

**PHASE II SITE INVESTIGATION REPORT
TWO PARCELS AT 3445 LONG BEACH BOULEVARD
LONG BEACH, CALIFORNIA 90807
(ASSESSOR'S PARCEL NUMBERS: 7141-004-019 AND -020)**

Prepared for:

888-5 Partners, LLC

3545 Long Beach Boulevard
Long Beach, California 90807

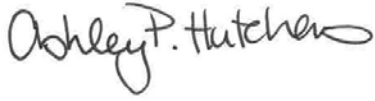
Prepared by:

SCS ENGINEERS

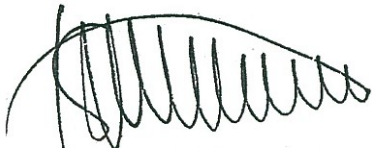
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July 5, 2017
File No. 01217033.01 T2

This Phase II Site Investigation Report dated July 5, 2017, for site located at 3445 Long Beach Boulevard, California, was prepared, and reviewed by the following:



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DISCLAIMER

This report has been prepared for 888-5 Partners, LLC with specific application to a Phase II investigation conducted at 3445 Long Beach Boulevard, Long Beach, California. The purpose of this investigation was to assess the potential for methane migration associated with oil operations, as well as assess impacts to soil at the Property from oil wells and appurtenant facilities on the Property and the operations of numerous generations of underground storage tanks on the adjacent site to the south.

The report has been prepared in accordance with the care and skill generally exercised by reputable professionals, under similar circumstances, in this or similar localities. No other warranty, express or implied, is made as to the professional opinions presented herein. No other party, known or unknown to SCS Engineers, is intended as a beneficiary of this work product, its content or information embedded therein. Third parties use this report at their own risk.

Changes in site conditions may occur due to variation in rainfall, temperature, water usage, or other factors. Additional information that was not available to the consultant at the time of this investigation or changes that may occur on the site or in the surrounding area may result in modification to the site that would impact the summary and recommendations presented herein. This report is not a legal opinion.

1 INTRODUCTION

SCS Engineers (SCS) was retained by 888-5 Partners, LLC to conduct a Phase II Site Investigation for the property located at 3445 Long Beach Boulevard (the “Property”), Long Beach, California. Investigation activities were conducted in accordance with SCS’s proposal dated June 1, 2017 (Proposal No. 010585217R).

The Property is located on the west side of Long Beach Boulevard south of the intersection with East 35th Street. A map showing the general location of the Property and surrounding area is provided as **Figure 1**.

BACKGROUND

The Property is approximately 0.39 acres and consists of two parcels. The northern parcel (APN 7141-004-019) is currently developed with two single-story structures fronting Long Beach Boulevard with associated parking at the rear. The southern parcel (APN 7141-004-020) is developed with one active oil and gas well (in the central portion of the southern parcel) and two associated aboveground storage tanks (ASTs) located at the southeast corner of the Property. In addition, a billboard is located at the southwest corner of the southern parcel.

SCS prepared a Phase I Environmental Site Assessment (Phase I ESA) report for the Property dated May 24, 2017. As part of the Phase I ESA, SCS identified the following Recognized Environmental Conditions (RECs) associated with the Property:

- The southern portion of the Property is currently and has historically been used for oil production. One existing well and one plugged and abandoned well along with two existing aboveground storage tanks (ASTs) are present. In addition, the Property is located within the Long Beach Oil Field and numerous wells and associated ASTs are present in the vicinity. Oil production on the Property and in the vicinity represents a REC.
- Several generations of underground storage tanks (USTs) associated with various gas stations and a car dealership dating back to at least 1963 have been and are still located on the adjacent site to the south of the Property. The close proximity of USTs represent a REC.

The purpose of this investigation was to assess the potential for methane migration associated with oil operations, as well as assess impacts to soil at the Property from oil wells on the Property and the nearby operation of numerous generations of USTs on the adjacent site to the south.

2 GEOLOGIC AND HYDROGEOLOGIC CONDITIONS

PHYSIOGRAPHIC SETTING

According to the U.S. Geological Survey (USGS), Long Beach (1964, photorevised 1981), California 7.5-minute topographic map, the Property is located between the Vista del Mar and California Heights areas of Long Beach. It is located to the northwest of Signal Hill at an

elevation of approximately 90 feet above mean sea level. The Property is situated approximately 0.85 miles east of the Los Angeles River and approximately 4 miles north of the San Pedro Bay. Site topography is generally flat. Local topography slopes to the south, with a more regional slope to the southwest.

GEOLOGY AND SOILS

Geologic maps indicate that surface sediments in this area consist of the Pleistocene-age Lakewood Formation, which is comprised of unconsolidated marine and continental deposits. In the area of the Property, surface deposits are primarily fine-grained sediments comprised of sands, silts, and clays. The Lakewood Formation is underlain by at least several thousand feet of mostly marine sediments of Tertiary age. During the current investigation, soil was interpreted to range from sandy and clayey silt to fine sand down to depths of 15 feet below ground surface (bgs).

GROUNDWATER

The Property is located within the West Coast Groundwater Basin. The first regional groundwater aquifer in the area is the Gage Aquifer within the Lakewood Formation. According to information reviewed on the California State Water Resources Control Board's GeoTracker website for the Bixby Knolls Car Wash (Global ID T0603701876 at 577 East Wardlow Road), located approximately 0.25 miles to the east-southeast), first groundwater is anticipated at approximately 31 feet bgs. Because the Property is located near the Long Beach Anticline and the Cherry Hill fault, groundwater flow directions may vary and are difficult to predict with precision.

3 SITE INVESTIGATION AND ANALYTICAL RESULTS

SUBSURFACE UTILITIES CLEARANCE

As required by law, SCS contacted Underground Service Alert prior to conducting any subsurface work (Dig Alert No. A71561346). Goldak Inc. of Sylmar, California, conducted a geophysical survey to clear boring locations of subsurface utilities and other potential obstructions prior to initiating the investigation. A permit to conduct the sampling was obtained from the City of Long Beach Department of Health and Human Services. A copy of the permit is provided in **Appendix A**.

SOIL SAMPLE COLLECTION

On June 15, 2017, under the direction of SCS, H&P Mobile Geochemistry Inc. (H&P) of Carlsbad, California collected soil samples from four boring locations using a truck-mounted direct-push drill rig. Boring locations SB1 through SB4 are identified on **Figure 2**. Soil borings were drilled on the southern parcel in areas of the former and current oil well and near the ASTs.

The borings were continuously cored to a depth of 15 feet bgs and cores examined for indications of contamination. Discrete soil samples were collected for laboratory analysis from each of the borings at the 1-, 5-, 10-, and 15-foot depths.

The drill rig was equipped with a hydraulic hammer and a 4-foot long, 2-inch diameter continuous core sampler. A pointed steel tip was fixed to the head of the solid core samplers and driven to the desired depth on a steel rod. Soil matrix samples were collected by retracting the drive tip through the center of the sampler with an inner rod, and hydraulically hammering the sampler an additional 1.5 to 2 feet. Soil samples were recovered in 4-foot long, 2-inch diameter pre-cleaned polycarbonate sleeves that had been placed inside the sampler. At each sampling interval, an approximately 6-inch section was cut from the sample sleeve at the appropriate interval and retained for submittal to the laboratory.

Appropriate soil samples were prepared in the field using EPA Method 5035, which includes the collection of three aliquots of soil from each soil sample using a plunger/sub-sampler provided by the laboratory. The three aliquots of soil were immediately placed in 40 milliliter VOA (volatile organic analysis) vials as follows – two aliquots in VOAs with a sodium bisulfate preservative and one in a methanol preservative. The acetate sample sleeve ends were covered with Teflon squares and sealed with plastic end caps. New nitrile gloves were used and frequently replaced in the handling of all soil samples to prevent cross-contamination.

A solvent-free label noting the date of collection, sample number, and project number was affixed to each sample container. Immediately following labeling, samples were placed in a chilled cooler to be submitted to Chemtek Environmental Laboratories Inc. (Chemtek) of Santa Fe Springs, California, a California Department of Health Services-certified laboratory. Soil samples were selectively analyzed based on field observations, site history, and to provide representative data from across the Property. Select soil samples (a total of twelve) were analyzed for total petroleum hydrocarbons–carbon chain analysis (TPH) using EPA Method 8015M, volatile organic compounds (VOCs) using EPA Method 8260B/5035, and/or Title 22 metals using EPA Methods 6010B/7471A. Samples were tracked from the point of collection through the laboratory using proper chain-of-custody protocol. Samples were collected and analyzed using generally accepted regulatory procedures.

A portion of each sample sleeve was selected for soil classification, to screen samples with a photoionization detector (PID), and to examine for field indications of potential contamination, such as discoloration and odor. Boring logs recording the lithology and associated PID readings are provided in **Appendix B**.

Soil Analytical Results

The Chemtek laboratory reports, including chain-of-custody forms and quality assurance/quality control (QA/QC) data, are provided in **Appendix C**. **Table 1** presents a summary of soil sample data for TPH and VOCs, and **Table 2** presents a summary of soil sample data for metals.

As shown in **Table 1**, TPH in the diesel range (C₁₃-C₂₂ [TPH-D]) and heavy oil range (C₂₃-C₄₀ [TPH-O]) were each detected in four of twelve samples analyzed. TPH-D was detected at concentrations ranging from 13.3 to 88.6 milligrams per kilogram (mg/kg) and TPH-O was detected at a concentrations ranging from 42.3 to 490 mg/kg. No gasoline range hydrocarbons (C₄-C₁₂ [TPH-G]) were detected in the samples analyzed.

Toluene, at a concentration of 1.95 micrograms per kilogram ($\mu\text{g/kg}$), was detected in one of the twelve samples analyzed for VOCs contained toluene. No other VOCs were detected in any of the samples.

As shown in **Table 2**, twelve samples were analyzed for metals of which nine were detected in one or more samples, including arsenic, barium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc.

SOIL VAPOR SAMPLING AND ANALYSIS

Under the direction of SCS, H&P installed four soil vapor probes at a depth of 5 feet bgs at four locations designated SV1 through SV4. Soil vapor probes were installed on both the northern and southern parcels at the locations depicted on **Figure 2**. SV1 and SV2 were installed to investigate the potential for releases associated with the presence of numerous generations of USTs on the adjacent site to the south. All four probes located on the northern and southern parcels were monitored to assess the potential for methane associated with oil production activities.

Soil vapor probes were installed using a direct-push drill rig. Stainless steel rods were advanced to the target depth. The steel rods were retracted from each boring and new (clean) 1/8-inch diameter Nylaflow tubing, with a polypropylene filter placed on the bottom end, was inserted to the desired depth. Clean #2/12 Monterey sand was placed in a 6-inch vertical interval around each filter. A bentonite seal was placed above the sand pack for each probe. The remaining annular space was then backfilled with bentonite and hydrated. Sampling was conducted in general accordance with the *Advisory – Active Soil Gas Investigations*, published by the Regional Water Quality Control Board and Department of Toxic Substance Control in April 2012.

Following a minimum of 30 minutes after being set, the probes were purged to remove ambient air from the sampling system and ensure that the collected soil vapor samples were representative of soil conditions.

A total of five soil vapor samples, including one replicate sample for quality control purposes, were collected into 400 milliliter Summa canisters and transported to H&P's fixed laboratory in Carlsbad, California to be analyzed for VOCs using Method 8260SV (a modified version of EPA Method 8260B) and for methane by EPA Method 8015M. In addition, the probes were measured in the field for pressure using a magnehelic gauge.

H&P is certified by the California Department of Health Services to conduct the specified analyses. Chain-of-custody documentation was completed in order to accurately track the samples from the point of collection through analysis. After all samples had been collected, the probes were removed and the surface repaired to match the surrounding area.

Soil Vapor Analytical Results

The H&P laboratory report, chain-of-custody documentation and quality assurance/control (QA/QC) data are included in **Appendix D**.

As shown in the H&P laboratory report, toluene was the only VOC detected. Toluene was detected at a concentration of 6.6 micrograms per liter ($\mu\text{g/l}$) in the 5-foot soil vapor sample from SV4, located on the northern parcel of the Property.

No methane was detected in any of the soil vapor samples collected and no positive pressure was detected in any of the probes.

4 DISCUSSION OF ANALYTICAL RESULTS AND REGULATORY LIMITS

METALS IN SOIL

Regulatory guidance for metals in soil is based on an evaluation of both background and risk-based concentrations. The Kearney Foundation of Soil Science published a report of background concentrations of trace and major elements in California soils (Bradford et al, 1996). The California Department of Toxic Substances Control (DTSC), Human and Ecological Risk Office (HERO) issued Human Health Risk Assessment Note Number 3 (Note No. 3), most recently updated in June 2016. Note No. 3 provides DTSC-modified Screening Levels (DTSC-SLs) for soil, tap water, and ambient air for use in evaluating human health risks at hazardous waste sites and permitted facilities. For the majority of the listed chemicals, HERO Note No. 3 recommends the use of the U.S. Environmental Protection Agency (EPA) Regional Screening Levels (RSLs; most recently updated in May 2016), except in cases where DTSC has calculated a more stringent screening level (DTSC-SL) or recommended using another screening level (e.g. California Human Health Screening Level [CHHSL] used for lead). Human health risks associated with contact of contaminated soil (dermal, ingestion, etc.) in California can be assessed by comparing concentrations detected at the Property to the most stringent (or conservative) of these values for each metal, referred to by SCS as the DTSC-Recommended SLs and presented on **Table 2**.

