Additional Phase II Environmental Site Assessment

1795 Long Beach Boulevard

Long Beach, California

EXECUTIVE SUMMARY

This report presents the results of a Phase II Environmental Site Assessment (ESA) conducted by Rincon Consultants, Inc. (Rincon) for AMCAL Multi-Housing, Inc. for the subject property located at 1795 Long Beach Boulevard in Long Beach, California. Rincon completed a Phase I ESA in September 2016, which identified two potential Recognized Environmental Conditions (RECs) at the subject property as follows:

Potential Recognized Environmental Conditions

1. Former Olympic Cleaners located on the subject property
2. Former automotive repair stations and former gasoline stations located adjacent to the subject property.

To evaluate impacts to the subject property associated with the potential RECs listed above, Rincon recommended conducting a soil vapor assessment in the vicinity of the former onsite cleaners, likely located on the southeastern portion of the subject property. Rincon also recommended reviewing Long Beach Fire Department records for the former adjacent automotive repair stations and gasoline stations.

Long Beach Fire Department records were reviewed on September 23, 2016. No relevant information regarding hazardous materials was available for the adjacent properties. Therefore, a soil vapor assessment was also conducted along the northern and western property boundaries to determine if the subject property has been impacted by the former adjacent land uses.

Groundwater monitoring reports for a Chevron gasoline station located at 1790 Long Beach Boulevard (adjacent to the east of the subject property, across Long Beach Boulevard) indicate that depth to groundwater ranges from approximately 25 to 27 feet below ground surface (bgs). Groundwater flow direction is variable, ranging from southeast to west.

Based on the findings of the Phase I ESA and file review, on October 19, 2016, Rincon and H&P Mobile Geochemistry (H&P) mobilized to the subject property to advance nine soil borings and install nine soil vapor probes onsite. Soil vapor samples were collected from five feet bgs at each vapor probe location. The soil vapor samples were analyzed onsite by H&P's certified mobile laboratory for volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH) as gasoline by Environmental Protection Agency (EPA) Method 8260SV, and methane by EPA Method 8015M. Based on the laboratory analytical results, tetrachloroethene (PCE), trichloroethene (TCE), benzene, ethylbenzene, and TPH as gasoline in soil vapor were detected at concentrations that exceeded their respective San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Environmental Screening Level (ESL) or California Human Health Screening Level (CHHSL). PCE and TCE are commonly associated with a release of dry cleaning chemicals. In addition, chloroform, toluene, xylenes, and naphthalene were also detected in the soil vapor samples. However, none of the concentrations detected exceeded their respective CHHSLs or ESLs. Methane was not detected in any of the soil vapor samples analyzed.

Based on the results from the October 19, 2016 assessment and to further delineate the detected PCE in soil vapor, Rincon and H&P mobilized to the subject property on December 6 and 7, 2016 to advance an additional seven soil borings and install additional soil vapor probes onsite. Soil vapor samples were collected from five feet bgs at five soil vapor probe locations, and collected at 15 feet bgs in six soil vapor probe locations. The soil vapor samples were analyzed onsite by H&P's certified mobile laboratory for VOCs by EPA Method 8260SV. Based on the proposed use of the site for commercial use on the first floor, and residential use on the upper floors, the results were compared to commercial screening levels for the purpose of vapor intrusion concern into the first floor (commercial use). Based on the laboratory analytical results, PCE in soil vapor was detected at concentrations that exceeded the CHHSL. Concentrations of benzene were detected near the adjacent auto repair facility (west of the subject property) and suggest offsite migration of benzene from the adjacent site to the west.

No VOCs were detected in the soil matrix samples analyzed. TPH diesel range organics (TPH-DRO) and oil range organics (TPH-ORO) were detected in the soil sample collected from RSB1 on the northeastern portion of the subject property at concentrations of 56 and 130 milligrams per kilogram (mg/kg), respectively. CHHSLs have not been established for TPH-DRO and TPH-ORO in soil, however, concentrations did not exceed their residential or commercial ESLs or the soil screening level (SSL) established by the Los Angeles RWQCB. TPH-GRO was not detected in the soil matrix samples analyzed.

PCE was detected in one groundwater sample at a concentration exceeding its Maximum Contaminant Level (MCL) for drinking water, set forth by the State Water Resources Control Board (SWRCB).

