APPENDIX E

LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT

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Limited Phase II Environmental Site Assessment

Western Portion of APN 241-221-23
Cypress, California 90630

City of Cypress Engineering Division

5275 Orange Avenue, Suite 400 | Cypress, California 90640

January 29, 2019 | Project No. 210784002





Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

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1 INTRODUCTION

Ninyo & Moore conducted a Limited Phase II Environmental Site Assessment (ESA) on behalf of the City of Cypress (City, client) of the property located at the northwest portion of Assessor's Parcel Number (APN) 241-221-23 in Cypress, California (site); Figure 1). The work was conducted in general accordance with our agreement, dated December 11, 2018. The following sections state the purpose, the scope of services, and the environmental findings and recommendations for this project.

2 BACKGROUND

A Phase I ESA was prepared by Ninyo & Moore, dated September 21, 2018 for the subject site (Ninyo & Moore, 2018). The Phase I ESA reported the following vapor encroachment condition (VEC) in connection with the site:

- Based on historical research and the results of the Vapor Encroachment Screening Matrix (VESM) conducted by Ninyo & Moore, a VEC cannot be ruled out beneath the site.
- If structures are planned for future development on the site, Ninyo & Moore recommends an additional evaluation in the form of a Phase II ESA to evaluate if a VEC exists at the site.

Based on the findings, Ninyo & Moore recommended a Phase II ESA to further evaluate the above mentioned VEC.

2.1 Project Location

The site consists of the western portion of APN 241-221-23 in Cypress, California. The site is bound by Lexington Drive to the west, by West Cerritos Avenue to the north, by a former golf course used for horse feed and construction material storage to the east, and by horse stalls associated with the Los Alamitos Race Course to the south. The site is planned for development as a park by the City.

2.2 Regional and Site Geology

Based on a review of the United States Geological Survey (USGS), 7.5-Minute Topographic Quadrangle Map Series, Los Alamitos, California, 2012, the site elevation is approximately 29 feet above mean sea level. The regional topography is generally flat and slopes to the west.

Based on a review of the California Geologic Survey South Gate Quadrangle, California-Los Angeles County 7.5 Minute Series, the site is located within the Pressure Area of the Orange County Groundwater Basin, which primarily contains sedimentary rocks ranging in age from Quaternary to Tertiary. The basin is bordered by hills and mountains to the north and east and the

Pacific Ocean to the southwest (GeoTracker, 2018). Based on a review of the Phase I EDR report, the site is underlain by Bolsa, a silty loam with slow infiltration rates (Ninyo & Moore, 2018a).

Soil encountered in borings during this evaluation consisted primarily of alluvium characterized by micaceous silty-sand. Boring B4 encountered approximately 0.5 feet of base characterized by gravel and asphalt debris, underlain by alluvium similar to that encountered in borings B1 through B3. Detailed descriptions of the subsurface materials encountered beneath the site are presented in the boring logs provided in Appendix A.

2.3 Hydrogeology

The site lies within the Westminster Watershed in the Pressure Area of the Orange County Groundwater Basin. Groundwater was measured at approximately 5 to 7 feet below ground surface (bgs) in 2006 at the southwest adjoining property (former Cypress Golf Course). Groundwater was encountered during this evaluation from approximately 8 to 11 feet bgs. Groundwater was reported to flow towards the west (Environmental Resolutions, Inc. [ERI], 2006). Groundwater levels, gradient, and flow direction can fluctuate due to seasonal variations, groundwater withdrawal or injection, changes in land use, and other factors. Groundwater was encountered during this Limited Phase II ESA at approximately 8 feet bgs in borings B1 and B2, and at 11 feet bgs and 13 feet bgs in borings B3 and B4, respectively.

3 OBJECTIVES

The objective of this Limited Phase II ESA was to evaluate whether significant concentrations of chemicals of concern are present in soil and soil vapor at select locations of the site, as suspected in Ninyo & Moore's Phase I ESA (Ninyo & Moore, 2018). The Limited Phase II ESA is not intended to delineate the extent of chemicals reported.

4 LIMITED PHASE II ESA

The following sections describe activities that were conducted for this Limited Phase II ESA. Field activities conducted at the site included advancing and sampling four borings, completing the borings as temporary dual-nested vapor probes, and collecting vapor samples. The approximate locations of the borings are presented in Figure 2. Boring logs are presented in Appendix A. Photographs of the site taken during this Limited Phase II ESA are presented in Appendix B. Field sampling procedures are described in Appendix C. The Limited Phase II ESA was conducted under the guidance of a Ninyo & Moore California Licensed Professional Geologist.

4.1 Site-Specific Health and Safety Plan (HSP)

Prior to implementing the field evaluation, a site-specific Health and Safety Plan (HSP) was prepared. The HSP provided a site-specific scope of work and reported the suspected constituents of concern that may be present at the site. Prior to the initiation of field activities, a site safety briefing was conducted to evaluate potential physical and chemical hazards and outlined measures to be taken in the event of an emergency. On-site personnel signed the safety form acknowledging their participation in the briefing.

4.2 Underground Service Alert

Prior to commencement of the soil sampling activities, the proposed soil boring locations were marked with white spray paint or a flag was placed in the proposed location. Underground Service Alert of Southern California was notified of the intent to conduct the subsurface evaluation activities at least 72 hours prior to initiation of intrusive field tasks. Inquiry identification numbers were obtained for the boring locations (A183540977 and A183540977-00A).

4.3 Geophysical Survey

On December 27, 2018, Ninyo & Moore retained Subsurface Surveys & Associates, Inc. (SSA), of Carlsbad, California to conduct a geophysical survey at the planned boring locations in an attempt to locate underground pipes conduits, utilities, and subsurface anomalies prior to drilling. Detected underground features were marked with pink spray paint by SSA. Obstructions were not found at the boring locations (Appendix C).

4.4 Field Activities

On December 27, 2018, Strongarm Environmental, Inc. (Strongarm) of Norwalk, California, advanced four soil borings (B1 through B4) to depths of approximately 15 feet bgs, under the oversight of Ninyo & Moore. Borings B1 through B4 were advanced to 5 feet bgs using a hand auger, then advanced deeper using a Geoprobe F350 direct push drill rig. Borings B1, B2, B3, and B4 encountered groundwater at approximately 8, 8.5, 11, and 13 feet bgs, respectively.

4.4.1 Soil Sampling Procedures

Soil samples from each soil boring were collected at approximately 5, 10, and 15 feet bgs. Soil samples collected from the borings were visually classified in accordance with the Unified Soil Classification System. Each soil sample was monitored for total volatile organic compounds (VOCs) using a calibrated Mini-Rae 3000, photo-ionization detector (PID). PID readings are presented on the boring logs (Appendix A). Soil sample collection was performed as described in the Field Procedures (Appendix C).

Soil samples were collected and transported to Enthalpy Analytical Laboratory, Inc. (Enthalpy) of Orange, California for analysis. Soil samples collected from approximately 5 feet bgs were analyzed for Title 22 Metals in accordance with United States Environmental Protection Agency (EPA) Method 6010B/7471A. Soil samples collected from approximately 10 feet bgs were analyzed for total petroleum hydrocarbons (TPHs) and VOCs in accordance with EPA Methods 8015B/5035 and 8260B/5035, respectively. The soil samples collected at 15 feet bgs from each boring were placed on hold at the laboratory, pending analytical results of the shallower samples. Soil samples for TPH as gasoline (TPHg) and VOC analysis were collected in accordance with EPA Method 5035 as described in the Field Procedures (Appendix C). The sample containers were labeled, placed in a cooler containing ice, and transported following standard chain-of-custody protocols to Enthalpy, a State-certified fixed environmental laboratory, within 24 hours after their collection.

4.4.2 Temporary Soil Vapor Probe Installation

After the drilling and sampling of borings B1 through B4, temporary dual-nested soil vapor probes were installed in accordance with the 2015 Department of Toxic Substances Control (DTSC) Advisory Active Soil Gas Investigation (DTSC, 2015). Depth of the deepest vapor probe in each boring was based on depth of groundwater encountered during drilling, and the shallower vapor probe depth was relative to that depth. Vapor probe depths in each boring were as follows: in Boring B1, approximately 3 and 7 feet bgs; in Boring B2, approximately 4.5 and 7.5 feet bgs; in Boring B3, approximately 5 and 9.5 feet bgs; and in Boring B4, approximately 5 and 10 feet bgs. Each vapor probe was centered in two feet of sand pack. The remainder of the borehole was backfilled with hydrated, granular bentonite. The temporary vapor probes were allowed to equilibrate for at least 48 hours before collecting soil vapor samples.

4.4.3 Soil Vapor Sampling Procedures

On January 2, 2019, a soil vapor sample from each of the dual-nested probes in borings B1 through B4 were collected and analyzed for TPHg and VOCs in accordance with EPA Method 8260B by Jones Environmental Laboratories, Inc. (Jones) of Santa Fe Springs, California. The temporary soil vapor probes were sampled in accordance with the DTSC Advisory Active Soil Gas Investigation (DTSC, 2015). Before sampling, the temporary soil vapor probes were purged of three purge volumes at a rate of approximately 200 milliliters per minute. After collection of soil vapor samples, the tubing was removed. Due to the location of the borings in unpaved ground, capping of the boreholes was conducted by placing soil on top of the borings to match surface grade.

4.5 Investigation Derived Wastes (IDW)

Soil cuttings and decontaminated water were stored in a 55-gallon drum pending analytical results. The non-hazardous waste drum was removed and disposed off-site by Belshire Environmental Services, Inc. on January 29, 2019. Copies of the non-hazardous waste manifests are provided in Appendix E.

5 ANALYTICAL RESULTS

Analytical results are presented in Tables 1 through 3, and discussed below. Laboratory reports are provided in Appendix D. Soil analytical results were compared to the EPA Regional Screening Levels (RSLs) for commercial/industrial soil (EPA, 2018), DTSC Human and Ecological Risk Office (HERO) Screening Levels (SLs) assuming commercial/industrial land use (DTSC, 2018), and DTSC Determination of Southern California regional background arsenic concentration in soil (DTSC, 2008). Soil vapor analytical results were compared to the DTSC HERO modified soil gas screening levels (SSLs) (DTSC, 2018) and modified EPA RSLs for commercial/industrial commercial/industrial indoor air (EPA, 2018).

5.1 Title 22 Metals in Soil Samples

Detectable concentrations of eleven Title 22 Metals were reported in one or more of the 5-foot bgs soil samples analyzed from each of the four borings but at concentrations below their respective EPA RSLs, except for arsenic in three of the samples (Table 1). Arsenic concentrations in three of the four samples (B1-5', B2-5' and B4-5') analyzed exceeded the EPA RSL and DTSC SL; however, were below the DTSC Determination of a Southern California Regional Background Arsenic Concentration in soil of 12 milligrams per kilogram (mg/kg) (DTSC, 2008).

5.2 TPH in Soil Samples

Concentrations of TPHg and TPH as diesel (TPHd) were not detected above the laboratory reporting limits (LRLs) in the 10-foot bgs samples analyzed from each of the four borings. A concentration of TPH as oil (TPHo) was reported in sample B4-10'; however, the concentration was below the EPA RSLs for TPHo (Table 2). TPHo was not detected above the reporting detection limit (RDL) in other samples analyzed.

5.3 VOCs in Soil Samples

Concentrations of VOCs were not detected above the RDLs in the 10-foot bgs soil samples analyzed from each of the four borings (Table 2).

5.4 VOCs in Soil Vapor Samples

Concentrations of 1,1-dichloroethene, tetrachloroethene, toluene, 1,2,4-trimethylbenzene, and/or o-xylene were detected in seven of the eight soil vapor samples analyzed and the duplicate sample; concentrations were below their respective DTSC HERO modified SSLs and modified EPA RSLs for commercial/industrial use.

Ethylbenzene concentrations were not detected above the reporting limit (RL) (<8 micrograms per cubic meter [µg/m^3]) in seven of the eight soil vapor samples analyzed and the duplicate sample. In sample SV1-7, an ethylbenzene concentration of 9 µg/m^3 was detected; however, the concentrations was below the ethylbenzne DTSC HERO modified SSL and modified EPA RSL for commercial/industrial use.

Other VOCs were not detected in concentrations above their respective RLs (Table 3).

5.5 TPHg in Soil Vapor Samples

TPHg was detected in two of eight soil vapor samples (SV1-3 and SV1-7) at concentrations of 4,670 µg/m^3 and 8,510 µg/m^3, respectively. Based on the laboratory's review of the chromatograms, *"…the hydrocarbon components are on the light end - C8 or less, and the majority are less than C6 (not aromatic). The aromatic low fraction (C6-C8) would be equivalent to the sum of the detected benzene, toluene, ethylbenzene and xylene (BTEX) compounds."* The sum of the detected BTEX concentrations in SV1-3 and SV1-7, 9 µg/m^3 and 31 µg/m^3, respectively are significantly below the TPH aromatic low modified EPA RSL concentration of 4,333.33 µg/m^3 (Table 3). There are no listed DTSC screening levels for TPH concentrations with aliphatic hydrocarbon components (less than C6). Concentrations of TPHg as low carbon range aliphatic compounds do not exceed modified industrial EPA RSLs (86,667 µg/m^3). TPHg was not detected above the RL in the other samples analyzed.

6 FINDINGS

Based on the laboratory analytical results of this Limited Phase II ESA, the following findings are provided:

- Detectable concentrations of eleven Title 22 Metals were reported in the 5-foot bgs soil samples analyzed from each of the four borings at concentrations below their EPA RSLs, except for arsenic in three of the borings (B1, B2 and B4). However, the arsenic concentrations were below the DTSC Determination of a Southern California Regional Background Arsenic Concentration in soil.

- Concentrations of TPHg, TPHd, and TPHo were not detected above their RDLs in the 10-foot bgs soil samples analyzed from each boring, except for a TPHo concentration in boring B4 which was below the EPA RSL.

- Concentrations of VOCs were not detected above the RDLs in the four 10-foot bgs soil samples analyzed.

- VOC concentrations detected in soil vapor in each of the four borings did not exceed their respective DTSC HERO modified commercial SSLs and modified EPA RSLs for commercial/industrial use.

- TPHg concentrations were detected in the two vapor samples (SV1-3 and SV1-7) from boring B1; however, the hydrocarbon components were characterized as carbon range C-8 or less, with the majority less than C-6 (not aromatic). The aromatic low fraction (C6-C8), equivalent to the sum of the detected BTEX compounds, in each sample was below the TPH aromatic low modified EPA RSL. There are no listed DTSC SSLs listed for low range aliphatic TPHg concentrations. Concentrations of TPHg as low carbon range aliphatic compounds do not exceed modified industrial EPA RSLs (86,667 µg/m^3).

7 CONCLUSIONS AND RECOMMENDATIONS

Based on the above findings, the following conclusions and recommendations are provided:

- Based on the detected Title 22 Metals, TPH, and/or VOC concentrations being below regulatory screening levels or not detected above their respective RDLs in the soil samples analyzed, significant concentrations are not present in soil at these locations and depths. Additional soil sampling is not recommended at this time.

- Based on the detected VOC and/or TPHg concentrations being below their respective modified regulatory screening levels for commercial/industrial land uses or not detected above their respective RLs in the soil vapor samples analyzed, significant concentrations are not present in the subsurface at these locations and depths. Additional soil vapor sampling is not recommended at this time.

- If land use changes from planned park to use for occupancy by sensitive receptors (residential, day care, etc.), additional soil vapor sampling should be conducted in the vicinity of boring B1, to evaluate if significant health risk may be present from potential exposure to VOCs in soil vapor.

8 LIMITATIONS

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard-of-care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Variations in site conditions may exist and conditions not observed or described in this report may be encountered during subsequent activities. Please also note that this study did not include an evaluation of geotechnical conditions or potential geologic hazards.

Ninyo & Moore's opinions and recommendations regarding environmental conditions, as presented in this report, are based on limited subsurface assessment and chemical analysis. Further assessment of potential adverse environmental impacts from past on-site and/or nearby

use of hazardous materials may be accomplished by a more comprehensive assessment. The samples collected and used for testing, and the observations made, are believed to be representative of the area(s) evaluated; however, conditions can vary significantly between sampling locations. Variations in soil and/or groundwater conditions will exist beyond the points explored in this evaluation.

The environmental interpretations and opinions contained in this report are based on the results of laboratory tests and analyses intended to detect the presence and concentration of specific chemical or physical constituents in samples collected from the site. The testing and analyses have been conducted by an independent laboratory which is certified by the State of California to conduct such tests. Ninyo & Moore has no involvement in, or control over, such testing and analysis. Ninyo & Moore, therefore, disclaims responsibility for any inaccuracy in such laboratory results.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. It should be understood that the conditions of a site could change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document.

This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

9 REFERENCES

California Department of Toxic Substances Control, 2008, Determination of a Southern California Regional Background Arsenic Concentration in Soil, G. Chernoff, W. Bosan and D. Oudiz, Society of Toxicology, dated March.

California Department of Toxic Substances Control, 2011, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air, dated October.

California Department of Toxic Substances Control, 2015, Advisory Active Soil Gas Investigations, dated July.

California Department of Toxic Substances Control Human and Ecological Risk Office, 2018, Human Health Risk Assessment Note Number: 3, DTSC-modified Screening Levels (DTSC-SLs), updated June.

DTSC, see California Department of Toxic Substances Control.

EPA, see United States Environmental Protection Agency.

Environmental Resolutions, Inc. (ERI), 2006, Third Quarter 2006 Groundwater Monitoring and Status Report, Former Cypress golf Club, 4921 Katella Avenue, Cypress, California, OCHCHA Case No. 04UT011, dated October 20.

Ninyo & Moore 2018, Phase I Environmental Site Assessment, Western Portion of APN 241-221-23 Cypress, California, dated September 21.

State of California Water Resources Control Board (SCWRCB), 2018; GeoTracker website: http://geotracker.waterboards.ca.gov/

United States Environmental Protection Agency, 2015, OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Ai, dated June.

United States Environmental Protection Agency, 2018, Regional Screening Levels, Pacific Southwest, Region 9, dated November.

United States Geological Survey, 2012, 7.5' Quadrangle Map Series: Scale 1:24,000, Los Alamitos, California.

USGS, see United States Geological Survey.

