.76	2.98	Other was *cis*- 1,2-dichloroethene
12/30/13	26.7	3.67	ND	
02/13/15	17.9	5.77	0.490 J	*cis*- 1,2-dichloroethene
12/23/15	ND	ND	ND	
12/20/16	7.92	1.90	20.3	Other was p-isopropyltoluene
MW7				
03/28/02	1.2	ND	ND	
06/27/02	0.8	ND	ND	
11/13/02	0.5	ND	ND	
01/02/03	ND	ND	ND	
03/17/03	1.1	ND	ND	
09/02/03	0.6	ND	ND	
03/19/04	ND	ND	ND	
09/17/04	ND	ND	ND	
05/27/05	0.48 J	ND	ND	
12/13/05	2.0	0.25 J	ND	
06/13/06	1.5	1.7	ND	
12/18/06	3.6	ND	ND	
06/05/07	ND	ND	ND	
12/13/07	2.0	ND	ND	
12/22/08	ND	ND	ND	
06/10/09	ND	ND	ND	
11/24/09	ND	ND	ND	
06/25/10	ND	ND	ND	
12/16/10	ND	ND	ND	
12/21/11	ND	ND	ND	
12/20/12	ND	ND	ND	
12/30/13	ND	ND	ND	
02/13/15	ND	ND	2.56	p-Isopropyltoluene
12/23/15	ND	ND	ND	
12/20/16	ND	ND	20.3	Other was p-Isopropyltoluene
MW8				
03/28/02	42.3	1.8	ND	
06/27/02	51.7	2.7	ND	
11/13/02	66.6	3.1	ND	
01/02/03	53.2	3.5	ND	
03/17/03	149.0	5.5	ND	

Table 4

Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
09/02/03	64.6	2.9	97.6	Other was dichlorodifluoromethane
03/19/04	112.0	5.1	4.1	Other was dichlorodifluoromethane
09/17/04	42.0	3.3	ND	
05/27/05	66.0	4.2	ND	
12/13/05	178.0	6.4	ND	
06/13/06	121.0	10.1	ND	
12/18/06	82.0	4.8	ND	
06/05/07	36.6	3.3	ND	
12/13/07	43.3	2.4	ND	
12/22/08	38.1	2.46	ND	
06/10/09	27.2	2.57	ND	
11/24/09	37.8	3.32	ND	
06/25/10	25.1	3.79	ND	
12/16/10	23.1	4.47	ND	
12/21/11	8.59	1.45	ND	
12/20/12	16.5	2.85	ND	
12/30/13	13.4	1.83	ND	
02/13/15	5.76	1.60	ND	
12/23/15	7.18	1.51	ND	
12/20/16	5.55	0.845 J	ND	
MW9				
01/02/03	ND	ND	ND	
03/17/03	ND	ND	ND	
09/02/03	ND	ND	ND	
03/19/04	ND	ND	ND	
09/17/04	ND	ND	ND	
05/27/05	2.9	ND	ND	
12/13/05	15.5	0.95	ND	
06/13/06	20.0	2.6	ND	
12/18/06	4.5	ND	ND	
06/05/07	1.3	ND	ND	
12/13/07	ND	ND	ND	
12/22/08	3.57	ND	ND	
06/10/09	2.78	ND	ND	
11/24/09	8.72	ND	ND	
06/25/10	13.5	1.62	ND	
12/16/10	7.6	ND	ND	
12/21/11	12.5	1.61	ND	

Table 4

Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
12/20/12	22.5	3.95	ND	
12/30/13	19.5	2.85	ND	
02/13/15	18.4	3.92	ND	
12/23/15	22.5	4.11	ND	
12/20/16	19.4	2.88	ND	
MW10				
12/13/05	0.63 J	0.38 J	ND	
06/13/06	ND	ND	ND	
12/18/06	ND	0.9	8.5	Other was dichlorodifluoromethane
06/05/07	ND	ND	ND	
12/13/07	ND	ND	7.5	Other was chloromethane (methyl chloride)
12/22/08	ND	ND	ND	
06/10/09	ND	ND	ND	
11/24/09	ND	ND	ND	
06/25/10	ND	ND	ND	
12/16/10	ND	ND	ND	
12/21/11	ND	ND	ND	
12/20/12	ND	ND	ND	
12/30/13	ND	ND	ND	
02/13/15	3.05	0.760 J	ND	
12/23/15	ND	ND	ND	
12/20/16	0.635 J	0.140 J	ND	
MW11				
12/13/05	22.8	1.7	ND	
06/13/06	1.5	1.9	ND	
12/18/06	1.2	ND	1.1	Other was dichlorodifluoromethane
06/05/07	ND	ND	ND	
12/13/07	ND	ND	ND	
12/22/08	ND	ND	ND	
06/10/09	ND	ND	ND	
11/24/09	1.67	ND	ND	
06/25/10	ND	ND	ND	
12/16/10	ND	ND	ND	
12/21/11	0.495 J	0.320 J	ND	
12/20/12	ND	ND	ND	
12/30/13	ND	ND	ND	
02/13/15	ND	ND	ND	

Table 4

Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
12/23/15	ND	ND	ND	
12/20/16	ND	ND	ND	
HP2				
02/16/01	3.2	ND	ND	
HP1				
04/10/00	82.3	7.0	ND	
CPT-1 at 30'				
11/26/96	0.61	ND	ND	
CPT-1 at 33'				
11/26/96	0.51	3.9	ND	
CPT-1 at 40'				
11/26/96	ND	ND	ND	
CPT-1 at 52'				
11/26/96	ND	ND	ND	
GW1				
09/16/96	ND	ND	6.7	Other was acetone

Table 4

Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
G2				
09/16/96	ND	ND	6.7	Other was acetone
G3				
09/16/96	65.0	4.7	ND	
G4				
09/16/96	25.0	ND	17.0	Other was acetone
G5				
09/16/96	5.6	4.8	ND	

Notes:

µg/L = Micrograms per liter

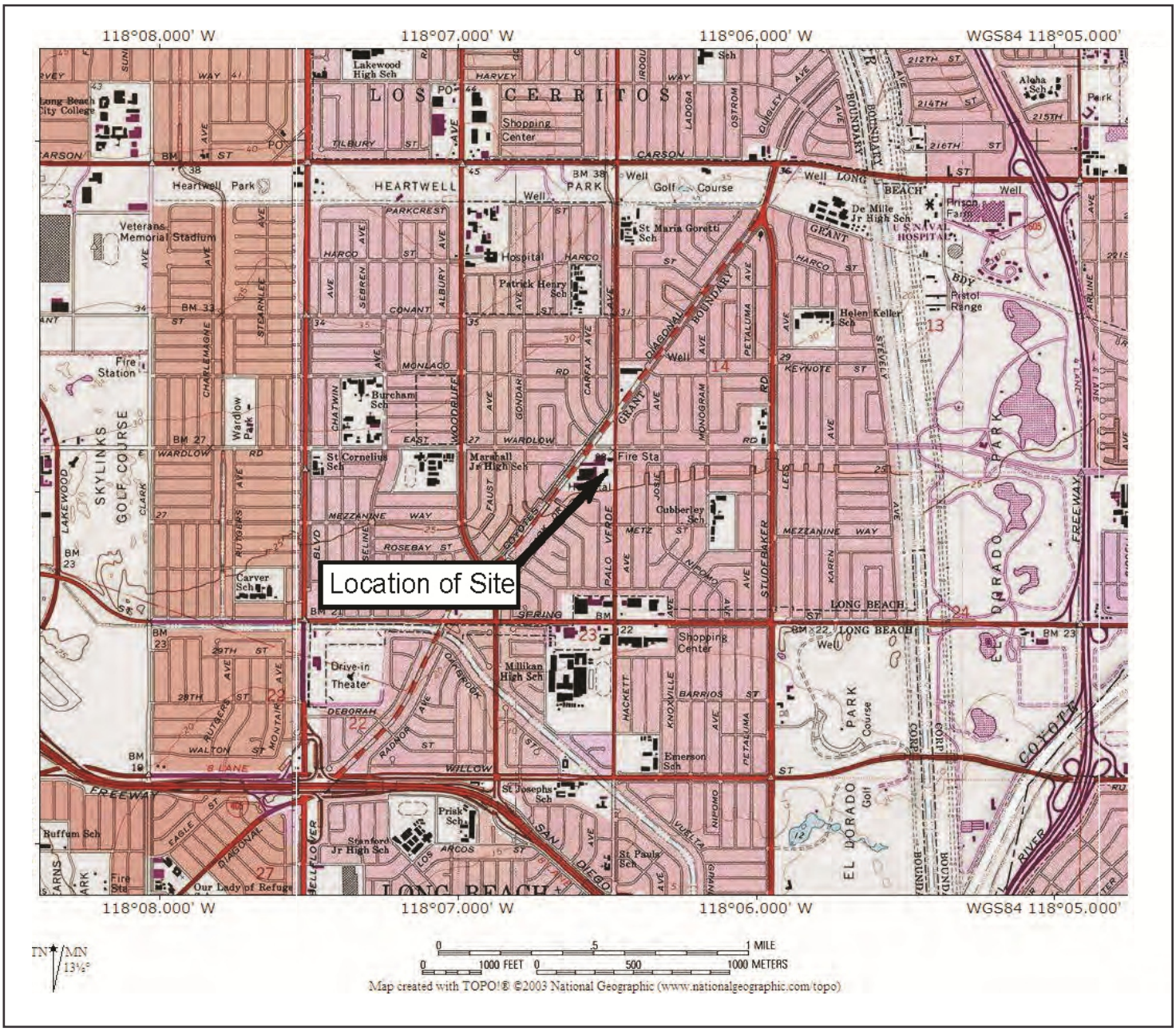
NA = Not analyzed

ND = Not detected at or above stated reporting or practical quantitation limit. See previous report for limits.

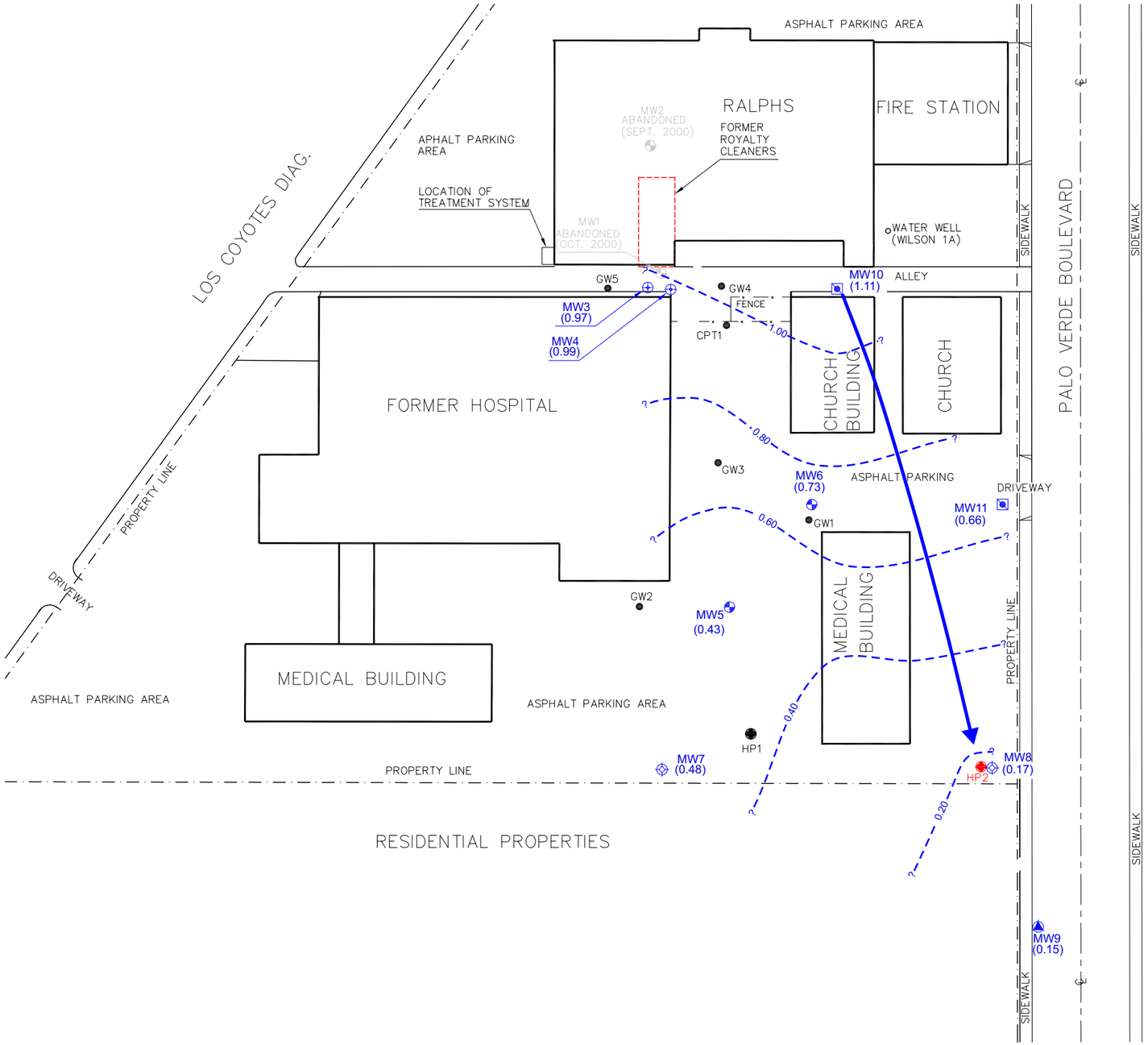
J = Estimated result. Compound positively detected at a value less than the reporting or practical quantitation limit.

– = Not applicable

FIGURES



Project Name:	FORMER ROYALTY CLEANERS 3378 LOS COYOTES DIAGONAL, LONG BEACH, CALIFORNIA			
Title:	SITE VICINITY MAP 2016 ANNUAL GROUNDWATER MONITORING EVENT			
Drafted By:	Approved By:	Project No.:	Date:	Figure No.:
DWS	UML	2016-170	1/17	1



LEGEND:

MW11	GROUNDWATER MONITORING WELL BY LE DECEMBER 2005
MW9	GROUNDWATER MONITORING WELL BY LE DECEMBER 2002
MW8	GROUNDWATER MONITORING WELL BY LE MARCH 2002
MW6	GROUNDWATER MONITORING WELL BY LE 2000
MW4	GROUNDWATER MONITORING WELL BY MCLAREN – HART 1996
MW2	ABANDONED MONITORING WELL
GW1	GEOPROBE WATER SAMPLE (SEPTEMBER 1996)
CPT1	CONE PENETROMETER SAMPLE (NOVEMBER 1996)
HP1	HYDROPUNCH SAMPLE (APRIL 2000)
HP2	HYDROPUNCH SAMPLE (FEBRUARY 2001)
(1.11)	GROUNDWATER ELEVATION MEASURED IN FT ABOVE MSL (DECEMBER 20, 2016)
1.00	GROUNDWATER ELEVATION CONTOUR
	GROUNDWATER GRADIENT

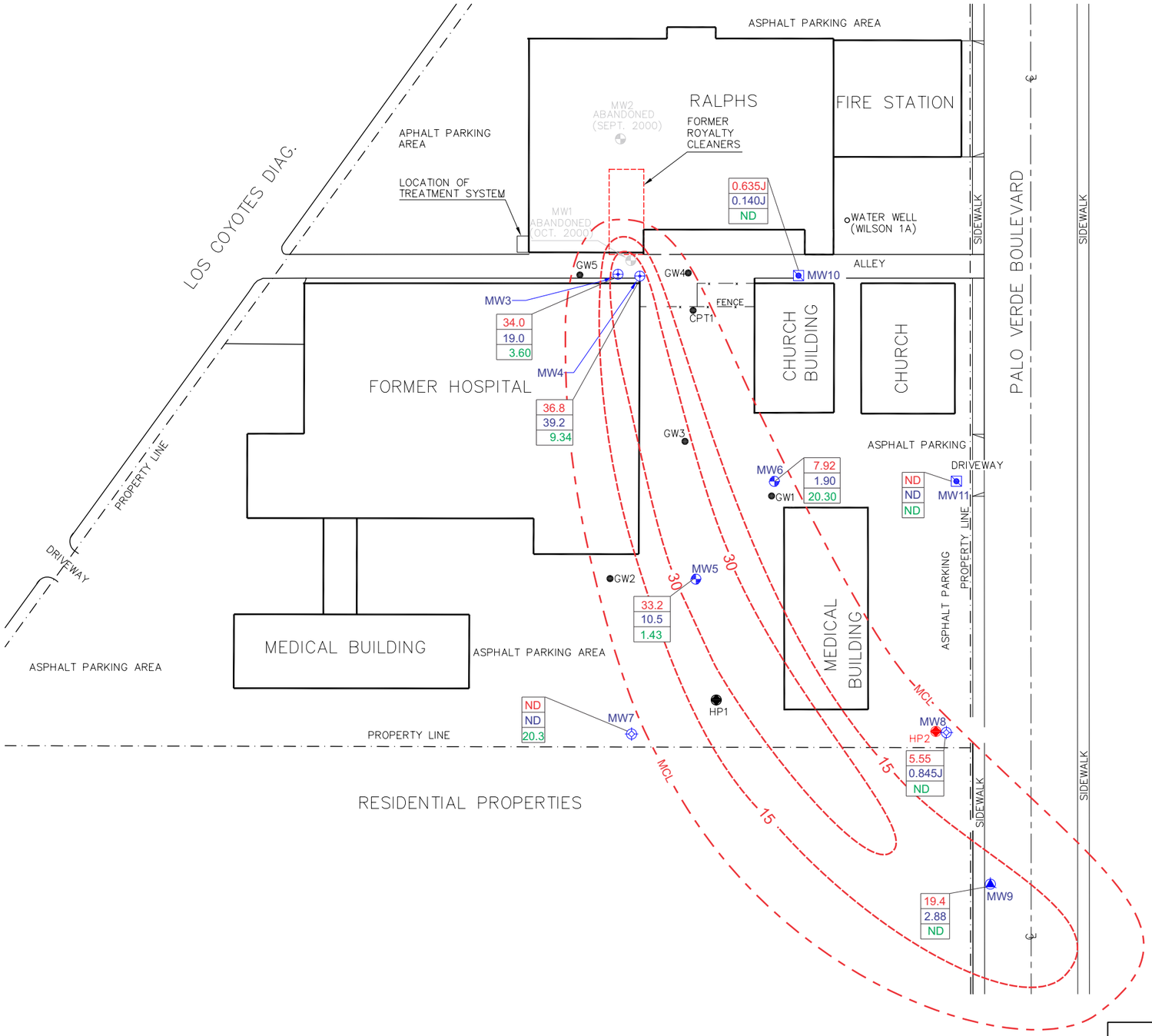
MW1 AND MW2 WELLS WERE ABANDONED

SCALE: 1" = 100'

0 1" 2"

0 100' 200'

Project Name: FORMER ROYALTY CLEANERS 3378 LOS COYOTES DIAGONAL, LONG BEACH, CALIFORNIA				
Title: GROUNDWATER ELEVATION CONTOURS 2016 ANNUAL GROUNDWATER MONITORING EVENT				
Drafted By: DWS	Approved By: UML	Project No.: 2016-170	Date: 1/17	Figure No.: 2



LEGEND:

MW11	GROUNDWATER MONITORING WELL BY LE DECEMBER 2005
MW9	GROUNDWATER MONITORING WELL BY LE DECEMBER 2002
MW8	GROUNDWATER MONITORING WELL BY LE MARCH 2002
MW6	GROUNDWATER MONITORING WELL BY LE 2000
MW4	GROUNDWATER MONITORING WELL BY MCLAREN – HART 1996
MW2	ABANDONED MONITORING WELL
GW1	GEOPROBE WATER SAMPLE (SEPTEMBER 1996)
CPT1	CONE PENETROMETER SAMPLE (NOVEMBER 1996)
HP1	HYDROPUNCH SAMPLE (APRIL 2000)
HP2	HYDROPUNCH SAMPLE (FEBRUARY 2001)
	CHEMICAL CONCENTRATION IN GROUNDWATER µg/l (12/20/16)
36.8	PCE
39.2	TCE
9.34	CIS-1,2-DCE
ND	NOT DETECTED ABOVE METHOD DETECTION LIMIT
30	INTERPRETED PCE ISOCONCENTRATION CONTOUR
MCL	MAXIMUM CONCENTRATION LEVEL (MCL) PCE ISOCONCENTRATION CONTOUR (MCL = 5 µg/l)

SCALE: 1" = 100'

0 1" 2"

0 100' 200'

LANDMARK ENGINEERING

Project Name: FORMER ROYALTY CLEANERS
3378 LOS COYOTES DIAGONAL, LONG BEACH, CALIFORNIA

Title: PCE, TCE, & CIS-1,2-DCE CONCENTRATION MAP
2016 ANNUAL GROUNDWATER MONITORING EVENT

Drafted By:	Approved By:	Project No.:	Date:	Figure No.:
DWS	UML	2016-170	1/17	3

APPENDIX A

Field Methodology

Field Methodology

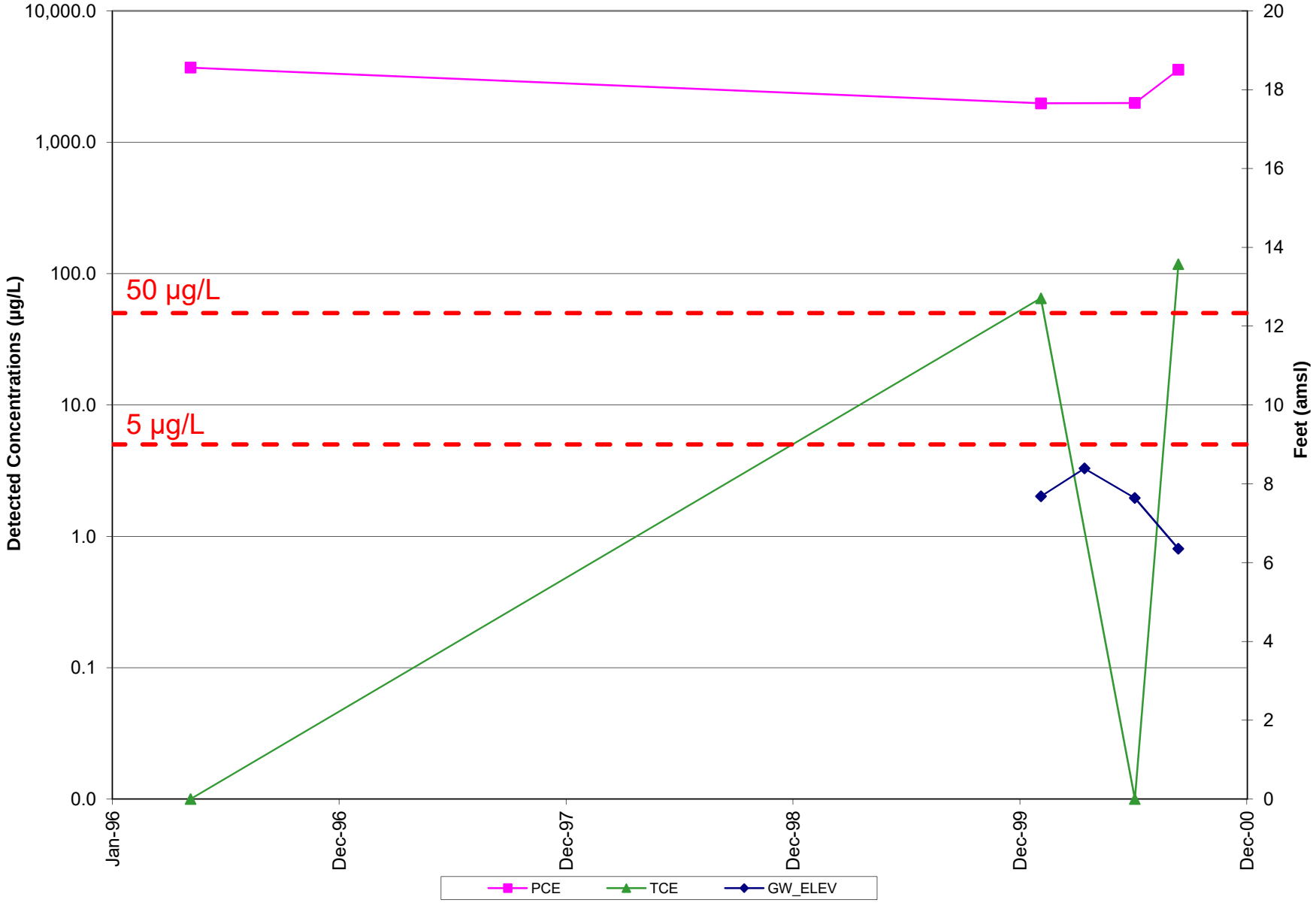
Prior to sampling, Blaine Tech measured the depth to groundwater using a Solinist depth to water probe. Following measurement of depth to groundwater, we purged at least three casing volumes of water from each well by use of a submersible pump. During purging, Blaine Tech measured the dissolved oxygen (DO) electrical conductivity, temperature, pH, turbidity, and oxidation-reduction potential (ORP), of the purged water in each well using a continuous flow-through cell attached to a Horiba multi-parameter meter. Purging continued until the conductivity, temperature, and pH had stabilized, or at least three well volumes had removed.

Blaine Tech collected groundwater samples from each of the wells after they had recovered to at least 80 percent of static levels. A dedicated, disposable high-density polyethylene bailer was used to collect groundwater samples from each sampled well. Blaine Tech transferred the groundwater into preserved (HCl) gas chromatography vials (also known as volatile organic ampules [VOAs]). The vials were sealed with Teflon-lined caps, labeled, placed on ice, and transported to a state-certified laboratory (American Scientific Laboratories) for analysis. Each sample was recorded on a chain-of-custody record identifying the sampler, sample identification, time and date of sampling, container type, couriers, responsible laboratory personnel, and requested analyses.

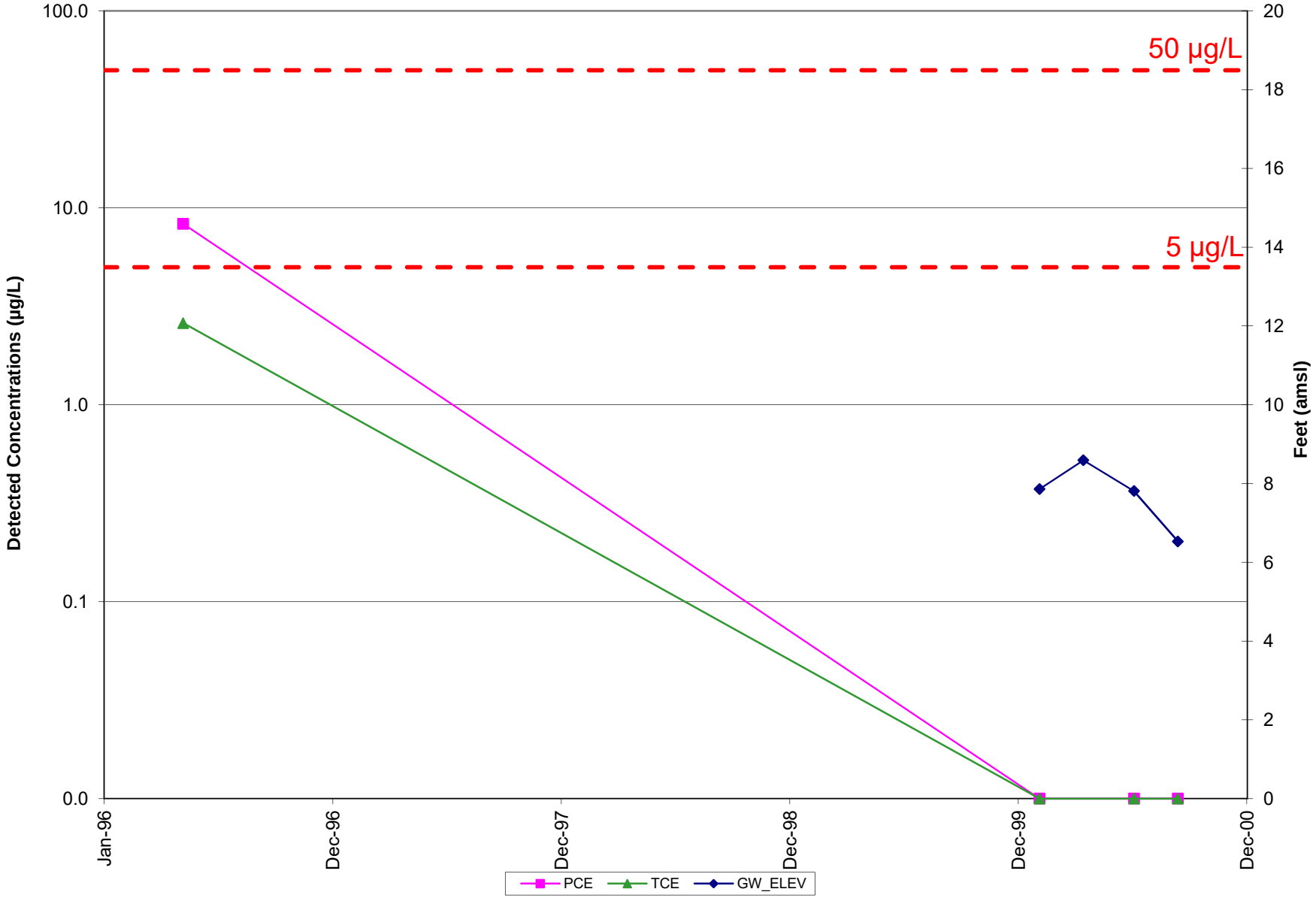
APPENDIX B

Graphs of Detected Concentrations and Groundwater Elevations vs. Time

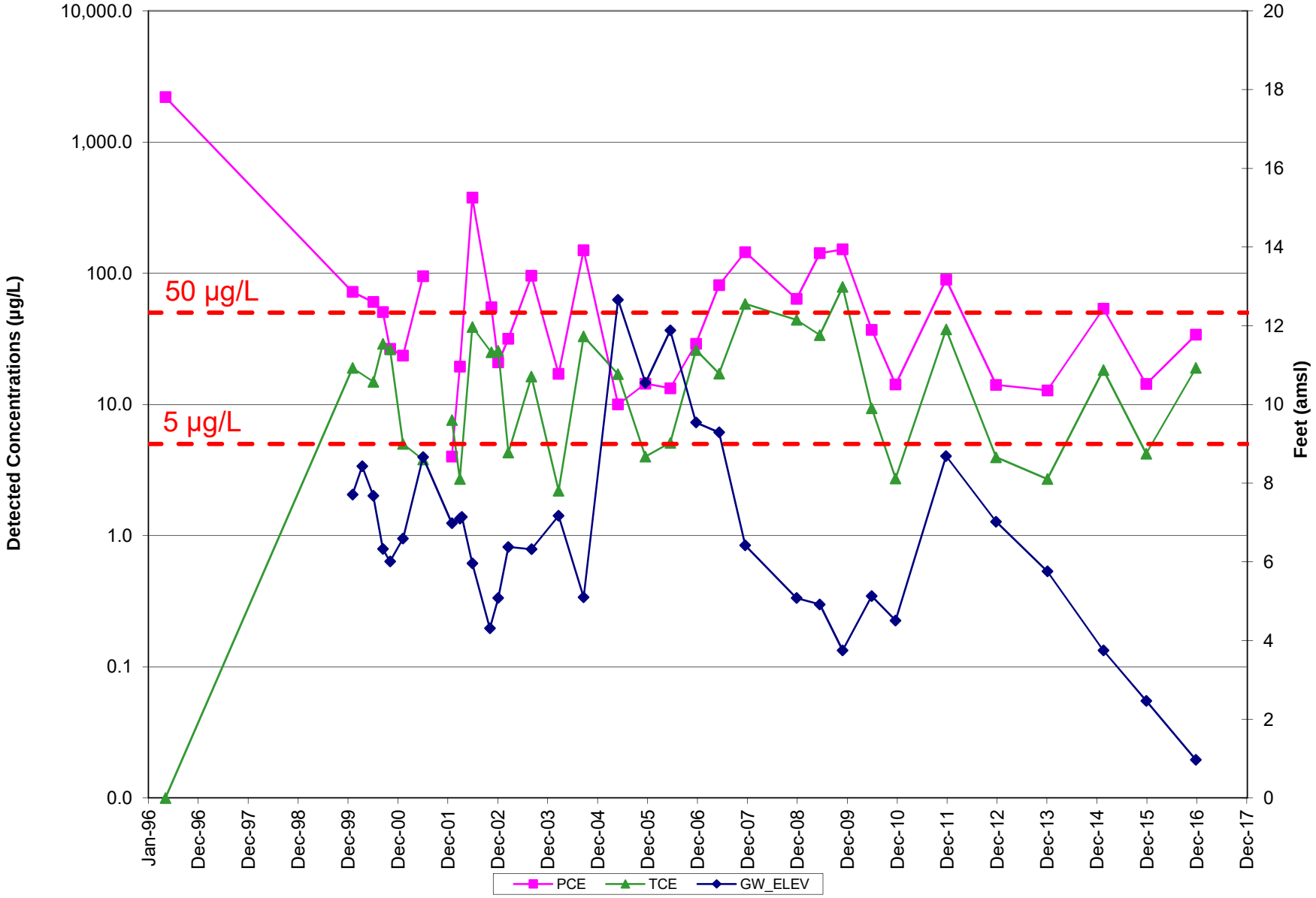
MW1: Detected Concentrations & Groundwater Elevations Versus Time



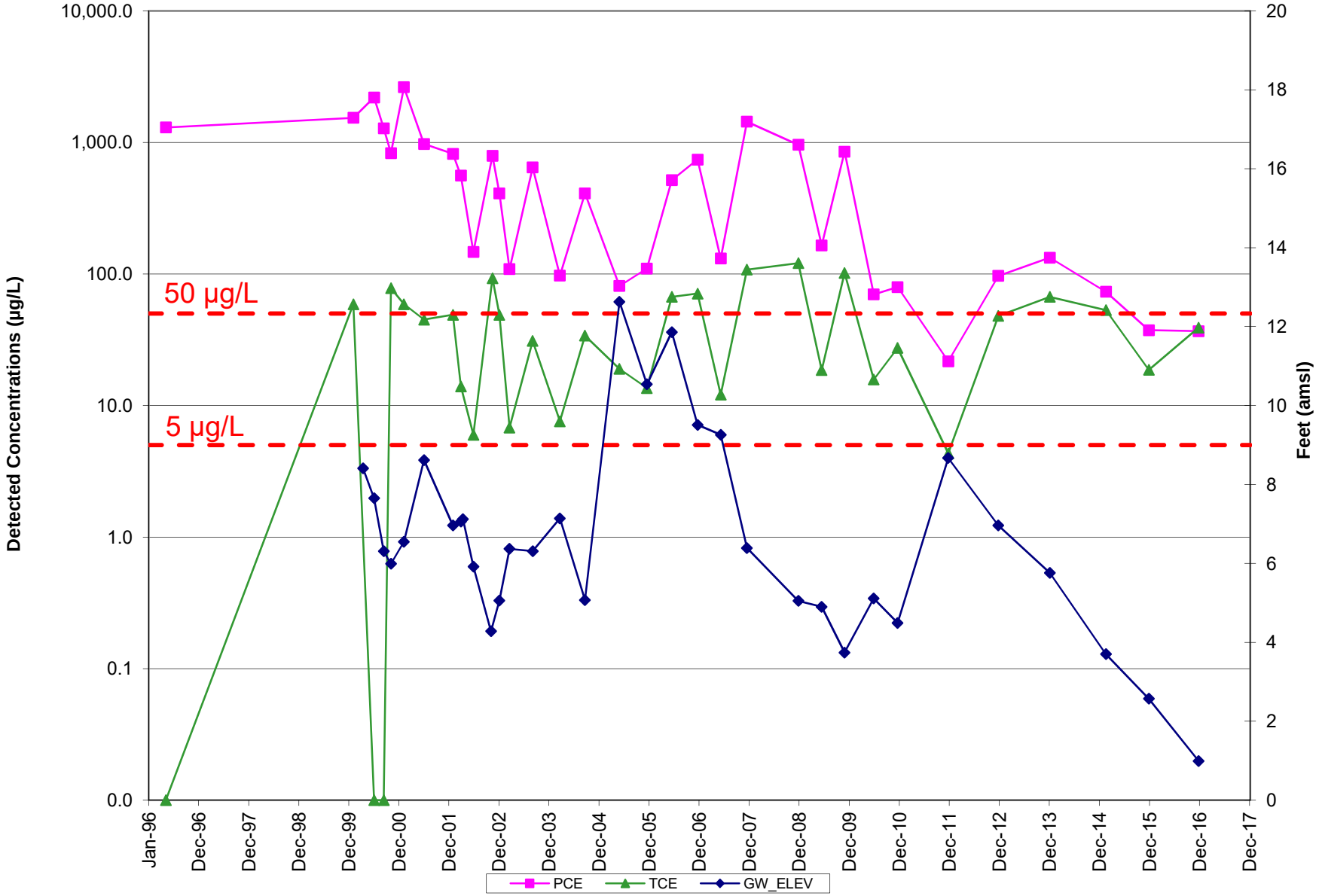
MW2: Detected Concentrations & Groundwater Elevations Versus Time



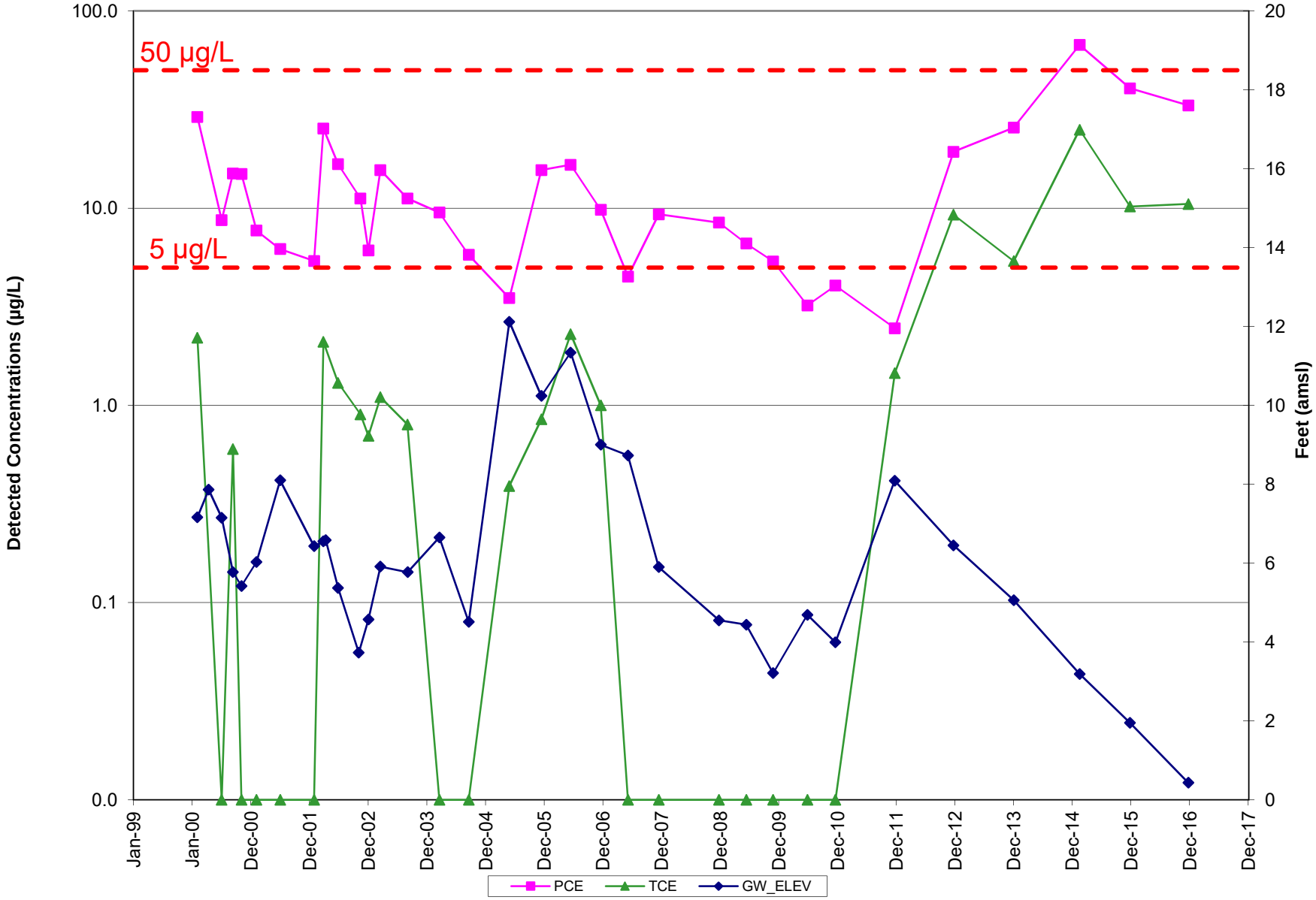
MW3: Detected Concentrations & Groundwater Elevations Versus Time



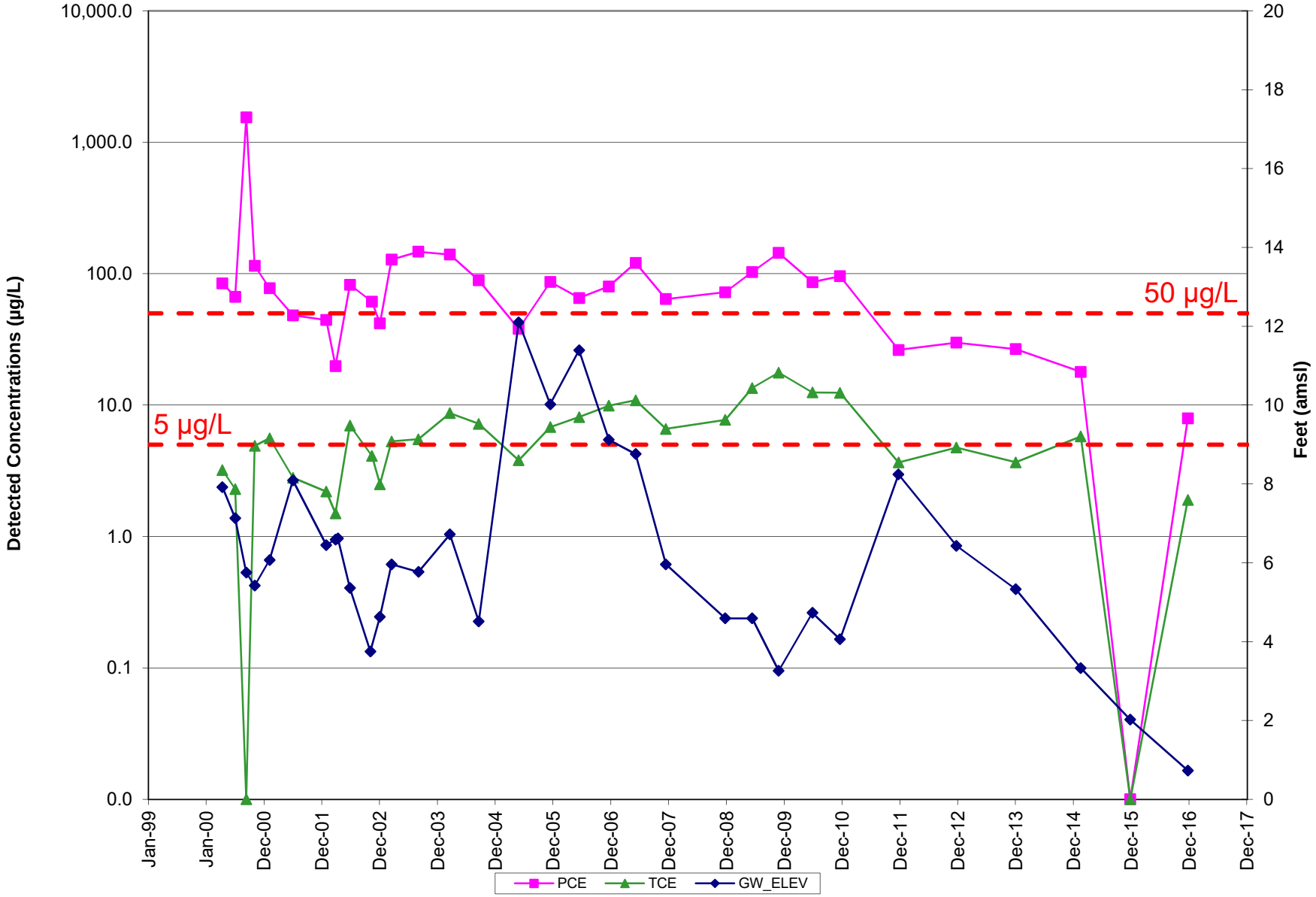
MW4: Detected Concentrations & Groundwater Elevations Versus Time



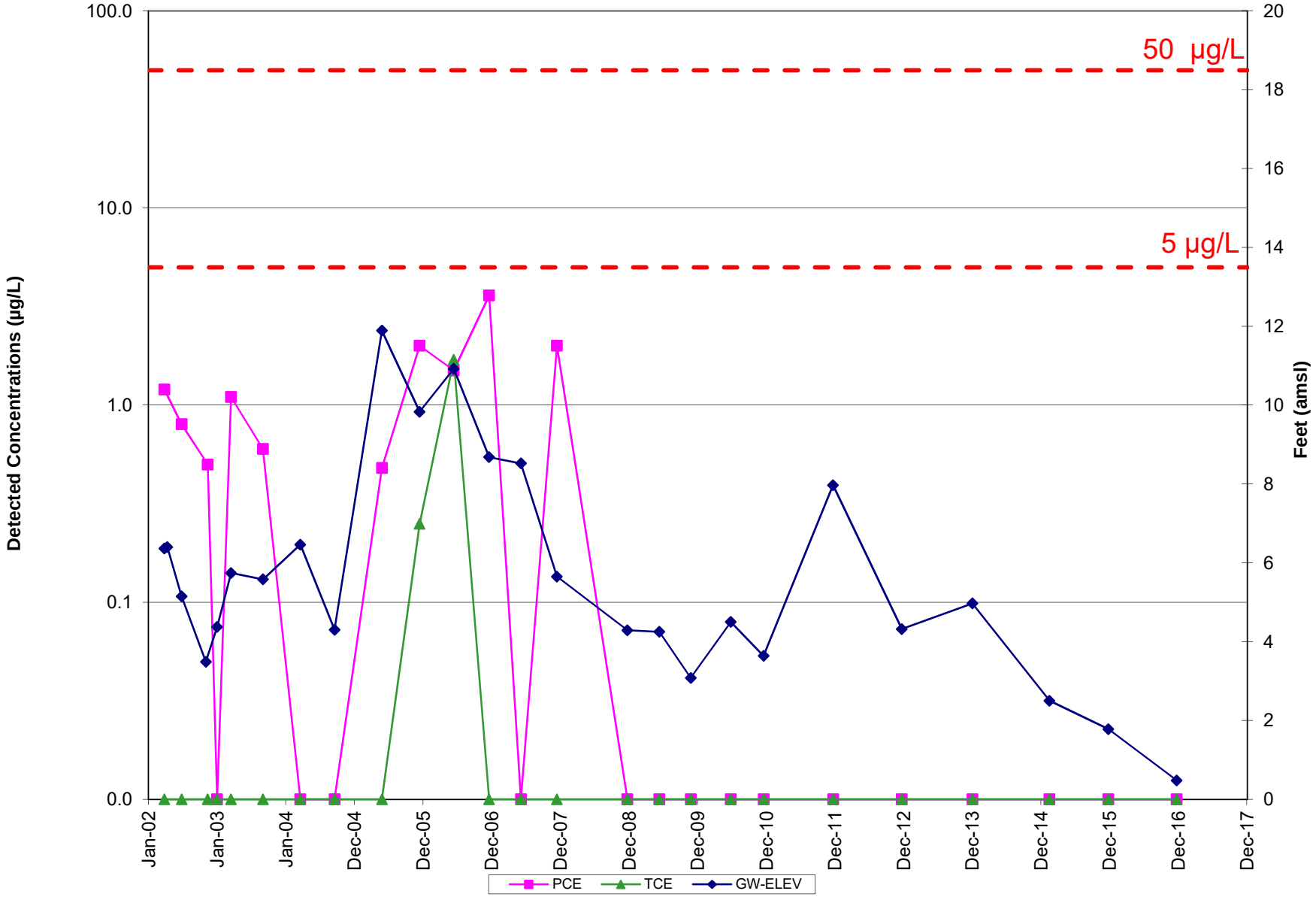
MW5: Detected Concentrations & Groundwater Elevations Versus Time



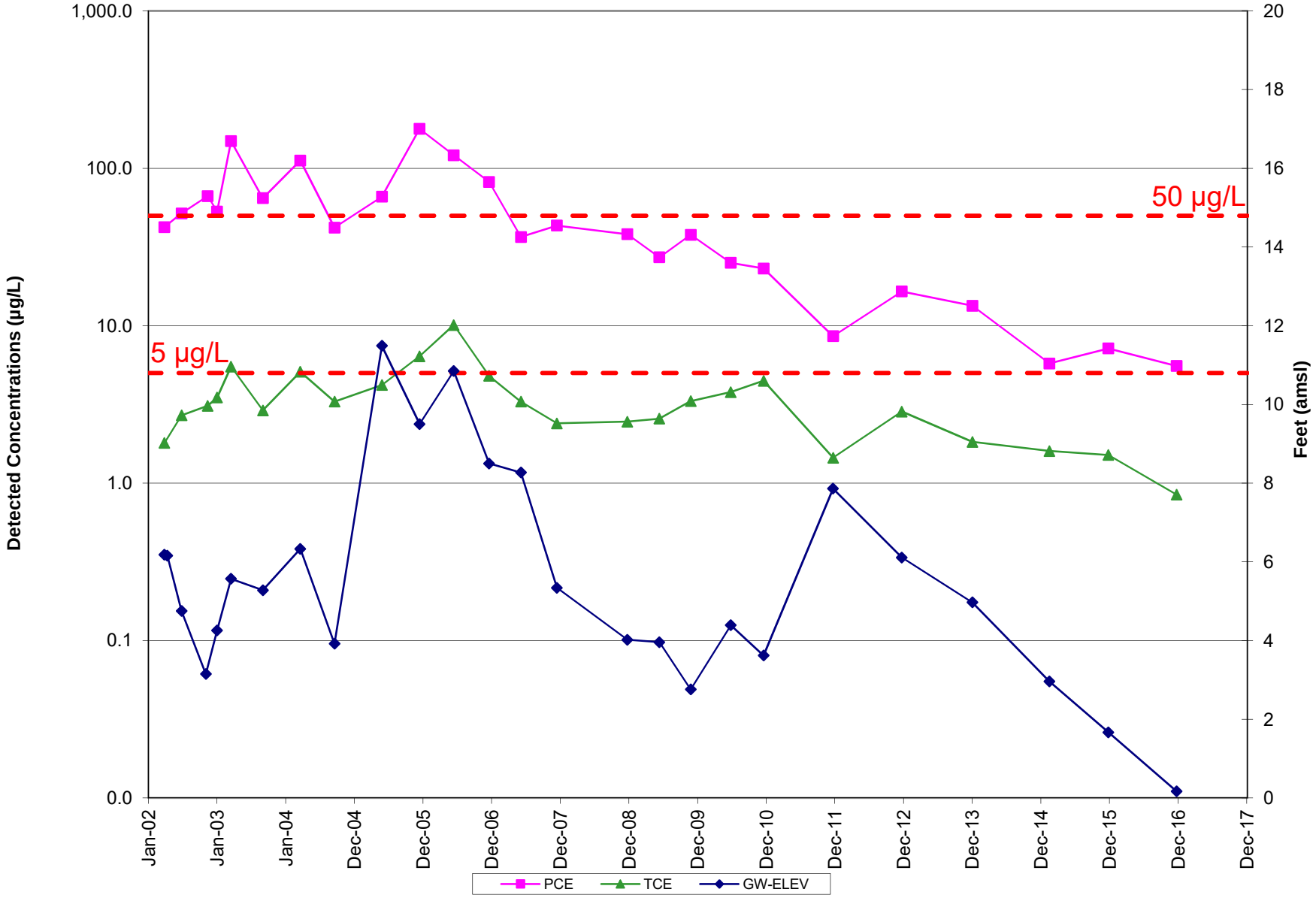
MW6: Detected Concentrations & Groundwater Elevations Versus Time



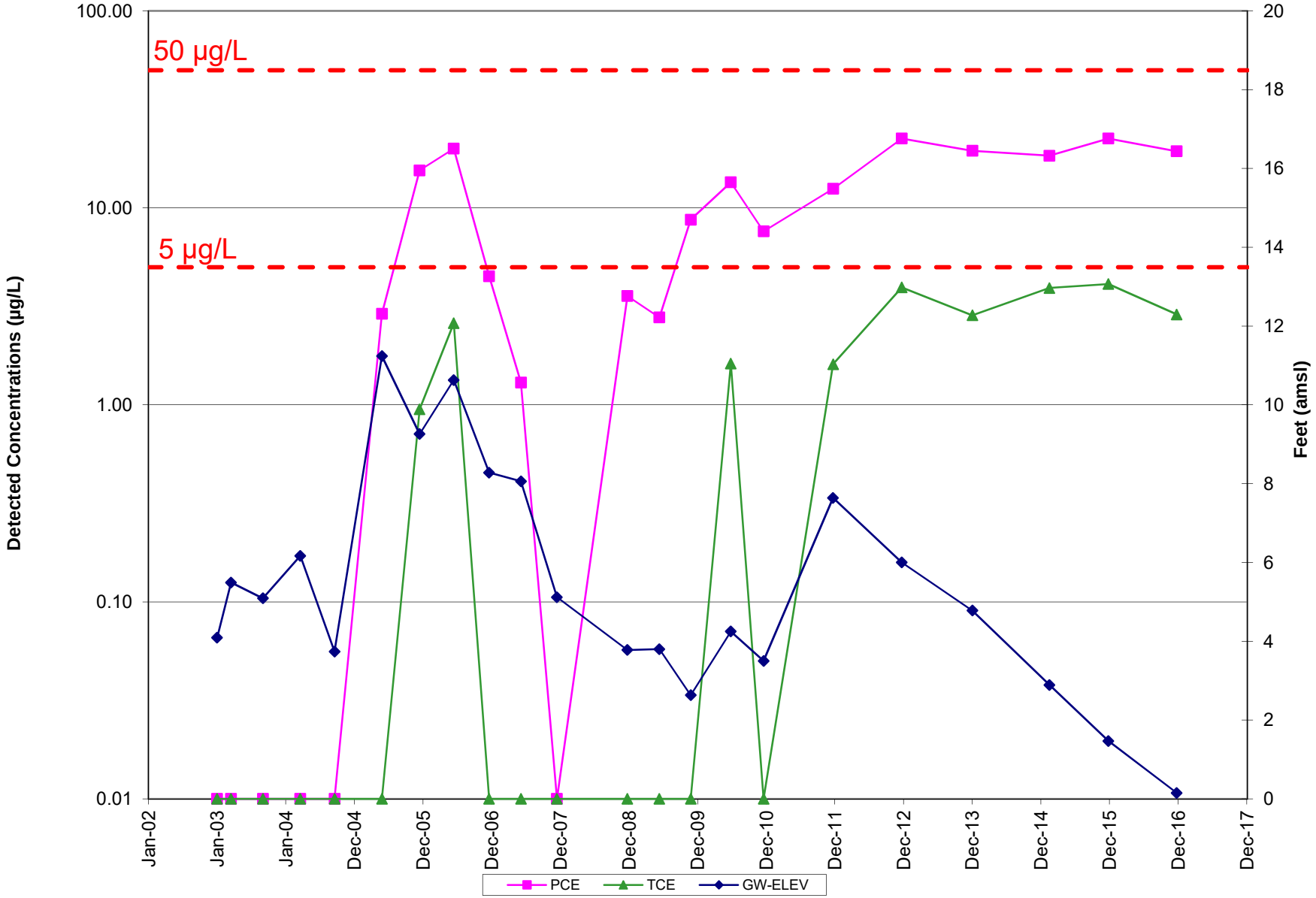
MW7: Detected Concentrations & Groundwater Elevations Versus Time



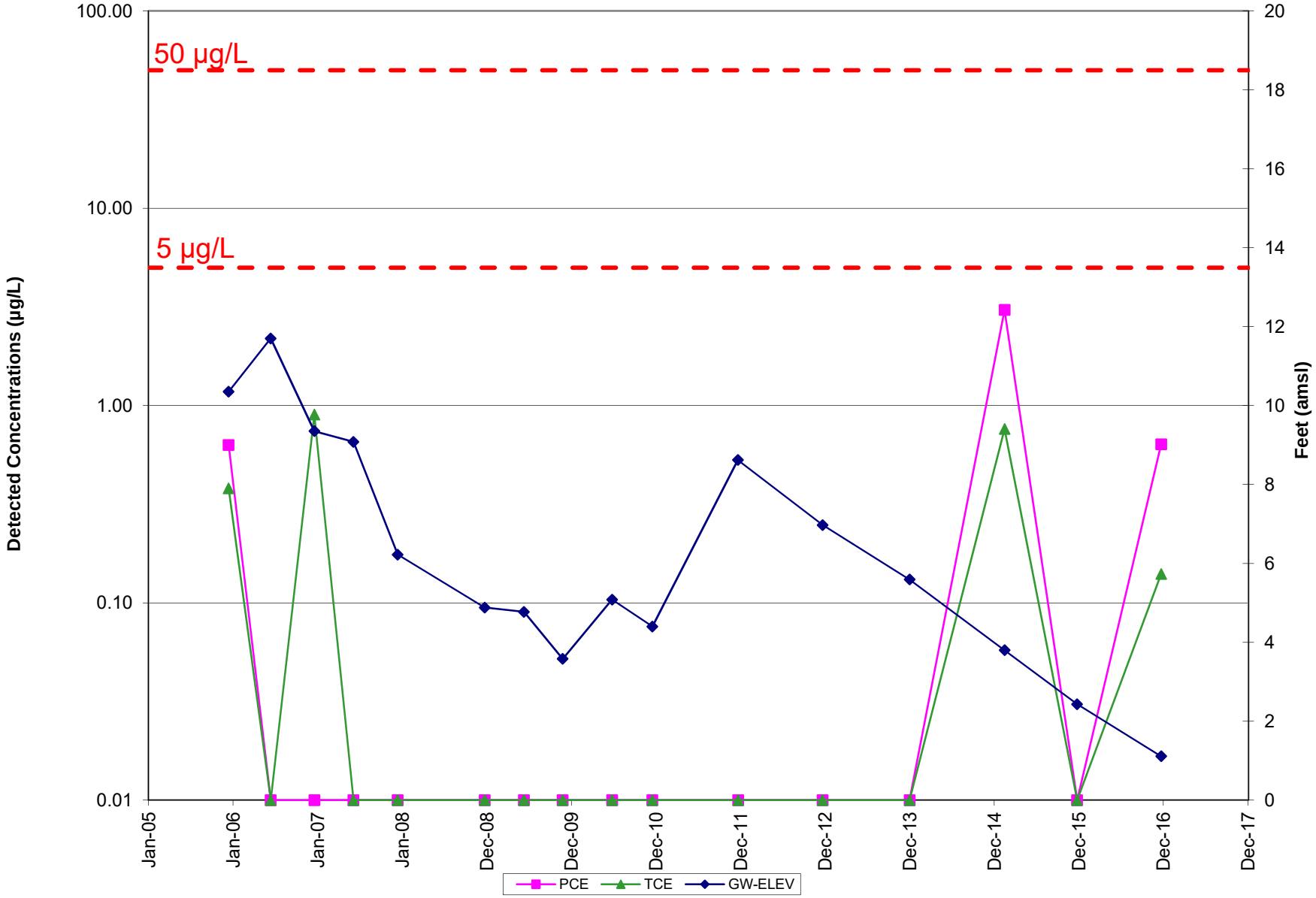
MW8: Detected Concentrations & Groundwater Elevations Versus Time



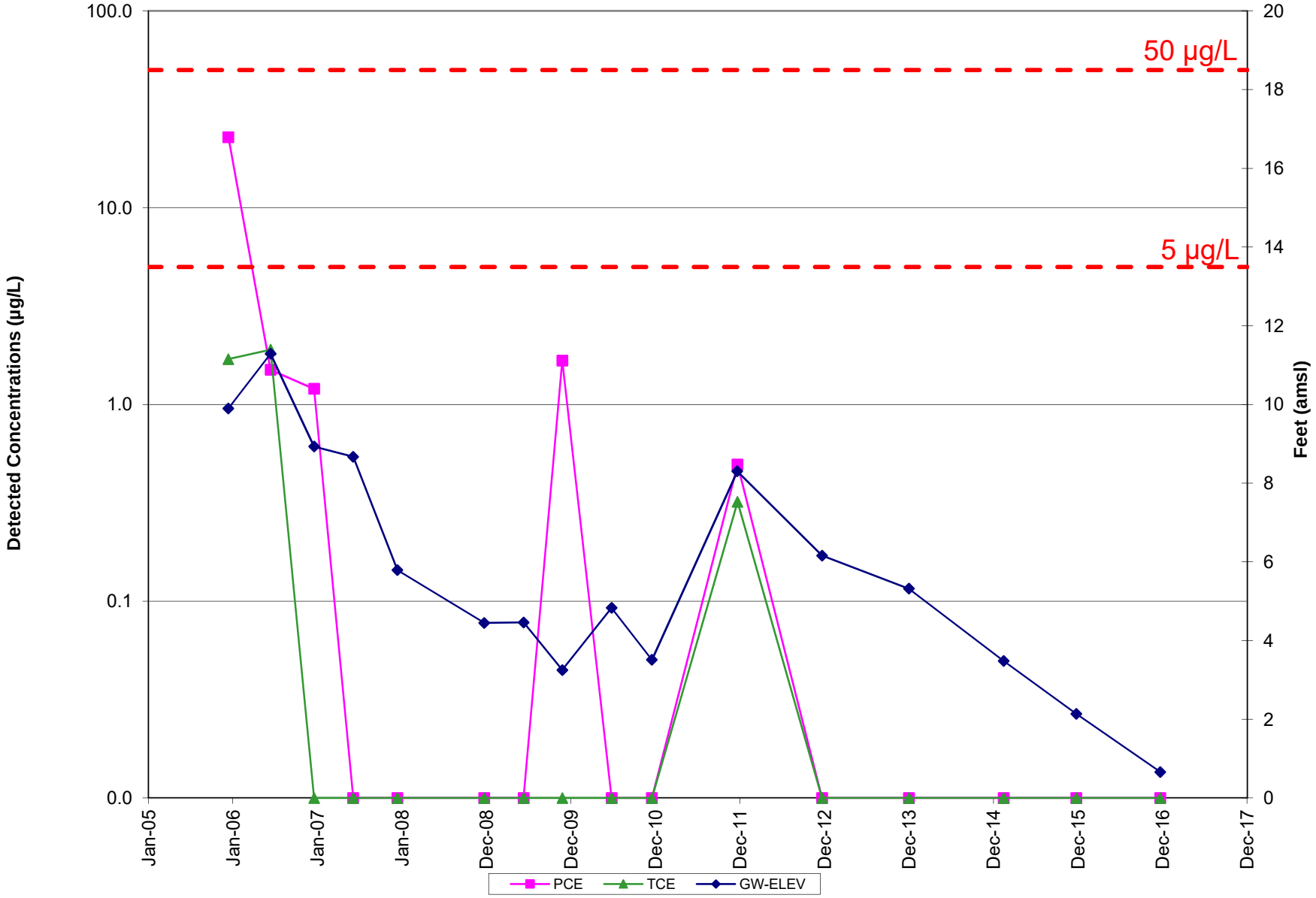
MW9: Detected Concentrations & Groundwater Elevations Versus Time



MW10: Detected Concentrations & Groundwater Elevations Versus Time



MW11: Detected Concentrations & Groundwater Elevations Versus Time



APPENDIX C

Well Purging Records

WELL GAUGING DATA

Project # 161220-BM Date 12-20-16 Client Lindmark

Site 3378 Los Coyotes diagonal, Long Beach

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW7	0822	2					24.54	39.72		roots in well
MW11	0750	2					24.31	38.67		
MW5	0809	2					26.18	30.24		roots in well
MW9	0830	2					23.81	33.20		
MW8	0803	2					24.50	39.25		
MW6	0756	2					25.74	39.98		roots in well
MW3	0724	4					25.10	33.92		
MW4	0744	2					25.12	34.61		
MW10	0730	2					24.39	39.98		

WELL MONITORING DATA SHEET

Project #: 161270.BM1	Site: Landmark @ Royally Cleaners
Sampler: BM	Date: 12.20.16
Well I.D.: MW3	Well Diameter: 2 3 (4) 6 8 ____
Total Well Depth (TD): 33.92	Depth to Water (DTW): 25.10
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 26.86	

Purge Method: Bailer / Disposable Bailer / Positive Air Displacement / Electric Submersible / Waterra / (2" Rediflo pump) / Extraction Pump / Other_____

Sampling Method: Bailer / Disposable Bailer / (Extraction Port) / Dedicated Tubing / Other: _____

5.7 (Gals.) X 3 = 17.1 Gals.
1 Case Volume — Specified Volumes — Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	Observations
1245	71.95	6.87	1152	17	0.73	-105.1	3	
1248	72.10	6.85	1148	26	0.21	-159.9	6	
1251	72.23	6.81	1172	20	0.17	-175.3	9	
1254	72.28	6.80	1189	15	0.16	-180.6	12	
1257	72.29	6.81	1184	14	0.16	-183.6	15	
1259	72.28	6.81	1187	14	0.16	-184.1	17.5	

Did well dewater? Yes (No) Gallons actually evacuated: 17.5

Sampling Date: 12.20.16 Sampling Time: 1304 Depth to Water: 25.26

Sample I.D.: MW3 Laboratory: ASL

Analyzed for: VOC's Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 161220.BM	Site: Landmark @ Royally Cleaners
Sampler: BM	Date: 12.20.16
Well I.D.: MW4	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth (TD): 34.61	Depth to Water (DTW): ~~25.12~~ 25.12
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 27.02	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, (2" Rediflo pump), Extraction Pump, Other_____

Sampling Method: Bailer, Disposable Bailer, (Extraction Port), Dedicated Tubing, Other: _____

6.2 (Gals.) X 3 = 18.6 Gals.
1 Case Volume — Specified Volumes — Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	Observations
1215	72.25	6.79	1140	47	0.36	166.4	3.5	
1218	72.45	6.80	1144	29	0.30	-174.9	6.5	
1222	72.47	6.81	1147	22	0.22	-188.0	10.0	
1225	72.49	6.81	1159	18	0.19	-196.3	13.0	
1229	72.49	6.81	1162	17	0.18	-199.4	16.5	
1232	72.50	6.82	1163	17	0.18	~~-18~~ -198.3	19.0	

Did well dewater? Yes (No) Gallons actually evacuated: 19.0 x BM

Sampling Date: 12.20.16 Sampling Time: 1237 Depth to Water: 25.36

Sample I.D.: MW4 Laboratory: ASL

Analyzed for: VOCs Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 161220.BN1	Site: Lindmark @ Royally Cleaners
Sampler: BN	Date: 12.20.16
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth (TD): 30.24	Depth to Water (DTW): 26.28
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 27.07	

Purge Method: Bailer / Disposable Bailer / Positive Air Displacement / Electric Submersible / Waterra / 2" Rediflo pump / (Extraction Pump) / Other_____

Sampling Method: Bailer / (Disposable Bailer) / Extraction Port / Dedicated Tubing / Other: _____

0.6 (Gals.) X 3 = 1.8 Gals.
1 Case Volume — Specified Volumes — Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	Observations
1035	74.20	6.71	1240	97	0.87	-71.4	0.5	
1036	75.13	6.75	1258	38	0.63	-75.2	1.0	
1037	75.24	6.78	1260	30	0.68	-78.3	1.5	
1038	75.24	6.78	1263	27	0.65	-79.4	2.0	

Did well dewater? Yes (No) Gallons actually evacuated: 2.0

Sampling Date: 12.20.16 Sampling Time: 1043 Depth to Water: 27.01

Sample I.D.: MW-5 Laboratory: ASL

Analyzed for: Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 161220.BN	Site: Lindmark @ Royal Cleaners
Sampler: BN	Date:
Well I.D.: MW 6	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 39.98	Depth to Water (DTW): 25.74
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 28.59	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, 2" Rediflo pump, Extraction Pump, Other_____

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: _____

2.3 (Gals.) X 3 = 6.9 Gals.
1 Case Volume — Specified Volumes — Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	Observations
0912	72.16	6.72	1276	189	0.80	-40.5	1.25	
0914	73.66	6.77	1285	82	0.39	-73.3	2.50	
0917	74.29	6.81	1292	43	0.32	-96.6	3.75	
0919	74.41	6.83	1291	28	0.29	-109.6	5.00	
0921	74.43	6.84	1287	27	0.28	-114.8	6.00	
0923	74.45	6.85	1284	27	0.26	-113.9	7.00	

Did well dewater? Yes (No) Gallons actually evacuated: 7.0

Sampling Date: 12.20.16 Sampling Time: 0930 Depth to Water: 26.13

Sample I.D.: MW-6 Laboratory: ASL

Analyzed for: VOC's Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 161220-BN1	Site: Lindmark @ Royally Cleaners
Sampler: BN	Date: 12-20-16
Well I.D.: MW7	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 39.72	Depth to Water (DTW): 24.54
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 27.57	

Purge Method: Bailer; Disposable Bailer; Positive Air Displacement; Electric Submersible; Waterra; (2" Rediflo pump); Extraction Pump; Other_____

Sampling Method: Bailer; Disposable Bailer; (Extraction Port); Dedicated Tubing; Other: _____

2.4 (Gals.) X 3 = 7.2 Gals.
1 Case Volume — Specified Volumes — Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	Observations
1008	71.28	6.67	1144	>1000	1.50	-110.8	1.75	
1010	73.15	6.63	1189	>1000	1.45	-121.3	2.50	
1013	73.71	6.64	1195	389	1.15	-124.0	3.75	
1015	73.75	6.68	1199	317	0.81	-119.3	5.00	
1018	73.80	6.70	1202	412	0.84	-118.8	6.25	
1020	73.80	6.71	1207	463	0.86	-119.2	7.00	

Did well dewater? Yes (No) Gallons actually evacuated: 7.00

Sampling Date: 12-20-16 Sampling Time: 1025 Depth to Water: 24.68

Sample I.D.: MW7 Laboratory: ASL

Analyzed for: See C.O.C. Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 161220-BN	Site: Landmark @ Royally Cleaners
Sampler: BN	Date: 12.20.16
Well I.D.: MW-8	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 39.25	Depth to Water (DTW): 24.50
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 27.45	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, (2" Rediflo pump), Extraction Pump, Other_____

Sampling Method: Bailer, (Disposable Bailer), Extraction Port, Dedicated Tubing, Other: _____

2.4 (Gals.) X 3 = 7.2 Gals.
1 Case Volume — Specified Volumes — Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	Observations
0939	71.73	6.84	1162	>1000	0.56	-32.2	1.25	
0941	71.61	6.79	1203	>1000	0.25	-88.2	2.50	
0944	71.85	6.82	1216	>1000	0.20	-109.7	3.75	
0946	72.12	6.82	1227	831	0.15	-133.4	5.00	
0949	72.14	6.83	1230	482	0.14	-134.7	6.25	
0951	72.16	6.83	1232	417	0.14	-133.8	7.25	

Did well dewater? Yes (No) Gallons actually evacuated: 7.25

Sampling Date: 12.20.16 Sampling Time: 0959 Depth to Water: 25.03

Sample I.D.: MW-8 Laboratory: ASL

Analyzed for: VOC's Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 161220.BN	Site: Landmark @ Royally Cleaners
Sampler: BN	Date: 12.20.16
Well I.D.: MW-9	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 33.70	Depth to Water (DTW): 23.81
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 25.69	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible (circled), Waterra, 2" Rediflo pump (circled), Extraction Pump, Other_____

Sampling Method: Bailer, Disposable Bailer (circled), Extraction Port, Dedicated Tubing, Other: _____

1.5 (Gals.) X 3 = 4.5 Gals.
1 Case Volume — Specified Volumes — Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	Observations
1052	72.73	6.97	1115	71000	0.95	-177.7	1.0	
1053	73.16	6.94	1208	936	0.86	-201.3	1.5	
1055	74.12	6.84	1312	710	0.83	-202.6	2.5	
1056	74.18	6.85	1336	648	0.82	-194.7	3.0	
1058	74.13	6.85	1341	592	0.82	-195.3	4.0	
1059	74.24	6.85	1340	517	0.86	-196.2	4.5	

Did well dewater? Yes (No) Gallons actually evacuated: 4.5

Sampling Date: 12.20.16 Sampling Time: 1105 Depth to Water: 24.12

Sample I.D.: MW-9 Laboratory: ASL

Analyzed for: See C.O.C. Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 161220-BN	Site: Lindmark @ Royally Cleaners
Sampler: BN	Date: 12.20.16
Well I.D.: MW10	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 39.98	Depth to Water (DTW): 24.39
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 27.51	

Purge Method: Bailer, Disposable Bailer, Positive Air Displacement, Electric Submersible, Waterra, 2" Rediflo pump, Extraction Pump, Other_____

Sampling Method: Bailer, Disposable Bailer, Extraction Port, Dedicated Tubing, Other: _____

2.5 (Gals.) X 3 = 7.5 Gals.
1 Case Volume — Specified Volumes — Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	Observations
1152	70.84	6.92	1118	>1000	1.69	-34.1	1.5	
1154	71.03	6.80	1117	>1000	1.52	-72.6	2.5	
1157	72.21	6.83	1145	>1000	1.08	-94.9	4.0	
1159	72.86	6.86	1163	>1000	0.97	-116.4	5.0	
1202	72.87	6.90	1168	>1000	0.94	-117.2	6.5	
1204	72.85	6.90	1167	>1000	0.98	-119.0	7.5	

Did well dewater? Yes No Gallons actually evacuated: 7.5

Sampling Date: 12.20.16 Sampling Time: 1210 Depth to Water: 24.59

Sample I.D.: MW10 Laboratory: ASL

Analyzed for: VOC's Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

WELL MONITORING DATA SHEET

Project #: 161220-13-N1	Site: Lindmark @ Royally Cleaners
Sampler: BN	Date: 12-20-16
Well I.D.: MW-11	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth (TD): 38.67	Depth to Water (DTW): 24.31
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type YSI 556
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 27.18	

Purge Method: Bailer / Disposable Bailer / Positive Air Displacement / Electric Submersible / Waterra / 2" Rediflo pump / (Extraction Pump) / Other ____

Sampling Method: Bailer / (Disposable Bailer) / Extraction Port / Dedicated Tubing / Other: ____

2.3 (Gals.) X 3 = 6.9 Gals.
1 Case Volume — Specified Volumes — Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS/cm or µS/cm)	Turbidity (NTUs)	D.O. (mg/L)	ORP(mV)	Gals. Removed	Observations
0847	71.57	6.44	1641	931	1.24	-132.6	1.25	
0849	71.99	6.48	1561	387	1.06	-165.9	2.50	
0852	73.21	6.55	1456	303	1.14	-152.3	3.75	
0854	73.52	6.57	1445	298	1.11	-155.8	~~4.00~~ 5.00	
0856	73.56	6.60	1446	295	1.08	-160.1	~~5.00~~ 6.00	
0858	73.58	6.67	1449	291	1.05	-161.7	~~6.00~~ 7.00	

Did well dewater? Yes (No) Gallons actually evacuated: 7.0

Sampling Date: 12-20-16 Sampling Time: 0905 Depth to Water: 25.12

Sample I.D.: MW-11 Laboratory: ASL

Analyzed for: VOC Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

FB I.D. (if applicable): @ Time Analyzed for:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY

BTS #

CLIENT: Lindmark Engineering

SITE: Former Royalty Cleaners
3378 Los Coyotes Diagonal
Long Beach, CA

CONDUCT ANALYSIS TO DETECT

LAB: ASL

DHS #

Invoice and Report to: David Smith
Lindmark Engineering
2625 Towngate Rd, Suite 330
Westlake Village, CA 91361
dsmith@lindmarkeng.com

SAMPLE I.D.	DATE	TIME	MATRIX S = Soil W = H2O	CONTAINERS TOTAL	CONTAINERS Pres.	C = COMPOSITE ALL CONTAINERS	VOCs							ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
MW7	12/20/16	1025	W	3	None		X										
MW11	12/20/16	0905	W	3	None		X										
MW5	12/20/16	1043	W	3	None		X										
MW9	12/20/16	1105	W	3	None		X										
MW8	12/20/16	0959	W	3	None		X										
MW6	12/20/16	0930	W	3	None		X										
MW3	12/20/16	1304	W	3	None		X										
MW4	12/20/16	1137	W	3	None		X										
MW10	12/20/16	1210	W	3	None		X										

SAMPLING COMPLETED: DATE 12.20.16 TIME

SAMPLING PERFORMED BY: Ben Stevens

RESULTS NEEDED NO LATER THAN: As Contracted

RELEASED BY	DATE	TIME		RECEIVED BY	DATE	TIME
[signature]	12.20.16	14:00	➡	[signature]	12/20/16	14:00
[signature]	12/22/16	13:35	➡	Alex	12-22-16	13:35
			➡			

SHIPPED VIA	DATE SENT	TIME SENT

WELLHEAD INSPECTION CHECKLIST

Client: Lind mark

Date: 12.20.16

Site Address: 3378 Los Coyotes diagonal, Long Beach

Job Number: 161220.BN1

Technician: BN

Well ID	Well Inspected - No Corrective Action Required	WELL IS SECURABLE BY DESIGN (12"or less)	WELL IS CLEARLY MARKED WITH THE WORDS "MONITORING WELL" (12"or less)	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW7										
MW11			X							X
MW5			X							X
MW9	X	X	X							
MW8	X	X	X							
MW6			X							X
MW3	X	X	X							
MW4			X							X
MW10			X							X

NOTES: 2 of 2 tabs stripped; MW10, MW11, MW6, MW5
MW4: 2 of 2 tabs broken, annular seal deficient

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME	Lindmark @ Royalty (leaner)			PROJECT NUMBER	(61270.B~)		
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI 556 ↓		12.20.16 0706	pH 7.00 ↓ 4.00 10.00	7.03 4.21 10.06	✓ ✓	12.12°C	BN
			3900µ 237.5mV 100.0%	3817 241.9mV 113.8%	✓ ✓	12.06°C	BN

APPENDIX D

Laboratory Analytical Reports and Chain-of-Custody Records

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Rd., Los Angeles, CA 90065 Tel: (323) 223-9700 Fax: (323) 223-9500

Ordered By

Lindmark Engineering
2625 Townsgate Road Suite 330
Westlake Village, CA 91361-

Telephone (818)707-6100
Attn David Smith

Number of Pages 7
Date Received 12/22/2016
Date Reported 12/30/2016

Job Number	Ordered	Client
69224	12/22/2016	LNDENG

Project ID: FORMER ROYALTY CLNR
Project Name:
Site: Former Royalty Cleaners
3378 Los Coyotes Diagonal
Long Beach, CA

Enclosed are the results of analyses on 9 samples analyzed as specified on attached chain of custody.