As shown in **Table 2**, the analytical results for all metals in all samples analyzed were below or within the typical background concentration ranges for southern California soils (Bradford et al, 1996), with the exception of zinc in one of twelve samples (SB4-1'). Although zinc was detected at a concentration of 340 mg/kg in this sample, above the typical background range, the concentrations of this metal were within background ranges at the 5 and 10 foot depth samples from this location. In addition, the concentration of zinc at one foot bgs in this location was well below the risk based DTSC-Recommended SLs for residential and industrial land use.

With the exception of arsenic, detected in one sample (SB1-1'), all other metal concentrations were well below the risk based DTSC-Recommended SLs for residential and industrial land use. Although above the risk-based screening level, arsenic detected at a concentration of 3.73 mg/kg in this sample was within the background range, and further, was below the acceptable level of arsenic in soil in the range of 8 to 12 mg/kg for school sites in California as set by the DTSC. In summary, the concentrations of metals detected in soil are not indicative of a release at the Property.

TPH AND VOCs IN SOIL

There are no universal cleanup guidelines for TPH- and/or VOC-contaminated soils in California. Cleanup levels can vary based on a number of factors including the nature of the contamination, depth to groundwater, the beneficial uses of groundwater, soil type, human health risks (i.e., land use, residential vs. commercial/industrial scenarios), and regulatory oversight agency requirements. Actual cleanup goals are site-specific and based on applicable regulatory guidelines. Generally, regulatory guidelines that apply to the cleanup of specific chemical constituents in soil are related to one or more of the following issues:

- Potential impacts to groundwater
- Human health risks
- Waste disposal restrictions

Based on available information regarding the Property, the following guidelines may be applicable to the remediation and cleanup of impacted soils.

Potential Impacts to Groundwater

The Los Angeles Regional Water Quality Control Board (RWQCB) has established cleanup guidelines, also known as soil screening levels (SSLs), for hydrocarbon-impacted soils based on the potential for groundwater contamination (RWQCB, 1996). Where impacted soils are anticipated to be between 20 and 150 feet above groundwater (assuming conservatively that groundwater is at approximately 30 feet bgs at the Property), the SSLs for petroleum hydrocarbons are:

- TPH-G or gasoline-range hydrocarbons (C₄-C₁₂) – 500 mg/kg
- TPH-D or diesel-range hydrocarbons (C₁₃-C₂₂) – 1,000 mg/kg
- TPH-O or oil/heavy-range hydrocarbons (C₂₃-C₄₀) – 10,000 mg/kg

These SSLs, along with the summary of analytical results, are also provided in **Table 1**. As shown on **Table 1**, the concentrations of TPH-D and TPH-O detected are well below their respective SSLs of 1,000 and 10,000 mg/kg, respectively. The RWQCB has also developed groundwater protection SSLs for selected fuel-related aromatic compounds including benzene, toluene, ethylbenzene, and xylenes in soils. The one detection of toluene in SB1-5' is well below the SSL of 300 µg/kg, for the sandy soil observed at the Property.

Based on this information and data from this investigation, there is no evidence of releases at the Property that may represent a risk to groundwater.

Human Health Risks

Note No. 3 also describes DTSC-Recommended SLs for use in evaluating human health risks at hazardous waste sites and permitted facilities. The toluene result is well below the DTSC-Recommended SLs as shown in **Table 1**.

Waste Disposal Restrictions

There are a number of state and federal regulations that relate to the disposal of contaminated soils. For the purposes of disposal, waste streams can be:

- Defined as hazardous in the regulations (e.g., soils containing spent solvents above specified limits for hazardous chemicals).
- Classified as hazardous on the basis of testing results for physical or chemical characteristics (i.e., toxic, reactive, ignitable, and/or corrosive).

In general soil containing petroleum hydrocarbons and/or solvents are not defined as “hazardous” under state and federal regulations. They may, however, exhibit “hazardous characteristics,” and should therefore be tested and characterized for disposal at an appropriate facility when excavated and removed. Under California regulations (Title 14 CCR, Division 7, Chapter 3, Article 5.6), contaminated soil that is excavated, and then either removed from or placed back on the Property, may be subject to the requirements of the RWQCB or a Local Enforcement Agency (such as the Long Beach Department of Human Health Services). Given the analytical results, there are not indicative of a release at the Property.

Although no significant impacted soil was encountered during this investigation, because a former oil well is located beneath the current structure on the Property, hydrocarbon-impacted soil could still be encountered during the redevelopment of the Property. If encountered during future site activities, potentially-impacted soil should be characterized and removed for proper disposal.

VOCs in Soil Vapor

Note No. 3 also makes recommendations regarding the methodology and use of the RSLs and DTSC-SLs for soil vapor screening under residential and commercial/industrial land use scenarios.

The DTSC-Recommended SLs for evaluating soil vapor intrusion are calculated using indoor air screening levels and recommended attenuation factors. These calculated soil vapor screening levels are for samples collected near the source area either for existing buildings or future buildings (Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, October 2011, DTSC). The term “near the source area” is considered to be at or just above the contaminant source, generally no more than five feet beneath a building foundation. The values calculated using Note No. 3 recommendations are conservative. Chemical concentrations in excess of the calculated DTSC-Recommended SLs are not conclusive evidence of adverse risks to human health. Additional investigation – such as sub-slab sampling, indoor air assessments, site-specific health risk assessments, etc. – may be warranted to further assess site-specific health risks.

The soil vapor results from this investigation were compared to the residential and commercial DTSC-Recommended SLs for a future building. The sample concentration of toluene, the only VOC detected, was not above its corresponding residential or commercial SLs.

Methane Results

No methane was detected in the four soil vapor samples collected. In addition, no subsurface positive gas pressure was detected during the investigation. Based on these observations there is no indication of methane at the Property.

5 CONCLUSIONS AND RECOMMENDATIONS

On June 15, 2017, SCS conducted soil and soil vapor investigation activities at 3445 Long Beach Boulevard, Long Beach, California. Based on the results of this investigation, SCS has concluded the following:

- Concentrations of metals detected in select soil samples were generally consistent with typical background concentration ranges for southern California soil and/or below the risk based DTSC-Recommended SLs for residential and industrial land use.
- TPH-D and TPH-O were each detected in four of twelve samples at concentrations below their respective SSLs.
- Toluene was detected in one of twelve soil samples and one of four soil vapor samples at concentrations below its DTSC-Recommended SLs.
- No methane or positive pressure were detected in any of the soil vapor probes installed on the Property.

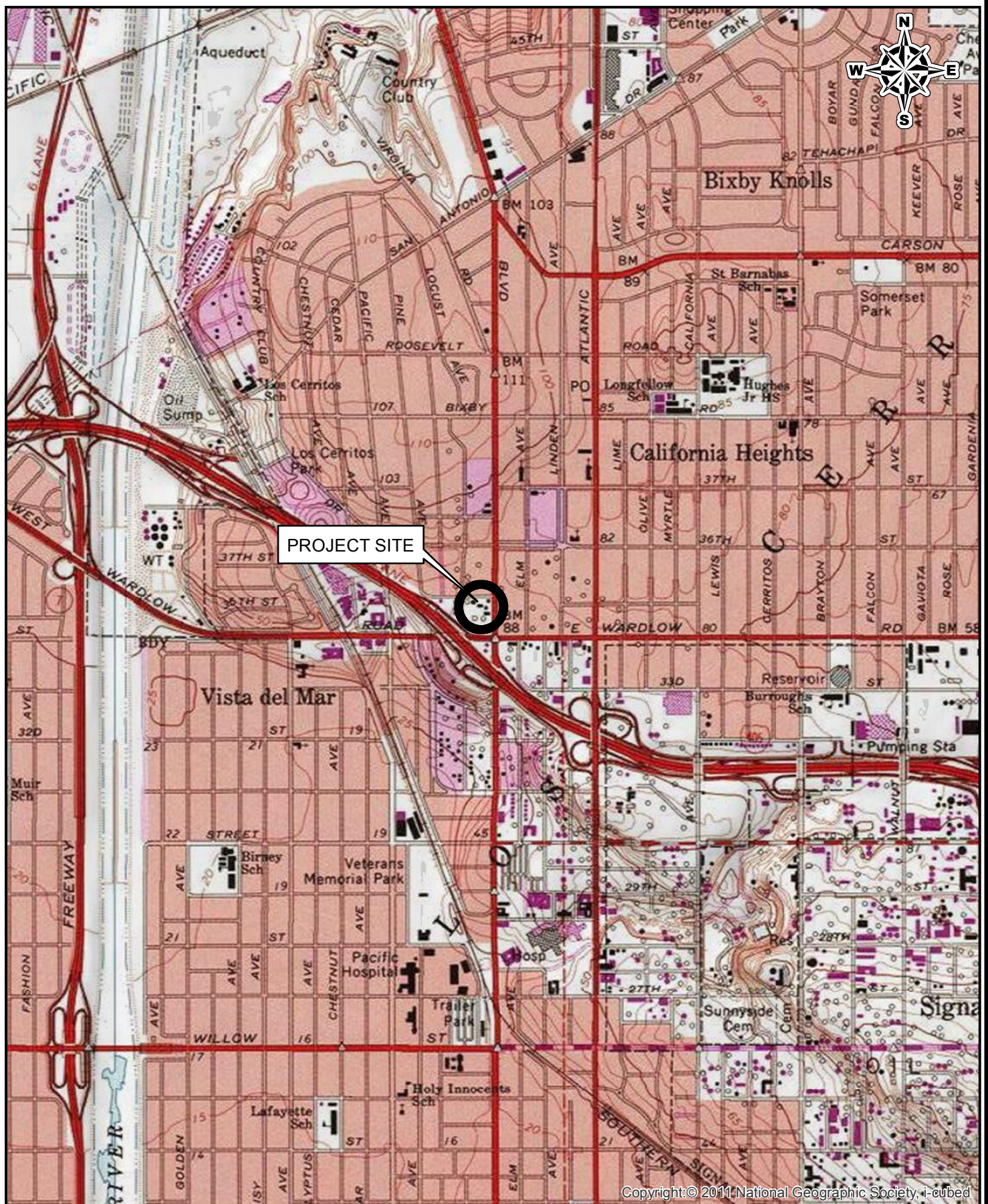
In summary, based on the results of this investigation there is no evidence of significant impact to the subsurface as a result of historical activities at the Property. It is SCS's opinion, that no further investigation or remediation is warranted at this time, however, because the Property is to be redeveloped, it will be necessary to expose the location of the former oil well for re-abandonment and to abandon the existing well to the current abandonment standards. In addition, because the Property is located in an oil field, the City of Long Beach may require a methane barrier as part of the design plan.

In addition, although no significantly impacted soil was encountered during this investigation, because of the presence of two oil wells on the Property, there is a potential that hydrocarbon-impacted soil to be encountered during the redevelopment of the Property. For this reason, preparation of a soils management plan is recommended that describes sampling and characterization if impacted soil is encountered.