Table 1 – Soil Sample Analytical Results – Title 22 Metals

Sample ID	Sample Depth (feet bgs)	Date Sample Collected	EPA Method 6010B/7471A (mg/kg)															
			Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
B1-5'	5'	12/27/2018	ND<3	**3.90**	**77.1**	ND<0.5	**0.60**	**16.2**	**9.66**	**11.4**	**5.30**	ND<0.14	**1.22**	**11.9**	ND<3	ND<0.5	ND<3	**37.7**	**52.6**
B1-10'	0'	12/27/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B1-15'	5'	12/27/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B2-5'	5'	12/27/2018	ND<3	**3.62**	**103**	ND<0.5	**0.84**	**27.5**	**12.0**	**16.4**	**10.6**	ND<0.14	**2.24**	**15.9**	ND<3	ND<0.5	ND<3	**44.9**	**68.1**
B2-10'	0'	12/27/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B2-15'	5'	12/27/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B3-5'	5'	12/27/2018	ND<3	**2.78**	**68.9**	ND<0.5	ND<0.5	**17.5**	**6.76**	**14.7**	**17.8**	ND<0.14	ND<1	**8.91**	ND<3	ND<0.5	ND<3	**25.8**	**64.5**
B3-10'	0'	12/27/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B3-15'	5'	12/27/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B4-5'	5'	12/27/2018	ND<3	**6.51**	**106**	ND<0.5	**0.78**	**22.1**	**11.8**	**17.4**	**10.7**	ND<0.14	ND<1	**15.8**	ND<3	ND<0.5	ND<3	**46.2**	**72.8**
B4-10'	0'	12/27/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
B4-15'	5'	12/27/2018	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Regulatory Screening Levels (mg/kg)																			
EPA RSLs (Industrial Soil)			470	3	220,000	2,300	980	1,800,000*[(1)]	350	47,000	800	46	5,800	22,000	5,800	5,800	12	5,800	350,000
DTSC HERO HHRA (Industrial Soil)			NL	0.36	NL	6,900	9,300	170,000*	NL	NL	320*	4.4*	NL	64,000	NL	1500*	NL	1000*	NL
DTSC Acceptable Clean Up Level			NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Hazardous Waste Criteria																			
TCLP (mg/L)			NL	5.0	100	NL	1.0	5	NL	NL	5.0	0.2	NL	NL	1.0	5	NL	NL	NL
STLC (mg/L)			15	5.0	100	0.75	1.0	5	80	25	5.0	0.2	350	20	1.0	5	7.0	24	250
TTLC (mg/kg)			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

Notes:

-- not analyzed

[1] trivalent chromium value

* non-cancer endpoint

** excluding barium sulfate

Bold concentration detected above laboratory reporting limit

bgs - below ground surface

DTSC Acceptable Clean Up Levels- DTSC's Determination of a Southern California Regional Background Arsenic concentrations in soil (March, 2008)

DTSC HERO HHRA in RSL for Soil (June 2018)

EPA - United States Environmental Protection Agency

ID - Identification

mg/kg - milligrams per kilogram

mg/L - milligrams per liter

NA - not applicable

ND< - not detected above the laboratory reporting limit

RSLs - United States Environmental Protection Agency Regional Screening Levels, November 2018

STLC - Soluble threshold limit concentration - maximum soluble limit concentration for California Hazardous Waste (California Code of Regulations [CCR] Title 22, Section 66261.24)

TCLP - Toxicity characteristic leaching procedure - maximum leachable concentration for Federal RCRA hazardous waste

TTLC - Total threshold limit concentration - maximum allowable concentration for California Hazardous Waste (California Code of Regulations [CCR] Title 22, Section 66261.24)

Table 2 – Soil Sample Analytical Results – TPH and VOCs

Sample ID	Sample Depth (feet bgs)	Date Sample Collected	EPA Method 8015B (mg/kg)			VOCs by EPA Method 8260B (µg/kg)
			TPH (C6 to C12)	TPH (C13 to C22)	TPH (C23 to C40)	
B1-5'	5'	12/27/2018	--	--	--	--
B1-10'	10'	12/27/2018	ND<2.61	ND<10	ND<10	ND
B1-15'	15'	12/27/2018	--	--	--	--
B2-5'	5'	12/27/2018	--	--	--	--
B2-10'	10'	12/27/2018	ND<2.25	ND<10	ND<10	ND
B2-15'	15'	12/27/2018	--	--	--	--
B3-5'	5'	12/27/2018	--	--	--	--
B3-10'	10'	12/27/2018	ND<2.64	ND<10	ND<10	ND
B3-15'	15'	12/27/2018	--	--	--	--
B4-5'	5'	12/27/2018	--	--	--	--
B4-10'	10'	12/27/2018	ND<2.22	ND<10	**32**	ND
B4-15'	15'	12/27/2018	--	--	--	--
Regulatory Screening Levels (mg/kg)						
EPA RSLs (Industrial Soil)			420*	600*	33,000*	Various

Notes:

-- not analyzed

* aromatic fraction

Bold concentration detected above laboratory reporting limit

µg/kg - micrograms per kilogram

bgs - below ground surface

EPA - United States Environmental Protection Agency

ID - Identification

mg/kg - milligrams per kilogram

ND - not detected above the laboratory reporting limit

RSLs - United States Environmental Protection Agency Regional Screening Levels, November 2018

TPH - Total petroleum hydrocarbons

VOCs - volatile organic compounds

Table 3 – Soil Vapor Analytical Results – VOCs and TPHg (µg/m^3)

Sample ID[1]	Depth (feet bgs)	Sample Date	1,1-Dichloroethene	Ethylbenzene	Tetrachloroethene (PCE)	Toluene	1,2,4-Trimethylbenzene	o-Xylene	TPHg (aliphatic fraction C5-C8)	TPHg (aromatic fraction C6-C8)[3]
SV1-3	3	1/2/19	ND<8	ND<8	11	ND<8	8	9	4,670[2]	9
SV1-7	7	1/2/19	86	9	27	12	9	10	8,510[2]	31
SV2-4.5	5	1/2/19	ND<8	ND<8	12	ND<8	ND<8	ND<8	ND<2,000	NA
SV2-7.5	8	1/2/19	ND<8	ND<8	14	12	ND<8	ND<8	ND<2,000	12
SV3-5	5	1/2/19	ND<8	ND<8	ND<8	ND<8	ND<8	ND<8	ND<2,000	NA
SV3-9.5	10	1/2/19	ND<8	ND<8	34	ND<8	ND<8	ND<8	ND<2,000	NA
SV4-5	5	1/2/19	ND<8	ND<8	10	ND<8	ND<8	ND<8	ND<2,000	NA
SV4-10	10	1/2/19	ND<8	ND<8	10	10	ND<8	ND<8	ND<2,000	10
SV4-10DUP	10	1/2/19	ND<8	ND<8	9	8	ND<8	ND<8	ND<2,000	8
Federal Regulatory Screening Criteria (µg/m^3)										
DTSC HERO - Commercial/ Industrial Ai			**310**	**NL**	**2**	**1,300**	**NL**	**NL**	**NL**	**NL**
DTSC Modified SSLs (Commercial/Industrial)*			**620,000**	**NL**	**4,000**	**2,600,000**	**NL**	**NL**	**NL**	**NL**
EPA RSL - Industrial Air			**880[1]**	**4.9**	**47**	**22,000[1]**	**260[1]**	**440**	**2,600**	**130[1][4]**
Modified RSLs (Future Commercial/Industrial)**			**29,333.33[1]**	**163.33**	**1,566.67**	**733,333.33[1]**	**8,666.67[1]**	**14,666.67[1]**	**86,667**	**4,333.33[1][4]**

Notes:

Bold type indicates analytical results greater than a regulatory screening criteria

* attenuation factor of 0.0005 for 5-foot probes used to calculate DTSC screening values (DTSC, 2011, Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air)

** attenuation factor of 0.03 for 5-foot probes used to calculate EPA screening values (EPA OSWER, 2015, Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air)

[1] non-cancer end-point

[2] Based on the laboratory's review of the chromatograms, the hydrocarbon components are on the light end - C8 or less, and the majority are less than C6 (not aromatic). The aromatic fraction (C6-C8) would be equivalent to the sum of the detected BTEX compounds.

[3] concentrations are a sum of detected benzene, toluene, and xylene, per footnote (2)

[4] Total Petroleum Hydrocarbons (aromatic low)

µg/m^3 - micrograms per cubic meter

bgs - below ground surface

DTSC Modified SSLs – Modified Soil Gas Screening Levels, California Department of Toxic Substances Control Human and Ecological Risk Office Human Health Risk Assessment Note 3, June, 2018, cancer endpoint value. Concentration is calculated from Indoor Air screening value using attenuation factor (0.0005 for future commercial/ industrial) provided in DTSC Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (October 2011).

BTEX - benzene, toluene, ethylbenzene, and xylenes

DUP - duplicate sample

EPA - United States Environmental Protection Agency

EPA RSL - Environmental Protection Agency, Regional Screening Levels for indoor air, updated November 2018

ID - identification

Modified RSLs – Modified Regional Screening Level, EPA Region 9, November 2018, cancer value. Concentration is calculated from Air screening value using EPA OSWER attenuation factor (0.03) provided in Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway (June, 2015).

NA - not analyzed

ND - not detected above the practical quantitation limit - see laboratory reports for additional details

NL - not listed

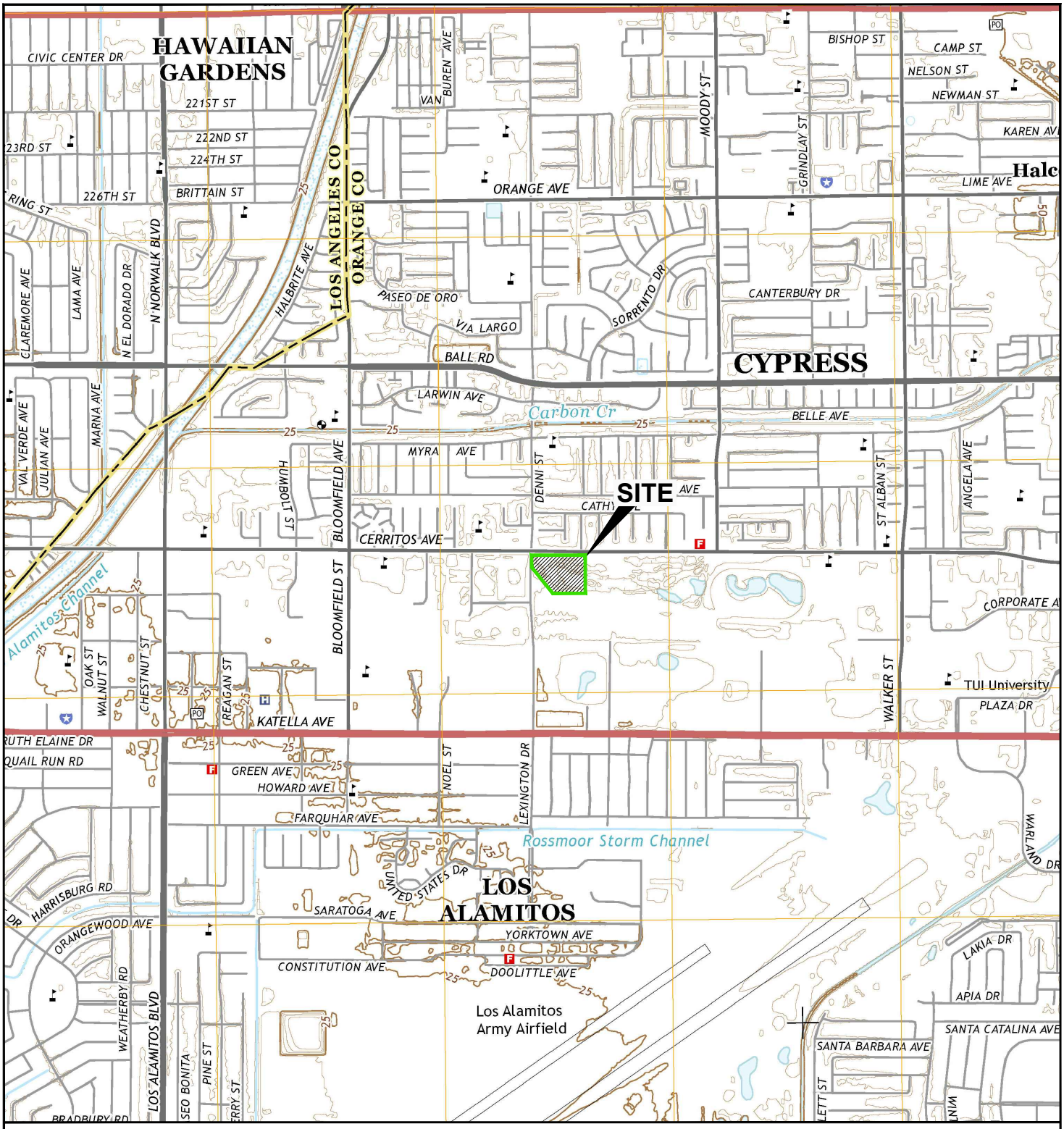
OSWER - Office of Solid Waste and Emergency Response

TPHg - total petroleum hydrocarbons as gasoline

SSLs - soil gas screening levels

VOCs - volatile organic compounds

FIGURES



NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. I REFERENCE: USGS, 2015.

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FIGURE 1

SITE LOCATION

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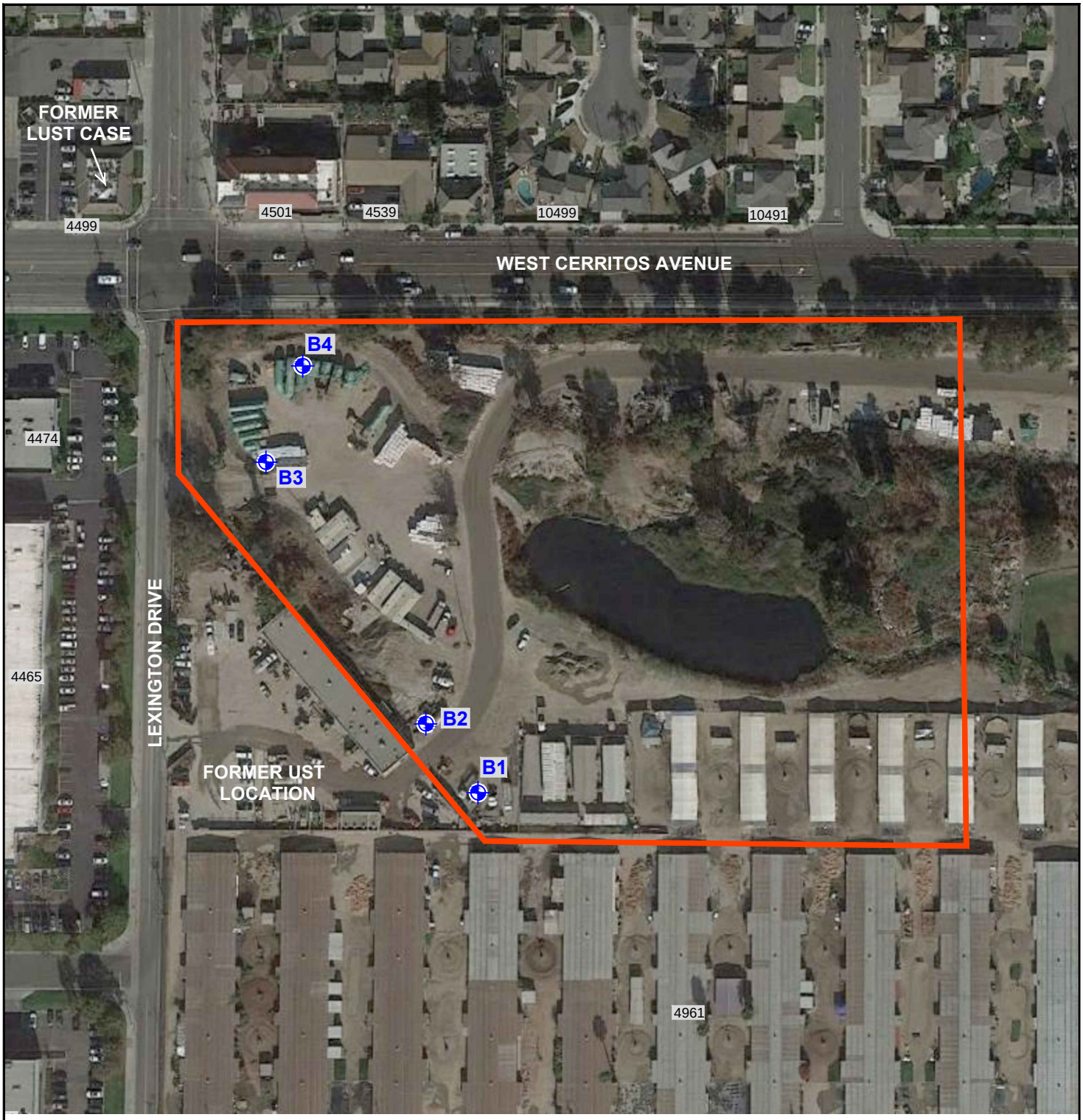

LEGEND

	SITE BOUNDARY	UST	UNDERGROUND STORAGE TANK
B4	BORING	10491	STREET ADDRESS

NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. I REFERENCE: GOOGLE EARTH, 2018.