Wendy Lu
Organics Supervisor

American Scientific Laboratories, LLC (ASL) accepts sample materials from clients for analysis with the assumption that all of the information provided to ASL verbally or in writing by our clients (and/or their agents), regarding samples being submitted to ASL, is complete and accurate. ASL accepts all samples subject to the following conditions:
1) ASL is not responsible for verifying any client-provided information regarding any samples submitted to the laboratory.
2) ASL is not responsible for any consequences resulting from any inaccuracies, omissions, or misrepresentations contained in client-provided information regarding samples submitted to the laboratory.

ASL

ASL JOB # 69224

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CALIFORNIA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY

BTS #

CLIENT: Lindmark Engineering

SITE: Former Royalty Cleaners
3378 Los Coyotes Diagonal
Long Beach, CA

CONDUCT ANALYSIS TO DETECT

LAB: ASL

DHS #

Invoice and Report to: David Smith
Lindmark Engineering
2625 Towngate Rd, Suite 330
Westlake Village, CA 91361
dsmith@lindmarkeng.com

	SAMPLE I.D.	DATE	TIME	MATRIX S = Soil W = H2O	CONTAINERS TOTAL	CONTAINERS Pres.	C = COMPOSITE ALL CONTAINERS	VOCs							ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
1	MW7	12/20/16	1025	W	3	None		X										352491
2	MW11	12/20/16	0905	W	3	None		X										352492
3	MW5	12/20/16	1043	W	3	None		X										352493
4	MW9	12/20/16	1105	W	3	None		X										352494
5	MW8	12/20/16	0959	W	3	None		X										352495
6	MW6	12/20/16	0930	W	3	None		X										352496
7	MW3	12/20/16	1304	W	3	None		X										352497
8	MW4	12/20/16	1137	W	3	None		X										352498
9	MW10	12/20/16	1210	W	3	None		X										352499

SAMPLING COMPLETED: DATE 12 2016 TIME

SAMPLING PERFORMED BY: Ben Stevens

RESULTS NEEDED NO LATER THAN: As Contracted

RELEASED BY	DATE	TIME		RECEIVED BY	DATE	TIME
[signature]	12.2016	11:00	➡	[signature]	12/20/16	14:00
[signature]	12/22/16	13:35	➡	Alex	12-22-16	13:35
			➡			

SHIPPED VIA	DATE SENT	TIME SENT

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Rd., Los Angeles, CA 90065 Tel: (323) 223-9700 Fax: (323) 223-9500

ANALYTICAL RESULTS

Ordered By

Lindmark Engineering
2625 Townsgate Road Suite 330
Westlake Village, CA 91361-

Site

Former Royalty Cleaners
3378 Los Coyotes Diagonal
Long Beach, CA

Telephone: (818)707-6100
Attn: David Smith

Page: 2

Project ID: FORMER ROYALTY CLNR

ASL Job Number	Submitted	Client
69224	12/22/2016	LNDENG

Method: 8260B, Volatile Organic Compounds

Our Lab I.D.			352491	352492	352493	352494	352495
Client Sample I.D.			MW7	MW11	MW5	MW9	MW8
Date Sampled			12/20/2016	12/20/2016	12/20/2016	12/20/2016	12/20/2016
Date Prepared			12/29/2016	12/29/2016	12/29/2016	12/29/2016	12/29/2016
Preparation Method							
Date Analyzed			12/29/2016	12/29/2016	12/29/2016	12/29/2016	12/29/2016
Matrix			Water	Water	Water	Water	Water
Units			ug/L	ug/L	ug/L	ug/L	ug/L
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Acetone	2.52	5.00	ND	ND	ND	ND	ND
Benzene	0.0970	1.00	ND	ND	ND	ND	ND
Bromobenzene (Phenyl bromide)	0.291	1.00	ND	ND	ND	ND	ND
Bromochloromethane (Chlorobromomethane)	0.169	1.00	ND	ND	ND	ND	ND
Bromodichloromethane (Dichlorobromomethane)	0.169	1.00	ND	ND	ND	ND	ND
Bromoform (Tribromomethane)	0.284	5.00	ND	ND	ND	ND	ND
Bromomethane (Methyl bromide)	0.174	3.00	ND	ND	ND	ND	ND
2-Butanone (MEK, Methyl ethyl ketone)	5.00	5.00	ND	ND	ND	ND	ND
n-Butylbenzene	0.363	1.00	ND	ND	ND	ND	ND
sec-Butylbenzene	0.338	1.00	ND	ND	ND	ND	ND
tert-Butylbenzene	0.235	1.00	ND	ND	ND	ND	ND
Carbon disulfide	0.463	1.00	ND	ND	ND	ND	ND
Carbon tetrachloride (Tetrachloromethane)	0.144	1.00	ND	ND	ND	ND	ND
Chlorobenzene	0.176	1.00	ND	ND	ND	ND	ND
Chloroethane	0.328	3.00	ND	ND	ND	ND	ND
2-Chloroethyl vinyl ether	0.665	5.00	ND	ND	ND	ND	ND
Chloroform (Trichloromethane)	0.247	1.00	ND	ND	ND	ND	ND
Chloromethane (Methyl chloride)	0.174	3.00	ND	ND	ND	ND	ND
4-Chlorotoluene (p-Chlorotoluene)	0.311	1.00	ND	ND	ND	ND	ND
2-Chlorotoluene (o-Chlorotoluene)	0.147	1.00	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane (DBCP)	0.333	5.00	ND	ND	ND	ND	ND
Dibromochloromethane	0.300	1.00	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB, Ethylene dibromide)	0.226	1.00	ND	ND	ND	ND	ND
Dibromomethane	0.316	1.00	ND	ND	ND	ND	ND
1,2-Dichlorobenzene (o-Dichlorobenzene)	0.358	1.00	ND	ND	ND	ND	ND
1,3-Dichlorobenzene (m-Dichlorobenzene)	0.333	1.00	ND	ND	ND	ND	ND
1,4-Dichlorobenzene (p-Dichlorobenzene)	0.384	1.00	ND	ND	ND	ND	ND

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
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ANALYTICAL RESULTS

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Project ID: FORMER ROYALTY CLNR

ASL Job Number	Submitted	Client
69224	12/22/2016	LNDENG

Method: 8260B, Volatile Organic Compounds

Our Lab I.D.			352491	352492	352493	352494	352495
Client Sample I.D.			MW7	MW11	MW5	MW9	MW8
Date Sampled			12/20/2016	12/20/2016	12/20/2016	12/20/2016	12/20/2016
Date Prepared			12/29/2016	12/29/2016	12/29/2016	12/29/2016	12/29/2016
Preparation Method							
Date Analyzed			12/29/2016	12/29/2016	12/29/2016	12/29/2016	12/29/2016
Matrix			Water	Water	Water	Water	Water
Units			ug/L	ug/L	ug/L	ug/L	ug/L
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
Dichlorodifluoromethane	0.244	3.00	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.372	1.00	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.182	1.00	ND	ND	ND	ND	ND
1,1-Dichloroethene (1,1-Dichloroethylene)	0.355	1.00	ND	ND	ND	ND	ND
cis-1,2-Dichloroethene	0.279	1.00	ND	ND	1.43	ND	ND
trans-1,2-Dichloroethene	0.176	1.00	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.359	1.00	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.205	1.00	ND	ND	ND	ND	ND
2,2-Dichloropropane	0.341	1.00	ND	ND	ND	ND	ND
1,1-Dichloropropene	0.210	1.00	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	0.122	1.00	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	0.100	1.00	ND	ND	ND	ND	ND
Ethylbenzene	0.209	1.00	ND	ND	ND	ND	ND
Hexachlorobutadiene (1,3-Hexachlorobutadiene)	0.413	3.00	ND	ND	ND	ND	ND
2-Hexanone	0.944	5.00	ND	ND	ND	ND	ND
Isopropylbenzene	0.291	1.00	ND	ND	ND	ND	ND
p-Isopropyltoluene (4-Isopropyltoluene)	0.468	1.00	20.3	ND	ND	ND	ND
MTBE	0.240	2.00	ND	ND	ND	ND	ND
4-Methyl-2-pentanone (MIBK, Methyl isobutyl ketone)	1.71	5.00	ND	ND	ND	ND	ND
Methylene chloride (Dichloromethane, DCM)	1.00	5.00	ND	ND	ND	ND	ND
Naphthalene	0.375	1.00	ND	ND	ND	ND	ND
n-Propylbenzene	0.254	1.00	ND	ND	ND	ND	ND
Styrene	0.122	1.00	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	0.141	1.00	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	0.579	1.00	ND	ND	ND	ND	ND
Tetrachloroethene (Tetrachloroethylene)	0.421	1.00	ND	ND	33.2	19.4	5.55
Toluene (Methyl benzene)	0.282	1.00	ND	ND	ND	ND	ND
1,2,3-Trichlorobenzene	0.219	1.00	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.451	1.00	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	0.150	1.00	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.233	1.00	ND	ND	ND	ND	ND
Trichloroethene (TCE)	0.117	1.00	ND	ND	10.5	2.88	0.845J
Trichlorofluoromethane	0.294	1.00	ND	ND	ND	ND	ND

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ANALYTICAL RESULTS

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Project ID: FORMER ROYALTY CLNR

ASL Job Number	Submitted	Client
69224	12/22/2016	LNDENG

Method: 8260B, Volatile Organic Compounds

Our Lab I.D.			352491	352492	352493	352494	352495
Client Sample I.D.			MW7	MW11	MW5	MW9	MW8
Date Sampled			12/20/2016	12/20/2016	12/20/2016	12/20/2016	12/20/2016
Date Prepared			12/29/2016	12/29/2016	12/29/2016	12/29/2016	12/29/2016
Preparation Method							
Date Analyzed			12/29/2016	12/29/2016	12/29/2016	12/29/2016	12/29/2016
Matrix			Water	Water	Water	Water	Water
Units			ug/L	ug/L	ug/L	ug/L	ug/L
Dilution Factor			1	1	1	1	1
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	**Results**
1,2,3-Trichloropropane	0.303	1.00	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	0.451	1.00	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	0.219	1.00	ND	ND	ND	ND	ND
Vinyl acetate	1.62	5.00	ND	ND	ND	ND	ND
Vinyl chloride (Chloroethene)	0.331	3.00	ND	ND	ND	ND	ND
o-Xylene	0.262	1.00	ND	ND	ND	ND	ND
m- & p-Xylenes	0.476	2.00	ND	ND	ND	ND	ND

Our Lab I.D.			352491	352492	352493	352494	352495
Surrogates	**% Rec.Limit**		**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**
Surrogate Percent Recovery							
Bromofluorobenzene	70-120		108	110	110	112	106
Dibromofluoromethane	70-120		96	97	94	97	97
Toluene-d8	70-120		90	105	102	99	98

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ANALYTICAL RESULTS

Ordered By

Lindmark Engineering
2625 Townsgate Road Suite 330
Westlake Village, CA 91361-

Site

Former Royalty Cleaners
3378 Los Coyotes Diagonal
Long Beach, CA

Telephone: (818)707-6100
Attn: David Smith

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Project ID: FORMER ROYALTY CLNR

ASL Job Number	Submitted	Client
69224	12/22/2016	LNDENG

Method: 8260B, Volatile Organic Compounds

Our Lab I.D.			352496	352497	352498	352499	
Client Sample I.D.			MW6	MW3	MW4	MW10	
Date Sampled			12/20/2016	12/20/2016	12/20/2016	12/20/2016	
Date Prepared			12/29/2016	12/29/2016	12/29/2016	12/29/2016	
Preparation Method							
Date Analyzed			12/29/2016	12/29/2016	12/29/2016	12/29/2016	
Matrix			Water	Water	Water	Water	
Units			ug/L	ug/L	ug/L	ug/L	
Dilution Factor			1	1	1	1	
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	
Acetone	2.52	5.00	ND	ND	ND	ND	
Benzene	0.0970	1.00	ND	ND	ND	ND	
Bromobenzene (Phenyl bromide)	0.291	1.00	ND	ND	ND	ND	
Bromochloromethane (Chlorobromomethane)	0.169	1.00	ND	ND	ND	ND	
Bromodichloromethane (Dichlorobromomethane)	0.169	1.00	ND	ND	ND	ND	
Bromoform (Tribromomethane)	0.284	5.00	ND	ND	ND	ND	
Bromomethane (Methyl bromide)	0.174	3.00	ND	ND	ND	ND	
2-Butanone (MEK, Methyl ethyl ketone)	5.00	5.00	ND	ND	ND	ND	
n-Butylbenzene	0.363	1.00	ND	ND	ND	ND	
sec-Butylbenzene	0.338	1.00	ND	ND	ND	ND	
tert-Butylbenzene	0.235	1.00	ND	ND	ND	ND	
Carbon disulfide	0.463	1.00	ND	ND	ND	ND	
Carbon tetrachloride (Tetrachloromethane)	0.144	1.00	ND	ND	ND	ND	
Chlorobenzene	0.176	1.00	ND	ND	ND	ND	
Chloroethane	0.328	3.00	ND	ND	ND	ND	
2-Chloroethyl vinyl ether	0.665	5.00	ND	ND	ND	ND	
Chloroform (Trichloromethane)	0.247	1.00	ND	ND	ND	ND	
Chloromethane (Methyl chloride)	0.174	3.00	ND	ND	ND	ND	
4-Chlorotoluene (p-Chlorotoluene)	0.311	1.00	ND	ND	ND	ND	
2-Chlorotoluene (o-Chlorotoluene)	0.147	1.00	ND	ND	ND	ND	
1,2-Dibromo-3-chloropropane (DBCP)	0.333	5.00	ND	ND	ND	ND	
Dibromochloromethane	0.300	1.00	ND	ND	ND	ND	
1,2-Dibromoethane (EDB, Ethylene dibromide)	0.226	1.00	ND	ND	ND	ND	
Dibromomethane	0.316	1.00	ND	ND	ND	ND	
1,2-Dichlorobenzene (o-Dichlorobenzene)	0.358	1.00	ND	ND	ND	ND	
1,3-Dichlorobenzene (m-Dichlorobenzene)	0.333	1.00	ND	ND	ND	ND	
1,4-Dichlorobenzene (p-Dichlorobenzene)	0.384	1.00	ND	ND	ND	ND	

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ANALYTICAL RESULTS

Project ID: FORMER ROYALTY CLNR

ASL Job Number	Submitted	Client
69224	12/22/2016	LNDENG

Method: 8260B, Volatile Organic Compounds

Our Lab I.D.			352496	352497	352498	352499	
Client Sample I.D.			MW6	MW3	MW4	MW10	
Date Sampled			12/20/2016	12/20/2016	12/20/2016	12/20/2016	
Date Prepared			12/29/2016	12/29/2016	12/29/2016	12/29/2016	
Preparation Method							
Date Analyzed			12/29/2016	12/29/2016	12/29/2016	12/29/2016	
Matrix			Water	Water	Water	Water	
Units			ug/L	ug/L	ug/L	ug/L	
Dilution Factor			1	1	1	1	
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	
Dichlorodifluoromethane	0.244	3.00	ND	ND	ND	ND	
1,1-Dichloroethane	0.372	1.00	ND	ND	ND	ND	
1,2-Dichloroethane	0.182	1.00	ND	ND	ND	ND	
1,1-Dichloroethene (1,1-Dichloroethylene)	0.355	1.00	ND	ND	ND	ND	
cis-1,2-Dichloroethene	0.279	1.00	ND	3.60	9.34	ND	
trans-1,2-Dichloroethene	0.176	1.00	ND	ND	ND	ND	
1,2-Dichloropropane	0.359	1.00	ND	ND	ND	ND	
1,3-Dichloropropane	0.205	1.00	ND	ND	ND	ND	
2,2-Dichloropropane	0.341	1.00	ND	ND	ND	ND	
1,1-Dichloropropene	0.210	1.00	ND	ND	ND	ND	
cis-1,3-Dichloropropene	0.122	1.00	ND	ND	ND	ND	
trans-1,3-Dichloropropene	0.100	1.00	ND	ND	ND	ND	
Ethylbenzene	0.209	1.00	ND	ND	ND	ND	
Hexachlorobutadiene (1,3-Hexachlorobutadiene)	0.413	3.00	ND	ND	ND	ND	
2-Hexanone	0.944	5.00	ND	ND	ND	ND	
Isopropylbenzene	0.291	1.00	ND	ND	ND	ND	
p-Isopropyltoluene (4-Isopropyltoluene)	0.468	1.00	20.3	ND	ND	ND	
MTBE	0.240	2.00	ND	ND	ND	ND	
4-Methyl-2-pentanone (MIBK, Methyl isobutyl ketone)	1.71	5.00	ND	ND	ND	ND	
Methylene chloride (Dichloromethane, DCM)	1.00	5.00	ND	ND	ND	ND	
Naphthalene	0.375	1.00	ND	ND	ND	ND	
n-Propylbenzene	0.254	1.00	ND	ND	ND	ND	
Styrene	0.122	1.00	ND	ND	ND	ND	
1,1,1,2-Tetrachloroethane	0.141	1.00	ND	ND	ND	ND	
1,1,2,2-Tetrachloroethane	0.579	1.00	ND	ND	ND	ND	
Tetrachloroethene (Tetrachloroethylene)	0.421	1.00	7.92	34.0	36.8	0.635J	
Toluene (Methyl benzene)	0.282	1.00	ND	ND	ND	ND	
1,2,3-Trichlorobenzene	0.219	1.00	ND	ND	ND	ND	
1,2,4-Trichlorobenzene	0.451	1.00	ND	ND	ND	ND	
1,1,1-Trichloroethane	0.150	1.00	ND	ND	ND	ND	
1,1,2-Trichloroethane	0.233	1.00	ND	ND	ND	ND	
Trichloroethene (TCE)	0.117	1.00	1.90	19.0	39.2	0.140J	
Trichlorofluoromethane	0.294	1.00	ND	ND	ND	ND	

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ANALYTICAL RESULTS

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Project ID: FORMER ROYALTY CLNR

ASL Job Number	Submitted	Client
69224	12/22/2016	LNDENG

Method: 8260B, Volatile Organic Compounds

Our Lab I.D.			352496	352497	352498	352499	
Client Sample I.D.			MW6	MW3	MW4	MW10	
Date Sampled			12/20/2016	12/20/2016	12/20/2016	12/20/2016	
Date Prepared			12/29/2016	12/29/2016	12/29/2016	12/29/2016	
Preparation Method							
Date Analyzed			12/29/2016	12/29/2016	12/29/2016	12/29/2016	
Matrix			Water	Water	Water	Water	
Units			ug/L	ug/L	ug/L	ug/L	
Dilution Factor			1	1	1	1	
Analytes	**MDL**	**PQL**	**Results**	**Results**	**Results**	**Results**	
1,2,3-Trichloropropane	0.303	1.00	ND	ND	ND	ND	
1,2,4-Trimethylbenzene	0.451	1.00	ND	ND	ND	ND	
1,3,5-Trimethylbenzene	0.219	1.00	ND	ND	ND	ND	
Vinyl acetate	1.62	5.00	ND	ND	ND	ND	
Vinyl chloride (Chloroethene)	0.331	3.00	ND	ND	ND	ND	
o-Xylene	0.262	1.00	ND	ND	ND	ND	
m- & p-Xylenes	0.476	2.00	ND	ND	ND	ND	

Our Lab I.D.			352496	352497	352498	352499	
Surrogates	**% Rec.Limit**		**% Rec.**	**% Rec.**	**% Rec.**	**% Rec.**	
Surrogate Percent Recovery							
Bromofluorobenzene	70-120		109	109	108	110	
Dibromofluoromethane	70-120		114	113	115	92	
Toluene-d8	70-120		99	102	101	100	

APPENDIX E

Non-Hazardous Waste Manifest

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: Not Required
2. Page 1 of 1
3. Emergency Response Phone: 866-423-8060
4. Waste Tracking Number: 1220161004

5. Generator's Name and Mailing Address
Royalty Cleaners
3378 Los Coyotes Diagonal
Long Beach CA 90808
Generator's Phone: 818 707-6100

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: American Integrated Services Inc
U.S. EPA ID Number: CAR000148338

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Crosby & Overton, Inc.
1630 W. 17th Street
Long Beach CA 90813
Facility's Phone: 562 432-5445
U.S. EPA ID Number: CAD028409019

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	Non-Hazardous Waste Liquid (Purge Water)	12	DM	75	G
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
Wear proper PPE while handling. Weights or volumes are approximate.
Job # 36009-42-1 Profile# 27578

D140053
2 Drums

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: AIS on behalf of Generator
Signature: NS
Month 12 Day 21 Year 16

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Eddie Lino
Signature: Eddie Lino
Month 12 Day 21 Year 16

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:
17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month Day Year

H135

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: William Hoop
Signature
Month 12 Day 30 Year 16

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

169-BLC-O 5 11977 (Rev. 9/09)

TRANSPORTER #1

STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER

CASE SUMMARY

REPORT DATE
1/1/1988

HAZARDOUS MATERIAL INCIDENT REPORT FILED WITH OES?

I. REPORTED BY -
UNKNOWN

CREATED BY
UNKNOWN

III. SITE LOCATION

FACILITY NAME
CHARTER HOSPITAL FACILITY

FACILITY ID

FACILITY ADDRESS
3340 LOS COYOTES DIAGONAL
LONG BEACH, CA 90808
LOS ANGELES COUNTY

ORIENTATION OF SITE TO STREET

CROSS STREET

V. SUBSTANCES RELEASED / CONTAMINANT(S) OF CONCERN
DIESEL

VI. DISCOVERY/ABATEMENT

DATE DISCHARGE BEGAN

DATE DISCOVERED

HOW DISCOVERED

DESCRIPTION

DATE STOPPED

STOP METHOD

DESCRIPTION

VII. SOURCE/CAUSE

SOURCE OF DISCHARGE
Other

CAUSE OF DISCHARGE
Unknown

DISCHARGE DESCRIPTION

VIII. CASE TYPE

CASE TYPE
Aquifer used for drinking water supply

IX. REMEDIAL ACTION
NO REMEDIAL ACTIONS ENTERED

X. GENERAL COMMENTS

XI. CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION REPORTED HEREIN IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

XII. REGULATORY USE ONLY

LOCAL AGENCY CASE NUMBER

REGIONAL BOARD CASE NUMBER
908080043

LOCAL AGENCY

CONTACT NAME	INITIALS	ORGANIZATION NAME	EMAIL ADDRESS
CARMEN PIRO	CP	LONG BEACH, CITY OF	carmen.piro@longbeach.gov

ADDRESS
2525 GRAND AVE.
LONG BEACH, CA 90815

CONTACT DESCRIPTION

PHONE TYPE	PHONE NUMBER	EXTENSION
phone	(562)-570-4137	

REGIONAL BOARD

CONTACT NAME	INITIALS	ORGANIZATION NAME	EMAIL ADDRESS
YI LU	YL	LOS ANGELES RWQCB (REGION 4)	ylu@waterboards.ca.gov

ADDRESS
R4 UNKNOWN, CA

CONTACT DESCRIPTION

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INTERVIEW

Property: LBCCD Surplus Real Property – Los Coyotes consisting of approximately 6.3 acres of real property located at 3320, 3340 Los Coyotes Diagonal and 3325 Palo Verde Avenue, Long Beach, California 90808, APN 7191-014-902, 903, 904, 905, 906, 010 and 022 known generally as the Los Coyotes Diagonal Site ("Property")

Date: November 9, 2017

Address: Purchasing and Contracts
Long Beach Community College District
4901 E. Carson Street – G4
Long Beach, CA 90808
Attn: Alan Moloney

Owner: Long Beach Community College District

Interview Name and Phone Number: Alan Moloney, Deputy Director Purchasing and Contracts
562-938-4541

□□ How long have □ou owned the Propert□□ The District purchased the propert□ in late □□□□□

□□ Are □ou aware o□an□ environmental cleanup liens against the propert□ that are □iled or recorded under □ederal□tri□al□state or local law□ □□□C□R□□□□□□□ Answer□□o

□□ Are □ou aware o□an□ activit□ and use limitations□such as engineering controls□land use restrictions or institutional controls that are in place at the site and□or have □een □iled or recorded in a registr□ under □ederal□tri□al□state or local law□ □□□C□R□□□□□□□Answer□An□ restrictions should □e on □ile with the Cit□ o□ Long Beach or LA Count□□

□□ Do □ou have an□ specialized knowledge or e□perience related to the propert□ or near□□ properties□ □or e□ample□are □ou involved in the same line o□□usiness as the current or □ormer occupants o□the propert□ or an ad□oining propert□ so that □ou would have specialized knowledge o□the chemicals and processes used □□ this t□pe o□□usiness □□□□C□R□□□□□□□Answer□□o□this is propert□ purchased and owned □□ a Communit□College District□

□□ Does the purchase price □eing paid □or this propert□ reasona□l□ re□ect the □air market value o□the propert□□ I□□ou conclude that there is a di□erence□have □ou considered whether the lower purchase price is □ecause contamination is known or □elieved to □e present at the propert□□ □□□C□R□□□□□□□Answer□□es□ the price re□ects the □air market value□

□□ Are □ou aware o□commonl□ known or reasona□l□ ascertaina□le in□ormation a□out the propert□ that would help the environmental pro□essional to identi□□ conditions indicative o□releases or threatened releases□ □□□C□R□□□□□□□

□ote□The District has never had an□ operations□o□□ces□or emplo□ees on this site□It was purchased with the intent to create an additional campus□That plan changed and the District has retained ownership o□the site and operated in the same manner as when it was purchased□

a□ Descri□e past tenants and operations□Answer□This has propert□ has □een in use as medical o□□ce □uilding use prior to and during the ownership □□ the District□All documents regarding the tenants have □een made availa□le to the □u□ers□

Interview

□□ An□past □present chemical use□storage□spills□releases□on□site treatment□disposal□ Answer□ This has propert□has □een in use as medical o□ice □uilding use prior to and during the ownership □□the District□All documents regarding the land and □uilding have □een made availa□le to the □u□ers

c□ Prior Environmental Reports□ Investigations□ Assessments□ Answer□This has propert□has □een in use as medical o□ice □uilding use prior to and during the ownership □□the District□All documents regarding the propert□including past environmental reports have □een made availa□le to the □u□ers

□□ Based on □our knowledge and e□perience related to the propert□□are there an□o□vious indicators that point to the presence or likel□presence o□releases at the propert□□ □□□C□R□□□□□□□□ Answer□This has propert□has □een in use as medical o□ice □uilding use prior to and during the ownership □□the District□All documents regarding the propert□including past environmental reports have □een made availa□le to the □u□ers□

□□ Do □ou know o□an□past or current Underground Storage Tanks □USTs□at the Propert□□ Answer□This has propert□has □een in use as medical o□ice □uilding use prior to and during the ownership □□the District□All documents regarding the propert□including past environmental reports have □een made availa□le to the □u□ers

□□ Do □ou know o□an□past or current wells at the Propert□□ Answer□This has propert□has □een in use as medical o□ice □uilding use prior to and during the ownership □□the District□All documents regarding the propert□including past environmental reports have □een made availa□le to the □u□ers

□□□ What are the Utilit□providers □or the Propert□□
Water □Sewer □□atural Gas □ Cit□o□Long Beach

Electric Power □ Sothern CA Edison

APPENDIX E

McALISTER GeoSCIENCE STATEMENT OF QUALIFICATIONS

McAlister GeoScience

Environmental
Site Investigation and Remediation

multiple, creative, and technically sound solutions for challenges facing property owners and property managers.

Turn-Key Solutions for complex sub-surface challenges

Phase I Site Investigations

Phase I environmental site investigations are routinely conducted to support pre-development property transactions, developed property transfers, and site closures. Lending institutions, realty corporations, landholders, and private individuals must consider environmental contamination as a potential risk when considering properties for acquisition. Purchase of contaminated property can result in assumption of significant cost for cleanup. To address this issue, purchasers of real estate consider an environmental assessment as a routine component of an acquisition.

Phase II Site Investigations

Phase II environmental site investigations are performed to delineate horizontal and vertical extent of volatile organics, metals, petroleum hydrocarbons, and other chemicals of concern. The McAlister GeoScience team has effectively managed field activities, coordinated with analytical laboratories, evaluated data, and prepared reports associated with ongoing groundwater monitoring programs.

Agency Interaction

The regulatory framework of California is diverse. Multiple agencies including regional water quality control boards, Federal EPA, CalEPA, city, county, and numerous other local agencies may oversee the same site at any given time. You need an experienced technical practitioner.

Regional Coverage

McAlister GeoScience has strong teaming ties in several metro areas including New Jersey; New York; North Carolina; Connecticut; Montana; Seattle; Phoenix, AZ; Denver, CO; Dallas, TX; Houston, TX; and Florida. Several locations are led by personnel with over 40 years of varied experience.

McAlister GeoScience is an effective and results-focused team possessing extensive experience with the successful design and implementation of Phase I and II environmental site assessments and GeoTechnical Investigations. McAlister GeoScience is well-versed in activities associated with the implementation of remedial action including agency interaction and all aspects of project management. McAlister GeoScience has also proven to be an effective team performing data analysis and reporting, remedial action, and compliance activities obtaining regulatory closure at numerous facilities nationwide.

- Environmental Site Investigation
- Environmental Remediation
- Regulatory Closure

McAlister
GeoScience

5030 E. 2nd Street, Suite 200
Long Beach, CA 90803
(714) 423-3796
dmcalister@mcageosci.com

dirtyproperty.com

McAlister GeoScience

McAlister GeoScience

- Environmental
- Geotechnical

Assessment

Phase I and II environmental site investigations. Characterization and rough order of magnitude (ROM) cost development. All performed on a timeframe and teaming fashion to facilitate commercial real estate transactions.

Remediation

Technically sound and legally defensible solutions performed in a teaming fashion to meet regulatory requirements, schedule, and budget.

GeoTechnical

Our team is well versed and experienced in the field aspects and report of soil reports for commercial and industrial properties including foundation stability, compaction, and slope stability.

Asbestos / Lead-based Paint

Surveys and abatement performed by licensed experts in a teaming fashion. All services provided on a turn-key basis with one point of contact for ease of management.

In Situ Chemical Oxidation (ISCO)

McAlister GeoScience has managed and performed ISCO (potassium permanganate and activated persulfate) injection for the treatment of chlorinated solvents in groundwater at various facilities in Southern California including the Cities of Industry, Bell, Los Angeles, Long Beach, Huntington Beach and Costa Mesa, California. Numerous ISCO reagents have been utilized including permanganate, hydrogen peroxide, and various proprietary reagents.

McAlister GeoScience

5030 E. 2nd Street, Suite 200
Long Beach, California 90803
(714) 423-3796
dmcalister@mcageosci.com

dirtyproperty.com

Southern California | New Jersey | New York | North Carolina | Connecticut | Montana
Seattle | Phoenix, AZ | Denver, CO | Dallas, TX | Houston, TX | Florida

Environmental Site Investigation & Remediation | Agency Interaction | Asbestos | Lead | Mold | GeoTechnical Investigations

Curriculum Vitae – David C. McAlister

Environmental Site Investigation and Remediation Professional

5030 E 2nd Street, Suite 200
Long Beach, California
90803

(714) 423-3796
dmcalister@mcageosci.com
dirtyproperty.com

Mr. McAlister is an effective and results-focused professional possessing extensive experience with the successful design and implementation of Phase I and II environmental site assessments. Mr. McAlister is well-versed in activities associated with the implementation of remedial action including agency interaction, scope, schedule, and budget management. Mr. McAlister has also proven to be effective at the design, performance, and management of a team performing data analysis and reporting, remedial action, and compliance activities obtaining regulatory closure at numerous facilities located in Southern California.

Selected Project Descriptions:

United States Air Force Reserves – Mr. McAlister managed and performed the field tasks associated with Groundwater remediation involving *in-situ* chemical oxidation (ISCO - potassium permanganate) for the remediation of groundwater impacted with chlorinated solvents at an operating air force base in Spokane, Washington.

Gardena Business Park, LLC. – Mr. McAlister achieved regulatory closure of an industrial property that had been entered the Spills, Leaks, Investigations, and Cleanup (SLIC) program of the Los Angeles Regional Water Quality Control Board. Contaminants of Concern included trichloroethylene (TCE) and tetrachloroethylene (PCE).

Lockheed Martin Corporation – Mr. McAlister was part of a team performing environmental due diligence reviews associated with the acquisition of a military vehicle manufacturer. Due diligence file reviews were completed on hundreds of sites located across the United States and Europe under an extremely compressed timeframe. Ultimately, two sites were identified with higher than acceptable environmental liability risk and the deal was not consummated due to these recommendations.

Various Industrial and Commercial Real Estate Clients – Mr. McAlister managed and performed ISCO injection for the treatment of chlorinated solvents in groundwater at various facilities in Southern California including the Cities of Industry, Bell, Los Angeles, Huntington Beach and Costa Mesa, California. Numerous ISCO reagents were evaluated for these projects including permanganate, hydrogen peroxide, and various proprietary reagents.

Carson Marketplace, LLC. – Mr. McAlister managed the field implementation of an aquifer pump test at a former landfill in Carson, California. The goal of the project was to redevelop the landfill for residential, retail, and other purposes. Through this process, remediation of soil and groundwater was required along with the implementation of landfill gas mitigation and management practices. The scope of the aquifer pump test included a constant rate and step-flow test in three discrete areas and the management of impacted groundwater generated during the process.

Education:

B.S., Soil Science, California State Polytechnic University, San Luis Obispo, 2001

Specialized Training:

OSHA 40-hour Hazwoper Health and Safety Training

OSHA 8-hour Hazwoper refresher course (annual)

OSHA 8-hour Supervisor Training

American Red Cross First Aid and CPR Certified (annual)

Years of Experience:

Sixteen

Employment History:

ERM-West Inc. (2001-2005)
Staff Scientist

Tetra Tech, Inc. (2005-2013)
Senior Scientist

Curriculum Vitae – David C. McAlister

Environmental Site Investigation and Remediation Professional

Selected Project Descriptions (Continued):

Baker Hughes – Mr. McAlister performed the evaluation of effectiveness and final agency reporting of an ISCO (activated persulfate) injection conducted in Huntington Beach, California. The agency review of the report and remediation progress following Mr. McAlister's involvement resulted in significant adjustments to the remedial approach and advanced the project significantly toward regulatory closure.

Union Pacific Rail Road – Mr. McAlister achieved regulatory closure of an Underground Storage Tank (UST) site in the city of Colton, California. Contaminants of Concern included, lead, arsenic, and "Bunker C" fuel oil. The regulatory agency providing oversight was the San Bernardino County Fire Department Hazardous Materials Division.

Lockheed Martin, Torrance, CA – Mr. McAlister has held various management and technical support positions due to his extensive experience with the project, regulatory environment, and hydrogeology of the area. Mr. McAlister attended meetings with the regulatory community, neighboring property owners, and various other stakeholders on behalf of Lockheed Martin Corporation. Additionally, Mr. McAlister attended quarterly meetings and briefed Lockheed senior management on the scope, schedule, remedial options, remedial approach, risks, and opportunities associated with the remediation of a groundwater plume at a facility immediately adjacent to a federal Superfund site.

ExxonMobil Global Remediation – Mr. McAlister improved LNAPL recovery at the Torrance refinery from approximately 30,000 gallons per month to approximately 91,000 gallons of per month, a 300% improvement in extraction efficiency within eight months. Installation of five new extraction wells and associated skimming systems contributed 40% of the increase in extraction efficiency. Optimization of currently existing infrastructure contributed 60% of the increase in extraction efficiency.

Los Angeles Department of Water and Power – Mr. McAlister coordinated and performed the field implementation of a sodium permanganate ISCO injection at a maintenance facility in Silver Lake area of Los Angeles, California.

Alcoa, Inc. – Mr. McAlister performed phase II soil, soil vapor, and groundwater investigations including the planning, implementation, and reporting of investigation activities at five separate facilities located in southern California for the acquisition of an aerospace fastener company.

Various Clients – Mr. McAlister has performed numerous soil and groundwater investigations to delineate horizontal and vertical extent of VOCs, metals, TPH, and other chemicals of concern at various rail yards and manufacturing plants throughout California. Site investigation activities included monitoring well installation, soil boring advancement, and sampling using various drilling techniques. Drilling techniques utilized include hollow-stem auger, air rotary casing hammer (ARCH), mud rotary, mud rotary with reverse circulation, and hydraulic direct-push. Mr. McAlister has effectively managed field activities, coordinated with analytical laboratories, evaluated data, and prepared reports associated with ongoing groundwater monitoring programs.

5030 E 2nd Street, Suite 200
Long Beach, California
90803
(714) 423-3796
dmcalister@mcageosci.com

Curriculum Vitae – Jay Schneider, P.G.

Environmental Site Investigation and Remediation Professional

5030 E. 2nd Street, Suite 200
Long Beach, California
90803

(626) 841-2667
jschneider@mcageosci.com
dirtyproperty.com

Mr. Schneider is a Professional Geologist with extensive experience in environmental remediation, subsurface investigations, storm water compliance, and project management for numerous sites in southern and Central California. Evaluated data, supervised fieldwork, prepared technical reports, managed projects, supervised junior staff, and interacted with clients and regulatory agencies. Managed and inspected traditional and LUP projects. Phase I, II, and III investigations. Have prepared and managed environmental health and safety programs for corporate clients, including Hazardous Waste Management, Hazardous Material Business Plans, chemical inventories, CERS uploads, and Toxic Organic Management Plans. Experienced with USTs, ASTs, chlorinated hydrocarbons, vapor intrusion, and reopened cases.

Selected Project Descriptions:

Independent Contractor – Performed numerous Phase I and Phase II investigations for Citadel, Tetra Tech, Phase 1 Environmental (San Jose, CA), All Appropriates Inquiries (Ashland City, TN), and McAlister GeoSciences (Long Beach, CA), and UST investigations/removals and QSD/QSP duties for Citadel. • Reviewed and signed paleontological resource reports for Cogstone Resource Management. • Taught geology courses at Saddleback College, Mission Viejo.

Project Geologist – Design of methane mitigation systems and soil vapor extraction (SVE) systems. UST removals, especially of fugitive tanks. SWPPP implementation, including inspections, reports, and sampling. Investigation of sites in Los Angeles Methane and Methane Buffer Zones.

Senior Environmental Scientist – Hazardous Materials Business Plans and Chemical Inventory management. Preparation and implementation of SWPPPs, especially for Caltrans and US military. Business Development and Project Management.

Paleontologist - Paleontological resource consultant for large highway, railway, and desalination plant construction projects. Prepared cost analyses, assessment reports, mitigation reports, and compliance reports.

Senior Project Geologist - Project Manager for a 16.2-mile linear 70 kV reconductoring project between San Luis Obispo and Atascadero for a major utility company. Conducted SWPPP/BMP inspections on utility company transmission, distribution, and solar stations, as well as LUPs; prepared SWPPPs and SWPPP amendments. Installed numerous wells (groundwater monitoring, soil vapor extraction [SVE], air sparge) and supervised the advancement of a multitude of soil borings at leaking underground fuel tank sites throughout southern and central California.

Education:

M.S. Geology, University of Cincinnati, Cincinnati, OH 1988

B.A. Earth and Planetary Sciences, Johns Hopkins University, Baltimore, MD 1985

Certifications:

California Professional Geologist #8787, California Qualified SWPPP Developer and Qualified SWPPP Practitioner #20608, OSHA 40hr HAZWOPER, First Aid, and CPR.

Years of Experience:

Ten

Employment History:

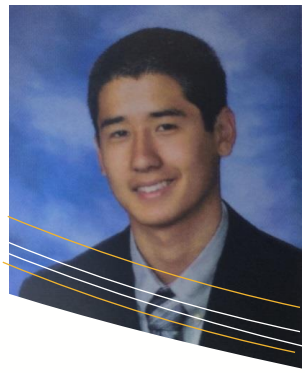
Project Geologist (2015-2016), Citadel Environmental Services

Senior Environmental Scientist (2013-2015), MLM & Associates Engineering

Paleontologist (2012-2013), Cogstone Resource Management

Sr Project Geologist (2008-2012), ETIC Engineering, Inc.

Staff Geologist (2006-2008), Delta Environmental Consultants



Curriculum Vitae – Joshua Kajiyama

Environmental Site Investigation and Remediation Professional

5030 E. 2nd Street, Suite 200
Long Beach, California
90803

jkajiyama@mcageosci.com
(310) 561-7750
dirtyproperty.com

Mr. Kajiyama is a geologist with experience in the environmental consulting field. Mr. Kajiyama has experience conducting Phase I due diligence for clients including banks, institutional investors, portfolio managers, and solar power developers. Mr. Kajiyama possesses direct experience with the investigation, historical research, and hydrogeologic modeling of subsurface soil and groundwater impacts.

Selected Project Descriptions:

Various Commercial Lending Clients – Hands-on and in-depth involvement in the field, data acquisition, and data evaluation aspects of Phase I Environmental Site Assessments. Investigations are successfully conducted on an accelerated time frame with tight budget constraints.

S Power, LLC – Successfully performed several portfolio projects for the acquisition of land in the San Joaquin Valley and Antelope Valley for the purpose of developing the properties in to photovoltaic solar power generating facilities. Projects consist of several adjoining properties with varied owners and former uses.

Various Clients – Performed soil and groundwater investigations to delineate horizontal and vertical extent of VOCs, metals, TPH, and other chemicals of concern at various sites throughout California. Other responsibilities included the effective design, implementation and reporting of Phase I and Phase II investigations, Remedial Action, and general environmental compliance activities.

Del Rey Fuel, LLC. – Implemented a Remedial Action Work Plan submitted to the Los Angeles Regional Water Quality Control Board (RWQCB) for the implementation of *in situ* chemical oxidation to treat residual soil and groundwater impacts; predominantly Total Petroleum Hydrocarbons (TPH) in the gasoline and diesel range, various Volatile Organic Compounds (VOCs) including Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) and various volatile breakdown products as well as fuel oxygenates.

Education:

B.S., Geology. California State University, Long Beach
Cum Laude Honors / Dean's List

Specialized Training:

OSHA 40-hour HAZWOPER Health and Safety Training

OSHA 8-hour HAZWOPER annual refresher

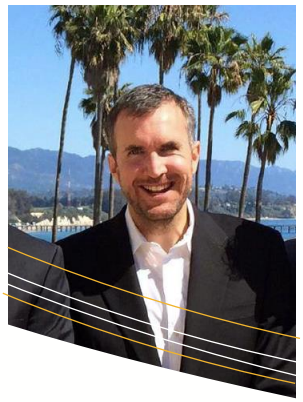
American Red Cross First Aid and CPR Certified (annual)

Years of Experience:

Two

Memberships:

- Geological Society of America
- AAPG Student Chapter
- 2015 ASBOG California Licensing Exam Volunteer.



Curriculum Vitae – Andrew Gwin

Environmental Site Investigation and Remediation Professional

5030 E. 2nd Street, Suite 200
Long Beach, California
90803

(949) 378-6043
agwin@mcageosci.com
dirtyproperty.com

Mr. Gwin is an environmental health scientist with experience in public health, property management, and the environmental consulting field. Mr. Gwin has experience conducting Phase I due diligence for clients including banks, institutional investors, portfolio managers, and solar power developers. Mr. Gwin has an in-depth interdisciplinary knowledge including epidemiology, environmental science, and renewable energy.

Selected Project Descriptions:

Various Commercial Lending Clients – Hands-on and in-depth involvement in the field, data acquisition, and data evaluation aspects of Phase I Environmental Site Assessments. Investigations are successfully conducted on an accelerated time frame with tight budget constraints.

S Power, LLC – Successfully performed several portfolio projects for the acquisition of land in the San Joaquin Valley and Antelope Valley for the purpose of developing the properties in to photovoltaic solar power generating facilities. Projects consist of several adjoining properties with varied owners and former uses.

EPA (Pesticides: Environmental Fate and Effects Division) – Working out of the Arlington, VA office, created and maintained databases on the biological characteristics of endangered species and summarized human health data regarding pesticide exposure.

County of Orange - Developed a website where citizens could report violations of the Clean Water Act and conducted internet research on various environmental topics related to water pollution, collected water samples in the field during and after storms, and processed those samples in the lab.

Rollins School of Public Health, Emory University, Atlanta, GA - Worked on a dual major- epidemiology, and environmental / occupational health. Assisted the Lu Lab, which looked at the association between exposure to pesticide residues in food and urinary excretion levels (EPA funded study: Environ Health Perspect. 2006 Feb; 114(2): 260-3). Oversaw sample collection and helped analyze urine samples for organophosphate pesticide residues.

Del Rey Fuel, LLC. – Developed a Remedial Action Work Plan submitted to the Los Angeles Regional Water Quality Control Board (RWQCB) for the implementation of *in situ* chemical oxidation to treat residual soil and groundwater impacts; predominantly Total Petroleum Hydrocarbons (TPH) in the gasoline and diesel range, various Volatile Organic Compounds (VOCs) including Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) and various volatile breakdown products as well as fuel oxygenates.

Education:

B.S., Environmental Science University of California, Berkeley, 2001

MSPH, Environmental and Occupation Health/Epidemiology Rollins School of Public Health, Emory University, 2007

MESM, Pollution Prevention and Remediation, University of California, Santa Barbara 2015

Specialized Training:

OSHA 40-hour Hazwoper Health and Safety Training

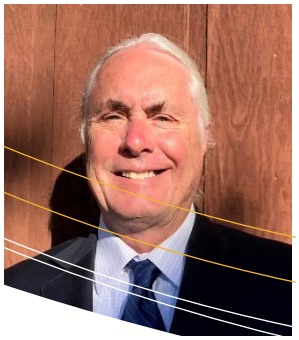
American Red Cross First Aid and CPR Certified (annual)

Years of Experience:

Three

Employment History:

Property Manager (2009-2011)
Senior Manager, The Ginner Company



Curriculum Vitae – Brendan Shine, P.E.

Engineer, Director of Rocky Mountain Operations

P.O. Box 1042
Golden, Colorado 80402

bshine@mcageosci.com
(303) 808-6133

Mr. Shine possesses experience in domestic and international consulting in environmental, geotechnical, hydrogeologic, and construction management projects. Mr. Shine has successfully completed projects for clients in the aerospace, petroleum, food, waste management, mining and other business sectors, and worked with government, both as an in-house contractor for the EPA and as a liaison for commercial clients. Focused experience includes field management of large-scale, high profile environmental and civil remediation programs, emergency responses, characterizations and monitoring programs, with hands-on experience in program design, budgeting, permitting, scheduling, management and problem solving. Mr. Shine has considerable experience in report preparation, critical review and project oversight.

Selected Project Descriptions:

Confidential Aerospace Client, Southern California – Senior Engineer for a major groundwater quality characterization effort involving installation of several deep multi-port monitoring wells using conventional mud rotary drilling techniques. Tasked with acquisition of access permits in urban settings within a heavily populated basin. Interaction with multiple regulatory agencies was required with logistical coordination between drilling contractor to maintain the compressed project schedule. Also tasked with data management and organization, establishment of field protocols and information management procedures, and health and safety and work plan preparation. Responsible for well design based on geophysical and lithologic logs and NPDES permit acquisition, discharge tracking and reporting for disposal of more than 1,000,000 gallons of development water. Provided or supported data interpretation and reporting, quality assurance/quality control and presentation tasks.

Beazer East, Gainesville, Florida – Senior Engineer and field team leader during the demolition and reclamation of a 90-acre Superfund wood treatment facility. Participated in design and implementation of key elements of the demolition and subsequent subsurface geophysical survey of the site for reported buried drums. Prepared the final demolition report, including waste stream and sample documentation and the buried drum investigation report.

Motorola, Arcade, New York – Senior Project Engineer, Lead Field Engineer/Remedial Site Supervisor at a former automotive electrical parts manufacturing facility in Arcade, New York. Successfully directed site characterization and remedial assessment/design steps and interaction with NYSDEC through the duration of this project. Prepared work plans and supervised mobilization and field remediation activities for this multiple operable unit site, including the evaluation and use of innovative technologies. The site was impacted by TCE, TCA, and their decay products, as well as cadmium, chromium, and lead in surface water, sediment, soil, and groundwater. Remediation activities included extensive dig and haul with confirmation sampling, followed by soil replacement and excavation restoration; *in-situ* soil chemical treatment; creek bed diversion, excavation and restoration with extensive confirmation sampling.

Education:

M.E., Geological Engineering, Colorado School of Mines, Golden, 1985

B.S., Geological Engineering, Colorado School of Mines, Golden, 1982

Specialized Training:

Registered Professional Engineer, Civil, #28168, CO

Registered Professional Engineer, Civil, #070187, NY

Registered Professional Engineer, Civil, #18316, CT

Registered Professional Engineer, Civil, #062 049856, IL

EPA Credentialed Underground Storage Tank Inspector – registration number pending

CDL/OIS Consultant, #5403, CO

OSHA 40-hour Hazwoper Health and Safety Training

OSHA 8-hour Hazwoper refresher course (annual)

OSHA 8-hour Supervisor Training

American Red Cross First Aid and CPR Certified (bi-annual)

Years of Experience:

Thirty-two

Curriculum Vitae – Brendan Shine, P.E.

Engineer, Director of Rocky Mountain Operations

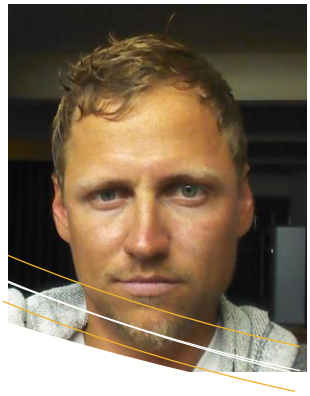
Selected Project Descriptions (Continued):

Rhom & Haas, Whitmoyer Laboratories Site, Myerstown, Pennsylvania – Senior Engineer/Operable Unit Supervisor and Field Operations Supervisor at a CERCLA site in Myerstown, Pennsylvania that had been used to manufacture livestock pharmaceuticals using arsenic, arsenilic acid, and other organics. Led the groundwater and surface water operable unit field programs, including oversight and design during construction and upgrade of an interim water treatment plant. Directed plant operation and supervised all field activities including groundwater and surface water quality and flow surveys, pretreatment pilot testing for organic acid breakdown using ultraviolet, ozonation, and reagent technologies, indoor and outdoor air quality sampling, waste management/disposal, and site health and safety monitoring.

Beazer East, Former Koppers Site, Gainesville, Florida – Senior Engineer responsible for logistical planning and field implementation for the comprehensive characterization of impacts to the Upper Floridan Aquifer at the former Koppers Site, Gainesville, Florida. Impacts resulted from historic operations at wood-treating plant that had been in operation for more than 90 years. Tasked with all phases of field implementation, well design and field method development, selection and oversight of numerous contractors, and reporting over a seven-year period for the installation of numerous complex, triple- and quadruple- telescoping cased wells designed to monitor water quality for the City of Gainesville primary drinking water source. Each well was equipped with Westbay multiport monitoring systems. Also managed the off-site shallow aquifer characterization. This program also required multiple isolation casing well installations to limit potential vertical contaminant migration. Also, responsible for community notification tasks, evaluation of the effectiveness of a pilot permanganate injection program, installation of Floridan Aquifer recovery wells to limit the migration of contaminants that had been detected in the aquifer, and planning for implementation of the demonstration-scale permanganate injection project.

Confidential Client, Lowry Landfill, Colorado – Project Engineer and Site Supervisor responsible for multiple Operable Unit activities during CERCLA data acquisition. Provided critical oversight of EPA contractor during field work and interpretation activities. Major participant in design and implementation of the gas (VOC and biogenic) and leachate specific OU characterization, including VOC gas migration assessment survey and meteoric infiltration (HELP) modeling. Field data was ultimately used to guide remediation at the site. Co-authored the remedial investigation.

Leprino Foods Company, Tracy, CA Plant – Project Manager – Lead the environmental characterization and remediation of soils and groundwater impacted by a historic diesel fuel release at one of the country's largest mozzarella manufacturing facilities. Acted as liaison between the client and the Regional Water Quality Control Board. Prepared and submitted a request for no-further action based on successful cleanup to no measurable product, no residual groundwater detections and acceptable soil vapor conditions. The consent order and monitoring has been rescinded at the site and we are awaiting a no-further-action determination.



Curriculum Vitae – Joseph Plummer

Environmental Site Investigation and Remediation Professional

5030 E. 2nd Street, Suite 200
Long Beach, California
90803

(619) 972-4454
jplummer@mcageosci.com
dirtyproperty.com

Mr. Plummer is an environmental consultant with experience in many aspects of the environmental discipline including but not limited to, personnel management, field documentation, sampling, remedial operations, site characterization, cost estimating, hydrogeological modeling, and report preparation. Mr. Plummer has experience with reporting and environmental requirements for RCRA, CERCLA, USEPA, USFS, BLM and local water boards in CA, AZ, NV, TX, GA, and FL.

Selected Project Descriptions:

Various Remedial Actions – Manager for site investigations, remedial actions, feasibility studies and environmental compliance projects primarily at airport fuel storage facilities, abandoned mine sites, NAVFAC military installations, and food manufacturing facilities.

Clients – Has worked alongside major airlines, energy production companies, food processors, the US army, the US Navy, National Parks Service, Bureau of Land Management, and National Forest Service.

Hydrologic Characterization study in Nevada – Participated as a key Geologist on a multi-million dollar hydrologic characterization study in Nevada.

Managed Phase II ESAs– Managed the Phase II investigation portion of a dry cleaning facility project including, proposal/report preparation, sampling, and budget tracking. Also worked on projects involving crude oil pipelines, natural gas/gasoline pipelines and LUSTs/ASTs.

Reporting and environmental requirements – RCRA, CERCLA, USEPA, USFS, BLM and local water boards in California, Arizona, Nevada, Texas, Georgia, and Florida.

Managing environmental databases – Two sites with over 10,000 records each, optimizing existing data utilizing a user-interface program (Epiphiny) to minimize errors and automate data tabulation.

Education:

B.A., Environmental Geology
Texas Tech University, 2001

Specialized Training:

OSHA 40-hour Hazwoper Health and Safety Training

OSHA 30-hour Construction Safety and Health Certification

EM385-1-1 40-hour Construction Safety Hazard Awareness Training by US Army Corps of Engineers

Department of Defense (DOD) security clearance valid until November 2018

Years of Experience:

16 years

Employment History:

King Remediation Services (2001-2002) – Environmental Technician/Geologist

HBC Engineering, a Division of Terracon (2002-2003) – Environmental Professional

MWH Americas (2003-2005) – Associate Geologist

Union Pacific Railroad (2005-2007) – Manager of Intermodal Operations

Environmental Cost Management, Inc (2008-present) – Project Geologist

Curriculum Vitae – Eric J. Cline

Geologist, Vice President – Pacific Northwest Operations

5641 Kagyu Street
Southeast
Olympia, WA 98513

ecline@mcageosci.com
(818) 309-9599

Mr. Cline is a top-performing geoscience professional offering in-depth experience providing dynamic quality assurance and human resources strategies for several industries. Mr. Cline possesses an impressive record of success using advanced knowledge of best engineering, quality testing and geological assessment strategies to extract essential information, driving projects towards successful completion.

Selected Experience:

Senior Geomechanicist; Geological and Geophysical Technology - ConocoPhillips, Houston TX Enthusiastic structural geologist and geomechanicist applying advanced management and leadership abilities to direct project development rock mechanics testing programs on behalf of internal business clients. Provided full-cycle project management, handling individual budgets of up to $500K, overseeing multiple programs simultaneously with a variety of clients, client needs, and final deliverables. Designed testing programs to meet testing standards and data compilation requirements. Provided support, data interpretation, and collaborates with petrophysicists, geophysicists, geochemists, stratigraphy's, and structural geologists to integrate geomechanical properties with geologic features. Prepared data for use in Petrel, GOHFER, Decision Space, ABAQUS, FracMan, TechLog, and proprietary modeling software.

TerraTek - Salt Lake City UT Client-facing consulting and project development for high pressure and high temperature rock mechanics testing programs with clients such as Chevron, BP, ConocoPhillips, Exxon, and Shell. Provided full-cycle project management, handled multiple individual budgets of $300K+. Oversaw initial processing of rock samples, testing process, data compilation and report creation. Managed task prioritization and workflow streamlining to ensure resources effectively allocated to achieve all project goals. Trained and provided ongoing mentorship to project staff of 15+; ensured junior staff received resources and knowledge necessary to successfully contribute to project success.

Pacific Soils Engineering - Cypress CA Technical observation and site supervision of heavy equipment earthwork and soil engineering with a focus on geotechnical and geologic hazards. Fault trenching and mapping, seismic hazard delineation, landslide hazard mapping via field survey and mapping, remote sensing, and historical survey data. Client liaison for supervisory reporting. Compilation, analysis, interpretation, and reporting of geologic data for engineering study around structural hazards related to steep terrain construction. On-site soil sample collection, density measurements, and compaction certification.

Education:

B.S., Geology
University of California, Santa Barbara

B.S., Geophysics
University of California, Santa Barbara

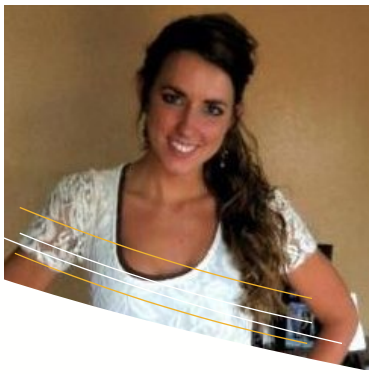
M.S., Geology
University of Utah, Salt Lake City

Specialized Training:

OSHA 40-hour HAZWOPER Health and Safety Training

OSHA 8-hour HAZWOPER annual refresher

American Red Cross First Aid and CPR Certified (annual)



Cirriculum Vitae – Janna R. Shehan

Environmental Scientist

5448 Old Broken Bow Highway
Broken Bow, OK

Janna@Shehans.net
(580) 579-8184

Ms. Shehan is an Environmental Professional with experience in the fields of environmental science and geology. Ms. Shehan specializes in Phase I Environmental Site Assessments in Oklahoma, Texas, Kansas and Arkansas for developers, retailers, school districts, lending institutions, local and state agencies, etc. Assessments are performed in accordance with ASTM standards and include review of public records, historical document research, review of physical setting, interviews with local regulatory agencies and owners, and preparation of a final report. The types of properties Ms. Shehan has assessed include agricultural, commercial, multi-family residential, and industrial. In addition to Phase I Environmental Site Assessments, Ms. Shehan has performed Environmental Transaction Screens, Construction Progress Monitoring reports, Geologic Assessments, Radon Studies, Mold Assessments, Lead-in-water sampling and analysis, and has participated in asbestos and lead-based paint sample collection. Ms. Shehan has also assisted in environmental volunteer activities with the Oklahoma Conservation Commission and the Washita National Wildlife Refuge which included laboratory analysis of soil and groundwater for any contaminants.

Selected Experience:

Various Clients – Hands-on and in-depth involvement in the field, data acquisition, and data evaluation aspects of Phase I Environmental Site Assessments. Investigations are successfully conducted on an accelerated time frame with tight budget constraints.

Various Clients – Successfully performed several portfolio projects for the acquisition or divesture of properties located in several different geographic locations.