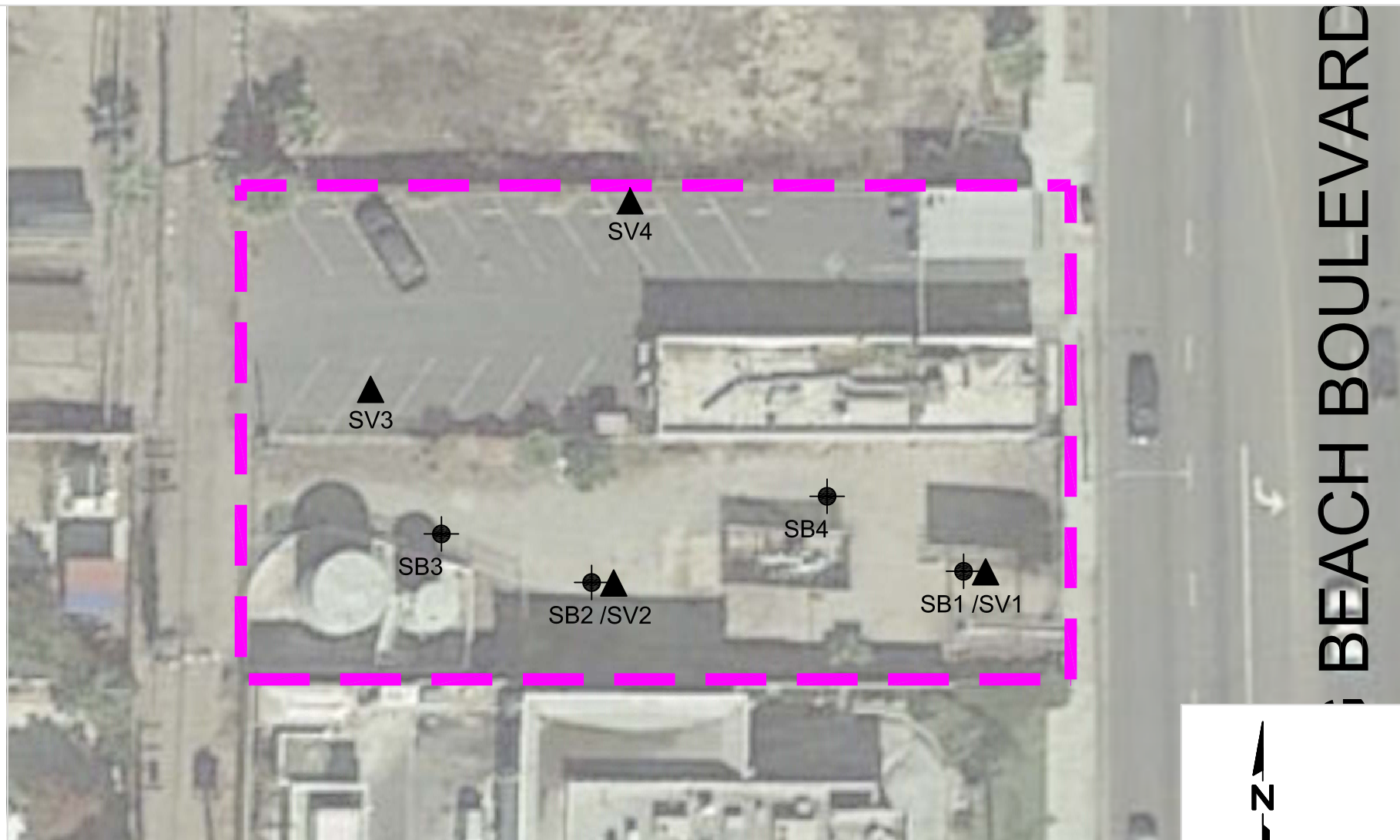
6 REFERENCES

- California Department of Toxic Substances Control and Regional Water Quality Control Board. *Advisory – Active Soil Gas Investigations*. July 2015.
- California Department of Toxic Substances Control (DTSC) and California Environmental Protection Agency (CalEPA). *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)*. October 2011.
- California Department of Toxic Substances Control (DTSC), Office of Human and Ecological Risk (HERO). *Human Health Risk Assessment (HHRA) Note Number 3*. June 2016.
- California Department of Water Resources. *Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County*. Bulletin No. 104. Reprinted April 1988.
- California Environmental Protection Agency, January 2005. *Use of California Human Health Screening Levels (CHHSLs) in Evaluation of Contaminated Properties*.
- Los Angeles Regional Water Quality Control Board (LARWQCB). *Interim Site Assessment and Cleanup Guidebook*. May 1996.
- California Environmental Protection Agency, State Water Resources Control Board. GeoTracker website; <http://geotracker.waterboards.ca.gov/>
- SCS Engineers, *Phase I Environmental Site Assessment, Two Parcels at 3445 Long Beach Boulevard, Long Beach, California 90801, (Assessor's Parcel Numbers: 7141-004-019 and -020)*, May 24, 2017.
- United States Geological Survey, Long Beach, CA 7.5 Minute Topographic Map, 1964 (Photorevised 1981).

FIGURES



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LEGEND

--- PROPERTY LINE



SOIL BORING LOCATIONS



SOIL VAPOR LOCATIONS



GRAPHIC SCALE

0 30 60

SCALE IN FEET

SCS ENGINEERS

ENVIRONMENTAL CONSULTANTS

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CLIENT:

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3545 LONG BEACH BOULEVARD
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SHEET TITLE:

AERIAL IMAGE SHOWING SOIL AND SOIL
VAPOR SAMPLE LOCATIONS

PROJECT TITLE:

3445-3449 LONG BEACH BOULEVARD
LONG BEACH, CALIFORNIA 90807

DATE:

JUNE 2017

SCALE:

1" = 60'

FIGURE NO.

2

PROJ. NO.	01217033.01	DWN. BY:	C.HERNANDEZ	ACAD FILE:	2017
DSN. BY:	C.HERNANDEZ	CHK. BY:	A.HUTCHENS	APP. BY:	K.GREEN

TABLES

TABLE 1
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES - TPH & VOCs
3445 LONG BEACH BOULEVARD
LONG BEACH, CA 90807

Sample Location	Sample Depth (feet bgs)	Date of Collection	TPH			VOCs	
			TPH as Gasoline-range Hydrocarbons (C4 - C12)	TPH as Diesel-range Hydrocarbons (C13 - C22)	TPH as Motor Oil-range Hydrocarbons (C23 - C40)	Toluene	
			milligrams per kilogram (mg/kg), equivalent to parts per million (ppm)			ug/kg	
SB1	1	June 15, 2017	<0.20	<5.0	<10	--	
	5		<0.20	<5.0	<10	1.95	
	10		<0.20	<5.0	<10	<0.9	
	15		--	--	--	<1.0	
SB2	1		<0.20	65.4	340	--	
	5		<0.20	<5.0	<10	<1.0	
	10		<0.20	<5.0	<10	<1.0	
	15		--	--	--	<1.0	
SB3	1		<0.20	<5.0	42.3	--	
	5		<0.20	17.3	45.4	<0.8	
	10		<0.20	13.3	<10	<1.0	
	15		--	--	--	<1.0	
SB4	1		<0.20	88.6	490	--	
	5		<0.20	<5.0	<10	<0.8	
	10		<0.20	<5.0	<10	<1.0	
	15		--	--	--	<1.0	
LARWQCB SSLs			500	1,000	10,000	300	
DTSC-Recommended SL (Residential)			--	--	--	1,100,000	
DTSC-Recommended SL (Commercial/Industrial)			--	--	--	5,400,000	

Notes:

TPH = Total petroleum hydrocarbons by EPA Method 8015M.

VOCs = Volatile organic compounds by EPA Method 8260B.

bgs = Below ground surface

LARWQCB SSLs = Los Angeles Regional Water Quality Control Board Soil Screening Levels in sandy soils approximately 20 to 30 feet above groundwater (Interim Site Assessment and Cleanup Guidebook, May 1996).

DTSC-Recommended SL = Screening Level as recommended in California Department of Toxic Substances Control (DTSC), Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note No. 3 - Residential and industrial/commercial land use scenarios June 2016, Referencing U.S. Environmental Protection Agency Regional Screening Level Summary Table - May 2016).

-- = Not analyzed/calculated

TABLE 2
SUMMARY OF ANALYTICAL RESULTS FOR SOIL SAMPLES - METALS
3445 LONG BEACH BOULEVARD
LONG BEACH, CA 90807

Boring ID	Sample Depth (feet bgs)	Sampling Date	Title 22 Metals (EPA Method 6010B, except Mercury by EPA Method 7471A)																	
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury (elemental)	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	
			Milligrams per kilogram (mg/kg), equivalent to parts per million (ppm)																	
SB1	1	June 15, 2017	<2.0	3.73	117	<1.0	<1.0	20.8	9.56	14.5	4.92	<0.05	<2.0	13.3	<2.0	<1.0	<2.0	38.7	35.9	
	5		<2.0	<2.0	106	<1.0	<1.0	17.7	6.34	16.5	63.3	<0.05	<2.0	13.1	<2.0	<1.0	<2.0	26.5	62.9	
	10		<2.0	<2.0	65.4	<1.0	<1.0	10.2	8.43	7.88	2.81	<0.05	<2.0	9.62	<2.0	<1.0	<2.0	21.3	32.4	
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
SB2	1		<2.0	<2.0	112	<1.0	<1.0	17.1	7.10	18.0	17.6	<0.05	<2.0	12.5	<2.0	<1.0	<2.0	27.9	42.9	
	5		<2.0	<2.0	80.5	<1.0	<1.0	17.1	5.63	10.6	2.47	<0.05	<2.0	10.3	<2.0	<1.0	<2.0	25.7	38.8	
	10		<2.0	<2.0	51.1	<1.0	<1.0	12.1	4.05	7.78	<2.0	<0.05	<2.0	7.82	<2.0	<1.0	<2.0	20.5	27.8	
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
SB3	1		<2.0	<2.0	87.4	<1.0	<1.0	16.0	5.39	14.7	10.8	<0.05	<2.0	10.5	<2.0	<1.0	<2.0	24.5	55.4	
	5		<2.0	<2.0	92.9	<1.0	<1.0	14.2	6.14	20.5	25.9	<0.05	<2.0	10.3	<2.0	<1.0	<2.0	24.1	66.7	
	10		<2.0	<2.0	153	<1.0	<1.0	13.1	4.42	7.94	<2.0	<0.05	<2.0	9.37	<2.0	<1.0	<2.0	27.1	27.9	
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
SB4	1		<2.0	<2.0	88.2	<1.0	<1.0	17.6	6.21	22.4	51.8	<0.05	<2.0	14.3	<2.0	<1.0	<2.0	24.8	340	
	5		<2.0	<2.0	101	<1.0	<1.0	19.9	6.93	13.3	11.6	<0.05	<2.0	12.1	<2.0	<1.0	<2.0	29.2	45.1	
	10		<2.0	<2.0	55.4	<1.0	<1.0	12.7	4.79	11.2	7.53	<0.05	<2.0	8.61	<2.0	<1.0	<2.0	29.9	40.4	
	15		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Typical Range for CA Soils*			0.15-1.95	0.6-11	133-1,400	0.25-2.7	0.05-1.7	23-1,579	2.7-46.9	9.1-96.4	12.4-97.1	0.1-0.9	0.1-9.6	9-509	0.015-0.430	0.1-8.3	0.17-1.1	39-288	88-236	
Source			RSL	HERO	RSL	HERO	HERO	HERO	RSL	RSL	HERO	HERO	RSL	HERO	RSL	HERO	RSL	HERO	RSL	
DTSC-Recommended SL (Residential)			31	0.11	15,000	15	5.2	36,000/0.3±	23	3,100	80	1.0	390	490	390	390	0.78	390	23,000	
DTSC-Recommended SL (Commercial/Industrial)			470	0.36	220,000	210	7.3	170,000/6.3±	350	47,000	320	4.5	5,800	3,100	5,800	1,500	12	1,000	350,000	
TTLC			500	500	10,000	75	100	2,500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000	
STLC**			15	5	100	0.75	1	5	80	25	5	0.2	350	20	1	5	7	24	250	
TCLP**			--	5	100	--	1	5	--	--	5	0.2	--	--	1	5	--	--	--	

Notes:

bgs = below ground surface

* = Bradford, G.R., Chang, A.C., Page, A.L., Bakhtar, D., Fampton, J.A., and Wright, H., 1996, *Background Concentrations of Trace and Major Elements in California Soils*, Kearney Foundation of Soil Science Special Report, Division of Agriculture and Natural Resources, University of California.

** = Values in milligrams per liter (mg/L)

± = Value for Chromium (III) / Value for Chromium (VI)

DTSC-Recommended SL = Screening Level as recommended in California Department of Toxic Substances Control (DTSC), Office of Human and Ecological Risk (HERO), Human Health Risk Assessment (HHRA) Note No. 3 - Residential and industrial/commercial land use scenarios (June 2016 Referencing U.S. Environmental Protection Agency Regional Screening Level [RSL] Summary Table - May 2016).

TTLC = Total Threshold Limit Concentration as identified in Title 22 of the California Code of Regulations. Wastes with concentrations above this value are considered hazardous for the purposes of disposal under California regulations.

STLC = Soluble Threshold Limit Concentration, in mg/L, as identified in Title 22 of the California Code of Regulations. A concentration of ten times the STLC is sometimes used as a trigger to conduct further analysis (i.e., the soluble analysis) of a sample to determine disposal requirements. Wastes with soluble concentrations above this value are considered hazardous for the purposes of disposal under California regulations.

TCPLP = Toxicity Characteristic Leaching Procedure concentration, in mg/L, as identified in the Code of Federal Regulations. Wastes with soluble concentrations above this value are considered hazardous for the purposes of disposal under federal regulations.

-- = Not analyzed/Not Applicable

APPENDIX A

PERMIT



CITY OF LONG BEACH
DEPARTMENT OF HEALTH AND HUMAN SERVICES
BUREAU OF ENVIRONMENTAL HEALTH
WATER QUALITY PROGRAM

2525 GRAND AVENUE, ROOM 220, LONG BEACH, CALIFORNIA CA 90815
562-570-4132



WELL PERMIT

PERMIT#: **2377**

DATE: **June 12, 2017**

**All work must be completed in accordance with Water Well Bulletin 74-81 and 74-90
PLEASE NOTIFY INSPECTOR 48 HOURS BEFORE DRILLING AND SUBMIT LOG(S) TO
vanna.kho@longbeach.gov , OR MAIL AT ADDRESS ABOVE.**

Site Address: **3445 Long Beach Blvd
Long Beach, CA 90807**

Owner: **888-5 Partners, LLC**

Owner Address: **3545 Long Beach Blvd
Long Beach, CA 90807
562-988-1688**

Consulting Firm: **SCS Engineers**

Consulting Firm Address **3900 Kilroy Airport Way, Suite 100
Long Beach, CA 90806
562-508-9002**

Drilling Company: **H & P Geochemistry**

Drilling Co. Address: **2470 Impala Drive
Carlsbad, CA 92010
714-647-6290**

Type Of Permit: **Soil Boring**

Type Of Well:

Total Number Of Well/Soil Boring: **6 Borings**

This permit valid for one year from date above

Vanna Kho, R.E.H.S.

Cross-Connection/Water Quality



CITY OF LONG BEACH
DEPARTMENT OF HEALTH AND HUMAN SERVICES
BUREAU OF ENVIRONMENTAL HEALTH
 WATER PROGRAM
 2525 GRAND AVENUE, ROOM 220, LONG BEACH, CALIFORNIA 90815
 562-570-4132 OFFICE 562-570-4038 FAX



WELL PERMIT APPLICATION

Date: 6/5/2017 Proposed Date: 6/15/2017

Site Address: 3445 Long Beach Boulevard, Long Beach, California

Permit Delivery: ☐ Mail ☐ Fax ☐ Pick Up ☒ E-mail: chernandez@scsengineers.com

Permit Type: ☐ New Well Construction ☐ Destruction ☐ Other: soil borings

Well Type: ☐ Monitoring ☐ Cathodic ☐ Private Domestic ☐ Public Domestic
☐ Vapor Extraction ☒ Soil Boring Number of: Wells _____ Borings 6

Well Owner Name: Laserfiche 888-5 Partners, LLC Phone: 562-988-1688

Well Owner Address: 3545 Long Beach Boulevard Long Beach CA 90807
 City State Zip Code

Consulting Firm Name: SCS Engineers Phone: 562-508-9002

Consulting Firm Address: 3900 Kilroy Airport Way, Suite 100 Long Beach, CA 90806
 City State Zip Code

Drilling Company Name: H & P Geochemistry Phone: 760-804-9678

Drilling Company Address: 2470 Impala Drive Carlsbad CA 92010
 City State Zip Code

PROVIDE PLOT PLAN LOCATING EACH WELL CONSTRUCTED OR ABANDONED

Construction/Destruction Method Type of casing, method of sealing etc., (Use additional sheet or attachments)
Soil borings will be backfilled with hydrated bentonite and patched to match the surrounding surface. <u>see attached email. vb.</u>

I hereby agree to comply in every respect with all regulations of the Long Beach Department of Health and Human Services and with all ordinance and laws of the City of Long Beach and of the State of California pertaining to well construction, reconstruction and destruction. Upon completion of well and within ten days perforations in casing, and any other data deemed necessary by other city agencies.