N

FEET

0 150 300

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SITE PLAN AND BORING LOCATIONS

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APPENDIX A

Boring Logs

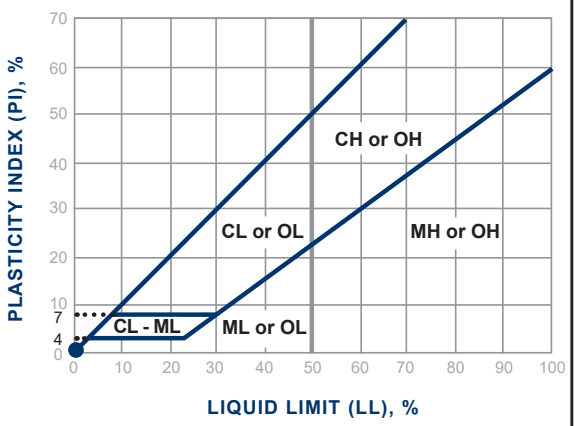
Soil Classification Chart Per ASTM D 2488

Primary Divisions			Secondary Divisions	
			Group Symbol	Group Name
COARSE-GRAINED SOILS more than 50% retained on No. 200 sieve	**GRAVEL** more than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVEL less than 5% fines	GW	well-graded GRAVEL
			GP	poorly graded GRAVEL
		GRAVEL with DUAL CLASSIFICATIONS 5% to 12% fines	GW-GM	well-graded GRAVEL with silt
			GP-GM	poorly graded GRAVEL with silt
			GW-GC	well-graded GRAVEL with clay
			GP-GC	poorly graded GRAVEL with
		GRAVEL with FINES more than 12% fines	GM	silty GRAVEL
			GC	clayey GRAVEL
			GC-GM	silty, clayey GRAVEL
	SAND 50% or more of coarse fraction passes No. 4 sieve	CLEAN SAND less than 5% fines	SW	well-graded SAND
			SP	poorly graded SAND
		SAND with DUAL CLASSIFICATIONS 5% to 12% fines	SW-SM	well-graded SAND with silt
			SP-SM	poorly graded SAND with silt
			SW-SC	well-graded SAND with clay
			SP-SC	poorly graded SAND with clay
		SAND with FINES more than 12% fines	SM	silty SAND
			SC	clayey SAND
			SC-SM	silty, clayey SAND
FINE-GRAINED SOILS 50% or more passes No. 200 sieve	**SILT and CLAY** liquid limit less than 50%	INORGANIC	CL	lean CLAY
			ML	SILT
			CL-ML	silty CLAY
		ORGANIC	OL (PI > 4)	organic CLAY
			OL (PI < 4)	organic SILT
	SILT and CLAY liquid limit 50% or more	INORGANIC	CH	fat CLAY
			MH	elastic SILT
		ORGANIC	OH (plots on or above "A"-line)	organic CLAY
			OH (plots below "A"-line)	organic SILT
	Highly Organic Soils		PT	Peat

Grain Size

Description		Sieve Size	Grain Size	Approximate Size
Boulders		> 12"	> 12"	Larger than basketball-sized
Cobbles		3 - 12"	3 - 12"	Fist-sized to basketball-sized
Gravel	Coarse	3/4 - 3"	3/4 - 3"	Thumb-sized to fist-sized
	Fine	#4 - 3/4"	0.19 - 0.75"	Pea-sized to thumb-sized
Sand	Coarse	#10 - #4	0.079 - 0.19"	Rock-salt-sized to pea-sized
	Medium	#40 - #10	0.017 - 0.079"	Sugar-sized to rock-salt-sized
	Fine	#200 - #40	0.0029 - 0.017"	Flour-sized to sugar-sized
Fines		Passing #200	< 0.0029"	Flour-sized and smaller

Plasticity Chart



Apparent Density - Coarse-Grained Soil

Apparent Density	Spooling Cable or Cathead		Automatic Trip Hammer	
	SPT (blows/foot)	Modified Split Barrel (blows/foot)	SPT (blows/foot)	Modified Split Barrel (blows/foot)
Very Loose	≤ 4	≤ 8	≤ 3	≤ 5
Loose	5 - 10	9 - 21	4 - 7	6 - 14
Medium Dense	11 - 30	22 - 63	8 - 20	15 - 42
Dense	31 - 50	64 - 105	21 - 33	43 - 70
Very Dense	> 50	> 105	> 33	> 70

Consistency - Fine-Grained Soil

Consis-tency	Spooling Cable or Cathead		Automatic Trip Hammer	
	SPT (blows/foot)	Modified Split Barrel (blows/foot)	SPT (blows/foot)	Modified Split Barrel (blows/foot)
Very Soft	< 2	< 3	< 1	< 2
Soft	2 - 4	3 - 5	1 - 3	2 - 3
Firm	5 - 8	6 - 10	4 - 5	4 - 6
Stiff	9 - 15	11 - 20	6 - 10	7 - 13
Very Stiff	16 - 30	21 - 39	11 - 20	14 - 26
Hard	> 30	> 39	> 20	> 26

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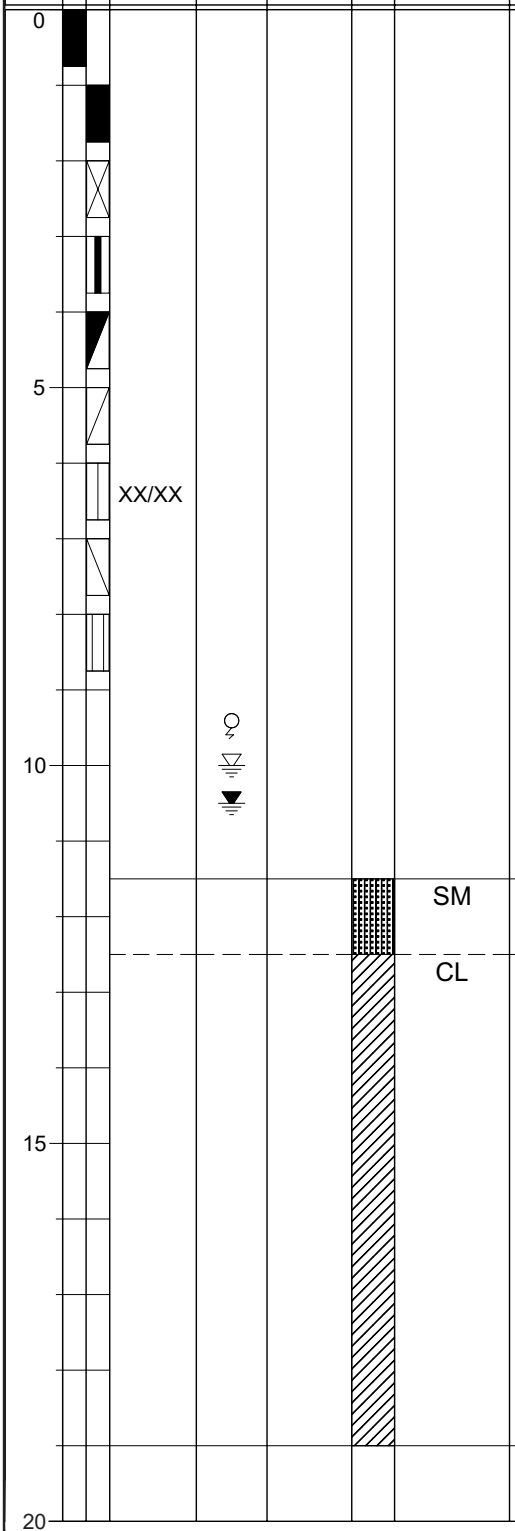
USCS METHOD OF SOIL CLASSIFICATION

BORING LOG EXPLANATION SHEET



Bulk sample.

Modified split-barrel drive sampler.

No recovery with modified split-barrel drive sampler.

Sample retained by others.

Standard Penetration Test (SPT).

No recovery with a SPT.

Shelby tube sample. Distance pushed in inches/length of sample recovered in inches.

No recovery with Shelby tube sampler.

Continuous Push Sample.

Seepage.

Groundwater encountered during drilling.

Groundwater measured after drilling.

MAJOR MATERIAL TYPE (SOIL):

Solid line denotes unit change.

Dashed line denotes material change.

Attitudes: Strike/Dip
b: Bedding
c: Contact
j: Joint
f: Fracture
F: Fault
cs: Clay Seam
s: Shear
bss: Basal Slide Surface
sf: Shear Fracture
sz: Shear Zone
sbs: Shear Bedding Surface

The total depth line is a solid line that is drawn at the bottom of the boring.

DATE DRILLED 12/27/18 BORING NO. B1

GROUND ELEVATION 30' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING Direct Push

DRIVE WEIGHT -- DROP --

SAMPLED BY KMH LOGGED BY KMH REVIEWED BY JJR

DEPTH (feet)	SAMPLES (Bulk / Driven)	TIME	SAMPLE ID	ORGANIC VAPORS (ppm)	MOISTURE	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0							SM	ALLUVIUM: Medium brown, slightly moist, dense, silty SAND; micaceous.
		0900	B1-5'	86.2				Wet. Slightly moist.
					▼			Water measured at 8 feet after waiting one hour.
10		0910	B1-10'	0.0				Very moist. Slightly moist.
								Wet; minor clay.
		0920	B1-15'	0.0				Very moist. Total Depth = 15 feet. Groundwater was encountered at approximately 8 feet one hour after drilling. Vapor probes installed at 3 and 7 feet bgs. Backfilled with hydrated, #8 granular bentonite from total depth to 8 feet, from 6 to 4 feet, and from 2 feet to surface, and with #3 Monterey sand from 2 to 4 feet and from 6 to 8 feet bgs.
20								Notes: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
30								
40								

FIGURE A- 1

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DATE DRILLED 12/27/18 BORING NO. B2

GROUND ELEVATION 29' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING Direct Push

DRIVE WEIGHT -- DROP --

SAMPLED BY KMH LOGGED BY KMH REVIEWED BY JJR

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	TIME	SAMPLE ID	ORGANIC VAPORS (ppm)	MOISTURE	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0								SM	ALLUVIUM: Medium brown, dry, dense, micaceous silty SAND.
		■	1000	B2-5'	2.3				
									Very moist; minor clay.
						▼			Water up to 8.5 feet after waiting one hour.
10		■	1010	B2-10'	0.0				Wet.
									No clay; very moist.
		■	1030	B2-15'	0.0				
									Total Depth = 15 feet. Groundwater was encountered at approximately 8.5 feet during drilling. Vapor probes installed at approximately 4.5 and 7.5 feet. Backfilled with hydrated, #8 granular bentonite from total depth to 8.5 feet, from 6.5 to 5.5 feet, and from 3.5 feet to surface and with #3 Monterey sand from 3.5 to 5.5 feet and from 6.5 to 8.5 feet.
20									Notes: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
									The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
30									
40									

DATE DRILLED 12/27/18 BORING NO. B3

GROUND ELEVATION 30' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING Direct Push

DRIVE WEIGHT -- DROP --

SAMPLED BY KMH LOGGED BY KMH REVIEWED BY JJR

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	TIME	SAMPLE ID	ORGANIC VAPORS (ppm)	MOISTURE	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0								SM	ALLUVIUM: Medium brown, dry, loose, micaceous, silty SAND with some gravel. Slightly moist; dense; no gravel.
		■	1200	B3-5'	2.8				Minor reddish-brown, rust-colored staining.
									Moist.
10		■	1210	B3-10'	0.0	▼			Hole collapsed at 10.5 feet after 15-foot sample collected-re-drilled. Some clay. Hole collapsed at 11 feet after re-drill. Water filled to 11 feet after one hour.
									Very moist.
		■	1220	B3-15'	0.0				Wet.
									Total Depth = 15 feet. Groundwater was measured at approximately 11 feet one hour after drilling. Backfilled with hydrated, #8 granular bentonite from 8.5 to 6 feet bgs and from 4 feet to surface, and with #3 Monterey sand from 4 to 6 feet from 8.5 to 10.5 feet. Vapor probes installed at 5 feet and 9.5 feet.
20									Notes: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report.
									The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
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FIGURE A- 3

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DATE DRILLED 12/27/18 BORING NO. B4

GROUND ELEVATION 28' ± (MSL) SHEET 1 OF 1

METHOD OF DRILLING Direct Push

DRIVE WEIGHT -- DROP --

SAMPLED BY KMH LOGGED BY KMH REVIEWED BY JJR

DEPTH (feet)	SAMPLES Bulk	SAMPLES Driven	TIME	SAMPLE ID	ORGANIC VAPORS (ppm)	MOISTURE	SYMBOL	CLASSIFICATION U.S.C.S.	DESCRIPTION/INTERPRETATION
0								SM	BASE: Light gray, dry, loose, well graded GRAVEL with some asphalt debris. FILL: Dark brown, slightly moist, dense, micaceous silty SAND.
		■	1250	B4-5'	0.0				Medium brown.
									Concrete and minor asphalt fragments.
10		■	1300	B4-10	0.0			SM	ALLUVIUM: Medium brown, moist, dense, micaceous silty SAND.
						▽			Hole collapsed to 11 feet after drilling.
									Wet.
		■	1310	B4-15'	0.0				Total Depth = 15 feet. Groundwater was encountered at approximately 13 feet bgs during drilling. Vapor probes installed at 5 and 10 feet bgs. Backfilled with hydrated #8 granular bentonite from 9 to 6 feet and from 4 feet bgs to surface, and with #3 Monterey sand from 4 to 6 feet and from 9 to 11 feet.
20									Notes: Groundwater may rise to a level higher than that measured in borehole due to seasonal variations in precipitation and several other factors as discussed in the report. The ground elevation shown above is an estimation only. It is based on our interpretations of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents.
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FIGURE A- 4

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APPENDIX B

Photographs

Photograph 1: **Looking southwest at the site towards Boring B1, before drilling and sampling activities.**

Photograph 2: **Looking west at the site towards Boring B2, before drilling and sampling activities.**

FIGURE B-1

PHOTOGRAPHS

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Photograph 3: **Looking northwest at the site during direct push drilling of Boring B3.**

Photograph 4: **Looking north at the site towards West Cerritos Avenue from Boring B4, before drilling and sampling activities.**

FIGURE B-2

PHOTOGRAPHS

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Photograph 5: **Vapor probes installed and at Boring B4 at approximately 5 and 10 feet below ground surface.**

Photograph 6: **Pressure monitoring of soil vapor probe using magnehelic prior to sampling on January 2, 2019.**

FIGURE B-3

PHOTOGRAPHS

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APPENDIX C

Geophysical Report and Field Procedures

SubSurface Surveys
& Associates, Inc.
An Applied Geophysical Company

2075 Corte Del Nogal, Suite W
Carlsbad, CA 92011
Office: (760) 476-0492
Fax: (760) 476-0493

December 27, 2018

Ninyo & Moore
475 Goddard, Suite 200
Irvine, CA 92618

Project No. 18-552

Attn: **Patrick Cullip**

Re: Geophysical Investigation, Hay Storage Lot, Northwest Corner of West Cerritos Avenue and Lexington Drive, Cypress, California

This report is to present the results of our geophysical survey carried out over a Hay Storage Lot located at the Northwest Corner of West Cerritos Avenue and Lexington Drive in Cerritos, California (Figure 1). The survey was performed on December 27, 2018, and its purpose was to locate and identify, insofar as possible, pipes, conduits, utilities, and other buried features that may exist within the vicinity of four (4) proposed boreholes scheduled for drilling.

A combination of electromagnetic induction (EM), magnetometry, and ground penetrating radar (GPR) were brought to the field with anticipation of use. Utility locators with line tracing capabilities were also used where applicable.

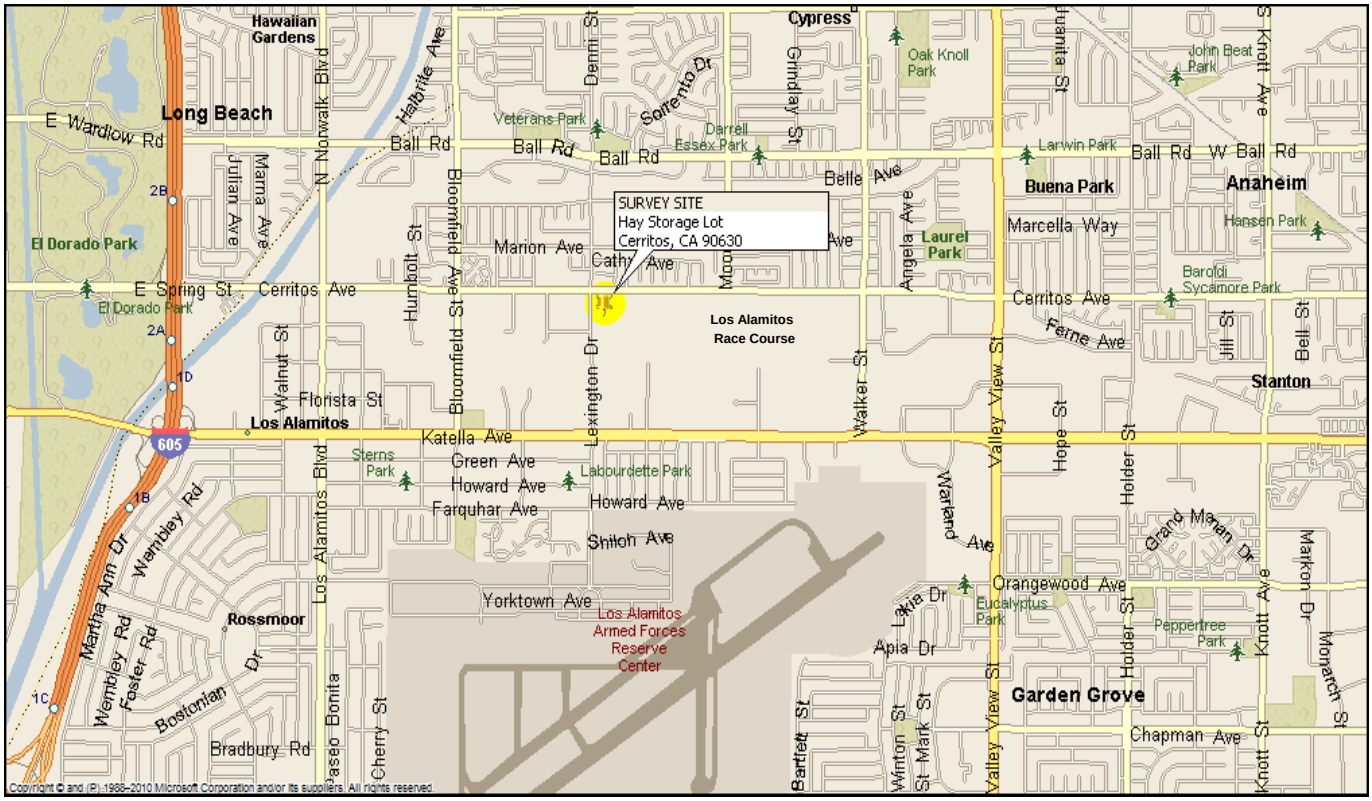

FIGURE 1 – Site Location Map

Survey Design – The areas to be surveyed were identified in the field by the client. It included four (4) proposed boreholes within an area of a hay storage lot associated with the Los Alamitos Race Course.

In site situations and survey objectives such as this, the best use of time is achieved by systematically free-traversing with the instruments while monitoring them continuously to determine which responses are significant and due to true subsurface targets, and which are due to other non-target or above-ground features and must be ignored. Where applicable, the EM devices, magnetic gradiometer, and GPR were traversed systematically over the survey areas in multiple, organized directions. Other traverses were taken for detailing and confirmation where anomalous conditions were found.

In addition, the line tracers were used to impress signals onto pipes, generally through accessible risers and tracer wires when present, to delineate the lines' locations and orientations. The instruments were also used in passive mode, configured to detect 60 Hz electrical signals and other common radio-frequency signals.

Hard copy of the EM data was not acquired, that is, discrete readings on the nodes of a grid were not recorded that could be put into a contoured map format. Rather, the instruments' meters were read continuously, and in real-time, during each traverse. This free-traversing method allowed for immediate detection of anomalous objects and facilitated the opportunity to investigate them further, without the need to first download and process data in the office. The lack of hard copy for EM data sets does not degrade the quality of the survey in any way. Hard copy merely provides a basis for report documentation of these geophysical fields, if such documentation is needed.

A Fischer M-Scope, were used for the EM sampling and a Sensors & Software Noggin Ground Penetrating Radar unit with a 500 MHz antenna produced the radar images. A Metrotech 9890 and RIDGID SR-60 SeekTech utility locator rounded out the tools applied.