Environmental Firms Represented:

- CBRE Consulting, Francisco, California October 2016 – Present
- AEI Consultants, Walnut Creek, California May 2015 – Present
- BC Group, Bradenton, Florida September 2013 – Present
- Global Realty Services Group, Laguna Beach, California September 2013 – Present
- Partner Engineering and Science, Torrance, California August 2013 – Present
- Superior Site Assessments, San Antonio, Texas December 2011 – January 2014

Geographic Coverage:

- Oklahoma;
- Texas;
- Kansas; and
- Arkansas

Education:

B.S., Biological Sciences
Magna Cum Laude, 2010
Southwestern Oklahoma State University

Specialized Training:

Parcel Platform

MS Word

PowerPoint

Excel

Access

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 1/4/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER

Landmark Insurance Group, LLC
6501 E. Belleview Ave.
Suite 550
Englewood CO 80111

CONTACT NAME: Annette Bossert
PHONE (A/C, No, Ext): (720)403-9450 FAX (A/C, No): (720)403-9451
E-MAIL ADDRESS: abossert@landmarkinsgroup.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Homeland Insurance Company of NY	
INSURER B :	
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED

McAlister GeoScience
1724 E 1st St

Long Beach CA 90802

COVERAGES CERTIFICATE NUMBER: CL16122003559 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE / X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY / PRO-JECT / LOC OTHER:			793004167 0001	1/3/2017	1/3/2018	EACH OCCURRENCE	$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
							MED EXP (Any one person)	$ 10,000
							PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
							PRODUCTS - COMP/OP AGG	$ 2,000,000
							Policy Aggregate Limit	$ 2,000,000
	AUTOMOBILE LIABILITY ANY AUTO ALL OWNED AUTOS / SCHEDULED AUTOS X HIRED AUTOS / X NON-OWNED AUTOS			793004167 0001	1/3/2017	1/3/2018	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
							BODILY INJURY (Per person)	$
							BODILY INJURY (Per accident)	$
							PROPERTY DAMAGE (Per accident)	$
								$
	UMBRELLA LIAB / OCCUR EXCESS LIAB / CLAIMS-MADE DED / RETENTION $						EACH OCCURRENCE	$
							AGGREGATE	$
								$
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A					PER STATUTE / OTH-ER	
							E.L. EACH ACCIDENT	$
							E.L. DISEASE - EA EMPLOYEE	$
							E.L. DISEASE - POLICY LIMIT	$
A	Professional Liability			793004167 0001	1/3/2017	1/3/2018		$1,000,000
A	Contractor Pollution Liab			793004167 0001	1/3/2017	1/2/2018		$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

For Informational Purposes

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

A Bossert/ANB001 Annette Bossert

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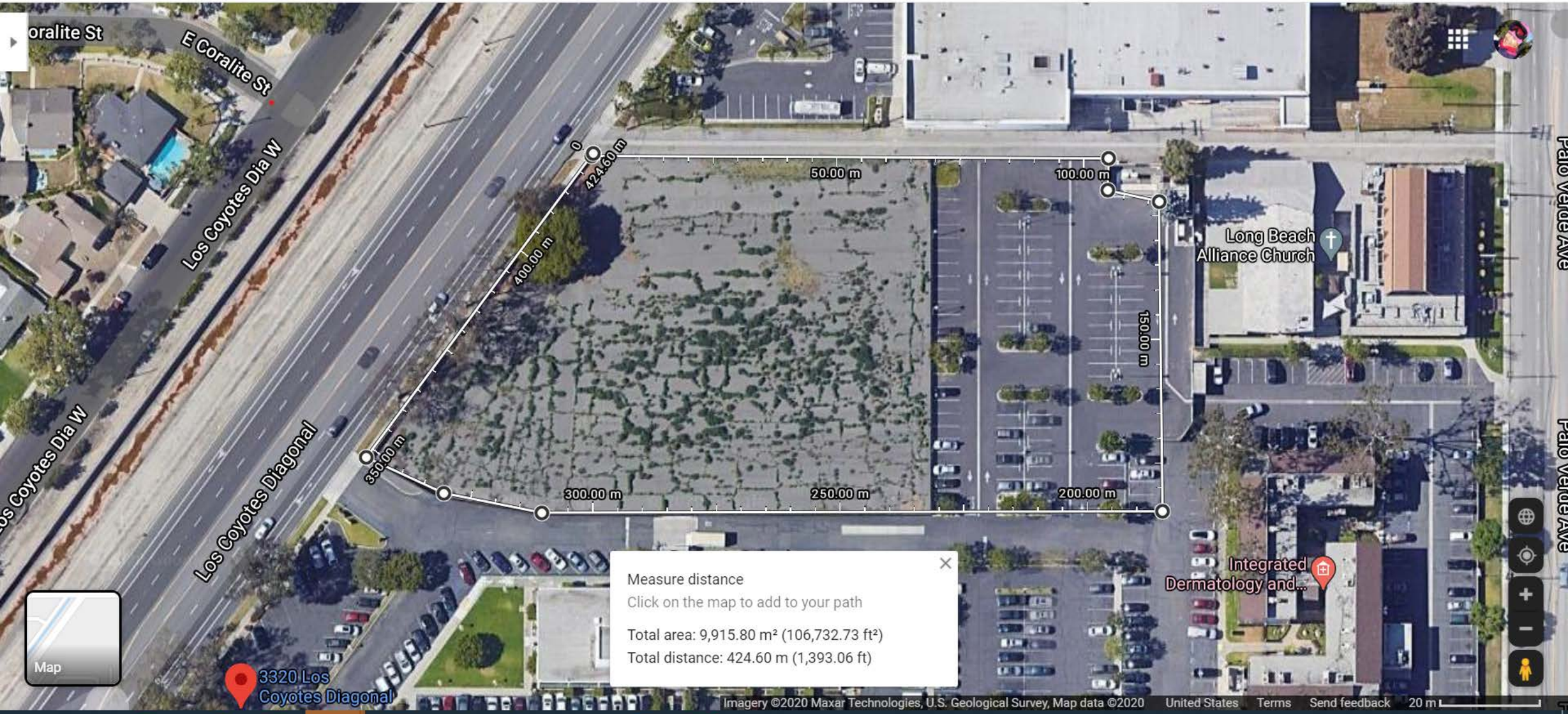


11:32 AM
8/31/2020

January 15, 2019
Project No. 2018-233
By Email

Mr. Robert Ehe
California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, California 90013

Re: 2019 Annual Groundwater Monitoring Report, Former Royalty Cleaners, 3378 Los Coyotes Diagonal, Long Beach, California, SLIC No. 537

Dear Mr. Ehe:

Lindmark Engineering (LE) has prepared the attached report to present the results of the 2019 annual groundwater monitoring event at the subject site. The report has been uploaded to Geotracker.

In view of the long term trend of PCE attenuation and maximum PCE concentrations below 50 µg/L for the last five events, and below 10 µg/L during this event, LE believes the site should be processed for closure. LE will contact you to discuss the requirements and schedule for site closure.

Please call us at 818-707-6100 if you have any questions.

Best regards,

PROFESSIONAL GEOLOGIST
DAVID WAYNE SMITH
NO. 8817
EXP. NOV. 30, 2020
STATE OF CALIFORNIA

David W. Smith, PG
Senior Project Geologist

and,

REGISTERED PROFESSIONAL ENGINEER
ULF M. LINDMARK
NO. 36787
EXPIRATION JUNE 30, 2020
CIVIL
STATE OF CALIFORNIA

Ulf Lindmark, PE, BCEE
President

cc: Maya Lopez Grasse/Alston+Bird (pdf)

Groundwater Monitoring Report
2019 Annual Sampling Event
Former Royalty Cleaners
3378 Los Coyotes Diagonal, Long Beach, California

15-Jan-20

GENERAL SITE INFORMATION

Site name:	Former Royalty Cleaners	**On-site groundwater wells:**	0
Site address	3378 Los Coyotes Diagonal, Long Beach, California	**Off-site groundwater wells:**	9

AGENCY INFORMATION

Local Agenc California Regional Water Quality Control Board, LA Region
Case Officer Mr. Robert Ehe
State Agenc State Water Resources Control Board

WORK PERFORMED IN 2019

Conducted 2019 annual groundwater gauging and sampling on December 18, 2019.

GROUNDWATER GAUGING AND SAMPLING FIELD ACTIVITIES

Groundwater monitoring wells gauging date:	18-Dec-19
Groundwater monitoring wells sampling date:	18-Dec-19
Number of wells gauged:	9
Number of wells sampled:	9
Method of purging/volume purged:	Submersible pump; approximately 95.5 gallons purged
Purged water disposal:	Crosby and Overton, Long Beach, California
Amount of LNAPL recovered during purging:	Not applicable
LNAPL disposal/treatment:	Not applicable
Field observations/notes:	No light non-aqueous phase liquid (LNAPL) was detected in wells. Tree roots observed in MW5, MW6, and MW8

RESULTS OF GROUNDWATER GAUGING

Minimum depth to groundwater (feet below ground surface [bgs]):	20.62	in well	MW9
Maximum depth to groundwater (feet bgs):	23.15	in well	MW5
Lowest groundwater elevation (feet above mean sea level):	3.34	in well	MW9
Highest groundwater elevation (feet above mean sea level):	4.07	in well	MW10
Average change in groundwater elevation since previous event (feet):	1.61		
Recent groundwater gradient and flow direction and date:	0.0014	S on	12/18/19
Previous groundwater gradient, flow direction and date:	0.0030	SSW on	12/19/18

LABORATORY RESULTS OF GROUNDWATER SAMPLES

Laboratory name:	American Scientific Laboratories, LLC, Los Angeles, California		
List of analyses performed:	Volatile organic compounds by EPA Method 8260B		
Maximum PCE concentration (µg/L):	9.3	in well	MW9
Maximum TCE concentration (µg/L):	7.8	in well	MW4

FINDINGS

Groundwater elevation data collected during this monitoring event show an average 1.61-foot increase compared with data reported during the previous sampling event (2018 Annual Groundwater Monitoring Event). The groundwater elevations in all wells increased. The groundwater gradient has shifted to a more southerly direction, with flatter slope, however it is generally similar to previous monitoring events (0.0014), with the prevailing groundwater flow direction to the south, with a minor component to the southwest . Roots were encountered in MW5, MW6, and MW8, and were noted in the field logs. The roots may have influenced some measurements in these wells.

Tetrachloroethene (PCE) concentrations have generally decreased compared to the previous sampling event. PCE concentrations decreased or remained below laboratory detection limits in all wells. PCE concentrations in MW3, MW6, MW7, MW10, and MW11 were below the maximum contaminant level (MCL = 5 µg/L). For the first time since the inception of monitoring in 1996, all PCE concentrations were below 10 µg/L. It appears the core of the PCE plume in groundwater continues to elongate toward the direction of MW9, however PCE concentrations are declining. The aerial extent of the PCE plume in groundwater, with concentrations above the California Maximum Contaminant Level (MCL) of 5 µg/L, has decreased since the last sampling event. Concentrations indicate the plume is decreasing in size consistent with natural attenuation.

Trichloroethene (TCE) concentrations above the method detection limit (MDL) were detected in seven wells (MW3, MW4, MW5, MW6, MW7, MW8, and MW9). TCE concentrations decreased in most wells, however increased in well MW8, or remained below detection limits in wells MW10 and MW11. The highest TCE concentration was detected in MW4 (7.76 µg/L). *Cis*-1,2-dichloroethene (cis-1,2-DCE), which is a daughter product of TCE, was detected in four wells during this sampling event, MW3, MW4, MW6 and MW7, and decreased to below detection limits in MW5. Chlorobenzene and toluene were detected in MW3 (0.900J µg/L and 0.450J µg/L,

respectively). No other VOCs were detected.

The PCE concentration in the most downgradient well, MW9, decreased from 17.1 µg/L during the previous sampling event to 9.30 µg/L during this event. Well MW9 is approximately 140 feet downgradient of well MW8. Since 2006, the PCE concentrations in MW8 have shown a declining trend after reaching a peak of 178 µg/L on December 13, 2005. The reduction in maximum PCE concentrations from well MW6, 266 feet upgradient of MW8, to MW8 (maximum of 1,550 µg/L at MW6 to a maximum of 178 µg/L at MW8) and from MW8 to MW9 (a maximum of 178 µg/L at MW8 to a maximum of 22.5 µg/L at MW9) indicates very significant attenuation in the downgradient direction.

CONCLUSIONS

If roots continue to influence depth to groundwater measurements at site wells, excessive root growth could affect groundwater sampling during subsequent sampling events.

The presence of TCE and cis-1,2-DCE concentrations at the site indicates the degradation of the parent compound, PCE.

Trace detections of chlorobenzene and toluene in MW3, which was the first well purged, are likely due to minor equipment cross contaminant. These compounds have never been detected before at the site, and were only detected in the first well purged. Furthermore, these compounds are not degradation products of PCE, TCE or cis-1,2-DCE.

PCE concentrations found during this sampling event decreased in all wells, with many concentrations in wells nearing their historic low range, and the concentration in MW3 falling below its historic range. PCE concentrations in downgradient well MW8 continues to be lower than upgradient well (MW5) or wells close to the source area (MW4). However well MW3 near the source area has decreased significantly, from 27.1 µg/L during the last sampling event to 1.94 µg/L during this event. Well MW4 near the source area also has shown decreasing PCE concentrations, from 13.3 µg/L during the last sampling event to 6.30 µg/L during this event, despite large fluctuations in groundwater elevations. These data support the conclusion that the PCE plume is decreasing in mass.

Based on the historic PCE data from wells MW6, MW8, and MW9, well MW9 is a representative downgradient well. LE expects that a long-term trend of attenuation in the downgradient direction and stable or lower PCE concentrations in this well will continue.

In view of the long term trend of PCE attenuation and maximum PCE concentrations below 50 µg/L for the last five events, and below 10 µg/L during this event, LE believes the site should be processed for closure.

STATEMENT OF LIMITATIONS

This report has been prepared for the exclusive use of the client and may not be relied upon by any other person or entity without Lindmark Engineering's express written permission.

The services described in this report were performed in a manner consistent with Lindmark Engineering's agreement with the client and in accordance with generally accepted professional consulting principles and practices.

Opinions and recommendations contained in this report apply to conditions existing at certain locations when services were performed and are intended only for the specific purposes, locations, time frames, and project parameters indicated. Lindmark Engineering cannot be responsible for the impact of any changes in environmental standards, practices, or regulations after performance of services.

Lindmark Engineering has not attempted to verify information/data provided to it by our client or other third parties, except as explicitly noted in our report, and makes no express representations to the accuracy of such information/data by the inclusion of it in our report.

This report is issued with the understanding that the client, the property owner, or its representative is responsible for ensuring that the information, conclusions and recommendations contained herein are brought to the attention of the appropriate regulatory agencies, as required.

ATTACHMENTS

Tables

Table 1	Summary of Groundwater Monitoring Results
Table 2	Summary of Groundwater Analytical Results
Table 3	Historic Groundwater Elevations
Table 4	Historic Groundwater Analytical Results – Organic Contaminants

Figures

Figure 1	Site Vicinity Map
Figure 2	Groundwater Contour Map (12/18/19)
Figure 3	PCE, TCE, and cis-1,2-DCE Concentration Map in Groundwater (12/18/19)

Appendices

Appendix A	Field Methodology
Appendix B	Graphs of Detected Concentrations & Groundwater Elevations versus Time
Appendix C	Well Purging Records
Appendix D	Laboratory Analytical Reports and Chain-of-Custody Records
Appendix E	Non-Hazardous Waste Manifest

TABLES

Table 1
Summary of Groundwater Monitoring Results
Former Royalty Cleaners

Well ID	Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)
MW1	12/18/19		Abandoned	
MW2	12/18/19		Abandoned	
MW3	12/18/19	26.07	22.08	3.99
MW4	12/18/19	26.11	22.12	3.99
MW5	12/18/19	26.71	23.15	3.56
MW6	12/18/19	26.47	22.80	3.67
MW7	12/18/19	25.02	21.59	3.43
MW8	12/18/19	24.67	21.17	3.50
MW9	12/18/19	23.96	20.62	3.34
MW10	12/18/19	25.50	21.43	4.07
MW11	12/18/19	24.97	21.03	3.94

AMSL = Above mean sea level

Table 2
Summary of Groundwater Analytical Results
2019 Annual Monitoring Event

Well ID	Date	PCE (µg/L)	TCE (µg/L)	Other (µg/L)
MW1	12/18/19	—	—	—
MW2	12/18/19	—	—	—
MW3	12/18/19	1.94	3.38	1.32*
MW4	12/18/19	6.30	7.76	0.975J*
MW5	12/18/19	6.92	4.17	ND
MW6	12/18/19	4.21	1.12	0.515J*
MW7	12/18/19	4.54	3.33	0.470J*
MW8	12/18/19	5.97	1.06	ND
MW9	12/18/19	9.30	2.59	ND
MW10	12/18/19	ND	ND	ND
MW11	12/18/19	ND	ND	ND
MDL		0.421	0.117	—
PQL		1.00	1.00	—
Cal MCL		5.00	5.00	—

Notes:

Cal MCL = California Department of Health Services Maximum Contaminant Level
PQL = Practical quantitation limit
MDL = Method detection limit
µg/L = Micrograms per liter
ND = Not detected at or above stated PQL
PCE Tetrachloroethene
TCE Trichloroethene
* cis-1,2-DCE

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)		Notes
MW1					
02/03/00	26.01	18.33	7.68		
04/13/00	26.01	17.62	8.39	(H)	
07/03/00	26.01	18.37	7.64		
09/11/00	26.01	19.66	6.35	(L)	
10/10/00	26.01	abandoned			
MW2					
02/03/00	28.53	20.67	7.86		
04/13/00	28.53	19.94	8.59	(H)	
07/03/00	28.53	20.72	7.81		
09/11/00	28.53	22.00	6.53	(L)	
10/10/00	28.53	abandoned			
MW3					
02/03/00	26.07	18.36	7.71		
04/13/00	26.07	17.64	8.43		
07/03/00	26.07	18.39	7.68		
09/11/00	26.07	19.74	6.33		
11/03/00	26.07	20.06	6.01		
02/05/01	26.07	19.48	6.59		
07/02/01	26.07	17.41	8.66		
01/29/02	26.07	19.09	6.98		
03/28/02	26.07	18.97	7.10		
04/12/02	26.07	18.93	7.14		
06/27/02	26.07	20.11	5.96		
11/03/02	26.07	21.76	4.31		
01/02/03	26.07	20.99	5.08		
03/17/03	26.07	19.69	6.38		
09/03/03	26.07	19.75	6.32		
03/19/04	26.07	18.90	7.17		
09/17/04	26.07	20.97	5.10		
05/27/05	26.07	13.41	12.66	(H)	
12/13/05	26.07	15.52	10.55		
06/13/06	26.07	14.19	11.88		
12/18/06	26.07	16.53	9.54		
06/05/07	26.07	16.78	9.29		

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
12/13/07	26.07	19.65	6.42	
12/22/08	26.07	20.99	5.08	
06/10/09	26.07	21.15	4.92	
11/24/09	26.07	22.32	3.75	
06/25/10	26.07	20.94	5.13	
12/16/10	26.07	21.56	4.51	
12/20/11	26.07	17.38	8.69	
12/20/12	26.07	19.05	7.02	
12/30/13	26.07	20.31	5.76	
02/13/15	26.07	22.32	3.75	
12/23/15	26.07	23.60	2.47	
12/20/16	26.07	25.10	0.97 (L)	
12/28/17	26.07	22.92	3.15	
12/19/18	26.07	23.68	2.39	
12/18/19	26.07	22.08	3.99	
MW4				
02/03/00	26.11	18.42	7.69	
04/13/00	26.11	17.70	8.41	
07/03/00	26.11	18.46	7.65	
09/11/00	26.11	19.80	6.31	
11/03/00	26.11	20.12	5.99	
02/05/01	26.11	19.56	6.55	
07/02/01	26.11	17.49	8.62	
01/29/02	26.11	19.15	6.96	
03/28/02	26.11	19.05	7.06	
04/12/02	26.11	18.99	7.12	
06/27/02	26.11	20.19	5.92	
11/03/02	26.11	21.83	4.28	
01/02/03	26.11	21.05	5.06	
03/17/03	26.11	19.74	6.37	
09/03/03	26.11	19.80	6.31	
03/19/04	26.11	18.97	7.14	
09/17/04	26.11	21.04	5.07	
05/27/05	26.11	13.48	12.63 (H)	
12/13/05	26.11	15.57	10.54	
06/13/06	26.11	14.25	11.86	
12/18/06	26.11	16.60	9.51	
06/05/07	26.11	16.85	9.26	

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)		Notes
12/13/07	26.11	19.72	6.39		
12/22/08	26.11	21.06	5.05		
06/10/09	26.11	21.21	4.90		
11/24/09	26.11	22.37	3.74		
06/25/10	26.11	21.00	5.11		
12/16/10	26.11	21.62	4.49		
12/20/11	26.11	17.44	8.67		
12/20/12	26.11	19.15	6.96		
12/30/13	26.11	20.35	5.76		
02/13/15	26.11	22.41	3.70		
12/23/15	26.11	23.54	2.57		
12/20/16	26.11	25.12	0.99	(L)	
12/28/17	26.11	22.98	3.13		
12/19/18	26.11	23.83	2.28		
12/18/19	26.11	22.12	3.99		
MW5					
02/03/00	26.71	19.55	7.16		
04/13/00	26.71	18.85	7.86		
07/03/00	26.71	19.56	7.15		
09/11/00	26.71	20.94	5.77		
11/03/00	26.71	21.29	5.42		
02/05/01	26.71	20.68	6.03		
07/02/01	26.71	18.61	8.10		
01/29/02	26.71	20.28	6.43		
03/28/02	26.71	20.16	6.55		
04/12/02	26.71	20.13	6.58		
06/27/02	26.71	21.34	5.37		
11/03/02	26.71	22.98	3.73		
01/02/03	26.71	22.14	4.57		
03/17/03	26.71	20.80	5.91		
09/03/03	26.71	20.94	5.77		
03/19/04	26.71	20.06	6.65		
09/17/04	26.71	22.20	4.51		
05/27/05	26.71	14.59	12.12	(H)	
12/13/05	26.71	16.47	10.24		
06/13/06	26.71	15.37	11.34		
12/18/06	26.71	17.71	9.00		
06/05/07	26.71	17.98	8.73		

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)		Notes
12/13/07	26.71	20.81	5.90		
12/22/08	26.71	22.16	4.55		
06/10/09	26.71	22.27	4.44		
11/24/09	26.71	23.50	3.21		
06/25/10	26.71	22.02	4.69		
12/16/10	26.71	22.72	3.99		
12/20/11	26.71	18.62	8.09		
12/20/12	26.71	20.26	6.45		
12/30/13	26.71	21.65	5.06		
02/13/15	26.71	23.52	3.19		
12/23/15	26.71	24.76	1.95		
12/20/16	26.71	26.28	0.43	(L)	
12/28/17	26.71	24.00	2.71		
12/19/18	26.71	24.86	1.85		
12/18/19	26.71	23.15	3.56		
MW6					
04/13/00	26.47	18.55	7.92		
07/03/00	26.47	19.34	7.13		
09/11/00	26.47	20.72	5.75		
11/03/00	26.47	21.05	5.42		
02/05/01	26.47	20.40	6.07		
07/02/01	26.47	18.38	8.09		
01/29/02	26.47	20.02	6.45		
03/28/02	26.47	19.88	6.59		
04/12/02	26.47	19.85	6.62		
06/27/02	26.47	21.11	5.36		
11/03/02	26.47	22.72	3.75		
01/02/03	26.47	21.84	4.63		
03/17/03	26.47	20.51	5.96		
09/03/03	26.47	20.70	5.77		
03/19/04	26.47	19.75	6.72		
09/17/04	26.47	21.96	4.51		
05/27/05	26.47	14.37	12.10	(H)	
12/13/05	26.47	16.45	10.02		
06/13/06	26.47	15.08	11.39		
12/18/06	26.47	17.35	9.12		
06/05/07	26.47	17.71	8.76		
12/13/07	26.47	20.51	5.96		

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)		Notes
12/22/08	26.47	21.88	4.59		
06/10/09	26.47	21.88	4.59		
11/24/09	26.47	23.21	3.26		
06/25/10	26.47	21.74	4.73		
12/16/10	26.47	22.41	4.06		
12/20/11	26.47	18.23	8.24		
12/20/12	26.47	20.04	6.43		
12/30/13	26.47	21.14	5.33		
02/13/15	26.47	23.14	3.33		
12/23/15	26.47	24.45	2.02		
12/20/16	26.47	25.74	0.73	(L)	
12/28/17	26.47	23.58	2.89		
12/19/18	26.47	24.20	2.27		
12/18/19	26.47	22.80	3.67		
MW7					
03/28/02	25.02	18.66	6.36		
04/12/02	25.02	18.62	6.40		
06/27/02	25.02	19.87	5.15		
11/03/02	25.02	21.53	3.49		
01/02/03	25.02	20.65	4.37		
03/17/03	25.02	19.28	5.74		
09/03/03	25.02	19.44	5.58		
03/19/04	25.02	18.56	6.46		
09/17/04	25.02	20.72	4.30		
05/27/05	25.02	13.13	11.89	(H)	
12/13/05	25.02	15.19	9.83		
06/13/06	25.02	14.10	10.92		
12/18/06	25.02	16.34	8.68		
06/05/07	25.02	16.50	8.52		
12/13/07	25.02	19.37	5.65		
12/22/08	25.02	20.73	4.29		
06/10/09	25.02	20.77	4.25		
11/24/09	25.02	21.94	3.08		
06/25/10	25.02	20.52	4.50		
12/16/10	25.02	21.38	3.64		
12/20/11	25.02	17.05	7.97		
12/20/12	25.02	20.70	4.32		
12/30/13	25.02	20.05	4.97		

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
02/13/15	25.02	22.52	2.50	
12/23/15	25.02	23.24	1.78	
12/20/16	25.02	24.54	0.48 (L)	
12/28/17	25.02	22.44	2.58	
12/19/18	25.02	23.23	1.79	
12/18/19	25.02	21.59	3.43	
MW8				
03/28/02	24.67	18.49	6.18	
04/12/02	24.67	18.51	6.16	
06/27/02	24.67	19.92	4.75	
11/03/02	24.67	21.52	3.15	
01/02/03	24.67	20.41	4.26	
03/17/03	24.67	19.10	5.57	
09/02/03	24.67	19.39	5.28	
03/19/04	24.67	18.34	6.33	
09/17/04	24.67	20.75	3.92	
05/27/05	24.67	13.18	11.49 (H)	
12/13/05	24.67	15.17	9.50	
06/13/06	24.67	13.82	10.85	
12/18/06	24.67	16.17	8.50	
06/05/07	24.67	16.40	8.27	
12/13/07	24.67	19.33	5.34	
12/22/08	24.67	20.65	4.02	
06/10/09	24.67	20.71	3.96	
11/24/09	24.67	21.91	2.76	
06/25/10	24.67	20.28	4.39	
12/16/10	24.67	21.05	3.62	
12/20/11	24.67	16.81	7.86	
12/20/12	24.67	18.56	6.11	
12/30/13	24.67	19.70	4.97	
02/13/15	24.67	21.71	2.96	
12/23/15	24.67	23.00	1.67	
12/20/16	24.67	24.50	0.17 (L)	
12/28/17	24.67	22.01	2.66	
12/19/18	24.67	23.00	1.67	
12/18/19	24.67	21.17	3.50	
MW9				
01/02/03	23.96	19.87	4.09	
03/17/03	23.96	18.47	5.49	
09/02/03	23.96	18.87	5.09	
03/19/04	23.96	17.79	6.17	

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
09/17/04	23.96	20.22	3.74	
05/27/05	23.96	12.72	11.24 (H)	
12/13/05	23.96	14.7	9.26	
06/13/06	23.96	13.33	10.63	
12/18/06	23.96	15.68	8.28	
06/05/07	23.96	15.90	8.06	
12/13/07	23.96	18.84	5.12	
12/22/08	23.96	20.18	3.78	
06/10/09	23.96	20.16	3.80	
11/24/09	23.96	21.33	2.63	
06/25/10	23.96	19.71	4.25	
12/16/10	23.96	20.46	3.50	
12/20/11	23.96	16.32	7.64	
12/20/12	23.96	17.96	6.00	
12/30/13	23.96	19.18	4.78	
02/13/15	23.96	21.07	2.89	
12/23/15	23.96	22.49	1.47	
12/20/16	23.96	23.81	0.15 (L)	
12/28/17	23.96	21.63	2.33	
12/19/18	23.96	22.33	1.63	
12/18/19	23.96	20.62	3.34	

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
MW10				
12/13/05	25.50	15.15	10.35	
06/13/06	25.50	13.80	11.70 (H)	
12/18/06	25.50	16.15	9.35	
06/05/07	25.50	16.42	9.08	
12/13/07	25.50	19.28	6.22	
12/22/08	25.50	20.62	4.88	
06/10/09	25.50	20.73	4.77	
11/24/09	25.50	21.92	3.58	
06/25/10	25.50	20.42	5.08	
12/16/10	25.50	21.10	4.40	
12/20/11	25.50	16.88	8.62	
12/20/12	25.50	18.53	6.97	
12/30/13	25.50	19.91	5.59	
02/13/15	25.50	21.70	3.80	
12/23/15	25.50	23.07	2.43	
12/20/16	25.50	24.39	1.11 (L)	
12/28/17	25.50	21.70	3.80	
12/19/18	25.50	22.61	2.89	
12/18/19	25.50	21.43	4.07	

Table 3
Historic Groundwater Elevations

Date	Top of Casing Elevation (ft AMSL)	Depth to Groundwater (ft)	Potentiometric Groundwater Elevation (ft AMSL)	Notes
MW11				
12/13/05	24.97	15.07	9.90	
06/13/06	24.97	13.68	11.29 (H)	
12/18/06	24.97	16.04	8.93	
06/05/07	24.97	16.30	8.67	
12/13/07	24.97	19.18	5.79	
12/22/08	24.97	20.52	4.45	
06/10/09	24.97	20.51	4.46	
11/24/09	24.97	21.72	3.25	
06/25/10	24.97	20.14	4.83	
12/16/10	24.97	21.46	3.51	
12/20/11	24.97	16.67	8.30	
12/20/12	24.97	18.81	6.16	
12/30/13	24.97	19.65	5.32	
02/13/15	24.97	21.49	3.48	
12/23/15	24.97	22.83	2.14	
12/20/16	24.97	24.31	0.66 (L)	
12/28/17	24.97	21.92	3.05	
12/19/18	24.97	22.71	2.26	
12/18/19	24.97	21.03	3.94	

Notes:

(H) = Highest historical groundwater elevation
(L) = Lowest historical groundwater elevation
AMSL = Above mean sea level

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
MW1				
05/06/96	3,700.0	ND	ND	
02/03/00	1,980.0	65.0	13.0	Other was *cis*- 1,2-dichloroethene
07/03/00	1,990.0	ND	ND	
09/11/00	3,560.0	118.0	ND	
10/10/00			abandoned	
MW2				
05/06/96	8.3	2.6	ND	
02/03/00	ND	ND	ND	
07/03/00	ND	ND	ND	
09/11/00	ND	ND	ND	
09/27/00			abandoned	
MW3				
05/06/96	2,200.0	ND	ND	
02/03/00	72.0	19.0	ND	
07/03/00	60.4	14.9	ND	
09/11/00	50.5	29.0	0.7	Other was *cis*- 1,2-dichloroethene
11/03/00	26.5	26.3	1.0	Other was *cis*- 1,2-dichloroethene
02/05/01	23.6	5.0	ND	
07/02/01	94.7	3.8	0.7	
07/02/01	–	–	0.5	Other was chloroform (trichloromethane)
01/29/02	4.0	7.6	ND	
03/28/02	19.4	2.7	ND	
06/27/02	377.0	39.0	ND	
11/13/02	55.1	25.0	4.2	Other was *cis*- 1,2-dichloroethene
01/02/03	20.9	25.6	1.6	Other was *cis*- 1,2-dichloroethene
03/17/03	31.7	4.3	ND	
09/02/03	95.5	16.3	0.7	Other was *cis*- 1,2-dichloroethene
03/19/04	17.1	2.2	ND	
09/17/04	150.0	33.0	ND	
05/27/05	10.0	17.0	1.4	Other was *cis*- 1,2-dichloroethene
12/13/05	14.4	4.0	ND	
06/13/06	13.3	5.1	ND	

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
12/18/06	29.0	26.0	1.8	Other was *cis*-1,2-dichloroethene
06/05/07	81.1	17.2	1.0	Other was *cis*-1,2-dichloroethene
12/13/07	145.0	58.5	4.9	Other was *cis*-1,2-dichloroethene
12/22/08	63.8	44.2	3.1	Other was *cis*-1,2-dichloroethene
06/10/09	142.0	33.8	2.6	Other was *cis*-1,2-dichloroethene
11/24/09	152.0	78.7	10.1	Other was *cis*-1,2-dichloroethene
06/25/10	37.1	9.4	ND	
12/16/10	14.2	2.7	ND	
12/21/11	89.6	37.3	4.39	Other was *cis*-1,2-dichloroethene
12/20/12	14.1	3.96	ND	
12/30/13	12.8	2.70	ND	
02/13/15	53.7	18.3	1.85	Other was *cis*-1,2-dichloroethene
12/23/15	14.3	4.22	0.37 J	Other was *cis*-1,2-dichloroethene
12/20/16	34.0	19.0	3.60	Other was *cis*-1,2-dichloroethene
12/28/17	38.0	26.4	5.24	Other was *cis*-1,2-dichloroethene
12/19/18	27.1	19.6	19.9	Other was Methylene chloride
12/18/19	1.94	3.38	1.32	*Other was *cis*-1,2-dichloroethene, and chlorobenzene = 0.900J µg/L, and Toluene = 0.450J µg/L
MW4				
05/06/96	1,300.0	ND	ND	
02/03/00	1,540.0	59.0	ND	
07/03/00	2,200.0	ND	ND	
09/11/00	1,280.0	ND	ND	
11/03/00	830.0	78.0	ND	
02/05/01	2,630.0	59.0	ND	
07/02/01	975.0	45.0	ND	
01/29/02	820.0	49.0	ND	
03/28/02	559.0	14.0	ND	
06/27/02	147.0	6.0	ND	
11/13/02	792.0	93.0	ND	
01/02/03	410.0	49.0	ND	
03/17/03	109.0	6.8	ND	
09/02/03	645.0	31.0	ND	
03/19/04	97.1	7.6	ND	
09/17/04	410.0	34.0	ND	

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
05/27/05	81.0	19.0	0.90 J	Other was *cis*- 1,2-dichloroethene
12/13/05	110.0	13.6	ND	
06/13/06	516.0	67.0	ND	
12/18/06	740.0	71.0	1.7	Other was *cis*- 1,2-dichloroethene
06/05/07	131.0	12.1	ND	
12/13/07	1,440.0	108.0	ND	
12/22/08	960.0	121.0	ND	
06/10/09	165.0	18.6	ND	
11/24/09	851.0	102.0	ND	
06/25/10	69.9	15.8	1.35	Other was *cis*- 1,2-dichloroethene
12/16/10	79.5	27.4	2.91	Other was *cis*- 1,2-dichloroethene
12/21/11	21.7	4.3	0.540 J	Other was *cis*- 1,2-dichloroethene
12/20/12	96.8	48.1	4.37	Other was *cis*- 1,2-dichloroethene
12/30/13	133.0	67.0	7.41	Other was *cis*- 1,2-dichloroethene
02/13/15	73.3	53.2	8.57	Other was *cis*- 1,2-dichloroethene
12/23/15	37.4	18.7	2.67	Other was *cis*- 1,2-dichloroethene
12/20/16	36.8	39.2	9.34	Other was *cis*- 1,2-dichloroethene
12/28/17	4.78	9.95	20.0	Other was *cis*- 1,2-dichloroethene
12/19/18	13.3	9.14	15.8	Other was Methylene chloride
12/18/19	6.30	7.76	0.975 J	Other was cis-1,2-dichloroethene
MW5				
02/03/00	29.0	2.2	ND	
07/03/00	8.7	ND	ND	
09/11/00	15.0	0.6	ND	
11/03/00	14.9	ND	ND	
02/05/01	7.7	ND	ND	
07/02/01	6.2	ND	ND	
01/29/02	5.4	ND	ND	
03/28/02	25.3	2.1	ND	
06/27/02	16.7	1.3	ND	
11/13/02	11.2	0.9	ND	
01/02/03	6.1	0.7	ND	
03/17/03	15.6	1.1	ND	
09/02/03	11.2	0.8	ND	
03/19/04	9.5	ND	ND	

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
09/17/04	5.8	ND	ND	
05/27/05	3.5	0.39 J	ND	
12/13/05	15.6	0.85 J	ND	
06/13/06	16.6	2.3	ND	
12/18/06	9.8	1.0	ND	
06/05/07	4.5	ND	ND	
12/13/07	9.3	ND	ND	
12/22/08	8.45	ND	ND	
06/10/09	6.62	ND	ND	
11/24/09	5.37	ND	ND	
06/25/10	3.21	ND	ND	
12/16/10	4.05	ND	ND	
12/21/11	2.46	1.5	0.325 J	Other was *cis*- 1,2-dichloroethene
12/20/12	19.30	9.26	1.23	Other was *cis*- 1,2-dichloroethene
12/30/13	25.60	5.39	ND	
02/13/15	67.2	25.0	4.06	Other was *cis*- 1,2-dichloroethene
12/23/15	40.5	10.2	1.29	Other was *cis*- 1,2-dichloroethene
12/20/16	33.2	10.5	1.43	Other was *cis*- 1,2-dichloroethene
12/28/17	34.5	11.9	1.38	Other was *cis*- 1,2-dichloroethene
12/19/18	11.4	4.38	0.535 J	Other was cis-1,2-dichloroethene, and Methylene chloride = 9.06
12/18/19	6.92	4.17	ND	
MW6				
04/13/00	84.5	3.2	ND	
07/03/00	66.8	2.3	ND	
09/11/00	1,550.0	ND	ND	
11/03/00	115.0	4.9	ND	
02/05/01	77.6	5.6	ND	
07/02/01	48.2	2.8	ND	
01/29/02	44.4	2.2	ND	
03/28/02	19.8	1.5	ND	
06/27/02	82.4	7.0	ND	
11/13/02	61.2	4.1	ND	
01/02/03	41.9	2.5	ND	
03/17/03	128.0	5.3	ND	
09/02/03	147.0	5.5	6.8	Other was dichlorodifluoromethane

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
03/19/04	140.0	8.7	ND	
09/17/04	89.0	7.2	ND	
05/27/05	38.0	3.8	ND	
12/13/05	86.5	6.8	0.76 J	Other was *cis*- 1,2-dichloroethene
06/13/06	65.4	8.1	ND	
12/18/06	80.0	9.9	0.8	Other was *cis*- 1,2-dichloroethene
06/05/07	121.0	10.9	1.4	Other was *cis*- 1,2-dichloroethene
12/13/07	64.1	6.6	ND	
12/22/08	72.3	7.72	ND	
06/10/09	103.0	13.50	ND	
11/24/09	144.0	17.70	ND	
06/25/10	86.3	12.50	ND	
12/16/10	95.7	12.40	ND	
12/21/11	26.3	3.66	0.510 J	
12/20/12	29.9	4.76	2.98	Other was *cis*- 1,2-dichloroethene
12/30/13	26.7	3.67	ND	
02/13/15	17.9	5.77	0.490 J	*cis*- 1,2-dichloroethene
12/23/15	ND	ND	ND	
12/20/16	7.92	1.90	20.3	Other was p-isopropyltoluene
12/28/17	17.4	3.32	1.45	*cis*- 1,2-dichloroethene
12/19/18	9.65	2.43	21.9	Other was Methylene chloride
12/18/19	4.21	1.12	0.515 J	Other was cis-1,2-dichloroethene
MW7				
03/28/02	1.2	ND	ND	
06/27/02	0.8	ND	ND	
11/13/02	0.5	ND	ND	
01/02/03	ND	ND	ND	
03/17/03	1.1	ND	ND	
09/02/03	0.6	ND	ND	
03/19/04	ND	ND	ND	
09/17/04	ND	ND	ND	
05/27/05	0.48 J	ND	ND	
12/13/05	2.0	0.25 J	ND	
06/13/06	1.5	1.7	ND	
12/18/06	3.6	ND	ND	

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
06/05/07	ND	ND	ND	
12/13/07	2.0	ND	ND	
12/22/08	ND	ND	ND	
06/10/09	ND	ND	ND	
11/24/09	ND	ND	ND	
06/25/10	ND	ND	ND	
12/16/10	ND	ND	ND	
12/21/11	ND	ND	ND	
12/20/12	ND	ND	ND	
12/30/13	ND	ND	ND	
02/13/15	ND	ND	2.56	p-Isopropyltoluene
12/23/15	ND	ND	ND	
12/20/16	ND	ND	20.3	Other was p-Isopropyltoluene
12/28/17	ND	0.460 J	ND	
12/19/18	7.01	3.66	0.975 J	Other was cis-1,2-dichloroethene, and Methylene chloride = 5.82, and Isopropylbenzene = 0.480J, and p-Isopropylbenzene = 11.4
12/18/19	4.54	3.33	0.470 J	Other was cis-1,2-dichloroethene
MW8				
03/28/02	42.3	1.8	ND	
06/27/02	51.7	2.7	ND	
11/13/02	66.6	3.1	ND	
01/02/03	53.2	3.5	ND	
03/17/03	149.0	5.5	ND	
09/02/03	64.6	2.9	97.6	Other was dichlorodifluoromethane
03/19/04	112.0	5.1	4.1	Other was dichlorodifluoromethane
09/17/04	42.0	3.3	ND	
05/27/05	66.0	4.2	ND	
12/13/05	178.0	6.4	ND	
06/13/06	121.0	10.1	ND	
12/18/06	82.0	4.8	ND	
06/05/07	36.6	3.3	ND	
12/13/07	43.3	2.4	ND	
12/22/08	38.1	2.46	ND	

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
06/10/09	27.2	2.57	ND	
11/24/09	37.8	3.32	ND	
06/25/10	25.1	3.79	ND	
12/16/10	23.1	4.47	ND	
12/21/11	8.59	1.45	ND	
12/20/12	16.5	2.85	ND	
12/30/13	13.4	1.83	ND	
02/13/15	5.76	1.60	ND	
12/23/15	7.18	1.51	ND	
12/20/16	5.55	0.845 J	ND	
12/28/17	6.56	0.950 J	ND	
12/19/18	7.35	0.985 J	19.4	Other was Methylene chloride
12/18/19	5.97	1.06	ND	
MW9				
01/02/03	ND	ND	ND	
03/17/03	ND	ND	ND	
09/02/03	ND	ND	ND	
03/19/04	ND	ND	ND	
09/17/04	ND	ND	ND	
05/27/05	2.9	ND	ND	
12/13/05	15.5	0.95	ND	
06/13/06	20.0	2.6	ND	
12/18/06	4.5	ND	ND	
06/05/07	1.3	ND	ND	
12/13/07	ND	ND	ND	
12/22/08	3.57	ND	ND	
06/10/09	2.78	ND	ND	
11/24/09	8.72	ND	ND	
06/25/10	13.5	1.62	ND	
12/16/10	7.6	ND	ND	
12/21/11	12.5	1.61	ND	
12/20/12	22.5	3.95	ND	
12/30/13	19.5	2.85	ND	
02/13/15	18.4	3.92	ND	
12/23/15	22.5	4.11	ND	

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
12/20/16	19.4	2.88	ND	
12/28/17	19.3	3.15	ND	
12/19/18	17.1	2.80	19.6	Other was Methylene chloride
12/18/19	9.30	2.59	ND	
MW10				
12/13/05	0.63 J	0.38 J	ND	
06/13/06	ND	ND	ND	
12/18/06	ND	0.9	8.5	Other was dichlorodifluoromethane
06/05/07	ND	ND	ND	
12/13/07	ND	ND	7.5	Other was chloromethane (methyl chloride)
12/22/08	ND	ND	ND	
06/10/09	ND	ND	ND	
11/24/09	ND	ND	ND	
06/25/10	ND	ND	ND	
12/16/10	ND	ND	ND	
12/21/11	ND	ND	ND	
12/20/12	ND	ND	ND	
12/30/13	ND	ND	ND	
02/13/15	3.05	0.760 J	ND	
12/23/15	ND	ND	ND	
12/20/16	0.635 J	0.140 J	ND	
12/28/17	ND	ND	ND	
12/19/18	ND	ND	15.9	Other was Methylene chloride
12/18/19	ND	ND	ND	
MW11				
12/13/05	22.8	1.7	ND	
06/13/06	1.5	1.9	ND	
12/18/06	1.2	ND	1.1	Other was dichlorodifluoromethane
06/05/07	ND	ND	ND	
12/13/07	ND	ND	ND	
12/22/08	ND	ND	ND	
06/10/09	ND	ND	ND	
11/24/09	1.67	ND	ND	
06/25/10	ND	ND	ND	
12/16/10	ND	ND	ND	
12/21/11	0.495 J	0.320 J	ND	
12/20/12	ND	ND	ND	
12/30/13	ND	ND	ND	

Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
02/13/15	ND	ND	ND	
12/23/15	ND	ND	ND	
12/20/16	ND	ND	ND	
12/28/17	ND	ND	ND	
12/19/18	ND	ND	7.31	Other was Methylene chloride
12/18/19	ND	ND	ND	
HP2				
02/16/01	3.2	ND	ND	
HP1				
04/10/00	82.3	7.0	ND	
CPT-1 at 30'				
11/26/96	0.61	ND	ND	
CPT-1 at 33'				
11/26/96	0.51	3.9	ND	
CPT-1 at 40'				
11/26/96	ND	ND	ND	

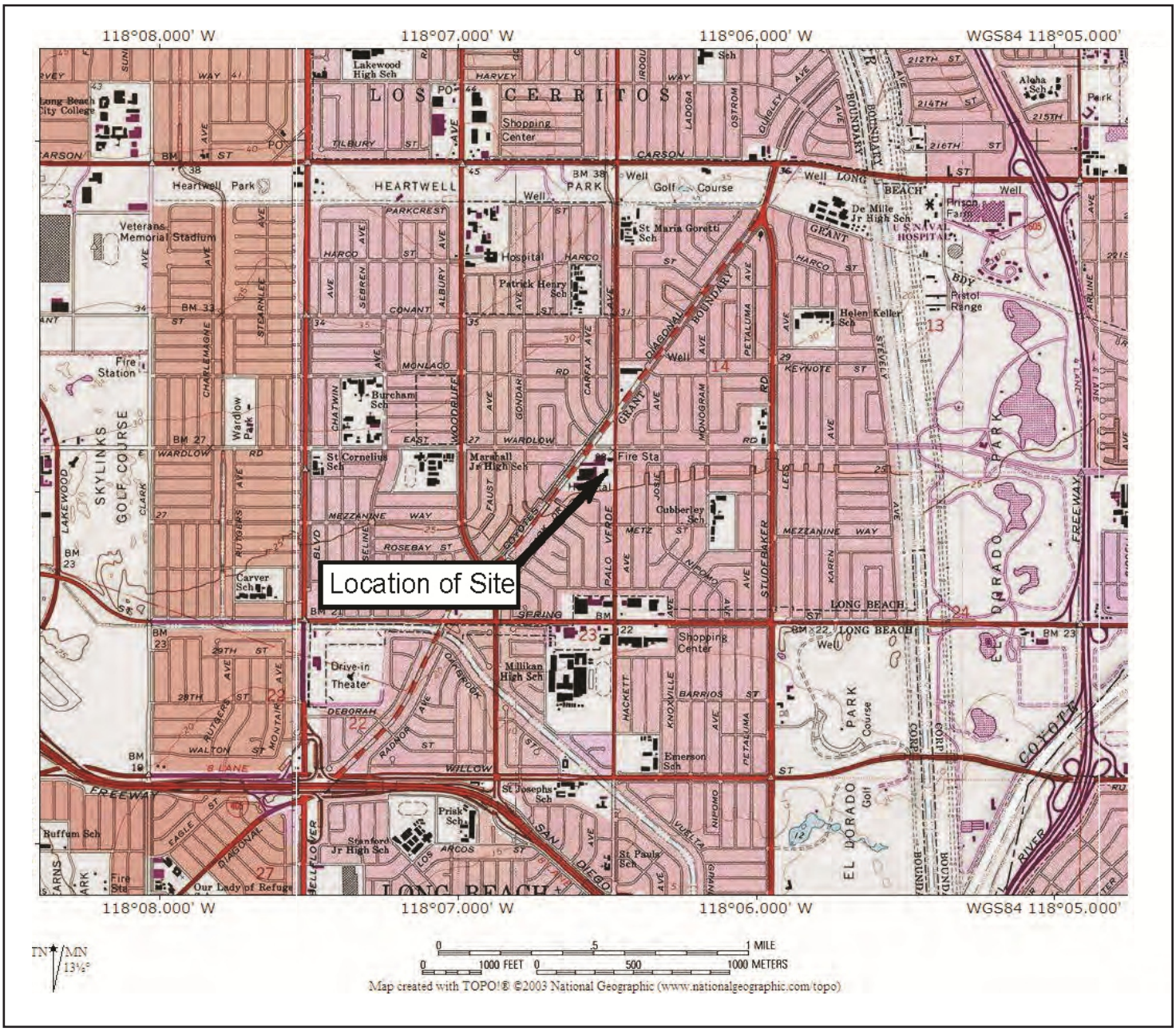
Table 4
Historic Groundwater Analytical Results – Organic Contaminants

EPA Method	8260B			
Date	PCE	TCE	Other	Notes
Units	(µg/L)	(µg/L)	(µg/L)	
CPT-1 at 52'				
11/26/96	ND	ND	ND	
GW1				
09/16/96	ND	ND	6.7	Other was acetone
G2				
09/16/96	ND	ND	6.7	Other was acetone
G3				
09/16/96	65.0	4.7	ND	
G4				
09/16/96	25.0	ND	17.0	Other was acetone
G5				
09/16/96	5.6	4.8	ND	

Notes:

µg/L = Micrograms per liter
NA = Not analyzed
ND = Not detected at or above stated reporting or practical quantitation limit.
See previous report for limits.
J = Estimated result. Compound positively detected at a value less than the reporting or practical quantitatic
– = Not applicable

FIGURES



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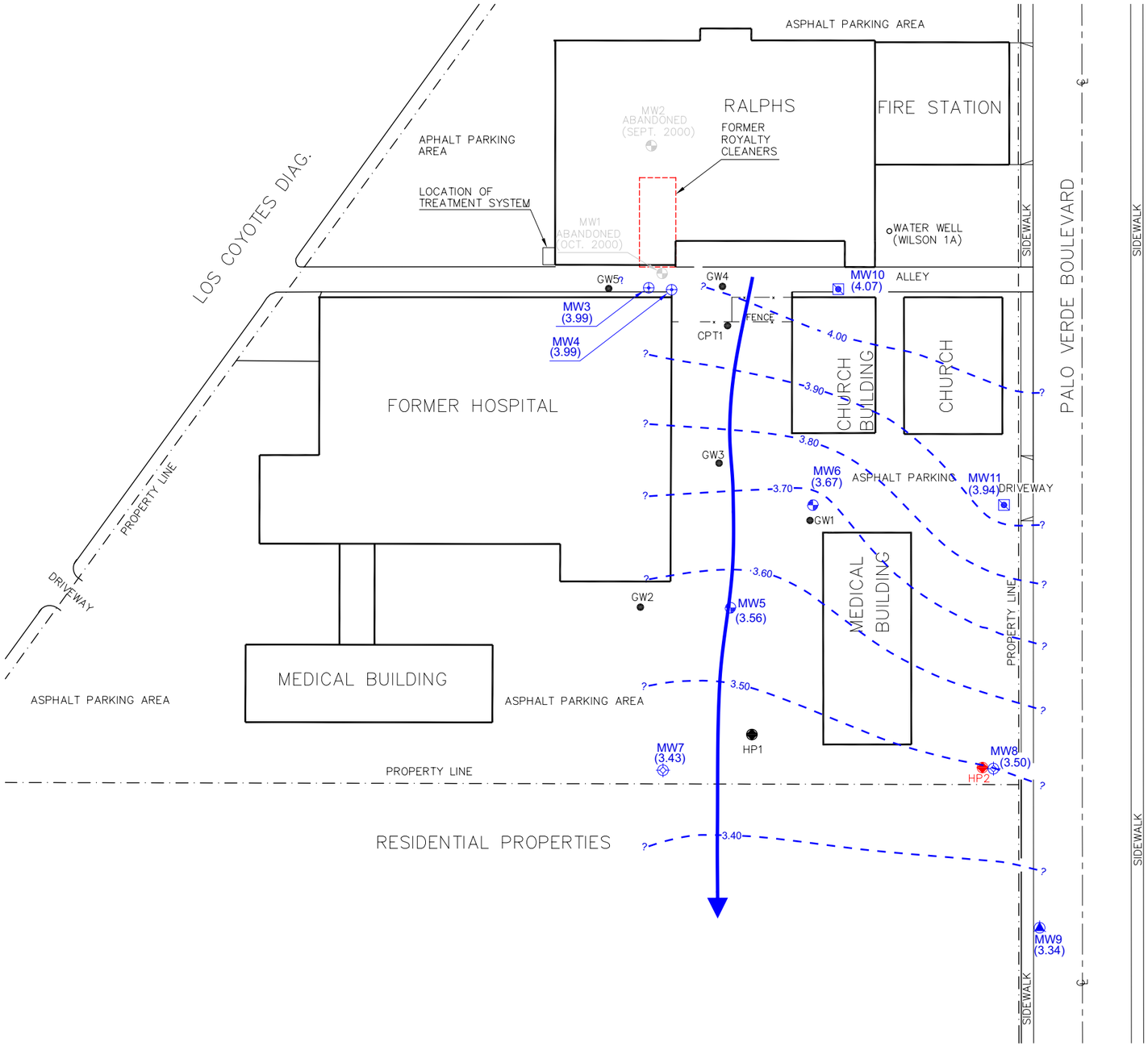
Project Name:	FORMER ROYALTY CLEANERS 3378 LOS COYOTES DIAGONAL, LONG BEACH, CALIFORNIA			
Title:	SITE VICINITY MAP 2019 ANNUAL GROUNDWATER MONITORING EVENT			
Drafted By:	Approved By:	Project No.:	Date:	Figure No.:
DWS	UML	2019-257	1/20	1



LEGEND:

MW11	GROUNDWATER MONITORING WELL BY LE DECEMBER 2005
MW9	GROUNDWATER MONITORING WELL BY LE DECEMBER 2002
MW8	GROUNDWATER MONITORING WELL BY LE MARCH 2002
MW6	GROUNDWATER MONITORING WELL BY LE 2000
MW4	GROUNDWATER MONITORING WELL BY MCLAREN – HART 1996
MW2	ABANDONED MONITORING WELL
GW1	GEOPROBE WATER SAMPLE (SEPTEMBER 1996)
CPT1	CONE PENETROMETER SAMPLE (NOVEMBER 1996)
HP1	HYDROPUNCH SAMPLE (APRIL 2000)
HP2	HYDROPUNCH SAMPLE (FEBRUARY 2001)
(4.07)	GROUNDWATER ELEVATION MEASURED IN FT ABOVE MSL (DECEMBER 18, 2019)
- - 4.00 - - -	GROUNDWATER ELEVATION CONTOUR
→	GROUNDWATER GRADIENT

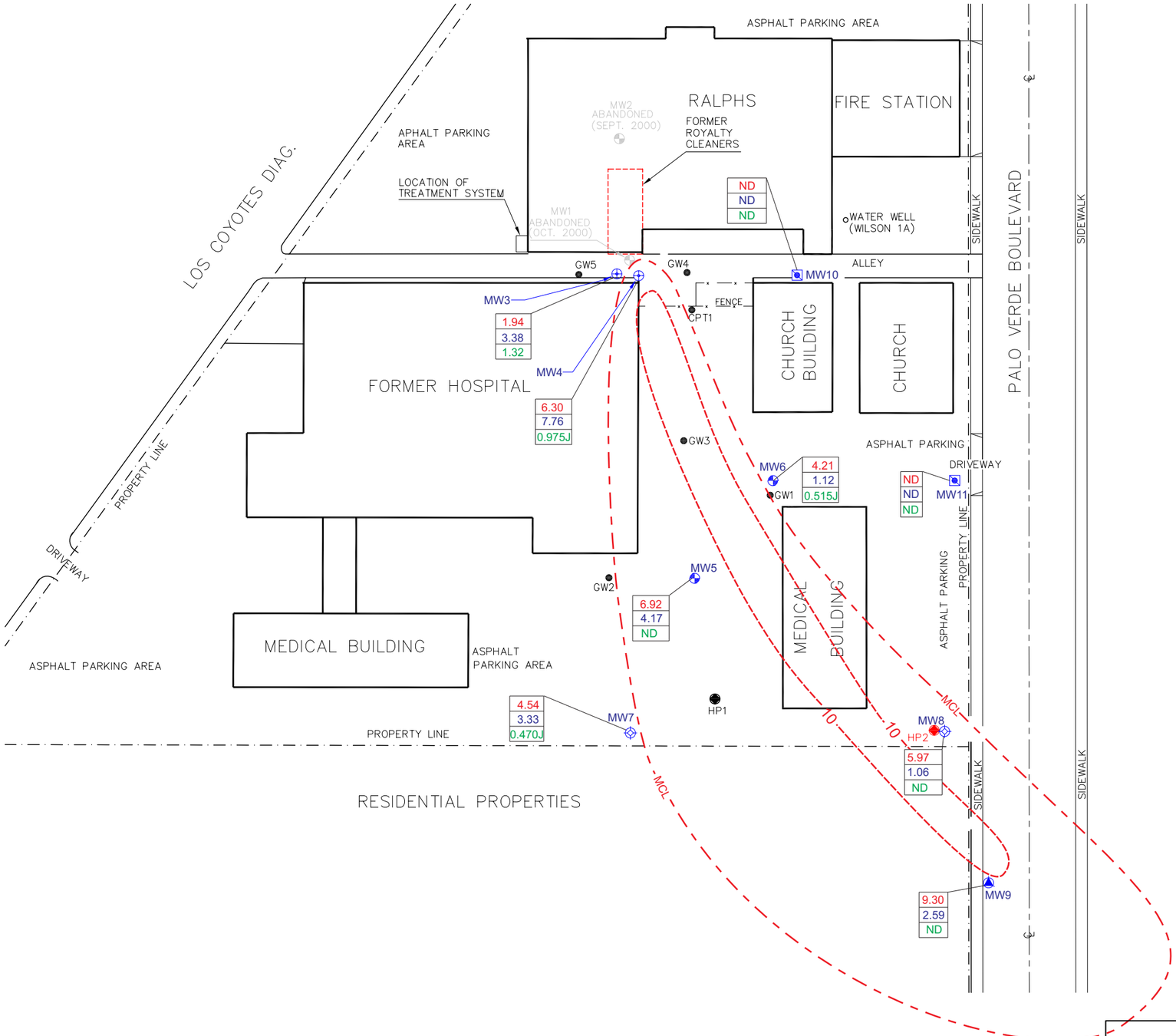
MW1 AND MW2 WELLS WERE ABANDONED

SCALE: 1" = 100'

0 1" 2"

0 100' 200'

Project Name: FORMER ROYALTY CLEANERS 3378 LOS COYOTES DIAGONAL, LONG BEACH, CALIFORNIA				
Title: GROUNDWATER ELEVATION CONTOURS 2019 ANNUAL GROUNDWATER MONITORING EVENT				
Drafted By: DWS	Approved By: UML	Project No.: 2019-257	Date: 1/20	Figure No.: 2



LEGEND:

MW11	GROUNDWATER MONITORING WELL BY LE DECEMBER 2005
MW9	GROUNDWATER MONITORING WELL BY LE DECEMBER 2002
MW8	GROUNDWATER MONITORING WELL BY LE MARCH 2002
MW6	GROUNDWATER MONITORING WELL BY LE 2000
MW4	GROUNDWATER MONITORING WELL BY MCLAREN – HART 1996
MW2	ABANDONED MONITORING WELL
GW1	GEOPROBE WATER SAMPLE (SEPTEMBER 1996)
CPT1	CONE PENETROMETER SAMPLE (NOVEMBER 1996)
HP1	HYDROPUNCH SAMPLE (APRIL 2000)
HP2	HYDROPUNCH SAMPLE (FEBRUARY 2001)
	CHEMICAL CONCENTRATION IN GROUNDWATER µg/l (12/18/19)
9.30	PCE
2.59	TCE
ND	CIS-1,2-DCE
ND	NOT DETECTED ABOVE METHOD DETECTION LIMIT
10	INTERPRETED PCE ISOCONCENTRATION CONTOUR
MCL	MAXIMUM CONCENTRATION LEVEL (MCL) PCE ISOCONCENTRATION CONTOUR (MCL = 5 µg/l)

SCALE: 1" = 100'

0 1" 2"

0 100' 200'

LANDMARK ENGINEERING

Project Name: FORMER ROYALTY CLEANERS
3378 LOS COYOTES DIAGONAL, LONG BEACH, CALIFORNIA

Title: PCE, TCE, & CIS-1,2-DCE CONCENTRATION MAP
2019 ANNUAL GROUNDWATER MONITORING EVENT

Drafted By:	Approved By:	Project No.:	Date:	Figure No.:
DWS	UML	2019-257	1/20	3

APPENDIX A

Field Methodology

Field Methodology

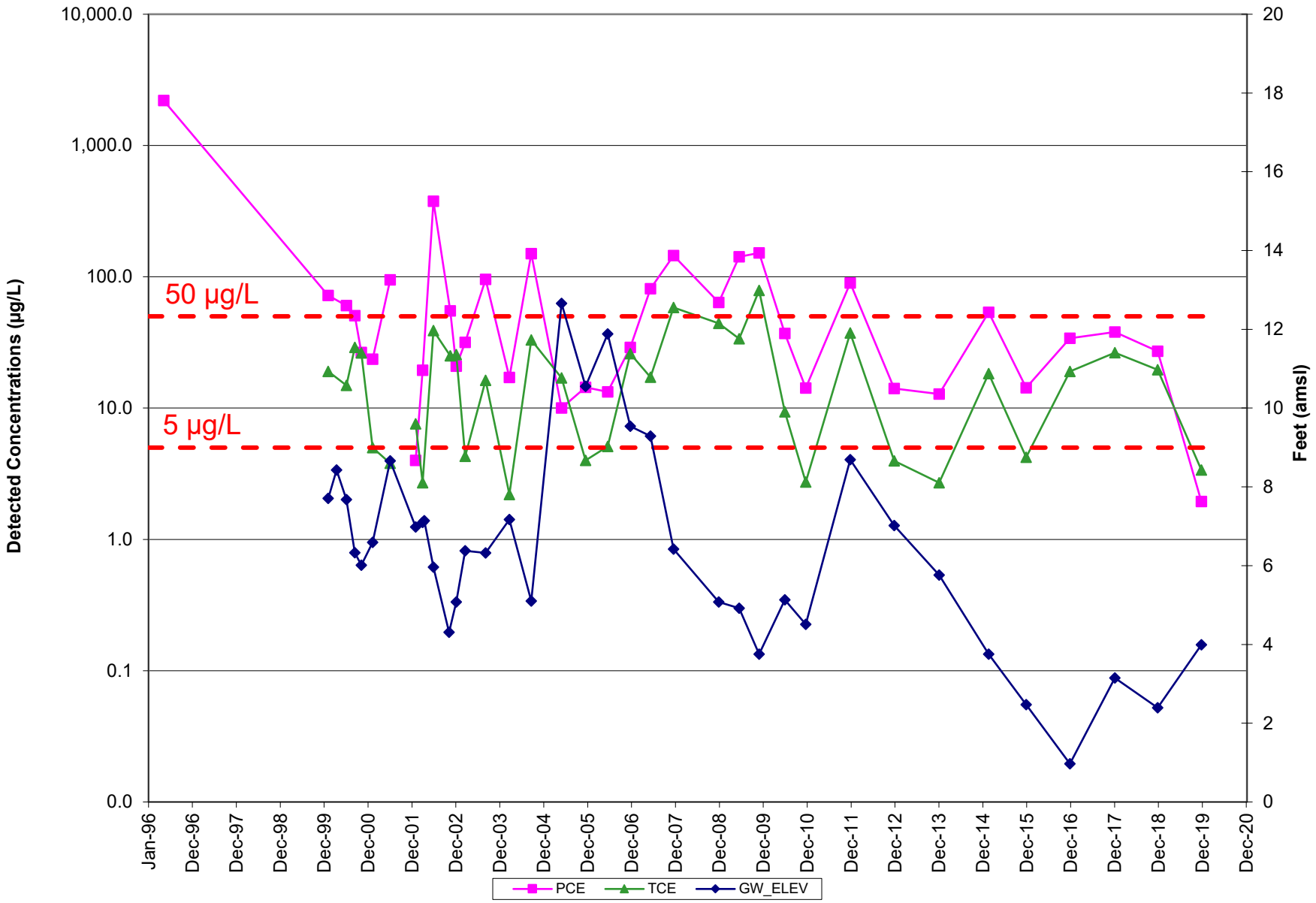
Prior to sampling, Lindmark Engineering (LE) measured the depth to groundwater using a Solinist depth to water probe. Following measurement of depth to groundwater, LE purged each well using a Grundfos submersible pump, with dedicated tubing. During purging, LE measured the dissolved oxygen (DO) electrical conductivity, temperature, pH, turbidity, and oxidation-reduction potential (ORP), of the purged water in each well using a continuous flow-through cell attached to a Horiba multi-parameter meter. Purging continued until the conductivity, temperature, and pH had stabilized, or at least three well volumes had removed.

LE collected groundwater samples from each of the wells after they had recovered to at least 80 percent of static levels. A dedicated, disposable high-density polyethylene bailer was used to collect groundwater samples from each sampled well. LE transferred the groundwater into unpreserved gas chromatography vials (also known as volatile organic ampules [VOAs]). The vials were sealed with Teflon-lined caps, labeled, placed on ice, and transported to a state-certified laboratory (American Scientific Laboratories) for analysis within 24 hours of sampling. Each sample was recorded on a chain-of-custody record identifying the sampler, sample identification, time and date of sampling, container type, couriers, responsible laboratory personnel, and requested analyses.