TPH-DRO and TPH-ORO were detected at maximum concentrations of 0.38 milligrams per liter (mg/L) and 0.71 mg/L, respectively, in groundwater collected from SV10-GW. MCLs have not been established for TPH in drinking water. However, the detected concentrations did not exceed the SFBRWQCB ESLs for non-drinking water odor nuisance levels (non-direct exposure levels) to which they were compared.

Based on these results, Rincon recommends that a human health risk assessment be conducted to determine if the detected concentrations require remediation prior to redeveloping the property for residential and commercial uses. In addition, engineering controls for the proposed structure may be warranted.

INTRODUCTION

This report presents the results of an Additional Phase II Environmental Site Assessment (ESA) conducted for the property located at 1795 Long Beach Boulevard in Long Beach, California (Figure 1, Vicinity Map). The Additional Phase II ESA was performed by Rincon Consultants, Inc. for AMCAL Multi-Housing, Inc. The Additional Phase II ESA was performed based on the findings of our previous Phase I ESA, dated September 28, 2016, and our Draft Phase II ESA, dated November 2, 2016.

PROJECT HISTORY

A Phase I ESA was prepared for the subject property by Rincon in September 2016. Based on the findings of the September 2016 Phase I ESA, the following potential Recognized Environmental Conditions (RECs) were identified:

Potential Recognized Environmental Conditions

1. Former Olympic Cleaners located on the subject property
2. Former automotive repair stations and former gasoline stations located adjacent to the subject property.

To evaluate the potential subject property impact associated with the potential RECs listed above, Rincon recommended conducting a soil vapor assessment in the vicinity of the former onsite cleaners. Rincon also recommended reviewing Long Beach Fire Department records for the former adjacent automotive repair stations and gasoline stations.

Long Beach Fire Department records were reviewed on September 23, 2016. No relevant information regarding hazardous materials was available for the adjacent properties. Therefore, a soil vapor assessment was also conducted along the northern and western property boundaries to determine if the subject property has been impacted by the former adjacent land uses.

A previous Phase II ESA was conducted on October 19, 2016. Rincon and H&P Mobile Geochemistry (H&P) mobilized to the subject property to advance nine soil borings and install nine soil vapor probes onsite. Soil vapor samples were collected from five feet below ground surface (bgs) at each vapor probe location, and a duplicate sample was collected from SV2, for a total of ten soil vapor samples. The soil vapor samples were analyzed onsite by H&P's certified mobile laboratory for volatile organic compounds (VOCs) and total petroleum hydrocarbons as gasoline by Environmental Protection Agency (EPA) Method 8260SV, and methane by EPA 8015M. Results of the soil vapor analysis are shown in Table 1.

Based on the laboratory analytical results, PCE, TCE, and benzene were detected at concentrations that exceeded their respective ESLs and CHHSLs. PCE and TCE are commonly associated with a release of dry cleaning chemicals. Rincon recommended further assessment to determine the vertical and lateral extent of the PCE and TCE in the subsurface.

The concentrations of benzene detected near the auto repair facility located adjacent to the west of the subject property suggest offsite migration from the adjacent site to the west. Rincon

recommended further assessment to delineate the extent of contamination from the adjacent auto repair.

Based on the results of the previous Phase II ESA, Rincon recommended collecting step-out soil vapor samples and soil and groundwater samples from the areas of SV1 through SV4, and analyzing the samples for VOCs. In addition, Rincon also recommended collecting soil, soil vapor, and groundwater samples from the subject property and analyzing the samples for VOCs to determine if the impacted soil vapor is originating from onsite or offsite sources. Soil samples collected near the adjacent auto repair facilities should also be analyzed for total petroleum hydrocarbons as gasoline, diesel, and oil.

SCOPE OF WORK

The following tasks were performed as part of the Additional Phase II ESA:

- **Health and Safety Plan**. A Health and Safety Plan was developed for the Phase II ESA sampling personnel.
- **Utility Notification.** The subject property was pre-marked and Underground Services Alert (USA) was contacted to mark areas where underground public utilities might be located in the drilling area.
- **Soil Gas Sampling.** Rincon advanced six soil borings with a direct push rig at the subject property (SV10-SV15). Soil vapor probes were installed at depths of 5 and 15 feet bgs in six of the soil borings, and at 15 feet in one boring (SV14).
- **Soil Matrix Sampling.** Rincon collected soil samples at 5, 10, and 15 feet bgs in each of the six borings. An additional 5-foot boring was advanced using a hand auger at the northeast corner of the property (RSB1).
- **Groundwater Sampling.** Rincon collected groundwater samples in five of the soil borings.
- **Laboratory Analysis.** The soil vapor, soil matrix, and groundwater samples were analyzed for VOCs by EPA Method 8260SV or 8260B. In addition, the soil samples collected at the western property boundary and in the northeast corner of the property were also analyzed for total petroleum hydrocarbons (TPH) as diesel range organics (TPH-DRO), oil range organics (TPH-ORO), and gasoline range organics (TPH-GRO) by EPA Method 8015B.
- **Reporting**. Preparation of this report documenting our findings.