Print Name: Cindy Hernandez Applicants Signature: Cindy Hernandez
 Telephone: 562-508-9002 Fax Number: 562-427-0805 E-mail: chernandez@scsengineers.com

☒ Approved ☐ Approved with Conditions ☐ Denied

If denied or approved with conditions, report reason or conditions here: _____

Approved By: [Signature] Date: 6/12/17

APPENDIX B

BORING LOGS

3900 Kilroy Airport Way, Suite 100
Long Beach, California 90806-6816

BORING NUMBER: SB1

Page 1 of 1

**3445 Long Beach Boulevard
Long Beach, California**

JOB NUMBER: 01217033.01 Task 2

REMARKS:
Continuous Core

Depth		Sample Information					Graphic Log	Description	Completion Detail
meters	feet	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.			
0	0								
	1		SB1-1		0.6	ML		Light Brown, Sandy (30%) Silt, Slightly Moist.	
	2							Light Brown, Silt (10% Sand), Slightly Moist.	
	3								
1	4					SM		Brown, Silty (30%) Fine Sand, Slightly Moist.	
	5		SB1-5		4.3	SM		Light Brown, Silty (30%) Fine Sand, Slightly Moist.	
	6								
2	7								
	8					ML		Brown, Silt with Sand (25%), Dry-Slightly Moist.	
	9					SP		Gray Brown, Very Fine to Fine Sand, Slightly Moist.	
3	10		SB1-10		0.9	SP		Gray Brown, Very Fine to Fine Sand, Slightly Moist.	
	11								
	12					SM		Light Gray with Mottled Brown, Silty (35%) Fine Sand, Slightly Moist.	
4	13					SP		Light Gray, Fine Sand, Slightly Moist.	
	14								
	15		SB1-15		3.5				
5	16								
	17								
	18								
	19								
6	20								

← Hydrated Bentonite

Drilling Company: **H & P Mobile Geochemistry**

Drilling Method: **Direct Push**

Logged By: **C. Hernandez**

Date Started: **6/15/17**

Date Ended: **6/15/17**

Boring Diameter: **2"**

Total Depth: **15.0 ft**

STANDARD_LOG_01217033.GPJ STD_LOG.GDT 7/6/17

3900 Kilroy Airport Way, Suite 100
Long Beach, California 90806-6816

BORING NUMBER: SB2

Page 1 of 1

**3445 Long Beach Boulevard
Long Beach, California**

JOB NUMBER: 01217033.01 Task 2

REMARKS:
Continuous Core

Depth		Sample Information					Graphic Log	Description	Completion Detail
meters	feet	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.			
0	0								
	1		SB2-1		2.4	ML		Brown, Silt with Sand (15%), Moist.	
	2					ML		Brown, Clayey Silt with Sand (15%), Moist.	
1	3								
	4					ML		Brown with Mottled Light Gray, Silt with Sand (10%), Trace of Cement Debris, Dry.	
	5		SB2-5		1.8	ML		Brown, Clayey Silt with Sand (5%), Slightly Moist.	
	6								
2	7					ML		Olive Brown, Silty (20%) Fine Sand, Slightly Moist.	
	8					SP		Brown, Very Fine to Fine Sand, Slightly Moist.	
	9								
3	10		SB2-10		1.6	SP		Brown, Very Fine to Fine Sand, Slightly Moist.	
	11					SP		Light Gray, Fine Sand, Slightly Moist.	
	12					SP		Light Gray, Fine Sand, Slightly Moist.	
	13					ML		Brown, Silt with Sand (20%), Trace of Fine Gravel, Slightly Moist.	
4	14					SP		Light Gray with Mottled Orange-Red, Fine Sand, Slightly Moist.	
	15		SB2-15		0.8				
	16								
5	17								
	18								
	19								
6	20								

← Hydrated Bentonite

Drilling Company: **H & P Mobile Geochemistry**

Drilling Method: **Direct Push**

Logged By: **C. Hernandez**

Date Started: **6/15/17**

Date Ended: **6/15/17**

Boring Diameter: **2"**

Total Depth: **15.0 ft**

3900 Kilroy Airport Way, Suite 100
Long Beach, California 90806-6816

BORING NUMBER: SB3

Page 1 of 1

**3445 Long Beach Boulevard
Long Beach, California**

JOB NUMBER: 01217033.01 Task 2

REMARKS:
Continuous Core

Depth		Sample Information					Graphic Log	Description	Completion Detail
meters	feet	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.			
0	0								
	1		SB3-1		1.0	ML		Rock Fragments and Cement Debris. Brown, Gravelly (20%) Silt with Sand (15%), Dry. Brown with Mottled Dark Brown, Silt, Slightly Moist.	
	2					ML			
	3								
1	4								
	5		SB3-5		1.6	SW		Brown, Medium Sand, Trace of Gravel, Slightly Moist.	
	6					SW		Brown, Medium Sand, Trace of Gravel, Slightly Moist.	
	7					ML		Brown, Clayey Silt with Sand (10%), Slightly Moist.	
2	8					SM		Brown with Mottled White, Silty (30%) Sand, Slightly Moist.	
	9					ML		Brown, Clayey Silt, Slightly Moist.	
	10		SB3-10			SP		Light Brown, Fine Sand, Slightly Moist.	
3	11								
	12					ML		Brown, Clayey Silt with Sand (10%), Trace of Fine Gravel, Slightly Moist.	
	13					SP		Light Brown, Fine Sand, Slightly Moist.	
4	14					ML		Brown, Silt with Trace of Fine Gravel, Slightly Moist.	
	15		SB3-15			ML		Light Brown with Mottled Red, Fine Sand, Slightly Moist.	
	16								
5	17								
	18								
	19								
6	20								

← Hydrated Bentonite

Drilling Company: **H & P Mobile Geochemistry**

Drilling Method: **Direct Push**

Logged By: **C. Hernandez**

Date Started: **6/15/17**

Date Ended: **6/15/17**

Boring Diameter: **2"**

Total Depth: **15.0 ft**

3900 Kilroy Airport Way, Suite 100
Long Beach, California 90806-6816

BORING NUMBER: SB4

Page 1 of 1

**3445 Long Beach Boulevard
Long Beach, California**

JOB NUMBER: 01217033.01 Task 2

REMARKS:
Continuous Core

Depth		Sample Information					Graphic Log	Description	Completion Detail
meters	feet	Sample Location	Sample Number	Blow Counts	OVM (ppm)	USCS Soil Class.			
0	0								0
	1		SB4-1		7.3	ML		Brown, Silt with Sand (10%), Slightly Moist.	
	2					ML		Brown with Mottled Orange-Red, Silt with Sand (10%), Slightly Moist.	
	3					ML		Brown with Mottled Olive Brown, Silt, Slightly Moist.	
1	4								
	5		SB4-5		0.9	ML		Brown, Sandy (30%) Silt, Slightly Moist.	5
	6								
2	7								
	8								
	9					ML		Brown, Silt with Sand (20%), Slightly Moist.	
3	10		SB4-10		0.7	SP		Light Gray with Mottled Orange-Red, Fine Sand, Slightly Moist.	10
	11								
	12								
	13					SP		Light Gray with Mottled Dark Brown, Fine Sand, Slightly Moist.	
4	14								
	15		SB4-15		0.8	SP		Light Gray, Fine to Medium Sand, Slightly Moist.	15
	16								
5	17								
	18								
	19								
6	20								

← Hydrated Bentonite

Drilling Company: **H & P Mobile Geochemistry**

Drilling Method: **Direct Push**

Logged By: **C. Hernandez**

Date Started: **6/15/17**

Date Ended: **6/15/17**

Boring Diameter: **2"**

Total Depth: **15.0 ft**

APPENDIX C
CHEMTEK LABORATORY REPORT

13554 Lawlin Circle, Santa Fe Springs, CA 90670

Tel. (562) 926-9848 FAX (562) 926-8324 Email: Chemteklabs@hotmail.com

CA Dept of Health Accredited. (ELAP No. 1435) & Mobile Lab (ELAP No. 2629)

Job No.: 01217033.01 T2

Page: 1 of 1

CUSTOMER INFORMATION				ANALYSIS REQUIRED													
COMPANY NAME: SCS Engineers		PROJECT CONTACT: A. Huchens		Email: A.Huchens@scsengineers.com													
ADDRESS: 3900 Kirby Airport Way Suite 100		PHONE: (562) 426-9544		FAX:													
PROJECT NAME: 888-5 Partners, Phase II				P.O. No.													
SITE ADDRESS: 3445 Long Beach Blvd				Turn Around Time		<input checked="" type="checkbox"/> NORM <input type="checkbox"/> 24 hr <input type="checkbox"/> 48 hr <input type="checkbox"/> Other											
SAMPLED BY: C. Hernandez				<input type="checkbox"/> EDF													
SAMPLE ID	DATE	TIME	SAMPLED TYPE *	pH/Time	REMARKS	Preserved	NO. OF CONT	8015M TPH G or GRO	8015M TPH D or DRO	CARBON CHAIN (8015M)	VOCs (8260 B) FULL	OXYGENATES (8260 B) SHORT	COD / TSS / BOD / TDS	pH, Conductivity, Turbidity	Sulfide, Cyanide, O&G	CAM 17 Metals (6000/7471) Title 22	
1 SB1-1	6/15/17	8:35	SO		5035		4	X		X	X					X	
2 SB1-5		8:38						X		X	X					X	
3 SB1-10		8:48						X		X	X					X	
4 SB1-15		8:54								X	X						
5 SB2-1		9:17						X		X	X					X	
6 SB2-5		9:25						X		X	X					X	
7 SB2-10		9:35						X		X	X					X	
8 SB2-15		9:44								X	X						
9 SB3-1		10:41						X		X	X					X	
10 SB3-5		10:46						X		X	X					X	
11 SB3-10		10:48						X		X	X					X	
12 SB3-15		10:51								X	X						
13 SB4-1		10:12						X		X	X					X	
14 SB4-5		10:17						X		X	X					X	
15 SB4-10		10:22						X		X	X					X	
16 SB4-15		10:25						X		X	X						
SIGNATURE: <i>Cindy Hernandez</i>				PRINT NAME: Cindy Hernandez				COMPANY NAME: SCS Engineers				DATE: 6/15/17				TIME: 15:30	
RECEIVED BY: <i>mh</i>				RECEIVED BY: <i>mh</i>				RECEIVED BY: <i>mh</i>				DATE: 6/15/17				TIME: 15:30	
RECEIVED FOR LABORATORY BY: <i>7</i>				RECEIVED FOR LABORATORY BY: <i>mh</i>				RECEIVED FOR LABORATORY BY: <i>mh</i>				DATE: 6/15/17				TIME: 4:30	

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made.