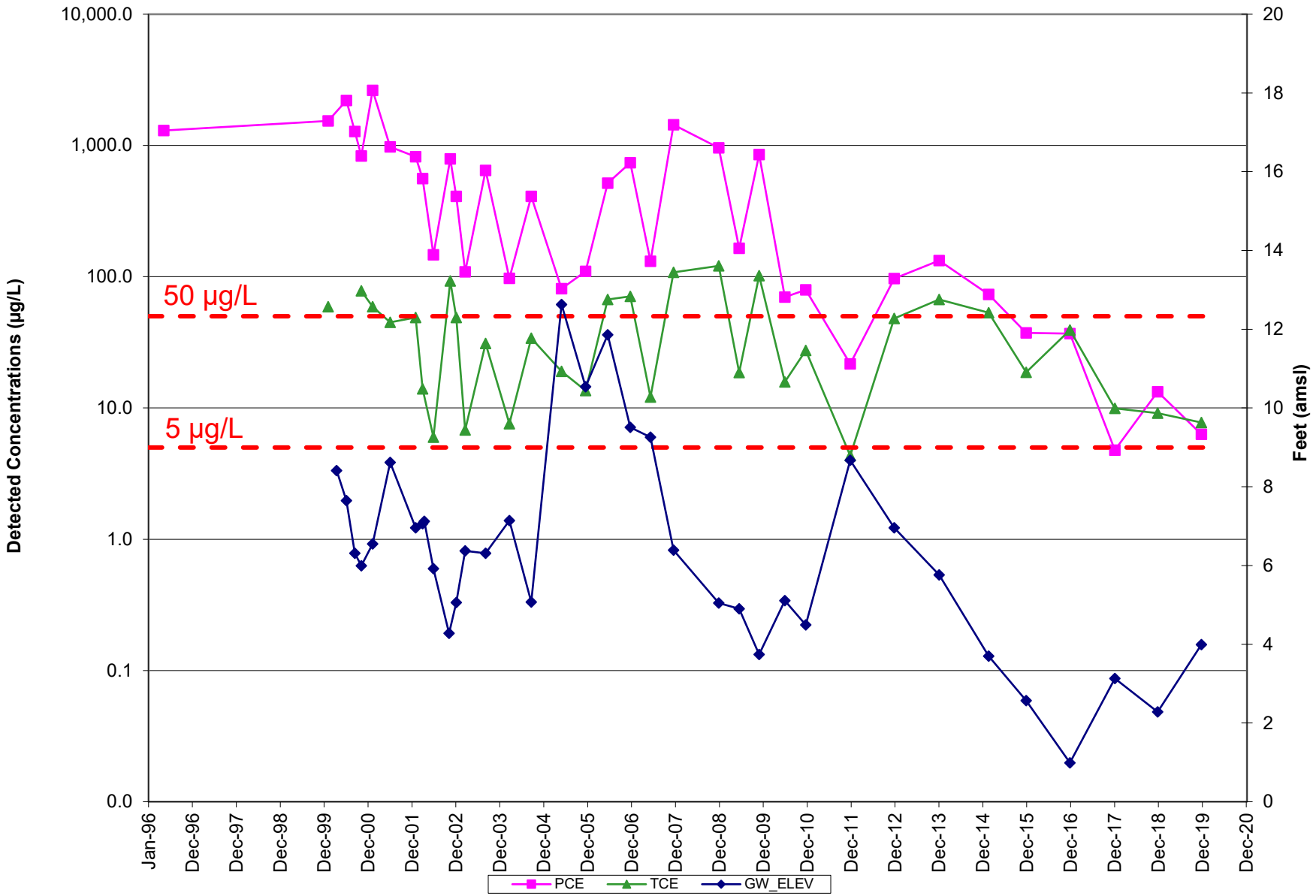
APPENDIX B

Graphs of Detected Concentrations and Groundwater Elevations vs. Time

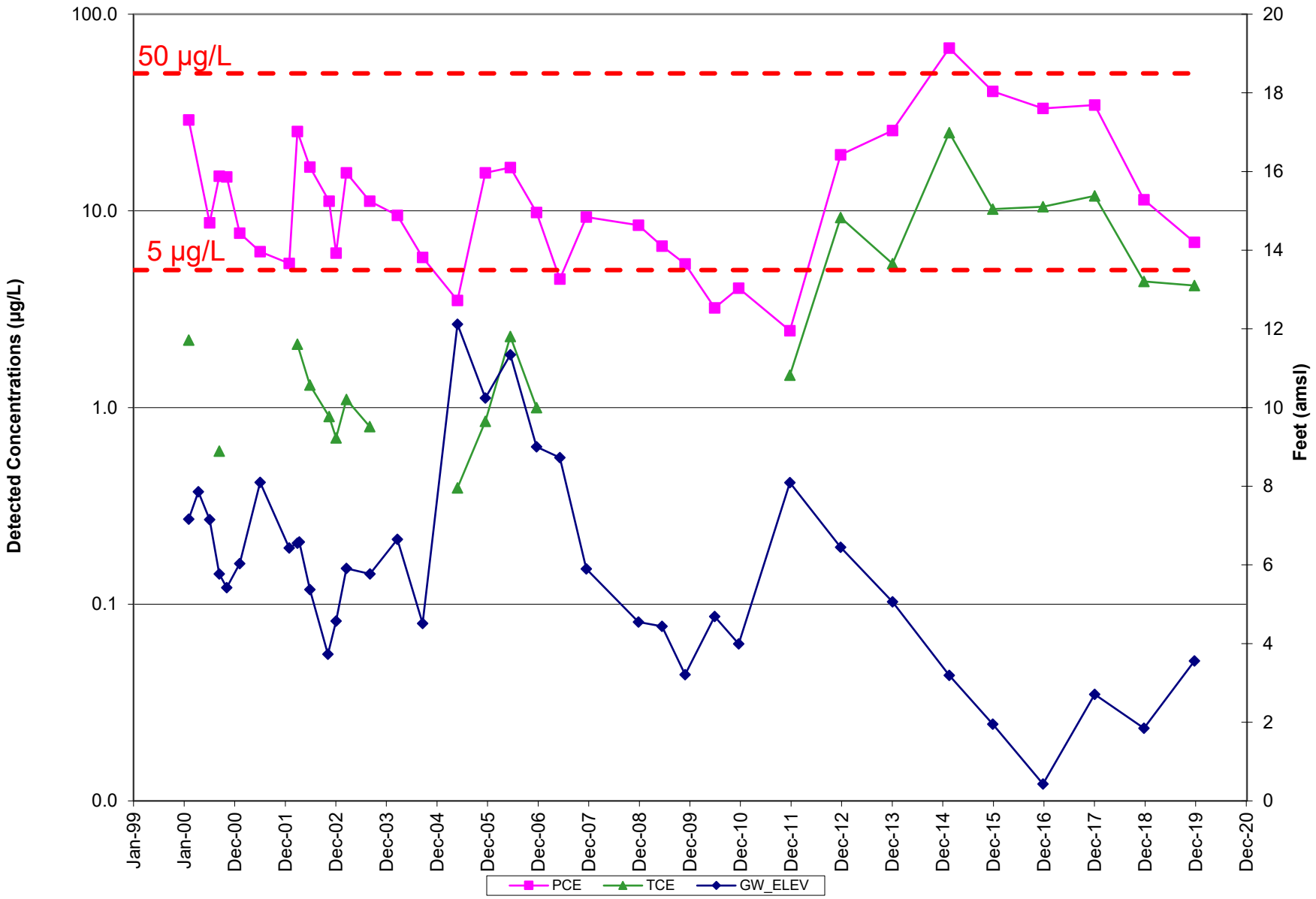
MW3: Detected Concentrations & Groundwater Elevations Versus Time



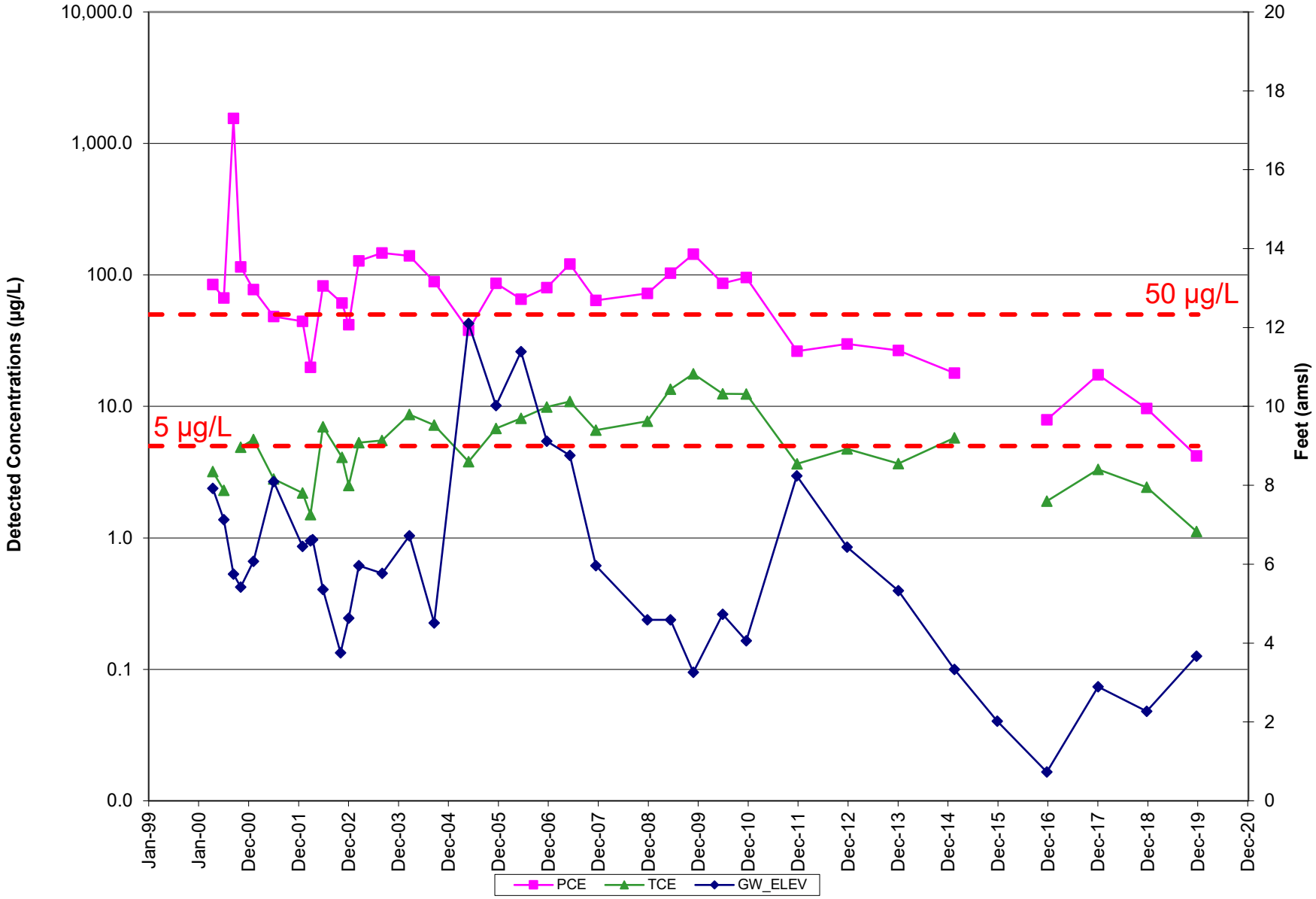
MW4: Detected Concentrations & Groundwater Elevations Versus Time



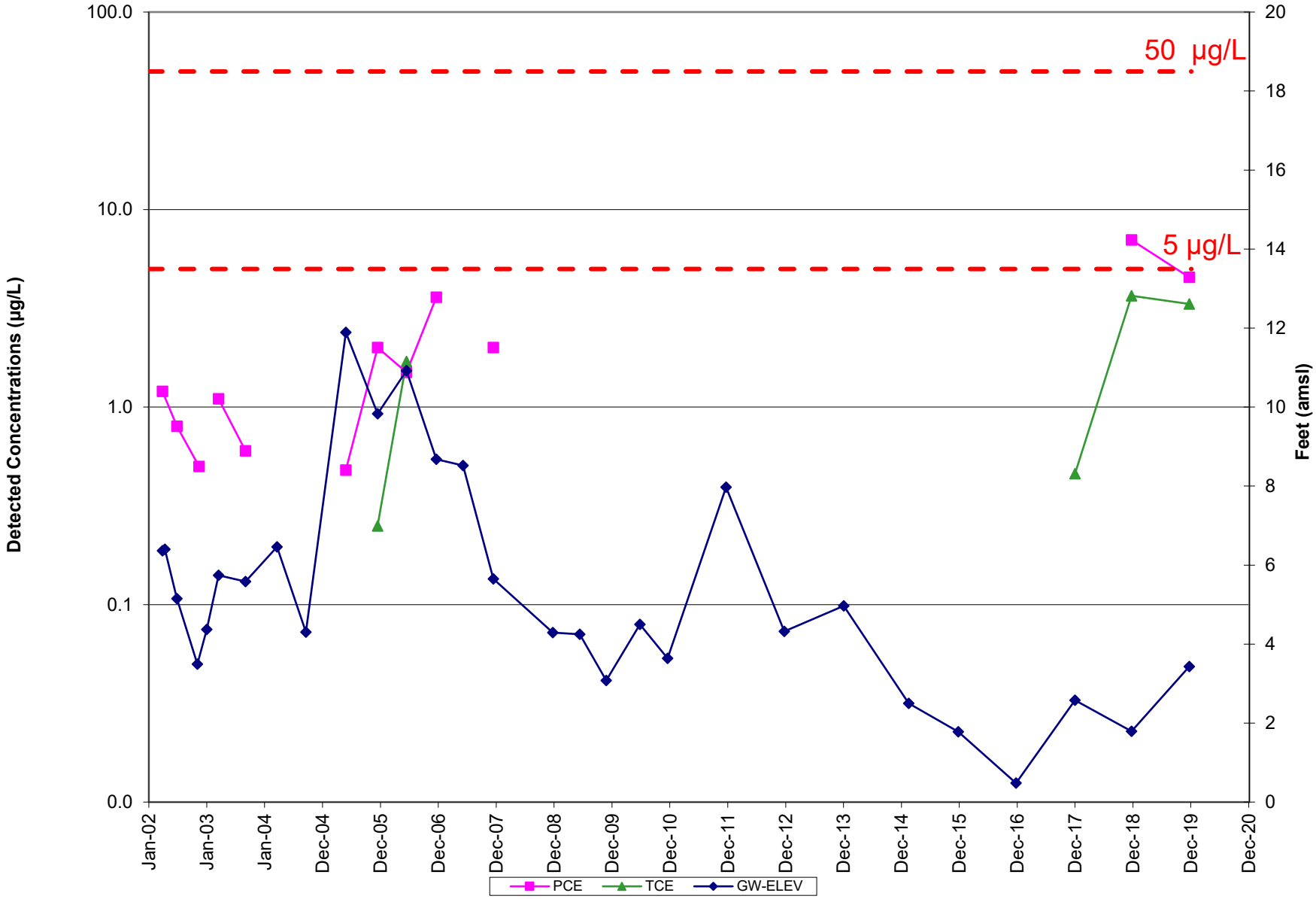
MW5: Detected Concentrations & Groundwater Elevations Versus Time



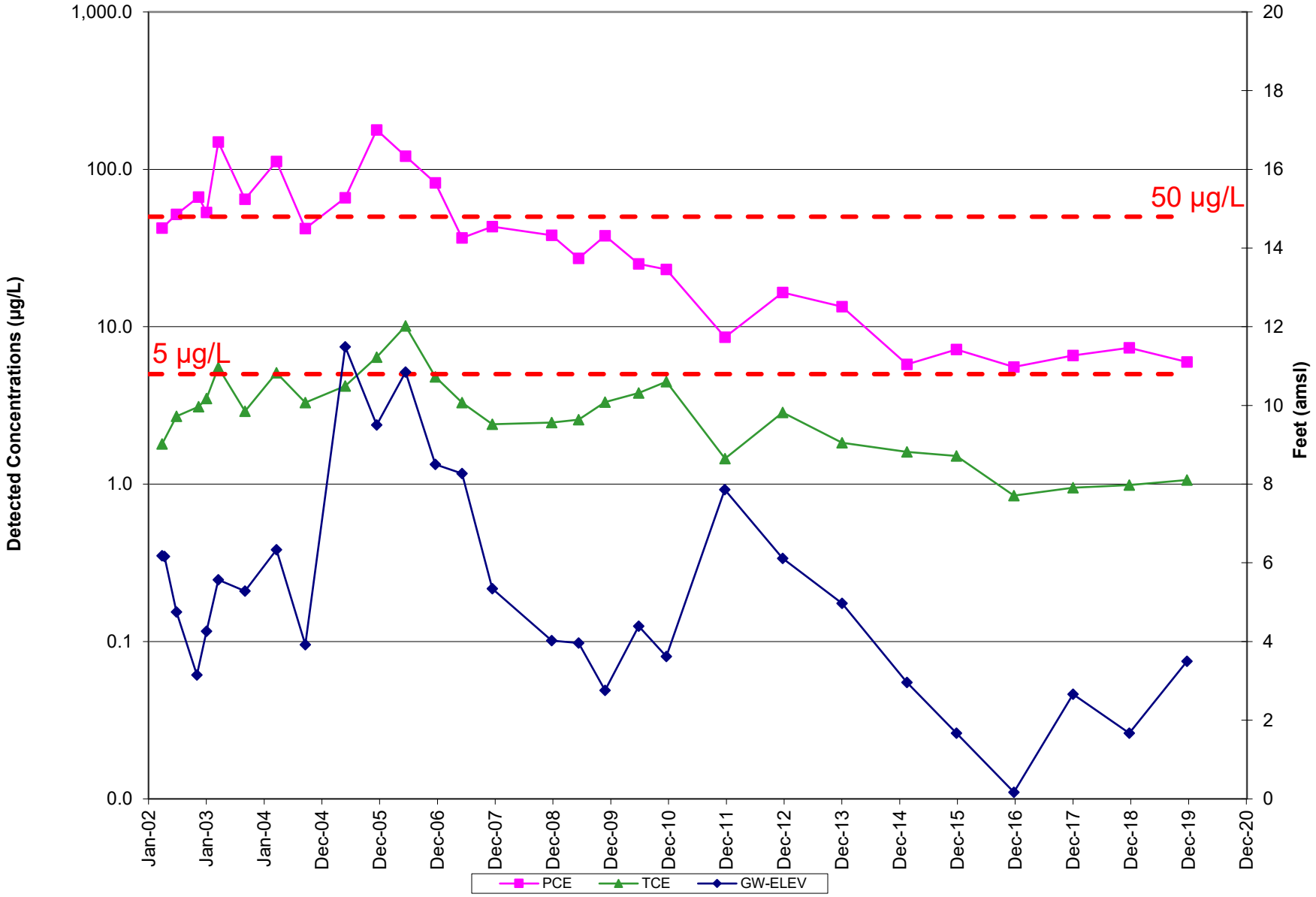
MW6: Detected Concentrations & Groundwater Elevations Versus Time



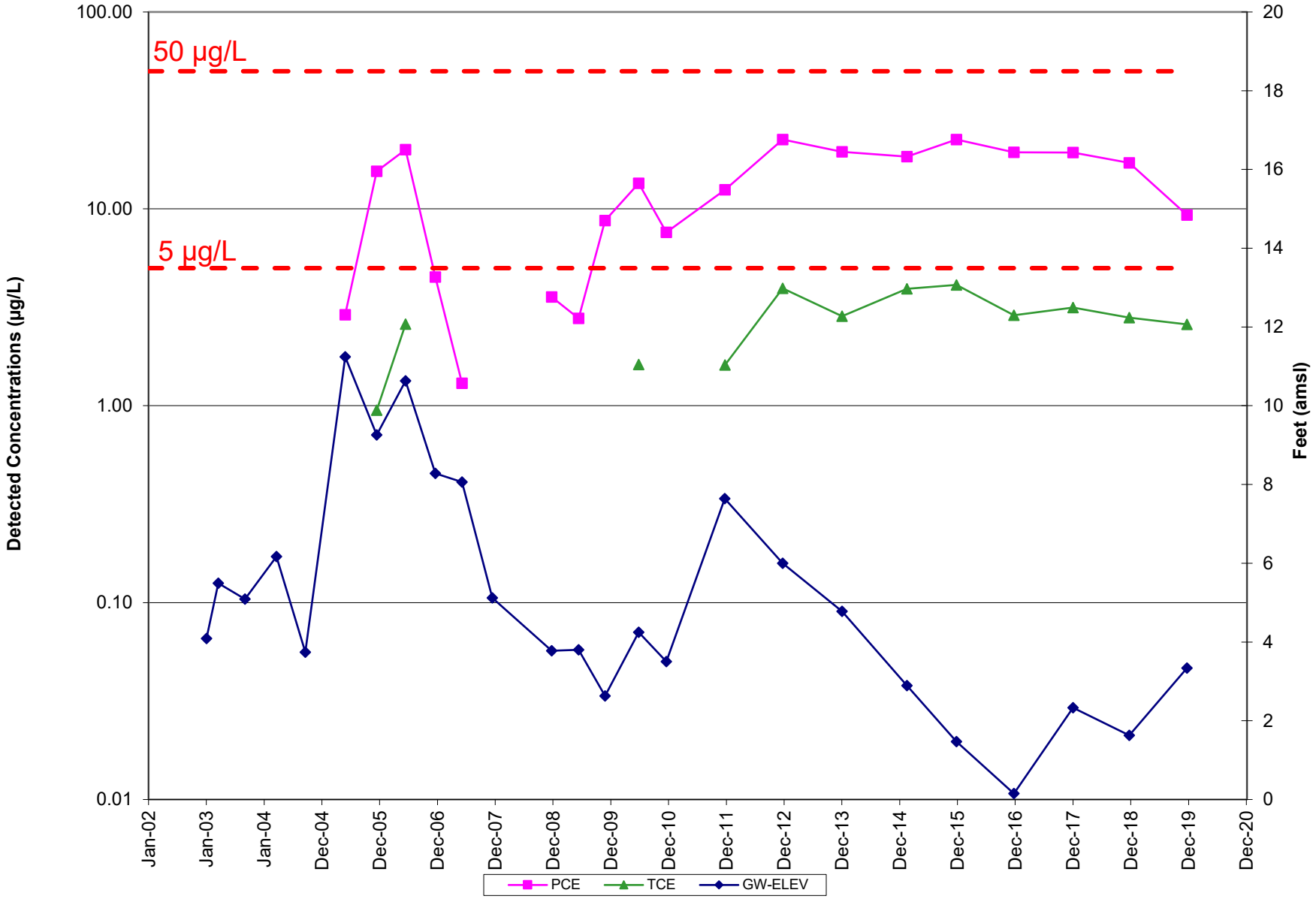
MW7: Detected Concentrations & Groundwater Elevations Versus Time



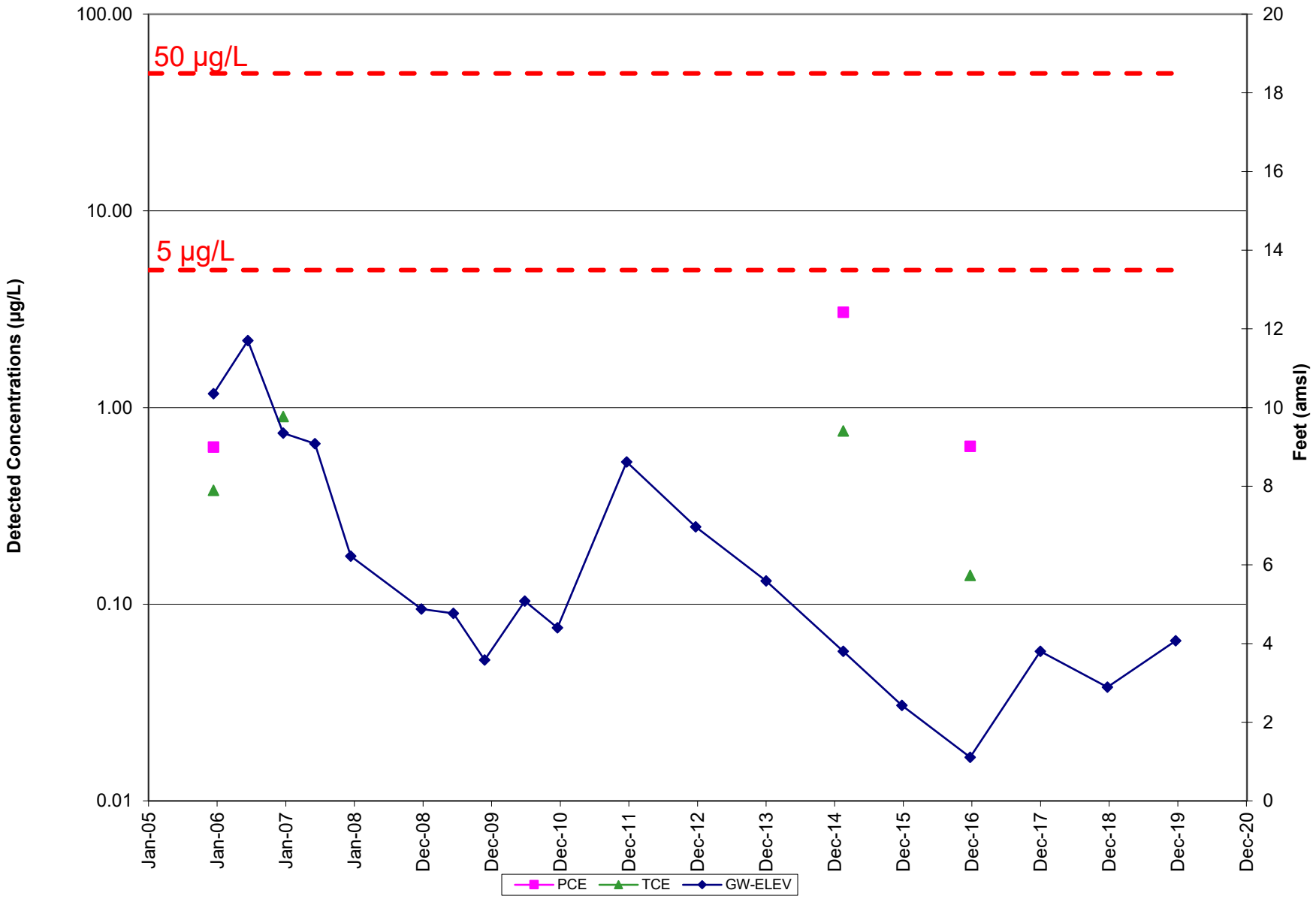
MW8: Detected Concentrations & Groundwater Elevations Versus Time



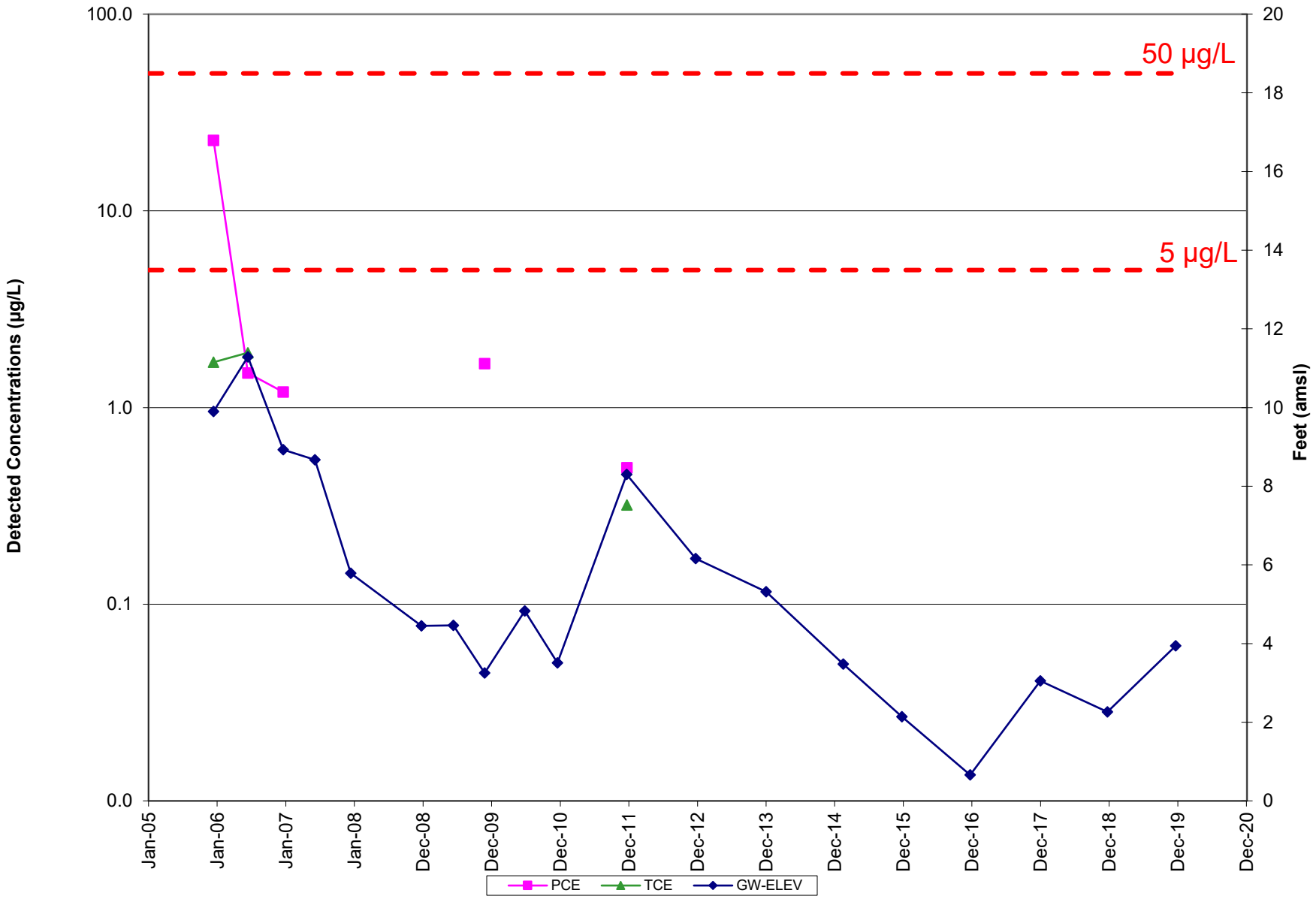
MW9: Detected Concentrations & Groundwater Elevations Versus Time



MW10: Detected Concentrations & Groundwater Elevations Versus Time



MW11: Detected Concentrations & Groundwater Elevations Versus Time



APPENDIX C

Well Purging Records

Groundwater Monitoring & Product Recovery Records

Lindmark Engineering
2625 Townsgate Road, Suite 330
Westlake Village, CA 91361
818-707-6100/805-267-1101

Project Name & No. Los Coyotes / 2019-257
Water Level Instrument Solonist
Measured by DWS & ST
DO Meter Calibrated by Pine Env. Elevation

Date	Well No.	Time	DTW	PM	Δ	DO	PDO	DTB	DTP	PT	Volume Bailed (gal.)		Post-bailing	
											Water	Product	DTW	DTP
12/18/19	MW3	9:17	22.08	23.68	+1.60	1.80	1.75	33.90	/	/	24	/	22.11	/
12/18/19	MW4	9:09	22.12	23.83	+1.71	0.00	0.31	34.50	/	/	23	/	22.04	/
12/18/19	MW5	8:52	23.15	24.86	+1.71	1.41	0.33	30.70	/	/	4.5	/	23.10	/
12/18/19	MW6	8:46	22.80	24.20	+1.40	0.01	0.30	36.22	/	/	6	/	22.75	/
12/18/19	MW7	8:27	21.59	23.23	+1.64	0.69	0.63	39.50	/	/	7	/	22.06	/
12/18/19	MW8	8:37	21.17	23.00	+1.83	0.09	0.32	39.62	/	/	8	/	21.20	/
12/18/19	MW9	9:00	20.62	23.33	+2.71	0.04	0.35	33.59	/	/	6.5	/	20.70	/
12/18/19	MW10	8:18	21.43	22.61	+1.18	0.10	0.33	40.60	/	/	8.5	/	21.40	/
12/18/19	MW11	7:59	21.03	22.71	+1.68	3.54	0.48	38.00	/	/	8	/	21.05	/

DTW = Depth to water (in feet) from top of casing
PM = Previous DTW measurement (in feet)
Δ = Difference between previous & current measurement (in feet)
DO = Dissolved oxygen (in mg/l)
PDO = Previous DO measurement (in mg/l)
DTB = Depth to bottom (in feet)
DTP = Depth to free product (in feet) from top of casing
PT = Product thickness (in feet)

gw_mon031218

Groundwater Monitoring Well Purging Record

Project: Los Coyotes GWM Project No.: 2019-257

Date: 12/18/19 Weather: overcast / 42°F

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW3 Well Condition: fair

Does this wellhead require repair? ☐ yes ☒ no Explanation:

Does this well require bolts and/or well locking caps? ☒ yes ☐ no Explanation: no locking cap, bolt and lid are partially broken

Static depth to water from top of casing ..... A: 22.08 ft. Time: 9:17

Top of casing to bottom of casing ..... B: 33.90 ft.

Feet of water in well ..... H: 11.82 ft. H = B - A

Diameter ..... D: 4 in. V = H x 0.65

Volume of water in well ..... V: 7.68 gal. ~~V = H/77.01~~

Three well volumes ..... Vx3: 23.05 gal.

Purge time begin: 2:53 Purge time finish: 2:56

Purging/bailing technique: sub. pump Purging/bailing equipment: rediflow grunfos

Average pumping rate: 0.96 ga/min Volume of water removed: 24ga

Depth to water from top of casing (at time of sampling): 22.11 Sampling time: 3:49

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (ppm)	Observations
2:35	6.94	979	23.40	6.9	0.73	70	0.647	2ga
2:41	7.01	1160	23.27	44.6	1.10	-68	0.738	6ga
2:43	7.04	1530	23.14	23.1	0.53	-70	0.993	10ga
2:53	7.03	1520	23.12	16.7	0.01	-69	0.936	18ga
2:55	7.20	963	23.13	16.3	1.80	-51	0.617	24ga

Groundwater Monitoring Well Purging Record

Project: Los Coyotes GWM Project No.: 2019-257

Date: 12/18/19 Weather: overcast / 42°F

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW4 Well Condition: poor

Does this wellhead require repair? ☒ yes ☐ no Explanation: well cap is

Does this well require bolts and/or well locking caps? ☒ yes ☐ no Explanation: covered / filled w/ soil, no bolt

Static depth to water from top of casing ..... A: 22.12 ft. Time: 9:09

Top of casing to bottom of casing ..... B: 34.50 ft.

Feet of water in well ..... H: 12.38 ft. H = B - A

Diameter ..... D: 4 in. V = H x 0.65

Volume of water in well ..... V: 8.05 gal. ~~= 2H/77.01~~ V

Three well volumes ..... Vx3: 24.14 gal.

Purge time begin: 2:03 Purge time finish: 2:26

Purging/bailing technique: sub. pump Purging/bailing equipment: rediflow grunfos

Average pumping rate: 1.2 ga/min Volume of water removed: 23

Depth to water from top of casing (at time of sampling): 22.04 Sampling time: 3:45

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (ppm)	Observations
2:06	7.17	1450	23.41	17.4	0.24	138	0.927	~~1ga~~ 1.5ga
2:10	7.10	1450	23.52	41.5	0.14	111	0.927	4.5ga
2:12	7.10	1460	23.44	61	0.06	94	0.932	8ga
2:15	7.10	1460	23.35	51.8	0.04	84	0.933	10ga
2:20	7.09	1460	23.22	28.0	0.00	68	0.930	15ga
2:23	7.10	1460	23.14	13.9	0.00	58	0.934	20ga
2:25	7.10	1460	23.16	13.2	0.00	55	0.935	23ga

Groundwater Monitoring Well Purging Record

Project: Los Coyotes GWM Project No.: 2019-257

Date: 12/18/19 Weather: Overcast / 42°F

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW5 Well Condition: Okay

Does this wellhead require repair? ☐ yes ☒ no Explanation: Ø

Does this well require bolts and/or well locking caps? ☒ yes ☐ no Explanation: bolts do not lock roots in well

Static depth to water from top of casing ..... A: 23.15 ft. Time: 8:52

Top of casing to bottom of casing ..... B: 30.70 ft.

Feet of water in well ..... H: 7.55 ft. H = B - A

Diameter ..... D: 2 in.

Volume of water in well ..... V: 1.21 gal. ~~= 2πr²H~~

Three well volumes ..... Vx3: 3.62 gal. V = H × 0.16

Purge time begin: 1:24 Purge time finish: 1:31

Purging/bailing technique: sub. pump Purging/bailing equipment: rediflow grunfos

Average pumping rate: 2.25 gal/min Volume of water removed: 4.5 gal

Depth to water from top of casing (at time of sampling): 23.10 Sampling time: 3:35

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (g/L) ~~(ppm)~~	Observations
1:28	7.08	1560	25.19	340	2.51	128	1.00	1.5 gal
1:29	7.13	1560	25.36	65.9	0.47	115	1.00	4 gal
1:30	7.14	1460	25.39	46	1.41	113	1.00	4.5 gal

Groundwater Monitoring Well Purging Record

Project: Los Coyotes Project No.: 2019-257

Date: 12/18/19 Weather: overcast / 42°F

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW6 Well Condition: good

Does this wellhead require repair? ☐ yes ☒ no Explanation:

Does this well require bolts and/or well locking caps? ☒ yes ☐ no Explanation: bolts do not work, roots in well

Static depth to water from top of casing ..... A: 22.80 ft. Time: 8:46

Top of casing to bottom of casing ..... B: 36.22 ft.

Feet of water in well ..... H: 13.42 ft. H = B - A

Diameter ..... D: 2 in.

Volume of water in well ..... V: 2.15 gal. ~~$\pi r^2 H / 77.01$~~ V=H x 0.16

Three well volumes ..... Vx3: 6.44 gal.

Purge time begin: 12:58 Purge time finish: 1:15

Purging/bailing technique: submersible pump Purging/bailing equipment: rediflow grundfos

Average pumping rate: 0.43 gal/min Volume of water removed: 6 gal

Depth to water from top of casing (at time of sampling): 22.75 Sampling time: 3:31

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (ppm)	Observations
1:01	7.11	2010	23.36	0.0	3.11	144	1.28	1 ga
1:04	7.11	2040	23.30	0.0	2.74	136	1.31	2 ga
1:07	7.09	2150	24.17	433	0.59	104	1.38	3 ga
1:10	7.10	2160	24.14	200	0.05	91	~~0~~ 1.38	4 ga
1:13	7.09	2170	24.00	145	0.02	79	1.39	5 ga
1:15	7.08	2170	24.07	96.3	0.01	72	1.39	6 ga

Groundwater Monitoring Well Purging Record

Project: Los Coyotes GWM Project No.: 2019-257

Date: 12/18/19 Weather: Overcast / 42°F

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW7 Well Condition: okay

Does this wellhead require repair? ☐ yes ☒ no Explanation:

Does this well require bolts and/or well locking caps? ☒ yes ☐ no Explanation: bolt do not work

Static depth to water from top of casing ..... A: 21.59 ft. Time: 8:27

Top of casing to bottom of casing ..... B: 39.50 ft.

Feet of water in well ..... H: 17.91 ft. H = B - A

Diameter ..... D: 2 in.

Volume of water in well ..... V: 2.86 gal. ~~= 2.11/77.01~~

Three well volumes ..... Vx3: 8.60 gal. V=H x 0.16

Purge time begin: 11:28 Purge time finish: 12:07

Purging/bailing technique: submersible pump Purging/bailing equipment: rediflow grunfos

Average pumping rate: 0.19 ga/min* Volume of water removed: 7ga

Depth to water from top of casing (at time of sampling): 22.06 Sampling time: 3:19

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (ppm)	Observations
11:30	7.18	1560	24.18	0	3.05	142	1.01	2ga
11:35	7.02	1570	25.87	0	6.57	141	1.01	*3ga (problem w/ flow controller)
12:00	7.18	1590	23.33	0	1.40	157	1.02	*4.5ga (resume purging)
12:04	7.08	1570	24.11	0	0.69	158	1.00	5ga
12:06	7.03	1560	24.72	0	0.68	151	1.00	5.5ga
12:07	7.04	1570	24.57	0	0.69	148	1.00	7ga

Groundwater Monitoring Well Purging Record

Project: Los Coyotes GWM Project No.: 2019-257

Date: 12/18/19 Weather: overcast / 42°F

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW8 Well Condition: good

Does this wellhead require repair? ☐ yes ☒ no Explanation:

Does this well require bolts and/or well locking caps? ☐ yes ☒ no Explanation: Roots in well

Static depth to water from top of casing ..... A: ~~21.12~~ 21.17 ft. Time: 8:37

Top of casing to bottom of casing ..... B: 39.62 ft.

Feet of water in well ..... H: 18.45 ft. H = B - A

Diameter ..... D: 2 in.

Volume of water in well ..... V: 2.95 gal.

Three well volumes ..... Vx3: 8.86 gal. V = H x 0.16

Purge time begin: 12:22 Purge time finish: 12:35

Purging/bailing technique: submersible pump Purging/bailing equipment: rediflow grunfos

Average pumping rate: 0.62 ga/min Volume of water removed: 8 ga

Depth to water from top of casing (at time of sampling): 21.20 Sampling time: 3:25

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (ppm)	Observations
12:24	7.27	1530	23.14	1000+	1.30	145	0.979	2 ga
12:26	7.24	1550	23.36	825	0.44	138	0.993	4 ga
12:27	7.16	1550	23.45	453	0.12	131	0.993	4.5 ga
12:28	7.16	1560	23.68	211	0.06	119	0.996	5 ga
12:31	7.16	1570	23.73	82	0.01	104	1.01	6 ga
12:33	7.15	1580	23.76	65	0.07	98	1.01	7 ga
12:35	7.30	1550	23.40	94	0.09	94	0.993	8 ga

Groundwater Monitoring Well Purging Record

Project: Los Coyotes GWM Project No.: 2019-257

Date: 12/18/19 Weather:

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW9 Well Condition: good

Does this wellhead require repair? ☐ yes ☒ no Explanation:

Does this well require bolts and/or well locking caps? ☒ yes ☐ no Explanation: bolts do not lock well cover

Static depth to water from top of casing ..... A: 20.62 ft. Time: 9:00

Top of casing to bottom of casing ..... B: 33.59 ~~23.33~~ ft.

Feet of water in well ..... H: 12.97 ~~2.71~~ ft. H = B - A

Diameter ..... D: 2 in.

Volume of water in well ..... V: 2.08 gal. ~~$\pi r^2 H/231$~~ V

Three well volumes ..... Vx3: 6.22 gal. V = H x 0.16

Purge time begin: 1:46 Purge time finish: 1:53

Purging/bailing technique: sub. pump Purging/bailing equipment: redflow grunfos

Average pumping rate: 0.93 ga/min Volume of water removed: 6.5 ga

Depth to water from top of casing (at time of sampling): 20.70 Sampling time: 3:41

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (ppm)	Observations
1:47	7.12	1550	24.36	0.0	0.18	146	0.987	1ga
1:52	7.26	1530	24.49	0.0	0.34	136	0.980	4.5ga
1:53	7.06	1530	24.48	0.0	0.04	133	0.979	~~6ga~~ 6.5ga

Groundwater Monitoring Well Purging Record

Project: Los Coyotes GWM Project No.: 2019-257

Date: 12/18/19 Weather: overcast / 42°F

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW10 Well Condition: fair

Does this wellhead require repair? ☐ yes ☒ no Explanation:

Does this well require bolts and/or well locking caps? ☒ yes ☐ no Explanation: bolts and well lid are partially broken

Static depth to water from top of casing ..... A: 21.43 ft. Time: 8:18

Top of casing to bottom of casing ..... B: 40.60 ft.

Feet of water in well ..... H: 19.17 ft. H = B - A

Diameter ..... D: 2 in.

Volume of water in well ..... V: 3.07 gal. ~~$= \pi^2 H/77.01$ V~~

Three well volumes ..... Vx3: 9.20 gal. V = H x 0.16

Purge time begin: 11:00 Purge time finish: 11:08

Purging/bailing technique: submersible pump Purging/bailing equipment: rediflow grundfos

Average pumping rate: 1.06 ga/min Volume of water removed: 8.5 ga

Depth to water from top of casing (at time of sampling): 21.40 Sampling time: 3:13

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (ppm)	Observations
11:00	7.18	1190	21.43	0.0*	5.93	140	0.787	1.5 ga
11:02	7.09	1350	23.26	0.0	5.92	132	0.870	4 ga
11:03	7.11	1370	23.39	0.0	6.36	129	0.875	5 ga
11:05	7.07	1410	23.45	0.0	0.20	126	0.403	7 ga
11:07	7.13	1410	23.51	980	0.11	120	0.898	7.5 ga
11:08	7.13	1400	23.50	1000+	0.10	119	0.896	~~8 ga~~ 8.5 ga

Groundwater Monitoring Well Purging Record

Project: Los Coyotes GWM Project No.: 2019-257

Date: 12/18/19 Weather: Overcast / 42°F

Sample Team: DWS & ST Well Measured By: ST

Well No.: MW11 Well Condition: okay

Does this wellhead require repair? ☐ yes ☒ no Explanation:

Does this well require bolts and/or well locking caps? ☒ yes ☐ no Explanation: bolts are loose

Static depth to water from top of casing ..... A: 21.03 ft. Time: 7:59

Top of casing to bottom of casing ..... B: 38.00 ft.

Feet of water in well ..... H: 16.97 ft. H = B - A

Diameter ..... D: 2 in.

Volume of water in well ..... V: 2.71 gal. ~~$V = \frac{H \times D^2}{17.01}$~~

Three well volumes ..... Vx3: 8.14 gal. V = H x 0.16

Purge time begin: 10:24 Purge time finish: 10:38

Purging/bailing technique: sub. pump Purging/bailing equipment: rediflow grunfos

Average pumping rate: 0.57 ga/min Volume of water removed: 8 ga

Depth to water from top of casing (at time of sampling): 21.05 Sampling time: 3:07

Time	pH	Cond. (µs/cm)	Temp. (°C)	Turb. (NTU)	DO (mg/L)	ORP (mV)	TDS (ppm)	Observations
10:24	7.85	1680	20.36	0.0*	2.50	95	1.05	*cloudy, out of tray, 1.5 ga
10:30	7.09	1580	23.54	0.0*	2.01	106	1.01	3 ga
10:33	7.15	1580	23.69	0.0*	3.69	105	1.01	4 ga
10:36	7.26	1570	22.68	0.0*	1.42	113	1.00	5 ga
10:37	7.15	1570	23.27	0.0*	3.20	114	1.01	7 ga
10:38	7.14	1560	23.17	0.0*	3.54	108	1.00	8 ga

APPENDIX D

Laboratory Analytical Reports and Chain-of-Custody Records

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

06 January 2020

Ulf Lindmark

Lindmark Engineering

2625 Townsgate Road Suite # 330

Westlake Village, CA 91361

Work Order #: 1912220

Project Name: Los Coyotes GWM

Project ID: 2019-257

Site Address: 3378 Los Coyotes Diagonal Long Beach

Enclosed are the results of analyses for samples received by the laboratory on December 19, 2019. If you have any questions concerning this report, please feel free to contact us.

Rojert G. Araghi

Laboratory Director

American Scientific Laboratories, LLC (ASL) accepts sample materials from clients for analysis with the assumption that all of the information provided to ASL verbally or in writing by our clients (and/or their agents), regarding samples being submitted to ASL, is complete and accurate. ASL accepts all samples subject to the following conditions:

1) ASL is not responsible for verifying any client-provided information regarding any samples submitted to the laboratory.
2) ASL is not responsible for any consequences resulting from any inaccuracies , omissions, or misrepresentations contained in client-provided information regarding samples submitted to the laboratory.

AMERICAN SCIENTIFIC LABORATORIES, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA, CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

COC# № 85072 GLOBAL ID _____ E REPORT: ☐ PDF ☐ EDF ☐ EDD ASL JOB# 1912220

CHAIN OF CUSTODY RECORD

Company: Lindmark Engineering		Report To:	ANALYSIS REQUESTED
Address: 2625 Townsgate Rd	Project Name: Los Coyotes GWM	Address:	
suite 330 Westlake Village	Site Address: 3378 Los Coyotes	Invoice To:	
Telephone: Fax: 818-707-6100	Diagonal, Long Beach	Address:	
Special Instruction:	Project ID: 2019-257		
E-mail: dsmith@lindmarkeng.com	Project Manager: Ulf Lindmark	P.O.#:	

ITEM	LAB USE ONLY Lab ID	SAMPLE DESCRIPTION Sample ID	Date	Time	Container(s) #	Type	Matrix	Preservation	VOCs by 8260B	Remarks
	1912220-01	MW3	12/18/19	3:49	3	VOAs	water	ice	X	
	1912220-02	MW4	12/18/19	3:45	3	VOAs	water	ice	X	
	1912220-03	MW5	12/18/19	3:35	3	VOAs	water	ice	X	
	1912220-04	MW6	12/18/19	3:31	3	VOAs	water	ice	X	
	1912220-05	MW7	12/18/19	3:19	3	VOAs	water	ice	X	
	1912220-06	MW8	12/18/19	3:25	3	VOAs	water	ice	X	
	1912220-07	MW9	12/18/19	3:41	3	VOAs	water	ice	X	
	1912220-08	MW10	12/18/19	3:13	3	VOAs	water	ice	X	
	1912220-09	MW11	12/18/19	3:07	3	VOAs	water	ice	X	

Collected By: [signature]	Date 12/18/19	Time 3:49	Relinquished By:	Date	Time
Relinquished By: [signature]	Date 12/19/19	Time 10:40	Received For Laboratory [signature]	Date 12/19/19	Time 10:40
Received By:	Date	Time	Condition of Sample:		

TAT: ☒ Normal ☐ Rush

White - Report, Yellow - Laboratory, Pink - Client

Job# 1912220

ASL Sample Receipt Form

Client: Lindmark Engineering

Date: 12-19-19

Sample Information:

Temperature: 4.5 °C ☐ Blank ☒ Sample

Custody Seal: ☐ Yes ☒ No ☐ Not Available

Received Within Holding Time: ☒ Yes ☐ No

Container:

Proper Containers and Sufficient Volume: ☒ Yes ☐ No

Soil: __☐ 4oz __☐ 8oz __☐ Sleeve __☐ VOA

Water: __☐500AG __☐1AG __☐125PB __☐250PB __☐500PB __☒VOA __☐Other _____

Air: __☐ Tedlar®

Sample Containers Intact: ☒ Yes ☐ No

Trip Blank ☐ Yes ☒ No

Chain-of-Custody (COC):

Received: ☒ Yes ☐ No

Samplers Name: ☒ Yes ☐ No

Container Labels match COC: ☒ Yes ☐ No

COC documents received complete: ☒ Yes ☐ No

Proper Preservation Noted: ☒ Yes ☐ No

Completed By: Janet Chin

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

ANALYTICAL SUMMARY REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW 3	1912220-01	Water	12/18/2019 15:49	12/19/2019 10:40
MW 4	1912220-02	Water	12/18/2019 15:45	12/19/2019 10:40
MW 5	1912220-03	Water	12/18/2019 15:35	12/19/2019 10:40
MW 6	1912220-04	Water	12/18/2019 15:31	12/19/2019 10:40
MW 7	1912220-05	Water	12/18/2019 15:19	12/19/2019 10:40
MW 8	1912220-06	Water	12/18/2019 15:25	12/19/2019 10:40
MW 9	1912220-07	Water	12/18/2019 15:41	12/19/2019 10:40
MW 10	1912220-08	Water	12/18/2019 15:13	12/19/2019 10:40
MW 11	1912220-09	Water	12/18/2019 15:07	12/19/2019 10:40

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rojert G. Araghi

Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
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Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 3

Laboratory Sample ID: 1912220-01 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Chlorobenzene	**0.900**	J	0.176	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
cis-1,2-Dichloroethene	**1.32**		0.279	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B

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Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 3

Laboratory Sample ID: 1912220-01 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Tetrachloroethene	**1.94**		0.421	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Toluene	**0.450**	J	0.282	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Trichloroethene	**3.38**		0.117	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/23/2019 21:11	ED	8260B
Surrogate: 4-Bromofluorobenzene			*105 %*		*70-120*		5030B	12/23/2019 21:11	ED	*8260B*
Surrogate: Dibromofluoromethane			*101 %*		*70-120*		5030B	12/23/2019 21:11	ED	*8260B*
Surrogate: Toluene-d8			*97.8 %*		*70-120*		5030B	12/23/2019 21:11	ED	*8260B*

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Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 4

Laboratory Sample ID: 1912220-02 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Chlorobenzene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
cis-1,2-Dichloroethene	**0.975**	J	0.279	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B

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Rojert G. Araghi, President/Lab Director

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Environmental Testing Services
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Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 4

Laboratory Sample ID: 1912220-02 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Tetrachloroethene	**6.30**		0.421	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Toluene	ND		0.282	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Trichloroethene	**7.76**		0.117	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/23/2019 21:37	ED	8260B
Surrogate: 4-Bromofluorobenzene			*104 %*		*70-120*		5030B	12/23/2019 21:37	ED	*8260B*
Surrogate: Dibromofluoromethane			*104 %*		*70-120*		5030B	12/23/2019 21:37	ED	*8260B*
Surrogate: Toluene-d8			*93.9 %*		*70-120*		5030B	12/23/2019 21:37	ED	*8260B*

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Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 5

Laboratory Sample ID: 1912220-03 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Chlorobenzene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
cis-1,2-Dichloroethene	ND		0.279	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B

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2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 5

Laboratory Sample ID: 1912220-03 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Tetrachloroethene	**6.92**		0.421	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Toluene	ND		0.282	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Trichloroethene	**4.17**		0.117	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/23/2019 22:03	ED	8260B
Surrogate: 4-Bromofluorobenzene			*102 %*		*70-120*		5030B	12/23/2019 22:03	ED	*8260B*
Surrogate: Dibromofluoromethane			*102 %*		*70-120*		5030B	12/23/2019 22:03	ED	*8260B*
Surrogate: Toluene-d8			*95.8 %*		*70-120*		5030B	12/23/2019 22:03	ED	*8260B*

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Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 6

Laboratory Sample ID: 1912220-04 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Chlorobenzene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
cis-1,2-Dichloroethene	**0.515**	J	0.279	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B

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Rojert G. Araghi, President/Lab Director

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Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 6

Laboratory Sample ID: 1912220-04 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Tetrachloroethene	**4.21**		0.421	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Toluene	ND		0.282	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Trichloroethene	**1.12**		0.117	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/23/2019 22:28	ED	8260B
Surrogate: 4-Bromofluorobenzene			*105 %*		*70-120*		5030B	12/23/2019 22:28	ED	*8260B*
Surrogate: Dibromofluoromethane			*101 %*		*70-120*		5030B	12/23/2019 22:28	ED	*8260B*
Surrogate: Toluene-d8			*95.7 %*		*70-120*		5030B	12/23/2019 22:28	ED	*8260B*

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Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 7

Laboratory Sample ID: 1912220-05 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Chlorobenzene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
cis-1,2-Dichloroethene	**0.470**	J	0.279	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B

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Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 7

Laboratory Sample ID: 1912220-05 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Tetrachloroethene	**4.54**		0.421	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Toluene	ND		0.282	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Trichloroethene	**3.33**		0.117	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/23/2019 22:54	ED	8260B
Surrogate: 4-Bromofluorobenzene			*107 %*		*70-120*		5030B	12/23/2019 22:54	ED	*8260B*
Surrogate: Dibromofluoromethane			*115 %*		*70-120*		5030B	12/23/2019 22:54	ED	*8260B*
Surrogate: Toluene-d8			*94.1 %*		*70-120*		5030B	12/23/2019 22:54	ED	*8260B*

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Rojert G. Araghi, President/Lab Director

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Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 8

Laboratory Sample ID: 1912220-06 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Chlorobenzene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
cis-1,2-Dichloroethene	ND		0.279	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B

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Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 8

Laboratory Sample ID: 1912220-06 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Tetrachloroethene	**5.97**		0.421	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Toluene	ND		0.282	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Trichloroethene	**1.06**		0.117	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/23/2019 23:19	ED	8260B
Surrogate: 4-Bromofluorobenzene			*105 %*		*70-120*		5030B	12/23/2019 23:19	ED	*8260B*
Surrogate: Dibromofluoromethane			*106 %*		*70-120*		5030B	12/23/2019 23:19	ED	*8260B*
Surrogate: Toluene-d8			*92.8 %*		*70-120*		5030B	12/23/2019 23:19	ED	*8260B*

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Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 9

Laboratory Sample ID: 1912220-07 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Chlorobenzene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
cis-1,2-Dichloroethene	ND		0.279	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B

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Rojert G. Araghi, President/Lab Director

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Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 9

Laboratory Sample ID: 1912220-07 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Tetrachloroethene	**9.30**		0.421	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Toluene	ND		0.282	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Trichloroethene	**2.59**		0.117	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/23/2019 23:45	ED	8260B
Surrogate: 4-Bromofluorobenzene			*108 %*		*70-120*		5030B	12/23/2019 23:45	ED	*8260B*
Surrogate: Dibromofluoromethane			*114 %*		*70-120*		5030B	12/23/2019 23:45	ED	*8260B*
Surrogate: Toluene-d8			*99.7 %*		*70-120*		5030B	12/23/2019 23:45	ED	*8260B*

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Rojert G. Araghi, President/Lab Director

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2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 10

Laboratory Sample ID: 1912220-08 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Chlorobenzene	ND		0.176	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
cis-1,2-Dichloroethene	ND		0.279	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B

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Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 10

Laboratory Sample ID: 1912220-08 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Tetrachloroethene	ND		0.421	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Toluene	ND		0.282	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Trichloroethene	ND		0.117	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/24/2019 00:11	ED	8260B
Surrogate: 4-Bromofluorobenzene			*101 %*		*70-120*		5030B	12/24/2019 00:11	ED	*8260B*
Surrogate: Dibromofluoromethane			*115 %*		*70-120*		5030B	12/24/2019 00:11	ED	*8260B*
Surrogate: Toluene-d8			*95.2 %*		*70-120*		5030B	12/24/2019 00:11	ED	*8260B*

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Rojert G. Araghi, President/Lab Director

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Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 11

Laboratory Sample ID: 1912220-09 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
Acetone	ND		2.52	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Benzene	ND		0.097	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Bromobenzene	ND		0.291	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Bromochloromethane	ND		0.169	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Bromodichloromethane	ND		0.169	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Bromoform	ND		0.284	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Bromomethane	ND		0.174	3.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
2-Butanone (MEK)	ND		5.00	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
n-Butylbenzene	ND		0.363	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
sec-Butylbenzene	ND		0.338	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
tert-Butylbenzene	ND		0.235	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Carbon disulfide	ND		0.463	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Carbon tetrachloride	ND		0.144	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Chlorobenzene	ND		0.176	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Chloroethane	ND		0.328	3.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
2-Chloroethyl vinyl ether	ND		0.665	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Chloroform	ND		0.247	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Chloromethane	ND		0.174	3.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
4-Chlorotoluene	ND		0.147	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
2-Chlorotoluene	ND		0.311	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2-Dibromo-3-chloropropane	ND		0.333	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Dibromochloromethane	ND		0.300	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2-Dibromoethane	ND		0.226	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Dibromomethane	ND		0.316	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2-Dichlorobenzene	ND		0.358	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,3-Dichlorobenzene	ND		0.333	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,4-Dichlorobenzene	ND		0.384	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Dichlorodifluoromethane	ND		0.244	3.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,1-Dichloroethane	ND		0.372	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2-Dichloroethane	ND		0.182	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,1-Dichloroethene	ND		0.355	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
cis-1,2-Dichloroethene	ND		0.279	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
trans-1,2-Dichloroethene	ND		0.176	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2-Dichloropropane	ND		0.359	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,3-Dichloropropane	ND		0.205	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
2,2-Dichloropropane	ND		0.341	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B

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Rojert G. Araghi, President/Lab Director

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Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Analytical Results

Client Sample ID: MW 11

Laboratory Sample ID: 1912220-09 (Water)

Analyte	Result	Notes	MDL	PQL	Units	Dilution	Prep Method	Analyzed	Analyst	Method
Volatile Organic Compounds				Batch ID:	BA00024		Prepared:	12/23/2019 09:00		
1,1-Dichloropropene	ND		0.210	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
cis-1,3-Dichloropropene	ND		0.122	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
trans-1,3-Dichloropropene	ND		0.100	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Ethylbenzene	ND		0.209	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Hexachlorobutadiene	ND		0.413	3.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
2-Hexanone	ND		0.944	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Isopropylbenzene	ND		0.291	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
p-Isopropyltoluene	ND		0.468	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Methyl tert-Butyl Ether (MTBE)	ND		0.240	2.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
4-Methyl-2-pentanone (MIBK)	ND		1.71	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Methylene chloride	ND		4.69	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Naphthalene	ND		0.375	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
n-Propylbenzene	ND		0.254	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Styrene	ND		0.122	2.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,1,1,2-Tetrachloroethane	ND		0.141	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,1,2,2-Tetrachloroethane	ND		0.579	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Tetrachloroethene	ND		0.421	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Toluene	ND		0.282	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2,3-Trichlorobenzene	ND		0.219	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2,4-Trichlorobenzene	ND		0.451	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,1,1-Trichloroethane	ND		0.150	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,1,2-Trichloroethane	ND		0.233	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Trichloroethene	ND		0.117	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Trichlorofluoromethane	ND		0.294	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2,3-Trichloropropane	ND		0.303	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,2,4- Trimethylbenzene	ND		0.451	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
1,3,5- Trimethylbenzene	ND		0.219	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Vinyl acetate	ND		1.62	5.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Vinyl chloride	ND		0.331	3.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
o-Xylene	ND		0.262	1.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
m,p-Xylenes	ND		0.476	2.00	ug/L	1	5030B	12/24/2019 00:36	ED	8260B
Surrogate: 4-Bromofluorobenzene			*105 %*		*70-120*		5030B	12/24/2019 00:36	ED	*8260B*
Surrogate: Dibromofluoromethane			*119 %*		*70-120*		5030B	12/24/2019 00:36	ED	*8260B*
Surrogate: Toluene-d8			*97.4 %*		*70-120*		5030B	12/24/2019 00:36	ED	*8260B*

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2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Volatile Organic Compounds - Quality Control Report

Analyte	Result	MDL	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BA00024 - 5030B - 8260B											
Blank (BA00024-BLK1)					Prepared & Analyzed: 12/23/201						
Acetone	ND	2.52	5.00	ug/L							
Benzene	ND	0.097	1.00	"							
Bromobenzene	ND	0.291	1.00	"							
Bromochloromethane	ND	0.169	1.00	"							
Bromodichloromethane	ND	0.169	1.00	"							
Bromoform	ND	0.284	5.00	"							
Bromomethane	ND	0.174	3.00	"							
2-Butanone (MEK)	ND	5.00	5.00	"							
n-Butylbenzene	ND	0.363	1.00	"							
sec-Butylbenzene	ND	0.338	1.00	"							
tert-Butylbenzene	ND	0.235	1.00	"							
Carbon disulfide	ND	0.463	1.00	"							
Carbon tetrachloride	ND	0.144	1.00	"							
Chlorobenzene	ND	0.176	1.00	"							
Chloroethane	ND	0.328	3.00	"							
2-Chloroethyl vinyl ether	ND	0.665	5.00	"							
Chloroform	ND	0.247	1.00	"							
Chloromethane	ND	0.174	3.00	"							
4-Chlorotoluene	ND	0.147	1.00	"							
2-Chlorotoluene	ND	0.311	1.00	"							
1,2-Dibromo-3-chloropropane	ND	0.333	5.00	"							
Dibromochloromethane	ND	0.300	1.00	"							
1,2-Dibromoethane	ND	0.226	1.00	"							
Dibromomethane	ND	0.316	1.00	"							
1,2-Dichlorobenzene	ND	0.358	1.00	"							
1,3-Dichlorobenzene	ND	0.333	1.00	"							
1,4-Dichlorobenzene	ND	0.384	1.00	"							
Dichlorodifluoromethane	ND	0.244	3.00	"							
1,1-Dichloroethane	ND	0.372	1.00	"							
1,2-Dichloroethane	ND	0.182	1.00	"							
1,1-Dichloroethene	ND	0.355	1.00	"							
cis-1,2-Dichloroethene	ND	0.279	1.00	"							
trans-1,2-Dichloroethene	ND	0.176	1.00	"							
1,2-Dichloropropane	ND	0.359	1.00	"							
1,3-Dichloropropane	ND	0.205	1.00	"							
2,2-Dichloropropane	ND	0.341	1.00	"							
1,1-Dichloropropene	ND	0.210	1.00	"							
cis-1,3-Dichloropropene	ND	0.122	1.00	"							
trans-1,3-Dichloropropene	ND	0.100	1.00	"							
Ethylbenzene	ND	0.209	1.00	"							

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Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Volatile Organic Compounds - Quality Control Report

Analyte	Result	MDL	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BA00024 - 5030B - 8260B											
Blank (BA00024-BLK1)					Prepared & Analyzed: 12/23/201						
Hexachlorobutadiene	ND	0.413	3.00	ug/L							
2-Hexanone	ND	0.944	5.00	"							
Isopropylbenzene	ND	0.291	1.00	"							
p-Isopropyltoluene	ND	0.468	1.00	"							
Methyl tert-Butyl Ether (MTBE)	ND	0.240	2.00	"							
4-Methyl-2-pentanone (MIBK)	ND	1.71	5.00	"							
Methylene chloride	ND	4.69	5.00	"							
Naphthalene	ND	0.375	1.00	"							
n-Propylbenzene	ND	0.254	1.00	"							
Styrene	ND	0.122	2.00	"							
1,1,1,2-Tetrachloroethane	ND	0.141	1.00	"							
1,1,2,2-Tetrachloroethane	ND	0.579	1.00	"							
Tetrachloroethene	ND	0.421	1.00	"							
Toluene	ND	0.282	1.00	"							
1,2,3-Trichlorobenzene	ND	0.219	1.00	"							
1,2,4-Trichlorobenzene	ND	0.451	1.00	"							
1,1,1-Trichloroethane	ND	0.150	1.00	"							
1,1,2-Trichloroethane	ND	0.233	1.00	"							
Trichloroethene	ND	0.117	1.00	"							
Trichlorofluoromethane	ND	0.294	1.00	"							
1,2,3-Trichloropropane	ND	0.303	1.00	"							
1,2,4- Trimethylbenzene	ND	0.451	1.00	"							
1,3,5- Trimethylbenzene	ND	0.219	1.00	"							
Vinyl acetate	ND	1.62	5.00	"							
Vinyl chloride	ND	0.331	3.00	"							
o-Xylene	ND	0.262	1.00	"							
m,p-Xylenes	ND	0.476	2.00	"							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rojert G. Araghi

Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Volatile Organic Compounds - Quality Control Report

Analyte	Result	MDL	PQL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch BA00024 - 5030B - 8260B											
Matrix Spike (BA00024-MS1)		**Source: 1912220-01**			Prepared & Analyzed: 12/23/201						
Benzene	55.5			ug/L	50.0	0.00	111	75-120			
Chlorobenzene	48.8			"	50.0	0.900	95.7	75-120			
1,1-Dichloroethene	47.3			"	50.0	0.00	94.6	75-120			
Methyl tert-Butyl Ether (MTBE)	40.0			"	50.0	0.00	80.0	75-120			
Toluene	56.9			"	50.0	0.450	113	75-120			
Trichloroethene	52.3			"	50.0	3.38	97.8	75-120			
Matrix Spike Dup (BA00024-MSD1)		**Source: 1912220-01**			Prepared & Analyzed: 12/23/201						
Benzene	51.6			ug/L	50.0	0.00	103	75-120	7.32	15	
Chlorobenzene	46.4			"	50.0	0.900	91.0	75-120	4.96	15	
1,1-Dichloroethene	41.2			"	50.0	0.00	82.3	75-120	13.9	15	
Methyl tert-Butyl Ether (MTBE)	40.4			"	50.0	0.00	80.7	75-120	0.946	15	
Toluene	54.3			"	50.0	0.450	108	75-120	4.77	15	
Trichloroethene	50.4			"	50.0	3.38	94.0	75-120	3.62	15	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rojert G. Araghi

Rojert G. Araghi, President/Lab Director

American Scientific Laboratories, LLC
Environmental Testing Services
2520 N. San Fernando Road, LA CA 90065 Tel: (323) 223-9700 • Fax: (323) 223-9500

Lindmark Engineering	Project: Los Coyotes GWM	Work Order No: 1912220
2625 Townsgate Road Suite # 330	Project Number: 2019-257	**Reported:**
Westlake Village CA, 91361	Project Manager: Ulf Lindmark	01/06/2020 15:23

Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the practical quantitation limit (PQL)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

APPENDIX E

Non-Hazardous Waste Manifest

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: Not Required
2. Page 1 of 1
3. Emergency Response Phone: 888-423-6060
4. Waste Tracking Number: 122019050

GENERATOR

5. Generator's Name and Mailing Address
Royalty Cleaners
3378 Los Coyotes Diagonal
Long Beach CA 90808
Generator's Phone: 818 707-6100

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: American Integrated Services, Inc.
U.S. EPA ID Number: CAR000148338

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Crosby & Overton, Inc.
1630 W. 17th Street
Long Beach CA 90813
Facility's Phone: 562 432-5445
U.S. EPA ID Number: CAD028409019

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1	Non-Hazardous Waste Liquid (Groundwater)	12	DM	94	G	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
Wear proper PPE while handling. Weights or volumes are approximate.
Job# 39009-8-5 Profile# 27579
L55121
D181251
2 drums

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: AIS on behalf of Generator - J Sherman
Signature: AIS
Month 12 Day 18 Year 19

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Alonzo Delgado
Signature:
Month 12 Day 18 Year 19

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

H135

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name
Signature
Month 12 Day 30 Year 19

169-BLC-O 5 11977 (Rev. 9/09)

TRANSPORTER #1

PARTNER

GROUNDWATER SAMPLING INVESTIGATION REPORT

Sunrise of Lakewood CA
3320 Los Coyotes Diagonal
Long Beach, California 90808

November 11, 2020
Partner Project Number: 20-289715.3

Prepared for:

Sunrise Senior Living, LLC
7902 Westpark Drive
Mclean, Virginia 22102

Engineers who understand your business

PARTNER

November 11, 2020

Jackie Dominguez
Sunrise Senior Living, LLC
7902 Westpark Drive
Mclean, Virginia 22102

Subject: Groundwater Sampling Investigation Report
Sunrise of Lakewood CA
3320 Los Coyotes Diagonal
Long Beach, California 90808
Partner Project Number: 20-289715.3

Dear Ms. Dominguez:

Partner Engineering and Science, Inc (Partner) is pleased to provide the results of the assessment performed at the above-referenced property. The following report describes the field activities, methods, and findings of the Groundwater Sampling Investigation conducted at the above-referenced property.

This assessment was performed consistent with acceptable industry standards. The independent conclusions represent Partner's best professional judgment based upon existing conditions and the information and data available to us during the course of this assignment.

We appreciate the opportunity to provide these services. If you have any questions concerning this report, or if we can assist you in any other matter, please contact Debbie Stott at (310) 622-8855.

Sincerely,

Partner Engineering and Science, Inc.

Joshua S. Cain
Project Scientist

Samantha J. Fujita, PG
Regional Manager – Subsurface Investigation

Debbie Stott
Principal

PROFESSIONAL GEOLOGIST
SAMANTHA J. FUJITA
No. 9042
STATE OF CALIFORNIA

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1.1 Purpose 1
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1.3 User Reliance 1
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4.3 Groundwater Sample Data Analysis 5
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2. Groundwater Sample VOCs Laboratory Results

Figures
1. Site Vicinity Map
2. Topographic Map
3. Sample Location Map
4. Detected Concentrations

Appendix
A. Laboratory Analytical Report

1.0 INTRODUCTION

1.1 Purpose

The purpose of the investigation was to evaluate presence of volatile organic compounds in groundwater conditions in four existing monitoring wells. Groundwater sampling was conducted at the client's request. Sunrise Senior Living, LLC provided project authorization of Partner Proposal Number P20-289715.4.

1.2 Limitations

This report presents a summary of work conducted by Partner. The work includes observations of site conditions encountered and the analytical results provided by an independent third-party laboratory of samples collected during the course of the project. The number and location of samples were selected to provide the required information. It cannot be assumed that the limited available data are representative of subsurface conditions in areas not sampled.

Conclusions and/or recommendations are based on the observations, laboratory analyses, and the governing regulations. Conclusions and/or recommendations beyond those stated and reported herein should not be inferred from this document.

Partner warrants that the environmental consulting services contained herein were accomplished in accordance with generally-accepted practices in the environmental engineering, geology, and hydrogeology fields that existed at the time and location of work. No other warranties are implied or expressed.

1.3 User Reliance

Partner was engaged by Sunrise Senior Living, LLC (the Addressee), or their authorized representative, to perform this investigation. The engagement agreement specifically states the scope and purpose of the investigation, as well as the contractual obligations and limitations of both parties. This report and the information therein, are for the exclusive use of the Addressee. This report has no other purpose and may not be relied upon, or used, by any other person or entity without the written consent of Partner. Third parties that obtain this report, or the information therein, shall have no rights of recourse or recovery against Partner, its officers, employees, vendors, successors or assigns. Any such unauthorized user shall be responsible to protect, indemnify and hold Partner, the Addressee and their respective officers, employees, vendors, successors and assigns harmless from any and all claims, damages, losses, liabilities, expenses (including reasonable attorneys' fees) and costs attributable to such use. Unauthorized use of this report shall constitute acceptance of, and commitment to, these responsibilities, which shall be irrevocable and shall apply regardless of the cause of action or legal theory pled or asserted.

This report has been completed under specific Terms and Conditions relating to scope, relying parties, limitations of liability, indemnification, dispute resolution, and other factors relevant to any reliance on this report. Any parties relying on this report do so having accepted Partner's standard Terms and Conditions, a copy of which can be found at http://www.partneresi.com/terms-and-conditions.php.