GEOLOGIC AND HYDROGEOLOGIC SETTING

TOPOGRAPHY

The current USGS topographic map (Long Beach Quadrangle, 2012) indicates that the subject property is situated at an elevation of about 25 feet above mean sea level with topography gently sloping towards the west. The topography in the vicinity of the subject property is relatively flat.

GEOLOGY AND HYDROGEOLOGY

Los Angeles County is within the Peninsular and Transverse Ranges Geologic Provinces of California. These provinces are characterized by northwest trending mountains and faults (Peninsular Range), and east-west trending mountains and folds (Transverse Range). Rocks within the Peninsular Range Province were emplaced during Cretaceous orogenic events and uplifted into the present mountain ranges during the late Tertiary and Quaternary. Igneous, volcanic, metamorphic, and sedimentary rocks are all found within the Peninsular Ranges. The area is seismically active, with several known active faults crossing the Province. Rocks within the Transverse Range include Precambrian metamorphic and igneous rocks that comprise the core of the San Gabriel and Santa Monica Mountains. These rocks are overlain by Miocene-aged marine sediments of the Pico, Monterey, Repetto, and other formations.

From the Orange County line to the Santa Monica Mountains, the area consists of a large Quaternary age alluvial basin (Coastal Plain of the Los Angeles Basin). This basin is filled with sediments derived from the surrounding hills and mountains. The largest drainages in this basin are the Los Angeles-Rio Hondo and San Gabriel Rivers.

According to the USGS Geologic Map of California, Long Beach Sheet (1962), the site is underlain by Quaternary age alluvium.

REGIONAL GROUNDWATER OCCURRENCE AND QUALITY

Rincon reviewed the California State Water Resources Control Board's (SWRCB's) online GeoTracker database to determine groundwater flow direction in the vicinity for the site:

- Groundwater monitoring reports for an adjacent Chevron gasoline station located at 1790 Long Beach Boulevard (adjacent to the east of the subject property, across Long Beach Boulevard) indicate that the depth to groundwater ranges between about 25 and 30 feet below grade with variable groundwater flow ranging from southeast to west. Beneficial uses of the groundwater in this area include municipal and domestic supply, agricultural supply, industrial process supply, and industrial process supply.

In addition, Jay Ross with AMCAL Multi-Housing indicated that a geotechnical study conducted at the subject property identified groundwater between 18 and 27 feet below grade beneath the subject property.

During the Additional Phase II ESA, groundwater was encountered between 27 and 30 feet below ground surface.

PHASE II ESA METHODOLOGY

SOIL VAPOR PROBE INSTALLATION, SAMPLING & ANALYSIS

On December 6 and 7, 2016 under the direction of Rincon, H&P utilized a truck-mounted drill rig equipped with direct push technology to advance six soil borings (SV10 through SV15) and install soil vapor probes at 5 and 15 five feet bgs.

Soil vapor probes were installed in accordance with the California Environmental Protection Agency/Department of Toxic Substances Control (DTSC) *Active Soil Gas Investigations Advisory*, dated July 2015. At each designated sampling depth, 1/8 inch diameter tubing was inserted in the borehole and extended to the ground surface. The tubing was notched at the base to allow soil gas to enter into the tubing during sampling. Sand was placed within the open borehole to form a permeable sand pack surrounding the vapor probes. Dry bentonite filled in the hole, which was then capped with hydrated bentonite. Backfilling with bentonite prevents air from being drawn down the borehole instead of from the formation. The tracer gas 1,1-Difluoroethane (1,1-DFA) was used to determine if there were leaks that allowed ambient air to interfere with the samples being collected. Following sampling, the probes were removed, the borings were backfilled with hydrated bentonite chips and the surface was patched to match the surrounding surface area.