Distribution: WHITE with report / YELLOW to CHEMTEK / PINK to courier

*Type: SO-Soil GW-Ground Water WW-Waste Water AQ-Aqueous A-Air OT-Other



Certificate of Analysis

Page 1

Client: SCS Engineers

3900 Kilroy Airport Way
Long Beach, CA

Project No. 01217033.01 T2

Project Site: 888-5 Partners
3445 Long Beach Blvd

Job No: 706074

Report Date: 06/23/17

Date Received: 06/15/17

Number of Samples: 16

Sample Matrix: Soil

Attention: Ashley Hutchens

This is the Certificate of Analysis for the following samples:

SAMPLE IDENTIFICATION	DATE OF SAMPLE	LABORATORY IDENTIFICATION
SB1-1	06/15/17	706074-01A
SB1-5	06/15/17	706074-02A
SB1-10	06/15/17	706074-03A
SB1-15	06/15/17	706074-04A
SB2-1	06/15/17	706074-05A
SB2-5	06/15/17	706074-06A
SB2-10	06/15/17	706074-07A
SB2-15	06/15/17	706074-08A
SB3-1	06/15/17	706074-09A
SB3-5	06/15/17	706074-10A
SB3-10	06/15/17	706074-11A
SB3-15	06/15/17	706074-12A
SB4-1	06/15/17	706074-13A
SB4-5	06/15/17	706074-14A
SB4-10	06/15/17	706074-15A
SB4-15	06/15/17	706074-16A

Reviewed and Approved:

For

Michael C.C. Lu
Laboratory Director



Certificate of Analysis

Page 2

Client: SCS Engineers	EPA Method: 8260B	Units: µg/kg or ppb	Job No: 706074
Project Site: 888-5 Partners	Matrix: Soil		
	Sample ID	Sample Date	
Project No. 01217033.01 T2	SB1-5	6/15/2017	
	Sample ID	Sample Date	
	SB1-10	6/15/2017	

Analyte	Results	Units	DF	DLR	Results	Units	DF	DLR
Benzene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Bromobenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Bromochloromethane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Bromoform	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Bromomethane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
n-Butylbenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
sec-Butylbenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
tert-Butylbenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Carbon Tetrachloride	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Chlorobenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Chloroethane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Chloroform	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Chloromethane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
2-Chlorotoluene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
4-Chlorotoluene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
2-Chloroethyl vinyl ether	ND	µg/kg	0.8	1.6	ND	µg/kg	0.9	1.8
Dibromochloromethane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,2-Dibromo-3-chloropropane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,2-Dibromoethane (EDB)	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Dibromomethane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,2-Dichlorobenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,3-Dichlorobenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,4-Dichlorobenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Dichlorodifluoromethane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,1-Dichloroethane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,2-Dichloroethane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,1-Dichloroethene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
cis-1,2 Dichloroethene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Trans-1,2-Dichloroethene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,2-Dichloropropane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,3-Dichloropropane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
2,2-Dichloropropane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,1-Dichloropropene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Cis-1,3-Dichloropropene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
trans-1,3-Dichloropropene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Ethylbenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Hexachlorobutadiene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Isopropylbenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
4-Isopropyltoluene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Methylene Chloride	ND	µg/kg	0.8	4	ND	µg/kg	0.9	4.5
Naphthalene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
n-propylbenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Styrene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,1,1,2-Tetrachloroethane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,1,2,2-Tetrachloroethane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Tetrachloroethene(PCE)	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Toluene	1.95	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,2,3-Trichlorobenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,2,4-Trichlorobenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,1,1-Trichloroethane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,1,2-Trichloroethane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Trichloroethene(TCE)	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Trichlorofluoromethane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,2,3-Trichloropropane	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,2,4-Trimethylbenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
1,3,5-Trimethylbenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Vinyl Chloride	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
Total Xylenes	ND	µg/kg	0.8	1.6	ND	µg/kg	0.9	1.8
Ethanol	ND	µg/kg	0.8	200	ND	µg/kg	0.9	225
MTBE	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
ETBE	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
DIPE	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
TAME	ND	µg/kg	0.8	0.8	ND	µg/kg	0.9	0.9
TBA	ND	µg/kg	0.8	40	ND	µg/kg	0.9	45
MEK	ND	µg/kg	0.8	8	ND	µg/kg	0.9	9
MIBK	ND	µg/kg	0.8	8	ND	µg/kg	0.9	9
2-Hexanone	ND	µg/kg	0.8	8	ND	µg/kg	0.9	9
Acetone	ND	µg/kg	0.8	80	ND	µg/kg	0.9	90

Analysis Date: 06/15/17

06/15/17

ND : Not detected at or above DLR

DLR: Detection Limit for Reporting Purposes



Certificate of Analysis

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Client: SCS Engineers	EPA Method: 8260B	Units: µg/kg or ppb	Job No: 706074
Project Site: 888-5 Partners	Matrix: Soil		
	Sample ID	Sample Date	
Project No. 01217033.01 T2	SB1-15	6/15/2017	
	Sample ID	Sample Date	
	SB2-5	6/15/2017	

Analyte	Results	Units	DF	DLR	Results	Units	DF	DLR
Benzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Bromobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Bromochloromethane	ND	µg/kg	1	1	ND	µg/kg	1	1
Bromoform	ND	µg/kg	1	1	ND	µg/kg	1	1
Bromomethane	ND	µg/kg	1	1	ND	µg/kg	1	1
n-Butylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
sec-Butylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
tert-Butylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Carbon Tetrachloride	ND	µg/kg	1	1	ND	µg/kg	1	1
Chlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Chloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
Chloroform	ND	µg/kg	1	1	ND	µg/kg	1	1
Chloromethane	ND	µg/kg	1	1	ND	µg/kg	1	1
2-Chlorotoluene	ND	µg/kg	1	1	ND	µg/kg	1	1
4-Chlorotoluene	ND	µg/kg	1	1	ND	µg/kg	1	1
2-Chloroethyl vinyl ether	ND	µg/kg	1	2	ND	µg/kg	1	2
Dibromochloromethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2-Dibromo-3-chloropropane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2-Dibromoethane (EDB)	ND	µg/kg	1	1	ND	µg/kg	1	1
Dibromomethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2-Dichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,3-Dichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,4-Dichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Dichlorodifluoromethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1-Dichloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2-Dichloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1-Dichloroethene	ND	µg/kg	1	1	ND	µg/kg	1	1
cis-1,2 Dichloroethene	ND	µg/kg	1	1	ND	µg/kg	1	1
Trans-1,2-Dichloroethene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2-Dichloropropane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,3-Dichloropropane	ND	µg/kg	1	1	ND	µg/kg	1	1
2,2-Dichloropropane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1-Dichloropropene	ND	µg/kg	1	1	ND	µg/kg	1	1
Cis-1,3-Dichloropropene	ND	µg/kg	1	1	ND	µg/kg	1	1
trans-1,3-Dichloropropene	ND	µg/kg	1	1	ND	µg/kg	1	1
Ethylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Hexachlorobutadiene	ND	µg/kg	1	1	ND	µg/kg	1	1
Isopropylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
4-Isopropyltoluene	ND	µg/kg	1	1	ND	µg/kg	1	1
Methylene Chloride	ND	µg/kg	1	5	ND	µg/kg	1	5
Naphthalene	ND	µg/kg	1	1	ND	µg/kg	1	1
n-propylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Styrene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1,1,2-Tetrachloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1,2,2-Tetrachloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
Tetrachloroethene(PCE)	ND	µg/kg	1	1	ND	µg/kg	1	1
Toluene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2,3-Trichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2,4-Trichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1,1-Trichloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1,2-Trichloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
Trichloroethene(TCE)	ND	µg/kg	1	1	ND	µg/kg	1	1
Trichlorofluoromethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2,3-Trichloropropane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2,4-Trimethylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,3,5-Trimethylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Vinyl Chloride	ND	µg/kg	1	1	ND	µg/kg	1	1
Total Xylenes	ND	µg/kg	1	2	ND	µg/kg	1	2
Ethanol	ND	µg/kg	1	250	ND	µg/kg	1	250
MTBE	ND	µg/kg	1	1	ND	µg/kg	1	1
ETBE	ND	µg/kg	1	1	ND	µg/kg	1	1
DIPE	ND	µg/kg	1	1	ND	µg/kg	1	1
TAME	ND	µg/kg	1	1	ND	µg/kg	1	1
TBA	ND	µg/kg	1	50	ND	µg/kg	1	50
MEK	ND	µg/kg	1	10	ND	µg/kg	1	10
MIBK	ND	µg/kg	1	10	ND	µg/kg	1	10
2-Hexanone	ND	µg/kg	1	10	ND	µg/kg	1	10
Acetone	ND	µg/kg	1	100	ND	µg/kg	1	100

Analysis Date: 06/15/17

06/15/17

ND : Not detected at or above DLR

DLR: Detection Limit for Reporting Purposes



Certificate of Analysis

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Client: SCS Engineers	EPA Method: 8260B	Units: µg/kg or ppb	Job No: 706074
Project Site: 888-5 Partners	Matrix: Soil		
	Sample ID	Sample Date	
Project No. 01217033.01 T2	SB2-10	6/15/2017	
	Sample ID	Sample Date	
	SB2-15	6/15/2017	

Analyte	Results	Units	DF	DLR	Results	Units	DF	DLR
Benzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Bromobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Bromochloromethane	ND	µg/kg	1	1	ND	µg/kg	1	1
Bromoform	ND	µg/kg	1	1	ND	µg/kg	1	1
Bromomethane	ND	µg/kg	1	1	ND	µg/kg	1	1
n-Butylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
sec-Butylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
tert-Butylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Carbon Tetrachloride	ND	µg/kg	1	1	ND	µg/kg	1	1
Chlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Chloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
Chloroform	ND	µg/kg	1	1	ND	µg/kg	1	1
Chloromethane	ND	µg/kg	1	1	ND	µg/kg	1	1
2-Chlorotoluene	ND	µg/kg	1	1	ND	µg/kg	1	1
4-Chlorotoluene	ND	µg/kg	1	1	ND	µg/kg	1	1
2-Chloroethyl vinyl ether	ND	µg/kg	1	2	ND	µg/kg	1	2
Dibromochloromethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2-Dibromo-3-chloropropane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2-Dibromoethane (EDB)	ND	µg/kg	1	1	ND	µg/kg	1	1
Dibromomethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2-Dichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,3-Dichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,4-Dichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Dichlorodifluoromethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1-Dichloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2-Dichloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1-Dichloroethene	ND	µg/kg	1	1	ND	µg/kg	1	1
cis-1,2 Dichloroethene	ND	µg/kg	1	1	ND	µg/kg	1	1
Trans-1,2-Dichloroethene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2-Dichloropropane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,3-Dichloropropane	ND	µg/kg	1	1	ND	µg/kg	1	1
2,2-Dichloropropane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1-Dichloropropene	ND	µg/kg	1	1	ND	µg/kg	1	1
Cis-1,3-Dichloropropene	ND	µg/kg	1	1	ND	µg/kg	1	1
trans-1,3-Dichloropropene	ND	µg/kg	1	1	ND	µg/kg	1	1
Ethylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Hexachlorobutadiene	ND	µg/kg	1	1	ND	µg/kg	1	1
Isopropylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
4-Isopropyltoluene	ND	µg/kg	1	1	ND	µg/kg	1	1
Methylene Chloride	ND	µg/kg	1	5	ND	µg/kg	1	5
Naphthalene	ND	µg/kg	1	1	ND	µg/kg	1	1
n-propylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Styrene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1,1,2-Tetrachloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1,2,2-Tetrachloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
Tetrachloroethene(PCE)	ND	µg/kg	1	1	ND	µg/kg	1	1
Toluene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2,3-Trichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2,4-Trichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1,1-Trichloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1,2-Trichloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
Trichloroethene(TCE)	ND	µg/kg	1	1	ND	µg/kg	1	1
Trichlorofluoromethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2,3-Trichloropropane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2,4-Trimethylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,3,5-Trimethylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Vinyl Chloride	ND	µg/kg	1	1	ND	µg/kg	1	1
Total Xylenes	ND	µg/kg	1	2	ND	µg/kg	1	2
Ethanol	ND	µg/kg	1	250	ND	µg/kg	1	250
MTBE	ND	µg/kg	1	1	ND	µg/kg	1	1
ETBE	ND	µg/kg	1	1	ND	µg/kg	1	1
DIPE	ND	µg/kg	1	1	ND	µg/kg	1	1
TAME	ND	µg/kg	1	1	ND	µg/kg	1	1
TBA	ND	µg/kg	1	50	ND	µg/kg	1	50
MEK	ND	µg/kg	1	10	ND	µg/kg	1	10
MIBK	ND	µg/kg	1	10	ND	µg/kg	1	10
2-Hexanone	ND	µg/kg	1	10	ND	µg/kg	1	10
Acetone	ND	µg/kg	1	100	ND	µg/kg	1	100

Analysis Date: 06/15/17

06/15/17

ND : Not detected at or above DLR

DLR: Detection Limit for Reporting Purposes



Certificate of Analysis

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Client: SCS Engineers	EPA Method: 8260B	Units: µg/kg or ppb	Job No: 706074
Project Site: 888-5 Partners	Matrix: Soil		
	Sample ID	Sample Date	
Project No. 01217033.01 T2	SB3-5	6/15/2017	
	Sample ID	Sample Date	
	SB3-10	6/15/2017	

Analyte	Results	Units	DF	DLR	Results	Units	DF	DLR
Benzene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Bromobenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Bromochloromethane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Bromoform	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Bromomethane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
n-Butylbenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
sec-Butylbenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
tert-Butylbenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Carbon Tetrachloride	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Chlorobenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Chloroethane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Chloroform	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Chloromethane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
2-Chlorotoluene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
4-Chlorotoluene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
2-Chloroethyl vinyl ether	ND	µg/kg	0.8	1.6	ND	µg/kg	1	2
Dibromochloromethane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,2-Dibromo-3-chloropropane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,2-Dibromoethane (EDB)	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Dibromomethane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,2-Dichlorobenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,3-Dichlorobenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,4-Dichlorobenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Dichlorodifluoromethane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,1-Dichloroethane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,2-Dichloroethane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,1-Dichloroethene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
cis-1,2 Dichloroethene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Trans-1,2-Dichloroethene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,2-Dichloropropane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,3-Dichloropropane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
2,2-Dichloropropane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,1-Dichloropropene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Cis-1,3-Dichloropropene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
trans-1,3-Dichloropropene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Ethylbenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Hexachlorobutadiene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Isopropylbenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
4-Isopropyltoluene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Methylene Chloride	ND	µg/kg	0.8	4	ND	µg/kg	1	5
Naphthalene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
n-propylbenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Styrene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,1,1,2-Tetrachloroethane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,1,2,2-Tetrachloroethane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Tetrachloroethene(PCE)	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Toluene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,2,3-Trichlorobenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,2,4-Trichlorobenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,1,1-Trichloroethane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,1,2-Trichloroethane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Trichloroethene(TCE)	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Trichlorofluoromethane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,2,3-Trichloropropane	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,2,4-Trimethylbenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
1,3,5-Trimethylbenzene	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Vinyl Chloride	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
Total Xylenes	ND	µg/kg	0.8	1.6	ND	µg/kg	1	2
Ethanol	ND	µg/kg	0.8	200	ND	µg/kg	1	250
MTBE	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
ETBE	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
DIPE	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
TAME	ND	µg/kg	0.8	0.8	ND	µg/kg	1	1
TBA	ND	µg/kg	0.8	40	ND	µg/kg	1	50
MEK	ND	µg/kg	0.8	8	ND	µg/kg	1	10
MIBK	ND	µg/kg	0.8	8	ND	µg/kg	1	10
2-Hexanone	ND	µg/kg	0.8	8	ND	µg/kg	1	10
Acetone	ND	µg/kg	0.8	80	ND	µg/kg	1	100