2.0 SITE BACKGROUND

2.1 Site Description

The subject property consists of one parcel of land comprising 2.2 acres located on the east side of Los Coyotes Diagonal within a mixed residential and commercial area of Long Beach, Los Angeles County, California. The subject property is currently developed with a parking lot.

The subject property is bound by commercial properties across the alley to the north, to the east, and to the south, and residential properties across Los Coyotes Diagonal and the Peñasquitos River to the west. Refer to Figure 1 for a site vicinity map showing site features and surrounding properties.

2.2 Site History

Partner completed a draft *Phase I Environmental Site Assessment Report* (Phase I) for the subject property, dated September 14, 2020, on behalf of Sunrise Senior Living, LLC. According to the reviewed historical sources, the subject property was previously developed as agricultural land or vacant land prior to 1963. Aerial photographs indicate that the land was vacant until developed with the Los Altos Hospital also known as Charter Hospital in 1964. The hospital was demolished sometime between 2006 and 2007 leaving a fenced, unpaved dirt lot. This subject property remained a fenced dirt lot until approximately 2011 when it was paved, and the eastern portion of the subject property was lined as a parking lot. The subject property has remained a paved parking lot since.

The following recognized environmental condition (REC) was identified in the Phase I:

- McAlister GeoScience (MG) performed a Phase I Environmental Site Assessment (ESA) dated December 21, 2017 and Phase II Site Assessment Report dated February 20, 2018 for the subject property that identified a former dry cleaning facility (Royalty Cleaners) that was present on the adjoining property to the north from the late 1960s to the 1990s. This property is now part of the adjacent Ralph's grocery store. A release from the dry cleaning facility occurred and is an open case overseen by the Los Angeles Regional Water Quality Control Board (RWQCB) since 1996. Soil in the vicinity of the former dry cleaning facility was remediated using excavation in October 2001. Additional remedial actions that combined vapor extraction with air sparging to reduce VOC levels in soil and groundwater took place between January and December 2001. The RWQCB offered soil only closure via a letter dated May 18, 2005. Continued groundwater monitoring was required and is ongoing.

  Investigations of soil, vapor, and groundwater indicate that vapor and groundwater beneath the subject property is impacted by VOCs as a result of the release from the former Royalty Cleaners case at 3378 Los Coyotes Diagonal.

  Groundwater moves to the south-southeast and the impacted groundwater is located beneath the eastern portion of the subject property. MG collected soil from depths of 5, 10, and 15 feet below ground surface (bgs) from seven borings on site and on adjacent parcels. Soil vapor was also sampled at each borehole at 5 and 15 feet bgs. The soil and soil vapor samples were analyzed by the laboratory for VOCs. VOCs were not detected in the soil samples. VOCs were detected in soil vapor and were compared to the 2016 San Francisco Bay RWQCB (SFBRWQCB) Environmental Screening Levels (ESLs) for residential properties, as well as for commercial/industrial properties. Tetrachloroethene (PCE),

trichloroethene (TCE), and benzene were measured above the SFBRWQCB ESLs in vapor samples collected on site. PCE concentrations at 5 feet bgs ranged from 3 parts per billion by volume (ppbv) to 94 ppbv. At that time MG stated that the ESL was 35 ppbv. When converted to units used currently, those concentrations range from 20 to 638 micrograms per cubic meter (µg/m^3). Current guidance for residential setting is 15 µg/m^3.

Benzene was considered likely to be due to the sample locations within parking lots and gasoline leaks from vehicles. MG stated the concentrations of PCE, TCE, and benzene in several soil vapor samples collected exceed the ESLs for residential properties established by the SFBRWQCB. A threat to human health would exist in a facility that was to be built upon it, without proper engineering controls. MG recommended the use of engineering controls for new construction to prevent vapor intrusion.

Lindmark Engineering (LE) issued a groundwater monitoring report dated January 15, 2019. Groundwater is sampled annually and was sampled from eight monitoring wells. Well MW5 appears to be within the footprint of the proposed building. The remaining monitoring wells appear to be offsite. Wells MW3, MW4, and MW10 are located in the alley to the north. Wells MW6 and MW11 are in the driveway south of the adjacent church, Well MW8 is southeast of the medical office building at 3325 Palo Verde Drive, Well MW is southeast of the medical office building at 3320 North Los Coyotes, and well MW9 is further south within Palo Verde Avenue. The groundwater data indicate decreasing concentrations of PCE. PCE concentrations range from 1.94 micrograms per liter (µg/L) in well MW3 near the former source area (the former dry cleaning facility) to 9.30 µg/L in the farthest well (MW9).

The impacted groundwater and soil vapor caused by the former dry cleaning facility represent a REC to the subject property. Partner opined that further investigation is not warranted to proceed with the proposed project. The well within the footprint of the proposed project will require abandonment. The proposed building must be protected from vapor intrusion through the use of engineering controls such as a vapor barrier combined with a passive venting system.

2.3 Geology and Hydrogeology

Review of the United States Geological Survey (USGS) *Los Alamitos, California* Quadrangle topographic map, indicates the subject property is situated approximately 25 feet above mean sea level, and the local topography is sloping gently to the south-southeast. Refer to Figure 2 for a topographic map of the site vicinity.

According to the California Geological Survey, the subject property is situated in the Peninsular Ranges which are a series of ranges separated by northwest trending valleys, subparallel to faults branching from the San Andreas Fault. The trend of topography is similar to the Coast Ranges, but the geology is more like the Sierra Nevada, with granitic rock intruding the older metamorphic rocks. The Peninsular Ranges extend into lower California and are bound on the east by the Colorado Desert. The Los Angeles Basin and the island group (Santa Catalina, Santa Barbara, and the distinctly terraced San Clemente and San Nicolas islands), together with the surrounding continental shelf (cut by deep submarine fault troughs), are included in the province.

Based on monitoring wells sampled during this investigation, groundwater was encountered at approximately 24 feet bgs.

3.0 FIELD ACTIVITIES

The Groundwater Sampling Investigation scope included the collection and analysis of four groundwater samples from existing monitoring wells MW3, MW4, MW5, and MW6. Refer to Table 1 for a summary of the sampling locations, sampling schedule and laboratory analyses for this investigation.

3.1 Preparatory Activities

Prior to the initiation of fieldwork, Partner completed the following activities.

3.1.1 Health and Safety Plan

Partner prepared a site-specific Health and Safety Plan, which was reviewed with on-site personnel involved in the project prior to the commencement of drilling activities.

3.2 Monitoring Well Locations

Groundwater monitoring wells MW3 and MW4 are located north of the property within the adjacent alley, south of the former dry cleaning facility. Groundwater monitoring well MW5 is located to the southeast of the subject property and groundwater monitoring well MW6 is located to the east-southeast of the subject property boundary.

Refer to Figure 3 for a map indicating sample locations.

3.3 Groundwater Sampling

At each monitoring well, the well caps were removed, and a new disposable bailer was utilized to collect a groundwater sample. Samples were collected from the bailer and retained in three hydrochloric acid-preserved volatile organic analysis (VOA) vials. The VOA vials were labeled for identification and stored in an iced cooler.

Groundwater samples were collected from monitoring wells MW3 though MW6 at approximately 24 feet bgs. The well caps were re-secured after sampling.

4.0 DATA ANALYSIS

4.1 Laboratory Analysis

Partner collected four groundwater samples on October 21, 2020, which were transported in an iced cooler under chain-of-custody protocol to Jones Environmental, Inc. (Jones), a state-certified laboratory [California Department of Public Health (CDPH) Environmental Laboratory Accreditation Program (ELAP) certificate number 6C73103] in the City of Santa Fe Springs, California for analysis. Each groundwater sample (four groundwater samples total) was analyzed for VOCs via United States Environmental Protection Agency (EPA)Method 8260B.

Laboratory analytical results are included in Appendix A and discussed below.

4.2 Regulatory Agency Comparison Criteria

Environmental Screening Levels - 2019

The SFBRWQCB has established ESLs as an initial screening level evaluation. ESLs aid in assessing the potential threats to human health, terrestrial/aquatic habitats, and/or drinking water resources due to contaminants in soil, soil gas, and/or groundwater. Under most circumstances, the presence of contamination below applicable ESLs can be assumed to not pose a significant, chronic (i.e., long-term) adverse risk to the applicable receptor of concern. Conversely, sites that exceed ESLs generally require further evaluation and/or remediation. Please note that the ESLs were developed using default assumptions (e.g., standard exposure factors) and, consequently, are only meant for screening level assessments. The ESLs should not be considered enforceable regulatory standards. Cleanup levels ultimately dependent on site-specific factors and are established by the regulatory agencies on a case-by-case basis.

4.3 Groundwater Sample Data Analysis

cis-1,2-Dichloroethane (DCE); PCE; and TCE were detected in the analyzed groundwater samples at concentrations above the laboratory reporting limits (RLs). PCE and TCE were detected in each of the analyzed groundwater samples at concentrations exceeding the applicable groundwater to vapor intrusion ESLs. None of the remaining detections were in exceedance of the ESLs. No other VOCs were detected above the laboratory RLs and the RLS were below the ESLs.

Refer to Table 2 for a summary of the groundwater sample VOCs laboratory analysis results.

4.4 Discussion and Conclusion

PCE and TCE were detected in each of the analyzed groundwater samples at concentrations exceeding the applicable groundwater to vapor intrusion ESLs. None of the remaining detections were in exceedance of the vapor intrusion ESLs. No other VOCs were detected above the laboratory RLs and the RLs were below the ESLs.

During the previous groundwater sampling performed by Lindmark Engineering in 2019, PCE was detected in each of the analyzed groundwater samples, and TCE was detected in MW3-GW through MW5-GW, above the ESLs. The detected concentrations appear to be relatively stable since 2019.

Based on the data, vapor intrusion into new construction is a possibility and can be mitigated through the use of engineering controls such as a passive vapor barrier.

TABLES

PARTNER

Table 1: Summary of Investigation Scope
3320 Los Coyotes Diagonal
Long Beach, California 90808
Partner Project Number 20-289715.3
October 21, 2020

Monitoring Well Identification	Location	Matrix Sampled	Sampling Depths* (feet bgs)	Target Analytes
MW3	Northeast property line, to the southwest of the former dry cleaning facility	Groundwater	24	VOCs
MW4	Northeast property line, to the southeast of the former dry cleaning facility	Groundwater	24	VOCs
MW5	Southeast of property	Groundwater	24	VOCs
MW6	East-southeast of property	Groundwater	24	VOCs

Notes:

*Depths in bold analyzed for volatile organic compounds (VOCs) via United States Environmental Protection Agency (EPA) Method 8260B.

bgs = below ground surface

PARTNER

Table 2: Groundwater Sample VOCs Laboratory Results
3320 Los Coyotes Diagonal
Long Beach, California 90808
Partner Project Number 20-289715.3
October 21, 2020

EPA Method			VOCs via 8260B							
Units			(µg/L)							
Sampling Round			Lindmark Engineering 2019 Sampling				Partner ESI 2020 Sampling			
Analyte	Residential ESLs	Commercial /Industrial ESLs	MW3-GW	MW4-GW	MW5-GW	MW6-GW	MW3-GW	MW4-GW	MW5-GW	MW6-GW
cis-1,2-DCE	49	210	1.32	0.98	0.535[J]	0.515	<0.5	1.0	<0.5	<0.5
PCE	0.64	2.8	1.94	6.3	6.92	4.21	4.4	16.7	6.8	5.8
TCE	1.2	7.5	3.38	7.76	4.17	1.12	3.0	7.8	2.3	1.9
Other VOCs	Varies	Varies	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

VOCs = volatile organic compounds

EPA = United States Environmental Protection Agency

µg/L = micrograms per liter

ESLs = Environmental Screening Levels for Groundwater Vapor Intrusion Risk to Human Health (San Francisco Bay Regional Water Quality Control Board - January, 2019)

DCE = dichloroethene

PCE = tetrachloroethene

TCE = trichloroethene

< = not detected above indicated laboratory Practical Quantitation Limit (PQL)/ Reporting Limit (RL)

ND = not detected above laboratory PQLs/RLs

[J] = detected below laboratory PQLs

Values in bold exceed laboratory PQLs/RLs

Yellow highlighted values exceed the residential regulatory guideline

Orange highlighted values exceed the residential and commercial/industrial regulatory guidelines

PARTNER

FIGURES

PARTNER

PARTNER

2154 Torrance Boulevard, Suite 200
Torrance, California 90501

Project Number: 20-289715.3

N

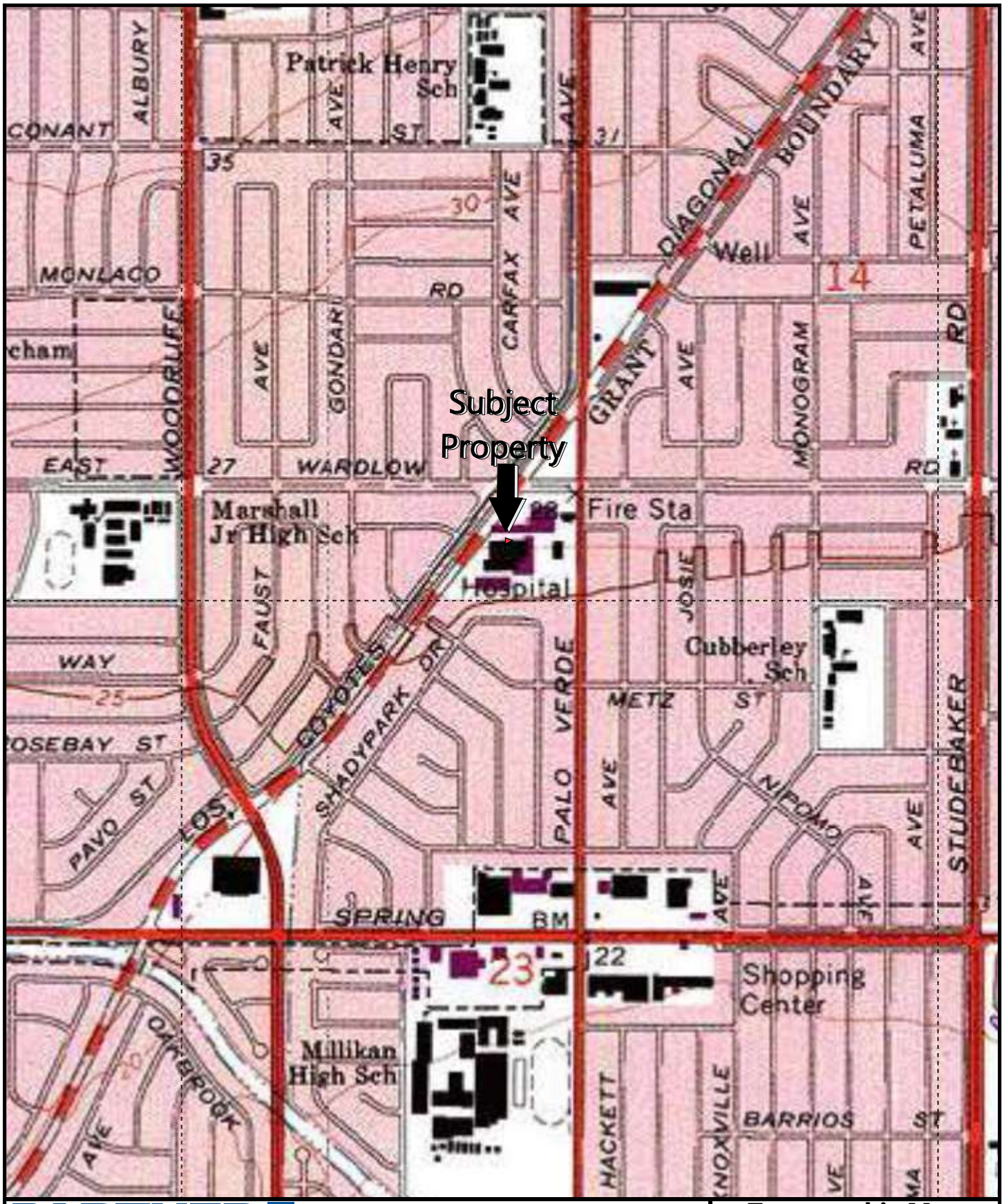
Legend

Subject Property

Site Vicinity Map

Figure	Prepared By	Date
1	J. Cain	November 2020

3320 Los Coyotes Diagonal
Long Beach, California 90808



PARTNER

2154 Torrance Boulevard, Suite 200
Torrance, California 90501

Project Number: 20-289715.3

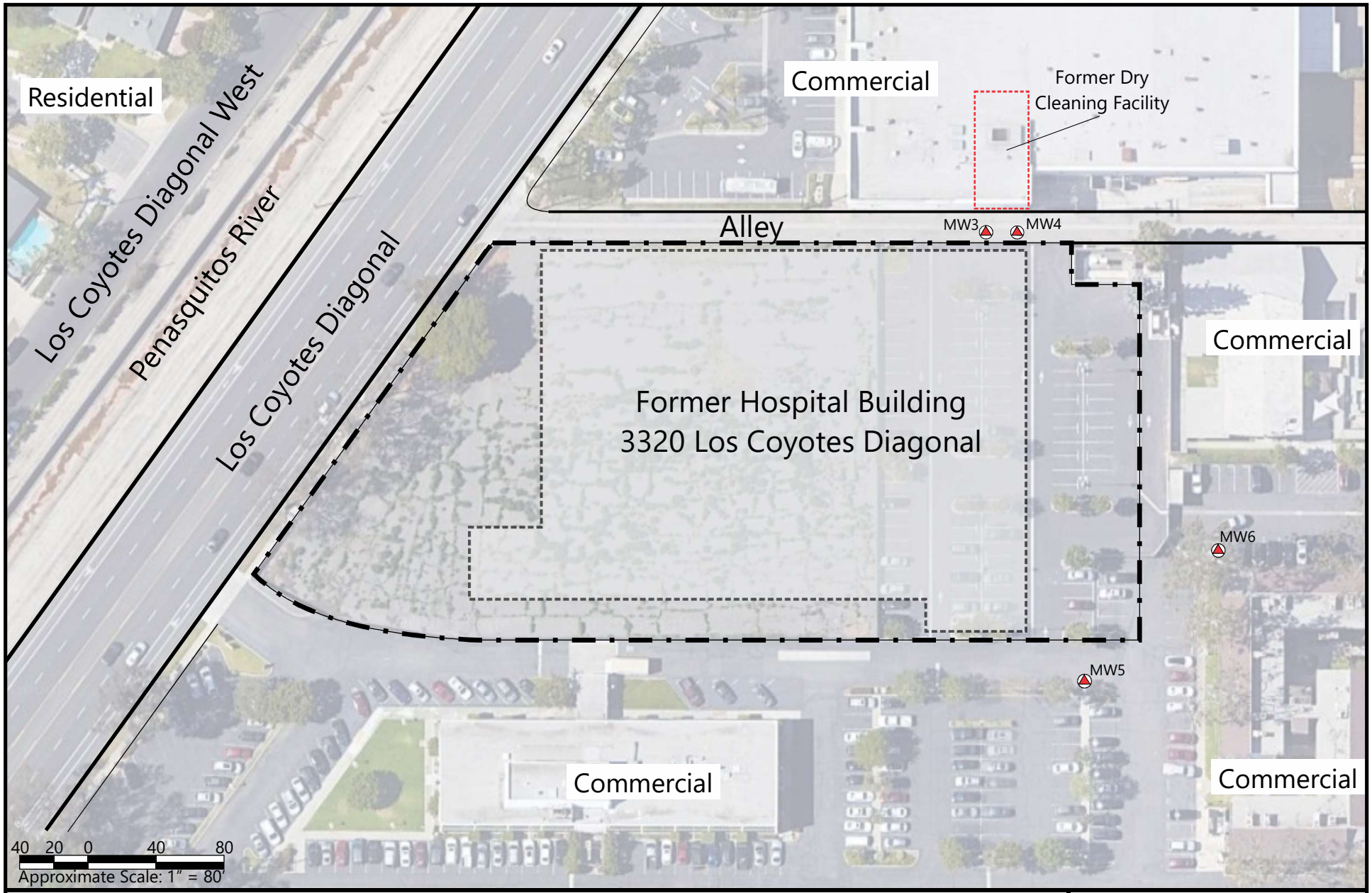
N

USGS Los Alamitos, California Quadrangle
Version: 1978 Current as of: 1981

Topographic Map

Figure	Prepared By	Date
2	J. Cain	November 2020

3320 Los Coyotes Diagonal
Long Beach, California 90808



PARTNER

2154 Torrance Boulevard, Suite 200
Torrance, California 90501

Project Number: 20-289715.3

N

Legend

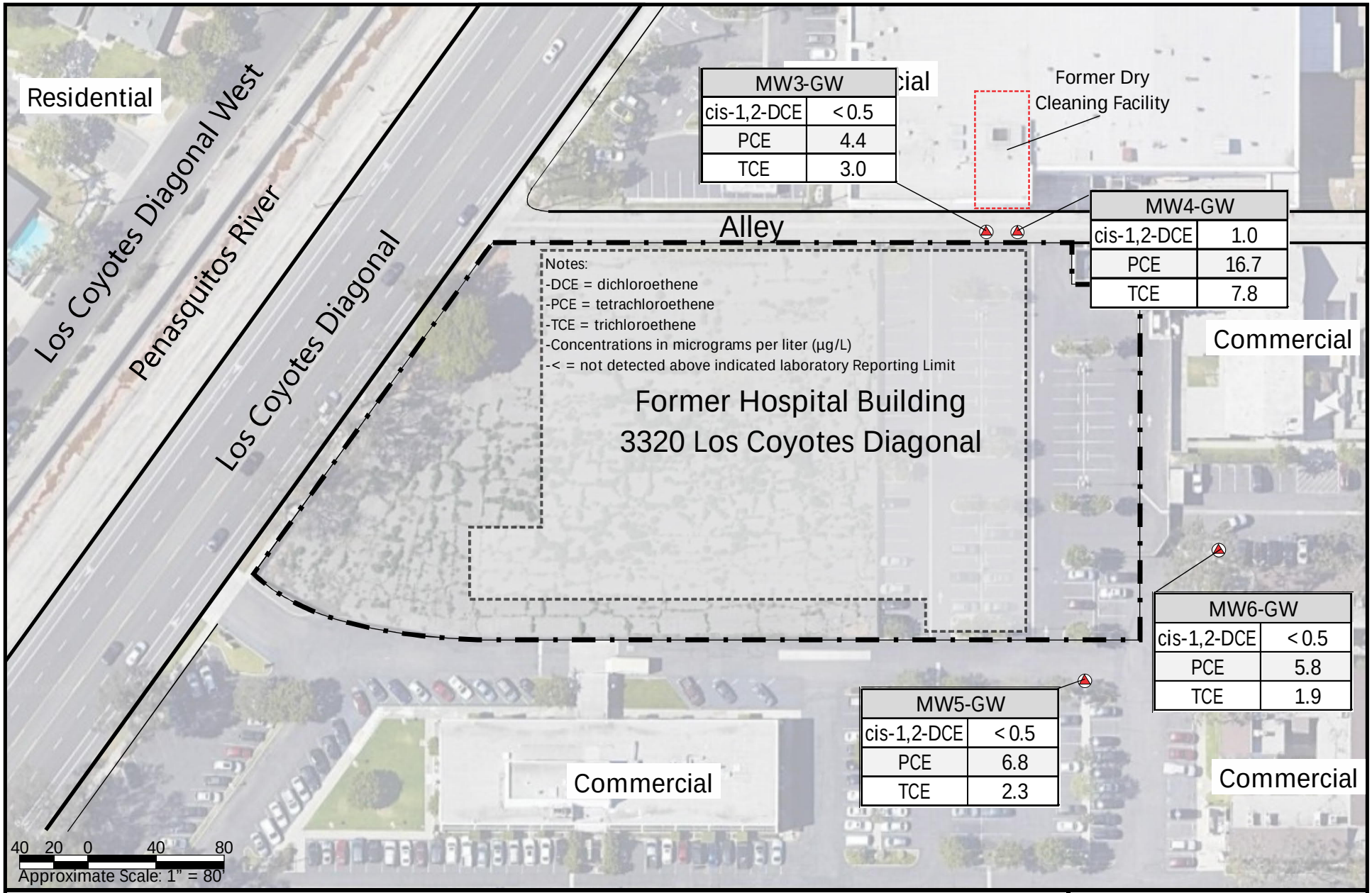
Subject Property

Monitoring Well

Sample Location Map

Figure	Prepared By	Date
3	J. Cain	November 2020

3320 Los Coyotes Diagonal
Long Beach, California 90808



MW3-GW	
cis-1,2-DCE	< 0.5
PCE	4.4
TCE	3.0

MW4-GW	
cis-1,2-DCE	1.0
PCE	16.7
TCE	7.8

MW5-GW	
cis-1,2-DCE	< 0.5
PCE	6.8
TCE	2.3

MW6-GW	
cis-1,2-DCE	< 0.5
PCE	5.8
TCE	1.9

PARTNER
2154 Torrance Boulevard, Suite 200
Torrance, California 90501
Project Number: 20-289715.3

N

Legend

Subject Property

Monitoring Well

Detected Concentrations

Figure	Prepared By	Date
4	J. Cain	November 2020

3320 Los Coyotes Diagonal
Long Beach, California 90808

APPENDIX A: LABORATORY ANALYTICAL REPORT

PARTNER

714-449-9937
562-646-1611

11007 FOREST PLACE
SANTA FE SPRINGS, CA 90670
WWW.JONESENV.COM

JONES ENVIRONMENTAL
LABORATORY RESULTS

Client:	Partner Engineering + Science	**Report date:**	10/29/2020
Client Address:	2154 Torrance Blvd, Suite 200 Torrance, CA 90501	**Jones Ref. No.:** **Client Ref. No.:**	ST-16302 20-289715.4
Attn:	Sam Fujita	**Date Sampled:** **Date Received:**	10/21/2020 10/21/2020
Project: **Project Address:**	Sunrise of Lakewood CA 3320 Los Coyotes Diagonal Long Beach, CA 90808	**Date Analyzed:** **Physical State:**	10/25/2020 Water

ANALYSES REQUESTED

1. EPA 8260B by 5030B – Volatile Organics by GC/MS + Oxygenates

Approval:

Colby Wakeman
QA/QC Manager

JONES ENVIRONMENTAL, INC.
714-449-9937
562-646-1611
11007 FOREST PLACE
SANTA FE SPRINGS, CA 90670
WWW.JONESENV.COM

JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering + Science	**Report date:**	10/29/2020
Client Address:	2154 Torrance Blvd, Suite 200 Torrance, CA 90501	**Jones Ref. No.:** **Client Ref. No.:**	ST-16302 20-289715.4
Attn:	Sam Fujita	**Date Sampled:**	10/21/2020
		Date Received:	10/21/2020
Project:	Sunrise of Lakewood CA	**Date Analyzed:**	10/25/2020
Project Address:	3320 Los Coyotes Diagonal Long Beach, CA 90808	**Physical State:**	Water

EPA 8260B by 5035 – Volatile Organics by GC/MS + Oxygenates

Sample ID:	**MW3-GW**	**MW4-GW**	**MW5-GW**	**MW6-GW**		
Jones ID:	**ST-16302-01**	**ST-16302-02**	**ST-16302-03**	**ST-16302-04**	**Reporting Limit**	**Units**
Analytes:						
Benzene	ND	ND	ND	ND	0.5	µg/L
Bromobenzene	ND	ND	ND	ND	0.5	µg/L
Bromodichloromethane	ND	ND	ND	ND	0.5	µg/L
Bromoform	ND	ND	ND	ND	0.5	µg/L
n-Butylbenzene	ND	ND	ND	ND	0.5	µg/L
sec-Butylbenzene	ND	ND	ND	ND	0.5	µg/L
tert-Butylbenzene	ND	ND	ND	ND	0.5	µg/L
Carbon tetrachloride	ND	ND	ND	ND	0.5	µg/L
Chlorobenzene	ND	ND	ND	ND	0.5	µg/L
Chloroform	ND	ND	ND	ND	0.5	µg/L
2-Chlorotoluene	ND	ND	ND	ND	0.5	µg/L
4-Chlorotoluene	ND	ND	ND	ND	0.5	µg/L
Dibromochloromethane	ND	ND	ND	ND	0.5	µg/L
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	0.5	µg/L
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	0.5	µg/L
Dibromomethane	ND	ND	ND	ND	0.5	µg/L
1,2- Dichlorobenzene	ND	ND	ND	ND	0.5	µg/L
1,3-Dichlorobenzene	ND	ND	ND	ND	0.5	µg/L
1,4-Dichlorobenzene	ND	ND	ND	ND	0.5	µg/L
1,1-Dichloroethane	ND	ND	ND	ND	0.5	µg/L
1,2-Dichloroethane	ND	ND	ND	ND	0.5	µg/L
1,1-Dichloroethene	ND	ND	ND	ND	0.5	µg/L
cis-1,2-Dichloroethene	ND	**1.0**	ND	ND	0.5	µg/L
trans-1,2-Dichloroethene	ND	ND	ND	ND	0.5	µg/L
1,2-Dichloropropane	ND	ND	ND	ND	0.5	µg/L
1,3-Dichloropropane	ND	ND	ND	ND	0.5	µg/L
2,2-Dichloropropane	ND	ND	ND	ND	0.5	µg/L
1,1-Dichloropropene	ND	ND	ND	ND	0.5	µg/L
cis-1,3-Dichloropropene	ND	ND	ND	ND	0.5	µg/L

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B by 5035 – Volatile Organics by GC/MS + Oxygenates

Sample ID:	**MW3-GW**	**MW4-GW**	**MW5-GW**	**MW6-GW**		
Jones ID:	**ST-16302-01**	**ST-16302-02**	**ST-16302-03**	**ST-16302-04**	**Reporting Limit**	**Units**
Analytes:						
trans-1,3-Dichloropropene	ND	ND	ND	ND	0.5	µg/L
Ethylbenzene	ND	ND	ND	ND	0.5	µg/L
Freon 11	ND	ND	ND	ND	2.5	µg/L
Freon 12	ND	ND	ND	ND	2.5	µg/L
Freon 113	ND	ND	ND	ND	2.5	µg/L
Hexachlorobutadiene	ND	ND	ND	ND	0.5	µg/L
Isopropylbenzene	ND	ND	ND	ND	0.5	µg/L
4-Isopropyltoluene	ND	ND	ND	ND	0.5	µg/L
Methylene chloride	ND	ND	ND	ND	0.5	µg/L
Naphthalene	ND	ND	ND	ND	0.5	µg/L
n-Propylbenzene	ND	ND	ND	ND	0.5	µg/L
Styrene	ND	ND	ND	ND	0.5	µg/L
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	0.5	µg/L
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	0.5	µg/L
Tetrachloroethene	**4.4**	**16.7**	**6.8**	**5.8**	0.5	µg/L
Toluene	ND	ND	ND	ND	0.5	µg/L
1,2,3-Trichlorobenzene	ND	ND	ND	ND	0.5	µg/L
1,2,4-Trichlorobenzene	ND	ND	ND	ND	0.5	µg/L
1,1,1-Trichloroethane	ND	ND	ND	ND	0.5	µg/L
1,1,2-Trichloroethane	ND	ND	ND	ND	0.5	µg/L
Trichloroethene	**3.0**	**7.8**	**2.3**	**1.9**	0.5	µg/L
1,2,3-Trichloropropane	ND	ND	ND	ND	0.5	µg/L
1,2,4-Trimethylbenzene	ND	ND	ND	ND	0.5	µg/L
1,3,5-Trimethylbenzene	ND	ND	ND	ND	0.5	µg/L
Vinyl chloride	ND	ND	ND	ND	0.5	µg/L
m,p-Xylene	ND	ND	ND	ND	1.0	µg/L
o-Xylene	ND	ND	ND	ND	0.5	µg/L
Methyl-tert-butylether	ND	ND	ND	ND	2.5	µg/L
Ethyl-tert-butylether	ND	ND	ND	ND	2.5	µg/L
Di-isopropylether	ND	ND	ND	ND	2.5	µg/L
tert-amylmethylether	ND	ND	ND	ND	2.5	µg/L
tert-Butylalcohol	ND	ND	ND	ND	25.0	µg/L
Dilution Factor	1	1	1	1		
Surrogate Recoveries:					**QC Limits**	
Dibromofluoromethane	106%	106%	106%	106%	60 - 140	
Toluene-d_8	104%	103%	103%	105%	60 - 140	
4-Bromofluorobenzene	93%	96%	96%	91%	60 - 140	
Batch:	VOC3_102520_01	VOC3_102520_01	VOC3_102520_01	VOC3_102520_01		

ND = Value less than reporting limit

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562-646-1611
11007 FOREST PLACE
SANTA FE SPRINGS, CA 90670
WWW.JONESENV.COM

JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Partner Engineering + Science	**Report date:**	10/29/2020
Client Address:	2154 Torrance Blvd, Suite 200 Torrance, CA 90501	**Jones Ref. No.:**	ST-16302
		Client Ref. No.:	20-289715.4
Attn:	Sam Fujita	**Date Sampled:**	10/21/2020
		Date Received:	10/21/2020
Project:	Sunrise of Lakewood CA	**Date Analyzed:**	10/25/2020
Project Address:	3320 Los Coyotes Diagonal Long Beach, CA 90808	**Physical State:**	Water

EPA 8260B by 5035 – Volatile Organics by GC/MS + Oxygenates

Sample ID:	**METHOD BLANK #1**		
Jones ID:	**102520-V3MB1**	**Reporting Limit**	**Units**
Analytes:			
Benzene	ND	0.5	µg/L
Bromobenzene	ND	0.5	µg/L
Bromodichloromethane	ND	0.5	µg/L
Bromoform	ND	0.5	µg/L
n-Butylbenzene	ND	0.5	µg/L
sec-Butylbenzene	ND	0.5	µg/L
tert-Butylbenzene	ND	0.5	µg/L
Carbon tetrachloride	ND	0.5	µg/L
Chlorobenzene	ND	0.5	µg/L
Chloroform	ND	0.5	µg/L
2-Chlorotoluene	ND	0.5	µg/L
4-Chlorotoluene	ND	0.5	µg/L
Dibromochloromethane	ND	0.5	µg/L
1,2-Dibromo-3-chloropropane	ND	0.5	µg/L
1,2-Dibromoethane (EDB)	ND	0.5	µg/L
Dibromomethane	ND	0.5	µg/L
1,2- Dichlorobenzene	ND	0.5	µg/L
1,3-Dichlorobenzene	ND	0.5	µg/L
1,4-Dichlorobenzene	ND	0.5	µg/L
1,1-Dichloroethane	ND	0.5	µg/L
1,2-Dichloroethane	ND	0.5	µg/L
1,1-Dichloroethene	ND	0.5	µg/L
cis-1,2-Dichloroethene	ND	0.5	µg/L
trans-1,2-Dichloroethene	ND	0.5	µg/L
1,2-Dichloropropane	ND	0.5	µg/L
1,3-Dichloropropane	ND	0.5	µg/L
2,2-Dichloropropane	ND	0.5	µg/L
1,1-Dichloropropene	ND	0.5	µg/L
cis-1,3-Dichloropropene	ND	0.5	µg/L

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B by 5035 – Volatile Organics by GC/MS + Oxygenates

Sample ID:	**METHOD BLANK #1**		
Jones ID:	**102520-V3MB1**	**Reporting Limit**	**Units**
Analytes:			
trans-1,3-Dichloropropene	ND	0.5	µg/L
Ethylbenzene	ND	0.5	µg/L
Freon 11	ND	2.5	µg/L
Freon 12	ND	2.5	µg/L
Freon 113	ND	2.5	µg/L
Hexachlorobutadiene	ND	0.5	µg/L
Isopropylbenzene	ND	0.5	µg/L
4-Isopropyltoluene	ND	0.5	µg/L
Methylene chloride	ND	3.0	µg/L
Naphthalene	ND	0.5	µg/L
n-Propylbenzene	ND	0.5	µg/L
Styrene	ND	0.5	µg/L
1,1,1,2-Tetrachloroethane	ND	0.5	µg/L
1,1,2,2-Tetrachloroethane	ND	0.5	µg/L
Tetrachloroethene	ND	0.5	µg/L
Toluene	ND	0.5	µg/L
1,2,3-Trichlorobenzene	ND	0.5	µg/L
1,2,4-Trichlorobenzene	ND	0.5	µg/L
1,1,1-Trichloroethane	ND	0.5	µg/L
1,1,2-Trichloroethane	ND	0.5	µg/L
Trichloroethene	ND	0.5	µg/L
1,2,3-Trichloropropane	ND	0.5	µg/L
1,2,4-Trimethylbenzene	ND	0.5	µg/L
1,3,5-Trimethylbenzene	ND	0.5	µg/L
Vinyl chloride	ND	0.5	µg/L
m,p-Xylene	ND	1.0	µg/L
o-Xylene	ND	0.5	µg/L
Methyl-tert-butylether	ND	2.5	µg/L
Ethyl-tert-butylether	ND	2.5	µg/L
Di-isopropylether	ND	2.5	µg/L
tert-amylmethylether	ND	2.5	µg/L
tert-Butylalcohol	ND	25.0	µg/L
Dilution Factor	1		

Surrogate Recoveries:		**QC Limits**
Dibromofluoromethane	106%	60 - 140
Toluene-d_8	101%	60 - 140
4-Bromofluorobenzene	98%	60 - 140

Batch:	VOC3_102520_01

ND = Value less than reporting limit

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JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

Client:	Partner Engineering + Science	**Report date:**	10/29/2020
Client Address:	2154 Torrance Blvd, Suite 200 Torrance, CA 90501	**Jones Ref. No.:** **Client Ref. No.:**	ST-16302 20-289715.4
Attn:	Sam Fujita	**Date Sampled:** **Date Received:**	10/21/2020 10/21/2020
Project:	Sunrise of Lakewood CA	**Date Analyzed:**	10/25/2020
Project Address:	3320 Los Coyotes Diagonal Long Beach, CA 90808	**Physical State:**	Water

EPA 8260B by 5035 – Volatile Organics by GC/MS + Oxygenates

Sample Spiked:	CLEAN SOIL		**GC#:**	**VOC3_102520 _01**		
Jones ID:	102520-V3LCS1	102520-V3LCSD1			102520-V3CCV1	
Parameter	MS Recovery (%)	MS Recovery (%)	RPD	Acceptability Range (%)	CCV	Acceptability Range (%)
Vinyl chloride	120%	114%	5.1%	60 - 140	96%	80 - 120
1,1-Dichloroethene	79%	74%	6.1%	60 - 140	83%	80 - 120
Cis-1,2-Dichloroethene	117%	118%	1.0%	70 - 130	118%	80 - 120
1,1,1-Trichloroethane	117%	109%	6.7%	70 - 130	113%	80 - 120
Benzene	117%	117%	0.7%	70 - 130	118%	80 - 120
Trichloroethene	115%	111%	3.5%	70 - 130	114%	80 - 120
Toluene	90%	86%	4.5%	70 - 130	82%	80 - 120
Tetrachloroethene	120%	110%	8.1%	70 - 130	117%	80 - 120
Chlorobenzene	117%	111%	5.2%	70 - 130	114%	80 - 120
Ethylbenzene	92%	84%	9.2%	70 - 130	99%	80 - 120
1,2,4 Trimethylbenzene	106%	100%	5.6%	70 - 130	111%	80 - 120
Surrogate Recovery:						
Dibromofluoromethane	96%	96%		60 - 140	100%	80 - 120
Toluene-d_8	102%	100%		60 - 140	109%	80 - 120
4-Bromofluorobenzene	98%	97%		60 - 140	118%	80 - 120

MS = Matrix Spike
MSD = Matrix Spike Duplicate
CCV = Continuing Calibration Verification
RPD = Relative Percent Difference; Acceptability range for RPD is ≤ 20%

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11007 Forest Pl.
Santa Fe Springs, CA 90670
(714) 449-9937
Fax(714)449-9685
www.jonesenv.com

Chain-of-Custody Record

LAB USE ONLY
Jones Project # ST16302
Page 1 of 1

Sample Condition as Received:
Chilled ☐ yes ☐ no
Sealed ☐ yes ☐ no

Client: Partner Engineering + Science
Project Name: Sunrise of Lakewood CA
Project Address: 3320 Los Coyotes Diagonal, Long Beach, California 90808
Email: sfujita + jcain@partneresi.com
Phone: 310 483 1367
Report To: Sam Fujita
Sampler: J. Cain

Date: 10/21/20
Client Project #: 20-289715.4

Turn Around Requested:
- ☐ Immediate Attention
- ☐ Rush 24 Hours
- ☐ Rush 48 Hours
- ☐ Rush 72 Hours
- ☑ Normal

Report Options
EDD ____
EDF* - 10% Surcharge ____
*Global ID ____

Sample Container I Preservative Abbreviations
V - VOAS
AS - Acetate Sleeve
SS - Stainless Steel Sleeve
BS - Brass Sleeve
G - Glass Jar
AB - Amber Bottle
P - Plastic
SOBI - Sodium Bisulfate
MeOH - Methanol
HCl - Hydrochloric Acid
HNO3 - Nitric Acid
O - Other (See Notes)

Analysis Requested

Sample ID	Date	Sample Collection Time	Jones ID Lab Use Only	Preservative	Sample Container	Sample Matrix: Soil (S), Sludge (SL), Aqueous (A), Free Product (FP)	VOCs, 8260										Hold	Number of Containers	Notes & Special Instructions
~~B3 GW~~ MW3-GW	10/21/20	9:50	ST16302-01		HCL VOAS	A	✓												
~~B4 GW~~ MW4-GW	↓	9:40	ST16302-02		↓	↓	✓												
MW5-GW	↓	9:20	ST16302-03		↓	↓	✓												
MW6-GW	↓	9:10	ST16302-04		↓	↓	✓												

Relinquished By (Signature)	Printed Name	Received By (Signature)	Printed Name
Joshua A. Cain	Joshua Cain	JWatkins	JWatkins
Company: Partner ESI	Date: 10/21/20 Time:	Company: JEL	Date: 10/21 Time: 1050
Relinquished By (Signature): JWatkins	Printed Name: JWatkins	Received By Laboratory (Signature): [illegible]	Printed Name: Tania Camacho
Company: JEL	Date: 10/21 Time: 1218	Company: Jones Env.	Date: 10.21.20 Time: 1220

Total Number of Containers

Client signature on this Chain of Custody form constitutes acknowledgment that the above analyses have been requested, and the information provided herein is correct and accurate

APPENDIX C: REGULATORY DATABASE REPORT

PARTNER

Sunrise of Lakewood CA
3320 Los Coyotes Diagonal
LONG BEACH, CA 90808

Inquiry Number: 6152113.2s
August 11, 2020

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
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Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

3320 LOS COYOTES DIAGONAL
LONG BEACH, CA 90808

COORDINATES

Latitude (North):	33.8169250 - 33˚ 49' 0.93''
Longitude (West):	118.1100500 - 118˚ 6' 36.18''
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	397265.1
UTM Y (Meters):	3742217.2
Elevation:	27 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5633745 LOS ALAMITOS, CA
Version Date:	2012
West Map:	5652670 LONG BEACH, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140513
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
3320 LOS COYOTES DIAGONAL
LONG BEACH, CA 90808

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	LEONARD RUSSO DDS	3320 LOS COYOTES DIA	HAZNET, HWTS		TP
A2	CHARTER BEHAVIORAL H	3320 LOS COYOTES DIA	HAZNET, HWTS		TP
A3	ANDREW JAMES MANOS D	3320 LOS COYOTES DIA	RCRA-SQG, FINDS, ECHO, HAZNET, HWTS		TP
A4	DR JOHN MCGUIRE	3320 LOS COYOTES DIA	HAZNET, HWTS		TP
A5	DENIS M MURPHY MD	3320 LOS COYOTES DIA	HWTS		TP
A6	LOS ALTOS HOSP	3340 LOS COYOTES DIA	LUST, Cortese, EMI, HIST CORTESE, CERS	Higher	70, 0.013, NW
B7	LONG BEACH COMMUNITY	3325 PALO VERDE AVE	RCRA NonGen / NLR	Higher	291, 0.055, East
B8	LOS ATOS FOOT HEALTH	3325 PALO VERDE AVE	RCRA-SQG, FINDS, ECHO	Higher	291, 0.055, East
C9	RALPHS GROCERY #058	3380 NORTH LOS COYOT	CERS HAZ WASTE, CERS	Higher	447, 0.085, NE
C10	LOS COYOTES CENTER	3378 LOS COYOTES DIA	RCRA-SQG, ENVIROSTOR, CPS-SLIC, FINDS, ECHO,...	Higher	484, 0.092, NNE
D11	AMY CASTRO	3192 CARFAX AVENUE	RCRA NonGen / NLR	Lower	492, 0.093, SSW
C12	RALPHS #0058-703	3380 LOS COYOTES DIA	RCRA-LQG	Higher	492, 0.093, NNE
C13	RALPHS NO 0058 703	3380 LOS COYOTES DIA	RCRA-LQG	Higher	492, 0.093, NNE
C14	CBHS @ LOS ALTOS - 1	3340 LOS COYOTES DIA	UST	Higher	512, 0.097, NE
15	GREEN VALLEY CLEANER	3221 PALO VERDE AVE	DRYCLEANERS, HWTS	Lower	525, 0.099, SE
16	FIRE STATION 18	3361 PALO VERDE AVE	UST	Higher	544, 0.103, ENE
D17	NEBULA INVESTSMENTS	3209 SHADYPARK DR	RCRA NonGen / NLR	Lower	627, 0.119, SW
18	ANGELA BROWN	3203 SHADYPARK DRIVE	RCRA NonGen / NLR	Lower	678, 0.128, SW
19	STAN FREEMAN	6229 EAST WARDLOW	RCRA NonGen / NLR	Higher	717, 0.136, North
20	CHRISTOPHER HAYNIE	3233 IROQUOIS AVE	RCRA NonGen / NLR	Lower	963, 0.182, ESE
21	CLIFFORD ROBINSON	3248 FAUST AVE	RCRA NonGen / NLR	Higher	1074, 0.203, West
22	THRIFTY SERVICE STAT	3100 LOS COYOTES DIA	LUST, Cortese, HIST CORTESE, CERS	Lower	1732, 0.328, SW
23	TEXACO SERVICE STATI	3565 LOS COYOTES DIA	LUST, Cortese, HIST CORTESE, CERS	Higher	1983, 0.376, NNE
24	LAKEWOOD PLAZA	6223-6351 EAST SPRIN	ENVIROSTOR, VCP	Lower	2182, 0.413, South
E25	SHELL SERVICE STATIO	6407 SPRING ST E	LUST, Cortese, CERS	Lower	2291, 0.434, SSE
E26	SHELL #204-4482-3205	6407 SPRING ST E	LUST, Cortese, HIST CORTESE	Lower	2291, 0.434, SSE
E27	CHEVRON #9-4055	6340 SPRING ST E	LUST, Cortese, HIST CORTESE, CERS	Lower	2418, 0.458, SSE
E28	CHEVRON STATION 9-40	6340 E. SPRING ST.	Notify 65	Lower	2418, 0.458, SSE
29	CREIGHTON'S CLEANERS	5951 SPRING STREET	ENVIROSTOR, VCP	Lower	2606, 0.494, SW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 9 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
LEONARD RUSSO DDS 3320 LOS COYOTES DIA LONG BEACH, CA 90808	HAZNET GEPAID: CAL000207215 HWTS	N/A
CHARTER BEHAVIORAL H 3320 LOS COYOTES DIA LONG BEACH, CA 90808	HAZNET GEPAID: CAC002273385 HWTS	N/A
ANDREW JAMES MANOS D 3320 LOS COYOTES DIA LONG BEACH, CA 90808	RCRA-SQG EPA ID:: CAD983625401 FINDS Registry ID:: 110002872295 ECHO Registry ID: 110002872295 HAZNET GEPAID: CAD983625401 HWTS	CAD983625401
DR JOHN MCGUIRE 3320 LOS COYOTES DIA LONG BEACH, CA 90808	HAZNET GEPAID: CAL000223539 HWTS	N/A
DENIS M MURPHY MD 3320 LOS COYOTES DIA LONG BEACH, CA 90808	HWTS	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List

EXECUTIVE SUMMARY

Proposed NPL ..... Proposed National Priority List Sites
NPL LIENS ..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ..... National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ..... Federal Facility Site Information listing
SEMS ..... Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ..... Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ..... RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-VSQG ..... RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ..... Land Use Control Information System
US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROLS ..... Institutional Controls Sites List

Federal ERNS list

ERNS ..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ..... State Response Sites

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ..... Solid Waste Information System

State and tribal leaking storage tank lists

INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ..... Underground Storage Tank Listing
AST ..... Aboveground Petroleum Storage Tank Facilities

INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS..... Considered Brownfieds Sites Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT..... Waste Management Unit Database
SWRCY..... Recycler Database
HAULERS..... Registered Waste Tire Haulers Listing
INDIAN ODI..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
ODI..... Open Dump Inventory
IHS OPEN DUMPS..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL..... Delisted National Clandestine Laboratory Register
AOCONCERN..... Key Areas of Concerns in Los Angeles County
HIST Cal-Sites..... Historical Calsites Database
SCH..... School Property Evaluation Program
CDL..... Clandestine Drug Labs
Toxic Pits..... Toxic Pits Cleanup Act Sites
US CDL..... National Clandestine Laboratory Register
PFAS..... PFAS Contamination Site Location Listing

Local Lists of Registered Storage Tanks

SWEEPS UST..... SWEEPS UST Listing
HIST UST..... Hazardous Substance Storage Container Database
CERS TANKS..... California Environmental Reporting System (CERS) Tanks
CA FID UST..... Facility Inventory Database

Local Land Records

LIENS..... Environmental Liens Listing
LIENS 2..... CERCLA Lien Information
DEED..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS..... Hazardous Materials Information Reporting System
CHMIRS..... California Hazardous Material Incident Report System

LDS	Land Disposal Sites Listing
MCS	Military Cleanup Sites Listing
SPILLS 90	SPILLS 90 data from FirstSearch

Other Ascertainable Records

FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
FUELS PROGRAM	EPA Fuels Program Registered Listing
CA BOND EXP. PLAN	Bond Expenditure Plan
CUPA Listings	CUPA Resources List
EMI	Emissions Inventory Data
ENF	Enforcement Action Listing
Financial Assurance	Financial Assurance Information Listing
ICE	ICE
LOS ANGELES CO. HMS	HMS: Street Number List
HWP	EnviroStor Permitted Facilities Listing
HWT	Registered Hazardous Waste Transporter Database
MINES	Mines Site Location Listing
MWMP	Medical Waste Management Program Listing
NPDES	NPDES Permits Listing
PEST LIC	Pesticide Regulation Licenses Listing
PROC	Certified Processors Database

EXECUTIVE SUMMARY

LA Co. Site Mitigation	Site Mitigation List
UIC	UIC Listing
UIC GEO	UIC GEO (GEOTRACKER)
WASTEWATER PITS	Oil Wastewater Pits Listing
WDS	Waste Discharge System
WIP	Well Investigation Program Case List
MILITARY PRIV SITES	MILITARY PRIV SITES (GEOTRACKER)
PROJECT	PROJECT (GEOTRACKER)
WDR	Waste Discharge Requirements Listing
CIWQS	California Integrated Water Quality System
CERS	CERS
NON-CASE INFO	NON-CASE INFO (GEOTRACKER)
OTHER OIL GAS	OTHER OIL & GAS (GEOTRACKER)
PROD WATER PONDS	PROD WATER PONDS (GEOTRACKER)
SAMPLING POINT	SAMPLING POINT (GEOTRACKER)
WELL STIM PROJ	Well Stimulation Project (GEOTRACKER)
MINES MRDS	Mineral Resources Data System
LOS ANGELES CO LF METHANE	Methane Producing Landfills

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP	EDR Proprietary Manufactured Gas Plants
EDR Hist Auto	EDR Exclusive Historical Auto Stations
EDR Hist Cleaner	EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF	Recovered Government Archive Solid Waste Facilities List
RGA LUST	Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal RCRA generators list

RCRA-LQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

A review of the RCRA-LQG list, as provided by EDR, and dated 03/23/2020 has revealed that there are 2 RCRA-LQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RALPHS #0058-703 EPA ID:: CAD981580665	3380 LOS COYOTES DIA	NNE 0 - 1/8 (0.093 mi.)	C12	34
RALPHS NO 0058 703 EPA ID:: CAR000244590	3380 LOS COYOTES DIA	NNE 0 - 1/8 (0.093 mi.)	C13	37

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 03/23/2020 has revealed that there are 2 RCRA-SQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOS ATOS FOOT HEALTH EPA ID:: CAD983665134	***3325 PALO VERDE AVE***	***E 0 - 1/8 (0.055 mi.)***	***B8***	***22***
LOS COYOTES CENTER EPA ID:: CAD981620461	***3378 LOS COYOTES DIA***	***NNE 0 - 1/8 (0.092 mi.)***	***C10***	***27***

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 04/27/2020 has revealed that there are 3 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOS COYOTES CENTER	***3378 LOS COYOTES DIA***	***NNE 0 - 1/8 (0.092 mi.)***	***C10***	***27***

Facility Id: 19720015
Status: Inactive - Needs Evaluation

Lower Elevation	Address	Direction / Distance	Map ID	Page
LAKEWOOD PLAZA	***6223-6351 EAST SPRIN***	***S 1/4 - 1/2 (0.413 mi.)***	***24***	***78***
Facility Id: 60002877 Status: Active				
CREIGHTON'S CLEANERS	***5951 SPRING STREET***	***SW 1/4 - 1/2 (0.494 mi.)***	***29***	***97***
Facility Id: 60001903 Status: Active				

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the LUST list, as provided by EDR, has revealed that there are 6 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOS ALTOS HOSP	***3340 LOS COYOTES DIA***	***NW 0 - 1/8 (0.013 mi.)***	***A6***	***17***
Database: LUST REG 4, Date of Government Version: 09/07/2004 Database: LUST, Date of Government Version: 05/13/2020 Status: Completed - Case Closed Facility Id: 908080043 Status: Case Closed Global Id: T0603701883 Global ID: T0603701883				
TEXACO SERVICE STATI	***3565 LOS COYOTES DIA***	***NNE 1/4 - 1/2 (0.376 mi.)***	***23***	***70***
Database: LUST REG 4, Date of Government Version: 09/07/2004 Database: LUST, Date of Government Version: 05/13/2020 Status: Completed - Case Closed Facility Id: 908080225 Status: Remediation Plan Global Id: T0603701902 Global ID: T0603701902				

Lower Elevation	Address	Direction / Distance	Map ID	Page
THRIFTY SERVICE STAT	***3100 LOS COYOTES DIA***	***SW 1/4 - 1/2 (0.328 mi.)***	***22***	***49***
Database: LUST REG 4, Date of Government Version: 09/07/2004 Database: LUST, Date of Government Version: 05/13/2020 Status: Completed - Case Closed Facility Id: 908080098 Status: Remedial action (cleanup) Underway Global Id: T0603701889 Global ID: T0603701889				
SHELL SERVICE STATIO	***6407 SPRING ST E***	***SSE 1/4 - 1/2 (0.434 mi.)***	***E25***	***81***
Database: LUST REG 4, Date of Government Version: 09/07/2004 Database: LUST, Date of Government Version: 05/13/2020				

Status: Completed - Case Closed
Facility Id: 908080061A
Status: Remedial action (cleanup) Underway
Global Id: T0603701886
Global Id: T0603701885
Global ID: T0603701886

SHELL #204-4482-3205 ***6407 SPRING ST E*** ***SSE 1/4 - 1/2 (0.434 mi.)*** ***E26*** ***89***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Facility Id: 908080061
Status: Case Closed
Global ID: T0603701885

CHEVRON #9-4055 ***6340 SPRING ST E*** ***SSE 1/4 - 1/2 (0.458 mi.)*** ***E27*** ***91***
Database: LUST REG 4, Date of Government Version: 09/07/2004
Database: LUST, Date of Government Version: 05/13/2020
Status: Completed - Case Closed
Facility Id: 908150216
Status: Case Closed
Global Id: T0603701997
Global ID: T0603701997

CPS-SLIC: Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

A review of the CPS-SLIC list, as provided by EDR, has revealed that there is 1 CPS-SLIC site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOS COYOTES CENTER	***3378 LOS COYOTES DIA***	***NNE 0 - 1/8 (0.092 mi.)***	***C10***	***27***

Database: SLIC REG 4, Date of Government Version: 11/17/2004
Database: CPS-SLIC, Date of Government Version: 05/13/2020
Facility Status: Open - Verification Monitoring
Global Id: SL184301413
Facility Status: Post Remediation Monitoring

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CBHS @ LOS ALTOS - 1	3340 LOS COYOTES DIA	NE 0 - 1/8 (0.097 mi.)	C14	41
Database: LONG BEACH UST, Date of Government Version: 04/22/2019				
FIRE STATION 18	3361 PALO VERDE AVE	ENE 0 - 1/8 (0.103 mi.)	16	43
Database: LONG BEACH UST, Date of Government Version: 04/22/2019				

EXECUTIVE SUMMARY

State and tribal voluntary cleanup sites

VCP: Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

A review of the VCP list, as provided by EDR, and dated 04/27/2020 has revealed that there are 2 VCP sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LAKEWOOD PLAZA Status: Active Facility Id: 60002877	***6223-6351 EAST SPRIN***	***S 1/4 - 1/2 (0.413 mi.)***	***24***	***78***
CREIGHTON'S CLEANERS Status: Active Facility Id: 60001903	***5951 SPRING STREET***	***SW 1/4 - 1/2 (0.494 mi.)***	***29***	***97***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Hazardous waste / Contaminated Sites

CERS HAZ WASTE: List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

A review of the CERS HAZ WASTE list, as provided by EDR, and dated 04/20/2020 has revealed that there is 1 CERS HAZ WASTE site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
RALPHS GROCERY #058	***3380 NORTH LOS COYOT***	***NE 0 - 1/8 (0.085 mi.)***	***C9***	***24***

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/23/2020 has revealed that there are 7 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LONG BEACH COMMUNITY EPA ID:: CAC003055100	3325 PALO VERDE AVE	E 0 - 1/8 (0.055 mi.)	B7	21
STAN FREEMAN EPA ID:: CAC003056716	6229 EAST WARDLOW	N 1/8 - 1/4 (0.136 mi.)	19	46
CLIFFORD ROBINSON	3248 FAUST AVE	W 1/8 - 1/4 (0.203 mi.)	21	48

EPA ID:: CAC003034855

Lower Elevation	Address	Direction / Distance	Map ID	Page
AMY CASTRO EPA ID:: CAC003021882	3192 CARFAX AVENUE	SSW 0 - 1/8 (0.093 mi.)	D11	33
NEBULA INVESTSMENTS EPA ID:: CAC003034525	3209 SHADYPARK DR	SW 0 - 1/8 (0.119 mi.)	D17	43
ANGELA BROWN EPA ID:: CAC003002238	3203 SHADYPARK DRIVE	SW 1/8 - 1/4 (0.128 mi.)	18	44
CHRISTOPHER HAYNIE EPA ID:: CAC002985515	3233 IROQUOIS AVE	ESE 1/8 - 1/4 (0.182 mi.)	20	47

Cortese: The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

A review of the Cortese list, as provided by EDR, and dated 03/23/2020 has revealed that there are 6 Cortese sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOS ALTOS HOSP Cleanup Status: COMPLETED - CASE CLOSED	***3340 LOS COYOTES DIA***	***NW 0 - 1/8 (0.013 mi.)***	***A6***	***17***
TEXACO SERVICE STATI Cleanup Status: COMPLETED - CASE CLOSED	***3565 LOS COYOTES DIA***	***NNE 1/4 - 1/2 (0.376 mi.)***	***23***	***70***

Lower Elevation	Address	Direction / Distance	Map ID	Page
THRIFTY SERVICE STAT Cleanup Status: COMPLETED - CASE CLOSED	***3100 LOS COYOTES DIA***	***SW 1/4 - 1/2 (0.328 mi.)***	***22***	***49***
SHELL SERVICE STATIO Cleanup Status: COMPLETED - CASE CLOSED	***6407 SPRING ST E***	***SSE 1/4 - 1/2 (0.434 mi.)***	***E25***	***81***
SHELL #204-4482-3205 Cleanup Status: COMPLETED - CASE CLOSED	***6407 SPRING ST E***	***SSE 1/4 - 1/2 (0.434 mi.)***	***E26***	***89***
CHEVRON #9-4055 Cleanup Status: COMPLETED - CASE CLOSED	***6340 SPRING ST E***	***SSE 1/4 - 1/2 (0.458 mi.)***	***E27***	***91***

DRYCLEANERS: A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaners' agents; linen supply; coin-operated laundries and cleaning; drycleaning plants except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

A review of the DRYCLEANERS list, as provided by EDR, has revealed that there are 2 DRYCLEANERS sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOS COYOTES CENTER Database: DRYCLEAN SOUTH COAST, Date of Government Version: 03/25/2020	***3378 LOS COYOTES DIA***	***NNE 0 - 1/8 (0.092 mi.)***	***C10***	***27***

Lower Elevation	Address	Direction / Distance	Map ID	Page
GREEN VALLEY CLEANER Database: DRYCLEANERS, Date of Government Version: 12/04/2019	***3221 PALO VERDE AVE***	***SE 0 - 1/8 (0.099 mi.)***	***15***	***42***

EXECUTIVE SUMMARY

EPA Id: CAL000368514

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 5 HIST CORTESE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LOS ALTOS HOSP Reg Id: 908080043	***3340 LOS COYOTES DIA***	***NW 0 - 1/8 (0.013 mi.)***	***A6***	***17***
TEXACO SERVICE STATI Reg Id: 908080225	***3565 LOS COYOTES DIA***	***NNE 1/4 - 1/2 (0.376 mi.)***	***23***	***70***

Lower Elevation	Address	Direction / Distance	Map ID	Page
THRIFTY SERVICE STAT Reg Id: 908080098	***3100 LOS COYOTES DIA***	***SW 1/4 - 1/2 (0.328 mi.)***	***22***	***49***
SHELL #204-4482-3205 Reg Id: 908080061 Reg Id: 908080061A	***6407 SPRING ST E***	***SSE 1/4 - 1/2 (0.434 mi.)***	***E26***	***89***
CHEVRON #9-4055 Reg Id: 908150216	***6340 SPRING ST E***	***SSE 1/4 - 1/2 (0.458 mi.)***	***E27***	***91***

Notify 65: Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

A review of the Notify 65 list, as provided by EDR, and dated 03/12/2020 has revealed that there is 1 Notify 65 site within approximately 1 mile of the target property.

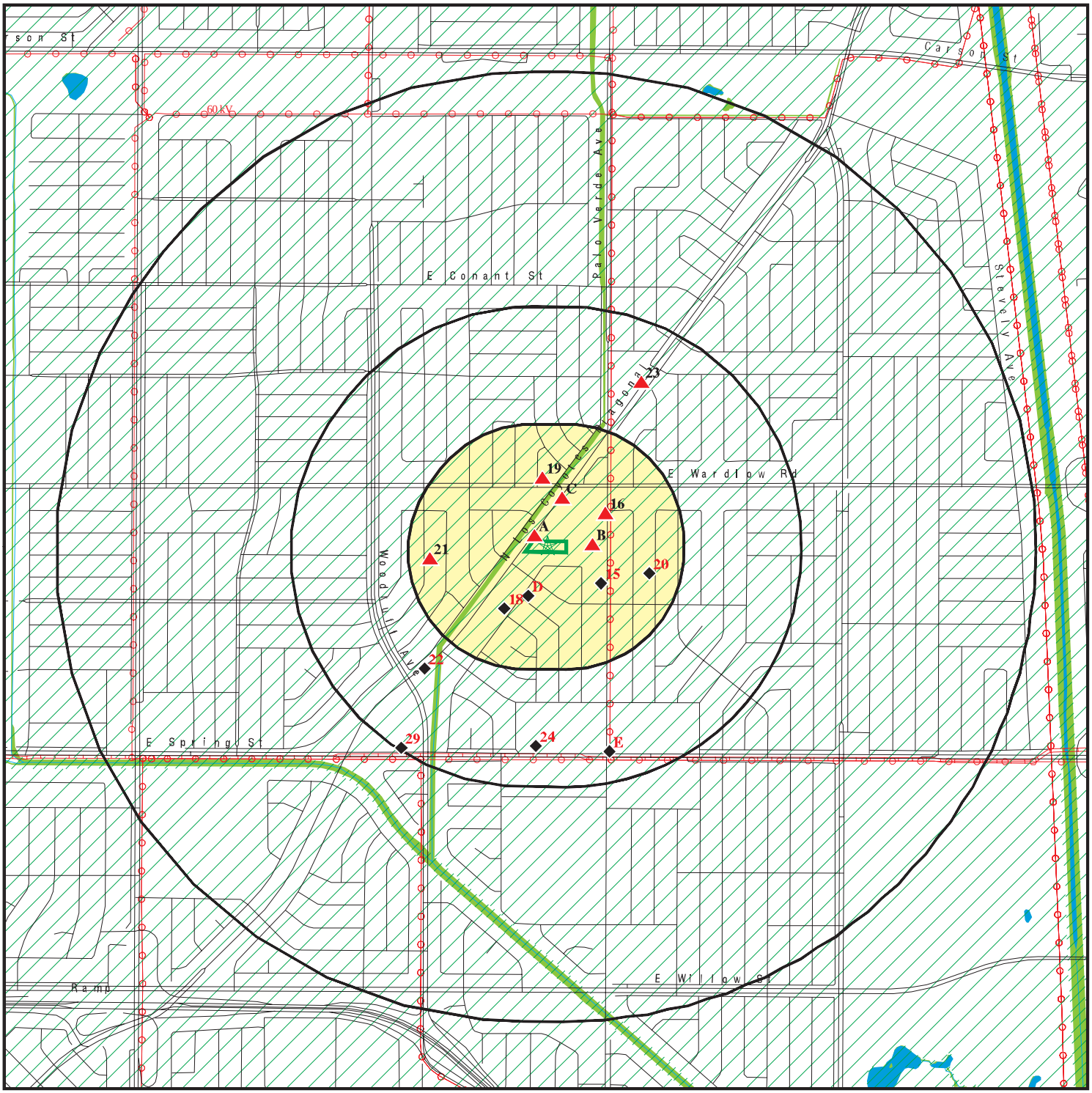
Lower Elevation	Address	Direction / Distance	Map ID	Page
CHEVRON STATION 9-40	6340 E. SPRING ST.	SSE 1/4 - 1/2 (0.458 mi.)	E28	97

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 6 records.