Brief Description of the Geophysical Methods Applied – The M-Scope device energizes the ground by producing an alternating primary magnetic field with AC current in a transmitting coil. If conducting materials are within the area of influence of the primary field, AC eddy currents are induced to flow in the conductors. A receiving coil senses the secondary magnetic field produced by these eddy currents, and outputs the response as anomalous conditions. The strength of the secondary field is a function of the conductivity of the object, say a pipe, tank or cluster of drums, its size, and its depth and position relative to the instrument's two coils. Conductive objects, to a depth of approximately 7 feet below ground surface (bgs) for the M-Scope are sensed. The device is also somewhat focused; that is, it is more sensitive to conductors below the instrument than they are to conductors off to the side.

The line locator is used to passively detect energized high voltage electric lines and electrical conduit (50-60 Hz), VLF signals (14-22 kHz), as well as to actively trace other utilities. Where risers are present, the utility locator transmitter can be connected directly to the object, and a signal (9.8-82 kHz) is sent traveling along the conductor, pipe, conduit, etc. In the absence of a riser, the transmitter can be used to impress an input signal on the utility by induction. In either case, the receiver unit is tuned to the input signal, and is used to actively trace the signal along the pipe's surface projection.

The GPR instrument beams energy into the ground from its transducer/antenna, in the form of electromagnetic waves. A portion of this energy is reflected back to the antenna at a boundary in the subsurface across which there is an electrical contrast. The instrument produces a continuous record of the reflected energy as the antenna is traversed across the ground surface. The greater the electrical contrast, the higher the amplitude of the returned energy. The radar wave travels at a velocity unique to the material properties of the ground being investigated, and when these velocities are known, the two-

way travel times can be converted to depth. The depth of penetration and image resolution produced are a function of ground electrical conductivity and dielectric constant.

Interpretation and Conclusions - The interpretation took place in real time as the survey progressed, and accordingly, the findings of our investigation were verbally relayed to the client, and further documented with site photographs (Figures 2-5).

The findings were marked out with spray paint using red for electric and high visibility pink for unknown piping.

Once completed, the proposed boreholes were spray-painted with a white circle and yellow "SSS" to indicate that Subsurface Surveys personnel had investigated them. Please refer to the attached photos for location and orientation of items detected in the survey.

Limitations and Further Recommendations - It should be understood that limitations inherent in geophysical instruments and/or surveying techniques exist at all sites, and nearly all sites exhibit conditions under which such might not perform optimally. Consequently, the detection of buried objects in all circumstances **cannot be guaranteed**. Such limitations are numerous and include, but are not limited to, rebar-reinforced ground cover, abrupt changes in ground cover type, above-ground obstacles preventing full traverses or traverses in one direction only, above-ground conductive objects interfering with instrument signal, nearby power lines or EM transmitters, highly conductive background soil conditions, limited GPR penetration, non-metallic targets, shallower or larger objects shielding deeper or smaller targets, tracing signal jumping from one line to another, and inaccessible risers, cleanouts, valve boxes, and manholes. If one or more geophysical instrument is rendered ineffective and cannot be utilized, the quality of the survey can be somewhat degraded.

For the above reasons, and in the interest of maximum safety, we encourage our clients to take advantage of Underground Service Alert (USA), Dig Alert, or other similar services, when possible. Furthermore, we recommend hand auguring and the use of a drilling method known as air knifing or vacuum extraction, when feasible or if applicable to this project. These methods may significantly limit damage to underground pipes, conduits, and utilities that might not have been detectable during the course of this survey. Please bear in mind, that geophysical surveying is only one of several levels of protection that is available to our clients.

SubSurface Surveys may include maps in some reports. While they are an accurate general representation of the site and our findings, they are not of engineering quality (i.e., measured and mapped by a licensed land surveyor).

SubSurface Surveys and Associates makes no guarantee either expressed or implied regarding the accuracy of the findings and interpretations present. And, in no event will SubSurface Surveys and Associates be liable for any direct, indirect, special, incidental, or consequential damages resulting from interpretations and opinions presented herewith.

All data generated on this project are in confidential file in this office, and are available for review by authorized persons at any time. The opportunity to participate in this investigation is very much appreciated. Please call, if there are questions.

Daniel L. Matticks, MS
Staff Geophysicist

Travis Crosby, GP# 1044
Senior Geophysicist

Figure 2

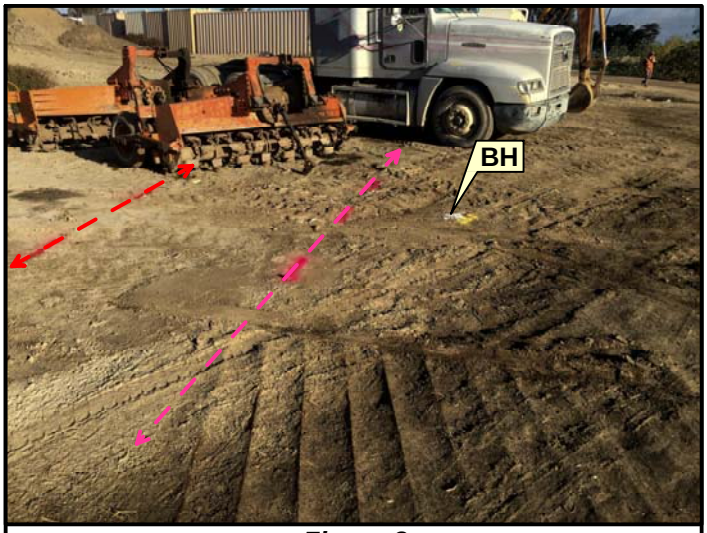

Figure 3

Figure 4

Figure 5

Sub Surface Surveys	SITE: **Hay Storage Lot** **NW Corner of** **West Cerritos Ave & Lexington Drive** **Cypress, California**	TITLE: **Borehole Photographs**	SURVEY DATE: **December 27, 2018**
		PREPARED FOR: **Ninyo & Moore**	SSS PROJECT NO: **18-552**

APPENDIX C

FIELD PROCEDURES

Hand Auger Soil Sampling Procedures

A hand-auger bucket is attached to an extension rod and "T" handle using threaded nuts or locking pins. If concrete was present, the location was cored prior to hand augering. The auger was advanced into the soil by hand while simultaneously rotating and putting downward pressure on the T-handle. The bucket was retrieved periodically (typically every 3 to 5 inches).

Soil cuttings were profiled and disposed in accordance with the Soil Classification and Investigative Derived Waste Standard Operating Procedures.

Direct-Push Soil Sampling Procedures

Prior to advancing soil borings, the proposed locations for boreholes were hand-augered to approximately 5 feet bgs to clear utilities. Drilling services were provided by a State-licensed drilling contractor. The direct-push rig consists of a van or pick-up truck-mounted hydraulic ram/pneumatic hammer system which pushes 4-foot-long, 1¼-inch-diameter rods. Soil samples are collected by attaching a 2- or 4-foot-long, 1.6- or 2-inch-diameter, stainless steel core sample or macro-core sampler containing brass or acetate sleeves to the bottom of the rods.

The probe-drive sampler consists of the sampler, sample tube, a piston tip attached to a piston rod, a drive head, and a piston stop pin. The sample tubes are placed in the sampler. The piston tip and attached piston rod are placed into the sampler from the bottom. The drive head is then screwed onto the top of the sampler. The piston stop-pin is screwed into the top of the drive head. The sampler is then attached to the 1-inch drive rods.

Undisturbed soil samples are collected by driving the sampler and rods to the target depth. The piston stop pin keeps the piston tip and rod from rising into the sampler. Subsequently, the probe-drive sampler remains sealed while it is pushed or driven to the desired sampling depth. Once the target depth is reached, the piston stop-pin is removed by means of extension rods inserted down the inside diameter of the probe rods. The sampler is then pushed approximately 24 inches. As the sampler is pushed down, the piston tip and rod rise in the sampler on top of the intruding soil. The rods and sampler are then retrieved. The sampler is disassembled, the sample tubes removed for sample logging, identification, and analysis, and the apparatus decontaminated prior to reuse.

The macro-core sampler consists of the sampler, cutting shoe, point assembly, drive head, sample sleeve, and (optional) sand catcher. Once assembled, the point assembly is placed in the cutting shoe and locked in place. The sample is then driven to the target depth. The point assembly is unlocked using extension rods lowered through the drive rods. The sampler is then driven another 4 feet. The sampler and drive rods are then retrieved, the sampler disassembled, and the sample tube removed for sample logging, identification and analysis. The apparatus is then decontaminated prior to reuse.

On retrieval, the sample sleeve containing the soil samples were removed from the sampler, cut to the desired sample length, capped with Teflon sheeting, and sealed with polyethylene end caps. The sample tube was labeled with the project number, sample number, sample depth, collection date and time, and sampler's initials. The soil samples were placed in sealable plastic bags and stored in a cooler chilled using ice to a temperature of approximately 4 degrees Celsius. [These samples were used for chemical analysis, with the exception of volatile organic compounds (VOCs) and total petroleum hydrocarbons as gasoline (TPHg).]

EPA 5035 Soil Sampling Procedures

If a soil sample was to be analyzed for VOCs, the sample was collected in accordance with United States Environmental Protection Agency (EPA) Method 5035 and following the California Department Toxic Substances Control (DTSC) Method 5035 Guidance Document, dated November, 2004.

The sample from the sleeve was sub-cored using EPA Method 5035 sample preservation. A plastic syringe was used to collect four aliquots of approximately 5 grams of soil. The 5-gram soil aliquot were ejected into pre-weighed, laboratory supplied, 40-milliliter volatile organic analysis (VOA) vials containing preservatives. A new syringe was used for each sampling interval.

A sample label was placed on the VOA vials with the sample number, location, and date recorded on the label. The VOA vials were placed in a zip-lock bag. VOA vials collected at a specific sample location and depth were placed in one zip-lock bag. The zip-lock bag and its contents were stored in a cooler chilled using ice to a temperature of approximately 4 degrees Celsius.

Soil Classification

Soil cuttings, the soil from the shoe of the sampler, and the remaining sleeves were examined and logged. Soil characterization information, including soil type (e.g., fill, native soil, or bedrock) were recorded on boring logs in accordance with the Unified Soil Classification System (USCS). Soil descriptions, sample type and depth, texture, color, density or consistency, odor, an estimate

of soil moisture content, and related drilling information were recorded in general accordance on boring logs. Boring logs were reviewed by a Ninyo & Moore California licensed Professional Geologist.

Backfill

Boreholes were backfilled with one foot of sand above and below vapor probes. The remainder of each borehole was backfilled with hydrated bentonite and capped to match surface material grade.

Chain-of-Custody Documentation

Sample information including: sample identification, date, time, analyses, sample, laboratory turn-around-time, number and type of containers, and preservation method were recorded on a chain-of-custody (COC). The COC was filled out and signed with the date and time by the sampler. The COC accompanied the samples. If the custody of the samples and COC were transferred the COC was signed with the date and time by the releasing and new custodians.

Investigative-Derived Waste Procedures

Used personal protective equipment and disposable equipment were not considered hazardous and were double bagged and placed in a municipal refuse dumpster. PPE and disposable equipment that could still be reused was rendered inoperable before disposal in the refuse dumpster.

APPENDIX D

Analytical Laboratory Reports

Enthalpy Analytical, LLC
931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
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MONTROSE ENVIRONMENTAL

Client: Ninyo & Moore
Address: 475 Goddard
Suite 200
Irvine, CA 92618
Attn: Patrick Cullip

Lab Request: 410374
Report Date: 01/07/2019
Date Received: 12/27/2018
Client ID: 15461

Comments: Cypress Ltd Phase II ESA
#210784002
APN: 244-221-23
Cypress, CA

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

Sample #	Client Sample ID
410374-001	B1-5'
410374-002	B1-10'
410374-003	B1-15'
410374-004	B2-5'
410374-005	B2-10'
410374-006	B2-15'
410374-007	B3-5'
410374-008	B3-10'
410374-009	B3-15'
410374-010	B4-5'
410374-011	B4-10'
410374-012	B4-15'
410374-013	Trip Blank

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Ranjit K. K. Clarke

Report Review performed by: Ranjit Clarke, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 60 days from date received.

ACCREDITED IN ACCORDANCE WITH nelac

Matrix:	Solid	**Client:**	Ninyo & Moore	**Collector:**	Client
Sampled:	12/27/2018 09:00	**Site:**			
Sample #:	**410374-001**	**Client Sample #:**	B1-5'	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1199568		
Antimony	ND	1	3	mg/Kg	01/02/19	01/03/19	KLN	
Arsenic	**3.90**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Barium	**77.1**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Cadmium	**0.60**	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Chromium	**16.2**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Cobalt	**9.66**	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Copper	**11.4**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Lead	**5.30**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Molybdenum	**1.22**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Nickel	**11.9**	1	1.5	mg/Kg	01/02/19	01/03/19	KLN	
Selenium	ND	1	3	mg/Kg	01/02/19	01/03/19	KLN	
Silver	ND	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Thallium	ND	1	3	mg/Kg	01/02/19	01/03/19	KLN	
Vanadium	**37.7**	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Zinc	**52.6**	1	5	mg/Kg	01/02/19	01/03/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1199549		
Mercury	ND	1	0.14	mg/Kg	12/31/18	12/31/18	CO	

Matrix:	Solid	**Client:**	Ninyo & Moore	**Collector:**	Client
Sampled:	12/27/2018 09:10	**Site:**			
Sample #:	**410374-002**	**Client Sample #:**	B1-10'	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1199631		
TPH (C6 to C12)	ND	0.87	2.61	mg/Kg		01/03/19	EW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
4-Bromofluorobenzene (SUR)	*100*		*60-140*					
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1199510		
TPH (C13 to C22)	ND	1	10	mg/Kg	12/29/18	01/01/19	SS	
TPH (C23 to C40)	ND	1	10	mg/Kg	12/29/18	01/01/19	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*91*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1199511		
1,1,1,2-Tetrachloroethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,1,1-Trichloroethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,1,2,2-Tetrachloroethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,1,2-Trichloroethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,1-Dichloroethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,1-Dichloroethene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,1-Dichloropropene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,2,3-Trichlorobenzene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,2,3-Trichloropropane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,2,4-Trichlorobenzene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,2,4-Trimethylbenzene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,2-Dibromo-3-chloropropane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,2-Dibromoethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,2-Dichlorobenzene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,2-Dichloroethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,2-Dichloropropane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,3,5-Trimethylbenzene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,3-Dichlorobenzene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,3-Dichloropropane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
1,4-Dichlorobenzene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
2,2-Dichloropropane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
2-Butanone (MEK)	ND	0.82	82	ug/Kg		12/29/18	ZZ	
2-Chlorotoluene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
4-Chlorotoluene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
4-Isopropyltoluene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
4-Methyl-2-pentanone (MIBK)	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Acetone	ND	0.82	82	ug/Kg		12/29/18	ZZ	
Allyl Chloride	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Benzene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Bromobenzene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Bromochloromethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Bromodichloromethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Bromoform	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Bromomethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Carbon Tetrachloride	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Chlorobenzene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Chlorodibromomethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Chloroethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Chloroform	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Chloromethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
cis-1,2-Dichloroethene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
cis-1,3-dichloropropene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
cis-1,4-dichloro-2-butene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	

Matrix: Solid **Client:** Ninyo & Moore **Collector:** Client
Sampled: 12/27/2018 09:10 **Site:**
Sample #: **410374-002** **Client Sample #:** B1-10' **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Dibromomethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Dichlorodifluoromethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Di-isopropyl ether (DIPE)	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Ethylbenzene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Ethyl-tertbutylether (ETBE)	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Hexachlorobutadiene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Isopropylbenzene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
m and p-Xylene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Methylene chloride	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Naphthalene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
N-butylbenzene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
N-propylbenzene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
o-Xylene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Sec-butylbenzene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Styrene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
t-Butyl alcohol (TBA)	ND	0.82	8.2	ug/Kg		12/29/18	ZZ	
Tert-amylmethylether (TAME)	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Tert-butylbenzene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Tetrachloroethene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Toluene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
trans-1,2-dichloroethene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
trans-1,3-dichloropropene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
trans-1,4-dichloro-2-butene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Trichloroethene	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Trichlorofluoromethane	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Vinyl Chloride	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	
Xylenes (Total)	ND	0.82	4.1	ug/Kg		12/29/18	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*106*	*70-145*	
4-Bromofluorobenzene (SUR)	*93*	*70-145*	
Dibromofluoromethane (SUR)	*103*	*70-145*	
Toluene-d8 (SUR)	*99*	*70-145*	

Matrix: Solid **Client:** Ninyo & Moore **Collector:** Client
Sampled: 12/27/2018 09:20 **Site:**
Sample #: **410374-003** **Client Sample #:** B1-15' **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: AL HOLD	Prep Method:					QCBatchID:		
N/A	**N/A**	1						

Matrix:	Solid	**Client:**	Ninyo & Moore	**Collector:**	Client
Sampled:	12/27/2018 10:00	**Site:**			
Sample #:	**410374-004**	**Client Sample #:**	B2-5'	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1199568		
Antimony	ND	1	3	mg/Kg	01/02/19	01/03/19	KLN	
Arsenic	**3.62**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Barium	**103**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Cadmium	**0.84**	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Chromium	**27.5**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Cobalt	**12.0**	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Copper	**16.4**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Lead	**10.6**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Molybdenum	**2.24**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Nickel	**15.9**	1	1.5	mg/Kg	01/02/19	01/03/19	KLN	
Selenium	ND	1	3	mg/Kg	01/02/19	01/03/19	KLN	
Silver	ND	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Thallium	ND	1	3	mg/Kg	01/02/19	01/03/19	KLN	
Vanadium	**44.9**	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Zinc	**68.1**	1	5	mg/Kg	01/02/19	01/03/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1199549		
Mercury	ND	1	0.14	mg/Kg	12/31/18	12/31/18	CO	