All analyses were performed in an onsite mobile laboratory using a laboratory grade Hewlett Packard model 5890 Series II gas chromatograph equipped with a Flame Ionization Detector (FID) and an Electron Capture Detector. All results were collected on a computer utilizing Hewlett Packard's PC-based chromatographic data collection and handling system. A duplicate sample was analyzed for QA/QC purposes from SV15.

SOIL BORING ADVANCEMENT

Prior to installation of the soil vapor probes, soil samples were collected from the six soil boings/soil vapor probe locations (SV10 through SV15) at 5, 10 and 15 feet bgs. Soil boring logs are in Appendix A. An additional soil boring (RSB1) was advanced using a hand auger (RSB1) with a sample collected at 5 feet bgs. A total of 19 soil samples were collected for laboratory analysis. In addition, groundwater samples were collected from SV10, SV13, SV14 and SV15 at a depth of about 30 feet below grade. The soil and groundwater samples were couriered to the state certified analytical laboratory Asset Laboratories based in Cerritos, California using chain-of-custody protocol and were analyzed for VOCs by EPA method 8260B and TPH by EPA method 8015B. All sampling was performed under the oversight of a California Professional Geologist. Following completion of the borings and removal of the soil vapor probes (where applicable), the soil borings were backfilled with bentonite grout and patched to match the surrounding ground surface.

SOIL VAPOR SAMPLING RESULTS

Soil gas samples were analyzed for VOCs by EPA Method 8260SV. Results of the soil vapor analysis are shown in Table 2. A copy of the laboratory analytical report is in Appendix B. Based on the proposed use of the site for commercial use on the first floor, and residential use on the upper floors, the results were compared to commercial screening levels for the purpose of vapor intrusion concern into the first floor (commercial use).

Tetrachloroethylene (PCE) was detected in all of the eleven samples analyzed, ranging from 0.54 µg/L to 12 µg/L. Ten of the soil vapor samples analyzed exceeded the California Human Health Screening Level (CHHSL) for PCE in soil vapor at commercial sites of 0.60 µg/L.

Trichloroethylene (TCE) was detected in seven of the eleven samples analyzed, ranging from 0.03 µg/L to 0.30 µg/L. None of the samples exceeded the CHHSL for TCE in soil vapor at commercial sites of 1.8 µg/L.

Chloroform was detected in two of the eleven samples analyzed, ranging from 0.04 µg/L to 0.08 µg/L. CHHSLs have not been established for chloroform.

Benzene was detected in ten of the eleven samples analyzed, ranging from 0.02 µg/L to 0.10 µg/L. None of the exceeded the CHHSL for benzene in soil vapor at commercial sites of 0.12 µg/L.

Ethylbenzene was detected in five of the eleven samples analyzed ranging from 0.10 µg/L to 1.0 µg/L. None of the samples exceeded the CHHSL for ethylbenzene in soil vapor at commercial sites of 1.4 µg/L.

Xylenes, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene were also detected in the soil vapor samples. However, none of the concentrations detected exceeded their respective CHHSLs, where applicable.

In addition, the leak detection compound, 1,1-DFA, was not detected in any of the soil vapor samples analyzed.

SOIL MATRIX SAMPLING RESULTS

Soil matrix samples were analyzed for VOCs and TPH. Results of the soil matrix analysis are shown in Table 3. A copy of the laboratory analytical report is in Appendix C. Based on the proposed use of the site for commercial use on the first floor, and residential use on the upper floors, the results were compared to commercial screening levels.

VOCs were not detected in any of the soil matrix samples analyzed. TPH-GRO was not detected in any of the soil matrix samples analyzed.

TPH-DRO and ORO were detected in RSB1 at concentrations of 56 mg/kg and 130 mg/kg, respectively. CHHSLs have not been established for TPH-DRO and ORO in soil, however,

concentrations did not exceed their residential or commercial ESLs or the soil screening level (SSL) established by the Los Angeles RWQCB.

GROUNDWATER SAMPLING RESULTS

Groundwater samples were collected from SV10, SV13, SV14, and SV15 and were analyzed for VOCs and TPH. Rincon attempted to collect a groundwater sample from SV12, but was unable to due to boring collapse. Results of the groundwater analysis are shown in Table 4. A copy of the laboratory analytical report is in Appendix C.

Groundwater analytical results were compared to Maximum Contaminant Levels (MCLs) set forth by the State Water Resources Control Board. The Los Angeles RWQCB uses the California MCLs as target screening levels. MCLs have not been established for chloroform, therefore, the detected chloroform concentration was compared to the Maximum Contaminant Level Goal (MCLG) established by the USEPA. MCLs have not been established for TPH, therefore, the detected TPH concentrations were compared to Environmental Screening Levels (ESLs) established by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB).