Site Name	Database(s)
JOHNEL CORP	RCRA-LQG, FINDS, ECHO, DRYCLEANERS, HAZNET, HWTS
ROYALTY CLEANERS	DRYCLEANERS
THRIFTY DRY CLEANERS	DRYCLEANERS
CONTINENTAL CLEANERS, MAGGIANI ENT	DRYCLEANERS
CONTINENTAL CLEANERS, JOHN CHIANIS	DRYCLEANERS
CONTINENTAL CLEANERS, PARSHWA INC	DRYCLEANERS

OVERVIEW MAP - 6152113.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Pipelines

Special Flood Hazard Area (1%)

0.2% Annual Chance Flood Hazard

National Wetland Inventory

State Wetlands

Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Sunrise of Lakewood CA	CLIENT:	Partner Engineering and Science, Inc.
ADDRESS:	3320 Los Coyotes Diagonal LONG BEACH CA 90808	CONTACT:	Cristina Scott
		INQUIRY #:	6152113.2s
LAT/LONG:	33.816925 / 118.11005	DATE:	August 11, 2020 4:15 pm

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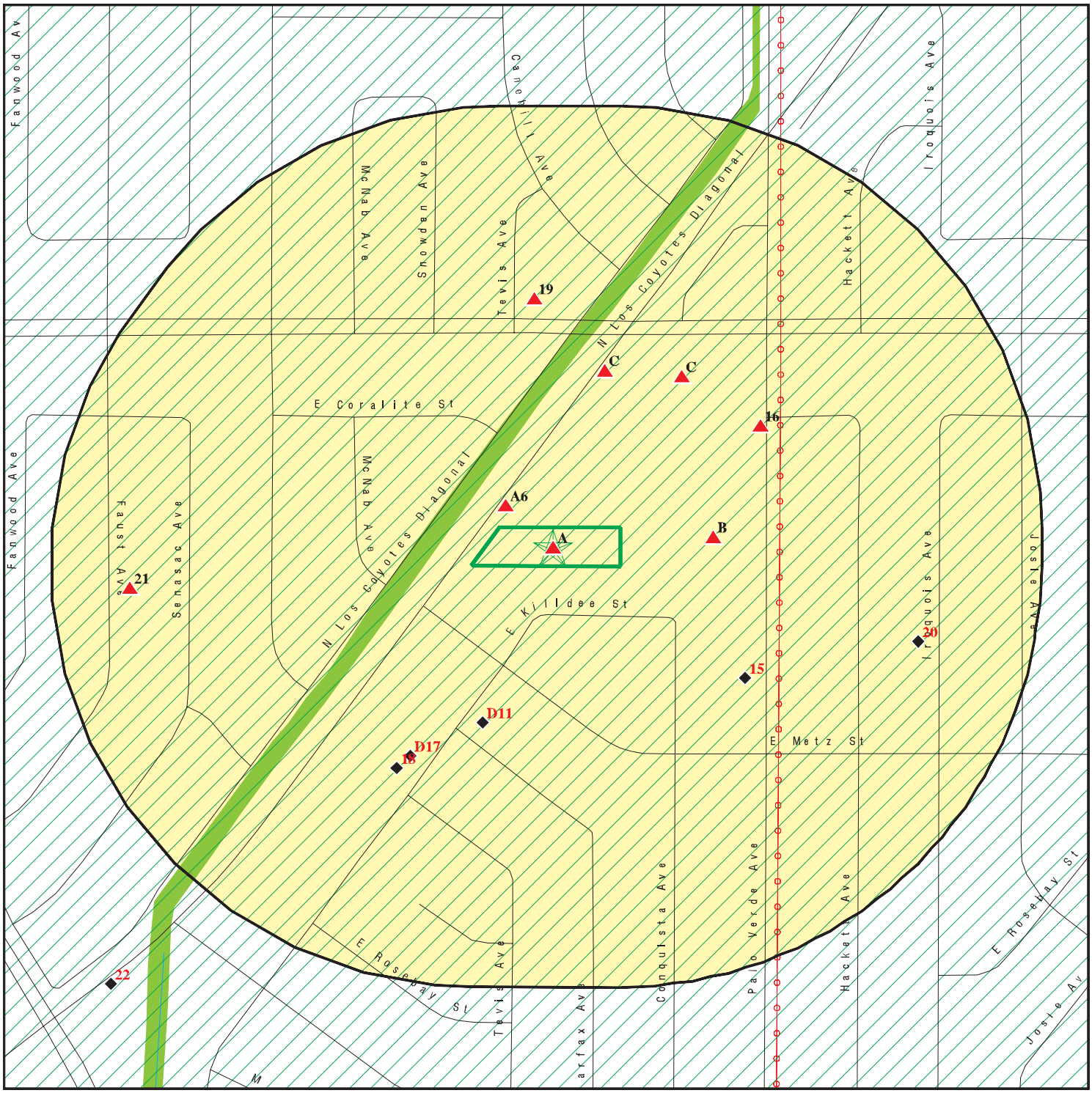
DETAIL MAP - 6152113.2S



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Sunrise of Lakewood CA	CLIENT:	Partner Engineering and Science, Inc.
ADDRESS:	3320 Los Coyotes Diagonal LONG BEACH CA 90808	CONTACT:	Cristina Scott
		INQUIRY #:	6152113.2s
LAT/LONG:	33.816925 / 118.11005	DATE:	August 11, 2020 4:18 pm

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		2	0	NR	NR	NR	2
RCRA-SQG	0.250	1	2	0	NR	NR	NR	3
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		1	0	2	0	NR	3
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		1	0	5	NR	NR	6

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN LUST	0.500		0	0	0	NR	NR	0
CPS-SLIC	0.500		1	0	0	NR	NR	1
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		2	0	NR	NR	NR	2
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	2	NR	NR	2
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
WMUDS/SWAT	0.500		0	0	0	NR	NR	0
SWRCY	0.500		0	0	0	NR	NR	0
HAULERS	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
AOCONCERN	1.000		0	0	0	0	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
CERS HAZ WASTE	0.250		1	0	NR	NR	NR	1
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
PFAS	0.500		0	0	0	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CERS TANKS	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
LIENS 2	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		3	4	NR	NR	NR	7
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP	1	NR	NR	NR	NR	NR	1
ECHO	TP	1	NR	NR	NR	NR	NR	1
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
CA BOND EXP. PLAN	1.000		0	0	0	0	NR	0
Cortese	0.500		1	0	5	NR	NR	6
CUPA Listings	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS	0.250		2	0	NR	NR	NR	2
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
HAZNET	TP	4	NR	NR	NR	NR	NR	4
ICE	TP		NR	NR	NR	NR	NR	0
HIST CORTESE	0.500		1	0	4	NR	NR	5
LOS ANGELES CO. HMS	TP		NR	NR	NR	NR	NR	0
HWP	1.000		0	0	0	0	NR	0
HWT	0.250		0	0	NR	NR	NR	0
MINES	0.250		0	0	NR	NR	NR	0
MWMP	0.250		0	0	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
PEST LIC	TP		NR	NR	NR	NR	NR	0
PROC	0.500		0	0	0	NR	NR	0
Notify 65	1.000		0	0	1	0	NR	1
LA Co. Site Mitigation	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
UIC GEO	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
MILITARY PRIV SITES	TP		NR	NR	NR	NR	NR	0
PROJECT	TP		NR	NR	NR	NR	NR	0
WDR	TP		NR	NR	NR	NR	NR	0
CIWQS	TP		NR	NR	NR	NR	NR	0
CERS	TP		NR	NR	NR	NR	NR	0
NON-CASE INFO	TP		NR	NR	NR	NR	NR	0
OTHER OIL GAS	TP		NR	NR	NR	NR	NR	0
PROD WATER PONDS	TP		NR	NR	NR	NR	NR	0
SAMPLING POINT	TP		NR	NR	NR	NR	NR	0
WELL STIM PROJ	TP		NR	NR	NR	NR	NR	0
HWTS	TP	5	NR	NR	NR	NR	NR	5
MINES MRDS	TP		NR	NR	NR	NR	NR	0
LOS ANGELES CO LF METHANE	0.500		0	0	0	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		12	17	4	19	0	0	52

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 Target Property | **LEONARD RUSSO DDS**
3320 LOS COYOTES DIAGONAL #102
LONG BEACH, CA 90808 | **HAZNET** | **S124423664**
HWTS | **N/A**

Site 1 of 6 in cluster A

Actual: 27 ft.

HAZNET:

Name:	LEONARD RUSSO DDS
Address:	3320 LOS COYOTES DIAGONAL #102
Address 2:	Not reported
City,State,Zip:	LONG BEACH, CA 908080000
Contact:	ALMA CAMPUZANO
Telephone:	3104218858
Mailing Name:	Not reported
Mailing Address:	3320 LOS COYOTES DIAGONAL #102
Year:	1999
Gepaid:	CAL000207215
TSD EPA ID:	CAD981397417
CA Waste Code:	211 - Halogenated solvents (chloroforms, methyl chloride, perchloroethylene, etc)
Disposal Method:	R01 - Recycler
Tons:	0.1209
Year:	1999
Gepaid:	CAL000207215
TSD EPA ID:	CAD981397417
CA Waste Code:	-
Disposal Method:	R01 - Recycler
Tons:	0

Additional Info:

Year:	1999
Gen EPA ID:	CAL000207215
Shipment Date:	19991027
Creation Date:	5/1/2000 0:00:00
Receipt Date:	19991112
Manifest ID:	99309833
Trans EPA ID:	CAR000030841
Trans Name:	Not reported
Trans 2 EPA ID:	CAD076548635
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD981397417
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	211 - Halogenated solvents (chloroform, methyl chloride, perchloroethylene, etc.
RCRA Code:	F002
Meth Code:	R01 - Recycler
Quantity Tons:	0.1209
Waste Quantity:	29
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported

LEONARD RUSSO DDS (Continued) **S124423664**

Additional Code 5:	Not reported
Shipment Date:	19991027
Creation Date:	5/1/2000 0:00:00
Receipt Date:	19991112
Manifest ID:	99309833
Trans EPA ID:	CAR000030841
Trans Name:	Not reported
Trans 2 EPA ID:	CAD076548635
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD981397417
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	- Not reported
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0
Waste Quantity:	0
Quantity Unit:	Not reported
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	LEONARD RUSSO DDS
Address:	3320 LOS COYOTES DIAGONAL #102
Address 2:	Not reported
City,State,Zip:	LONG BEACH, CA 908080000
EPA ID:	CAL000207215
Inactive Date:	06/30/2000
Create Date:	04/14/1999
Last Act Date:	04/10/2001
Mailing Name:	Not reported
Mailing Address:	3320 LOS COYOTES DIAGONAL #102
Mailing Address 2:	Not reported
Mailing City,State,Zip:	LONG BEACH, CA 908081108
Owner Name:	LEONARD RUSSO DDS
Owner Address:	3320 LOS COYOTES DIAGONAL #102
Owner Address 2:	Not reported
Owner City,State,Zip:	LONG BEACH, CA 908081108
Contact Name:	ALMA CAMPUZANO
Contact Address:	INACT 00VQ FINAL NOTICE - BATCH
Contact Address 2:	4/10/01
City,State,Zip:	LONG BEACH, CA 908081108

A2 Target Property | **CHARTER BEHAVIORAL HEALTH SYS AT LOS ALT**
3320 LOS COYOTES DIAGONAL STE 100
LONG BEACH, CA 90808 | **HAZNET** | **S112908432**
HWTS | **N/A**

Site 2 of 6 in cluster A

Actual: 27 ft.

HAZNET:

Name:	CHARTER BEHAVIORAL HEALTH SYS AT LOS ALT
Address:	3320 LOS COYOTES DIAGONAL STE 100
Address 2:	Not reported
City,State,Zip:	LONG BEACH, CA 908080000
Contact:	NANCY JANZEN/ALTERNATIVE TECH
Telephone:	8187008002
Mailing Name:	Not reported
Mailing Address:	3146 RED HILL AVE STE 150
Year:	2000
Gepaid:	CAC002273385
TSD EPA ID:	AZR000005454
CA Waste Code:	261 - Polychlorinated biphenyls and material containing PCBs
Disposal Method:	R01 - Recycler
Tons:	0.0842

Additional Info:

Year:	2000
Gen EPA ID:	CAC002273385
Shipment Date:	20000721
Creation Date:	9/11/2000 0:00:00
Receipt Date:	20000728
Manifest ID:	20123664
Trans EPA ID:	CAL000190213
Trans Name:	Not reported
Trans 2 EPA ID:	CAR000017657
Trans 2 Name:	Not reported
TSDF EPA ID:	AZR000005454
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	261 - Not reported
RCRA Code:	Not reported
Meth Code:	R01 - Recycler
Quantity Tons:	0.0842
Waste Quantity:	0.1
Quantity Unit:	Y
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	CHARTER BEHAVIORAL HEALTH SYS AT LOS ALT
Address:	3320 LOS COYOTES DIAGONAL STE 100
Address 2:	Not reported
City,State,Zip:	LONG BEACH, CA 908080000
EPA ID:	CAC002273385

CHARTER BEHAVIORAL HEALTH SYS AT LOS ALT (Continued) **S112908432**

Inactive Date:	06/11/2001
Create Date:	07/10/2000
Last Act Date:	06/11/2001
Mailing Name:	JOHN SCHMID/UNIMED ESSENCE MGM
Mailing Address:	3146 RED HILL AVE STE 150
Mailing Address 2:	Not reported
Mailing City,State,Zip:	COSTA MESA, CA 926260000
Owner Name:	CHARTER BEHAVIORAL HEALTH SYS
Owner Address:	AT LOS ALTOS INC/3146 RED HILL
Owner Address 2:	AVE #150
Owner City,State,Zip:	COSTA MESA, CA 926260000
Contact Name:	NANCY JANZEN/ALTERNATIVE TECH
Contact Address:	--
Contact Address 2:	Not reported
City,State,Zip:	--, 99 --

A3
Target
Property

ANDREW JAMES MANOS DO INC **RCRA-SQG** **1000685863**
3320 LOS COYOTES DIAG STE 112 **FINDS** **CAD983625401**
LONG BEACH, CA 90808 **ECHO**
HAZNET
Site 3 of 6 in cluster A **HWTS**

Actual:
27 ft.

RCRA-SQG:

Date form received by agency:	1992-03-25 00:00:00.0
Facility name:	ANDREW JAMES MANOS DO INC
Facility address:	3320 LOS COYOTES DIAG STE 112 LONG BEACH, CA 90808-3918
EPA ID:	CAD983625401
Contact:	ANDREW MANOS
Contact address:	3320 LOS COYOTES DIAG STE 112 LONG BEACH, CA 90808-3918
Contact country:	US
Contact telephone:	310-420-1466
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	ANDREW JAMES MANOS DO
Owner/operator address:	3320 LOS COYOTES DIAG STE 112 LONG BEACH, CA 90808
Owner/operator country:	Not reported
Owner/operator telephone:	310-420-1466
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

ANDREW JAMES MANOS DO INC (Continued) **1000685863**

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

FINDS:

Registry ID: 110002872295

Click Here:

Environmental Interest/Information System:

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000685863
Registry ID:	110002872295
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110002872295
Name:	ANDREW JAMES MANOS DO INC
Address:	3320 LOS COYOTES DIAG STE 112
City,State,Zip:	LONG BEACH, CA 90808

HAZNET:

Name:	ANDREW JAMES MANOS DO INC
Address:	3320 LOS COYOTES DIAG STE 112
Address 2:	Not reported
City,State,Zip:	LONG BEACH, CA 908080000
Contact:	PAM MANOS/OFFICE MANAGER
Telephone:	5624201466
Mailing Name:	Not reported
Mailing Address:	1760 TERMINO STE 222
Year:	1994
Gepaid:	CAD983625401
TSD EPA ID:	CAD982524613
CA Waste Code:	541 - Photochemicals/photoprocessing waste
Disposal Method:	R01 - Recycler

ANDREW JAMES MANOS DO INC (Continued) **1000685863**

Tons: 0.0208

Additional Info:

Year:	1994
Gen EPA ID:	CAD983625401
Shipment Date:	19940511
Creation Date:	3/25/1996 0:00:00
Receipt Date:	19940512
Manifest ID:	92887464
Trans EPA ID:	CAL920425641
Trans Name:	Not reported
Trans 2 EPA ID:	Not reported
Trans 2 Name:	Not reported
TSDF EPA ID:	CAD982524613
Trans Name:	Not reported
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	541 - Photochemicals / photo processing waste
RCRA Code:	D011
Meth Code:	R01 - Recycler
Quantity Tons:	0.0208
Waste Quantity:	5
Quantity Unit:	G
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	ANDREW JAMES MANOS DO INC
Address:	3320 LOS COYOTES DIAG STE 112
Address 2:	Not reported
City,State,Zip:	LONG BEACH, CA 908080000
EPA ID:	CAD983625401
Inactive Date:	06/01/2000
Create Date:	03/25/1992
Last Act Date:	08/10/2004
Mailing Name:	Not reported
Mailing Address:	1760 TERMINO STE 222
Mailing Address 2:	Not reported
Mailing City,State,Zip:	LONG BEACH, CA 908040000
Owner Name:	ANDREW JAMES MANOS DO
Owner Address:	3320 N LOS COYOTES DIAGONAL STE 112
Owner Address 2:	Not reported
Owner City,State,Zip:	LONG BEACH, CA 908083936
Contact Name:	PAM MANOS/OFFICE MANAGER
Contact Address:	BUS MOVED PER LTR,DATED 1/31/01,MB
Contact Address 2:	Not reported
City,State,Zip:	LONG BEACH, CA 908080000

A4 Target Property | **DR JOHN MCGUIRE**
3320 LOS COYOTES DIAGANOL STE 220
LONG BEACH, CA 90808 | **HAZNET** | **S113465296**
HWTS | **N/A**

Site 4 of 6 in cluster A

Actual: 27 ft.

HAZNET:

Name:	DR JOHN MCGUIRE
Address:	3320 LOS COYOTES DIAGANOL STE 220
Address 2:	Not reported
City,State,Zip:	LONG BEACH, CA 908080000
Contact:	DR MCGUIRE
Telephone:	5626270075
Mailing Name:	Not reported
Mailing Address:	3320 LOS COYOTES DIAGANOL STE 220
Year:	2010
Gepaid:	CAL000223539
TSD EPA ID:	AZR000501510
CA Waste Code:	352 - Other organic solids
Disposal Method:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Tons:	0.9

Additional Info:

Year:	2010
Gen EPA ID:	CAL000223539
Shipment Date:	20100322
Creation Date:	12/3/2010 18:30:22
Receipt Date:	20100402
Manifest ID:	001116470GBF
Trans EPA ID:	CAD983615501
Trans Name:	PACIFIC OIL COMPANY
Trans 2 EPA ID:	CAD980585293
Trans 2 Name:	INDUSTRIAL WASTE UTILIZATION INC
TSDF EPA ID:	AZR000501510
Trans Name:	AA SYDCOL LLC
TSDF Alt EPA ID:	Not reported
TSDF Alt Name:	Not reported
Waste Code Description:	352 - Other organic solids
RCRA Code:	Not reported
Meth Code:	H141 - Storage, Bulking, And/Or Transfer Off Site--No Treatment/Reovery (H010-H129) Or (H131-H135)
Quantity Tons:	0.9
Waste Quantity:	1800
Quantity Unit:	P
Additional Code 1:	Not reported
Additional Code 2:	Not reported
Additional Code 3:	Not reported
Additional Code 4:	Not reported
Additional Code 5:	Not reported

HWTS:

Name:	DR JOHN MCGUIRE
Address:	3320 LOS COYOTES DIAGANOL STE 220
Address 2:	Not reported

DR JOHN MCGUIRE (Continued) **S113465296**

City,State,Zip:	LONG BEACH, CA 908080000
EPA ID:	CAL000223539
Inactive Date:	06/30/2008
Create Date:	06/25/2001
Last Act Date:	10/04/2011
Mailing Name:	Not reported
Mailing Address:	3320 LOS COYOTES DIAGANOL STE 220
Mailing Address 2:	Not reported
Mailing City,State,Zip:	LONG BEACH, CA 908080000
Owner Name:	JOHN MCGUIRE
Owner Address:	3320 LOS COYOTES DIAGANOL STE 220
Owner Address 2:	Not reported
Owner City,State,Zip:	LONG BEACH, CA 908080000
Contact Name:	DR MCGUIRE
Contact Address:	3320 LOS COYOTES DIAGANOL STE 220
Contact Address 2:	Not reported
City,State,Zip:	LONG BEACH, CA 908080000

NAICS:

EPA ID:	CAL000223539
Create Date:	2002-03-14 16:36:29
NAICS Code:	62121
NAICS Description:	Offices of Dentists
Issued EPA ID Date:	2001-06-25 00:00:00
Inactive Date:	2008-06-30 00:00:00
Facility Name:	DR JOHN MCGUIRE
Facility Address:	3320 LOS COYOTES DIAGANOL STE 220
Facility Address 2:	Not reported
Facility City:	LONG BEACH
Facility County:	19
Facility State:	CA
Facility Zip:	908080000

A5 Target Property **DENIS M MURPHY MD** **HWTS** **S124801382**
3320 LOS COYOTES DIAG #101 **N/A**
LONG BEACH, CA 90808

Site 5 of 6 in cluster A

Actual: 27 ft.

HWTS:

Name:	DENIS M MURPHY MD
Address:	3320 LOS COYOTES DIAG #101
Address 2:	Not reported
City,State,Zip:	LONG BEACH, CA 908080000
EPA ID:	CAL000113764
Inactive Date:	08/23/1993
Create Date:	08/19/1993
Last Act Date:	08/03/2001
Mailing Name:	Not reported
Mailing Address:	3320 LOS COYOTES DIAG #101
Mailing Address 2:	Not reported
Mailing City,State,Zip:	LONG BEACH, CA 908080000
Owner Name:	DENIS M MURPHY
Owner Address:	3320 LOS COYOTES DIAG #101
Owner Address 2:	Not reported
Owner City,State,Zip:	LONG BEACH, CA 908080000
Contact Name:	--

DENIS M MURPHY MD (Continued) **S124801382**

Contact Address: REC'D CAD #980891352
Contact Address 2: Not reported
City,State,Zip: LONG BEACH, CA 908080000

A6 **LOS ALTOS HOSP** **LUST** **S103281805**
NW **3340 LOS COYOTES DIAGONAL** **Cortese** **N/A**
< 1/8 **LONG BEACH, CA 90808** **EMI**
0.013 mi. **HIST CORTESE**
70 ft. **Site 6 of 6 in cluster A** **CERS**

Relative:
Higher

Actual:
27 ft.

LUST REG 4:

Region:	4
Regional Board:	04
County:	Los Angeles
Facility Id:	908080043
Status:	Case Closed
Substance:	Diesel
Substance Quantity:	Not reported
Local Case No:	Not reported
Case Type:	Groundwater
Abatement Method Used at the Site:	Not reported
Global ID:	T0603701883
W Global ID:	Not reported
Staff:	UNK
Local Agency:	19060
Cross Street:	Not reported
Enforcement Type:	Not reported
Date Leak Discovered:	Not reported
Date Leak First Reported:	1/1/1988
Date Leak Record Entered:	12/31/1986
Date Confirmation Began:	Not reported
Date Leak Stopped:	Not reported
Date Case Last Changed on Database:	6/20/1988
Date the Case was Closed:	10/15/1997
How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	UNK
Leak Source:	UNK
Operator:	1-800-511-2396
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	588.4790523911778610473688568 9
Source of Cleanup Funding:	UNK
Preliminary Site Assessment Workplan Submitted:	Not reported
Preliminary Site Assessment Began:	Not reported
Pollution Characterization Began:	6/20/1988
Remediation Plan Submitted:	Not reported
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	Not reported
Enforcement Action Date:	Not reported
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Owner Contact:	Not reported

LOS ALTOS HOSP (Continued) **S103281805**

Responsible Party: CHARTER HOSPITAL
RP Address: 16960 E. BASTANCHURY RD, STE E, YORBA LINDA, CA 92886
Program: LUST
Lat/Long: 33.8175292 / -1
Local Agency Staff: Not reported
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: LDP REQUESTED BY LONG BEACH FIRE DEPARTMENT IS INADEQUATE. SITE HAS BEEN CLOSED BY CHARTER HOSPITAL SINCE 1996.

LUST:
Name: CHARTER HOSPITAL FACILITY
Address: 3340 LOS COYOTES DIAGONAL
City,State,Zip: LONG BEACH, CA 90808
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603701883
Global Id: T0603701883
Latitude: 33.8177425
Longitude: -118.1100894
Status: Completed - Case Closed
Status Date: 10/15/1997
Case Worker: YL
RB Case Number: 908080043
Local Agency: LONG BEACH, CITY OF
File Location: Not reported
Local Case Number: Not reported
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Diesel
Site History: Not reported

LUST:
Global Id: T0603701883
Contact Type: Local Agency Caseworker
Contact Name: CARMEN PIRO
Organization Name: LONG BEACH, CITY OF
Address: 2525 GRAND AVE.
City: LONG BEACH
Email: carmen.piro@longbeach.gov
Phone Number: 5625704137

Global Id: T0603701883
Contact Type: Regional Board Caseworker
Contact Name: YI LU
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: Not reported
City: R4 UNKNOWN
Email: ylu@waterboards.ca.gov
Phone Number: Not reported

LUST:
Global Id: T0603701883
Action Type: Other
Date: 01/01/1988

LOS ALTOS HOSP (Continued) **S103281805**

Action: Leak Reported

LUST:

Global Id: T0603701883
Status: Open - Case Begin Date
Status Date: 01/01/1988

Global Id: T0603701883
Status: Open - Site Assessment
Status Date: 06/20/1988

Global Id: T0603701883
Status: Completed - Case Closed
Status Date: 10/15/1997

CORTESE:

Name:	CHARTER HOSPITAL FACILITY
Address:	3340 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90808
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0603701883
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

EMI:

Name:	LOS ALTOS HOSP
Address:	3340 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90808
Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	19065
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0

LOS ALTOS HOSP (Continued) **S103281805**

Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	LOS ALTOS HOSPITAL & MENTAL HE
Address:	3340 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90808
Year:	1990
County Code:	19
Air Basin:	SC
Facility ID:	19065
Air District Name:	SC
SIC Code:	8062
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

HIST CORTESE:

edr_fname:	CHARTER HOSPITAL FACILITY
edr_fadd1:	3340 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90808
Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	908080043

CERS:

Name:	CHARTER HOSPITAL FACILITY
Address:	3340 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90808
Site ID:	195199
CERS ID:	T0603701883
CERS Description:	Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	CARMEN PIRO - LONG BEACH, CITY OF
Entity Title:	Not reported
Affiliation Address:	2525 GRAND AVE.
Affiliation City:	LONG BEACH
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	5625704137

Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	YI LU - LOS ANGELES RWQCB (REGION 4)

LOS ALTOS HOSP (Continued) **S103281805**

Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	R4 UNKNOWN
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

B7 **LONG BEACH COMMUNITY COLLEGE DISTRICT** **RCRA NonGen / NLR** **1026048452**
East **3325 PALO VERDE AVE** **CAC003055100**
< 1/8 **LONG BEACH, CA 90808**
0.055 mi.
291 ft. **Site 1 of 2 in cluster B**

Relative:
Higher

Actual:
27 ft.

RCRA NonGen / NLR:

Date form received by agency:	2020-02-10 00:00:00.0
Facility name:	LONG BEACH COMMUNITY COLLEGE DISTRICT
Facility address:	3325 PALO VERDE AVE LONG BEACH, CA 90808
EPA ID:	CAC003055100
Mailing address:	4901 E CARSON ST B-13 LONG BEACH, CA 90808
Contact:	LUBERT IGLESIA
Contact address:	4901 E CARSON ST B-13 LONG BEACH, CA 90808
Contact country:	Not reported
Contact telephone:	562-938-4713
Contact email:	LIGLESIA@LBCC.EDU
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	LUBERT IGLESIA
Owner/operator address:	4901 E CARSON ST B-13 LONG BEACH, CA 90808
Owner/operator country:	Not reported
Owner/operator telephone:	562-938-4713
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	LONG BEACH COMMUNITY COLLEGE
Owner/operator address:	4901 E CARSON ST B-13 LONG BEACH, CA 90808
Owner/operator country:	Not reported
Owner/operator telephone:	562-938-4713
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other

LONG BEACH COMMUNITY COLLEGE DISTRICT (Continued) **1026048452**

Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): Not reported
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

B8
East
< 1/8
0.055 mi.
291 ft.

LOS ATOS FOOT HEALTH CORP **RCRA-SQG** **1000820475**
3325 PALO VERDE AVE UNIT 205 **FINDS** **CAD983665134**
LONG BEACH, CA 90808 **ECHO**

Site 2 of 2 in cluster B

Relative:
Higher

Actual:
27 ft.

RCRA-SQG:
Date form received by agency: 1993-04-13 00:00:00.0
Facility name: LOS ATOS FOOT HEALTH CORP
Facility address: 3325 PALO VERDE AVE UNIT 205
LONG BEACH, CA 90808
EPA ID: CAD983665134
Mailing address: PALO VERDE AVE UNIT 205
LONG BEACH, CA 90808
Contact: KAREN COOPER
Contact address: 3325 PALO VERDE AVE UNIT 205
LONG BEACH, CA 90808
Contact country: US
Contact telephone: 310-420-6888
Contact email: Not reported
EPA Region: 09
Classification: Small Small Quantity Generator
Description: Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:
Owner/operator name: GUY D DANON DPM
Owner/operator address: 3325 PALO VERDE UNIT 205
LONG BEACH, CA 90808
Owner/operator country: Not reported
Owner/operator telephone: 310-420-6888
Owner/operator email: Not reported

LOS ATOS FOOT HEALTH CORP (Continued) **1000820475**

Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: Not reported
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:
Registry ID: 110002896992

Click Here:

Environmental Interest/Information System:
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000820475
Registry ID: 110002896992
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110002896992
Name: LOS ATOS FOOT HEALTH CORP
Address: 3325 PALO VERDE AVE UNIT 205
City,State,Zip: LONG BEACH, CA 90808

C9 NE < 1/8 0.085 mi. 447 ft. | **RALPHS GROCERY #058**
3380 NORTH LOS COYOTES DIAGONAL
LONG BEACH, CA 90808 | **CERS HAZ WASTE**
CERS | **S123501749**
N/A

Site 1 of 5 in cluster C

Relative: Higher

Actual: 28 ft.

CERS HAZ WASTE:

Name:	RALPHS GROCERY #058
Address:	3380 NORTH LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90808
Site ID:	146243
CERS ID:	10160305
CERS Description:	Hazardous Waste Generator

CERS:

Name:	RALPHS GROCERY #058
Address:	3380 NORTH LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90808
Site ID:	146243
CERS ID:	10160305
CERS Description:	Chemical Storage Facilities

Violations:

Site ID:	146243
Site Name:	Ralphs Grocery #058
Violation Date:	02-27-2020
Citation:	HSC 6.95 25505(a)(4) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(a)(4)
Violation Description:	Failure to provide initial and annual training to all employees in safety procedures in the event of a release or threatened release of a hazardous material or failure to document and maintain training records for a minimum of three years.
Violation Notes:	OBSERVATION: The business did not provide one or more of the following: initial employee training, adequate employee training, annual employee training and/or maintain records of employee training. CORRECTIVE ACTION: Provide all employees with required training that includes: safe handling hazardous materials, emergency response procedures, and proper use of response equipment. Maintain records of training available for 3 years.
Violation Division:	Long Beach Environmental Heath
Violation Program:	HMRRP
Violation Source:	CERS

Site ID:	146243
Site Name:	Ralphs Grocery #058
Violation Date:	02-27-2020
Citation:	HSC 6.95 25505(c) - California Health and Safety Code, Chapter 6.95, Section(s) 25505(c)
Violation Description:	Failure to have a business plan readily available to personnel of the business or the unified program facility with responsibilities for emergency response or training.
Violation Notes:	OBSERVATION: The business failed to have the hazardous material business plan readily available to personnel of the business or the unified program facility with responsibilities for emergency response or training. CORRECTIVE ACTION: Provide a readily available business plan to personnel of the business or the unified program facility with responsibilities for emergency response or training. Document that appropriate personnel have the business plan readily available. A hard copy or digital copy of the current Hazardous Materials Business Plan

RALPHS GROCERY #058 (Continued) **S123501749**

	submittal shall be available and all persons at the facility qualified to serve as emergency coordinators must be thoroughly familiar with the contents and use of the HMBP, with the operations and activities of the facility, and with the locations of hazardous materials records maintained by the facility.
Violation Division:	Long Beach Environmental Heath
Violation Program:	HMRRP
Violation Source:	CERS

Evaluation:

Eval General Type:	Compliance Evaluation Inspection
Eval Date:	03-09-2016
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	NO VIOLATIONS.
Eval Division:	Long Beach Environmental Heath
Eval Program:	HMRRP
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	10-19-2017
Violations Found:	No
Eval Type:	Routine done by local agency
Eval Notes:	3380 LOS COYOTES DIAG-MGR-SIZVESTRA AGUILA BEP UPDATED 2/23/17
Eval Division:	Long Beach Environmental Heath
Eval Program:	HW
Eval Source:	CERS
Eval General Type:	Compliance Evaluation Inspection
Eval Date:	02-27-2020
Violations Found:	Yes
Eval Type:	Routine done by local agency
Eval Notes:	On-site to complete a Hazardous Materials Business Plan compliance inspection. Permission to inspect granted by: Helena Contreras Inspection included a review of all hazardous materials on-site including hazardous waste, and review of facility submittal in CERS against on-site conditions. Inspection also included verification of current Operational Permit(s). OBSERVATION: Owner/Operator did not obtain, maintain, and/or properly display a valid Operating Fire Permit for the storage/handling/use of Propane (Liquid Gases) and Corrosives. CFC 105.1.1 through 105.7.18 CORRECTIVE ACTION: Obtain, maintain, and properly display a valid Operating Fire Permit. NOTE: A FIRE permit invoice will be sent to the billing address on file, pay all fees due. Business Owner/Operator is responsible for the submittal of additional programs, and to obtain and maintain current applicable business license and operational permit(s) that pertain to the facility. CFC 105.1.1 through [Truncated]
Eval Division:	Long Beach Environmental Heath
Eval Program:	HMRRP
Eval Source:	CERS

Affiliation:

Affiliation Type Desc:	Document Preparer
Entity Name:	Ralphs Grocery Company
Entity Title:	Not reported
Affiliation Address:	Not reported

RALPHS GROCERY #058 (Continued) **S123501749**

Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Facility Mailing Address
Entity Name:	Mailing Address
Entity Title:	Not reported
Affiliation Address:	P.O. Box 54143
Affiliation City:	Los Angeles
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	90054-0143
Affiliation Phone:	Not reported

Affiliation Type Desc:	Operator
Entity Name:	Ralphs Grocery Company
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	(310) 884-9000

Affiliation Type Desc:	Property Owner
Entity Name:	Ralphs Coyotes, LLC
Entity Title:	Not reported
Affiliation Address:	3632 Fawndale Place
Affiliation City:	Sherman Oaks
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	91403
Affiliation Phone:	(818) 399-3112

Affiliation Type Desc:	Environmental Contact
Entity Name:	Matthew Eaton
Entity Title:	Not reported
Affiliation Address:	P.O. Box 54143
Affiliation City:	Los Angeles
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	90054-0143
Affiliation Phone:	Not reported

Affiliation Type Desc:	Identification Signer
Entity Name:	Matthew Eaton
Entity Title:	Manager Environmental Affairs
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

Affiliation Type Desc:	Legal Owner

RALPHS GROCERY #058 (Continued) **S123501749**

Entity Name:	Ralphs Grocery Company
Entity Title:	Not reported
Affiliation Address:	P.O. Box 54143
Affiliation City:	Los Angeles
Affiliation State:	CA
Affiliation Country:	United States
Affiliation Zip:	90054-0143
Affiliation Phone:	(310) 884-9000

Affiliation Type Desc:	CUPA District
Entity Name:	Long Beach Environmental Heath
Entity Title:	Not reported
Affiliation Address:	2525 Grand Avenue
Affiliation City:	Long Beach
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	90815
Affiliation Phone:	(562) 570-4131

Affiliation Type Desc:	Parent Corporation
Entity Name:	Ralphs Grocery Company
Entity Title:	Not reported
Affiliation Address:	Not reported
Affiliation City:	Not reported
Affiliation State:	Not reported
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

C10 **LOS COYOTES CENTER** **RCRA-SQG** **1000149356**
NNE **3378 LOS COYOTES DIAGONAL** **ENVIROSTOR** **CAD981620461**
< 1/8 **LONG BEACH, CA 90808** **CPS-SLIC**
0.092 mi. **FINDS**
484 ft. **Site 2 of 5 in cluster C** **ECHO**
DRYCLEANERS
Relative: **EMI**
Higher **CERS**

Actual:
27 ft.

RCRA-SQG:

Date form received by agency:	2000-09-08 00:00:00.0
Facility name:	LOS COYOTES CENTER
Facility address:	3378 LOS COYOTES DIAGONAL LONG BEACH, CA 90808
EPA ID:	CAD981620461
Mailing address:	9676 WENDOVER DR BEVERLY HILLS, CA 90210
Contact:	SALLY FORSTER JONES
Contact address:	9676 WENDOVER DR BEVERLY HILLS, CA 90210
Contact country:	US
Contact telephone:	310-281-3999
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous

LOS COYOTES CENTER (Continued) **1000149356**

waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	PANOS SKLAVENITIS
Owner/operator address:	9676 WENDOVER DR BEVERLY HILLS, CA 90210
Owner/operator country:	Not reported
Owner/operator telephone:	310-281-3999
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	415-555-1212
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

. Waste code: F002
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2, TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE

LOS COYOTES CENTER (Continued) **1000149356**

ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

ENVIROSTOR:

Name:	LOS COYOTES SHOPPING CENTER
Address:	3378 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90808
Facility ID:	19720015
Status:	Inactive - Needs Evaluation
Status Date:	10/02/1995
Site Code:	Not reported
Site Type:	Historical
Site Type Detailed:	* Historical
Acres:	Not reported
NPL:	NO
Regulatory Agencies:	NONE SPECIFIED
Lead Agency:	NONE SPECIFIED
Program Manager:	Not reported
Supervisor:	* Mmonroy
Division Branch:	Cleanup Chatsworth
Assembly:	54
Senate:	Not reported
Special Program:	Not reported
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Not reported
Latitude:	33.81828
Longitude:	-118.1097
APN:	NONE SPECIFIED
Past Use:	NONE SPECIFIED
Potential COC:	* HALOGENATED ORGANIC COMPOUNDS * HALOGENATED SOLVENTS
Confirmed COC:	NONE SPECIFIED
Potential Description:	NONE SPECIFIED
Alias Name:	LOS COYOTES SHOPPING CENTER
Alias Type:	Alternate Name
Alias Name:	ROYALTY CLEANERS
Alias Type:	Alternate Name
Alias Name:	110002726621
Alias Type:	EPA (FRS #)
Alias Name:	19720015
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Site Screening
Completed Date:	10/02/1995
Comments:	The Department received a Non-Emergency Hazardous Substance Release Report dated September 21, 1995. Soil and ground- water at the site are contaminated with PCE. Due to evidence of a hazardous substance release, DTSC recommended a PEA and notified the RP thereof.
Future Area Name:	Not reported
Future Sub Area Name:	Not reported
Future Document Type:	Not reported

LOS COYOTES CENTER (Continued) **1000149356**

Future Due Date:	Not reported
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

SLIC REG 4:

Region:	4
Facility Status:	Post Remediation Monitoring
SLIC:	0537
Substance:	VOCs
Staff:	GJH

CPS-SLIC:

Name:	ROYALTY CLEANERS
Address:	3378 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA
Region:	STATE
Facility Status:	**Open - Verification Monitoring**
Status Date:	11/15/2011
Global Id:	SL184301413
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Lead Agency Case Number:	Not reported
Latitude:	33.8181264997505
Longitude:	-118.108820915222
Case Type:	Cleanup Program Site
Case Worker:	RE
Local Agency:	Not reported
RB Case Number:	0537
File Location:	Regional Board
Potential Media Affected:	Aquifer used for drinking water supply, Soil, Soil Vapor
Potential Contaminants of Concern:	Tetrachloroethylene (PCE)
Site History:	A dry cleaning operation operated at the site from 1970 until 1990. The former dry cleaner is one of 11 former retail spaces that were demolished during construction of the Ralphs Grocery store in October 2000. Site investigations conducted indicated that soil and groundwater beneath the site was impacted by volatile organic compounds. A soil vapor extraction and air sparing system operation at the site between January 1 and December 26, 2001 to remediate the subsurface soil. Groundwater monitoring is currently being implemented.

Click here to access the California GeoTracker records for this facility:

FINDS:

Registry ID: 110002726621

Click Here:

Environmental Interest/Information System:

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and

LOS COYOTES CENTER (Continued) **1000149356**

corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000149356
Registry ID:	110002726621
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110002726621
Name:	LOS COYOTES CENTER
Address:	3378 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90808

DRYCLEAN SOUTH COAST:

Name:	ROYALTY CLEANERS
Address:	3378 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90808
Facility ID:	39562
Application Number:	C42999
Permit Number:	M32496
Status:	O
Representative Name:	ELI COHEN
Representative Telephone:	213 4215511
Permit Status:	EXPIRED
BCAT Number:	000234
BCAT Description:	DRY CLEANING EQUIP PERCHLOROETHYLENE
CCAT Number:	02
CCAT Description:	ADSORBER (DRY CLEANING) REGENERATIVE
UTM East:	0
UTM North:	0

Name:	ROYALTY CLEANERS
Address:	3378 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90800
Facility ID:	53927
Application Number:	146712
Permit Number:	M52919
Status:	I
Representative Name:	Not reported
Representative Telephone:	Not reported
Permit Status:	INACTIVE
BCAT Number:	000234
BCAT Description:	DRY CLEANING EQUIP PERCHLOROETHYLENE
CCAT Number:	02
CCAT Description:	ADSORBER (DRY CLEANING) REGENERATIVE
UTM East:	398.19000244
UTM North:	3742.5400391

EMI:

Name:	ROYALTY CLEANERS
Address:	3378 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90808
Year:	1987
County Code:	19
Air Basin:	SC
Facility ID:	53927
Air District Name:	SC

LOS COYOTES CENTER (Continued) **1000149356**

SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

Name:	ROYALTY CLEANERS
Address:	3378 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90808
Year:	1990
County Code:	19
Air Basin:	SC
Facility ID:	53927
Air District Name:	SC
SIC Code:	7216
Air District Name:	SOUTH COAST AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	2
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers and Smllr Tons/Yr:	0

CERS:

Name:	ROYALTY CLEANERS
Address:	3378 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA
Site ID:	259552
CERS ID:	SL184301413
CERS Description:	Cleanup Program Site

Affiliation:

Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	ROBERT EHE - LOS ANGELES RWQCB (REGION 4)
Entity Title:	Not reported
Affiliation Address:	320 W 4TH ST., SUITE 200
Affiliation City:	LOS ANGELES
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	Not reported

D11 SSW < 1/8 0.093 mi. 492 ft. | **AMY CASTRO** | **RCRA NonGen / NLR** | **1025842273**
3192 CARFAX AVENUE | **CAC003021882**
LONG BEACH, CA 90808

Site 1 of 2 in cluster D

Relative: Lower

Actual: 26 ft.

RCRA NonGen / NLR:

Date form received by agency:	2019-06-28 00:00:00.0
Facility name:	AMY CASTRO
Facility address:	3192 CARFAX AVENUE LONG BEACH, CA 90808
EPA ID:	CAC003021882
Contact:	AMY CASTRO
Contact address:	3192 CARFAX AVENUE LONG BEACH, CA 90808
Contact country:	Not reported
Contact telephone:	562-301-0558
Contact email:	NANCYRUIZ@ALLIANCE-ENVIRO.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	AMY CASTRO
Owner/operator address:	3192 CARFAX AVENUE LONG BEACH, CA 90808
Owner/operator country:	Not reported
Owner/operator telephone:	562-301-0558
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	AMY CASTRO
Owner/operator address:	3192 CARFAX AVENUE LONG BEACH, CA 90808
Owner/operator country:	Not reported
Owner/operator telephone:	562-301-0558
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

AMY CASTRO (Continued) **1025842273**

Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

C12
NNE
< 1/8
0.093 mi.
492 ft.

RALPHS #0058-703 **RCRA-LQG** **1016954085**
3380 LOS COYOTES DIAGONAL **CAD981580665**
LONG BEACH, CA 90808

Site 3 of 5 in cluster C

Relative:
Higher

Actual:
27 ft.

RCRA-LQG:

Date form received by agency:	2014-03-03 00:00:00.0
Facility name:	RALPHS #0058-703
Facility address:	3380 LOS COYOTES DIAGONAL LONG BEACH, CA 90808
EPA ID:	CAD981580665
Mailing address:	LOS COYOTES DIAGONAL LONG BEACH, CA 90808
Contact:	MELISSA PENA
Contact address:	LOS COYOTES DIAGONAL LONG BEACH, CA 90808
Contact country:	Not reported
Contact telephone:	310-884-4016
Contact email:	MELISSA.PENA@RALPHS.COM
EPA Region:	09
Classification:	Large Quantity Generator
Description:	Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:

Owner/operator name:	RALPHS GROCERY CO
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	1961-04-11 00:00:00.
Owner/Op end date:	Not reported

RALPHS #0058-703 (Continued) **1016954085**

Owner/operator name:	SLAUSON & CRENSHAW ASSOCIATES, ACLP
Owner/operator address:	W 6RH ST 6TH FL LOS ANGELES, CA 90017
Owner/operator country:	Not reported
Owner/operator telephone:	213-683-0500
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	1968-12-16 00:00:00.
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Hazardous Waste Summary:

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: D010
. Waste name: SELENIUM

RALPHS #0058-703 (Continued) **1016954085**

. Waste code: D011
. Waste name: SILVER

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D022
. Waste name: CHLOROFORM

. Waste code: D024
. Waste name: M-CRESOL

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

. Waste code: U001
. Waste name: ACETALDEHYDE (I) (OR) ETHANAL (I)

. Waste code: U002
. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U010
. Waste name: AZIRINO [2',3':3,4]PYRROLO[1,2-A]INDOLE-4,7-DIONE, 6-AMINO-8-[[(AMINOCARBONYL)OXY]METHYL]-1,1A,2,8,8A,8B-HEXAHYDRO-8A-METHOXY-5-METHYL-, [1AS-(1AALPHA, 8BETA, 8AALPHA, 8BALPHA)]- (OR) MITOMYCIN C

. Waste code: U035
. Waste name: BENZENEBUTANOIC ACID, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) CHLORAMBUCIL

. Waste code: U044
. Waste name: CHLOROFORM (OR) METHANE, TRICHLORO-

. Waste code: U058
. Waste name: 2H-1,3,2-OXAZAPHOSPHORIN-2-AMINE, N,N-BIS(2-CHLOROETHYL)TETRAHYDRO-, 2-OXIDE (OR) CYCLOPHOSPHAMIDE

. Waste code: U059
. Waste name: 5,12-NAPHTHACENEDIONE, 8-ACETYL-10-[(3-AMINO-2,3,6-TRIDEOXY)-ALPHA-L-LYXO-HEXOPYRANOSYL)OXY]-7,8,9,10-TETRAHYDRO-6,8,11-TRIHYDROXY-1-METHOXY-, (8S-CIS)- (OR) DAUNOMYCIN

. Waste code: U089
. Waste name: DIETHYLSTILBESTEROL (OR) PHENOL, 4,4'-(1,2-DIETHYL-1,2-ETHENEDIYL)BIS,

RALPHS #0058-703 (Continued) **1016954085**

(E)-

. Waste code: U129
. Waste name: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE

. Waste code: U132
. Waste name: HEXACHLOROPHENE (OR) PHENOL, 2,2'-METHYLENEBIS[3,4,6-TRICHLORO-

. Waste code: U144
. Waste name: ACETIC ACID, LEAD(2+) SALT (OR) LEAD ACETATE

. Waste code: U150
. Waste name: L-PHENYLALANINE, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) MELPHALAN

. Waste code: U187
. Waste name: ACETAMIDE, N-(4-ETHOXYPHENYL)- (OR) PHENACETIN

. Waste code: U188
. Waste name: PHENOL

. Waste code: U200
. Waste name: RESERPINE (OR) YOHIMBAN-16-CARBOXYLIC ACID, 11,17-DIMETHOXY-18-[(3,4,5-TRIMETHOXYBENZOYL)OXY]-, METHYL ESTER, (3BETA, 16BETA, 17ALPHA, 18BETA, 20ALPHA)-

. Waste code: U201
. Waste name: 1,3-BENZENEDIOL (OR) RESORCINOL

. Waste code: U202
. Waste name: 1,2-BENZISOTHIAZOL-3(2H)-ONE, 1,1-DIOXIDE, & SALTS

. Waste code: U204
. Waste name: SELENIOUS ACID (OR) SELENIUM DIOXIDE

. Waste code: U205
. Waste name: SELENIUM SULFIDE (OR) SELENIUM SULFIDE SES2 (R,T)

Violation Status: No violations found

C13 **RALPHS NO 0058 703** **RCRA-LQG** **1016674859**
NNE **3380 LOS COYOTES DIAGONAL** **CAR000244590**
< 1/8 **LONG BEACH, CA 90808**
0.093 mi.
492 ft. **Site 4 of 5 in cluster C**

Relative:
Higher

Actual:
27 ft.

RCRA-LQG:
Date form received by agency: 2014-05-20 00:00:00.0
Facility name: RALPHS NO 0058 703
Facility address: 3380 LOS COYOTES DIAGONAL
LONG BEACH, CA 90808
EPA ID: CAR000244590
Mailing address: 1100 W ARTESIA BLVD
COMPTON, CA 90220
Contact: MELISSA PENA
Contact address: 1100 W ARTESIA BLVD
COMPTON, CA 90220
Contact country: US
Contact telephone: 310-884-4016

RALPHS NO 0058 703 (Continued) **1016674859**

Contact email: MELISSA.PENA@RALPHS.COM
EPA Region: 09
Classification: Large Quantity Generator
Description: Handler: generates 1,000 kg or more of hazardous waste during any calendar month; or generates more than 1 kg of acutely hazardous waste during any calendar month; or generates more than 100 kg of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month; or generates 1 kg or less of acutely hazardous waste during any calendar month, and accumulates more than 1 kg of acutely hazardous waste at any time; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates more than 100 kg of that material at any time

Owner/Operator Summary:
Owner/operator name: RALPHS GROCERY CO
Owner/operator address: Not reported
Not reported
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 1961-04-11 00:00:00.
Owner/Op end date: Not reported

Owner/operator name: SLAUSON AND CRENSHAW ASSOCIATES ACLP
Owner/operator address: 800 W 6TH ST 6TH FLOOR
LOS ANGELES, CA 90017
Owner/operator country: US
Owner/operator telephone: 213-683-0500
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 1968-12-16 00:00:00.
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No

RALPHS NO 0058 703 (Continued) **1016674859**

Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 2014-03-05 00:00:00.0
Site name: RALPHS NO 0058 703
Classification: Large Quantity Generator

Hazardous Waste Summary:

. Waste code: 122
. Waste name: Alkaline solution without metals (pH > 12.5)

. Waste code: 141
. Waste name: Off-specification, aged, or surplus inorganics

. Waste code: 181
. Waste name: Other inorganic solid waste

. Waste code: 214
. Waste name: Unspecified solvent mixture

. Waste code: 311
. Waste name: Pharmaceutical waste

. Waste code: 331
. Waste name: Off-specification, aged, or surplus organics

. Waste code: 352
. Waste name: Other organic solids

. Waste code: 791
. Waste name: Liquids with pH < 2

. Waste code: D001
. Waste name: IGNITABLE WASTE

. Waste code: D002
. Waste name: CORROSIVE WASTE

. Waste code: D005
. Waste name: BARIUM

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D007
. Waste name: CHROMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

RALPHS NO 0058 703 (Continued) **1016674859**

. Waste code: D010
. Waste name: SELENIUM

. Waste code: D011
. Waste name: SILVER

. Waste code: D016
. Waste name: 2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)

. Waste code: D018
. Waste name: BENZENE

. Waste code: D022
. Waste name: CHLOROFORM

. Waste code: D024
. Waste name: M-CRESOL

. Waste code: D035
. Waste name: METHYL ETHYL KETONE

. Waste code: P001
. Waste name: 2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%

. Waste code: P075
. Waste name: NICOTINE, & SALTS (OR) PYRIDINE, 3-(1-METHYL-2-PYRROLIDINYL)-,(S)-, & SALTS

. Waste code: U002
. Waste name: 2-PROPANONE (I) (OR) ACETONE (I)

. Waste code: U010
. Waste name: AZIRINO [2',3':3,4]PYRROLO[1,2-A]INDOLE-4,7-DIONE, 6-AMINO-8-[[(AMINOCARBONYL)OXY]METHYL]-1,1A,2,8,8A,8B-HEXAHYDRO-8A-MET HOXY-5-METHYL-, [1AS-(1AALPHA, 8BETA, 8AALPHA, 8BALPHA)]- (OR) MITOMYCIN C

. Waste code: U035
. Waste name: BENZENEBUTANOIC ACID, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) CHLORAMBUCIL

. Waste code: U044
. Waste name: CHLOROFORM (OR) METHANE, TRICHLORO-

. Waste code: U058
. Waste name: 2H-1,3,2-OXAZAPHOSPHORIN-2-AMINE, N,N-BIS(2-CHLOROETHYL)TETRAHYDRO-, 2-OXIDE (OR) CYCLOPHOSPHAMIDE

. Waste code: U059
. Waste name: 5,12-NAPHTHACENEDIONE, 8-ACETYL-10-[(3-AMINO-2,3,6-TRIDEOXY)-ALPHA-L-LYXO-HEXOPYRANOSYL)OXY]-7,8,9,10-TETRAHYDRO-6,8,11-TRIHYDROXY-1-METHOXY-, (8S-CIS)- (OR) DAUNOMYCIN

. Waste code: U089
. Waste name: DIETHYLSTILBESTEROL (OR) PHENOL, 4,4'-(1,2-DIETHYL-1,2-ETHENEDIYL)BIS,

RALPHS NO 0058 703 (Continued) **1016674859**

(E)-

. Waste code: U129
. Waste name: CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE

. Waste code: U132
. Waste name: HEXACHLOROPHENE (OR) PHENOL, 2,2'-METHYLENEBIS[3,4,6-TRICHLORO-

. Waste code: U144
. Waste name: ACETIC ACID, LEAD(2+) SALT (OR) LEAD ACETATE

. Waste code: U150
. Waste name: L-PHENYLALANINE, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) MELPHALAN

. Waste code: U187
. Waste name: ACETAMIDE, N-(4-ETHOXYPHENYL)- (OR) PHENACETIN

. Waste code: U188
. Waste name: PHENOL

. Waste code: U200
. Waste name: RESERPINE (OR) YOHIMBAN-16-CARBOXYLIC ACID, 11,17-DIMETHOXY-18-[(3,4,5-TRIMETHOXYBENZOYL)OXY]-, METHYL ESTER, (3BETA, 16BETA, 17ALPHA, 18BETA, 20ALPHA)-

. Waste code: U201
. Waste name: 1,3-BENZENEDIOL (OR) RESORCINOL

. Waste code: U202
. Waste name: 1,2-BENZISOTHIAZOL-3(2H)-ONE, 1,1-DIOXIDE, & SALTS

. Waste code: U204
. Waste name: SELENIOUS ACID (OR) SELENIUM DIOXIDE

. Waste code: U205
. Waste name: SELENIUM SULFIDE (OR) SELENIUM SULFIDE SES2 (R,T)

Violation Status: No violations found

C14 **CBHS @ LOS ALTOS - 1 S/W STEEL** **UST** **U003660994**
NE **3340 LOS COYOTES DIAG** **N/A**
< 1/8 **LONG BEACH, CA**
0.097 mi.
512 ft. **Site 5 of 5 in cluster C**

Relative: Higher

Actual: 28 ft.

LONG BEACH UST:

DATA AS OF 02/25/2014:

Name:	CBHS @ LOS ALTOS - 1 S/W STEEL
Address:	3340 LOS COYOTES DIAG
City,State,Zip:	LONG BEACH, CA
Region:	LONG BEACH
Tanks:	1T
Tank Test:	01/08/96
Leak Test:	01/08/96
Tank Status:	Not reported

15 SE < 1/8 0.099 mi. 525 ft. | **GREEN VALLEY CLEANERS**
3221 PALO VERDE AVE # 1-AAA
LONG BEACH, CA 90808 | **DRYCLEANERS HWTS** | **S111417779 N/A**

Relative: Lower

Actual: 26 ft.

DRYCLEANERS:

Name:	GREEN VALLEY CLEANERS
Address:	3221 PALO VERDE AVE # 1-AAA
City,State,Zip:	LONG BEACH, CA 908084111
EPA Id:	CAL000368514
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
SIC Code:	7211
SIC Description:	Power Laundries, Family and Commercial
Create Date:	10/21/2011
Facility Active:	No
Inactive Date:	06/30/2013
Facility Addr2:	Not reported
Owner Name:	JOANNE KIM
Owner Address:	3221 PALO VERDE AVE # 1-AAA
Owner Address 2:	Not reported
Owner Telephone:	9088920220
Contact Name:	JOANNE KIM
Contact Address:	3221 PALO VERDE AVE # 1-AAA
Contact Address 2:	Not reported
Contact Telephone:	9088920220
Mailing Name:	Not reported
Mailing Address 1:	3221 PALO VERDE AVE # 1-AAA
Mailing Address 2:	Not reported
Mailing City:	LONG BEACH
Mailing State:	CA
Mailing Zip:	908084111
Owner Fax:	Not reported
Region Code:	3

HWTS:

Name:	GREEN VALLEY CLEANERS
Address:	3221 PALO VERDE AVE # 1-AAA
Address 2:	Not reported
City,State,Zip:	LONG BEACH, CA 908084111
EPA ID:	CAL000368514
Inactive Date:	06/30/2013
Create Date:	10/21/2011
Last Act Date:	03/19/2014
Mailing Name:	Not reported
Mailing Address:	3221 PALO VERDE AVE # 1-AAA
Mailing Address 2:	Not reported
Mailing City,State,Zip:	LONG BEACH, CA 908084111
Owner Name:	JOANNE KIM
Owner Address:	3221 PALO VERDE AVE # 1-AAA
Owner Address 2:	Not reported
Owner City,State,Zip:	LONG BEACH, CA 908084111
Contact Name:	JOANNE KIM
Contact Address:	3221 PALO VERDE AVE # 1-AAA
Contact Address 2:	Not reported
City,State,Zip:	LONG BEACH, CA 908084111

NAICS:

GREEN VALLEY CLEANERS (Continued) **S111417779**

EPA ID:	CAL000368514
Create Date:	2011-10-21 10:14:43
NAICS Code:	81232
NAICS Description:	Drycleaning and Laundry Services (except Coin-Operated)
Issued EPA ID Date:	2011-10-21 10:14:43
Inactive Date:	2013-06-30 00:00:00
Facility Name:	GREEN VALLEY CLEANERS
Facility Address:	3221 PALO VERDE AVE # 1-AAA
Facility Address 2:	Not reported
Facility City:	LONG BEACH
Facility County:	19
Facility State:	CA
Facility Zip:	908084111

16
ENE
< 1/8
0.103 mi.
544 ft.

FIRE STATION 18 **UST** **U003661277**
3361 PALO VERDE AVE **N/A**
LONG BEACH, CA

Relative:
Higher

Actual:
28 ft.

LONG BEACH UST:

DATA AS OF 02/25/2014:

Name:	FIRE STATION 18
Address:	3361 PALO VERDE AVE
City,State,Zip:	LONG BEACH, CA
Region:	LONG BEACH
Tanks:	0T
Tank Test:	Not reported
Leak Test:	Not reported
Tank Status:	Not reported

D17
SW
< 1/8
0.119 mi.
627 ft.

NEBULA INVESTSMENTS LLC **RCRA NonGen / NLR** **1025854297**
3209 SHADYPARK DR **CAC003034525**
LONG BEACH, CA 90808

Site 2 of 2 in cluster D

Relative:
Lower

Actual:
26 ft.

RCRA NonGen / NLR:

Date form received by agency:	2019-09-18 00:00:00.0
Facility name:	NEBULA INVESTSMENTS LLC
Facility address:	3209 SHADYPARK DR LONG BEACH, CA 90808-3927
EPA ID:	CAC003034525
Mailing address:	5753 E SANTA ANA CANYON RD STE G589 ANAHEIM, CA 92807
Contact:	ERIC WU
Contact address:	5753 E SANTA ANA CANYON RD STE G589 ANAHEIM, CA 92807
Contact country:	Not reported
Contact telephone:	714-272-2228
Contact email:	NANCYRUIZ@ALLIANCE-ENVIRO.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

NEBULA INVESTSMENTS LLC (Continued) **1025854297**

Owner/Operator Summary:

Owner/operator name:	NEBULA INVESTSMENTS LLC
Owner/operator address:	5753 E SANTA ANA CANYON RD STE G589 ANAHEIM, CA 92807
Owner/operator country:	Not reported
Owner/operator telephone:	714-272-2228
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	ERIC WU
Owner/operator address:	5753 E SANTA ANA CANYON RD STE G589 ANAHEIM, CA 92807
Owner/operator country:	Not reported
Owner/operator telephone:	714-272-2228
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	Not reported
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

18
SW
1/8-1/4
0.128 mi.
678 ft.

ANGELA BROWN
3203 SHADYPARK DRIVE
LONG BEACH, CA 90808

RCRA NonGen / NLR **1024782261**
CAC003002238

Relative:
Lower

Actual:
26 ft.

RCRA NonGen / NLR:

Date form received by agency:	2019-02-21 00:00:00.0
Facility name:	ANGELA BROWN
Facility address:	3203 SHADYPARK DRIVE LONG BEACH, CA 90808
EPA ID:	CAC003002238

ANGELA BROWN (Continued) **1024782261**

Contact:	ANGELA BROWN
Contact address:	3203 SHADYPARK DRIVE LONG BEACH, CA 90808
Contact country:	Not reported
Contact telephone:	562-277-6481
Contact email:	NANCYRUIZ@ALLIANCE-ENVIRO.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	ANGELA BROWN
Owner/operator address:	3203 SHADYPARK DRIVE LONG BEACH, CA 90808
Owner/operator country:	Not reported
Owner/operator telephone:	562-277-6481
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	ANGELA BROWN
Owner/operator address:	3203 SHADYPARK DRIVE LONG BEACH, CA 90808
Owner/operator country:	Not reported
Owner/operator telephone:	562-277-6481
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

19 North 1/8-1/4 0.136 mi. 717 ft. | **STAN FREEMAN 6229 EAST WARDLOW LONG BEACH, CA 90808** | **RCRA NonGen / NLR** | **1026049912 CAC003056716**

Relative: Higher

Actual: 28 ft.

RCRA NonGen / NLR:

Date form received by agency:	2020-02-20 00:00:00.0
Facility name:	STAN FREEMAN
Facility address:	6229 EAST WARDLOW LONG BEACH, CA 90808
EPA ID:	CAC003056716
Contact:	STAN FREEMAN
Contact address:	6229 EAST WARDLOW LONG BEACH, CA 90808
Contact country:	Not reported
Contact telephone:	562-230-5767
Contact email:	NANCYRUIZ@ALLIANCE-ENVIRO.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	STAN FREEMAN
Owner/operator address:	6229 EAST WARDLOW LONG BEACH, CA 90808
Owner/operator country:	Not reported
Owner/operator telephone:	562-230-5767
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	STAN FREEMAN
Owner/operator address:	6229 EAST WARDLOW LONG BEACH, CA 90808
Owner/operator country:	Not reported
Owner/operator telephone:	562-230-5767
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	Not reported
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

STAN FREEMAN (Continued) **1026049912**

Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

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20 ESE 1/8-1/4 0.182 mi. 963 ft. | **CHRISTOPHER HAYNIE**
3233 IROQUOIS AVE
LONG BEACH, CA 90808 | **RCRA NonGen / NLR** | **1024765646**
CAC002985515

Relative: Lower

Actual: 26 ft.

RCRA NonGen / NLR:

Date form received by agency:	2018-10-18 00:00:00.0
Facility name:	CHRISTOPHER HAYNIE
Facility address:	3233 IROQUOIS AVE LONG BEACH, CA 90808
EPA ID:	CAC002985515
Contact:	CHRISTOPHER HAYNIE
Contact address:	3233 IROQUOIS AVE LONG BEACH, CA 90808
Contact country:	Not reported
Contact telephone:	714-227-7700
Contact email:	JANET@WDRCONTRACTING.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	CHRISTOPHER HAYNIE
Owner/operator address:	3233 IROQUOIS AVE LONG BEACH, CA 90808
Owner/operator country:	Not reported
Owner/operator telephone:	714-227-7700
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	CHRISTOPHER HAYNIE
Owner/operator address:	3233 IROQUOIS AVE LONG BEACH, CA 90808
Owner/operator country:	Not reported
Owner/operator telephone:	714-227-7700
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

CHRISTOPHER HAYNIE (Continued) **1024765646**

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

21
West
1/8-1/4
0.203 mi.
1074 ft.

CLIFFORD ROBINSON
3248 FAUST AVE
LONG BEACH, CA 90808

RCRA NonGen / NLR **1025854615**
CAC003034855

Relative:
Higher

Actual:
28 ft.

RCRA NonGen / NLR:

Date form received by agency:	2019-09-20 00:00:00.0
Facility name:	CLIFFORD ROBINSON
Facility address:	3248 FAUST AVE LONG BEACH, CA 90808-3807
EPA ID:	CAC003034855
Contact:	CLIFFORD ROBINSON
Contact address:	3248 FAUST AVE LONG BEACH, CA 90808-3807
Contact country:	Not reported
Contact telephone:	562-429-0092
Contact email:	USSROBINSON@AOL.COM
EPA Region:	09
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	CLIFFORD ROBINSON
Owner/operator address:	3248 FAUST AVE LONG BEACH, CA 90808
Owner/operator country:	Not reported
Owner/operator telephone:	562-429-0092
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	CLIFFORD ROBINSON
Owner/operator address:	3248 FAUST AVE LONG BEACH, CA 90808

CLIFFORD ROBINSON (Continued) **1025854615**

Owner/operator country:	Not reported
Owner/operator telephone:	562-429-0092
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Other
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	Not reported
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

Violation Status: No violations found

22
SW
1/4-1/2
0.328 mi.
1732 ft.

THRIFTY SERVICE STATION #023
3100 LOS COYOTES DIAGONAL
LONG BEACH, CA 90808

LUST **S103891216**
Cortese **N/A**
HIST CORTESE
CERS

Relative:
Lower

Actual:
26 ft.