Matrix:	Solid	**Client:**	Ninyo & Moore	**Collector:**	Client
Sampled:	12/27/2018 10:10	**Site:**			
Sample #:	**410374-005**	**Client Sample #:**	B2-10'	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1199631		
TPH (C6 to C12)	ND	0.75	2.25	mg/Kg		01/03/19	EW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
4-Bromofluorobenzene (SUR)	*100*		*60-140*					
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1199510		
TPH (C13 to C22)	ND	1	10	mg/Kg	12/29/18	12/31/18	SS	
TPH (C23 to C40)	ND	1	10	mg/Kg	12/29/18	12/31/18	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*66*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1199511		
1,1,1,2-Tetrachloroethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,1,1-Trichloroethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,1,2,2-Tetrachloroethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,1,2-Trichloroethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,1-Dichloroethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,1-Dichloroethene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,1-Dichloropropene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,2,3-Trichlorobenzene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,2,3-Trichloropropane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,2,4-Trichlorobenzene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,2,4-Trimethylbenzene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,2-Dibromo-3-chloropropane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,2-Dibromoethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,2-Dichlorobenzene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,2-Dichloroethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,2-Dichloropropane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,3,5-Trimethylbenzene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,3-Dichlorobenzene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,3-Dichloropropane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
1,4-Dichlorobenzene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
2,2-Dichloropropane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
2-Butanone (MEK)	ND	0.71	71	ug/Kg		12/29/18	ZZ	
2-Chlorotoluene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
4-Chlorotoluene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
4-Isopropyltoluene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
4-Methyl-2-pentanone (MIBK)	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Acetone	ND	0.71	71	ug/Kg		12/29/18	ZZ	
Allyl Chloride	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Benzene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Bromobenzene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Bromochloromethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Bromodichloromethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Bromoform	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Bromomethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Carbon Tetrachloride	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Chlorobenzene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Chlorodibromomethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Chloroethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Chloroform	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Chloromethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
cis-1,2-Dichloroethene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
cis-1,3-dichloropropene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
cis-1,4-dichloro-2-butene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	

Matrix: Solid **Client:** Ninyo & Moore **Collector:** Client
Sampled: 12/27/2018 10:10 **Site:**
Sample #: **410374-005** **Client Sample #:** B2-10' **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Dibromomethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Dichlorodifluoromethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Di-isopropyl ether (DIPE)	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Ethylbenzene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Ethyl-tertbutylether (ETBE)	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Hexachlorobutadiene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Isopropylbenzene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
m and p-Xylene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Methylene chloride	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Naphthalene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
N-butylbenzene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
N-propylbenzene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
o-Xylene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Sec-butylbenzene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Styrene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
t-Butyl alcohol (TBA)	ND	0.71	7.1	ug/Kg		12/29/18	ZZ	
Tert-amylmethylether (TAME)	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Tert-butylbenzene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Tetrachloroethene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Toluene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
trans-1,2-dichloroethene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
trans-1,3-dichloropropene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
trans-1,4-dichloro-2-butene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Trichloroethene	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Trichlorofluoromethane	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Vinyl Chloride	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	
Xylenes (Total)	ND	0.71	3.55	ug/Kg		12/29/18	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*109*	*70-145*	
4-Bromofluorobenzene (SUR)	*96*	*70-145*	
Dibromofluoromethane (SUR)	*105*	*70-145*	
Toluene-d8 (SUR)	*97*	*70-145*	

Matrix: Solid **Client:** Ninyo & Moore **Collector:** Client
Sampled: 12/27/2018 10:30 **Site:**
Sample #: **410374-006** **Client Sample #:** B2-15' **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: AL HOLD	Prep Method:					QCBatchID:		
N/A	**N/A**	1						

Matrix:	Solid	**Client:**	Ninyo & Moore	**Collector:**	Client
Sampled:	12/27/2018 12:00	**Site:**			
Sample #:	**410374-007**	**Client Sample #:**	B3-5'	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1199568		
Antimony	ND	1	3	mg/Kg	01/02/19	01/03/19	KLN	
Arsenic	**2.78**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Barium	**68.9**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Cadmium	ND	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Chromium	**17.5**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Cobalt	**6.76**	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Copper	**14.7**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Lead	**17.8**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Molybdenum	ND	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Nickel	**8.91**	1	1.5	mg/Kg	01/02/19	01/03/19	KLN	
Selenium	ND	1	3	mg/Kg	01/02/19	01/03/19	KLN	
Silver	ND	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Thallium	ND	1	3	mg/Kg	01/02/19	01/03/19	KLN	
Vanadium	**25.8**	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Zinc	**64.5**	1	5	mg/Kg	01/02/19	01/03/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1199549		
Mercury	ND	1	0.14	mg/Kg	12/31/18	12/31/18	CO	

Matrix:	Solid	**Client:**	Ninyo & Moore	**Collector:**	Client
Sampled:	12/27/2018 12:10	**Site:**			
Sample #:	**410374-008**	**Client Sample #:**	B3-10'	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1199631		
TPH (C6 to C12)	ND	0.88	2.64	mg/Kg		01/03/19	EW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
4-Bromofluorobenzene (SUR)	*100*		*60-140*					
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1199510		
TPH (C13 to C22)	ND	1	10	mg/Kg	12/29/18	12/31/18	SS	
TPH (C23 to C40)	ND	1	10	mg/Kg	12/29/18	12/31/18	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*89*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1199511		
1,1,1,2-Tetrachloroethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,1,1-Trichloroethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,1,2,2-Tetrachloroethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,1,2-Trichloroethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,1-Dichloroethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,1-Dichloroethene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,1-Dichloropropene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,2,3-Trichlorobenzene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,2,3-Trichloropropane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,2,4-Trichlorobenzene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,2,4-Trimethylbenzene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,2-Dibromo-3-chloropropane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,2-Dibromoethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,2-Dichlorobenzene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,2-Dichloroethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,2-Dichloropropane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,3,5-Trimethylbenzene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,3-Dichlorobenzene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,3-Dichloropropane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
1,4-Dichlorobenzene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
2,2-Dichloropropane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
2-Butanone (MEK)	ND	0.83	83	ug/Kg		12/29/18	ZZ	
2-Chlorotoluene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
4-Chlorotoluene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
4-Isopropyltoluene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
4-Methyl-2-pentanone (MIBK)	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Acetone	ND	0.83	83	ug/Kg		12/29/18	ZZ	
Allyl Chloride	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Benzene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Bromobenzene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Bromochloromethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Bromodichloromethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Bromoform	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Bromomethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Carbon Tetrachloride	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Chlorobenzene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Chlorodibromomethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Chloroethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Chloroform	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Chloromethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
cis-1,2-Dichloroethene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
cis-1,3-dichloropropene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
cis-1,4-dichloro-2-butene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	

Matrix: Solid **Client:** Ninyo & Moore **Collector:** Client
Sampled: 12/27/2018 12:10 **Site:**
Sample #: **410374-008** **Client Sample #:** B3-10' **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Dibromomethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Dichlorodifluoromethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Di-isopropyl ether (DIPE)	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Ethylbenzene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Ethyl-tertbutylether (ETBE)	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Hexachlorobutadiene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Isopropylbenzene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
m and p-Xylene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Methylene chloride	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Naphthalene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
N-butylbenzene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
N-propylbenzene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
o-Xylene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Sec-butylbenzene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Styrene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
t-Butyl alcohol (TBA)	ND	0.83	8.3	ug/Kg		12/29/18	ZZ	
Tert-amylmethylether (TAME)	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Tert-butylbenzene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Tetrachloroethene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Toluene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
trans-1,2-dichloroethene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
trans-1,3-dichloropropene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
trans-1,4-dichloro-2-butene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Trichloroethene	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Trichlorofluoromethane	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Vinyl Chloride	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	
Xylenes (Total)	ND	0.83	4.15	ug/Kg		12/29/18	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*111*	*70-145*	
4-Bromofluorobenzene (SUR)	*93*	*70-145*	
Dibromofluoromethane (SUR)	*106*	*70-145*	
Toluene-d8 (SUR)	*95*	*70-145*	

Matrix: Solid **Client:** Ninyo & Moore **Collector:** Client
Sampled: 12/27/2018 12:20 **Site:**
Sample #: **410374-009** **Client Sample #:** B3-15' **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: AL HOLD	Prep Method:					QCBatchID:		
N/A	**N/A**	1						

Matrix:	Solid	**Client:**	Ninyo & Moore	**Collector:**	Client
Sampled:	12/27/2018 12:50	**Site:**			
Sample #:	**410374-010**	**Client Sample #:**	B4-5'	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC*	Prep Method: EPA 3050B					QCBatchID: QC1199568		
Antimony	ND	1	3	mg/Kg	01/02/19	01/03/19	KLN	
Arsenic	**6.51**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Barium	**106**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Cadmium	**0.78**	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Chromium	**22.1**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Cobalt	**11.8**	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Copper	**17.4**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Lead	**10.7**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Molybdenum	ND	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Nickel	**15.8**	1	1.5	mg/Kg	01/02/19	01/03/19	KLN	
Selenium	ND	1	3	mg/Kg	01/02/19	01/03/19	KLN	
Silver	ND	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Thallium	ND	1	3	mg/Kg	01/02/19	01/03/19	KLN	
Vanadium	**46.2**	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Zinc	**72.8**	1	5	mg/Kg	01/02/19	01/03/19	KLN	
Method: EPA 7471A *NELAC*	Prep Method: EPA 7471A					QCBatchID: QC1199549		
Mercury	ND	1	0.14	mg/Kg	12/31/18	12/31/18	CO	

Matrix:	Solid	**Client:**	Ninyo & Moore	**Collector:**	Client
Sampled:	12/27/2018 13:00	**Site:**			
Sample #:	**410374-011**	**Client Sample #:**	B4-10'	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8015B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1199631		
TPH (C6 to C12)	ND	0.74	2.22	mg/Kg		01/03/19	EW	
Surrogate	*% Recovery*		*Limits*	*Notes*				
4-Bromofluorobenzene (SUR)	*100*		*60-140*					
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1199510		
TPH (C13 to C22)	ND	1	10	mg/Kg	12/29/18	12/31/18	SS	
TPH (C23 to C40)	**32**	1	10	mg/Kg	12/29/18	12/31/18	SS	
Surrogate	*% Recovery*		*Limits*	*Notes*				
Triacontane (SUR)	*71*		*50-150*					
Method: EPA 8260B *NELAC* Prep Method: EPA 5035A						QCBatchID: QC1199511		
1,1,1,2-Tetrachloroethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,1,1-Trichloroethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,1,2,2-Tetrachloroethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,1,2-Trichloroethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,1,2-Trichlorotrifluoroethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,1-Dichloroethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,1-Dichloroethene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,1-Dichloropropene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,2,3-Trichlorobenzene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,2,3-Trichloropropane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,2,4-Trichlorobenzene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,2,4-Trimethylbenzene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,2-Dibromo-3-chloropropane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,2-Dibromoethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,2-Dichlorobenzene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,2-Dichloroethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,2-Dichloropropane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,3,5-Trimethylbenzene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,3-Dichlorobenzene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,3-Dichloropropane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
1,4-Dichlorobenzene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
2,2-Dichloropropane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
2-Butanone (MEK)	ND	0.81	81	ug/Kg		12/29/18	ZZ	
2-Chlorotoluene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
4-Chlorotoluene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
4-Isopropyltoluene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
4-Methyl-2-pentanone (MIBK)	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Acetone	ND	0.81	81	ug/Kg		12/29/18	ZZ	
Allyl Chloride	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Benzene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Bromobenzene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Bromochloromethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Bromodichloromethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Bromoform	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Bromomethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Carbon Tetrachloride	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Chlorobenzene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Chlorodibromomethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Chloroethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Chloroform	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Chloromethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
cis-1,2-Dichloroethene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
cis-1,3-dichloropropene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
cis-1,4-dichloro-2-butene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	

Matrix: Solid **Client:** Ninyo & Moore **Collector:** Client
Sampled: 12/27/2018 13:00 **Site:**
Sample #: **410374-011** **Client Sample #:** B4-10' **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Dibromomethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Dichlorodifluoromethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Di-isopropyl ether (DIPE)	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Ethylbenzene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Ethyl-tertbutylether (ETBE)	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Hexachlorobutadiene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Isopropylbenzene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
m and p-Xylene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Methylene chloride	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Naphthalene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
N-butylbenzene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
N-propylbenzene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
o-Xylene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Sec-butylbenzene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Styrene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
t-Butyl alcohol (TBA)	ND	0.81	8.1	ug/Kg		12/29/18	ZZ	
Tert-amylmethylether (TAME)	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Tert-butylbenzene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Tetrachloroethene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Toluene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
trans-1,2-dichloroethene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
trans-1,3-dichloropropene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
trans-1,4-dichloro-2-butene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Trichloroethene	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Trichlorofluoromethane	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Vinyl Chloride	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	
Xylenes (Total)	ND	0.81	4.05	ug/Kg		12/29/18	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*108*	*70-145*	
4-Bromofluorobenzene (SUR)	*93*	*70-145*	
Dibromofluoromethane (SUR)	*103*	*70-145*	
Toluene-d8 (SUR)	*99*	*70-145*	

Matrix: Solid **Client:** Ninyo & Moore **Collector:** Client
Sampled: 12/27/2018 13:10 **Site:**
Sample #: **410374-012** **Client Sample #:** B4-15' **Sample Type:**

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: AL HOLD	Prep Method:					QCBatchID:		
N/A	**N/A**	1						

Matrix:	Water	**Client:**	Ninyo & Moore	**Collector:**	Client
Sampled:	12/27/2018	**Site:**			
Sample #:	**410374-013**	**Client Sample #:**	Trip Blank	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 8260B *NELAC* Prep Method: EPA 5030B						QCBatchID: QC1199504		
1,1,1,2-Tetrachloroethane	ND	1	5	ug/L		12/29/18	LZ	
1,1,1-Trichloroethane	ND	1	5	ug/L		12/29/18	LZ	
1,1,2,2-Tetrachloroethane	ND	1	5	ug/L		12/29/18	LZ	
1,1,2-Trichloroethane	ND	1	5	ug/L		12/29/18	LZ	
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/L		12/29/18	LZ	
1,1-Dichloroethane	ND	1	5	ug/L		12/29/18	LZ	
1,1-Dichloroethene	ND	1	5	ug/L		12/29/18	LZ	
1,1-Dichloropropene	ND	1	5	ug/L		12/29/18	LZ	
1,2,3-Trichlorobenzene	ND	1	5	ug/L		12/29/18	LZ	
1,2,3-Trichloropropane	ND	1	5	ug/L		12/29/18	LZ	
1,2,4-Trichlorobenzene	ND	1	5	ug/L		12/29/18	LZ	
1,2,4-Trimethylbenzene	ND	1	5	ug/L		12/29/18	LZ	
1,2-Dibromo-3-chloropropane	ND	1	5	ug/L		12/29/18	LZ	
1,2-Dibromoethane	ND	1	5	ug/L		12/29/18	LZ	
1,2-Dichlorobenzene	ND	1	5	ug/L		12/29/18	LZ	
1,2-Dichloroethane	ND	1	5	ug/L		12/29/18	LZ	
1,2-Dichloropropane	ND	1	5	ug/L		12/29/18	LZ	
1,3,5-Trimethylbenzene	ND	1	5	ug/L		12/29/18	LZ	
1,3-Dichlorobenzene	ND	1	5	ug/L		12/29/18	LZ	
1,3-Dichloropropane	ND	1	5	ug/L		12/29/18	LZ	
1,4-Dichlorobenzene	ND	1	5	ug/L		12/29/18	LZ	
2,2-Dichloropropane	ND	1	5	ug/L		12/29/18	LZ	
2-Butanone (MEK)	ND	1	100	ug/L		12/29/18	LZ	
2-Chlorotoluene	ND	1	5	ug/L		12/29/18	LZ	
4-Chlorotoluene	ND	1	5	ug/L		12/29/18	LZ	
4-Isopropyltoluene	ND	1	5	ug/L		12/29/18	LZ	
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/L		12/29/18	LZ	
Acetone	ND	1	100	ug/L		12/29/18	LZ	
Allyl Chloride	ND	1	5	ug/L		12/29/18	LZ	
Benzene	ND	1	1	ug/L		12/29/18	LZ	
Bromobenzene	ND	1	5	ug/L		12/29/18	LZ	
Bromochloromethane	ND	1	5	ug/L		12/29/18	LZ	
Bromodichloromethane	ND	1	5	ug/L		12/29/18	LZ	
Bromoform	ND	1	5	ug/L		12/29/18	LZ	
Bromomethane	ND	1	5	ug/L		12/29/18	LZ	
Carbon Tetrachloride	ND	1	5	ug/L		12/29/18	LZ	
Chlorobenzene	ND	1	5	ug/L		12/29/18	LZ	
Chlorodibromomethane	ND	1	5	ug/L		12/29/18	LZ	
Chloroethane	ND	1	5	ug/L		12/29/18	LZ	
Chloroform	ND	1	5	ug/L		12/29/18	LZ	
Chloromethane	ND	1	5	ug/L		12/29/18	LZ	
cis-1,2-Dichloroethene	ND	1	5	ug/L		12/29/18	LZ	
cis-1,3-dichloropropene	ND	1	5	ug/L		12/29/18	LZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/L		12/29/18	LZ	
Dibromomethane	ND	1	5	ug/L		12/29/18	LZ	
Dichlorodifluoromethane	ND	1	5	ug/L		12/29/18	LZ	
Di-isopropyl ether (DIPE)	ND	1	1	ug/L		12/29/18	LZ	
Ethylbenzene	ND	1	5	ug/L		12/29/18	LZ	
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L		12/29/18	LZ	
Hexachlorobutadiene	ND	1	5	ug/L		12/29/18	LZ	
Isopropylbenzene	ND	1	5	ug/L		12/29/18	LZ	
m and p-Xylene	ND	1	5	ug/L		12/29/18	LZ	
Methylene chloride	ND	1	5	ug/L		12/29/18	LZ	
Methyl-t-butyl Ether (MTBE)	ND	1	1	ug/L		12/29/18	LZ	

Matrix:	Water	**Client:**	Ninyo & Moore	**Collector:**	Client
Sampled:	12/27/2018	**Site:**			
Sample #:	**410374-013**	**Client Sample #:**	Trip Blank	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Naphthalene	ND	1	5	ug/L		12/29/18	LZ	
N-butylbenzene	ND	1	5	ug/L		12/29/18	LZ	
N-propylbenzene	ND	1	5	ug/L		12/29/18	LZ	
o-Xylene	ND	1	5	ug/L		12/29/18	LZ	
Sec-butylbenzene	ND	1	5	ug/L		12/29/18	LZ	
Styrene	ND	1	5	ug/L		12/29/18	LZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/L		12/29/18	LZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/L		12/29/18	LZ	
Tert-butylbenzene	ND	1	5	ug/L		12/29/18	LZ	
Tetrachloroethene	ND	1	5	ug/L		12/29/18	LZ	
Toluene	ND	1	5	ug/L		12/29/18	LZ	
trans-1,2-dichloroethene	ND	1	5	ug/L		12/29/18	LZ	
trans-1,3-dichloropropene	ND	1	5	ug/L		12/29/18	LZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/L		12/29/18	LZ	
Trichloroethene	ND	1	5	ug/L		12/29/18	LZ	
Trichlorofluoromethane	ND	1	5	ug/L		12/29/18	LZ	
Vinyl Chloride	ND	1	5	ug/L		12/29/18	LZ	
Xylenes (Total)	ND	1	5	ug/L		12/29/18	LZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*104*	*70-145*	
4-Bromofluorobenzene (SUR)	*97*	*70-145*	
Dibromofluoromethane (SUR)	*107*	*70-145*	
Toluene-d8 (SUR)	*97*	*70-145*	