Analysis Date: 06/15/17

06/15/17

ND : Not detected at or above DLR

DLR: Detection Limit for Reporting Purposes



Certificate of Analysis

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Client: SCS Engineers	EPA Method: 8260B	Units: µg/kg or ppb	Job No: 706074
Project Site: 888-5 Partners	Matrix: Soil		
	Sample ID	Sample Date	
Project No. 01217033.01 T2	SB3-15	6/15/2017	
	Sample ID	Sample Date	
	SB4-5	6/15/2017	

Analyte	Results	Units	DF	DLR	Results	Units	DF	DLR
Benzene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Bromobenzene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Bromochloromethane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Bromoform	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Bromomethane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
n-Butylbenzene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
sec-Butylbenzene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
tert-Butylbenzene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Carbon Tetrachloride	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Chlorobenzene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Chloroethane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Chloroform	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Chloromethane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
2-Chlorotoluene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
4-Chlorotoluene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
2-Chloroethyl vinyl ether	ND	µg/kg	1	2	ND	µg/kg	0.8	1.6
Dibromochloromethane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,2-Dibromo-3-chloropropane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,2-Dibromoethane (EDB)	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Dibromomethane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,2-Dichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,3-Dichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,4-Dichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Dichlorodifluoromethane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,1-Dichloroethane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,2-Dichloroethane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,1-Dichloroethene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
cis-1,2 Dichloroethene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Trans-1,2-Dichloroethene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,2-Dichloropropane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,3-Dichloropropane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
2,2-Dichloropropane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,1-Dichloropropene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Cis-1,3-Dichloropropene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
trans-1,3-Dichloropropene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Ethylbenzene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Hexachlorobutadiene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Isopropylbenzene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
4-Isopropyltoluene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Methylene Chloride	ND	µg/kg	1	5	ND	µg/kg	0.8	4
Naphthalene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
n-propylbenzene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Styrene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,1,1,2-Tetrachloroethane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,1,2,2-Tetrachloroethane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Tetrachloroethene(PCE)	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Toluene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,2,3-Trichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,2,4-Trichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,1,1-Trichloroethane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,1,2-Trichloroethane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Trichloroethene(TCE)	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Trichlorofluoromethane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,2,3-Trichloropropane	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,2,4-Trimethylbenzene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
1,3,5-Trimethylbenzene	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Vinyl Chloride	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
Total Xylenes	ND	µg/kg	1	2	ND	µg/kg	0.8	1.6
Ethanol	ND	µg/kg	1	250	ND	µg/kg	0.8	200
MTBE	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
ETBE	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
DIPE	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
TAME	ND	µg/kg	1	1	ND	µg/kg	0.8	0.8
TBA	ND	µg/kg	1	50	ND	µg/kg	0.8	40
MEK	ND	µg/kg	1	10	ND	µg/kg	0.8	8
MIBK	ND	µg/kg	1	10	ND	µg/kg	0.8	8
2-Hexanone	ND	µg/kg	1	10	ND	µg/kg	0.8	8
Acetone	ND	µg/kg	1	100	ND	µg/kg	0.8	80

Analysis Date: 06/16/17

06/16/17

ND : Not detected at or above DLR

DLR: Detection Limit for Reporting Purposes



Certificate of Analysis

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Client: SCS Engineers	EPA Method: 8260B	Units: µg/kg or ppb	Job No: 706074
Project Site: 888-5 Partners	Matrix: Soil		
	Sample ID	Sample Date	
Project No. 01217033.01 T2	SB4-10	6/15/2017	
	Sample ID	Sample Date	
	SB4-15	6/15/2017	

Analyte	Results	Units	DF	DLR	Results	Units	DF	DLR
Benzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Bromobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Bromochloromethane	ND	µg/kg	1	1	ND	µg/kg	1	1
Bromoform	ND	µg/kg	1	1	ND	µg/kg	1	1
Bromomethane	ND	µg/kg	1	1	ND	µg/kg	1	1
n-Butylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
sec-Butylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
tert-Butylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Carbon Tetrachloride	ND	µg/kg	1	1	ND	µg/kg	1	1
Chlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Chloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
Chloroform	ND	µg/kg	1	1	ND	µg/kg	1	1
Chloromethane	ND	µg/kg	1	1	ND	µg/kg	1	1
2-Chlorotoluene	ND	µg/kg	1	1	ND	µg/kg	1	1
4-Chlorotoluene	ND	µg/kg	1	1	ND	µg/kg	1	1
2-Chloroethyl vinyl ether	ND	µg/kg	1	2	ND	µg/kg	1	2
Dibromochloromethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2-Dibromo-3-chloropropane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2-Dibromoethane (EDB)	ND	µg/kg	1	1	ND	µg/kg	1	1
Dibromomethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2-Dichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,3-Dichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,4-Dichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Dichlorodifluoromethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1-Dichloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2-Dichloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1-Dichloroethene	ND	µg/kg	1	1	ND	µg/kg	1	1
cis-1,2 Dichloroethene	ND	µg/kg	1	1	ND	µg/kg	1	1
Trans-1,2-Dichloroethene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2-Dichloropropane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,3-Dichloropropane	ND	µg/kg	1	1	ND	µg/kg	1	1
2,2-Dichloropropane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1-Dichloropropene	ND	µg/kg	1	1	ND	µg/kg	1	1
Cis-1,3-Dichloropropene	ND	µg/kg	1	1	ND	µg/kg	1	1
trans-1,3-Dichloropropene	ND	µg/kg	1	1	ND	µg/kg	1	1
Ethylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Hexachlorobutadiene	ND	µg/kg	1	1	ND	µg/kg	1	1
Isopropylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
4-Isopropyltoluene	ND	µg/kg	1	1	ND	µg/kg	1	1
Methylene Chloride	ND	µg/kg	1	5	ND	µg/kg	1	5
Naphthalene	ND	µg/kg	1	1	ND	µg/kg	1	1
n-propylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Styrene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1,1,2-Tetrachloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1,2,2-Tetrachloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
Tetrachloroethene(PCE)	ND	µg/kg	1	1	ND	µg/kg	1	1
Toluene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2,3-Trichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2,4-Trichlorobenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1,1-Trichloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,1,2-Trichloroethane	ND	µg/kg	1	1	ND	µg/kg	1	1
Trichloroethene(TCE)	ND	µg/kg	1	1	ND	µg/kg	1	1
Trichlorofluoromethane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2,3-Trichloropropane	ND	µg/kg	1	1	ND	µg/kg	1	1
1,2,4-Trimethylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
1,3,5-Trimethylbenzene	ND	µg/kg	1	1	ND	µg/kg	1	1
Vinyl Chloride	ND	µg/kg	1	1	ND	µg/kg	1	1
Total Xylenes	ND	µg/kg	1	2	ND	µg/kg	1	2
Ethanol	ND	µg/kg	1	250	ND	µg/kg	1	250
MTBE	ND	µg/kg	1	1	ND	µg/kg	1	1
ETBE	ND	µg/kg	1	1	ND	µg/kg	1	1
DIPE	ND	µg/kg	1	1	ND	µg/kg	1	1
TAME	ND	µg/kg	1	1	ND	µg/kg	1	1
TBA	ND	µg/kg	1	50	ND	µg/kg	1	50
MEK	ND	µg/kg	1	10	ND	µg/kg	1	10
MIBK	ND	µg/kg	1	10	ND	µg/kg	1	10
2-Hexanone	ND	µg/kg	1	10	ND	µg/kg	1	10
Acetone	ND	µg/kg	1	100	ND	µg/kg	1	100

Analysis Date: 06/16/17

06/16/17

ND : Not detected at or above DLR

DLR: Detection Limit for Reporting Purposes



Certificate of Analysis

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Client: SCS Engineers
Project Site: 888-5 Partners

Project No: 01217033.01 T2

EPA Method: 8015M
units: mg/kg or ppm

Job No: 706074
Report Date: 06/23/17
Date of Sample: 06/15/17
Date Received: 06/15/17
Sample Matrix: Soil

Sample ID	UNITS	Gas Range			Diesel Range			Oil Range		
		(C4-C12)	DF	DLR	(C13-C22)	DF	DLR	(C23-36)	DF	DLR
SB1-1	mg/kg	ND	1	0.20	ND	1	5.0	ND	1	10
SB1-5	mg/kg	ND	1	0.20	ND	1	5.0	ND	1	10
SB1-10	mg/kg	ND	1	0.20	ND	1	5.0	ND	1	10
SB2-1	mg/kg	ND	1	0.20	65.4	1	5.0	340	1	10
SB2-5	mg/kg	ND	1	0.20	ND	1	5.0	ND	1	10
SB2-10	mg/kg	ND	1	0.20	ND	1	5.0	ND	1	10
SB3-1	mg/kg	ND	1	0.20	ND	1	5.0	42.3	1	10
SB3-5	mg/kg	ND	1	0.20	17.3	1	5.0	45.4	1	10
SB3-10	mg/kg	ND	1	0.20	13.3	1	5.0	ND	1	10
SB4-1	mg/kg	ND	1	0.20	88.6	1	5.0	490	1	10
SB4-5	mg/kg	ND	1	0.20	ND	1	5.0	ND	1	10
SB4-10	mg/kg	ND	1	0.20	ND	1	5.0	ND	1	10

Sample Date: 06/15/17
Analysis Date: 06/15-16/17

06/15/17
06/22/17

06/15/17
06/22/17

ND : Not detected at or above DLR

DLR: Detection Limit for Reporting Purposes



Certificate of Analysis

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Client: SCS Engineers
Project Site: 888-5 Partners
Project No: 01217033.01 T2

Job No: 706074
Report Date: 06/23/17
Date of Sample: 06/15/17
Date Received: 06/15/17
Sample Matrix: Soil

EPA Method: 6010B Metals Units: ppm or mg/Kg

Client Sample ID:	SB1-1	SB1-5	SB1-10	SB2-1	SB2-5	SB2-10	SB3-1	SB3-5	SB3-10	SB4-1	Detection
Dilution Factor:	1	1	1	1	1	1	1	1	1	1	Limit
Analyte	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
Antimony	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.00
Arsenic	3.73	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.00
Barium	117	106	65.4	112	80.5	51.1	87.4	92.9	153	88.2	1.00
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.00
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.00
Chromium	20.8	17.7	10.2	17.1	17.1	12.1	16.0	14.2	13.1	17.6	1.00
Cobalt	9.56	6.34	8.43	7.10	5.63	4.05	5.39	6.14	4.42	6.21	2.00
Copper	14.5	16.5	7.88	18.0	10.6	7.78	14.7	20.5	7.94	22.4	2.00
Lead	4.92	63.3	2.81	17.6	2.47	ND	10.8	25.9	ND	51.8	2.00
Molybdenum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.00
Nickel	13.3	13.1	9.62	12.5	10.3	7.82	10.5	10.3	9.37	14.3	2.00
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.00
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.00
Thallium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.00
Vanadium	38.7	26.5	21.3	27.9	25.7	20.5	24.5	24.1	27.1	24.8	2.00
Zinc	35.9	62.9	32.4	42.9	38.8	27.8	55.4	66.7	27.9	340	5.00

Analysis Date: 6/16/17 6/16/17 6/16/17 6/16/17 6/16/17 6/16/17 6/16/17 6/16/17 6/16/17 6/16/17 6/16/17

EPA Method: 7470A Mercury Units: ppm or mg/Kg

Client Sample ID:	SB1-1	SB1-5	SB1-10	SB2-1	SB2-5	SB2-10	SB3-1	SB3-5	SB3-10	SB4-1	Detection
Dilution Factor:	1	1	1	1	1	1	1	1	1	1	Limit
Analyte	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.05

Analysis Date: 6/16/17 6/16/17 6/16/17 6/16/17 6/16/17 6/16/17 6/16/17 6/16/17 6/16/17 6/16/17 6/16/17

ND: Not Detected Below (DF x Detection Limit)

DF: Dilution Factor



Certificate of Analysis

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Client: SCS Engineers
Project Site: 888-5 Partners
Project No: 01217033.01 T2

Job No: 706074
Report Date: 06/23/17
Date of Sample: 06/15/17
Date Received: 06/15/17
Sample Matrix: Soil

EPA Method: 6010B Metals Units: ppm or mg/Kg

Client Sample ID:	SB4-5	SB4-10	Detection
Dilution Factor:	1	1	Limit
Analyte	(ppm)	(ppm)	(ppm)
Antimony	ND	ND	2.00
Arsenic	ND	ND	2.00
Barium	101	55.4	1.00
Beryllium	ND	ND	1.00
Cadmium	ND	ND	1.00
Chromium	19.9	12.7	1.00
Cobalt	6.93	4.79	2.00
Copper	13.3	11.2	2.00
Lead	11.6	7.53	2.00
Molybdenum	ND	ND	2.00
Nickel	12.1	8.61	2.00
Selenium	ND	ND	2.00
Silver	ND	ND	1.00
Thallium	ND	ND	2.00
Vanadium	29.2	29.9	2.00
Zinc	45.1	40.4	5.00

Analysis Date: 6/16/17 6/16/17

EPA Method: 7470A Mercury Units: ppm or mg/Kg

Client Sample ID:	SB4-5	SB4-10	Detection
Dilution Factor:	1	1	Limit
Analyte	(ppm)	(ppm)	(ppm)
Mercury	ND	ND	0.05