LUST REG 4:

Region:	4	
Regional Board:	04	
County:	Los Angeles	
Facility Id:	908080098	
Status:	Remedial action (cleanup) Underway	
Substance:	Gasoline	
Substance Quantity:	Not reported	
Local Case No:	Not reported	
Case Type:	Groundwater	
Abatement Method Used at the Site:		Pump and Treat Groundwater
Global ID:	T0603701889	
W Global ID:	Not reported	
Staff:	JLC	
Local Agency:	19060	
Cross Street:	PAGEANTRY	
Enforcement Type:	SI	
Date Leak Discovered:	Not reported	
Date Leak First Reported:		2/26/1988
Date Leak Record Entered:	6/20/1988	
Date Confirmation Began:	Not reported	
Date Leak Stopped:	Not reported	
Date Case Last Changed on Database:		7/12/2002

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Date the Case was Closed:	Not reported
How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	Not reported
Leak Source:	Not reported
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	2769.5145182325990779509240492
Source of Cleanup Funding:	Not reported
Preliminary Site Assessment Workplan Submitted:	3/6/1987
Preliminary Site Assessment Began:	Not reported
Pollution Characterization Began:	8/25/1999
Remediation Plan Submitted:	8/25/1999
Remedial Action Underway:	7/19/2004
Post Remedial Action Monitoring Began:	2/26/1988
Enforcement Action Date:	1/18/2001
Historical Max MTBE Date:	6/6/2000
Hist Max MTBE Conc in Groundwater:	166000
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Yes
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Owner Contact:	Not reported
Responsible Party:	RICHARD VOGL
RP Address:	3151 AIRWAY AVE., BLDG. H1
Program:	LUST
Lat/Long:	33.8127824 / -1
Local Agency Staff:	Not reported
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Assigned Name:	Not reported
Summary:	12/21/00 ADDENDUM TO CORRECTIVE ACTION PLAN; 1/8/01 4TH QTR GW MON RPT 2000; 4/3/01 SITE HEALTH & SAFETY PLAN; 4/11/01 1ST QTR GW MON PRT 2001

LUST:

Name:	THRIFTY SERVICE STATION #023
Address:	3100 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90808
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603701889
Global Id:	T0603701889
Latitude:	33.8127959963793
Longitude:	-118.114711046219
Status:	Completed - Case Closed
Status Date:	12/17/2019
Case Worker:	ALT
RB Case Number:	908080098
Local Agency:	LONG BEACH, CITY OF
File Location:	Regional Board
Local Case Number:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0603701889
Contact Type: Regional Board Caseworker
Contact Name: ADAM TAING
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 West 4th Street
City: LOS ANGELES
Email: adam.taing@waterboards.ca.gov
Phone Number: 2135766752

Global Id: T0603701889
Contact Type: Local Agency Caseworker
Contact Name: CARMEN PIRO
Organization Name: LONG BEACH, CITY OF
Address: 2525 GRAND AVE.
City: LONG BEACH
Email: carmen.piro@longbeach.gov
Phone Number: 5625704137

LUST:
Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 02/21/2017
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 04/07/2017
Action: Staff Letter

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2007
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2003
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2004
Action: Monitoring Report - Quarterly

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2004
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2003
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2004
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2010
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2010
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2009
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE
Date: 11/03/2010
Action: Request for Closure

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2015
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Date: 10/15/2017
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2018
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 06/17/2019
Action: Well Destruction Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 03/06/1987
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2017
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2003
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2004
Action: Soil and Water Investigation Report

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2004
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2011
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2017
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE
Date: 08/07/2017
Action: Final Remedial Action Report / Corrective Action Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2018
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/16/2017
Action: Soil Vapor Intrusion Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 02/21/2019
Action: Correspondence

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2018
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 05/29/2013
Action: Request for Closure - Regulator Responded

Global Id: T0603701889
Action Type: RESPONSE

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Date: 04/15/2016
Action: Monitoring Report - Quarterly - Regulator Responded

Global Id: T0603701889
Action Type: RESPONSE
Date: 12/22/2015
Action: Request for Closure - Regulator Responded

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2016
Action: Request for Closure - Regulator Responded

Global Id: T0603701889
Action Type: RESPONSE
Date: 11/09/2016
Action: Request for Closure - Regulator Responded

Global Id: T0603701889
Action Type: RESPONSE
Date: 11/17/2017
Action: Corrective Action Plan / Remedial Action Plan - Regulator Responded

Global Id: T0603701889
Action Type: RESPONSE
Date: 05/22/2017
Action: Soil Vapor Intrusion Investigation Workplan - Regulator Responded

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/13/2017
Action: Request for Closure - Regulator Responded

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/21/2017
Action: Corrective Action Plan / Remedial Action Plan - Regulator Responded

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 03/24/2008
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 03/22/2017
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2005
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2005
Action: Monitoring Report - Quarterly

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2005
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2005
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2004
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2005
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2005
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2006
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Date: 04/15/2006
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2011
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2012
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: REMEDIATION
Date: 07/01/1992
Action: Free Product Removal

Global Id: T0603701889
Action Type: REMEDIATION
Date: 12/06/2001
Action: Dual Phase Extraction

Global Id: T0603701889
Action Type: REMEDIATION
Date: 12/01/2001
Action: Dual Phase Extraction

Global Id: T0603701889
Action Type: REMEDIATION
Date: 01/05/1996
Action: Excavation

Global Id: T0603701889
Action Type: REMEDIATION
Date: 10/01/2014
Action: Dual Phase Extraction

Global Id: T0603701889
Action Type: REMEDIATION
Date: 05/04/2017
Action: Dual Phase Extraction

Global Id: T0603701889
Action Type: REMEDIATION
Date: 10/16/2014
Action: Dual Phase Extraction

Global Id: T0603701889
Action Type: REMEDIATION
Date: 04/01/1985
Action: Pump & Treat (P&T) Groundwater

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 12/21/2018
Action: Notification - Preclosure

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2005
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2006
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2005
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2007
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2008
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2011
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Date: 07/15/2012
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2012
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 06/07/2017
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 01/22/2018
Action: Staff Letter

Global Id: T0603701889
Action Type: Other
Date: 02/26/1988
Action: Leak Reported

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2007
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2007
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2005
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2006
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2006
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/12/2007
Action: Soil and Water Investigation Report

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 03/13/2019
Action: Staff Letter

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2006
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2006
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2006
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2007
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2007
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2008
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2008
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Date: 04/15/2008
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 12/09/1985
Action: Site Assessment Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/02/1987
Action: CAP/RAP - Other Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 12/27/2012
Action: Request for Closure

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2013
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 01/14/2002
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 09/06/2002
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 06/15/2009
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 08/28/2017
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 12/17/2019
Action: Closure/No Further Action Letter

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2009
Action: Monitoring Report - Semi-Annually

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Global Id: T0603701889
Action Type: RESPONSE
Date: 08/30/1985
Action: Tank Removal Report / UST Sampling Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 05/20/2009
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2013
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2013
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2015
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 08/25/1999
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 12/02/2002
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 06/18/2003
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 10/13/2000
Action: Staff Letter

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2009
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2008
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Date: 10/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2007
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2002
Action: Interim Remedial Action Plan

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2005
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2003
Action: Sensitive Receptor Survey Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2015
Action: Sensitive Receptor Survey Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2014
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2014
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2015
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 05/06/2002
Action: Site Visit / Inspection / Sampling

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 04/19/2004
Action: Site Visit / Inspection / Sampling

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 06/09/2014
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 04/29/2019
Action: Staff Letter

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 01/03/2019
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2009
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2008
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2002
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Date: 01/15/2003
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2009
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2010
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/19/2010
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2010
Action: Conceptual Site Model

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2015
Action: Remedial Progress Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2015
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2015
Action: Monitoring Report - Semi-Annually

Global Id: T0603701889
Action Type: ENFORCEMENT
Date: 08/13/2009
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2002
Action: Soil and Water Investigation Report

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 04/15/2002
Action: Interim Remedial Action Plan

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701889
Action Type: RESPONSE
Date: 07/15/2002
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 10/15/2002
Action: Soil and Water Investigation Report

Global Id: T0603701889
Action Type: RESPONSE
Date: 11/15/2002
Action: CAP/RAP - Final Remediation / Design Plan

Global Id: T0603701889
Action Type: RESPONSE
Date: 01/15/2016
Action: Monitoring Report - Quarterly

LUST:
Global Id: T0603701889
Status: Open - Case Begin Date
Status Date: 03/06/1987

Global Id: T0603701889
Status: Open - Site Assessment
Status Date: 03/06/1987

Global Id: T0603701889
Status: Open - Remediation
Status Date: 08/25/1999

Global Id: T0603701889
Status: Open - Site Assessment
Status Date: 08/25/1999

Global Id: T0603701889
Status: Open - Remediation
Status Date: 01/18/2001

Global Id: T0603701889

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Status: Open - Site Assessment
Status Date: 12/02/2002

Global Id: T0603701889
Status: Open - Remediation
Status Date: 01/15/2003

Global Id: T0603701889
Status: Open - Remediation
Status Date: 04/13/2003

Global Id: T0603701889
Status: Open - Remediation
Status Date: 04/16/2003

Global Id: T0603701889
Status: Open - Remediation
Status Date: 06/18/2003

Global Id: T0603701889
Status: Open - Remediation
Status Date: 07/15/2003

Global Id: T0603701889
Status: Open - Remediation
Status Date: 10/15/2003

Global Id: T0603701889
Status: Open - Remediation
Status Date: 01/09/2004

Global Id: T0603701889
Status: Open - Remediation
Status Date: 04/16/2004

Global Id: T0603701889
Status: Open - Remediation
Status Date: 07/19/2004

Global Id: T0603701889
Status: Open - Remediation
Status Date: 10/07/2004

Global Id: T0603701889
Status: Open - Remediation
Status Date: 01/18/2005

Global Id: T0603701889
Status: Open - Remediation
Status Date: 04/19/2005

Global Id: T0603701889
Status: Open - Remediation
Status Date: 08/03/2005

Global Id: T0603701889
Status: Open - Remediation

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Status Date: 10/21/2005

Global Id: T0603701889
Status: Open - Remediation
Status Date: 01/17/2006

Global Id: T0603701889
Status: Open - Remediation
Status Date: 04/17/2006

Global Id: T0603701889
Status: Open - Remediation
Status Date: 07/17/2006

Global Id: T0603701889
Status: Open - Remediation
Status Date: 10/16/2006

Global Id: T0603701889
Status: Open - Remediation
Status Date: 01/12/2007

Global Id: T0603701889
Status: Open - Remediation
Status Date: 04/16/2007

Global Id: T0603701889
Status: Open - Remediation
Status Date: 07/13/2007

Global Id: T0603701889
Status: Open - Remediation
Status Date: 10/17/2007

Global Id: T0603701889
Status: Open - Remediation
Status Date: 01/15/2008

Global Id: T0603701889
Status: Open - Remediation
Status Date: 04/11/2008

Global Id: T0603701889
Status: Open - Eligible for Closure
Status Date: 08/13/2013

Global Id: T0603701889
Status: Open - Remediation
Status Date: 06/03/2014

Global Id: T0603701889
Status: Open - Eligible for Closure
Status Date: 12/21/2018

Global Id: T0603701889
Status: Completed - Case Closed
Status Date: 12/17/2019

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

CORTESE:

Name:	THRIFTY SERVICE STATION #023
Address:	3100 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90808
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0603701889
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

HIST CORTESE:

edr_fname:	THRIFTY SERVICE STATION #
edr_fadd1:	3100 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90808
Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	908080098

CERS:

Name:	THRIFTY SERVICE STATION #023
Address:	3100 LOS COYOTES DIAGONAL
City,State,Zip:	LONG BEACH, CA 90808
Site ID:	189766
CERS ID:	T0603701889
CERS Description:	Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	ADAM TAING - LOS ANGELES RWQCB (REGION 4)
Entity Title:	Not reported
Affiliation Address:	320 West 4th Street
Affiliation City:	LOS ANGELES
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	2135766752

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	CARMEN PIRO - LONG BEACH, CITY OF

THRIFTY SERVICE STATION #023 (Continued) **S103891216**

Entity Title:	Not reported
Affiliation Address:	2525 GRAND AVE.
Affiliation City:	LONG BEACH
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	5625704137

23
NNE
1/4-1/2
0.376 mi.
1983 ft.

TEXACO SERVICE STATION (FORMER)
3565 LOS COYOTES DIAG N
LONG BEACH, CA 90808

LUST **S104406358**
Cortese **N/A**
HIST CORTESE
CERS

Relative:
Higher

Actual:
28 ft.

LUST REG 4:

Region:	4	
Regional Board:	04	
County:	Los Angeles	
Facility Id:	908080225	
Status:	Remediation Plan	
Substance:	Gasoline	
Substance Quantity:	Not reported	
Local Case No:	Not reported	
Case Type:	Groundwater	
Abatement Method Used at the Site:		Not reported
Global ID:	T0603701902	
W Global ID:	Not reported	
Staff:	NC	
Local Agency:	19060	
Cross Street:	PALO VERDE AVE	
Enforcement Type:	DLLET	
Date Leak Discovered:	11/19/1999	
Date Leak First Reported:		1/11/1999
Date Leak Record Entered:	Not reported	
Date Confirmation Began:	Not reported	
Date Leak Stopped:	Not reported	
Date Case Last Changed on Database:		9/9/2002
Date the Case was Closed:		Not reported
How Leak Discovered:	OM	
How Leak Stopped:	Not reported	
Cause of Leak:	UNK	
Leak Source:	UNK	
Operator:	Not reported	
Water System:	Not reported	
Well Name:	Not reported	
Approx. Dist To Production Well (ft):		876.3535816914817571817044354
Source of Cleanup Funding:		UNK
Preliminary Site Assessment Workplan Submitted:		4/25/2000
Preliminary Site Assessment Began:		5/15/2000
Pollution Characterization Began:		8/21/2000
Remediation Plan Submitted:		8/25/2003
Remedial Action Underway:		Not reported
Post Remedial Action Monitoring Began:		Not reported
Enforcement Action Date:		3/13/2001
Historical Max MTBE Date:		1/1/1965
Hist Max MTBE Conc in Groundwater:		170000
Hist Max MTBE Conc in Soil:		12

TEXACO SERVICE STATION (FORMER) (Continued) **S104406358**

Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Owner Contact:	Not reported
Responsible Party:	EVERETT FERGUSON
RP Address:	P.O. BOX 7869
Program:	LUST
Lat/Long:	33.8220291 / -1
Local Agency Staff:	Not reported
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Assigned Name:	Not reported
Summary:	12-13-99 GROUNDWATER CONCENTRATION REPORTED FOR TEMPORARY WELLS; 5/15/00 WP TO CONDUCT ADD'L SITE INVESTIGATION; 12/20/00 ADDL SITE ASSESSMENT RPT; 1/18/01 4TH QTR GW MON RPT 2000

LUST:

Name:	TEXACO SERVICE STATION (FORMER)
Address:	3565 LOS COYOTES DIAG N
City,State,Zip:	LONG BEACH, CA 90808
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603701902
Global Id:	T0603701902
Latitude:	33.8220291
Longitude:	-118.1065831
Status:	Completed - Case Closed
Status Date:	12/15/2009
Case Worker:	NC
RB Case Number:	908080225
Local Agency:	LONG BEACH, CITY OF
File Location:	Regional Board
Local Case Number:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST:

Global Id:	T0603701902
Contact Type:	Local Agency Caseworker
Contact Name:	CARMEN PIRO
Organization Name:	LONG BEACH, CITY OF
Address:	2525 GRAND AVE.
City:	LONG BEACH
Email:	carmen.piro@longbeach.gov
Phone Number:	5625704137

Global Id:	T0603701902
Contact Type:	Regional Board Caseworker
Contact Name:	NOMAN CHOWDHURY
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 WEST 4TH STREET, SUITE 200
City:	LOS ANGELES
Email:	noman.chowdhury@waterboards.ca.gov

TEXACO SERVICE STATION (FORMER) (Continued) **S104406358**

Phone Number: 2135766704

LUST:

Global Id: T0603701902
Action Type: ENFORCEMENT
Date: 05/23/2005
Action: Site Visit / Inspection / Sampling

Global Id: T0603701902
Action Type: ENFORCEMENT
Date: 06/26/2006
Action: Staff Letter

Global Id: T0603701902
Action Type: Other
Date: 11/19/1999
Action: Leak Discovery

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2004
Action: Monitoring Report - Quarterly

TEXACO SERVICE STATION (FORMER) (Continued) **S104406358**

Global Id: T0603701902
Action Type: REMEDIATION
Date: 11/26/2001
Action: In Situ Physical/Chemical Treatment (other than SVE)

Global Id: T0603701902
Action Type: REMEDIATION
Date: 12/10/2000
Action: Excavation

Global Id: T0603701902
Action Type: ENFORCEMENT
Date: 03/13/2001
Action: 13267 Requirement

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2007
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2005
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2008
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2006
Action: Interim Remedial Action Plan

Global Id: T0603701902
Action Type: Other

TEXACO SERVICE STATION (FORMER) (Continued) **S104406358**

Date: 01/11/1999
Action: Leak Reported

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2007
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2006
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2006
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2006
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2007
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2008
Action: Soil and Water Investigation Report

TEXACO SERVICE STATION (FORMER) (Continued) **S104406358**

Global Id: T0603701902
Action Type: ENFORCEMENT
Date: 06/15/2009
Action: Staff Letter

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2009
Action: Conceptual Site Model

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2007
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: ENFORCEMENT
Date: 11/30/2009
Action: Notification - Preclosure

Global Id: T0603701902
Action Type: ENFORCEMENT
Date: 12/15/2009
Action: Closure/No Further Action Letter

Global Id: T0603701902
Action Type: ENFORCEMENT
Date: 11/30/2009
Action: Site Visit / Inspection / Sampling

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2007
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2008
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2008
Action: Conceptual Site Model

Global Id: T0603701902
Action Type: RESPONSE

TEXACO SERVICE STATION (FORMER) (Continued) **S104406358**

Date: 07/15/2009
Action: Monitoring Report - Semi-Annually

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2008
Action: Conceptual Site Model

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2009
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: ENFORCEMENT
Date: 08/23/2004
Action: Site Visit / Inspection / Sampling

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2009
Action: Conceptual Site Model

Global Id: T0603701902
Action Type: RESPONSE
Date: 10/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2003
Action: Corrective Action Plan / Remedial Action Plan

Global Id: T0603701902
Action Type: RESPONSE
Date: 07/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701902
Action Type: RESPONSE
Date: 04/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701902
Action Type: RESPONSE
Date: 01/15/2003
Action: Monitoring Report - Quarterly

LUST:
Global Id: T0603701902
Status: Open - Case Begin Date
Status Date: 01/11/1999

Global Id: T0603701902
Status: Open - Site Assessment
Status Date: 04/25/2000

TEXACO SERVICE STATION (FORMER) (Continued) **S104406358**

Global Id:	T0603701902
Status:	Open - Site Assessment
Status Date:	05/15/2000
Global Id:	T0603701902
Status:	Open - Site Assessment
Status Date:	08/21/2000
Global Id:	T0603701902
Status:	Open - Remediation
Status Date:	03/13/2001
Global Id:	T0603701902
Status:	Open - Remediation
Status Date:	08/25/2003
Global Id:	T0603701902
Status:	Open - Remediation
Status Date:	05/14/2007
Global Id:	T0603701902
Status:	Completed - Case Closed
Status Date:	12/15/2009

CORTESE:

Name:	TEXACO SERVICE STATION (FORMER)
Address:	3565 LOS COYOTES DIAG N
City,State,Zip:	LONG BEACH, CA 90808
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0603701902
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

HIST CORTESE:

edr_fname:	TEXACO SERVICE STATION
edr_fadd1:	3565 LOS COYOTES DIAG
City,State,Zip:	LONG BEACH, CA 90808
Region:	CORTESE

TEXACO SERVICE STATION (FORMER) (Continued) **S104406358**

Facility County Code: 19
Reg By: LTNKA
Reg Id: 908080225

CERS:
Name: TEXACO SERVICE STATION (FORMER)
Address: 3565 LOS COYOTES DIAG N
City,State,Zip: LONG BEACH, CA 90808
Site ID: 220791
CERS ID: T0603701902
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: CARMEN PIRO - LONG BEACH, CITY OF
Entity Title: Not reported
Affiliation Address: 2525 GRAND AVE.
Affiliation City: LONG BEACH
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 5625704137

Affiliation Type Desc: Regional Board Caseworker
Entity Name: NOMAN CHOWDHURY - LOS ANGELES RWQCB (REGION 4)
Entity Title: Not reported
Affiliation Address: 320 WEST 4TH STREET, SUITE 200
Affiliation City: LOS ANGELES
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 2135766704

24
South
1/4-1/2
0.413 mi.
2182 ft.

LAKEWOOD PLAZA
6223-6351 EAST SPRING STREET
LONG BEACH, CA 90808

ENVIROSTOR **S125820808**
VCP **N/A**

Relative:
Lower

Actual:
21 ft.

ENVIROSTOR:
Name: LAKEWOOD PLAZA
Address: 6223-6351 EAST SPRING STREET
City,State,Zip: LONG BEACH, CA 90808
Facility ID: 60002877
Status: Active
Status Date: 09/11/2019
Site Code: 401887
Site Type: Voluntary Cleanup
Site Type Detailed: Voluntary Cleanup
Acres: 7.3
NPL: NO
Regulatory Agencies: SMBRP
Lead Agency: SMBRP
Program Manager: Rana Georges
Supervisor: Yolanda Garza
Division Branch: Southern California Schools & Brownfields Outreach
Assembly: 70

LAKEWOOD PLAZA (Continued) **S125820808**

Senate:	33
Special Program:	Voluntary Cleanup Program
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Responsible Party
Latitude:	33.81079
Longitude:	-118.1105
APN:	719-1027-025, 719-1027-027, 719-1027-028, 719-1027-029
Past Use:	DRY CLEANING
Potential COC:	Tetrachloroethylene (PCE
Confirmed COC:	Tetrachloroethylene (PCE
Potential Description:	SV
Alias Name:	719-1027-025
Alias Type:	APN
Alias Name:	719-1027-027
Alias Type:	APN
Alias Name:	719-1027-028
Alias Type:	APN
Alias Name:	719-1027-029
Alias Type:	APN
Alias Name:	401887
Alias Type:	Project Code (Site Code)
Alias Name:	60002877
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1
Completed Date:	01/21/2020
Comments:	Provided comments during the scoping meeting. A supplemental site investigation workplan will be provided to address data gaps.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Voluntary Cleanup Agreement
Completed Date:	11/26/2019
Comments:	SVA was fully executed on 11/26/2019. Advance payment required: $21,521 due on 12/6/2019.
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Removal Action Workplan
Future Due Date:	2021
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

VCP:

Name:	LAKEWOOD PLAZA
Address:	6223-6351 EAST SPRING STREET
City,State,Zip:	LONG BEACH, CA 90808
Facility ID:	60002877
Site Type:	Voluntary Cleanup
Site Type Detail:	Voluntary Cleanup

LAKEWOOD PLAZA (Continued) **S125820808**

Site Mgmt. Req.:	NONE SPECIFIED
Acres:	7.3
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Rana Georges
Supervisor:	Yolanda Garza
Division Branch:	Southern California Schools & Brownfields Outreach
Site Code:	401887
Assembly:	70
Senate:	33
Special Programs Code:	Voluntary Cleanup Program
Status:	Active
Status Date:	09/11/2019
Restricted Use:	NO
Funding:	Responsible Party
Lat/Long:	33.81079 / -118.1105
APN:	719-1027-025, 719-1027-027, 719-1027-028, 719-1027-029
Past Use:	DRY CLEANING
Potential COC:	30022
Confirmed COC:	30022
Potential Description:	SV
Alias Name:	719-1027-025
Alias Type:	APN
Alias Name:	719-1027-027
Alias Type:	APN
Alias Name:	719-1027-028
Alias Type:	APN
Alias Name:	719-1027-029
Alias Type:	APN
Alias Name:	401887
Alias Type:	Project Code (Site Code)
Alias Name:	60002877
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Phase 1
Completed Date:	01/21/2020
Comments:	Provided comments during the scoping meeting. A supplemental site investigation workplan will be provided to address data gaps.
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Voluntary Cleanup Agreement
Completed Date:	11/26/2019
Comments:	SVA was fully executed on 11/26/2019. Advance payment required: $21,521 due on 12/6/2019.
Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Removal Action Workplan
Future Due Date:	2021
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported

LAKEWOOD PLAZA (Continued) **S125820808**

Schedule Due Date: Not reported
Schedule Revised Date: Not reported

E25 SSE 1/4-1/2 0.434 mi. 2291 ft. | **SHELL SERVICE STATION (FORMER)** | **LUST** | **S104406356**
6407 SPRING ST E | **Cortese** | **N/A**
LONG BEACH, CA 90808 | **CERS**

Site 1 of 4 in cluster E

Relative: Lower

Actual: 19 ft.

LUST REG 4:

Region:	4
Regional Board:	04
County:	Los Angeles
Facility Id:	908080061A
Status:	Remedial action (cleanup) Underway
Substance:	Gasoline
Substance Quantity:	Not reported
Local Case No:	Not reported
Case Type:	Groundwater
Abatement Method Used at the Site:	OT
Global ID:	T0603701886
W Global ID:	Not reported
Staff:	HDN
Local Agency:	19060
Cross Street:	PALO VERDE AVE
Enforcement Type:	DLSEL
Date Leak Discovered:	5/10/1999
Date Leak First Reported:	11/2/1999
Date Leak Record Entered:	Not reported
Date Confirmation Began:	Not reported
Date Leak Stopped:	5/7/1999
Date Case Last Changed on Database:	7/18/2002
Date the Case was Closed:	Not reported
How Leak Discovered:	Repair Tank
How Leak Stopped:	Not reported
Cause of Leak:	UNK
Leak Source:	UNK
Operator:	EQUILON ENTERPRISES LLC
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	1328.4520934450621167675070751
Source of Cleanup Funding:	UNK
Preliminary Site Assessment Workplan Submitted:	1/25/2000
Preliminary Site Assessment Began:	4/28/2000
Pollution Characterization Began:	1/15/2002
Remediation Plan Submitted:	1/23/2003
Remedial Action Underway:	3/6/2003
Post Remedial Action Monitoring Began:	11/2/1999
Enforcement Action Date:	Not reported
Historical Max MTBE Date:	9/13/2000
Hist Max MTBE Conc in Groundwater:	960
Hist Max MTBE Conc in Soil:	41
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Owner Contact:	Not reported
Responsible Party:	LAURA MENDOZA

SHELL SERVICE STATION (FORMER) (Continued) **S104406356**

RP Address: 8281 COMMONWEALTH AVE.
Program: LUST
Lat/Long: 33.8106763 / -1
Local Agency Staff: Not reported
Beneficial Use: Not reported
Priority: Not reported
Cleanup Fund Id: Not reported
Suspended: Not reported
Assigned Name: Not reported
Summary: CONCENTRATIONS OF FUEL HYDROCARBON (HCS) AND/OR MTBE WERE DETECTED IN SOIL SAMPLES FROM BENEATH ONE FUEL DISPENSER AND FROM THE BOTTOM OF THE FUEL TANK EXCAVATION. ELEVATED TRPH WAS DETECTED BENEATH THE CLARIFIER AND SELECT H

LUST:
Name: SHELL SERVICE STATION (FORMER)
Address: 6407 SPRING ST E
City,State,Zip: LONG BEACH, CA 90808
Lead Agency: LOS ANGELES RWQCB (REGION 4)
Case Type: LUST Cleanup Site
Geo Track: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603701886
Global Id: T0603701886
Latitude: 33.8106763
Longitude: -118.1077319
Status: Completed - Case Closed
Status Date: 01/11/2005
Case Worker: HDN
RB Case Number: 908080061A
Local Agency: LONG BEACH, CITY OF
File Location: Not reported
Local Case Number: Not reported
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST:
Global Id: T0603701886
Contact Type: Local Agency Caseworker
Contact Name: CARMEN PIRO
Organization Name: LONG BEACH, CITY OF
Address: 2525 GRAND AVE.
City: LONG BEACH
Email: carmen.piro@longbeach.gov
Phone Number: 5625704137

Global Id: T0603701886
Contact Type: Regional Board Caseworker
Contact Name: HA D. NGUYEN
Organization Name: LOS ANGELES RWQCB (REGION 4)
Address: 320 W. 4th Street, Suite 200
City: LOS ANGELES
Email: hnguyen@waterboards.ca.gov
Phone Number: 2135766658

LUST:
Global Id: T0603701886
Action Type: Other

SHELL SERVICE STATION (FORMER) (Continued) **S104406356**

Date: 05/10/1999
Action: Leak Discovery

Global Id: T0603701886
Action Type: RESPONSE
Date: 01/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701886
Action Type: RESPONSE
Date: 07/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 07/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 07/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701886
Action Type: RESPONSE
Date: 07/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701886
Action Type: RESPONSE
Date: 07/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 01/15/2003
Action: CAP/RAP - Final Remediation / Design Plan

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 10/15/2003
Action: Monitoring Report - Quarterly

SHELL SERVICE STATION (FORMER) (Continued) **S104406356**

Global Id: T0603701886
Action Type: RESPONSE
Date: 10/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 01/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 10/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701886
Action Type: RESPONSE
Date: 10/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: Other
Date: 05/07/1999
Action: Leak Stopped

Global Id: T0603701886
Action Type: REMEDIATION
Date: 02/21/2000
Action: Excavation

Global Id: T0603701886
Action Type: Other
Date: 11/02/1999
Action: Leak Reported

Global Id: T0603701886
Action Type: ENFORCEMENT
Date: 11/05/2002
Action: Staff Letter

Global Id: T0603701886
Action Type: ENFORCEMENT
Date: 07/02/2002
Action: 13267 Requirement

Global Id: T0603701886
Action Type: ENFORCEMENT
Date: 02/22/2000
Action: Site Visit / Inspection / Sampling

Global Id: T0603701886
Action Type: ENFORCEMENT
Date: 01/28/2003
Action: Site Visit / Inspection / Sampling

Global Id: T0603701886
Action Type: ENFORCEMENT

SHELL SERVICE STATION (FORMER) (Continued) **S104406356**

Date: 03/06/2003
Action: Staff Letter

Global Id: T0603701886
Action Type: ENFORCEMENT
Date: 01/12/2001
Action: 13267 Requirement

Global Id: T0603701886
Action Type: ENFORCEMENT
Date: 11/01/2004
Action: Notification - Preclosure

Global Id: T0603701886
Action Type: ENFORCEMENT
Date: 01/11/2005
Action: Closure/No Further Action Letter

Global Id: T0603701886
Action Type: ENFORCEMENT
Date: 10/15/2004
Action: Site Visit / Inspection / Sampling

Global Id: T0603701886
Action Type: RESPONSE
Date: 10/15/2002
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2004
Action: Monitoring Report - Quarterly

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2002
Action: Soil and Water Investigation Workplan

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2002
Action: Interim Remedial Action Plan

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2002
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 07/15/2002
Action: Other Report / Document

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2002
Action: Soil and Water Investigation Report

SHELL SERVICE STATION (FORMER) (Continued) **S104406356**

Global Id: T0603701886
Action Type: RESPONSE
Date: 10/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701886
Action Type: RESPONSE
Date: 01/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 01/15/2003
Action: Interim Remedial Action Plan

Global Id: T0603701886
Action Type: RESPONSE
Date: 04/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701886
Action Type: RESPONSE
Date: 01/15/2003
Action: Monitoring Report - Quarterly

LUST:
Global Id: T0603701886
Status: Open - Case Begin Date
Status Date: 05/07/1999

Global Id: T0603701886
Status: Open - Site Assessment
Status Date: 01/25/2000

Global Id: T0603701886
Status: Open - Site Assessment
Status Date: 04/28/2000

Global Id: T0603701886
Status: Open - Remediation
Status Date: 01/15/2002

Global Id: T0603701886
Status: Open - Site Assessment
Status Date: 01/15/2002

Global Id: T0603701886
Status: Open - Remediation
Status Date: 03/06/2003

Global Id: T0603701886
Status: Completed - Case Closed
Status Date: 01/11/2005

Name: SHELL #204-4482-3205
Address: 6407 SPRING ST E

SHELL SERVICE STATION (FORMER) (Continued) **S104406356**

City,State,Zip:	LONG BEACH, CA 90808
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603701885
Global Id:	T0603701885
Latitude:	33.8105705
Longitude:	-118.1069679
Status:	Completed - Case Closed
Status Date:	08/02/1996
Case Worker:	YR
RB Case Number:	908080061
Local Agency:	LONG BEACH, CITY OF
File Location:	Not reported
Local Case Number:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST:

Global Id:	T0603701885
Contact Type:	Local Agency Caseworker
Contact Name:	CARMEN PIRO
Organization Name:	LONG BEACH, CITY OF
Address:	2525 GRAND AVE.
City:	LONG BEACH
Email:	carmen.piro@longbeach.gov
Phone Number:	5625704137

Global Id:	T0603701885
Contact Type:	Regional Board Caseworker
Contact Name:	YUE RONG
Organization Name:	LOS ANGELES RWQCB (REGION 4)
Address:	320 W. 4TH ST., SUITE 200
City:	Los Angeles
Email:	yrong@waterboards.ca.gov
Phone Number:	Not reported

LUST:

Global Id:	T0603701885
Action Type:	Other
Date:	02/25/1988
Action:	Leak Reported

LUST:

Global Id:	T0603701885
Status:	Open - Case Begin Date
Status Date:	02/25/1988

Global Id:	T0603701885
Status:	Open - Site Assessment
Status Date:	06/27/1991

Global Id:	T0603701885
Status:	Open - Remediation
Status Date:	02/24/1992

Global Id:	T0603701885

SHELL SERVICE STATION (FORMER) (Continued) **S104406356**

Status:	Completed - Case Closed
Status Date:	08/02/1996

CORTESE:

Name:	SHELL SERVICE STATION (FORMER)
Address:	6407 SPRING ST E
City,State,Zip:	LONG BEACH, CA 90808
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0603701886
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

CERS:

Name:	SHELL #204-4482-3205
Address:	6407 SPRING ST E
City,State,Zip:	LONG BEACH, CA 90808
Site ID:	235190
CERS ID:	T0603701885
CERS Description:	Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	CARMEN PIRO - LONG BEACH, CITY OF
Entity Title:	Not reported
Affiliation Address:	2525 GRAND AVE.
Affiliation City:	LONG BEACH
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	5625704137

Affiliation Type Desc:	Regional Board Caseworker
Entity Name:	YUE RONG - LOS ANGELES RWQCB (REGION 4)
Entity Title:	Not reported
Affiliation Address:	320 W. 4TH ST., SUITE 200
Affiliation City:	Los Angeles
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported

SHELL SERVICE STATION (FORMER) (Continued) **S104406356**

Affiliation Phone: Not reported

Name: SHELL SERVICE STATION (FORMER)
Address: 6407 SPRING ST E
City,State,Zip: LONG BEACH, CA 90808
Site ID: 249027
CERS ID: T0603701886
CERS Description: Leaking Underground Storage Tank Cleanup Site

Affiliation:
Affiliation Type Desc: Local Agency Caseworker
Entity Name: CARMEN PIRO - LONG BEACH, CITY OF
Entity Title: Not reported
Affiliation Address: 2525 GRAND AVE.
Affiliation City: LONG BEACH
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 5625704137

Affiliation Type Desc: Regional Board Caseworker
Entity Name: HA D. NGUYEN - LOS ANGELES RWQCB (REGION 4)
Entity Title: Not reported
Affiliation Address: 320 W. 4th Street, Suite 200
Affiliation City: LOS ANGELES
Affiliation State: CA
Affiliation Country: Not reported
Affiliation Zip: Not reported
Affiliation Phone: 2135766658

E26 **SHELL #204-4482-3205** **LUST** **U003058424**
SSE **6407 SPRING ST E** **Cortese** **N/A**
1/4-1/2 **LONG BEACH, CA 90808** **HIST CORTESE**
0.434 mi.
2291 ft. **Site 2 of 4 in cluster E**

Relative:
Lower

Actual:
19 ft.

LUST REG 4:
Region: 4
Regional Board: 04
County: Los Angeles
Facility Id: 908080061
Status: Case Closed
Substance: Gasoline
Substance Quantity: Not reported
Local Case No: Not reported
Case Type: Groundwater
Abatement Method Used at the Site: FPED
Global ID: T0603701885
W Global ID: Not reported
Staff: UNK
Local Agency: 19060
Cross Street: PALO VERDE AVE
Enforcement Type: Not reported
Date Leak Discovered: Not reported
Date Leak First Reported: 2/25/1988
Date Leak Record Entered: 3/23/1988

SHELL #204-4482-3205 (Continued) **U003058424**

Date Confirmation Began:	Not reported
Date Leak Stopped:	Not reported
Date Case Last Changed on Database:	9/6/1996
Date the Case was Closed:	8/2/1996
How Leak Discovered:	Not reported
How Leak Stopped:	Not reported
Cause of Leak:	Not reported
Leak Source:	Not reported
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	1314.2736348067152570716890948
Source of Cleanup Funding:	Not reported
Preliminary Site Assessment Workplan Submitted:	Not reported
Preliminary Site Assessment Began:	Not reported
Pollution Characterization Began:	6/27/1991
Remediation Plan Submitted:	2/24/1992
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	Not reported
Enforcement Action Date:	Not reported
Historical Max MTBE Date:	Not reported
Hist Max MTBE Conc in Groundwater:	Not reported
Hist Max MTBE Conc in Soil:	Not reported
Significant Interim Remedial Action Taken:	Yes
GW Qualifier:	Not reported
Soil Qualifier:	Not reported
Organization:	Not reported
Owner Contact:	Not reported
Responsible Party:	SHELL OIL COMPANY
RP Address:	PO BOX 25370, SANTA ANA, CA 92799
Program:	LUST
Lat/Long:	33.8105483 / -1
Local Agency Staff:	Not reported
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Assigned Name:	Not reported
Summary:	INITIAL SA WORK DONE BY LONG BEACH HEALTH DEPARTMENT

CORTESE:

Name:	SHELL #204-4482-3205
Address:	6407 SPRING ST E
City,State,Zip:	LONG BEACH, CA 90808
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0603701885
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active

SHELL #204-4482-3205 (Continued) **U003058424**

Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

HIST CORTESE:

edr_fname:	SHELL #204-4482-3205
edr_fadd1:	6407 SPRING
City,State,Zip:	LONG BEACH, CA 90808
Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	908080061

edr_fname:	SHELL SERVICE STATION (FO
edr_fadd1:	6407 SPRING
City,State,Zip:	LONG BEACH, CA 90808
Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	908080061A

E27 **CHEVRON #9-4055** **LUST** **U003700275**
SSE **6340 SPRING ST E** **Cortese** **N/A**
1/4-1/2 **LONG BEACH, CA 90815** **HIST CORTESE**
0.458 mi. **CERS**
2418 ft. **Site 3 of 4 in cluster E**

Relative:
Lower

Actual:
19 ft.

LUST REG 4:

Region:	4	
Regional Board:	04	
County:	Los Angeles	
Facility Id:	908150216	
Status:	Case Closed	
Substance:	Gasoline	
Substance Quantity:	Not reported	
Local Case No:	Not reported	
Case Type:	Groundwater	
Abatement Method Used at the Site:		Not reported
Global ID:	T0603701997	
W Global ID:	Not reported	
Staff:	JLC	
Local Agency:	19060	
Cross Street:	PALOS VERDES AVE	
Enforcement Type:	CLOS	
Date Leak Discovered:	3/14/1991	
Date Leak First Reported:		3/19/1991
Date Leak Record Entered:	5/7/1991	
Date Confirmation Began:	Not reported	
Date Leak Stopped:	Not reported	
Date Case Last Changed on Database:		7/12/2002
Date the Case was Closed:		4/26/2004
How Leak Discovered:	Tank Test	

CHEVRON #9-4055 (Continued) **U003700275**

How Leak Stopped:	Not reported
Cause of Leak:	UNK
Leak Source:	UNK
Operator:	Not reported
Water System:	Not reported
Well Name:	Not reported
Approx. Dist To Production Well (ft):	1593.9012915064664501959846572
Source of Cleanup Funding:	UNK
Preliminary Site Assessment Workplan Submitted:	3/19/1991
Preliminary Site Assessment Began:	3/19/1991
Pollution Characterization Began:	9/15/1999
Remediation Plan Submitted:	1/2/2003
Remedial Action Underway:	Not reported
Post Remedial Action Monitoring Began:	3/19/1991
Enforcement Action Date:	Not reported
Historical Max MTBE Date:	9/20/1997
Hist Max MTBE Conc in Groundwater:	14000
Hist Max MTBE Conc in Soil:	.035
Significant Interim Remedial Action Taken:	Not reported
GW Qualifier:	Not reported
Soil Qualifier:	<
Organization:	Not reported
Owner Contact:	Not reported
Responsible Party:	Y M TUAN
RP Address:	P.O. BOX 2292
Program:	LUST
Lat/Long:	33.8102633 / -1
Local Agency Staff:	Not reported
Beneficial Use:	Not reported
Priority:	Not reported
Cleanup Fund Id:	Not reported
Suspended:	Not reported
Assigned Name:	Not reported
Summary:	5/16/00 ADD'L. SITE ASSESSMENT RPT; 7/12/00 2ND QTR GW MON RPT 2000; 3RD QTR GW MON RPT; 1/16/01 4TH QTR GW MON RPT 2000; 4/10/01 1ST QTR GW MON RPT 2001

LUST:

Name:	CHEVRON #9-4055
Address:	6340 SPRING ST E
City,State,Zip:	LONG BEACH, CA 90815
Lead Agency:	LOS ANGELES RWQCB (REGION 4)
Case Type:	LUST Cleanup Site
Geo Track:	http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603701997
Global Id:	T0603701997
Latitude:	33.8102633
Longitude:	-118.1086339
Status:	Completed - Case Closed
Status Date:	04/26/2004
Case Worker:	Not reported
RB Case Number:	908150216
Local Agency:	LONG BEACH, CITY OF
File Location:	Not reported
Local Case Number:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

CHEVRON #9-4055 (Continued) **U003700275**

LUST:

Global Id:	T0603701997
Contact Type:	Local Agency Caseworker
Contact Name:	CARMEN PIRO
Organization Name:	LONG BEACH, CITY OF
Address:	2525 GRAND AVE.
City:	LONG BEACH
Email:	carmen.piro@longbeach.gov
Phone Number:	5625704137

LUST:

Global Id:	T0603701997
Action Type:	Other
Date:	03/14/1991
Action:	Leak Discovery
Global Id:	T0603701997
Action Type:	RESPONSE
Date:	04/15/2003
Action:	Monitoring Report - Quarterly
Global Id:	T0603701997
Action Type:	RESPONSE
Date:	04/15/2003
Action:	Soil and Water Investigation Report
Global Id:	T0603701997
Action Type:	RESPONSE
Date:	04/15/2004
Action:	Monitoring Report - Quarterly
Global Id:	T0603701997
Action Type:	RESPONSE
Date:	04/15/2004
Action:	Soil and Water Investigation Report
Global Id:	T0603701997
Action Type:	RESPONSE
Date:	01/15/2004
Action:	Monitoring Report - Quarterly
Global Id:	T0603701997
Action Type:	RESPONSE
Date:	07/15/2003
Action:	Monitoring Report - Quarterly
Global Id:	T0603701997
Action Type:	RESPONSE
Date:	07/15/2003
Action:	Soil and Water Investigation Report
Global Id:	T0603701997
Action Type:	RESPONSE
Date:	10/15/2003
Action:	Soil and Water Investigation Report

CHEVRON #9-4055 (Continued) **U003700275**

Global Id: T0603701997
Action Type: RESPONSE
Date: 07/15/2004
Action: Unknown

Global Id: T0603701997
Action Type: RESPONSE
Date: 01/15/2004
Action: Soil and Water Investigation Report

Global Id: T0603701997
Action Type: RESPONSE
Date: 10/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701997
Action Type: RESPONSE
Date: 10/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701997
Action Type: Other
Date: 03/19/1991
Action: Leak Reported

Global Id: T0603701997
Action Type: ENFORCEMENT
Date: 09/15/1999
Action: Staff Letter

Global Id: T0603701997
Action Type: ENFORCEMENT
Date: 09/03/2002
Action: Staff Letter

Global Id: T0603701997
Action Type: ENFORCEMENT
Date: 04/12/2002
Action: Staff Letter

Global Id: T0603701997
Action Type: RESPONSE
Date: 01/15/2003
Action: Soil and Water Investigation Report

Global Id: T0603701997
Action Type: RESPONSE
Date: 04/30/2002
Action: Soil and Water Investigation Report

Global Id: T0603701997
Action Type: ENFORCEMENT
Date: 05/06/2002
Action: Site Visit / Inspection / Sampling

Global Id: T0603701997
Action Type: ENFORCEMENT

CHEVRON #9-4055 (Continued) **U003700275**

Date: 04/02/2004
Action: Staff Letter

Global Id: T0603701997
Action Type: ENFORCEMENT
Date: 04/19/2004
Action: Site Visit / Inspection / Sampling

Global Id: T0603701997
Action Type: ENFORCEMENT
Date: 04/26/2004
Action: Closure/No Further Action Letter

Global Id: T0603701997
Action Type: RESPONSE
Date: 01/15/2003
Action: Monitoring Report - Quarterly

Global Id: T0603701997
Action Type: RESPONSE
Date: 04/30/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701997
Action Type: RESPONSE
Date: 07/15/2002
Action: Monitoring Report - Quarterly

Global Id: T0603701997
Action Type: RESPONSE
Date: 07/15/2002
Action: Interim Remedial Action Plan

Global Id: T0603701997
Action Type: RESPONSE
Date: 07/15/2002
Action: Soil and Water Investigation Report

Global Id: T0603701997
Action Type: RESPONSE
Date: 10/15/2002
Action: Soil and Water Investigation Report

Global Id: T0603701997
Action Type: RESPONSE
Date: 04/15/2003
Action: CAP/RAP - Final Remediation / Design Plan

Global Id: T0603701997
Action Type: RESPONSE
Date: 10/15/2002
Action: Monitoring Report - Quarterly

LUST:
Global Id: T0603701997
Status: Open - Case Begin Date
Status Date: 03/14/1991

CHEVRON #9-4055 (Continued) **U003700275**

Global Id:	T0603701997
Status:	Open - Site Assessment
Status Date:	03/19/1991
Global Id:	T0603701997
Status:	Open - Verification Monitoring
Status Date:	03/19/1991
Global Id:	T0603701997
Status:	Open - Site Assessment
Status Date:	09/15/1999
Global Id:	T0603701997
Status:	Open - Remediation
Status Date:	01/02/2003
Global Id:	T0603701997
Status:	Completed - Case Closed
Status Date:	04/26/2004

CORTESE:

Name:	CHEVRON #9-4055
Address:	6340 SPRING ST E
City,State,Zip:	LONG BEACH, CA 90815
Region:	CORTESE
Envirostor Id:	Not reported
Global ID:	T0603701997
Site/Facility Type:	LUST CLEANUP SITE
Cleanup Status:	COMPLETED - CASE CLOSED
Status Date:	Not reported
Site Code:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Owner:	Not reported
Enf Type:	Not reported
Swat R:	Not reported
Flag:	active
Order No:	Not reported
Waste Discharge System No:	Not reported
Effective Date:	Not reported
Region 2:	Not reported
WID Id:	Not reported
Solid Waste Id No:	Not reported
Waste Management Uit Name:	Not reported
File Name:	Active Open

HIST CORTESE:

edr_fname:	CHEVRON #9-04055
edr_fadd1:	6340 SPRING
City,State,Zip:	LONG BEACH, CA 90815
Region:	CORTESE
Facility County Code:	19
Reg By:	LTNKA
Reg Id:	908150216

CHEVRON #9-4055 (Continued) **U003700275**

CERS:

Name:	CHEVRON #9-4055
Address:	6340 SPRING ST E
City,State,Zip:	LONG BEACH, CA 90815
Site ID:	213238
CERS ID:	T0603701997
CERS Description:	Leaking Underground Storage Tank Cleanup Site

Affiliation:

Affiliation Type Desc:	Local Agency Caseworker
Entity Name:	CARMEN PIRO - LONG BEACH, CITY OF
Entity Title:	Not reported
Affiliation Address:	2525 GRAND AVE.
Affiliation City:	LONG BEACH
Affiliation State:	CA
Affiliation Country:	Not reported
Affiliation Zip:	Not reported
Affiliation Phone:	5625704137

E28
SSE
1/4-1/2
0.458 mi.
2418 ft.

CHEVRON STATION 9-4055 **Notify 65** **S100179597**
6340 E. SPRING ST. **N/A**
LONG BEACH, CA 90815

Site 4 of 4 in cluster E

Relative:
Lower

Actual:
19 ft.

NOTIFY 65:

Name:	CHEVRON STATION 9-4055
Address:	6340 E. SPRING ST.
City,State,Zip:	LONG BEACH, CA 90815-1424
Date Reported:	Not reported
Staff Initials:	Not reported
Board File Number:	Not reported
Facility Type:	Not reported
Discharge Date:	Not reported
Issue Date:	Not reported
Incident Description:	Not reported

29
SW
1/4-1/2
0.494 mi.
2606 ft.

CREIGHTON'S CLEANERS **ENVIROSTOR** **S113804699**
5951 SPRING STREET **VCP** **N/A**
LONG BEACH, CA 90808

Relative:
Lower

Actual:
23 ft.

ENVIROSTOR:

Name:	CREIGHTON'S CLEANERS
Address:	5951 SPRING STREET
City,State,Zip:	LONG BEACH, CA 90808
Facility ID:	60001903
Status:	Active
Status Date:	07/18/2013
Site Code:	401650
Site Type:	Voluntary Cleanup
Site Type Detailed:	Voluntary Cleanup
Acres:	7.5
NPL:	NO

CREIGHTON'S CLEANERS (Continued) **S113804699**

Regulatory Agencies:	SMBRP
Lead Agency:	SMBRP
Program Manager:	Angela Turner
Supervisor:	Emad Yemut
Division Branch:	Southern California Schools & Brownfields Outreach
Assembly:	70
Senate:	33
Special Program:	Voluntary Cleanup Program
Restricted Use:	NO
Site Mgmt Req:	NONE SPECIFIED
Funding:	Responsible Party
Latitude:	33.81152
Longitude:	-118.1153
APN:	NONE SPECIFIED
Past Use:	DRY CLEANING
Potential COC:	Tetrachloroethylene (PCE Trichloroethylene (TCE
Confirmed COC:	Tetrachloroethylene (PCE Trichloroethylene (TCE
Potential Description:	IA, SOIL, SV
Alias Name:	401650
Alias Type:	Project Code (Site Code)
Alias Name:	60001903
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Public Notice
Completed Date:	08/22/2019
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	10/30/2018
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	04/10/2019
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Removal Action Workplan
Completed Date:	10/11/2019
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	10/09/2019
Comments:	Not reported

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Voluntary Cleanup Agreement
Completed Date:	07/18/2013

CREIGHTON'S CLEANERS (Continued) **S113804699**

Comments: VCA was executed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 07/21/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Workplan
Completed Date: 11/06/2014
Comments: Final Workplan was approved

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 02/22/2017
Comments: Additional Characterization Workplan for vertical extent.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 09/09/2013
Comments: Workplan was approved with comments including additional scope to be implemented during fieldwork

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 09/27/2013
Comments: The Indoor Air Assessment Work plan was implemented on field.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pilot/Treatability Study Report
Completed Date: 11/08/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pilot Study/Treatability Workplan
Completed Date: 01/04/2018
Comments: Letter delivered to RP and consultant via email

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 07/31/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Community Profile
Completed Date: 09/05/2019
Comments: completed

CREIGHTON'S CLEANERS (Continued) **S113804699**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/13/2016
Comments: FY 1617 Annual Oversight Cost Estimate completed and mailed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 04/06/2017
Comments: Notification of new project manager assignment.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 04/25/2017
Comments: Proponent TRC Spring Street emailed regarding a change in contact person and address as well as update to billing address.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/19/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 12/11/2017
Comments: Letter sent via email and hard copy

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 08/22/2018
Comments: FY 1819 Cost Estimate: $45,705

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Request for Tribal Outreach
Completed Date: 11/12/2019
Comments: EJTA has not indicated any tribal interest

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: CEQA - Notice of Exemption
Completed Date: 10/08/2019
Comments: signed by BC

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 11/14/2019
Comments: Not reported

Future Area Name: PROJECT WIDE
Future Sub Area Name: Not reported

CREIGHTON'S CLEANERS (Continued) **S113804699**

Future Document Type:	Remedial Action Completion Report
Future Due Date:	2020
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

VCP:

Name:	CREIGHTON'S CLEANERS
Address:	5951 SPRING STREET
City,State,Zip:	LONG BEACH, CA 90808
Facility ID:	60001903
Site Type:	Voluntary Cleanup
Site Type Detail:	Voluntary Cleanup
Site Mgmt. Req.:	NONE SPECIFIED
Acres:	7.5
National Priorities List:	NO
Cleanup Oversight Agencies:	SMBRP
Lead Agency:	SMBRP
Lead Agency Description:	DTSC - Site Cleanup Program
Project Manager:	Angela Turner
Supervisor:	Emad Yemut
Division Branch:	Southern California Schools & Brownfields Outreach
Site Code:	401650
Assembly:	70
Senate:	33
Special Programs Code:	Voluntary Cleanup Program
Status:	Active
Status Date:	07/18/2013
Restricted Use:	NO
Funding:	Responsible Party
Lat/Long:	33.81152 / -118.1153
APN:	NONE SPECIFIED
Past Use:	DRY CLEANING
Potential COC:	30022, 30027
Confirmed COC:	30022,30027
Potential Description:	IA, SOIL, SV
Alias Name:	401650
Alias Type:	Project Code (Site Code)
Alias Name:	60001903
Alias Type:	Envirostor ID Number

Completed Info:

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Public Notice
Completed Date:	08/22/2019
Comments:	Not reported
Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Monitoring Report
Completed Date:	10/30/2018
Comments:	Not reported
Completed Area Name:	PROJECT WIDE

CREIGHTON'S CLEANERS (Continued) **S113804699**

Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 04/10/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Removal Action Workplan
Completed Date: 10/11/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 10/09/2019
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 07/18/2013
Comments: VCA was executed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 07/21/2014
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Workplan
Completed Date: 11/06/2014
Comments: Final Workplan was approved

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Characterization Report
Completed Date: 02/22/2017
Comments: Additional Characterization Workplan for vertical extent.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Technical Workplan
Completed Date: 09/09/2013
Comments: Workplan was approved with comments including additional scope to be implemented during fieldwork

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Fieldwork
Completed Date: 09/27/2013
Comments: The Indoor Air Assessment Work plan was implemented on field.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pilot/Treatability Study Report

CREIGHTON'S CLEANERS (Continued) **S113804699**

Completed Date: 11/08/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Pilot Study/Treatability Workplan
Completed Date: 01/04/2018
Comments: Letter delivered to RP and consultant via email

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Monitoring Report
Completed Date: 07/31/2018
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Community Profile
Completed Date: 09/05/2019
Comments: completed

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/13/2016
Comments: FY 1617 Annual Oversight Cost Estimate completed and mailed.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 04/06/2017
Comments: Notification of new project manager assignment.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 04/25/2017
Comments: Proponent TRC Spring Street emailed regarding a change in contact person and address as well as update to billing address.

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 09/19/2017
Comments: Not reported

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 12/11/2017
Comments: Letter sent via email and hard copy

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Annual Oversight Cost Estimate
Completed Date: 08/22/2018
Comments: FY 1819 Cost Estimate: $45,705

CREIGHTON'S CLEANERS (Continued) **S113804699**

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Request for Tribal Outreach
Completed Date:	11/12/2019
Comments:	EJTA has not indicated any tribal interest

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	CEQA - Notice of Exemption
Completed Date:	10/08/2019
Comments:	signed by BC

Completed Area Name:	PROJECT WIDE
Completed Sub Area Name:	Not reported
Completed Document Type:	Annual Oversight Cost Estimate
Completed Date:	11/14/2019
Comments:	Not reported

Future Area Name:	PROJECT WIDE
Future Sub Area Name:	Not reported
Future Document Type:	Remedial Action Completion Report
Future Due Date:	2020
Schedule Area Name:	Not reported
Schedule Sub Area Name:	Not reported
Schedule Document Type:	Not reported
Schedule Due Date:	Not reported
Schedule Revised Date:	Not reported

Count: 6 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
LONG BEACH	S121693320	ROYALTY CLEANERS	3378 LOS COYOTES	90808	DRYCLEANERS
LONG BEACH	S121698084	THRIFTY DRY CLEANERS	3581 LOS COYOTES DIAG	90808	DRYCLEANERS
LONG BEACH	S121695530	CONTINENTAL CLEANERS, MAGGIANI ENT	2630 LOS COYOTES DIAG	90815	DRYCLEANERS
LONG BEACH	S121693798	CONTINENTAL CLEANERS, JOHN CHIANIS	2630 LOS COYOTES DIAG	90815	DRYCLEANERS
LONG BEACH	S121696394	CONTINENTAL CLEANERS, PARSHWA INC	2630 LOS COYOTES DIAG	90815	DRYCLEANERS
LONG BEACH	1004676807	JOHNEL CORP	8777 E WARDLOW RD	90808	RCRA-LQG, FINDS, ECHO, DRYCLEANERS, HAZNET, HWTS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: N/A
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 04/03/2019
Date Data Arrived at EDR: 04/05/2019
Date Made Active in Reports: 05/14/2019
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/15/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 30

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/22/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 08/10/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 9: Leaking Underground Storage Tank Report
Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/26/2011
Next Scheduled EDR Contact: 01/09/2012
Data Release Frequency: No Update Planned

LUST: Leaking Underground Fuel Tank Report (GEOTRACKER)
Leaking Underground Storage Tank (LUST) Sites included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/06/2011
Next Scheduled EDR Contact: 12/19/2011
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing
For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/15/2019
Date Data Arrived at EDR: 12/17/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 55

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 10/04/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 85

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 10/02/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 10/10/2019
Date Data Arrived at EDR: 12/05/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 67

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 72

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

CPS-SLIC: Statewide SLIC Cases (GEOTRACKER)
Cleanup Program Sites (CPS; also known as Site Cleanups [SC] and formerly known as Spills, Leaks, Investigations, and Cleanups [SLIC] sites) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 1

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/19/2011
Next Scheduled EDR Contact: 01/02/2012
Data Release Frequency: No Update Planned

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 07/18/2011
Next Scheduled EDR Contact: 10/31/2011
Data Release Frequency: No Update Planned

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 07/01/2011
Next Scheduled EDR Contact: 10/17/2011
Data Release Frequency: No Update Planned

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/01/2011
Next Scheduled EDR Contact: 11/14/2011
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/12/2011
Next Scheduled EDR Contact: 12/26/2011
Data Release Frequency: No Update Planned

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/08/2011
Next Scheduled EDR Contact: 11/21/2011
Data Release Frequency: No Update Planned

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 02/01/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 71

Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

UST CLOSURE: Proposed Closure of Underground Storage Tank (UST) Cases

UST cases that are being considered for closure by either the State Water Resources Control Board or the Executive Director have been posted for a 60-day public comment period. UST Case Closures being proposed for consideration by the State Water Resources Control Board. These are primarily UST cases that meet closure criteria under the decisional framework in State Water Board Resolution No. 92-49 and other Board orders. UST Case Closures proposed for consideration by the Executive Director pursuant to State Water Board Resolution No. 2012-0061. These are cases that meet the criteria of the Low-Threat UST Case Closure Policy. UST Case Closure Review Denials and Approved Orders.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/26/2020
Number of Days to Update: 76

Source: State Water Resources Control Board
Telephone: 916-327-7844
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

MILITARY UST SITES: Military UST Sites (GEOTRACKER)

Military ust sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

AST: Aboveground Petroleum Storage Tank Facilities

A listing of aboveground storage tank petroleum storage tank locations.

Date of Government Version: 07/06/2016
Date Data Arrived at EDR: 07/12/2016
Date Made Active in Reports: 09/19/2016
Number of Days to Update: 69

Source: California Environmental Protection Agency
Telephone: 916-327-5092
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 10/10/2019
Date Data Arrived at EDR: 12/05/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 67

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 10/01/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 10/02/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 10/11/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 68

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 10/03/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/14/2020
Number of Days to Update: 72

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 10/04/2019
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 02/27/2020
Number of Days to Update: 85

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/23/2020
Next Scheduled EDR Contact: 11/01/2020
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Considered Brownfieds Sites Listing
A listing of sites the SWRCB considers to be Brownfields since these are sites have come to them through the MOA Process.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/05/2020
Number of Days to Update: 73

Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/01/2020
Date Data Arrived at EDR: 06/02/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 7

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: No Update Planned

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing

A listing of registered waste tire haulers.

Date of Government Version: 11/15/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/23/2020
Number of Days to Update: 69

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

HIST CAL-SITES: Calsites Database
The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program
This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

CDL: Clandestine Drug Labs
A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

CERS HAZ WASTE: CERS HAZ WASTE
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Hazardous Chemical Management, Hazardous Waste Onsite Treatment, Household Hazardous Waste Collection, Hazardous Waste Generator, and RCRA LQ HW Generator programs.

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 83

Source: CalEPA
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites

Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 03/18/2020
Date Data Arrived at EDR: 03/19/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 82

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Quarterly

PFAS: PFAS Contamination Site Location Listing

A listing of PFAS contaminated sites included in the GeoTracker database.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

Local Lists of Registered Storage Tanks

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 05/20/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 08/06/2020
Number of Days to Update: 78

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Annually

HIST UST: Hazardous Substance Storage Container Database
The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SAN FRANCISCO AST: Aboveground Storage Tank Site Listing
Aboveground storage tank sites

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72

Source: San Francisco County Department of Public Health
Telephone: 415-252-3896
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

CERS TANKS: California Environmental Reporting System (CERS) Tanks
List of sites in the California Environmental Protection Agency (CalEPA) Regulated Site Portal which fall under the Aboveground Petroleum Storage and Underground Storage Tank regulatory programs.

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 79

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

CA FID UST: Facility Inventory Database
The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS: Environmental Liens Listing
A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 03/03/2020
Date Data Arrived at EDR: 03/05/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 70

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 02/27/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 06/23/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 03/31/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 79

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Semi-Annually

LDS: Land Disposal Sites Listing (GEOTRACKER)

Land Disposal sites (Landfills) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 1

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing (GEOTRACKER)

Military sites (consisting of: Military UST sites; Military Privatized sites; and Military Cleanup sites [formerly known as DoD non UST]) included in GeoTracker. GeoTracker is the Water Boards data management system for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater.

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 06/06/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/22/2013
Number of Days to Update: 50

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/28/2020
Date Data Arrived at EDR: 02/19/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 85

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/05/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/18/2020
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 79

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 03/01/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/15/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 01/31/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/15/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 06/09/2020
Number of Days to Update: 34

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

PADS: PCB Activity Database System
PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 10/09/2019
Date Data Arrived at EDR: 10/11/2019
Date Made Active in Reports: 12/20/2019
Number of Days to Update: 70

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/13/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/25/2019
Date Data Arrived at EDR: 10/25/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 82

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 12/04/2019
Date Made Active in Reports: 01/15/2020
Number of Days to Update: 42

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 06/05/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/01/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/27/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/21/2020
Number of Days to Update: 6

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/07/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites
A listing of former lead smelter site locations.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 22

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites
A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)
The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data
A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

MINES VIOLATIONS: MSHA Violation Assessment Data
Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 03/31/2020
Date Data Arrived at EDR: 04/01/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 50

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

US MINES: Mines Master Index File
Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/11/2020
Date Data Arrived at EDR: 02/25/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 86

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 02/28/2020
Date Made Active in Reports: 05/22/2020
Number of Days to Update: 84

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/05/2020
Date Data Arrived at EDR: 03/06/2020
Date Made Active in Reports: 05/29/2020
Number of Days to Update: 84

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/19/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/03/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/28/2020
Number of Days to Update: 86

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 01/17/2019
Date Made Active in Reports: 04/01/2019
Number of Days to Update: 74

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 04/04/2020
Date Data Arrived at EDR: 04/07/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 80

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing
A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 07/26/2018
Date Made Active in Reports: 10/05/2018
Number of Days to Update: 71

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing
This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 76

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/19/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Quarterly

CA BOND EXP. PLAN: Bond Expenditure Plan
Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CORTESE: "Cortese" Hazardous Waste & Substances Sites List
The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites).

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 03/24/2020
Date Made Active in Reports: 06/05/2020
Number of Days to Update: 73

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 06/22/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

CUPA LIVERMORE-PLEASANTON: CUPA Facility Listing
list of facilities associated with the various CUPA programs in Livermore-Pleasanton

Date of Government Version: 05/01/2019
Date Data Arrived at EDR: 05/14/2019
Date Made Active in Reports: 07/17/2019
Number of Days to Update: 64

Source: Livermore-Pleasanton Fire Department
Telephone: 925-454-2361
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 08/24/2020
Data Release Frequency: Varies

CUPA SAN FRANCISCO CO: CUPA Facility Listing
Cupa facilities

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72

Source: San Francisco County Department of Environmental Health
Telephone: 415-252-3896
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

DRYCLEAN AVAQMD: Antelope Valley Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the Antelope Valley Air Quality Management District.

Date of Government Version: 02/27/2020
Date Data Arrived at EDR: 02/28/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 69

Source: Antelope Valley Air Quality Management District
Telephone: 661-723-8070
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

DRYCLEANERS: Cleaner Facilities
A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 12/04/2019
Date Data Arrived at EDR: 01/29/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 71

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Annually

DRYCLEAN SOUTH COAST: South Coast Air Quality Management District Drycleaner Listing
A listing of dry cleaners in the South Coast Air Quality Management District

Date of Government Version: 03/25/2020
Date Data Arrived at EDR: 03/26/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 81

Source: South Coast Air Quality Management District
Telephone: 909-396-3211
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

EMI: Emissions Inventory Data
Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/24/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 59

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 06/16/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Varies

ENF: Enforcement Action Listing
A listing of Water Board Enforcement Actions. Formal is everything except Oral/Verbal Communication, Notice of Violation, Expedited Payment Letter, and Staff Enforcement Letter.

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 04/07/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 8

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Financial Assurance information

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 05/14/2020
Date Data Arrived at EDR: 05/15/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 73

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method. This database begins with calendar year 1993.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 04/15/2020
Date Made Active in Reports: 07/02/2020
Number of Days to Update: 78

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 73

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES]. This listing is no longer updated by the state agency.

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HWP: EnviroStor Permitted Facilities Listing

Detailed information on permitted hazardous waste facilities and corrective action ("cleanups") tracked in EnviroStor.

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/18/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 74

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 05/18/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Quarterly

HWT: Registered Hazardous Waste Transporter Database

A listing of hazardous waste transporters. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by DTSC. A hazardous waste transporter registration is valid for one year and is assigned a unique registration number.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/08/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 79

Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 07/07/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Quarterly

MINES: Mines Site Location Listing
A listing of mine site locations from the Office of Mine Reclamation.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

MWMP: Medical Waste Management Program Listing
The Medical Waste Management Program (MWMP) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste Offsite Treatment Facilities (PDF) and Transfer Stations (PDF) throughout the state. MWMP also oversees all Medical Waste Transporters.

Date of Government Version: 02/12/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 72

Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 05/12/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/28/2020
Number of Days to Update: 77

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 08/10/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: Quarterly

PEST LIC: Pesticide Regulation Licenses Listing
A listing of licenses and certificates issued by the Department of Pesticide Regulation. The DPR issues licenses and/or certificates to: Persons and businesses that apply or sell pesticides; Pest control dealers and brokers; Persons who advise on agricultural pesticide applications.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 72

Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

NOTIFY 65: Proposition 65 Records
Listings of all Proposition 65 incidents reported to counties by the State Water Resources Control Board and the Regional Water Quality Control Board. This database is no longer updated by the reporting agency.

Date of Government Version: 03/12/2020
Date Data Arrived at EDR: 03/13/2020
Date Made Active in Reports: 05/21/2020
Number of Days to Update: 69

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

UIC GEO: Underground Injection Control Sites (GEOTRACKER)
Underground control injection sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resource Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WASTEWATER PITS: Oil Wastewater Pits Listing
Water officials discovered that oil producers have been dumping chemical-laden wastewater into hundreds of unlined pits that are operating without proper permits. Inspections completed by the Central Valley Regional Water Quality Control Board revealed the existence of previously unidentified waste sites. The water boards review found that more than one-third of the region's active disposal pits are operating without permission.

Date of Government Version: 11/19/2019
Date Data Arrived at EDR: 01/07/2020
Date Made Active in Reports: 03/09/2020
Number of Days to Update: 62

Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

WDS: Waste Discharge System
Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: No Update Planned

WIP: Well Investigation Program Case List
Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: No Update Planned

MILITARY PRIV SITES: Military Privatized Sites (GEOTRACKER)
Military privatized sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PROJECT: Project Sites (GEOTRACKER)
Projects sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WDR: Waste Discharge Requirements Listing

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27.

Date of Government Version: 03/09/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/19/2020
Number of Days to Update: 70

Source: State Water Resources Control Board
Telephone: 916-341-5810
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

CIWQS: California Integrated Water Quality System

The California Integrated Water Quality System (CIWQS) is a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: State Water Resources Control Board
Telephone: 866-794-4977
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Varies

CERS: CalEPA Regulated Site Portal Data

The CalEPA Regulated Site Portal database combines data about environmentally regulated sites and facilities in California into a single database. It combines data from a variety of state and federal databases, and provides an overview of regulated activities across the spectrum of environmental programs for any given location in California. These activities include hazardous materials and waste, state and federal cleanups, impacted ground and surface waters, and toxic materials

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/21/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 83

Source: California Environmental Protection Agency
Telephone: 916-323-2514
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

NON-CASE INFO: Non-Case Information Sites (GEOTRACKER)

Non-Case Information sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

OTHER OIL GAS: Other Oil & Gas Projects Sites (GEOTRACKER)

Other Oil & Gas Projects sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PROD WATER PONDS: Produced Water Ponds Sites (GEOTRACKER)
Produced water ponds sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

SAMPLING POINT: Sampling Point ? Public Sites (GEOTRACKER)
Sampling point - public sites

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

WELL STIM PROJ: Well Stimulation Project (GEOTRACKER)
Includes areas of groundwater monitoring plans, a depiction of the monitoring network, and the facilities, boundaries, and subsurface characteristics of the oilfield and the features (oil and gas wells, produced water ponds, UIC wells, water supply wells, etc?) being monitored

Date of Government Version: 05/13/2020
Date Data Arrived at EDR: 05/13/2020
Date Made Active in Reports: 05/15/2020
Number of Days to Update: 2

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Varies

PCS INACTIVE: Listing of Inactive PCS Permits
An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

PCS ENF: Enforcement data
No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 07/01/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 05/21/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

HWTS: Hazardous Waste Tracking System
DTSC maintains the Hazardous Waste Tracking System that stores ID number information since the early 1980s and manifest data since 1993. The system collects both manifest copies from the generator and destination facility.

Date of Government Version: 04/08/2020
Date Data Arrived at EDR: 04/09/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 83

Source: Department of Toxic Substances Control
Telephone: 916-324-2444
Last EDR Contact: 08/02/2020
Next Scheduled EDR Contact: 10/18/2020
Data Release Frequency: Varies

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 06/08/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA LF: Recovered Government Archive Solid Waste Facilities List
The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Resources Recycling and Recovery in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Resources Recycling and Recovery
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank
The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the State Water Resources Control Board in California.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/30/2013
Number of Days to Update: 182

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

COUNTY RECORDS

ALAMEDA COUNTY:

CS ALAMEDA: Contaminated Sites
A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 01/09/2019
Date Data Arrived at EDR: 01/11/2019
Date Made Active in Reports: 03/05/2019
Number of Days to Update: 53

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

UST ALAMEDA: Underground Tanks
Underground storage tank sites located in Alameda county.

Date of Government Version: 06/30/2020
Date Data Arrived at EDR: 07/01/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 16

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA AMADOR: CUPA Facility List
Cupa Facility List

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 06/01/2020
Number of Days to Update: 13

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

BUTTE COUNTY:

CUPA BUTTE: CUPA Facility Listing
Cupa facility list.

Date of Government Version: 04/21/2017
Date Data Arrived at EDR: 04/25/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 106

Source: Public Health Department
Telephone: 530-538-7149
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA CALVERAS: CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 03/27/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA COLUSA: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/06/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 78

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

SL CONTRA COSTA: Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 04/01/2020
Date Data Arrived at EDR: 04/20/2020
Date Made Active in Reports: 07/06/2020
Number of Days to Update: 77

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA DEL NORTE: CUPA Facility List
Cupa Facility list

Date of Government Version: 04/16/2020
Date Data Arrived at EDR: 04/20/2020
Date Made Active in Reports: 07/08/2020
Number of Days to Update: 79

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA EL DORADO: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/07/2020
Date Data Arrived at EDR: 05/07/2020
Date Made Active in Reports: 07/23/2020
Number of Days to Update: 77

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

FRESNO COUNTY:

CUPA FRESNO: CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 01/10/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

GLENN COUNTY:

CUPA GLENN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 49

Source: Glenn County Air Pollution Control District
Telephone: 830-934-6500
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: No Update Planned

HUMBOLDT COUNTY:

CUPA HUMBOLDT: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/19/2020
Date Data Arrived at EDR: 05/20/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 26

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 05/14/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA IMPERIAL: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

INYO COUNTY:

CUPA INYO: CUPA Facility List
Cupa facility list.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/03/2018
Date Made Active in Reports: 06/14/2018
Number of Days to Update: 72

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

KERN COUNTY:

UST KERN: Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 04/29/2020
Date Data Arrived at EDR: 05/05/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 73

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

KINGS COUNTY:

CUPA KINGS: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 05/11/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

LAKE COUNTY:

CUPA LAKE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/20/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/14/2020
Number of Days to Update: 77

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LASSEN COUNTY:

CUPA LASSEN: CUPA Facility List
Cupa facility list

Date of Government Version: 01/30/2020
Date Data Arrived at EDR: 01/31/2020
Date Made Active in Reports: 04/09/2020
Number of Days to Update: 69

Source: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 08/05/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

LOS ANGELES COUNTY:

AOCONCERN: Key Areas of Concerns in Los Angeles County
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office. Date of Government Version: 3/30/2009 Exide Site area is a cleanup plan of lead-impacted soil surrounding the former Exide Facility as designated by the DTSC. Date of Government Version: 7/17/2017

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: N/A
Telephone: N/A
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: No Update Planned

HMS LOS ANGELES: HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 03/26/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 81

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Semi-Annually

LF LOS ANGELES: List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 04/13/2020
Date Data Arrived at EDR: 04/14/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 78

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 07/13/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LF LOS ANGELES CITY: City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 01/15/2019
Date Made Active in Reports: 03/07/2019
Number of Days to Update: 51

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

LOS ANGELES AST: Active & Inactive AST Inventory
A listing of active & inactive above ground petroleum storage tank site locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LOS ANGELES CO LF METHANE: Methane Producing Landfills

This data was created on April 30, 2012 to represent known disposal sites in Los Angeles County that may produce and emanate methane gas. The shapefile contains disposal sites within Los Angeles County that once accepted degradable refuse material. Information used to create this data was extracted from a landfill survey performed by County Engineers (Major Waste System Map, 1973) as well as historical records from CalRecycle, Regional Water Quality Control Board, and Los Angeles County Department of Public Health

Date of Government Version: 04/30/2012
Date Data Arrived at EDR: 04/17/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 42

Source: Los Angeles County Department of Public Works
Telephone: 626-458-6973
Last EDR Contact: 07/13/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: No Update Planned

LOS ANGELES HM: Active & Inactive Hazardous Materials Inventory

A listing of active & inactive hazardous materials facility locations, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LOS ANGELES UST: Active & Inactive UST Inventory

A listing of active & inactive underground storage tank site locations and underground storage tank historical sites, located in the City of Los Angeles.