QCBatchID: QC1199504	**Analyst:** lucy	**Method:** EPA 8260B	
Matrix: Water	**Analyzed:** 12/28/2018	**Instrument:** VOA-MS (group)	

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1199504MB1						
1,1,1,2-Tetrachloroethane	ND	ug/L		5		
1,1,1-Trichloroethane	ND	ug/L		5		
1,1,2,2-Tetrachloroethane	ND	ug/L		5		
1,1,2-Trichloroethane	ND	ug/L		5		
1,1,2-Trichlorotrifluoroethane	ND	ug/L		5		
1,1-Dichloroethane	ND	ug/L		5		
1,1-Dichloroethene	ND	ug/L		5		
1,1-Dichloropropene	ND	ug/L		5		
1,2,3-Trichlorobenzene	ND	ug/L		5		
1,2,3-Trichloropropane	ND	ug/L		5		
1,2,4-Trichlorobenzene	ND	ug/L		5		
1,2,4-Trimethylbenzene	ND	ug/L		5		
1,2-Dibromo-3-chloropropane	ND	ug/L		5		
1,2-Dibromoethane	ND	ug/L		5		
1,2-Dichlorobenzene	ND	ug/L		5		
1,2-Dichloroethane	ND	ug/L		5		
1,2-Dichloropropane	ND	ug/L		5		
1,3,5-Trimethylbenzene	ND	ug/L		5		
1,3-Dichlorobenzene	ND	ug/L		5		
1,3-Dichloropropane	ND	ug/L		5		
1,4-Dichlorobenzene	ND	ug/L		5		
2,2-Dichloropropane	ND	ug/L		5		
2-Butanone (MEK)	ND	ug/L		100		
2-Chloroethyl Vinyl Ether	ND	ug/L		10		
2-Chlorotoluene	ND	ug/L		5		
4-Chlorotoluene	ND	ug/L		5		
4-Isopropyltoluene	ND	ug/L		5		
4-Methyl-2-pentanone (MIBK)	ND	ug/L		5		
Acetone	ND	ug/L		100		
Allyl Chloride	ND	ug/L		5		
Benzene	ND	ug/L		1		
Bromobenzene	ND	ug/L		5		
Bromochloromethane	ND	ug/L		5		
Bromodichloromethane	ND	ug/L		5		
Bromoform	ND	ug/L		5		
Bromomethane	ND	ug/L		5		
Carbon Tetrachloride	ND	ug/L		5		
Chlorobenzene	ND	ug/L		5		
Chlorodibromomethane	ND	ug/L		5		
Chloroethane	ND	ug/L		5		
Chloroform	ND	ug/L		5		
Chloromethane	ND	ug/L		5		
cis-1,2-Dichloroethene	ND	ug/L		5		
cis-1,3-dichloropropene	ND	ug/L		5		
cis-1,4-dichloro-2-butene	ND	ug/L		5		
Dibromomethane	ND	ug/L		5		
Dichlorodifluoromethane	ND	ug/L		5		
Di-isopropyl ether (DIPE)	ND	ug/L		1		
Ethanol	ND	ug/L		500		
Ethylbenzene	ND	ug/L		5		
Ethyl-tertbutylether (ETBE)	ND	ug/L		1		
Hexachlorobutadiene	ND	ug/L		5		

QCBatchID: QC1199504 **Analyst:** lucy **Method:** EPA 8260B

Matrix: Water **Analyzed:** 12/28/2018 **Instrument:** VOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1199504MB1					
Isopropylbenzene	ND	ug/L		5	
m and p-Xylene	ND	ug/L		5	
Methylene chloride	ND	ug/L		5	
Methyl-t-butyl Ether (MTBE)	ND	ug/L		1	
Naphthalene	ND	ug/L		5	
N-butylbenzene	ND	ug/L		5	
N-propylbenzene	ND	ug/L		5	
o-Xylene	ND	ug/L		5	
Sec-butylbenzene	ND	ug/L		5	
Styrene	ND	ug/L		5	
t-Butyl alcohol (TBA)	ND	ug/L		10	
Tert-amylmethylether (TAME)	ND	ug/L		5	
Tert-butylbenzene	ND	ug/L		5	
Tetrachloroethene	ND	ug/L		5	
Toluene	ND	ug/L		5	
trans-1,2-dichloroethene	ND	ug/L		5	
trans-1,3-dichloropropene	ND	ug/L		5	
trans-1,4-dichloro-2-butene	ND	ug/L		5	
Trichloroethene	ND	ug/L		5	
Trichlorofluoromethane	ND	ug/L		5	
Vinyl Chloride	ND	ug/L		5	
Xylenes (Total)	ND	ug/L		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199504LCS1											
1,1-Dichloroethene	50		61		ug/L	122			59-172		
Benzene	50		50		ug/L	100			62-137		
Chlorobenzene	50		53		ug/L	106			60-133		
Methyl-t-butyl Ether (MTBE)	50		38		ug/L	76			62-137		
Toluene	50		55		ug/L	110			59-139		
Trichloroethene	50		55		ug/L	110			66-142		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199504MS1, QC1199504MSD1												**Source: 410381-001**
1,1-Dichloroethene	ND	50	50	63	59	ug/L	126	118	6.6	59-172	22	
Benzene	ND	50	50	51	49	ug/L	102	98	4.0	62-137	24	
Chlorobenzene	ND	50	50	53	50	ug/L	106	100	5.8	60-133	24	
Methyl-t-butyl Ether (MTBE)	ND	50	50	40	43	ug/L	80	86	7.2	62-137	21	
Toluene	ND	50	50	56	52	ug/L	112	104	7.4	59-139	21	
Trichloroethene	ND	50	50	54	50	ug/L	108	100	7.7	66-142	21	

QCBatchID: QC1199510 **Analyst:** ssabir **Method:** EPA 8015M

Matrix: Solid **Analyzed:** 12/29/2018 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1199510MB1					
TPH (C10 to C28)	ND	mg/Kg		10	
TPH (C13 to C22)	ND	mg/Kg		10	
TPH (C23 to C40)	ND	mg/Kg		20	
TPH (C28 to C40)	ND	mg/Kg		20	
TPH (C6 to C12)	ND	mg/Kg		10	
TPH (C6 to C44) Total	ND	mg/Kg		20	
TPH (C8 to C10)	ND	mg/Kg		10	
TPH Diesel	ND	mg/Kg		10	
TPH Gasoline	ND	mg/Kg		10	
TPH Motor Oil	ND	mg/Kg		20	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199510LCS1											
TPH (C10 to C28)	250		220		mg/Kg	88			60-133		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199510MS1, QC1199510MSD1												**Source: 410389-001**
TPH (C10 to C28)	3300	250	250	3000	3300	mg/Kg	0	0	9.5	70-130	20	NC

QCBatchID: QC1199511	**Analyst:** nicollez	**Method:** EPA 8260B	
Matrix: Solid	**Analyzed:** 12/29/2018	**Instrument:** VOA-MS (group)	

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1199511MB1						
1,1,1,2-Tetrachloroethane	ND	ug/Kg		5		
1,1,1-Trichloroethane	ND	ug/Kg		5		
1,1,2,2-Tetrachloroethane	ND	ug/Kg		5		
1,1,2-Trichloroethane	ND	ug/Kg		5		
1,1,2-Trichlorotrifluoroethane	ND	ug/Kg		5		
1,1-Dichloroethane	ND	ug/Kg		5		
1,1-Dichloroethene	ND	ug/Kg		5		
1,1-Dichloropropene	ND	ug/Kg		5		
1,2,3-Trichlorobenzene	ND	ug/Kg		5		
1,2,3-Trichloropropane	ND	ug/Kg		5		
1,2,4-Trichlorobenzene	ND	ug/Kg		5		
1,2,4-Trimethylbenzene	ND	ug/Kg		5		
1,2-Dibromo-3-chloropropane	ND	ug/Kg		5		
1,2-Dibromoethane	ND	ug/Kg		5		
1,2-Dichlorobenzene	ND	ug/Kg		5		
1,2-Dichloroethane	ND	ug/Kg		5		
1,2-Dichloropropane	ND	ug/Kg		5		
1,3,5-Trimethylbenzene	ND	ug/Kg		5		
1,3-Dichlorobenzene	ND	ug/Kg		5		
1,3-Dichloropropane	ND	ug/Kg		5		
1,4-Dichlorobenzene	ND	ug/Kg		5		
2,2-Dichloropropane	ND	ug/Kg		5		
2-Butanone (MEK)	ND	ug/Kg		100		
2-Chlorotoluene	ND	ug/Kg		5		
4-Chlorotoluene	ND	ug/Kg		5		
4-Isopropyltoluene	ND	ug/Kg		5		
4-Methyl-2-pentanone (MIBK)	ND	ug/Kg		5		
Acetone	ND	ug/Kg		100		
Allyl Chloride	ND	ug/Kg		5		
Benzene	ND	ug/Kg		5		
Bromobenzene	ND	ug/Kg		5		
Bromochloromethane	ND	ug/Kg		5		
Bromodichloromethane	ND	ug/Kg		5		
Bromoform	ND	ug/Kg		5		
Bromomethane	ND	ug/Kg		5		
Carbon Tetrachloride	ND	ug/Kg		5		
Chlorobenzene	ND	ug/Kg		5		
Chlorodibromomethane	ND	ug/Kg		5		
Chloroethane	ND	ug/Kg		5		
Chloroform	ND	ug/Kg		5		
Chloromethane	ND	ug/Kg		5		
cis-1,2-Dichloroethene	ND	ug/Kg		5		
cis-1,3-dichloropropene	ND	ug/Kg		5		
cis-1,4-dichloro-2-butene	ND	ug/Kg		5		
Dibromomethane	ND	ug/Kg		5		
Dichlorodifluoromethane	ND	ug/Kg		5		
Di-isopropyl ether (DIPE)	ND	ug/Kg		5		
Ethylbenzene	ND	ug/Kg		5		
Ethyl-tertbutylether (ETBE)	ND	ug/Kg		5		
Hexachlorobutadiene	ND	ug/Kg		5		
Isopropylbenzene	ND	ug/Kg		5		
m and p-Xylene	ND	ug/Kg		5		

QCBatchID: QC1199511 **Analyst:** nicollez **Method:** EPA 8260B

Matrix: Solid **Analyzed:** 12/29/2018 **Instrument:** VOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1199511MB1					
Methylene chloride	ND	ug/Kg		5	
Methyl-t-butyl Ether (MTBE)	ND	ug/Kg		5	
Naphthalene	ND	ug/Kg		5	
N-butylbenzene	ND	ug/Kg		5	
N-propylbenzene	ND	ug/Kg		5	
o-Xylene	ND	ug/Kg		5	
Sec-butylbenzene	ND	ug/Kg		5	
Styrene	ND	ug/Kg		5	
t-Butyl alcohol (TBA)	ND	ug/Kg		10	
Tert-amylmethylether (TAME)	ND	ug/Kg		5	
Tert-butylbenzene	ND	ug/Kg		5	
Tetrachloroethene	ND	ug/Kg		5	
Toluene	ND	ug/Kg		5	
trans-1,2-dichloroethene	ND	ug/Kg		5	
trans-1,3-dichloropropene	ND	ug/Kg		5	
trans-1,4-dichloro-2-butene	ND	ug/Kg		5	
Trichloroethene	ND	ug/Kg		5	
Trichlorofluoromethane	ND	ug/Kg		5	
Vinyl Chloride	ND	ug/Kg		5	
Xylenes (Total)	ND	ug/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199511LCS1											
1,1-Dichloroethene	50		59		ug/Kg	118			59-172		
Benzene	50		49		ug/Kg	98			62-137		
Chlorobenzene	50		51		ug/Kg	102			60-133		
Methyl-t-butyl Ether (MTBE)	50		38		ug/Kg	76			62-137		
Toluene	50		54		ug/Kg	108			59-139		
Trichloroethene	50		53		ug/Kg	106			66-142		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199511MS1, QC1199511MSD1												**Source: 410375-001**
1,1-Dichloroethene	ND	50	50	58	60	ug/Kg	116	120	3.4	59-172	22	
Benzene	0.95	50	50	48	50	ug/Kg	94	98	4.1	62-137	24	
Chlorobenzene	ND	50	50	49	49	ug/Kg	98	98	0.0	60-133	24	
Methyl-t-butyl Ether (MTBE)	ND	50	50	43	44	ug/Kg	86	88	2.3	62-137	21	
Toluene	ND	50	50	51	52	ug/Kg	102	104	1.9	59-139	21	
Trichloroethene	ND	50	50	51	52	ug/Kg	102	104	1.9	66-142	21	

QCBatchID: QC1199549 **Analyst:** cota **Method:** EPA 7471A

Matrix: Solid **Analyzed:** 12/31/2018 **Instrument:** AAICP-HG1

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1199549MB1						
Mercury	ND	mg/Kg		0.14		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199549LCS1											
Mercury	0.83		0.82		mg/Kg	99			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199549MS1, QC1199549MSD1												**Source: 410397-001**
Mercury	ND	0.83	0.83	0.77	0.72	mg/Kg	93	87	6.7	75-125	20	

QCBatchID: QC1199568 **Analyst:** dswafford **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 01/02/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1199568MB1					
Antimony	ND	mg/Kg		3	
Arsenic	ND	mg/Kg		1	
Barium	ND	mg/Kg		1	
Beryllium	ND	mg/Kg		0.5	
Cadmium	ND	mg/Kg		0.5	
Chromium	ND	mg/Kg		1	
Cobalt	ND	mg/Kg		0.5	
Copper	ND	mg/Kg		1	
Lead	ND	mg/Kg		1	
Molybdenum	ND	mg/Kg		1	
Nickel	ND	mg/Kg		1.5	
Selenium	ND	mg/Kg		3	
Silver	ND	mg/Kg		0.5	
Thallium	ND	mg/Kg		3	
Vanadium	ND	mg/Kg		0.5	
Zinc	ND	mg/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199568LCS1											
Antimony	100		98.6		mg/Kg	99			80-120		
Arsenic	100		95.3		mg/Kg	95			80-120		
Barium	100		102		mg/Kg	102			80-120		
Beryllium	100		91.2		mg/Kg	91			80-120		
Cadmium	100		96.4		mg/Kg	96			80-120		
Chromium	100		93.5		mg/Kg	94			80-120		
Cobalt	100		101		mg/Kg	101			80-120		
Copper	100		95.6		mg/Kg	96			80-120		
Lead	100		103		mg/Kg	103			80-120		
Molybdenum	100		95.9		mg/Kg	96			80-120		
Nickel	100		104		mg/Kg	104			80-120		
Selenium	100		89.4		mg/Kg	89			80-120		
Silver	100		103		mg/Kg	103			80-120		
Thallium	100		98.1		mg/Kg	98			80-120		
Vanadium	100		101		mg/Kg	101			80-120		
Zinc	100		96.1		mg/Kg	96			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199568MS1, QC1199568MSD1												**Source: 410305-131**
Antimony	ND	100	100	73.8	58.9	mg/Kg	74	59	22.5	75-125	20	M,D
Arsenic	1.63	100	100	111	104	mg/Kg	109	102	6.5	75-125	20	
Barium	112	100	100	214	204	mg/Kg	102	92	4.8	75-125	20	
Beryllium	ND	100	100	98.0	95.8	mg/Kg	98	96	2.3	75-125	20	
Cadmium	0.63	100	100	96.9	90.4	mg/Kg	96	90	6.9	75-125	20	
Chromium	12.0	100	100	107	99.2	mg/Kg	95	87	7.6	75-125	20	
Cobalt	9.08	100	100	110	102	mg/Kg	101	93	7.5	75-125	20	
Copper	13.1	100	100	111	104	mg/Kg	98	91	6.5	75-125	20	
Lead	15.2	100	100	131	120	mg/Kg	116	105	8.8	75-125	20	
Molybdenum	0.56	100	100	105	96.8	mg/Kg	104	96	8.1	75-125	20	

QCBatchID: QC1199568 **Analyst:** dswafford **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 01/02/2019 **Instrument:** AAICP (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199568MS1, QC1199568MSD1												**Source: 410305-131**
Nickel	9.28	100	100	121	111	mg/Kg	112	102	8.6	75-125	20	
Selenium	ND	100	100	102	95.2	mg/Kg	102	95	6.9	75-125	20	
Silver	ND	100	100	109	100	mg/Kg	109	100	8.6	75-125	20	
Thallium	2.20	100	100	104	98.2	mg/Kg	102	96	5.7	75-125	20	
Vanadium	30.6	100	100	137	127	mg/Kg	106	96	7.6	75-125	20	
Zinc	59.4	100	100	172	159	mg/Kg	113	100	7.9	75-125	20	

QCBatchID:	**QC1199631**	**Analyst:**	sandyw	**Method:**	EPA 8015B
Matrix:	Solid	**Analyzed:**	01/03/2019	**Instrument:**	VOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1199631MB1						
TPH (C6 to C12)	ND	mg/Kg		3		

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount		Spike Result		Units	Recoveries		RPD	Limits		Notes
	LCS	LCSD	LCS	LCSD		LCS	LCSD		%Rec	RPD	
QC1199631LCS1, QC1199631LCSD1											
TPH Gasoline	5	5	5.3	5.3	mg/Kg	106	106	0	70-130	20	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

ENTHALPY ANALYTICAL, INC.	Chain of Custody Record	Turn Around Time (Rush by advanced notice only)
931 W. Barkley Ave, Orange, CA 92868	Lab No: 2n128 Cyp 410374	Standard: X 4 Day: 3 Day:
Phone: (714) 771-6900 Fax: (714)771-9933	Page: 1 of 2	2 Day: 1 Day: Same Day:
Billing: Enthalpy - Orange c/o Montrose Environmental Group P.O. Box 741137, Los Angeles, CA 90074-1137	**Matrix:** A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other	**Preservatives:** 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Ninyo & Moore	Name:	Cypress Ltd Phase II ESA
Report To:	Patrick Cullip & Kristina Hill	Number:	210784002
Email:	pcullip@ninyoandmoore.com	P.O. #:	11
Address:	475 Goddard	Address:	APN: 244-221-23
	Irvine, CA 92618		Cypress, CA
Phone:	949-753-7070	Global ID:	—
Fax:	949-753-7071	Sampled By:	KMH (Kristina Hill)

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	T22 Metals (6010B/7471A)	TPH cc (8015B/5035)	VOCs (8260B/5035)	HOLD	Test Instructions / Comments
1	B1-5'	12/27/18	0900	SOIL	1-6" sleeve 5-VOAs	ICE	X				
2	B1-10'		0910					X	X		
3	B1-15'		0920							X	Hold
4	B2-5'		1000				X				
5	B2-10'		1010					X	X		
6	B2-15'		1030							X	Hold
7	B3-5'		1200				X				
8	B3-10'		1210					X	X		
9	B3-15'		1220							X	Hold
10	B4-5'	↓	1250	↓	↓		X				

	Signature	Print Name	Company / Title	Date / Time
[1] Relinquished By:	[signature]	Kristina Hill	Ninyo & Moore / Ecologist	12/27/18 1535
[1] Received By:	[signature]	6 km	CA	12/27/18 1535
[2] Relinquished By:				
[2] Received By:				
[3] Relinquished By:				
[3] Received By:				

ENTHALPY ANALYTICAL, INC.