PCE was detected in all four groundwater samples analyzed, ranging from 1.1 µg/L to 7.6 µg/L. One of the four samples (SV14-GW) analyzed exceeded MCL for PCE of 5.0 µg/L.

Chloroform was detected in SV15-GW at a concentration of 6.8 µg/L, which is below the MCLG for chloroform in drinking water of 70 µg/L.

TPH-DRO was detected in two of the three samples analyzed, at concentrations of 0.33 milligrams per liter (mg/L) and 0.38 mg/L. TPH-ORO was detected in two of the three samples analyzed, at concentrations of 0.5 mg/L and 0.71 mg/L. MCLs have not been established for TPH in drinking water. However, the detected concentrations did not exceed the SFBRWQCB ESLs for non-drinking water odor nuisance levels (non-direct exposure levels) to which they were compared.

TPH -GRO was not detected in any of the groundwater samples analyzed.

CONCLUSIONS & RECOMMENDATIONS

Based on the laboratory analytical results, PCE in soil vapor was detected at concentrations that exceeded the CHHSL for commercial properties. PCE is commonly associated with a release of dry cleaning chemicals. The highest concentrations of PCE were detected on the southern portion of the subject property in the area of the suspected former dry cleaner. PCE was also detected in groundwater samples collected from the southern portion of the subject property. PCE was detected in one groundwater sample at a level that exceeds its MCL

Benzene in soil vapor was detected at concentrations that do not exceed the CHHSL for commercial properties. The concentrations of benzene were detected near the auto repair

facility located adjacent to the west of the subject property and suggest offsite migration from the adjacent site to the west.

No VOCs were detected in the soil matrix samples analyzed. TPH-DRO and TPH-ORO were detected in RSB1 (located on the northeastern portion of the subject property) at levels that did not exceed their residential or commercial ESLs or the Los Angeles RWQCB SSL. TPH-GRO was not detected in the soil matrix samples analyzed.

TPH-DRO was detected in two of the three groundwater samples analyzed for TPH, at concentrations of 0.33 mg/L and 0.38 mg/L. TPH-ORO was detected in two of the three groundwater samples analyzed for TPH, at concentrations of 0.5 mg/L and 0.71 mg/L. MCLs have not been established for TPH in drinking water. However, the detected concentrations did not exceed the SFBRWQCB ESLs for non-drinking water odor nuisance levels (non-direct exposure levels) to which they were compared.

Based on these results, Rincon recommends that a human health risk assessment be conducted to determine if the detected concentrations require remediation prior to redeveloping the property for residential and commercial uses. In addition, engineering controls for the proposed structure may be warranted.

LIMITATIONS

This report has been prepared for and is intended for the exclusive use of AMCAL Multi-Housing, Inc. The contents of this report should not be relied upon by any other party without the written consent of Rincon Consultants, Inc.

Our conclusions regarding the subject property are based on the results of a limited sampling program. The results of this evaluation are qualified by the fact that only limited sampling and analysis was conducted during this assessment.

This scope was not intended to completely establish the quantities and distribution of contaminants present at the subject property or to determine the cost to remediate the subject property. The concentrations of contaminants measured at any given location may not be representative of conditions at other locations. Further, conditions may change at any particular location as a function of time in response to natural conditions, chemical reactions and other events. Conclusions regarding the condition of the subject property do not represent a warranty that all areas within the subject property are similar to those sampled.

REFERENCES

The following reference materials were used in preparation of this Phase II ESA:

RWQCB online database (GeoTracker).

Rincon Consultants, *Phase I Environmental Site Assessment, 1795 Long Beach Boulevard, Long Beach, California,* dated September 28, 2016.

Rincon Consultants, *Phase II Environmental Site Assessment, 1795 Long Beach Boulevard, Long Beach, California,* dated November 2, 2016.

USGS topographic map (Long Beach Quadrangle, California), 2012.

USGS Geologic Map of California, Long Beach Sheet (1962).