Analysis Date: 6/16/17 6/16/17

ND: Not Detected Below (DF x Detection Limit)

DF: Dilution Factor



Certificate of Analysis

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QC Analysis Date: 06/15/17
QC Lab ID: 706074-3A
Units: ppb

Job No: 706074

QUALITY CONTROL DATA

EPA METHOD: 8260B(VOC's)

ANALYTE	BLANK RESULT	SPIKE CONC.	MS % REC	MSD % REC	% RPD	% RPD ACCEPT LIMITS	% REC ACCEPT LIMITS
1,1-Dichloroethene	ND	25	811.5	82.2	163.2%	30	70-130
Benzene	ND	25	103.8	105.9	2.0%	30	70-130
Trichloroethylene	ND	25	112.7	114.4	1.5%	30	70-130
Toluene	ND	25	115.3	114.2	1.0%	30	70-130
Chlorobenzene	ND	25	118.2	117.6	0.5%	30	70-130

QC Analysis Date: 06/15/17
QC Lab ID: 706074-3A
Units: ppm

QUALITY CONTROL DATA

EPA METHOD: 8015B(TPH Gas Range Organics)

ANALYTE	BLANK RESULT	SPIKE CONC.	MS % REC	MSD % REC	% RPD	% RPD ACCEPT LIMITS	% REC ACCEPT LIMITS
GRO (TPH)	ND	0.5	98.9	103.9	4.9%	30	70-130

QC Analysis Date: 06/22/17
QC Lab ID: 706074-3A
Units: ppm

QUALITY CONTROL DATA

EPA METHOD: 8015m(TPH Diesel Range Organics)

ANALYTE	BLANK RESULT	SPIKE CONC.	MS % REC	MSD % REC	% RPD	% RPD ACCEPT LIMITS	% REC ACCEPT LIMITS
DRO (TPH)	ND	100	116.8	121.8	4.2%	30	70-130



QC Analysis Date: 06/16/17
QC Lab ID: 706074-1A
Units: ppm

Job No: 706074

QUALITY CONTROL DATA (MS/MSD)

EPA METHOD: 6010B

ANALYTE	BLANK RESULT	SPIKE CONC.	MS % REC	MSD % REC	% RPD	% RPD ACCEPT LIMITS	% REC ACCEPT LIMITS
Antimony	ND	1.00	95.9	98.2	2.4%	30	70-130
Arsenic	ND	1.00	99.8	98.8	1.0%	30	70-130
Barium	ND	1.00	99.0	99.6	0.6%	30	70-130
Beryllium	ND	1.00	96.8	96.8	0.0%	30	70-130
Cadmium	ND	1.00	94.0	96.4	2.5%	30	70-130
Chromium	ND	1.00	96.8	98.4	1.6%	30	70-130
Cobalt	ND	1.00	98.6	98.2	0.4%	30	70-130
Copper	ND	1.00	97.5	96.3	1.2%	30	70-130
Lead	ND	1.00	97.0	98.8	1.8%	30	70-130
Molybdenum	ND	1.00	100.0	102.2	2.2%	30	70-130
Nickel	ND	1.00	102.0	99.7	2.3%	30	70-130
Selenium	ND	1.00	99.0	98.8	0.2%	30	70-130
Silver	ND	1.00	91.1	81.8	10.8%	30	70-130
Thallium	ND	1.00	102.8	103.2	0.4%	30	70-130
Vanadium	ND	1.00	101.2	101.5	0.3%	30	70-130
Zinc	ND	1.00	103.7	101.5	2.1%	30	70-130

APPENDIX D
H&P LABORATORY REPORT

21 June 2017

Ms. Ashley Hutchens
SCS Engineers - Long Beach
3900 Kilroy Airport Way, Suite 100
Long Beach, CA 90806-6816

H&P Project: SCS061617-11
Client Project: 01217033.01 T2 / 3445 Long Beach Blvd.

Dear Ms. Ashley Hutchens:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 15-Jun-17 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody
- Sampling Logs (if applicable)

Unless otherwise noted, I certify that all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,



Janis La Roux
Laboratory Director

H&P Mobile Geochemistry, Inc. is certified under the California ELAP and the National Environmental Laboratory Accreditation Conference (NELAC). H&P is approved as an Environmental Testing Laboratory and Mobile Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs, accreditation number 69070 for EPA Method TO-15, H&P Method TO-15, EPA Method 8260B and H&P 8260SV.



SCS Engineers - Long Beach
3900 Kilroy Airport Way, Suite 100
Long Beach, CA 90806-6816

Project: SCS061617-11
Project Number: 01217033.01 T2 / 3445 Long Beach Blvd.
Project Manager: Ms. Ashley Hutchens

Reported:
21-Jun-17 08:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SV4-5	E706060-01	Vapor	15-Jun-17	15-Jun-17
SV3-5	E706060-02	Vapor	15-Jun-17	15-Jun-17
SV2-5	E706060-03	Vapor	15-Jun-17	15-Jun-17
SV1-5	E706060-04	Vapor	15-Jun-17	15-Jun-17
SV1-5 Rep	E706060-05	Vapor	15-Jun-17	15-Jun-17

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DETECTIONS SUMMARY

Sample ID: **SV4-5**

Laboratory ID: **E706060-01**

Analyte	Result	Reporting Limit	Units	Method	Notes
Toluene	6.6	1.0	ug/l	H&P 8260SV	

Sample ID: **SV3-5**

Laboratory ID: **E706060-02**

Analyte	Result	Reporting Limit	Units	Method	Notes
No Detections Reported					

Sample ID: **SV2-5**

Laboratory ID: **E706060-03**

Analyte	Result	Reporting Limit	Units	Method	Notes
No Detections Reported					

Sample ID: **SV1-5**

Laboratory ID: **E706060-04**

Analyte	Result	Reporting Limit	Units	Method	Notes
No Detections Reported					

Sample ID: **SV1-5 Rep**

Laboratory ID: **E706060-05**

Analyte	Result	Reporting Limit	Units	Method	Notes
No Detections Reported					

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Soil Gas and Vapor Analysis
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV4-5 (E706060-01) Vapor Sampled: 15-Jun-17 Received: 15-Jun-17									
Methane	ND	10	ppmv	1	EF71604	16-Jun-17	16-Jun-17	EPA 8015M	
SV3-5 (E706060-02) Vapor Sampled: 15-Jun-17 Received: 15-Jun-17									
Methane	ND	10	ppmv	1	EF71604	16-Jun-17	16-Jun-17	EPA 8015M	
SV2-5 (E706060-03) Vapor Sampled: 15-Jun-17 Received: 15-Jun-17									
Methane	ND	10	ppmv	1	EF71604	16-Jun-17	16-Jun-17	EPA 8015M	
SV1-5 (E706060-04) Vapor Sampled: 15-Jun-17 Received: 15-Jun-17									
Methane	ND	10	ppmv	1	EF71604	16-Jun-17	16-Jun-17	EPA 8015M	
SV1-5 Rep (E706060-05) Vapor Sampled: 15-Jun-17 Received: 15-Jun-17									
Methane	ND	10	ppmv	1	EF71604	16-Jun-17	16-Jun-17	EPA 8015M	

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Volatile Organic Compounds by H&P 8260SV

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV4-5 (E706060-01) Vapor Sampled: 15-Jun-17 Received: 15-Jun-17									
1,1-Difluoroethane (LCC)	ND	0.50	ug/l	0.05	EF72013	20-Jun-17	20-Jun-17	H&P 8260SV	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.05	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.10	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	6.6	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	

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Volatile Organic Compounds by H&P 8260SV

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV4-5 (E706060-01) Vapor Sampled: 15-Jun-17 Received: 15-Jun-17									
Styrene	ND	0.50	ug/l	0.05	EF72013	20-Jun-17	20-Jun-17	H&P 8260SV	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane	95.4 %	75-125	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	89.7 %	75-125	"	"	"	"
Surrogate: Toluene-d8	100 %	75-125	"	"	"	"
Surrogate: 4-Bromofluorobenzene	94.8 %	75-125	"	"	"	"

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Volatile Organic Compounds by H&P 8260SV

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV3-5 (E706060-02) Vapor Sampled: 15-Jun-17 Received: 15-Jun-17									
1,1-Difluoroethane (LCC)	ND	0.50	ug/l	0.05	EF72013	20-Jun-17	20-Jun-17	H&P 8260SV	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.05	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.10	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	

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H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV3-5 (E706060-02) Vapor Sampled: 15-Jun-17 Received: 15-Jun-17									
Styrene	ND	0.50	ug/l	0.05	EF72013	20-Jun-17	20-Jun-17	H&P 8260SV	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane	97.8 %	75-125	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	89.3 %	75-125	"	"	"	"
Surrogate: Toluene-d8	101 %	75-125	"	"	"	"
Surrogate: 4-Bromofluorobenzene	97.3 %	75-125	"	"	"	"

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Volatile Organic Compounds by H&P 8260SV

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV2-5 (E706060-03) Vapor Sampled: 15-Jun-17 Received: 15-Jun-17									
1,1-Difluoroethane (LCC)	ND	0.50	ug/l	0.05	EF72013	20-Jun-17	20-Jun-17	H&P 8260SV	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.05	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.10	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	

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Volatile Organic Compounds by H&P 8260SV

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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV2-5 (E706060-03) Vapor Sampled: 15-Jun-17 Received: 15-Jun-17									
Styrene	ND	0.50	ug/l	0.05	EF72013	20-Jun-17	20-Jun-17	H&P 8260SV	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane	98.4 %	75-125	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	89.7 %	75-125	"	"	"	"
Surrogate: Toluene-d8	99.4 %	75-125	"	"	"	"
Surrogate: 4-Bromofluorobenzene	97.8 %	75-125	"	"	"	"

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Long Beach, CA 90806-6816

Project: SCS061617-11
Project Number: 01217033.01 T2 / 3445 Long Beach Blvd.
Project Manager: Ms. Ashley Hutchens

Reported:
21-Jun-17 08:06

Volatile Organic Compounds by H&P 8260SV

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV1-5 (E706060-04) Vapor Sampled: 15-Jun-17 Received: 15-Jun-17									
1,1-Difluoroethane (LCC)	ND	0.50	ug/l	0.05	EF72013	20-Jun-17	20-Jun-17	H&P 8260SV	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.05	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.10	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	

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Volatile Organic Compounds by H&P 8260SV

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV1-5 (E706060-04) Vapor Sampled: 15-Jun-17 Received: 15-Jun-17									
Styrene	ND	0.50	ug/l	0.05	EF72013	20-Jun-17	20-Jun-17	H&P 8260SV	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane	95.7 %	75-125	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	88.3 %	75-125	"	"	"	"
Surrogate: Toluene-d8	100 %	75-125	"	"	"	"
Surrogate: 4-Bromofluorobenzene	96.8 %	75-125	"	"	"	"

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Reported:
21-Jun-17 08:06

Volatile Organic Compounds by H&P 8260SV

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV1-5 Rep (E706060-05) Vapor Sampled: 15-Jun-17 Received: 15-Jun-17									
1,1-Difluoroethane (LCC)	ND	0.50	ug/l	0.05	EF72013	20-Jun-17	20-Jun-17	H&P 8260SV	
Dichlorodifluoromethane (F12)	ND	0.50	"	"	"	"	"	"	
Chloromethane	ND	0.50	"	"	"	"	"	"	
Vinyl chloride	ND	0.05	"	"	"	"	"	"	
Bromomethane	ND	0.50	"	"	"	"	"	"	
Chloroethane	ND	0.50	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	ND	0.50	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.50	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.50	"	"	"	"	"	"	
2,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.50	"	"	"	"	"	"	
Chloroform	ND	0.10	"	"	"	"	"	"	
Bromochloromethane	ND	0.50	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.10	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.10	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Trichloroethene	ND	0.10	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Bromodichloromethane	ND	0.50	"	"	"	"	"	"	
Dibromomethane	ND	0.50	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.50	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.50	"	"	"	"	"	"	
1,3-Dichloropropane	ND	0.50	"	"	"	"	"	"	
Tetrachloroethene	ND	0.10	"	"	"	"	"	"	
Dibromochloromethane	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	0.10	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	

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Volatile Organic Compounds by H&P 8260SV

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV1-5 Rep (E706060-05) Vapor Sampled: 15-Jun-17 Received: 15-Jun-17									
Styrene	ND	0.50	ug/l	0.05	EF72013	20-Jun-17	20-Jun-17	H&P 8260SV	
Bromoform	ND	0.50	"	"	"	"	"	"	
Isopropylbenzene (Cumene)	ND	0.50	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.50	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	0.50	"	"	"	"	"	"	
n-Propylbenzene	ND	0.50	"	"	"	"	"	"	
Bromobenzene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
2-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
4-Chlorotoluene	ND	0.50	"	"	"	"	"	"	
tert-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
sec-Butylbenzene	ND	0.50	"	"	"	"	"	"	
p-Isopropyltoluene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
n-Butylbenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.10	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	0.50	"	"	"	"	"	"	
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane	96.5 %	75-125	"	"	"	"
Surrogate: 1,2-Dichloroethane-d4	91.1 %	75-125	"	"	"	"
Surrogate: Toluene-d8	99.6 %	75-125	"	"	"	"
Surrogate: 4-Bromofluorobenzene	95.5 %	75-125	"	"	"	"

SCS Engineers - Long Beach 3900 Kilroy Airport Way, Suite 100 Long Beach, CA 90806-6816	Project: SCS061617-11 Project Number: 01217033.01 T2 / 3445 Long Beach Blvd. Project Manager: Ms. Ashley Hutchens	Reported: 21-Jun-17 08:06
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Soil Gas and Vapor Analysis - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF71604 - GC