931 W. Barkley Ave, Orange, CA 92868

Phone: (714) 771-6900 Fax: (714)771-9933

Billing: Enthalpy - Orange

c/o Montrose Environmental Group

P.O. Box 741137, Los Angeles, CA 90074-1137

ENTHALPY ANALYTICAL

Chain of Custody Record

Lab No:

Page: 2 of 2

Turn Around Time (Rush by advanced notice only)

Standard:	X	4 Day:		3 Day:	
2 Day:		1 Day:		Same Day:	

Matrix: A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other

Preservatives: 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Ninyo & Moore	Name:	Cypress Ltd Phase II ESA
Report To:	Patrick Cullip & Kristina Hill	Number:	210784002
Email:	pcullip / khill @ ninyoandmoore.com	P.O. #:	11
Address:	475 Goddard	Address:	APN: 244-221-23
	Irvine, CA 92618		Cypress, CA
Phone:	949-753-7070	Global ID:	—
Fax:	949-753-7071	Sampled By:	KMH (Kristina Hill)

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	T22 Metals (6010B/7471A)	TPHcc (8015B)	VOCs (8260B)	HOLD	Test Instructions / Comments
1	B4-10'	12/27/18	1300	SOIL	1-6" sleeve 5-VOAs	ICE	X	X			
2	B4-15'		1310		11 11					X	Hold
3	Trip Blank		—	H_2O	2-VOAs				X		
4											
5											
6											
7											
8											
9											
10											

Analysis Request: 5035 5035 KMH 12/27/18

	Signature	Print Name	Company / Title	Date / Time
[1] Relinquished By:		Kristina Hill	Ninyo & Moore / Geologist	12/27/18 1535
[1] Received By:				12/27/18 1535
[2] Relinquished By:				
[2] Received By:				
[3] Relinquished By:				
[3] Received By:				

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Ninyo & Moore Project: _____

Date Received: 12/27/18 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 8.5 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☐ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: -0.1 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)	✓		
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 12/27/18

JONES ENVIRONMENTAL, INC.

714-449-9937
562-646-1611
805-399-0060

11007 FOREST PLACE
SANTA FE SPRINGS, CA 90670
WWW.JONESENV.COM

JONES ENVIRONMENTAL

LABORATORY RESULTS

Client:	Ninyo & Moore	**Report date:**	1/2/2019
Client Address:	475 Goddard, Suite 200 Irvine, CA 92618	**JEL Ref. No.:**	D-1572
Attn:	Kristina Hill	**Date Sampled:**	1/2/2019
		Date Received:	1/2/2019
		Date Analyzed:	1/2/2019
Project Address:	4511 Katella Ave Cypress, CA	**Physical State:**	Soil Gas

ANALYSES REQUESTED

1. EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sampling – Soil Gas samples were collected in glass gas-tight syringes equipped with Teflon plungers.

A tracer gas mixture of n-pentane, n-hexane, and n-heptane was placed at the tubing-surface interface before sampling. These compounds were analyzed during the 8260B analytical run to determine if there were surface leaks into the subsurface due to improper installation of the probe. No n-pentane, n-hexane, or n-heptane was found in any of the samples reported herein.

The sampling rate was approximately 200 cc/min, except when noted differently on the chain of custody record, using a glass gas-tight syringe. Purging was completed using a pump set at approximately 200 cc/min, except when noted differently on the chain of custody record. A default of 3 purge volumes was used as recommended by July 2015 DTSC/RWQCB guidance documents.

Prior to purging and sampling of soil gas at each point, a shut-in test was conducted to check for leaks in the above ground fittings. The shut-in test was performed on the above ground apparatus by evacuating the line to a vacuum of 100 inches of water, sealing the entire system and watching the vacuum for at least one minute. A vacuum gauge attached in parallel to the apparatus measured the vacuum. If there was any observable loss of vacuum, the fittings were adjusted as needed until the vacuum did not change noticeably. The soil gas sample was then taken.

No flow conditions occur when a sampling rate greater than 10 mL/min cannot be maintained without applying a vacuum greater than 100 inches of water to the sampling train. The sampling train is left at a vacuum for no less than three minutes. If the vacuum does not subside appreciably after three minutes, the sample location is determined to be a no flow sample.

Analytical – Soil Gas samples were analyzed using EPA Method 8260 that includes extra compounds required by DTSC/RWQCB (such as Freon 113). Instrument Continuing Calibration Verification, QC Reference Standards, Instrument Blanks and Sampling Blanks were analyzed every 12 hours as prescribed by the method. In addition, a Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) were analyzed with each batch of Soil Gas samples. A duplicate/replicate sample was analyzed each day of the sampling activity. All samples were injected into the GC/MS system within 30 minutes of sampling.

Approval:

Angela Haar, Ph. D.
Mobile Lab Manager

JONES ENVIRONMENTAL, INC.

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562-646-1611
805-399-0060

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SANTA FE SPRINGS, CA 90670
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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Ninyo & Moore	**Report date:**	1/2/2019
Client Address:	475 Goddard, Suite 200 Irvine, CA 92618	**Jones Ref. No.:**	D-1572
Attn:	Kristina Hill	**Date Sampled:**	1/2/2019
		Date Received:	1/2/2019
		Date Analyzed:	1/2/2019
Project Address:	4511 Katella Ave Cypress, CA	**Physical State:**	Soil Gas

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV1-3**	**SV1-7**	**SV2-4.5**	**SV2-7.5**	**SV3-5**		
Jones ID:	**D-1572-01**	**D-1572-02**	**D-1572-03**	**D-1572-04**	**D-1572-05**	**Reporting Limit**	**Units**
Analytes:							
Benzene	ND	ND	ND	ND	ND	8	µg/m3
Bromobenzene	ND	ND	ND	ND	ND	8	µg/m3
Bromodichloromethane	ND	ND	ND	ND	ND	8	µg/m3
Bromoform	ND	ND	ND	ND	ND	8	µg/m3
n-Butylbenzene	ND	ND	ND	ND	ND	8	µg/m3
sec-Butylbenzene	ND	ND	ND	ND	ND	8	µg/m3
tert-Butylbenzene	ND	ND	ND	ND	ND	8	µg/m3
Carbon tetrachloride	ND	ND	ND	ND	ND	8	µg/m3
Chlorobenzene	ND	ND	ND	ND	ND	8	µg/m3
Chloroform	ND	ND	ND	ND	ND	8	µg/m3
2-Chlorotoluene	ND	ND	ND	ND	ND	10	µg/m3
4-Chlorotoluene	ND	ND	ND	ND	ND	10	µg/m3
Dibromochloromethane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	ND	8	µg/m3
Dibromomethane	ND	ND	ND	ND	ND	8	µg/m3
1,2- Dichlorobenzene	ND	ND	ND	ND	ND	10	µg/m3
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	10	µg/m3
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	10	µg/m3
Dichlorodifluoromethane	ND	ND	ND	ND	ND	8	µg/m3
1,1-Dichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1-Dichloroethene	ND	**86**	ND	ND	ND	8	µg/m3
cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	8	µg/m3
1,2-Dichloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,3-Dichloropropane	ND	ND	ND	ND	ND	8	µg/m3
2,2-Dichloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,1-Dichloropropene	ND	ND	ND	ND	ND	10	µg/m3

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Sample ID:	**SV1-3**	**SV1-7**	**SV2-4.5**	**SV2-7.5**	**SV3-5**		
Jones ID:	**D-1572-01**	**D-1572-02**	**D-1572-03**	**D-1572-04**	**D-1572-05**	**Reporting Limit**	**Units**
Analytes:							
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	8	µg/m3
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	8	µg/m3
Ethylbenzene	ND	**9**	ND	ND	ND	8	µg/m3
Freon 113	ND	ND	ND	ND	ND	16	µg/m3
Hexachlorobutadiene	ND	ND	ND	ND	ND	16	µg/m3
Isopropylbenzene	ND	ND	ND	ND	ND	8	µg/m3
4-Isopropyltoluene	ND	ND	ND	ND	ND	10	µg/m3
Methylene chloride	ND	ND	ND	ND	ND	8	µg/m3
Naphthalene	ND	ND	ND	ND	ND	40	µg/m3
n-Propylbenzene	ND	ND	ND	ND	ND	8	µg/m3
Styrene	ND	ND	ND	ND	ND	8	µg/m3
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	8	µg/m3
Tetrachloroethene	**11**	**27**	**12**	**14**	ND	8	µg/m3
Toluene	ND	**12**	ND	**12**	ND	8	µg/m3
1,2,3-Trichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,2,4-Trichlorobenzene	ND	ND	ND	ND	ND	16	µg/m3
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	8	µg/m3
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	8	µg/m3
Trichloroethene	ND	ND	ND	ND	ND	8	µg/m3
Trichlorofluoromethane	ND	ND	ND	ND	ND	10	µg/m3
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	8	µg/m3
1,2,4-Trimethylbenzene	**8**	**9**	ND	ND	ND	8	µg/m3
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	8	µg/m3
Vinyl chloride	ND	ND	ND	ND	ND	8	µg/m3
m,p-Xylene	ND	ND	ND	ND	ND	16	µg/m3
o-Xylene	**9**	**10**	ND	ND	ND	8	µg/m3
MTBE	ND	ND	ND	ND	ND	40	µg/m3
Ethyl-tert-butylether	ND	ND	ND	ND	ND	40	µg/m3
Di-isopropylether	ND	ND	ND	ND	ND	40	µg/m3
tert-amylmethylether	ND	ND	ND	ND	ND	40	µg/m3
tert-Butylalcohol	ND	ND	ND	ND	ND	400	µg/m3
Gasoline Range Organics (C4-C12)	**4670**	**8510**	ND	ND	ND	2000	µg/m3
Tracer:							
n-Pentane	ND	ND	ND	ND	ND	80	µg/m3
n-Hexane	ND	ND	ND	ND	ND	80	µg/m3
n-Heptane	ND	ND	ND	ND	ND	80	µg/m3
Dilution Factor	1	1	1	1	1		
Surrogate Recoveries:						**QC Limits**	
Dibromofluoromethane	100%	86%	102%	104%	100%	60 - 140	
Toluene-d_8	97%	96%	90%	95%	95%	60 - 140	
4-Bromofluorobenzene	92%	93%	89%	92%	93%	60 - 140	
Batch ID	D1-010219-01	D1-010219-01	D1-010219-01	D1-010219-01	D1-010219-01		

ND= Value less than reporting limit

JONES ENVIRONMENTAL, INC.

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805-399-0060

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JONES ENVIRONMENTAL LABORATORY RESULTS

Client:	Ninyo & Moore	**Report date:**	1/2/2019
Client Address:	475 Goddard, Suite 200 Irvine, CA 92618	**Jones Ref. No.:**	D-1572
Attn:	Kristina Hill	**Date Sampled:**	1/2/2019
		Date Received:	1/2/2019
		Date Analyzed:	1/2/2019
Project Address:	4511 Katella Ave Cypress, CA	**Physical State:**	Soil Gas

EPA 8260B – Volatile Organics by GC/MS + Oxygenates

Sample ID:	**SV3-9.5**	**SV4-5**	**SV4-10**	**SV4-10 DUP**		
Jones ID:	**D-1572-06**	**D-1572-07**	**D-1572-08**	**D-1572-09**	**Reporting Limit**	**Units**
Analytes:						
Benzene	ND	ND	ND	ND	8	µg/m3
Bromobenzene	ND	ND	ND	ND	8	µg/m3
Bromodichloromethane	ND	ND	ND	ND	8	µg/m3
Bromoform	ND	ND	ND	ND	8	µg/m3
n-Butylbenzene	ND	ND	ND	ND	8	µg/m3
sec-Butylbenzene	ND	ND	ND	ND	8	µg/m3
tert-Butylbenzene	ND	ND	ND	ND	8	µg/m3
Carbon tetrachloride	ND	ND	ND	ND	8	µg/m3
Chlorobenzene	ND	ND	ND	ND	8	µg/m3
Chloroform	ND	ND	ND	ND	8	µg/m3
2-Chlorotoluene	ND	ND	ND	ND	10	µg/m3
4-Chlorotoluene	ND	ND	ND	ND	10	µg/m3
Dibromochloromethane	ND	ND	ND	ND	8	µg/m3
1,2-Dibromo-3-chloropropane	ND	ND	ND	ND	8	µg/m3
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	8	µg/m3
Dibromomethane	ND	ND	ND	ND	8	µg/m3
1,2- Dichlorobenzene	ND	ND	ND	ND	10	µg/m3
1,3-Dichlorobenzene	ND	ND	ND	ND	10	µg/m3
1,4-Dichlorobenzene	ND	ND	ND	ND	10	µg/m3
Dichlorodifluoromethane	ND	ND	ND	ND	8	µg/m3
1,1-Dichloroethane	ND	ND	ND	ND	8	µg/m3
1,2-Dichloroethane	ND	ND	ND	ND	8	µg/m3
1,1-Dichloroethene	ND	ND	ND	ND	8	µg/m3
cis-1,2-Dichloroethene	ND	ND	ND	ND	8	µg/m3
trans-1,2-Dichloroethene	ND	ND	ND	ND	8	µg/m3
1,2-Dichloropropane	ND	ND	ND	ND	8	µg/m3
1,3-Dichloropropane	ND	ND	ND	ND	8	µg/m3
2,2-Dichloropropane	ND	ND	ND	ND	8	µg/m3
1,1-Dichloropropene	ND	ND	ND	ND	10	µg/m3

JONES ENVIRONMENTAL LABORATORY RESULTS

EPA 8260B – Volatile Organics by GC/MS + Oxygenates

Sample ID:	**SV3-9.5**	**SV4-5**	**SV4-10**	**SV4-10 DUP**		
Jones ID:	**D-1572-06**	**D-1572-07**	**D-1572-08**	**D-1572-09**	**Reporting Limit**	**Units**
Analytes:						
cis-1,3-Dichloropropene	ND	ND	ND	ND	8	µg/m3
trans-1,3-Dichloropropene	ND	ND	ND	ND	8	µg/m3
Ethylbenzene	ND	ND	ND	ND	8	µg/m3
Freon 113	ND	ND	ND	ND	16	µg/m3
Hexachlorobutadiene	ND	ND	ND	ND	16	µg/m3
Isopropylbenzene	ND	ND	ND	ND	8	µg/m3
4-Isopropyltoluene	ND	ND	ND	ND	10	µg/m3
Methylene chloride	ND	ND	ND	ND	8	µg/m3
Naphthalene	ND	ND	ND	ND	40	µg/m3
n-Propylbenzene	ND	ND	ND	ND	8	µg/m3
Styrene	ND	ND	ND	ND	8	µg/m3
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	8	µg/m3
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	8	µg/m3
Tetrachloroethene	**34**	**10**	**10**	**9**	8	µg/m3
Toluene	ND	ND	**10**	**8**	8	µg/m3
1,2,3-Trichlorobenzene	ND	ND	ND	ND	16	µg/m3
1,2,4-Trichlorobenzene	ND	ND	ND	ND	16	µg/m3
1,1,1-Trichloroethane	ND	ND	ND	ND	8	µg/m3
1,1,2-Trichloroethane	ND	ND	ND	ND	8	µg/m3
Trichloroethene	ND	ND	ND	ND	8	µg/m3
Trichlorofluoromethane	ND	ND	ND	ND	10	µg/m3
1,2,3-Trichloropropane	ND	ND	ND	ND	8	µg/m3
1,2,4-Trimethylbenzene	ND	ND	ND	ND	8	µg/m3
1,3,5-Trimethylbenzene	ND	ND	ND	ND	8	µg/m3
Vinyl chloride	ND	ND	ND	ND	8	µg/m3
m,p-Xylene	ND	ND	ND	ND	16	µg/m3
o-Xylene	ND	ND	ND	ND	8	µg/m3
MTBE	ND	ND	ND	ND	40	µg/m3
Ethyl-tert-butylether	ND	ND	ND	ND	40	µg/m3
Di-isopropylether	ND	ND	ND	ND	40	µg/m3
tert-amylmethylether	ND	ND	ND	ND	40	µg/m3
tert-Butylalcohol	ND	ND	ND	ND	400	µg/m3
Gasoline Range Organics (C4-C12)	ND	ND	ND	ND	2000	µg/m3
Tracer:						
n-Pentane	ND	ND	ND	ND	80	µg/m3
n-Hexane	ND	ND	ND	ND	80	µg/m3
n-Heptane	ND	ND	ND	ND	80	µg/m3
Dilution Factor	1	1	1	1		
Surrogate Recoveries:					**QC Limits**	
Dibromofluoromethane	101%	99%	97%	99%	60 - 140	
Toluene-d_8	95%	96%	96%	95%	60 - 140	
4-Bromofluorobenzene	91%	94%	96%	94%	60 - 140	
Batch ID	D1-010219-01	D1-010219-01	D1-010219-01	D1-010219-01		

ND= Value less than reporting limit

JONES ENVIRONMENTAL, INC.