Appendix A

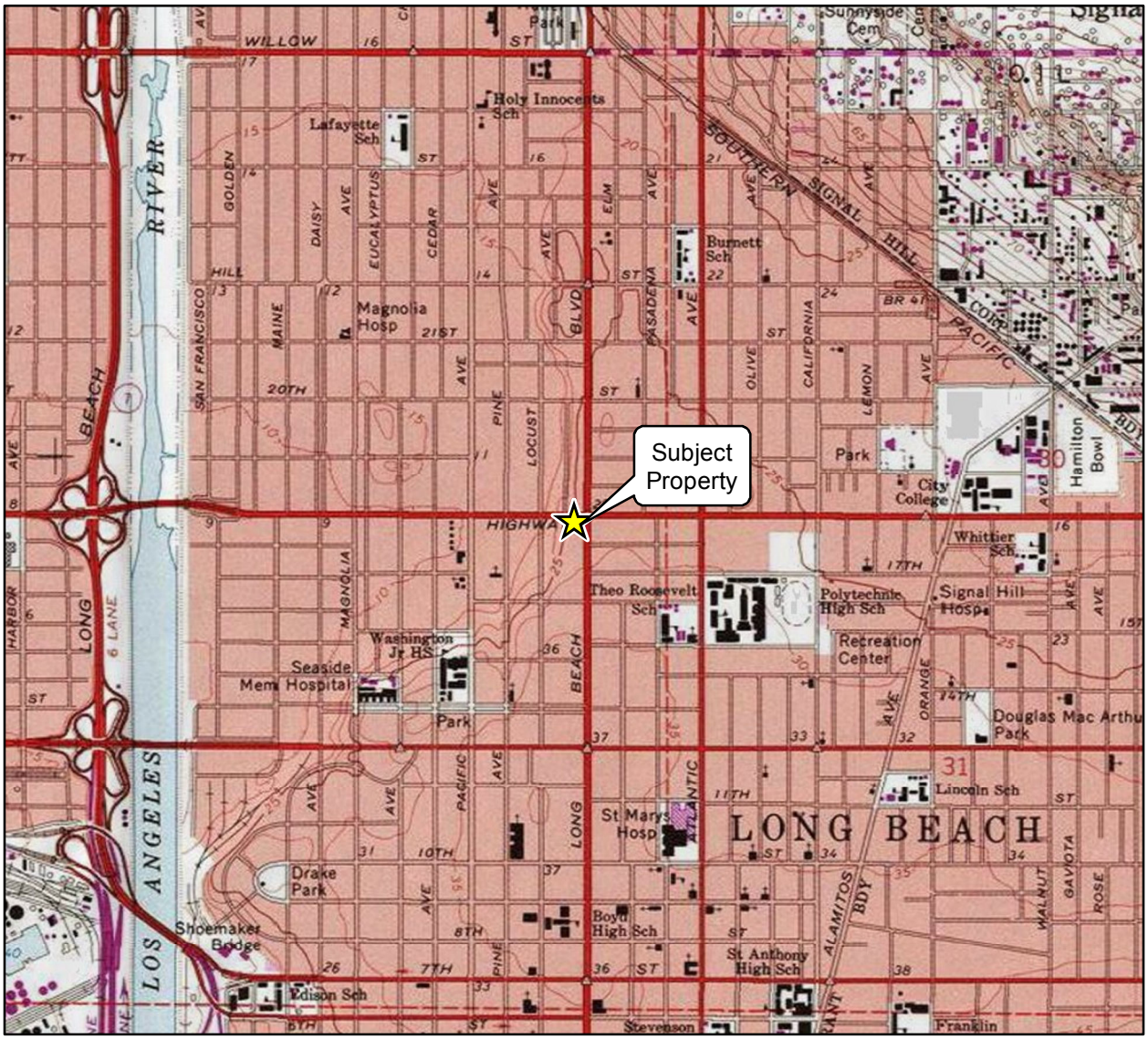
Soil Boring Logs

Appendix B

Soil Vapor Laboratory Analytical Report

Appendix C

Soil and Groundwater Laboratory Analytical Report



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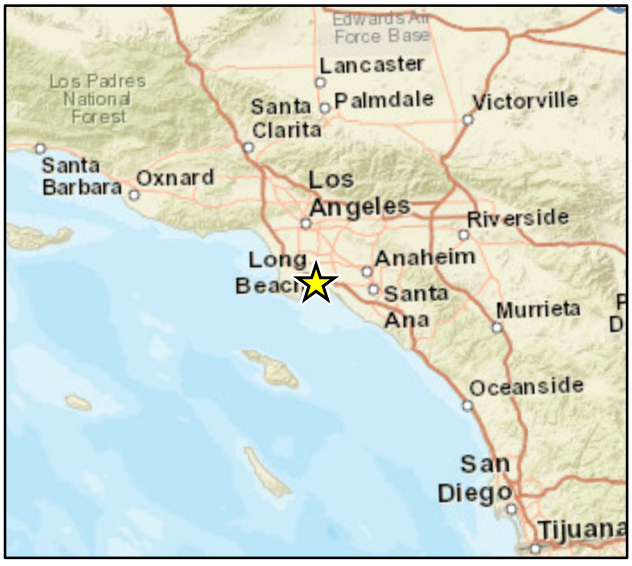