Blank (EF71604-BLK1)	Prepared & Analyzed: 16-Jun-17									
Methane	ND	10	ppmv							

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Reported:
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Volatile Organic Compounds by H&P 8260SV - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF72013 - EPA 5030

Blank (EF72013-BLK1)

Prepared & Analyzed: 20-Jun-17

1,1-Difluoroethane (LCC)	ND	0.50	ug/l
Dichlorodifluoromethane (F12)	ND	0.50	"
Chloromethane	ND	0.50	"
Vinyl chloride	ND	0.05	"
Bromomethane	ND	0.50	"
Chloroethane	ND	0.50	"
Trichlorofluoromethane (F11)	ND	0.50	"
Methylene chloride (Dichloromethane)	ND	0.50	"
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"
trans-1,2-Dichloroethene	ND	0.50	"
1,1-Dichloroethane	ND	0.50	"
1,1-Dichloroethene	ND	0.50	"
2,2-Dichloropropane	ND	0.50	"
cis-1,2-Dichloroethene	ND	0.50	"
Chloroform	ND	0.10	"
Bromochloromethane	ND	0.50	"
1,1,1-Trichloroethane	ND	0.50	"
1,1-Dichloropropene	ND	0.50	"
Carbon tetrachloride	ND	0.10	"
1,2-Dichloroethane (EDC)	ND	0.10	"
Benzene	ND	0.10	"
Trichloroethene	ND	0.10	"
1,2-Dichloropropane	ND	0.50	"
Bromodichloromethane	ND	0.50	"
Dibromomethane	ND	0.50	"
cis-1,3-Dichloropropene	ND	0.50	"
Toluene	ND	1.0	"
trans-1,3-Dichloropropene	ND	0.50	"
1,1,2-Trichloroethane	ND	0.50	"
1,2-Dibromoethane (EDB)	ND	0.50	"
1,3-Dichloropropane	ND	0.50	"
Tetrachloroethene	ND	0.10	"
Dibromochloromethane	ND	0.50	"
Chlorobenzene	ND	0.10	"

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Volatile Organic Compounds by H&P 8260SV - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF72013 - EPA 5030

Blank (EF72013-BLK1)

Prepared & Analyzed: 20-Jun-17

Ethylbenzene	ND	0.50	ug/l
1,1,1,2-Tetrachloroethane	ND	0.50	"
m,p-Xylene	ND	0.50	"
o-Xylene	ND	0.50	"
Styrene	ND	0.50	"
Bromoform	ND	0.50	"
Isopropylbenzene (Cumene)	ND	0.50	"
1,1,2,2-Tetrachloroethane	ND	0.50	"
1,2,3-Trichloropropane	ND	0.50	"
n-Propylbenzene	ND	0.50	"
Bromobenzene	ND	0.50	"
1,3,5-Trimethylbenzene	ND	0.50	"
2-Chlorotoluene	ND	0.50	"
4-Chlorotoluene	ND	0.50	"
tert-Butylbenzene	ND	0.50	"
1,2,4-Trimethylbenzene	ND	0.50	"
sec-Butylbenzene	ND	0.50	"
p-Isopropyltoluene	ND	0.50	"
1,3-Dichlorobenzene	ND	0.50	"
1,4-Dichlorobenzene	ND	0.50	"
n-Butylbenzene	ND	0.50	"
1,2-Dichlorobenzene	ND	0.50	"
1,2-Dibromo-3-chloropropane	ND	5.0	"
1,2,4-Trichlorobenzene	ND	0.50	"
Hexachlorobutadiene	ND	0.50	"
Naphthalene	ND	0.10	"
1,2,3-Trichlorobenzene	ND	0.50	"
1,1,2 Trichlorotrifluoroethane (F113)	ND	0.50	"

Surrogate: Dibromofluoromethane	2.37	"	2.50	94.9	75-125
Surrogate: 1,2-Dichloroethane-d4	2.16	"	2.50	86.5	75-125
Surrogate: Toluene-d8	2.53	"	2.50	101	75-125
Surrogate: 4-Bromofluorobenzene	2.51	"	2.50	101	75-125

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Volatile Organic Compounds by H&P 8260SV - Quality Control
H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EF72013 - EPA 5030

LCS (EF72013-BS1)

Prepared & Analyzed: 20-Jun-17

Dichlorodifluoromethane (F12)	3.16	0.50	ug/l	5.00		63.2	70-130			QL-1L
Vinyl chloride	4.42	0.05	"	5.00		88.3	70-130			
Chloroethane	5.07	0.50	"	5.00		101	70-130			
Trichlorofluoromethane (F11)	4.84	0.50	"	5.00		96.7	70-130			
Methylene chloride (Dichloromethane)	5.10	0.50	"	5.00		102	70-130			
trans-1,2-Dichloroethene	5.13	0.50	"	5.00		103	70-130			
1,1-Dichloroethane	4.77	0.50	"	5.00		95.4	70-130			
1,1-Dichloroethene	5.07	0.50	"	5.00		101	70-130			
cis-1,2-Dichloroethene	5.30	0.50	"	5.00		106	70-130			
Chloroform	4.95	0.10	"	5.00		99.1	70-130			
1,1,1-Trichloroethane	5.05	0.50	"	5.00		101	70-130			
Carbon tetrachloride	5.01	0.10	"	5.00		100	70-130			
1,2-Dichloroethane (EDC)	5.02	0.10	"	5.00		100	70-130			
Benzene	4.90	0.10	"	5.00		97.9	70-130			
Trichloroethene	5.44	0.10	"	5.00		109	70-130			
Toluene	4.95	1.0	"	5.00		99.0	70-130			
1,1,2-Trichloroethane	5.17	0.50	"	5.00		103	70-130			
Tetrachloroethene	5.28	0.10	"	5.00		106	70-130			
Ethylbenzene	5.14	0.50	"	5.00		103	70-130			
1,1,1,2-Tetrachloroethane	5.04	0.50	"	5.00		101	70-130			
m,p-Xylene	10.2	0.50	"	10.0		102	70-130			
o-Xylene	5.14	0.50	"	5.00		103	70-130			
1,1,2,2-Tetrachloroethane	4.80	0.50	"	5.00		96.1	70-130			
1,1,2 Trichlorotrifluoroethane (F113)	5.91	0.50	"	5.00		118	70-130			

Surrogate: Dibromofluoromethane	2.45		"	2.50		98.1	75-125			
Surrogate: 1,2-Dichloroethane-d4	2.22		"	2.50		89.0	75-125			
Surrogate: Toluene-d8	2.50		"	2.50		100	75-125			
Surrogate: 4-Bromofluorobenzene	2.50		"	2.50		99.9	75-125			

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Notes and Definitions

QL-1L	The LCS and/or LCSD recoveries fell below the established control specifications for this analyte. Any result for this compound is qualified and should be considered biased low.
LCC	Leak Check Compound
ND	Analyte NOT DETECTED at or above the reporting limit
MDL	Method Detection Limit
%REC	Percent Recovery
RPD	Relative Percent Difference

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Testing Laboratory and Mobile Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs, accreditation number 69070 for EPA Method TO-15, H&P Method TO-15, EPA Method 8260B and H&P 8260SV.

H&P is approved by the State of Arizona as an Environmental Testing Laboratory and Mobile Laboratory, certification numbers AZM758 and AZ0779.

H&P is approved by the State of California as an Environmental Laboratory and Mobile Laboratory in conformance with the Environmental Laboratory Accreditation Program (ELAP) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste, certification numbers 2740, 2741, 2743, 2744, 2745, 2754 & 2930.

H&P is approved by the State of Florida Department of Health under the National Environmental Laboratory Accreditation Conference (NELAC) certification number E871100.

The complete list of stationary and mobile laboratory certifications along with the fields of testing (FOTs) and analyte lists are available at www.handpmg.com/about/certifications.

Lab Client and Project Information			
Lab Client/Consultant: <u>SCS Engineers</u>		Project Name / #: <u>01217033.01 T2</u>	
Lab Client Project Manager: <u>A. Hutteners</u>		Project Location: <u>3900 Kilroy Airportway Suite 200</u>	
Lab Client Address: <u>3445 Long Beach Blvd.</u>		Report E-Mail(s): <u>A.Hutteners@scsengineers.com</u> <u>chemandez@scsengineers.com</u>	
Lab Client City, State, Zip: <u>Long Beach, CA 90806</u>			
Phone Number: <u>(562) 426-9544</u>			
Reporting Requirements		Turnaround Time	
<input checked="" type="checkbox"/> Standard Report <input type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/> Excel EDD <input type="checkbox"/> Other EDD: _____ <input type="checkbox"/> CA Geotracker Global ID: _____		<input checked="" type="checkbox"/> 5-7 day Std <input type="checkbox"/> 24-Hr Rush <input type="checkbox"/> 3-day Rush <input type="checkbox"/> Mobile Lab <input type="checkbox"/> 48-Hr Rush <input type="checkbox"/> Other: _____	
Sampler Information			
Sampler(s): <u>C. Norman</u>			
Signature: <u>[Signature]</u>			
Date: <u>06/15/17</u>			

Sample Receipt (Lab Use Only)	
Date Rec'd: <u>6/16/17</u>	Control #: <u>170514.02</u>
H&P Project # <u>SCS000617-11</u>	
Lab Work Order # <u>E706060</u>	
Sample Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> See Notes Below	
Receipt Gauge ID: <u>11167</u>	Temp: <u>RT</u>
Outside Lab:	
Receipt Notes/Tracking #:	
Lab PM Initials: <u>KIM</u>	

Additional Instructions to Laboratory:

☐ Check if Project Analyte List is Attached

* Preferred VOC units (please choose one):

☐ µg/L ☐ µg/m³ ☐ ppbv ☐ ppmv

SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV)	CONTAINER SIZE & TYPE 400mL/1L/6L Summa or Tedlar or Tube	CONTAINER ID (###)	Lab use only: Receipt Vac														
								VOCs Standard Full List	VOCs Short List / Project List	Oxygenates	Naphthalene	TPHv as Gas	TPHv as Diesel (sorber tube)	Aromatic/Aliphatic Fractions	Leak Check Compound	Methane by EPA 8015m	Fixed Gases by ASTM D1945				
SV4-5		06/15/17	0916	SV	400 mL	475	79	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
SV3-5			0925			470	1.17	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
SV2-5			1150			216	1.96	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
SV1-5			1152			458	1.80	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					
SV1-5 Rep			1155			225	1.94	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					

Approved/Relinquished by: <u>[Signature]</u>	Company: <u>SCS Engineers</u>	Date: <u>6/15/17</u>	Time: <u>12:00</u>	Received by: <u>[Signature]</u>	Company: <u>[Signature]</u>	Date: <u>6/15/17</u>	Time: <u>12:00</u>
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

Log Sheet: Soil Vapor Sampling with Summa

H&P Project #: SCS061517 - SP8/Tah

Date: 06/15/17

Site Address: 3445 Long Beach Blvd, Long Beach

Page: 1 of 1

Consultant: SCS Engineers

H&P Rep(s): K. Schindler

Reviewed: DB

Consultant Rep(s): C. Hernandez

G. Norman

Scanned: T. Torres

Equipment Info

Inline Gauge ID#: T29

Pump ID#:

Purge Volume Information

PV Amount:

3 PV

PV Includes: ☒ Tubing

☒ Sand 40%

☒ Dry Bent 50%

Leak Check Compound

☒ 1,1-DFA

☐ 1,1,1,2-TFA

☐ IPA

☐ Other:

A cloth saturated with LCC is placed around tubing connections and probe seal. This is done for all samples unless otherwise noted.

Sample and Summa Information							Probe Specs								Purge & Collection Information						
Point ID	Summa ID #	Sample Kit ID #	Start Time	Initial Vac (" Hg)	End / Sample Time	End Vac (" Hg)	Probe Depth (ft)	Tubing Length (ft)	Tubing OD (in.)	Sand Ht (in.)	Sand Dia (in.)	Dry Bent. Ht (in.)	Dry Bent. Dia (in.)	Shut In Test 60 sec (✓)	Leak Check (✓)	Purge Vol (mL)	Purge Flow Rate (mL/min)	Pump Time (min:sec)	Sample Flow Rate (mL/min)	ProbeVac <div><input checked="" type="checkbox"/> Hg <input type="checkbox"/> H₂O</div>	
1 SV4-5	475	124	0913	-30 ⁺	0916	0	5	7	1/8	12	0.75	6	0.75	✓	✓	189	2200	—	2200	0	
2 SV3-5	470	140	0922	-30 ⁺	0925	0	5	7	1/8	12	0.75	6	0.75	✓	✓	189	2200	—	2200	0	
3 SV2-5	222	115	1129	-30 ⁺	1033	-1	5	7	1/8	12	2.25	6	2.25	✓	✓	2131	2200	10:39	2200	5	
4 SV2-5	216	115	1147	-30 ⁺	1150	-1	5	7	1/8	12	2.25	6	2.25	✓	✓	2131	2200	10:39	2200	5	
5 SV1-5	458	077	1149	-30	1152	0	5	7	1/8	12	2.25	6	2.25	✓	✓	2131	2200	10:39	2200	0	
6 SV1-5 Rep	225	077	1152	-30 ⁺	1155	0	5	7	1/8	12	2.25	6	2.25	✓	✓	2531	2200	—	2200	0	
7																					
8																					
9																					
10																					
11																					
12																					

Site Notes such as weather, visitors, scope deviations, health & safety issues, etc. (When making sample specific notes, reference the line number above):

① forced the valve the wrong way when collecting sample, so used the backup summa to recollect