Date of Government Version: 06/01/2019
Date Data Arrived at EDR: 06/25/2019
Date Made Active in Reports: 08/22/2019
Number of Days to Update: 58

Source: Los Angeles Fire Department
Telephone: 213-978-3800
Last EDR Contact: 06/25/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

SITE MIT LOS ANGELES: Site Mitigation List

Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 03/25/2020
Date Data Arrived at EDR: 04/14/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 78

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 07/17/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Annually

UST EL SEGUNDO: City of El Segundo Underground Storage Tank

Underground storage tank sites located in El Segundo city.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 04/19/2017
Date Made Active in Reports: 05/10/2017
Number of Days to Update: 21

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: No Update Planned

UST LONG BEACH: City of Long Beach Underground Storage Tank

Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 04/22/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/27/2019
Number of Days to Update: 65

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

UST TORRANCE: City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 06/27/2019
Date Data Arrived at EDR: 07/30/2019
Date Made Active in Reports: 10/02/2019
Number of Days to Update: 64

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Semi-Annually

MADERA COUNTY:

CUPA MADERA: CUPA Facility List
A listing of sites included in the county's Certified Unified Program Agency database. California's Secretary for Environmental Protection established the unified hazardous materials and hazardous waste regulatory program as required by chapter 6.11 of the California Health and Safety Code. The Unified Program consolidates the administration, permits, inspections, and enforcement activities.

Date of Government Version: 02/24/2020
Date Data Arrived at EDR: 02/25/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 72

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

MARIN COUNTY:

UST MARIN: Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 09/26/2018
Date Data Arrived at EDR: 10/04/2018
Date Made Active in Reports: 11/02/2018
Number of Days to Update: 29

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA MERCED: CUPA Facility List
CUPA facility list.

Date of Government Version: 07/28/2020
Date Data Arrived at EDR: 07/30/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 1

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 07/24/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

MONO COUNTY:

CUPA MONO: CUPA Facility List
CUPA Facility List

Date of Government Version: 02/21/2020
Date Data Arrived at EDR: 03/05/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 69

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: Varies

MONTEREY COUNTY:

CUPA MONTEREY: CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 07/13/2020
Date Data Arrived at EDR: 07/15/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 16

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 07/08/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Varies

NAPA COUNTY:

LUST NAPA: Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 01/09/2017
Date Data Arrived at EDR: 01/11/2017
Date Made Active in Reports: 03/02/2017
Number of Days to Update: 50

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

UST NAPA: Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 09/05/2019
Date Data Arrived at EDR: 09/09/2019
Date Made Active in Reports: 10/31/2019
Number of Days to Update: 52

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA NEVADA: CUPA Facility List
CUPA facility list.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/07/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 78

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 07/21/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

ORANGE COUNTY:

IND_SITE ORANGE: List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Annually

LUST ORANGE: List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 07/24/2020
Number of Days to Update: 77

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

UST ORANGE: List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 05/01/2020
Date Data Arrived at EDR: 05/05/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 73

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/03/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

PLACER COUNTY:

MS PLACER: Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA PLUMAS: CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 03/31/2019
Date Data Arrived at EDR: 04/23/2019
Date Made Active in Reports: 06/26/2019
Number of Days to Update: 64

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

RIVERSIDE COUNTY:

LUST RIVERSIDE: Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 03/10/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 70

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 02/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Quarterly

UST RIVERSIDE: Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 03/10/2020
Date Data Arrived at EDR: 03/11/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 70

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

CS SACRAMENTO: Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 02/18/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/15/2020
Number of Days to Update: 76

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

ML SACRAMENTO: Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 02/24/2020
Date Data Arrived at EDR: 03/31/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 78

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 07/02/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA SAN BENITO: CUPA Facility List
Cupa facility list

Date of Government Version: 04/24/2020
Date Data Arrived at EDR: 04/28/2020
Date Made Active in Reports: 07/13/2020
Number of Days to Update: 76

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

PERMITS SAN BERNARDINO: Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 71

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

HMMD SAN DIEGO: Hazardous Materials Management Division Database
The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/13/2020
Number of Days to Update: 71

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 06/02/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

LF SAN DIEGO: Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 04/24/2018
Date Made Active in Reports: 06/19/2018
Number of Days to Update: 56

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

SAN DIEGO CO LOP: Local Oversight Program Listing
A listing of all LOP release sites that are or were under the County of San Diego's jurisdiction. Included are closed or transferred cases, open cases, and cases that did not have a case type indicated. The cases without a case type are mostly complaints; however, some of them could be LOP cases.

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 77

Source: Department of Environmental Health
Telephone: 858-505-6874
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

SAN DIEGO CO SAM: Environmental Case Listing
The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 03/23/2010
Date Data Arrived at EDR: 06/15/2010
Date Made Active in Reports: 07/09/2010
Number of Days to Update: 24

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

LUST SAN FRANCISCO: Local Oversite Facilities
A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: No Update Planned

UST SAN FRANCISCO: Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 05/04/2020
Date Data Arrived at EDR: 05/06/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 72

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

UST SAN JOAQUIN: San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 06/22/2018
Date Data Arrived at EDR: 06/26/2018
Date Made Active in Reports: 07/11/2018
Number of Days to Update: 15

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 06/10/2020
Next Scheduled EDR Contact: 09/28/2020
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA SAN LUIS OBISPO: CUPA Facility List
Cupa Facility List.

Date of Government Version: 05/08/2020
Date Data Arrived at EDR: 05/08/2020
Date Made Active in Reports: 08/03/2020
Number of Days to Update: 87

Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

SAN MATEO COUNTY:

BI SAN MATEO: Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 02/20/2020
Date Data Arrived at EDR: 02/20/2020
Date Made Active in Reports: 04/24/2020
Number of Days to Update: 64

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/12/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Annually

LUST SAN MATEO: Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 03/29/2019
Date Data Arrived at EDR: 03/29/2019
Date Made Active in Reports: 05/29/2019
Number of Days to Update: 61

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 06/03/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

CUPA SANTA BARBARA: CUPA Facility Listing
CUPA Program Listing from the Environmental Health Services division.

Date of Government Version: 09/08/2011
Date Data Arrived at EDR: 09/09/2011
Date Made Active in Reports: 10/07/2011
Number of Days to Update: 28

Source: Santa Barbara County Public Health Department
Telephone: 805-686-8167
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: No Update Planned

SANTA CLARA COUNTY:

CUPA SANTA CLARA: Cupa Facility List
Cupa facility list

Date of Government Version: 05/08/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

HIST LUST SANTA CLARA: HIST LUST - Fuel Leak Site Activity Report
A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LUST SANTA CLARA: LOP Listing
A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 03/03/2014
Date Data Arrived at EDR: 03/05/2014
Date Made Active in Reports: 03/18/2014
Number of Days to Update: 13

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 05/15/2020
Next Scheduled EDR Contact: 09/07/2020
Data Release Frequency: No Update Planned

SAN JOSE HAZMAT: Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 04/22/2020
Date Data Arrived at EDR: 04/24/2020
Date Made Active in Reports: 05/07/2020
Number of Days to Update: 13

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

CUPA SANTA CRUZ: CUPA Facility List
CUPA facility listing.

Date of Government Version: 01/21/2017
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 05/23/2017
Number of Days to Update: 90

Source: Santa Cruz County Environmental Health
Telephone: 831-464-2761
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

SHASTA COUNTY:

CUPA SHASTA: CUPA Facility List
Cupa Facility List.

Date of Government Version: 06/15/2017
Date Data Arrived at EDR: 06/19/2017
Date Made Active in Reports: 08/09/2017
Number of Days to Update: 51

Source: Shasta County Department of Resource Management
Telephone: 530-225-5789
Last EDR Contact: 05/07/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Varies

SOLANO COUNTY:

LUST SOLANO: Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 06/04/2019
Date Data Arrived at EDR: 06/06/2019
Date Made Active in Reports: 08/13/2019
Number of Days to Update: 68

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 05/26/2020
Next Scheduled EDR Contact: 09/13/2020
Data Release Frequency: Quarterly

UST SOLANO: Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/02/2020
Date Data Arrived at EDR: 03/04/2020
Date Made Active in Reports: 05/14/2020
Number of Days to Update: 71

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 06/23/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Quarterly

SONOMA COUNTY:

CUPA SONOMA: Cupa Facility List
Cupa Facility list

Date of Government Version: 02/25/2020
Date Data Arrived at EDR: 02/26/2020
Date Made Active in Reports: 03/11/2020
Number of Days to Update: 14

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 06/30/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Varies

LUST SONOMA: Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 04/03/2020
Date Data Arrived at EDR: 04/08/2020
Date Made Active in Reports: 06/26/2020
Number of Days to Update: 79

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 06/17/2020
Next Scheduled EDR Contact: 10/05/2020
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA STANISLAUS: CUPA Facility List
Cupa facility list

Date of Government Version: 02/04/2020
Date Data Arrived at EDR: 02/05/2020
Date Made Active in Reports: 04/15/2020
Number of Days to Update: 70

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 07/06/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Varies

SUTTER COUNTY:

UST SUTTER: Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 01/23/2020
Date Data Arrived at EDR: 03/03/2020
Date Made Active in Reports: 05/08/2020
Number of Days to Update: 66

Source: Sutter County Environmental Health Services
Telephone: 530-822-7500
Last EDR Contact: 05/27/2020
Next Scheduled EDR Contact: 09/14/2020
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA TEHAMA: CUPA Facility List
Cupa facilities

Date of Government Version: 05/18/2020
Date Data Arrived at EDR: 05/19/2020
Date Made Active in Reports: 07/31/2020
Number of Days to Update: 73

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 07/28/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA TRINITY: CUPA Facility List
Cupa facility list

Date of Government Version: 04/09/2020
Date Data Arrived at EDR: 04/10/2020
Date Made Active in Reports: 07/01/2020
Number of Days to Update: 82

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

TULARE COUNTY:

CUPA TULARE: CUPA Facility List
Cupa program facilities

Date of Government Version: 05/14/2020
Date Data Arrived at EDR: 05/15/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 73

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 08/06/2020
Next Scheduled EDR Contact: 11/16/2020
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA TUOLUMNE: CUPA Facility List
Cupa facility list

Date of Government Version: 04/23/2018
Date Data Arrived at EDR: 04/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 61

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 07/14/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Varies

VENTURA COUNTY:

BWT VENTURA: Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 77

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

LF VENTURA: Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 12/01/2011
Date Data Arrived at EDR: 12/01/2011
Date Made Active in Reports: 01/19/2012
Number of Days to Update: 49

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: No Update Planned

LUST VENTURA: Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: No Update Planned

MED WASTE VENTURA: Medical Waste Program List
To protect public health and safety and the environment from potential exposure to disease causing agents, the Environmental Health Division Medical Waste Program regulates the generation, handling, storage, treatment and disposal of medical waste throughout the County.

Date of Government Version: 03/26/2020
Date Data Arrived at EDR: 04/23/2020
Date Made Active in Reports: 07/09/2020
Number of Days to Update: 77

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 07/20/2020
Next Scheduled EDR Contact: 11/02/2020
Data Release Frequency: Quarterly

UST VENTURA: Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 01/27/2020
Date Data Arrived at EDR: 03/10/2020
Date Made Active in Reports: 05/20/2020
Number of Days to Update: 71

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 06/09/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Quarterly

YOLO COUNTY:

UST YOLO: Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 03/23/2020
Date Data Arrived at EDR: 04/01/2020
Date Made Active in Reports: 06/17/2020
Number of Days to Update: 77

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 06/24/2020
Next Scheduled EDR Contact: 10/12/2020
Data Release Frequency: Annually

YUBA COUNTY:

CUPA YUBA: CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 04/27/2020
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/17/2020
Number of Days to Update: 79

Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 08/04/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 05/12/2020
Date Data Arrived at EDR: 05/12/2020
Date Made Active in Reports: 07/27/2020
Number of Days to Update: 76

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/10/2020
Next Scheduled EDR Contact: 11/23/2020
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/19/2020
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/31/2020
Next Scheduled EDR Contact: 11/09/2020
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/09/2020
Next Scheduled EDR Contact: 10/26/2020
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 10/02/2019
Date Made Active in Reports: 12/10/2019
Number of Days to Update: 69

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/14/2020
Next Scheduled EDR Contact: 08/31/2020
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/04/2020
Next Scheduled EDR Contact: 09/21/2020
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

SUNRISE OF LAKEWOOD CA
3320 LOS COYOTES DIAGONAL
LONG BEACH, CA 90808

TARGET PROPERTY COORDINATES

Latitude (North):	33.816925 - 33˚ 49’ 0.93’’
Longitude (West):	118.11005 - 118˚ 6’ 36.18’’
Universal Tranverse Mercator:	Zone 11
UTM X (Meters):	397265.1
UTM Y (Meters):	3742217.2
Elevation:	27 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5633745 LOS ALAMITOS, CA
Version Date:	2012
West Map:	5652670 LONG BEACH, CA
Version Date:	2012

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

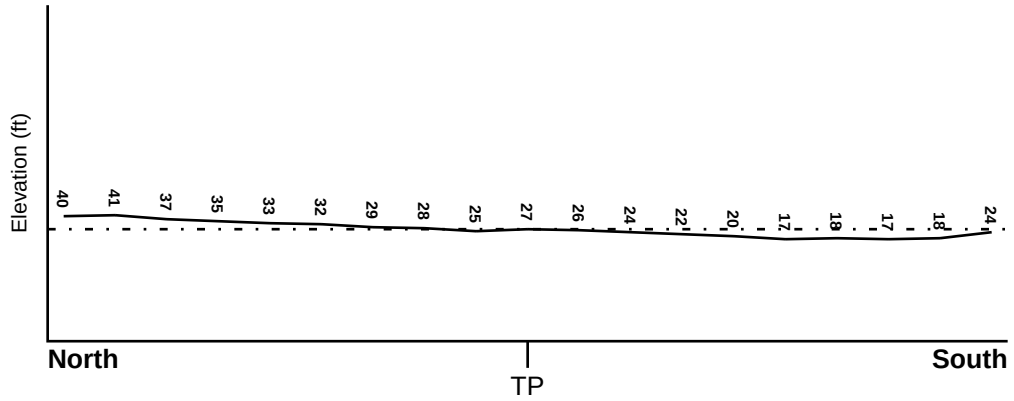
TOPOGRAPHIC INFORMATION

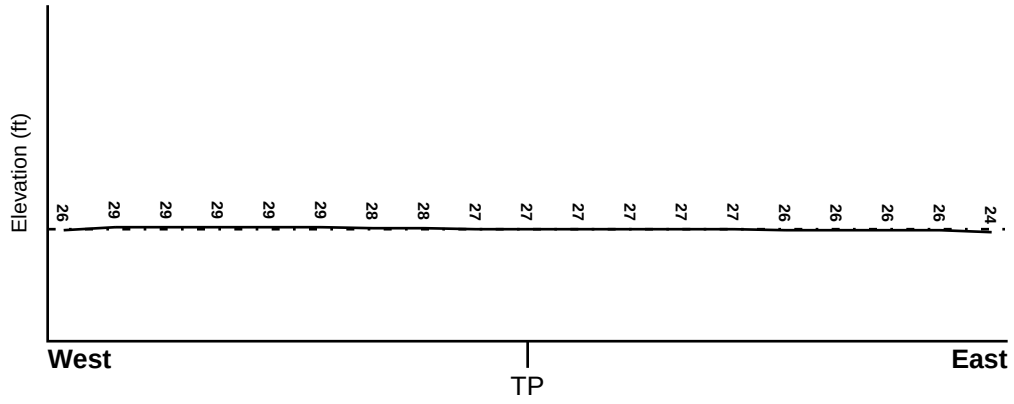
Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

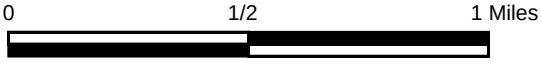
General Topographic Gradient: General SSE

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES





Target Property Elevation: 27 ft.



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
06037C1980F	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06037C1960F	FEMA FIRM Flood data
06037C1970F	FEMA FIRM Flood data
06037C1990F	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
LOS ALAMITOS	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data*:

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

* ©1996 Site−specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	URBAN LAND
Soil Surface Texture:	variable
Hydrologic Group:	Not reported
Soil Drainage Class:	Not reported

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel:	Not Reported
Depth to Bedrock Min:	> 10 inches
Depth to Bedrock Max:	> 10 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	6 inches	variable	Not reported	Not reported	Max: 0.00 Min: 0.00	Max: 0.00 Min: 0.00

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: loam
clay
silt loam
loamy sand
sandy loam
fine sand
clay loam
gravelly - sandy loam
coarse sand
gravelly - sand
sand

Surficial Soil Types: loam
clay
silt loam
loamy sand
sandy loam
fine sand
clay loam
gravelly - sandy loam
coarse sand
gravelly - sand
sand

Shallow Soil Types: fine sandy loam
gravelly - loam
sand
silty clay

Deeper Soil Types: stratified
clay loam
silty clay loam
gravelly - sandy loam
coarse sand
sand
weathered bedrock
very fine sandy loam

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A1	USGS40000138404	0 - 1/8 Mile East
A2	USGS40000138403	0 - 1/8 Mile East
7	USGS40000138451	1/2 - 1 Mile NE
8	USGS40000138365	1/2 - 1 Mile SE
C9	USGS40000138433	1/2 - 1 Mile ENE
C10	USGS40000138427	1/2 - 1 Mile ENE
C11	USGS40000138434	1/2 - 1 Mile ENE
12	USGS40000138327	1/2 - 1 Mile SSE
13	USGS40000138369	1/2 - 1 Mile ESE
14	USGS40000138361	1/2 - 1 Mile SE
D15	USGS40000138482	1/2 - 1 Mile North
D16	USGS40000138484	1/2 - 1 Mile North
17	USGS40000138453	1/2 - 1 Mile WNW
18	USGS40000138489	1/2 - 1 Mile North
20	USGS40000138349	1/2 - 1 Mile SE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B3	5315	1/2 - 1 Mile East
B4	5307	1/2 - 1 Mile East
B5	5334	1/2 - 1 Mile East
B6	5316	1/2 - 1 Mile East
19	5311	1/2 - 1 Mile NNE

PHYSICAL SETTING SOURCE MAP - 6152113.2s

0 1/4 1/2 1 Miles

- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- HD Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME:	Sunrise of Lakewood CA	CLIENT:	Partner Engineering and Science, Inc.
ADDRESS:	3320 Los Coyotes Diagonal LONG BEACH CA 90808	CONTACT:	Cristina Scott
		INQUIRY #:	6152113.2s
LAT/LONG:	33.816925 / 118.11005	DATE:	August 11, 2020 4:19 pm

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Map ID Direction Distance Elevation	Database	EDR ID Number
A1 **East** **0 - 1/8 Mile** **Higher**	**FED USGS**	**USGS40000138404**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S012W23C001S	Type:	Well
Description:	Not Reported	HUC:	18070106
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	1367
Well Depth Units:	ft	Well Hole Depth:	1367
Well Hole Depth Units:	ft		

A2 **East** **0 - 1/8 Mile** **Higher**	**FED USGS**	**USGS40000138403**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S012W14P001S	Type:	Well
Description:	Not Reported	HUC:	18070106
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	1232
Well Depth Units:	ft	Well Hole Depth:	1706
Well Hole Depth Units:	ft		

B3 **East** **1/2 - 1 Mile** **Lower**	**CA WELLS**	**5315**

Seq:	5315	Prim sta c:	04S/12W-14K01 S
Frds no:	1910065008	County:	19
District:	15	User id:	MET
System no:	1910065	Water type:	G
Source nam:	ANNEX WELL 206 - INACTIVE	Station ty:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Latitude:	334900.0	Longitude:	1180600.0
Precision:	8	Status:	IR
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		
System no:	1910065	System nam:	Long Beach-City, Water Dept.
Hqname:	Not Reported	Address:	1800 E WARDLOW ROAD
City:	LONG BEACH	State:	CA
Zip:	90807	Zip ext:	Not Reported
Pop serv:	424276	Connection:	85818

Area serve: LONG BEACH

B4
East
1/2 - 1 Mile
Lower

CA WELLS 5307

Seq:	5307	Prim sta c:	04S/12W-13N02 S
Frds no:	1910065022	County:	19
District:	15	User id:	MET
System no:	1910065	Water type:	G
Source nam:	COMMISSION WELL 13	Station ty:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Latitude:	334900.0	Longitude:	1180600.0
Precision:	8	Status:	AR
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		

System no:	1910065	System nam:	Long Beach-City, Water Dept.
Hqname:	Not Reported	Address:	1800 E WARDLOW ROAD
City:	LONG BEACH	State:	CA
Zip:	90807	Zip ext:	Not Reported
Pop serv:	424276	Connection:	85818
Area serve:	LONG BEACH		

B5
East
1/2 - 1 Mile
Lower

CA WELLS 5334

Seq:	5334	Prim sta c:	04S/12W-23C01 S
Frds no:	1910065041	County:	19
District:	15	User id:	MET
System no:	1910065	Water type:	G
Source nam:	WILSON WELL 01-A	Station ty:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Latitude:	334900.0	Longitude:	1180600.0
Precision:	8	Status:	AR
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		

System no:	1910065	System nam:	Long Beach-City, Water Dept.
Hqname:	Not Reported	Address:	1800 E WARDLOW ROAD
City:	LONG BEACH	State:	CA
Zip:	90807	Zip ext:	Not Reported
Pop serv:	424276	Connection:	85818
Area serve:	LONG BEACH		

Sample date:	04-AUG-16	Finding:	30.9
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		

Sample date:	04-AUG-16	Finding:	0.8
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		

Sample date:	04-AUG-16	Finding:	354.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US

Dlr:	0.		
Sample date:	04-AUG-16	Finding:	8.74
Chemical:	PH, FIELD	Report units:	Not Reported
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	6.5
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	131.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	158.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	1.64
Chemical:	TOTAL ORGANIC CARBON (TOC)	Report units:	MG/L
Dlr:	0.3		
Sample date:	04-AUG-16	Finding:	30.2
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	11.2
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	0.506
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	69.9
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	0.84
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	17.3
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	17.2
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	04-AUG-16	Finding:	0.55
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	04-AUG-16	Finding:	22.4
Chemical:	SILICA	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	234.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		

Sample date:	04-AUG-16	Finding:	0.179
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	04-AUG-16	Finding:	3.
Chemical:	ODOR THRESHOLD @ 60 C	Report units:	TON
Dlr:	1.		
Sample date:	04-AUG-16	Finding:	2.5
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	0.57
Chemical:	RADIUM 228 COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	3.
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	0.54
Chemical:	RADIUM 226 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	67.
Chemical:	COLOR	Report units:	UNITS
Dlr:	0.		
Sample date:	23-SEP-15	Finding:	8.76
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	0.17
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	20-AUG-15	Finding:	12.38
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	8.8
Chemical:	PH, FIELD	Report units:	Not Reported
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	130.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	160.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	6.9
Chemical:	CARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	2.7
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	3.
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L

Dlr:	0.		
Sample date:	20-AUG-15	Finding:	31.5
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	76.
Chemical:	COLOR	Report units:	UNITS
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	363.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	8.82
Chemical:	PH, FIELD	Report units:	Not Reported
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	130.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	160.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	2.92
Chemical:	TOTAL ORGANIC CARBON (TOC)	Report units:	MG/L
Dlr:	0.3		
Sample date:	20-AUG-15	Finding:	29.6
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	11.
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	0.583
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	66.4
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	5.28
Chemical:	SODIUM ABSORPTION RATIO	Report units:	Not Reported
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	0.81
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	16.3
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	17.3
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		

Sample date:	20-AUG-15	Finding:	0.51
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	20-AUG-15	Finding:	17.
Chemical:	SILICA	Report units:	MG/L
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	256.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	20-AUG-15	Finding:	0.69
Chemical:	LANGELIER INDEX AT SOURCE TEMP.	Report units:	Not Reported
Dlr:	0.		
Sample date:	13-NOV-14	Finding:	18.4
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	13-NOV-14	Finding:	23.1
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	24-JUN-13	Finding:	4.
Chemical:	ODOR THRESHOLD @ 60 C	Report units:	TON
Dlr:	1.		
Sample date:	24-JUN-13	Finding:	12.2
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	0.123
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	24-JUN-13	Finding:	232.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	18.4
Chemical:	SILICA	Report units:	MG/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	0.47
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	24-JUN-13	Finding:	12.9
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	24-JUN-13	Finding:	14.6
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	0.725
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	67.
Chemical:	SODIUM	Report units:	MG/L

Dlr:	0.		
Sample date:	24-JUN-13	Finding:	0.271
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	10.4
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	3.52
Chemical:	TOTAL ORGANIC CARBON (TOC)	Report units:	MG/L
Dlr:	0.3		
Sample date:	24-JUN-13	Finding:	8.72
Chemical:	PH, FIELD	Report units:	Not Reported
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	353.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	64.
Chemical:	COLOR	Report units:	UNITS
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	30.4
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	130.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	2.4
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	3.
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	12.12
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	0.1
Chemical:	BROMIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	0.19
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	29-AUG-12	Finding:	0.4
Chemical:	LANGELIER INDEX AT SOURCE TEMP.	Report units:	Not Reported
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	224.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		

Sample date:	29-AUG-12	Finding:	20.
Chemical:	SILICA	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	0.49
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	29-AUG-12	Finding:	13.4
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	29-AUG-12	Finding:	14.8
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	0.8
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	5.39
Chemical:	SODIUM ABSORPTION RATIO	Report units:	Not Reported
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	68.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	0.31
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	10.3
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	27.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	0.44
Chemical:	SULFIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	2.84
Chemical:	TOTAL ORGANIC CARBON (TOC)	Report units:	MG/L
Dlr:	0.3		
Sample date:	29-AUG-12	Finding:	0.5
Chemical:	CARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	130.9
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	131.4
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	8.59
Chemical:	PH, FIELD	Report units:	Not Reported

Dlr:	0.		
Sample date:	29-AUG-12	Finding:	351.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	29.4
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	81.
Chemical:	COLOR	Report units:	UNITS
Dlr:	0.		

B6
East
1/2 - 1 Mile
Lower

CA WELLS 5316

Seq:	5316	Prim sta c:	04S/12W-14R01 S
Frds no:	1910065007	County:	19
District:	15	User id:	MET
System no:	1910065	Water type:	G
Source nam:	ANNEX WELL 205 - INACTIVE	Station ty:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Latitude:	334900.0	Longitude:	1180600.0
Precision:	8	Status:	IR
Comment 1:	Not Reported	Comment 2:	Not Reported
Comment 3:	Not Reported	Comment 4:	Not Reported
Comment 5:	Not Reported	Comment 6:	Not Reported
Comment 7:	Not Reported		
System no:	1910065	System nam:	Long Beach-City, Water Dept.
Hqname:	Not Reported	Address:	1800 E WARDLOW ROAD
City:	LONG BEACH	State:	CA
Zip:	90807	Zip ext:	Not Reported
Pop serv:	424276	Connection:	85818
Area serve:	LONG BEACH		

7
NE
1/2 - 1 Mile
Higher

FED USGS USGS40000138451

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S012W14K001S	Type:	Well
Description:	Not Reported	HUC:	18070106
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	1170
Well Depth Units:	ft	Well Hole Depth:	1170
Well Hole Depth Units:	ft		

Map ID Direction Distance Elevation	Database	EDR ID Number
8 **SE** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS40000138365**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S012W23K003S	Type:	Well
Description:	LA WATER REPLENISHMENT DIST GPS LAT/LONG		
HUC:	18070106	Drainage Area:	Not Reported
Drainage Area Units:	Not Reported	Contrib Drainage Area:	Not Reported
Contrib Drainage Area Unts:	Not Reported	Aquifer:	California Coastal Basin aquifers
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	838
Well Depth Units:	ft	Well Hole Depth:	854
Well Hole Depth Units:	ft		

C9 **ENE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000138433**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S012W14R001S	Type:	Well
Description:	Not Reported	HUC:	18070106
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	557
Well Depth Units:	ft	Well Hole Depth:	720
Well Hole Depth Units:	ft		

C10 **ENE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000138427**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S012W13N002S	Type:	Well
Description:	Not Reported	HUC:	18070106
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	1539
Well Depth Units:	ft	Well Hole Depth:	1634
Well Hole Depth Units:	ft		

Map ID Direction Distance Elevation	Database	EDR ID Number
C11 **ENE** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000138434**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S012W13N001S	Type:	Well
Description:	Not Reported	HUC:	18070106
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	451
Well Depth Units:	ft	Well Hole Depth:	508
Well Hole Depth Units:	ft		

12 **SSE** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS40000138327**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S012W23K002S	Type:	Well
Description:	Not Reported	HUC:	18070106
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	1103
Well Depth Units:	ft	Well Hole Depth:	1186
Well Hole Depth Units:	ft		

13 **ESE** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS40000138369**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S012W24M002S	Type:	Well
Description:	Not Reported	HUC:	18070106
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	980
Well Depth Units:	ft	Well Hole Depth:	1086
Well Hole Depth Units:	ft		

Map ID Direction Distance Elevation	Database	EDR ID Number
14 **SE** **1/2 - 1 Mile** **Lower**	**FED USGS**	**USGS40000138361**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S012W24M008S	Type:	Well
Description:	Not Reported	HUC:	18070106
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	1100
Well Depth Units:	ft	Well Hole Depth:	1100
Well Hole Depth Units:	ft		

D15 **North** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000138482**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S012W14C001S	Type:	Well
Description:	Not Reported	HUC:	18070106
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	300
Well Depth Units:	ft	Well Hole Depth:	324
Well Hole Depth Units:	ft		

D16 **North** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000138484**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S012W14C002S	Type:	Well
Description:	Not Reported	HUC:	18070106
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	2000
Well Depth Units:	ft	Well Hole Depth:	2250
Well Hole Depth Units:	ft		

Map ID Direction Distance Elevation	Database	EDR ID Number
17 **WNW** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000138453**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S012W15K003S	Type:	Well
Description:	Not Reported	HUC:	18070106
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	66
Well Depth Units:	ft	Well Hole Depth:	1066
Well Hole Depth Units:	ft		

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18 **North** **1/2 - 1 Mile** **Higher**	**FED USGS**	**USGS40000138489**	

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S012W14C006S	Type:	Well
Description:	Not Reported	HUC:	18070106
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	1411
Well Depth Units:	ft	Well Hole Depth:	1715
Well Hole Depth Units:	ft		

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19 **NNE** **1/2 - 1 Mile** **Higher**	**CA WELLS**	**5311**	

Seq:	5311	Prim sta c:	04S/12W-14B02 S
Frds no:	1910065027	County:	19
District:	15	User id:	MET
System no:	1910065	Water type:	G
Source nam:	COMMISSION WELL 17	Station ty:	WELL/AMBNT/MUN/INTAKE/SUPPLY
Latitude:	334950.8	Longitude:	1180619.1
Precision:	3	Status:	AR
Comment 1:	PARKCREST ST., 55’ E OF HACKETT ST., LONG BEACH		
Comment 2:	Not Reported	Comment 3:	Not Reported
Comment 4:	Not Reported	Comment 5:	Not Reported
Comment 6:	Not Reported	Comment 7:	Not Reported
System no:	1910065	System nam:	Long Beach-City, Water Dept.
Hqname:	Not Reported	Address:	1800 E WARDLOW ROAD
City:	LONG BEACH	State:	CA
Zip:	90807	Zip ext:	Not Reported
Pop serv:	424276	Connection:	85818

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Area serve: LONG BEACH

Sample date:	04-AUG-16	Finding:	329.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	0.43
Chemical:	RADIUM 226 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	3.
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	2.6
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	2.
Chemical:	ODOR THRESHOLD @ 60 C	Report units:	TON
Dlr:	1.		
Sample date:	04-AUG-16	Finding:	0.178
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	04-AUG-16	Finding:	208.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	229.
Chemical:	IRON	Report units:	UG/L
Dlr:	100.		
Sample date:	04-AUG-16	Finding:	6.
Chemical:	ARSENIC	Report units:	UG/L
Dlr:	2.		
Sample date:	04-AUG-16	Finding:	21.7
Chemical:	SILICA	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	0.48
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	04-AUG-16	Finding:	17.8
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	04-AUG-16	Finding:	9.7
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	2.49
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	32.1
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		

Sample date:	04-AUG-16	Finding:	4.77
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	38.4
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	116.
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	0.58
Chemical:	PHOSPHATE, ORTHO	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	183.
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	150.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	23.8
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	7.
Chemical:	COLOR	Report units:	UNITS
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	0.74
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	8.03
Chemical:	PH, FIELD	Report units:	Not Reported
Dlr:	0.		
Sample date:	04-AUG-16	Finding:	6.5
Chemical:	PH, LABORATORY	Report units:	Not Reported
Dlr:	0.		
Sample date:	22-JAN-16	Finding:	0.87
Chemical:	RADIUM 228 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	22-JAN-16	Finding:	0.41
Chemical:	RADIUM 226 MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	22-JAN-16	Finding:	0.56
Chemical:	XYLENES (TOTAL)	Report units:	UG/L
Dlr:	0.5		
Sample date:	22-JAN-16	Finding:	0.56
Chemical:	M,P-XYLENE	Report units:	UG/L
Dlr:	0.5		
Sample date:	22-JAN-16	Finding:	3.
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L

Dlr:	0.		
Sample date:	22-JAN-16	Finding:	2.6
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	15-DEC-14	Finding:	0.64
Chemical:	1,2,4-TRIMETHYLBENZENE	Report units:	UG/L
Dlr:	0.5		
Sample date:	15-DEC-14	Finding:	2.1
Chemical:	TOTAL TRIHALOMETHANES	Report units:	UG/L
Dlr:	0.		
Sample date:	15-DEC-14	Finding:	3.
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	15-DEC-14	Finding:	6.7
Chemical:	GROSS ALPHA	Report units:	PCI/L
Dlr:	3.		
Sample date:	15-DEC-14	Finding:	3.4
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	15-DEC-14	Finding:	2.1
Chemical:	CHLOROFORM (THM)	Report units:	UG/L
Dlr:	1.		
Sample date:	15-DEC-14	Finding:	1.7
Chemical:	TOLUENE	Report units:	UG/L
Dlr:	0.5		
Sample date:	15-DEC-14	Finding:	2.2
Chemical:	BENZENE	Report units:	UG/L
Dlr:	0.5		
Sample date:	24-JUN-13	Finding:	22.
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	2.3
Chemical:	GROSS ALPHA COUNTING ERROR	Report units:	PCI/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	140.
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	12.3
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	0.279
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		
Sample date:	24-JUN-13	Finding:	220.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		

Sample date:	24-JUN-13	Finding:	17.9
Chemical:	SILICA	Report units:	MG/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	0.34
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	24-JUN-13	Finding:	18.7
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	24-JUN-13	Finding:	6.63
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	2.11
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	34.3
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	3.77
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	35.6
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	0.11
Chemical:	PHOSPHATE, ORTHO	Report units:	MG/L
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	8.19
Chemical:	PH, FIELD	Report units:	Not Reported
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	317.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	5.
Chemical:	COLOR	Report units:	UNITS
Dlr:	0.		
Sample date:	24-JUN-13	Finding:	3.
Chemical:	GROSS ALPHA MDA95	Report units:	PCI/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	12.43
Chemical:	AGGRSSIVE INDEX (CORROSIVITY)	Report units:	Not Reported
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	24.5
Chemical:	SOURCE TEMPERATURE C	Report units:	C
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	0.6
Chemical:	LANGELIER INDEX AT SOURCE TEMP.	Report units:	Not Reported

Dlr:	0.		
Sample date:	29-AUG-12	Finding:	216.
Chemical:	TOTAL DISSOLVED SOLIDS	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	21.5
Chemical:	SILICA	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	0.33
Chemical:	FLUORIDE (F) (NATURAL-SOURCE)	Report units:	MG/L
Dlr:	0.1		
Sample date:	29-AUG-12	Finding:	20.4
Chemical:	SULFATE	Report units:	MG/L
Dlr:	0.5		
Sample date:	29-AUG-12	Finding:	7.
Chemical:	CHLORIDE	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	2.02
Chemical:	POTASSIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	1.57
Chemical:	SODIUM ABSORPTION RATIO	Report units:	Not Reported
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	36.
Chemical:	SODIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	3.81
Chemical:	MAGNESIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	33.7
Chemical:	CALCIUM	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	99.7
Chemical:	HARDNESS (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	139.9
Chemical:	BICARBONATE ALKALINITY	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	139.9
Chemical:	ALKALINITY (TOTAL) AS CACO3	Report units:	MG/L
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	8.36
Chemical:	PH, FIELD	Report units:	Not Reported
Dlr:	0.		
Sample date:	29-AUG-12	Finding:	353.
Chemical:	SPECIFIC CONDUCTANCE	Report units:	US
Dlr:	0.		

Sample date:	29-AUG-12	Finding:	26.
Chemical:	COLOR	Report units:	UNITS
Dlr:	0.		

Sample date:	29-AUG-12	Finding:	8.6e-002
Chemical:	TURBIDITY, LABORATORY	Report units:	NTU
Dlr:	0.1		

20
SE
1/2 - 1 Mile
Lower

FED USGS **USGS40000138349**

Organization ID:	USGS-CA		
Organization Name:	USGS California Water Science Center		
Monitor Location:	004S012W24M004S	Type:	Well
Description:	Not Reported	HUC:	18070106
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	California Coastal Basin aquifers		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	Not Reported	Well Depth:	952
Well Depth Units:	ft	Well Hole Depth:	1010
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	487	Level reading date:	1944-10-21
Feet below surface:	30.7	Feet to sea level:	Not Reported
Note:	Not Reported		

Level reading date:	1944-10-14	Feet below surface:	31.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-10-07	Feet below surface:	31.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-10-02	Feet below surface:	31.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-09-23	Feet below surface:	33.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-09-16	Feet below surface:	31.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-09-08	Feet below surface:	34.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-09-01	Feet below surface:	34.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-08-26	Feet below surface:	33.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-08-19	Feet below surface:	32.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-08-12	Feet below surface:	27.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-07-31	Feet below surface:	27.0

Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-07-22	Feet below surface:	27.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-07-15	Feet below surface:	26.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-07-08	Feet below surface:	27.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-07-01	Feet below surface:	29.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-06-24	Feet below surface:	28.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-06-17	Feet below surface:	27.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-06-10	Feet below surface:	26.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-05-31	Feet below surface:	25.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-05-20	Feet below surface:	23.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-05-13	Feet below surface:	23.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-05-06	Feet below surface:	21.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-04-29	Feet below surface:	23.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-04-22	Feet below surface:	23.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-04-15	Feet below surface:	22.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-04-08	Feet below surface:	23.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-04-01	Feet below surface:	23.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-03-25	Feet below surface:	23.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-03-18	Feet below surface:	21.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-03-11	Feet below surface:	17.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-03-01	Feet below surface:	18.4
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1944-02-19	Feet below surface:	22.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-02-11	Feet below surface:	17.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-01-31	Feet below surface:	18.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-01-22	Feet below surface:	18.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-01-15	Feet below surface:	18.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1944-01-08	Feet below surface:	19.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-12-31	Feet below surface:	20.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-12-24	Feet below surface:	21.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-12-18	Feet below surface:	22.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-12-11	Feet below surface:	24.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-12-01	Feet below surface:	25.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-11-20	Feet below surface:	27.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-11-13	Feet below surface:	29.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-11-06	Feet below surface:	29.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-10-29	Feet below surface:	29.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-10-23	Feet below surface:	29.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-10-16	Feet below surface:	33.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-10-09	Feet below surface:	33.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-10-01	Feet below surface:	35.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-09-25	Feet below surface:	55.5
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1943-09-01	Feet below surface:	35.8
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1943-08-03	Feet below surface:	35.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-07-10	Feet below surface:	50.5
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1943-06-30	Feet below surface:	26.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-06-19	Feet below surface:	25.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-06-12	Feet below surface:	25.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-06-01	Feet below surface:	23.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-05-22	Feet below surface:	25.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-05-15	Feet below surface:	21.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-05-08	Feet below surface:	21.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-04-30	Feet below surface:	19.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-04-24	Feet below surface:	18.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-04-17	Feet below surface:	17.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-04-10	Feet below surface:	15.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-03-31	Feet below surface:	13.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-03-20	Feet below surface:	15.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-03-13	Feet below surface:	15.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-03-06	Feet below surface:	16.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-03-01	Feet below surface:	15.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-02-20	Feet below surface:	17.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-02-13	Feet below surface:	17.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-02-06	Feet below surface:	17.7
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1943-01-29	Feet below surface:	18.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-01-16	Feet below surface:	17.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-01-09	Feet below surface:	21.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-12-31	Feet below surface:	20.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-12-19	Feet below surface:	22.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-12-12	Feet below surface:	21.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-12-01	Feet below surface:	23.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-11-21	Feet below surface:	25.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-11-14	Feet below surface:	27.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-11-07	Feet below surface:	28.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-11-02	Feet below surface:	31.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-09-30	Feet below surface:	33.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-09-01	Feet below surface:	36.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-07-31	Feet below surface:	34.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-07-01	Feet below surface:	26.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-06-13	Feet below surface:	45.4
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1942-06-06	Feet below surface:	45.3
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1942-06-01	Feet below surface:	23.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-05-23	Feet below surface:	40.8
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1942-05-16	Feet below surface:	36.7
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1942-05-09	Feet below surface:	36.8
Feet to sea level:	Not Reported	Note:	The site was being pumped.

Level reading date:	1942-04-30	Feet below surface:	15.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-04-25	Feet below surface:	20.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-04-24	Feet below surface:	18.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-04-18	Feet below surface:	19.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-04-17	Feet below surface:	17.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-04-11	Feet below surface:	17.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-04-10	Feet below surface:	15.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-03-31	Feet below surface:	18.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-03-21	Feet below surface:	14.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-03-20	Feet below surface:	15.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-03-14	Feet below surface:	15.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-03-13	Feet below surface:	15.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-03-07	Feet below surface:	13.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-03-06	Feet below surface:	16.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-03-01	Feet below surface:	15.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-02-27	Feet below surface:	14.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-02-21	Feet below surface:	36.0
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1942-02-20	Feet below surface:	17.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-02-14	Feet below surface:	34.3
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1942-02-13	Feet below surface:	17.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-02-07	Feet below surface:	33.9
Feet to sea level:	Not Reported	Note:	The site was being pumped.

Level reading date:	1942-02-06	Feet below surface:	17.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-01-29	Feet below surface:	18.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-01-24	Feet below surface:	35.2
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1942-01-17	Feet below surface:	35.8
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1942-01-16	Feet below surface:	17.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1942-01-10	Feet below surface:	36.6
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1942-01-09	Feet below surface:	21.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-12-20	Feet below surface:	38.0
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1941-12-13	Feet below surface:	38.7
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1941-11-15	Feet below surface:	43.0
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1941-11-08	Feet below surface:	44.4
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1941-10-31	Feet below surface:	25.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-10-25	Feet below surface:	47.8
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1941-10-18	Feet below surface:	28.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-10-11	Feet below surface:	47.0
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1941-10-01	Feet below surface:	26.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-09-20	Feet below surface:	24.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-09-13	Feet below surface:	25.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-09-02	Feet below surface:	29.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-08-23	Feet below surface:	48.0
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1941-08-09	Feet below surface:	47.1
Feet to sea level:	Not Reported	Note:	The site was being pumped.

Level reading date:	1941-08-01	Feet below surface:	25.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-07-26	Feet below surface:	44.6
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1941-07-19	Feet below surface:	49.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-07-12	Feet below surface:	41.4
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1941-07-07	Feet below surface:	39.8
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1941-07-01	Feet below surface:	19.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-06-21	Feet below surface:	39.9
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1941-06-14	Feet below surface:	38.4
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1941-06-07	Feet below surface:	38.4
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1941-06-02	Feet below surface:	16.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-05-24	Feet below surface:	37
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1941-05-17	Feet below surface:	36.3
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1941-05-10	Feet below surface:	36.2
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1941-04-30	Feet below surface:	11.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-04-19	Feet below surface:	11.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-04-12	Feet below surface:	11.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-03-31	Feet below surface:	13.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-03-22	Feet below surface:	14.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-03-15	Feet below surface:	13.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-03-08	Feet below surface:	13.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-02-28	Feet below surface:	14.58
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1941-02-21	Feet below surface:	15.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-02-15	Feet below surface:	15.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-02-08	Feet below surface:	17.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-01-31	Feet below surface:	17.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-01-25	Feet below surface:	17.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-01-18	Feet below surface:	18.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-01-11	Feet below surface:	18.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1941-01-02	Feet below surface:	19.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-12-21	Feet below surface:	21.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-12-13	Feet below surface:	24.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-12-07	Feet below surface:	27.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-12-02	Feet below surface:	29.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-11-23	Feet below surface:	48.9
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-11-16	Feet below surface:	50.4
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-11-09	Feet below surface:	29.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-11-01	Feet below surface:	31.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-10-26	Feet below surface:	51.9
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-10-19	Feet below surface:	54.5
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-10-11	Feet below surface:	53.8
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-10-01	Feet below surface:	39.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-09-21	Feet below surface:	54.4
Feet to sea level:	Not Reported	Note:	The site was being pumped.

Level reading date:	1940-09-14	Feet below surface:	54.7
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-09-07	Feet below surface:	54.7
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-08-30	Feet below surface:	36.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-08-24	Feet below surface:	54.4
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-08-17	Feet below surface:	43.5
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-08-10	Feet below surface:	53.5
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-08-01	Feet below surface:	35.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-07-20	Feet below surface:	51.3
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-07-13	Feet below surface:	49.5
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-07-06	Feet below surface:	47.9
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-07-01	Feet below surface:	29.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-06-22	Feet below surface:	46.4
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-06-15	Feet below surface:	44.6
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-06-08	Feet below surface:	44.8
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-05-31	Feet below surface:	25.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-05-24	Feet below surface:	43.7
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-05-18	Feet below surface:	46.1
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-05-11	Feet below surface:	40.4
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-05-01	Feet below surface:	17.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-04-20	Feet below surface:	18.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-04-13	Feet below surface:	38.6
Feet to sea level:	Not Reported	Note:	The site was being pumped.

Level reading date:	1940-04-06	Feet below surface:	37.5
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-04-01	Feet below surface:	20.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-03-23	Feet below surface:	41.9
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-03-16	Feet below surface:	42.2
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-03-09	Feet below surface:	41.3
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-03-01	Feet below surface:	19.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-02-23	Feet below surface:	39.7
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-02-16	Feet below surface:	36.0
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-02-09	Feet below surface:	36.1
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-01-30	Feet below surface:	19.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1940-01-19	Feet below surface:	37.1
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-01-12	Feet below surface:	37.0
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-01-06	Feet below surface:	37.4
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1940-01-02	Feet below surface:	20.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-12-23	Feet below surface:	38.3
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-12-15	Feet below surface:	38.8
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-12-08	Feet below surface:	40.7
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-12-01	Feet below surface:	25.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-11-25	Feet below surface:	42.3
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-11-18	Feet below surface:	45.3
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-11-13	Feet below surface:	22.2
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1939-11-01	Feet below surface:	29.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-10-21	Feet below surface:	44.8
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-10-14	Feet below surface:	45.1
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-10-07	Feet below surface:	45.8
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-09-30	Feet below surface:	32.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-09-23	Feet below surface:	52.2
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-09-16	Feet below surface:	49.2
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-09-11	Feet below surface:	48.5
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-09-01	Feet below surface:	32.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-08-26	Feet below surface:	47.8
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-08-19	Feet below surface:	47.4
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-08-12	Feet below surface:	47.5
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-08-05	Feet below surface:	47.0
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-07-31	Feet below surface:	28.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-07-22	Feet below surface:	45.4
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-07-15	Feet below surface:	44.1
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-07-08	Feet below surface:	41.2
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-06-30	Feet below surface:	26.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-06-24	Feet below surface:	39.9
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-06-17	Feet below surface:	39.0
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1939-06-10	Feet below surface:	36.2
Feet to sea level:	Not Reported	Note:	The site was being pumped.

Level reading date:	1939-05-31	Feet below surface:	17.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-05-20	Feet below surface:	11.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-05-13	Feet below surface:	11.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-05-06	Feet below surface:	10.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-05-01	Feet below surface:	9.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-04-22	Feet below surface:	9.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-04-15	Feet below surface:	10.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-04-08	Feet below surface:	7.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-03-31	Feet below surface:	9.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-03-25	Feet below surface:	9.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-03-18	Feet below surface:	10.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-03-11	Feet below surface:	11.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-03-01	Feet below surface:	10.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-02-20	Feet below surface:	10.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-02-11	Feet below surface:	10.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-01-31	Feet below surface:	13.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-01-21	Feet below surface:	13.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-01-14	Feet below surface:	14.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1939-01-07	Feet below surface:	14.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-12-31	Feet below surface:	14.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-12-24	Feet below surface:	15.0
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1938-12-17	Feet below surface:	16.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-12-10	Feet below surface:	19.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-12-01	Feet below surface:	22.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-11-19	Feet below surface:	22.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-11-12	Feet below surface:	24.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-11-05	Feet below surface:	24.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-10-31	Feet below surface:	23.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-10-22	Feet below surface:	25.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-10-15	Feet below surface:	27.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-10-08	Feet below surface:	27.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-10-01	Feet below surface:	27.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-09-24	Feet below surface:	29.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-09-17	Feet below surface:	27.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-09-12	Feet below surface:	27.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-08-31	Feet below surface:	26.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-08-22	Feet below surface:	26.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-08-15	Feet below surface:	25.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-08-08	Feet below surface:	24.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-08-01	Feet below surface:	23.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-07-25	Feet below surface:	22.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-07-18	Feet below surface:	20.5
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1938-07-11	Feet below surface:	20.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-06-30	Feet below surface:	21.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-06-20	Feet below surface:	34.9
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1938-06-13	Feet below surface:	35.7
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1938-06-01	Feet below surface:	19.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-04-25	Feet below surface:	18.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-04-18	Feet below surface:	37.9
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1938-04-11	Feet below surface:	38.5
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1938-04-01	Feet below surface:	12.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-03-28	Feet below surface:	12.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-03-23	Feet below surface:	33.0
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1938-03-16	Feet below surface:	32.2
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1938-03-14	Feet below surface:	12.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-03-09	Feet below surface:	37.9
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1938-03-07	Feet below surface:	12.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-03-02	Feet below surface:	17.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-03-01	Feet below surface:	13.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-02-21	Feet below surface:	13.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-02-14	Feet below surface:	14.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-02-07	Feet below surface:	15.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-01-31	Feet below surface:	16.2
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1938-01-24	Feet below surface:	16.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-01-17	Feet below surface:	17.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-01-10	Feet below surface:	20.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1938-01-03	Feet below surface:	18.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-12-27	Feet below surface:	19.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-12-20	Feet below surface:	22.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-12-06	Feet below surface:	21.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-11-30	Feet below surface:	22.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-11-22	Feet below surface:	22.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-11-15	Feet below surface:	22.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-11-08	Feet below surface:	22.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-11-01	Feet below surface:	21.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-10-25	Feet below surface:	23.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-10-18	Feet below surface:	25.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-10-11	Feet below surface:	24.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-09-30	Feet below surface:	25.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-09-20	Feet below surface:	26.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-09-13	Feet below surface:	27.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-09-07	Feet below surface:	26.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-08-31	Feet below surface:	28.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-08-23	Feet below surface:	27.2
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1937-08-16	Feet below surface:	25.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-08-09	Feet below surface:	25.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-08-02	Feet below surface:	24.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-07-26	Feet below surface:	23.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-07-19	Feet below surface:	22.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-07-01	Feet below surface:	21.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-06-21	Feet below surface:	20.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-06-14	Feet below surface:	18.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-06-07	Feet below surface:	18.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-06-01	Feet below surface:	16.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-05-24	Feet below surface:	15.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-05-17	Feet below surface:	14.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-05-10	Feet below surface:	12.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-05-01	Feet below surface:	16.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-04-26	Feet below surface:	16.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-04-19	Feet below surface:	15.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-04-12	Feet below surface:	12.4
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-04-01	Feet below surface:	14.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-03-22	Feet below surface:	15.6
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-03-15	Feet below surface:	15.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-03-08	Feet below surface:	18.1
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1937-03-01	Feet below surface:	16.80
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-02-23	Feet below surface:	17.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-02-15	Feet below surface:	19.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-02-08	Feet below surface:	18.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-02-04	Feet below surface:	17.17
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-01-25	Feet below surface:	19.75
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-01-11	Feet below surface:	20.42
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1937-01-02	Feet below surface:	20.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-12-28	Feet below surface:	22.33
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-12-21	Feet below surface:	24.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-12-14	Feet below surface:	25.42
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-12-07	Feet below surface:	25.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-11-30	Feet below surface:	32.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-11-23	Feet below surface:	45.58
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-11-16	Feet below surface:	46.00
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-11-09	Feet below surface:	45.66
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-11-02	Feet below surface:	33.66
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-10-26	Feet below surface:	49.33
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-10-19	Feet below surface:	31.17
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-10-14	Feet below surface:	47.00
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-10-01	Feet below surface:	34.00
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1936-09-21	Feet below surface:	49.33
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-09-14	Feet below surface:	47.00
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-09-08	Feet below surface:	47.50
Feet to sea level:	Not Reported	Note:	The site had been pumped recently.
Level reading date:	1936-08-31	Feet below surface:	29.66
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-08-24	Feet below surface:	46.50
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-08-17	Feet below surface:	46.83
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-08-10	Feet below surface:	47.00
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-08-03	Feet below surface:	33.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-07-27	Feet below surface:	47.58
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-07-20	Feet below surface:	46.25
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-07-13	Feet below surface:	45.00
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-07-07	Feet below surface:	45.00
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-06-30	Feet below surface:	30.08
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-06-22	Feet below surface:	42.25
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-06-15	Feet below surface:	40.58
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-06-08	Feet below surface:	39.42
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-06-01	Feet below surface:	23.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-05-25	Feet below surface:	22.42
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-05-12	Feet below surface:	35.17
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-04-30	Feet below surface:	16.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-04-20	Feet below surface:	33.75
Feet to sea level:	Not Reported	Note:	The site was being pumped.

Level reading date:	1936-04-13	Feet below surface:	33.00
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-04-02	Feet below surface:	18.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-03-23	Feet below surface:	31.17
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-03-16	Feet below surface:	30.66
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-03-09	Feet below surface:	31.17
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-03-01	Feet below surface:	16.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-02-24	Feet below surface:	32.08
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-02-18	Feet below surface:	32.33
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-02-10	Feet below surface:	31.25
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-02-03	Feet below surface:	16.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1936-01-27	Feet below surface:	31.66
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-01-20	Feet below surface:	30.50
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1936-01-13	Feet below surface:	14.17
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-12-30	Feet below surface:	12.17
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-12-23	Feet below surface:	16.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-12-16	Feet below surface:	16.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-12-09	Feet below surface:	16.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-12-02	Feet below surface:	17.66
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-11-25	Feet below surface:	18.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-11-18	Feet below surface:	18.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-11-12	Feet below surface:	18.92
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1935-11-01	Feet below surface:	19.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-10-21	Feet below surface:	21.42
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-10-14	Feet below surface:	20.33
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-10-07	Feet below surface:	35.75
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1935-09-30	Feet below surface:	20.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-09-23	Feet below surface:	20.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-09-16	Feet below surface:	35.33
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1935-09-10	Feet below surface:	21.83
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-09-03	Feet below surface:	22.08
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-08-26	Feet below surface:	35.83
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1935-08-20	Feet below surface:	36.75
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1935-08-12	Feet below surface:	36.50
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1935-07-31	Feet below surface:	23.33
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-07-22	Feet below surface:	33.66
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1935-07-15	Feet below surface:	32.50
Feet to sea level:	Not Reported	Note:	The site was being pumped.
Level reading date:	1935-07-01	Feet below surface:	14.16
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-06-30	Feet below surface:	14.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-05-31	Feet below surface:	11.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-04-30	Feet below surface:	6.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-03-31	Feet below surface:	9.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1935-02-28	Feet below surface:	11.2
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1935-01-31	Feet below surface:	10.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-12-31	Feet below surface:	16.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-11-30	Feet below surface:	18.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-10-31	Feet below surface:	20.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-09-30	Feet below surface:	25.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-08-31	Feet below surface:	24.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-06-30	Feet below surface:	18.8
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-05-31	Feet below surface:	18.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-05-22	Feet below surface:	19.32
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-05-16	Feet below surface:	18.75
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-05-09	Feet below surface:	17.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-05-02	Feet below surface:	16.09
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-04-30	Feet below surface:	13.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-04-25	Feet below surface:	15.28
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-04-18	Feet below surface:	14.68
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-04-11	Feet below surface:	14.33
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-04-04	Feet below surface:	13.29
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-03-31	Feet below surface:	10.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-03-28	Feet below surface:	12.44
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-03-24	Feet below surface:	11.81
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-03-21	Feet below surface:	11.25
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1934-03-14	Feet below surface:	10.18
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-03-10	Feet below surface:	9.41
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-03-07	Feet below surface:	9.03
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-02-28	Feet below surface:	9.57
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-02-21	Feet below surface:	10.09
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-02-14	Feet below surface:	10.36
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-02-07	Feet below surface:	9.96
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-02-01	Feet below surface:	10.1
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-01-31	Feet below surface:	10.01
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-01-25	Feet below surface:	10.34
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1934-01-18	Feet below surface:	9.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-12-31	Feet below surface:	15.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-11-30	Feet below surface:	20.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-11-02	Feet below surface:	15.84
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-10-31	Feet below surface:	18
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-09-30	Feet below surface:	18.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-08-31	Feet below surface:	20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-07-31	Feet below surface:	19.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-07-17	Feet below surface:	29.82
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-06-30	Feet below surface:	16
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-05-31	Feet below surface:	17.3
Feet to sea level:	Not Reported	Note:	Not Reported

Level reading date:	1933-04-30	Feet below surface:	9.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-04-24	Feet below surface:	9.55
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-03-31	Feet below surface:	5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-02-28	Feet below surface:	8.7
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1933-01-31	Feet below surface:	11.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1932-12-31	Feet below surface:	11.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1932-12-27	Feet below surface:	10.0
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1932-11-30	Feet below surface:	15
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1932-10-31	Feet below surface:	19.5
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1932-09-30	Feet below surface:	20.3
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1932-08-31	Feet below surface:	20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1932-07-31	Feet below surface:	21.9
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1932-06-30	Feet below surface:	19.2
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1932-01-31	Feet below surface:	11.2
Feet to sea level:	Not Reported	Note:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
90808	24	0

Federal EPA Radon Zone for LOS ANGELES County: 2

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for LOS ANGELES COUNTY, CA

Number of sites tested: 63

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	0.711 pCi/L	98%	2%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	0.933 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: Department of Fish and Wildlife
Telephone: 916-445-0411

HYDROGEOLOGIC INFORMATION

AQUIFLOW[R] Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database
Source: Department of Water Resources
Telephone: 916-651-9648

California Drinking Water Quality Database
Source: Department of Public Health
Telephone: 916-324-2319
The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Dept of Conservation, Geologic Energy Management Division
Telephone: 916-323-1779
Oil and Gas well locations in the state.

California Earthquake Fault Lines
Source: California Division of Mines and Geology
The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

RADON

State Database: CA Radon
Source: Department of Public Health
Telephone: 916-210-8558
Radon Database for California

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

STREET AND ADDRESS INFORMATION

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APPENDIX D: QUALIFICATIONS/INSURANCE

Heather Hodgetts
Senior Scientist

Education
B.A. in Earth Sciences, University of Southern California

Training
40-Hour OSHA-approved Health & Safety Training
8-hour OSHA HAZWOPER Annual Refresher

Highlights
20 years in the environmental consulting industry
Phase I Environmental Site Assessments
Phase II and III Subsurface Investigations

Experience Summary
As a Senior Scientist for due diligence services within the Investment Advisory Group, Ms. Hodgetts focuses on providing solutions to clients' due diligence and engineering needs and sharing years of expertise with staff and clients. Previously, Ms. Hodgetts was a Senior Environmental Scientist for a Fortune 500 company and was responsible for managing due diligence projects throughout the United States.

Ms. Hodgetts has performed hundreds of Phase I Environmental Site Assessments, Third Party Reviews, Due Diligence Audits, and Record Search, Phase II Subsurface Investigations, Underground Storage Tank Investigations, Remedial Investigations, Limited asbestos surveys, Lead-based paint surveys, Radon Studies, and Lead-in-water sampling and analysis.

Ms. Hodgetts has worked with various clients including: individual investors, institutional investors, private and institutional equity companies, insurance companies, attorneys, brokers, developers, and multiple lenders.

Project Experience
Phase I Environmental Site assessments
Ms. Hodgetts has performed Phase I Environmental Site Assessments of commercial, residential, and industrial properties including schools, shopping centers, industrial parks, manufacturing facilities, drycleaners and gasoline stations.

Subsurface Investigations
Conducted soil and groundwater assessments at County of San Diego Department of Public Works Road Stations throughout San Diego County. Activities included field oversight of groundwater monitoring well installation using mud-rotary, air-rotary, and hollow-stem augers; soil and groundwater sampling; receptor surveys; and installed monitoring wells and soil borings.

Environmental Regulatory Compliance
Assisted in environmental regulatory compliance audit and ownership transfer activities. The audit included coordinating with local agencies to transfer environmental permits for air, wastewater, hazardous waste, and medical waste.

Storage Tank Programs
Completed UST Closure Reports, Limited Site Assessments, Soil Assessment Reports, Soil Closure Reports, and Corrective Action Plans for submittal to regulatory agencies for UST sites owned by various industrial and government entities.

School District Investigations
Worked in-house for San Diego Unified School District (SDUSD) for 15 months completing the environmental due diligence for Proposition MM, a bond measure passed by voters to fund modernization of 165 existing school and construction of 16 new/rebuilt schools. Activities included: conducting Phase I ESAs for proposed school sites, including information relevant to the California Department of Education (CDE) School Site Selection and Approval Guide; submitting Phase I ESAs for EPA Department of Toxic Substances Control review; preparing Public Participations Plans and assisting with public meeting presentations; and submitting site packages to CDE for site approval. In addition to SDUSD, Ms. Hodgetts has also worked on Los Angeles Unified School District, Coronado Unified School District, and Lake Elsinore Unified School District sites.

Subsurface Investigations
Conducted soil and groundwater assessments at County of San Diego Department of Public Works Road Stations throughout San Diego County. Activities included field oversight of groundwater monitoring well installation using mud-rotary, air-rotary, and hollow-stem augers; soil and groundwater sampling; receptor surveys; and installed monitoring wells and soil borings.

Environmental Regulatory Compliance
Assisted in environmental regulatory compliance audit and ownership transfer activities. The audit included coordinating with local agencies to transfer environmental permits for air, wastewater, hazardous waste, and medical waste.

Cellular Telephone Investigations
Performed environmental assessments for cellular telephone antenna installations for a major cellular operator. Tasks included: inspections of numerous buildings, installations, additions, collocations, and vacant land; and asbestos and lead sampling at these facilities throughout southern California.

Contact

hhodgettsl@partneresi.com

Debbie Stott, P.G.
Nevada CEM
Technical Director

Education
BA Geology, The Ohio State University

Registrations
California Professional Geologist No. 6221
Nevada Certified Environmental Manager No. 2359

Training
OSHA, Hazardous Waste Operator (HAZWOPER) 40 hour Certification
AHERA Certified Asbestos Inspector
Certified Project Manager

Highlights
Over 25 years of experience in the environmental service industry with a focus on due diligence assessments
Knowledgeable with ASTM, EPA's All Appropriate Inquiry (AAI), and customized client formats.
100+ Phase I Environmental Site Assessments

Experience Summary
As Technical Director for due diligence services as part of the Investment Advisory Group, Ms. Stott focuses on report quality, client service, and sharing her years of expertise with staff and clients.

Ms. Stott has performed hundreds of Phase I Environmental Site Assessments, Third Party Reviews, Due Diligence Audits, Record Search and Risk Assessments, Phase II and III Subsurface Investigations, Underground storage tank investigations, Remedial Investigations, Radon Studies, Mold Assessments, Methane Surveys, Indoor Air Quality Assessments, and Lead-in-water sampling and analysis.

Clients have varied and have included: individual investors, City of Los Angeles Agencies, Los Angeles County, City of Anaheim, institutional investors, private and institutional equity companies, insurance companies, attorneys, brokers, developers, and multiple lenders.

Project Experience
Ms. Stott has conducted, managed and directed thousands of ESAs throughout her career and has been Senior Project Manager for hundreds of site investigations, characterization studies and remediation projects throughout California and the US. The following select projects summarize her experience and due diligence background:

Transaction Due Diligence
Project Manager, Western US and Southern California, LBA Realty. For over 16 years performed due diligence services related to real estate transfers as well as asset refinances for LBA Realty. The relationship requires close coordination and communication with property managers and representatives to provide a smooth process with client and lenders. Services have also included review of third party reports, asbestos surveys, subsurface investigations, and development of soil management plans. Many projects involved multiple locations in several states thus requiring coordination with other offices and client contacts.

Environmental Lead, West Coast, Barings, LLC (Barings). Ms. Stott assists with management and review of environmental due diligence and environmental actions associated with acquisitions, property development, joint venture developments, property divestments and finance group loan transactions. Environmental due diligence includes Phase I ESAs, Phase II ESAs, indoor air quality assessments, mold assessment and mitigation planning, providing third party review, asbestos investigations, asbestos abatement, operation and maintenance plan development, remedial action development and implementation, regulatory correspondence and permitting.

Phase I ESAs – multiple clients throughout US.. Ms. Stott manages and oversees preparation of Phase I Environmental Site Assessments for several confidential clients. All are completed to ASTM guidelines with various special criteria specific to each client.

Subsurface Investigations/Vapor Intrusion

Project Manager, Whittier, CA, Confidential Client. Conducted several investigations to evaluate the potential for vapor intrusion associated with contaminated groundwater into client buildings. At one location a horizontal well system was installed to passively vent vapors. Site investigations involved the installation of multiple, multi-depth vapor probes through the property to map the plume and to assist in decision making for potential further investigation. Data collected from both soil vapor and indoor air monitoring was subjected to risk assessment in order to determine if indoor air quality had been negatively impacted and engineering controls needed to protect workers. Client was able to purchase and redevelop portions of the desired parcels for use as parking.

Project Manager and Environmental Lead, Berkeley, CA, LBA Realty. Evaluation of potential risks associated with the presence of trichloroethylene (TCE) and breakdown products cis 1,2- dichloroethene (cis 1,2-DCE) and vinyl chloride (VC), and methyl tert butyl ether (MTBE) in groundwater and ambient air at an existing building in Berkeley, CA. Worked with outside counsel to evaluate, summarize, and present the risks and potential risks of continued investment in the property. Remedial systems were installed under DTSC oversight, risk assessment performed and the building remodeled and reused for office space.

Municipal/State Contracts

Project Manager, ESAs for City of Anaheim widening of Lincoln Avenue. As a subcontractor to the geotechnical consultant, Partner provided Environmental Site Assessments for multiple properties along the project alignment. The parcel uses ranged from car wash, to older office and motel properties, automotive repair, banks, public school, and a church. Partner finished the multi-site project on time and within budget.

Contact

Dstott@partneresi.com

Long Beach Water
Exceptional Water · Exceptional Service

Christopher J. Garner
General Manager

1800 E. Wardlow Road, Long Beach, CA 90807-4931
562.570.2300 | lbwater.org

August □□□□□□□

Mr□Akivan Rooks
Fuscoe Engineering, Inc.
□□□ Wilshire Boulevard□Suite □□□□
Los Angeles□CA □□□□□
arooks□ □uscoe□com

Dear Mr□Rooks□

Subject: "Will Serve" Letter for 3320 N. Los Coyotes Diagonal

The Long Beach Water Department is transmitting this "Will Serve" letter in response to □our re□uest □or the proposed pro□ect located at □□□□ □□Los Co□otes Diagonal in the Cit□ o□Long Beach□

The use o□the e□isting pu□lic □acilities□as listed □elow□is su□□ect to the Developer meeting all applica□le technical and engineering re□uirements as laid out □□ the Long Beach Water Department □Engineering Bureau□ Availa□ilit□ and su□□icienc□ o□these □acilities shall □e con□□rmed □□ conducting a h□draulic stud□ and demand calculation □or the water s□stem□and a sewer capacit□ stud□ □or the sewer s□stem□Pota□le water and sewer services will □e made availa□le □or the proposed development in accordance with our Rules and Regulations □or Pota□le Water□Reclaimed Water□and Sanitar□Sewer□

According to our current records□there is an e□isting □□inch as□estos cement □uid tite □AC□□T□pota□le water line in Los Co□otes Diagonal on the west side o□the pro□ect site□ and an □□inch as□estos cement □uid tite □AC□□T□pota□le water line in the east□west alle□ east o□Los Co□otes Diagonal on the north side o□the pro□ect site□

Additionall□□there is an □□inch vitri□□ed cla□pipe □VCP□sewer main in the east□west alle□ east o□Los Co□otes Diagonal on the north side o□the pro□ect site□There are also other sewer mains in the vicinit□□including an e□isting □□□inch vitri□□ed cla□pipe □VCP□owned □□Los Angeles Count□Sanitation Districts □LACSD□in Los Co□otes Diagonal on the west side o□the pro□ect site□and a privatel□owned □□inch vitri□□ed cla□pipe □VCP□on the south side o□the pro□ect site□Please note□approval □rom the appropriate owners will □e re□uired prior to connection to non□LBWD sewer □acilities□Please contact the □acilit□ owners directl□□

If you have any questions please call Hailey Vu at [illegible]

Sincerely,

Dennis A. Santos, P.E.
Manager of Engineering

cc: Carolina Avendano, Capital Projects Coordinator III
Hailey Vu, Civil Engineering Assistant