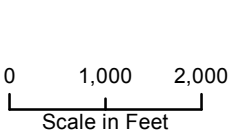

Vicinity Map

Figure 1

Imagery provided by Google and its licensors © 2016.

Sampling Location Map

Figure 2

Table 1 - Soil Vapor Analytical Results
Samples Collected by H&P Mobile Geochemistry on
October 19, 2016

Soil Vapor Probe Location	Depth (ft)	PCE (µg/L)	TCE (µg/L)	Chloroform (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	m,p-Xylene (µg/L)	o-Xylene (µg/L)	Naphthalene (µg/L)	TPH-g (C5-C12) (µg/L)	Other VOCs (µg/L)	Methane (ppmv)
SV1	5	**50**	0.15	ND	0.06	ND	**2.0**	6.4	2.0	ND	110	ND	ND
SV2	5	**17**	ND	ND	0.04	ND	ND	ND	ND	ND	ND	ND	ND
	5-DUP	**18**	0.02	ND	0.04	ND	ND	ND	ND	ND	ND	ND	ND
SV3	5	**66**	**1.8**	ND	**0.23**	ND	ND	1.0	ND	ND	69	ND	ND
SV4	5	**12**	0.06	ND	0.09	ND	ND	ND	ND	ND	ND	ND	ND
SV5	5	**1.7**	0.12	ND	**0.17**	0.28	ND	0.14	ND	ND	ND	ND	ND
SV6	5	**1.1**	ND	0.02	**0.16**	ND	ND	0.11	ND	ND	ND	ND	ND
SV7	5	0.15	ND	ND	0.04	ND	ND	ND	ND	ND	ND	ND	ND
SV8	5	**5.1**	0.60	ND	ND	ND	0.41	1.9	0.72	0.03	ND	ND	ND
SV9	5	0.30	ND	ND	ND	ND	**9.2**	36	11	ND	430	ND	ND
Laboratory Detection Limit		0.40	0.02	0.02	0.02	0.20	0.10	1.0	0.10	0.02	80	Varies	NE
CHHSL - Commercial/Industrial		0.60	1.8	NE	0.12	380	1.4	890	880	0.11	NE	Varies	NE

NE - Not established
ND - Not detected above laboratory detection limit
ft - feet
µg/L - micrograms per liter
ppmv = parts per million by volume
PCE - Tetrachloroethene
TCE - Trichloroethene
VOCs - Volatile Organic Compounds
CHHSL = California Human Health Screening Levels (commercial/industrial scenario)
Bold - Concentration detected meets or exceeds the CHHSL

Table 2 - Soil Vapor Analytical Results
Samples Collected by H&P Mobile Geochemistry on
December 6 and 7, 2016

Soil Vapor Probe Location	Depth (ft)	PCE (µg/L)	TCE (µg/L)	Chloroform (µg/L)	Benzene (µg/L)	Ethylbenzene (µg/L)	m,p-Xylene (µg/L)	o-Xylene (µg/L)	1,2,4 - TMB (µg/L)	1,3,5 - TMB (µg/L)	Other VOCs (µg/L)
SV10	5	0.54	0.03	ND	0.05	ND	0.24	0.11	0.15	ND	ND
	15	**1.1**	0.04	ND	0.08	0.17	0.63	0.2	ND	ND	ND
SV11	5	**9.4**	0.25	ND	0.03	1.0	4.2	1.3	0.33	0.15	ND
	15	**8.8**	0.30	ND	ND	0.62	2.8	0.99	ND	ND	ND
SV12	5	**2.5**	0.04	ND	0.02	ND	ND	ND	ND	ND	ND
	15	**4.2**	0.22	ND	ND	ND	ND	ND	ND	ND	ND
SV13	5	**1.2**	ND	ND	0.10	0.10	0.29	0.11	ND	ND	ND
	15	**2.4**	ND	0.04	0.03	ND	ND	ND	ND	ND	ND
SV14	15	**12**	0.06	0.08	0.03	0.12	0.49	0.22	ND	ND	ND
SV15	5	**8.2**	ND	ND	0.02	ND	ND	ND	ND	ND	ND
	15	**8.2**	ND	ND	0.02	ND	ND	ND	ND	ND	ND
	15 - REP	**7.7**	ND	ND	0.03	ND	ND	ND	ND	ND	ND
Laboratory Detection Limit		0.02	0.02	0.02	0.02	0.10	0.10	0.10	0.10	0.10	Varies
CHHSL - Commercial/Industrial		0.60	1.8	NE	0.12	1.4	890	880	NE	NE	Varies

NE - Not established
ND - Not detected above laboratory detection limit
ft - feet
µg/L - Micrograms per liter
VOCs - Volatile Organic Compounds
PCE - Tetrachloroethene
TCE - Trichloroethene
TMB - Trimethylbenzene
CHHSL = California Human Health Screening Levels - Commercial/Industrial Scenario
Bold - Concentration detected meets or exceeds the CHHSL

Table 3
Soil Matrix Analytical Results
VOCs (8260B) & TPH (8015B)
1795 Long Beach Boulevard
Long Beach, California
December 6 & 7, 2016

Boring	Sampling Depth (feet bgs)	VOCs (µg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)
RSB1	5	ND	ND	56	130
SV10	5	ND	ND	ND	ND
	10	ND	ND	ND	ND
	15	ND	ND	ND	ND
SV11	5	ND	--	--	--
	10	ND	--	--	--
	15	ND	--	--	--
SV12	5	ND	--	--	--
	10	ND	--	--	--
	15	ND	--	--	--
SV13	5	ND	ND	ND	ND
	10	ND	ND	ND	ND
	15	ND	ND	ND	ND
SV14	5	ND	--	--	--
	10	ND	--	--	--
	15	ND	--	--	--
SV15	5	ND	--	--	--
	10	ND	--	--	--
	15	ND	--	--	--
Laboratory Reporting Limit		Varies	1.0	10	10
LA RWQCB SSL		Varies	500	1,000	10,000
ESL - Residential		Varies	740	230	11,000
ESL - Commercial		Varies	3,900	1,100	140,000
CHHSL - Residential		Varies	NE	NE	NE
CHHSL - Commercial		Varies	NE	NE	NE

Notes:
VOCs = Volatile Organic Compounds
TPH = Total Petroleum Hydrocarbons
DRO = Diesel Range Organics
ORO = Oil Range Organics
GRO = Gasoline Range Organics
µg/kg = micrograms per kilogram
mg/kg = milligrams per kilogram
bgs = below ground surface
ND = not detected above the laboratory reporting limit
-- = not analyzed
LA RWQCB SSL = Los Angeles Regional Water Quality Control Board Soil Screening Level
ESL = San Francisco Bay Regional Water Quality Control Board Environmental Screening Level-
Direct Exposure Human Health Risk Levels (Shallow Soil Exposure)
CHHSL = California Human Health Screening Levels

Table 4
Groundwater Analytical Results
VOCs (8260B) & TPH (8015B)
1795 Long Beach Boulevard
Long Beach, California
December 6 & 7, 2016

Boring	Chloroform (µg/L)	PCE (µg/L)	Other VOCs	TPH- GRO (µg/L)	TPH- DRO (µg/L)	TPH- ORO (µg/L)
SV10-GW	ND	2.6	ND	ND	380	710
SV13-GW	ND	1.1	ND	ND	330	500
SV14-GW	ND	**7.6**	ND	--	--	--
SV15-GW	6.8	2.6	ND	ND	ND	ND
Laboratory Reporting Limit	0.50	0.50	Varies	Varies	Varies	Varies
MCL	*70**	*5.0*	*Varies*	*NE*	*NE*	*NE*

Notes:
VOCs - Volatile Organic Compounds
PCE = Tetrachloroethene
TPH- Total Petroleum Hydrocarbons
DRO=Diesel Range Organics
ORO=Oil Range Organics
GRO=Gasoline Range Organics
µg/L = micrograms per liter
ND = not detected above the laboratory reporting limit
-- = not analyzed
NE= not established
MCL =State of California Maximum Contaminant Levels for Drinking Water
*= No established MCL for chloroform, so the detections were compared to the USEPA Maximum Contaminant Level Goal (MCLG)