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JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

Client:	Ninyo & Moore	**Report date:**	1/2/2019
Client Address:	475 Goddard, Suite 200 Irvine, CA 92618	**Jones Ref. No.:**	D-1572
Attn:	Kristina Hill	**Date Sampled:**	1/2/2019
		Date Received:	1/2/2019
		Date Analyzed:	1/2/2019
Project Address:	4511 Katella Ave Cypress, CA	**Physical State:**	Soil Gas

EPA 8260B – Volatile Organics by GC/MS + Oxygenates

Sample ID:	**METHOD BLANK**	**SAMPLING BLANK**		
Jones ID:	**010219-D1MB1**	**010219-D1SB1**	**Reporting Limit**	**Units**
Analytes:				
Benzene	ND	ND	8	µg/m3
Bromobenzene	ND	ND	8	µg/m3
Bromodichloromethane	ND	ND	8	µg/m3
Bromoform	ND	ND	8	µg/m3
n-Butylbenzene	ND	ND	8	µg/m3
sec-Butylbenzene	ND	ND	8	µg/m3
tert-Butylbenzene	ND	ND	8	µg/m3
Carbon tetrachloride	ND	ND	8	µg/m3
Chlorobenzene	ND	ND	8	µg/m3
Chloroform	ND	ND	8	µg/m3
2-Chlorotoluene	ND	ND	10	µg/m3
4-Chlorotoluene	ND	ND	10	µg/m3
Dibromochloromethane	ND	ND	8	µg/m3
1,2-Dibromo-3-chloropropane	ND	ND	8	µg/m3
1,2-Dibromoethane (EDB)	ND	ND	8	µg/m3
Dibromomethane	ND	ND	8	µg/m3
1,2- Dichlorobenzene	ND	ND	10	µg/m3
1,3-Dichlorobenzene	ND	ND	10	µg/m3
1,4-Dichlorobenzene	ND	ND	10	µg/m3
Dichlorodifluoromethane	ND	ND	8	µg/m3
1,1-Dichloroethane	ND	ND	8	µg/m3
1,2-Dichloroethane	ND	ND	8	µg/m3
1,1-Dichloroethene	ND	ND	8	µg/m3
cis-1,2-Dichloroethene	ND	ND	8	µg/m3
trans-1,2-Dichloroethene	ND	ND	8	µg/m3
1,2-Dichloropropane	ND	ND	8	µg/m3
1,3-Dichloropropane	ND	ND	8	µg/m3
2,2-Dichloropropane	ND	ND	8	µg/m3
1,1-Dichloropropene	ND	ND	10	µg/m3

JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

EPA 8260B – Volatile Organics by GC/MS + Oxygenates

Sample ID:	METHOD BLANK	SAMPLING BLANK		
Jones ID:	**010219-D1MB1**	**010219-D1SB1**	**Reporting Limit**	**Units**
Analytes:				
cis-1,3-Dichloropropene	ND	ND	8	µg/m3
trans-1,3-Dichloropropene	ND	ND	8	µg/m3
Ethylbenzene	ND	ND	8	µg/m3
Freon 113	ND	ND	16	µg/m3
Hexachlorobutadiene	ND	ND	16	µg/m3
Isopropylbenzene	ND	ND	8	µg/m3
4-Isopropyltoluene	ND	ND	10	µg/m3
Methylene chloride	ND	ND	8	µg/m3
Naphthalene	ND	ND	40	µg/m3
n-Propylbenzene	ND	ND	8	µg/m3
Styrene	ND	ND	8	µg/m3
1,1,1,2-Tetrachloroethane	ND	ND	8	µg/m3
1,1,2,2-Tetrachloroethane	ND	ND	8	µg/m3
Tetrachloroethene	ND	ND	8	µg/m3
Toluene	ND	ND	8	µg/m3
1,2,3-Trichlorobenzene	ND	ND	16	µg/m3
1,2,4-Trichlorobenzene	ND	ND	16	µg/m3
1,1,1-Trichloroethane	ND	ND	8	µg/m3
1,1,2-Trichloroethane	ND	ND	8	µg/m3
Trichloroethene	ND	ND	8	µg/m3
Trichlorofluoromethane	ND	ND	10	µg/m3
1,2,3-Trichloropropane	ND	ND	8	µg/m3
1,2,4-Trimethylbenzene	ND	ND	8	µg/m3
1,3,5-Trimethylbenzene	ND	ND	8	µg/m3
Vinyl chloride	ND	ND	8	µg/m3
m,p-Xylene	ND	ND	16	µg/m3
o-Xylene	ND	ND	8	µg/m3
MTBE	ND	ND	40	µg/m3
Ethyl-tert-butylether	ND	ND	40	µg/m3
Di-isopropylether	ND	ND	40	µg/m3
tert-amylmethylether	ND	ND	40	µg/m3
tert-Butylalcohol	ND	ND	400	µg/m3
Tracer:				
n-Pentane	ND	ND	80	µg/m3
n-Hexane	ND	ND	80	µg/m3
n-Heptane	ND	ND	80	µg/m3
Dilution Factor	1	1		
Surrogate Recoveries:			**QC Limits**	
Dibromofluoromethane	92%	62%	60 - 140	
Toluene-d_8	97%	68%	60 - 140	
4-Bromofluorobenzene	97%	78%	60 - 140	
Batch ID	D1-010219-01	D1-010219-01		

ND= Value less than reporting limit

JONES ENVIRONMENTAL, INC.

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JONES ENVIRONMENTAL QUALITY CONTROL INFORMATION

Client:	Ninyo & Moore	**Report date:**	1/2/2019
Client Address:	475 Goddard, Suite 200 Irvine, CA 92618	**Jones Ref. No.:**	D-1572
Attn:	Kristina Hill	**Date Sampled:**	1/2/2019
		Date Received:	1/2/2019
		Date Analyzed:	1/2/2019
Project Address:	4511 Katella Ave Cypress, CA	**Physical State:**	Soil Gas

EPA 8260B – Volatile Organics by GC/MS + Oxygenates/Gasoline Range Organics

Batch ID: D1-010219-01

Jones ID:	**010219-D1LCS1**	**010219-D1LCS1**			**010219-D1CCV1**	
Parameter	LCS Recovery (%)	LCSD Recovery (%)	RPD	Acceptability Range (%)	CCV	Acceptability Range (%)
Vinyl chloride	94%	89%	5.9%	60 - 140	93%	80 - 120
1,1-Dichloroethene	104%	98%	6.0%	60 - 140	116%	80 - 120
Cis-1,2-Dichloroethene	98%	95%	3.9%	70 - 130	103%	80 - 120
1,1,1-Trichloroethane	99%	93%	5.9%	70 - 130	103%	80 - 120
Benzene	113%	110%	3.3%	70 - 130	103%	80 - 120
Trichloroethene	97%	90%	7.6%	70 - 130	101%	80 - 120
Toluene	94%	86%	8.7%	70 - 130	98%	80 - 120
Tetrachloroethene	93%	83%	11.2%	70 - 130	99%	80 - 120
Chlorobenzene	97%	91%	6.1%	70 - 130	97%	80 - 120
Ethylbenzene	102%	90%	12.5%	70 - 130	99%	80 - 120
1,2,4 Trimethylbenzene	99%	85%	15.0%	70 - 130	103%	80 - 120
Gasoline Range Organics (C4-C12)	102%	93%	9.5%	70 - 130	101%	80 - 120
Surrogate Recovery:						
Dibromofluoromethane	94%	96%		60 - 140	100%	60 - 140
Toluene-d_8	98%	96%		60 - 140	102%	60 - 140
4-Bromofluorobenzene	98%	96%		60 - 140	101%	60 - 140

LCS = Laboratory Control Sample
LCSD = Laboratory Control Sample Duplicate
CCV = Continuing Calibration Verification
RPD = Relative Percent Difference; Acceptability range for RPD is ≤ 20%

JONES ENVIRONMENTAL, INC.
11007 Forest Pl.
Santa Fe Springs, CA 90670
(714) 449-9937
Fax (714) 449-9685
www.jonesenv.com

Soil-Gas Chain-of-Custody Record

Client: Ninyo & Moore
Project Name:
Project Address: 4511 Katella Ave, Cypress, CA
Email:
Phone:
Report To: Kristina Hill
Sampler: CEE & JJA

Date: 01/0219
Client Project #:

Purge Number: □ 1P ☑ 3P □ 7P □ 10P

Shut-In Test: (Y) / N

Report Options: EDD ____ EDF* - 10% Surcharge____ *Global ID _____

LAB USE ONLY
Jones Project #: D-1572

Page 1 of 1

Sample Container: GASTIGHT GLASS SYRINGE
If different than above, see Notes.

Turn Around Requested:
□ Immediate Attention
□ Rush 24 Hours
□ Rush 48 Hours
□ Rush 72 Hours
□ Normal
☑ Mobile Lab

Tracer:
☑ n-pentane
☑ n-hexane
☑ n-heptane
□ Helium
□ 1,1-DFA
□ _____

Reporting Limits Requested: □ Commercial ☑ Residential

Units: µg/M³

Analysis Requested

Sample ID	Purge Number	Purge Volume (mL)	Date	Sample Collection Time	Sample Analysis Time	Laboratory Sample ID	Purge Rate (mL/min)	Pump Used	Magnehelic	Sample Matrix: Soil Gas (SG), Air (A), Material (M)	EPA 8260B (VOCs)	TPHg			Magnehelic Vacuum (in/H_2O)	Number of Containers	Notes & Special Instructions
SV1-3	3	1270	1/2/19	9:29	9:35	D-1572-01	200	STEVE.1	M100.002	SG	X	X			<2	1	
SV1-7	3	1340	1/2/19	8:54	8:57	D-1572-02	200	STEVE.2	M100.002	SG	X	X			<2	1	
SV2-4.5	3	1300	1/2/19	9:46	9:51	D-1572-03	200	STEVE.1	118012	SG	X	X			<2	1	
SV2-7.5	3	1340	1/2/19	10:04	10:09	D-1572-04	200	STEVE.2	118012	SG	X	X			<2	1	
SV3-5	3	1310	1/2/19	10:25	10:26	D-1572-05	200	STEVE.1	M100.002	SG	X	X			<2	1	
SV3-9.5	3	1380	1/2/19	10:55	10:59	D-1572-06	200	STEVE.2	118012	SG	X	X			<2	1	
SV4-5	3	1380	1/2/19	11:13	11:17	D-1572-07	200	STEVE.1	M100.002	SG	X	X			<2	1	
SV4-10	3	1310	1/2/19	11:32	11:35	D-1572-08	200	STEVE.2	118012	SG	X	X			8	1	
SV4-10 DUP	3	1390	1/2/19	11:49	11:52	D-1572-09	200	STEVE.2	118012	SG	X	X			8	1	

Relinquished By (Signature)	Printed Name	Received By (Signature)	Printed Name	
Kristina Hill	Kristina Hill	Casey Ellis	Casey Ellis	9 Total Number of Containers
Company: NINYO & MOORE	Date: 1/2/2019 Time: 1225	Company: JONES ENVIRONMENTAL, INC.	Date: 1/2/2019 Time: 1225	
Relinquished By (Signature)	Printed Name	Received By Laboratory (Signature)	Printed Name	
Company	Date Time	Company	Date Time	

Client signature on this Chain of Custody form constitutes acknowledgement that the above analytes have been requested, and the information provided herein is correct and accurate.

Enthalpy Analytical, LLC
931 W. Barkley Ave - Orange, CA 92868
Tel: (714)771-6900 Fax: (714)538-1209
www.enthalpy.com
info-sc@enthalpy.com

MONTROSE ENVIRONMENTAL

Client:	Ninyo & Moore
Address:	475 Goddard Suite 200 Irvine, CA 92618
Attn:	Patrick Cullip

Lab Request:	410375
Report Date:	01/04/2019
Date Received:	12/27/2018
Client ID:	15461

Comments: Cypress Ltd Phase II ESA
PO# 210784002
APN 244-221-23
Cypress, CA

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods. Methods accredited by NELAC are indicated on the report. This cover letter is an integral part of the final report.

Sample #	Client Sample ID
410375-001	WC-1

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

Report Review performed by: Ranjit Clarke, Project Manager

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 60 days from date received.

Matrix:	Solid	**Client:**	Ninyo & Moore	**Collector:**	Client
Sampled:	12/27/2018	**Site:**			
Sample #:	**410375-001**	**Client Sample #:**	WC-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Method: EPA 6010B *NELAC* Prep Method: EPA 3050B						QCBatchID: QC1199568		
Antimony	ND	1	3	mg/Kg	01/02/19	01/03/19	KLN	
Arsenic	ND	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Barium	**68.7**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Beryllium	ND	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Cadmium	**0.50**	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Chromium	**16.3**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Cobalt	**9.18**	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Copper	**9.66**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Lead	**6.98**	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Molybdenum	ND	1	1	mg/Kg	01/02/19	01/03/19	KLN	
Nickel	**11.3**	1	1.5	mg/Kg	01/02/19	01/03/19	KLN	
Selenium	ND	1	3	mg/Kg	01/02/19	01/03/19	KLN	
Silver	ND	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Thallium	ND	1	3	mg/Kg	01/02/19	01/03/19	KLN	
Vanadium	**33.2**	1	0.5	mg/Kg	01/02/19	01/03/19	KLN	
Zinc	**50.5**	1	5	mg/Kg	01/02/19	01/03/19	KLN	
Method: EPA 7471A *NELAC* Prep Method: EPA 7471A						QCBatchID: QC1199549		
Mercury	ND	2	0.28	mg/Kg	12/31/18	12/31/18	CO	D2
Method: EPA 8015M Prep Method: EPA 3580A						QCBatchID: QC1199510		
TPH (C13 to C22)	ND	1	10	mg/Kg	12/29/18	12/31/18	SS	
TPH (C23 to C40)	ND	1	10	mg/Kg	12/29/18	12/31/18	SS	
TPH (C6 to C12)	ND	1	10	mg/Kg	12/29/18	12/31/18	SS	

Surrogate	*% Recovery*	*Limits*	*Notes*
Triacontane (SUR)	*89*	*50-150*	

Method: EPA 8260B *NELAC* Prep Method: EPA 5030						QCBatchID: QC1199511	
1,1,1,2-Tetrachloroethane	ND	1	5	ug/Kg		12/29/18	ZZ
1,1,1-Trichloroethane	ND	1	5	ug/Kg		12/29/18	ZZ
1,1,2,2-Tetrachloroethane	ND	1	5	ug/Kg		12/29/18	ZZ
1,1,2-Trichloroethane	ND	1	5	ug/Kg		12/29/18	ZZ
1,1,2-Trichlorotrifluoroethane	ND	1	5	ug/Kg		12/29/18	ZZ
1,1-Dichloroethane	ND	1	5	ug/Kg		12/29/18	ZZ
1,1-Dichloroethene	ND	1	5	ug/Kg		12/29/18	ZZ
1,1-Dichloropropene	ND	1	5	ug/Kg		12/29/18	ZZ
1,2,3-Trichlorobenzene	ND	1	5	ug/Kg		12/29/18	ZZ
1,2,3-Trichloropropane	ND	1	5	ug/Kg		12/29/18	ZZ
1,2,4-Trichlorobenzene	ND	1	5	ug/Kg		12/29/18	ZZ
1,2,4-Trimethylbenzene	ND	1	5	ug/Kg		12/29/18	ZZ
1,2-Dibromo-3-chloropropane	ND	1	5	ug/Kg		12/29/18	ZZ
1,2-Dibromoethane	ND	1	5	ug/Kg		12/29/18	ZZ
1,2-Dichlorobenzene	ND	1	5	ug/Kg		12/29/18	ZZ
1,2-Dichloroethane	ND	1	5	ug/Kg		12/29/18	ZZ
1,2-Dichloropropane	ND	1	5	ug/Kg		12/29/18	ZZ
1,3,5-Trimethylbenzene	ND	1	5	ug/Kg		12/29/18	ZZ
1,3-Dichlorobenzene	ND	1	5	ug/Kg		12/29/18	ZZ
1,3-Dichloropropane	ND	1	5	ug/Kg		12/29/18	ZZ
1,4-Dichlorobenzene	ND	1	5	ug/Kg		12/29/18	ZZ
2,2-Dichloropropane	ND	1	5	ug/Kg		12/29/18	ZZ
2-Butanone (MEK)	ND	1	100	ug/Kg		12/29/18	ZZ
2-Chlorotoluene	ND	1	5	ug/Kg		12/29/18	ZZ
4-Chlorotoluene	ND	1	5	ug/Kg		12/29/18	ZZ
4-Isopropyltoluene	ND	1	5	ug/Kg		12/29/18	ZZ
4-Methyl-2-pentanone (MIBK)	ND	1	5	ug/Kg		12/29/18	ZZ
Acetone	ND	1	100	ug/Kg		12/29/18	ZZ

Matrix:	Solid	**Client:**	Ninyo & Moore	**Collector:**	Client
Sampled:	12/27/2018	**Site:**			
Sample #:	**410375-001**	**Client Sample #:**	WC-1	**Sample Type:**	

Analyte	Result	DF	RDL	Units	Prepared	Analyzed	By	Notes
Allyl Chloride	ND	1	5	ug/Kg		12/29/18	ZZ	
Benzene	ND	1	5	ug/Kg		12/29/18	ZZ	
Bromobenzene	ND	1	5	ug/Kg		12/29/18	ZZ	
Bromochloromethane	ND	1	5	ug/Kg		12/29/18	ZZ	
Bromodichloromethane	ND	1	5	ug/Kg		12/29/18	ZZ	
Bromoform	ND	1	5	ug/Kg		12/29/18	ZZ	
Bromomethane	ND	1	5	ug/Kg		12/29/18	ZZ	
Carbon Tetrachloride	ND	1	5	ug/Kg		12/29/18	ZZ	
Chlorobenzene	ND	1	5	ug/Kg		12/29/18	ZZ	
Chlorodibromomethane	ND	1	5	ug/Kg		12/29/18	ZZ	
Chloroethane	ND	1	5	ug/Kg		12/29/18	ZZ	
Chloroform	ND	1	5	ug/Kg		12/29/18	ZZ	
Chloromethane	ND	1	5	ug/Kg		12/29/18	ZZ	
cis-1,2-Dichloroethene	ND	1	5	ug/Kg		12/29/18	ZZ	
cis-1,3-dichloropropene	ND	1	5	ug/Kg		12/29/18	ZZ	
cis-1,4-dichloro-2-butene	ND	1	5	ug/Kg		12/29/18	ZZ	
Dibromomethane	ND	1	5	ug/Kg		12/29/18	ZZ	
Dichlorodifluoromethane	ND	1	5	ug/Kg		12/29/18	ZZ	
Di-isopropyl ether (DIPE)	ND	1	5	ug/Kg		12/29/18	ZZ	
Ethylbenzene	ND	1	5	ug/Kg		12/29/18	ZZ	
Ethyl-tertbutylether (ETBE)	ND	1	5	ug/Kg		12/29/18	ZZ	
Hexachlorobutadiene	ND	1	5	ug/Kg		12/29/18	ZZ	
Isopropylbenzene	ND	1	5	ug/Kg		12/29/18	ZZ	
m and p-Xylene	ND	1	5	ug/Kg		12/29/18	ZZ	
Methylene chloride	ND	1	5	ug/Kg		12/29/18	ZZ	
Methyl-t-butyl Ether (MTBE)	ND	1	5	ug/Kg		12/29/18	ZZ	
Naphthalene	ND	1	5	ug/Kg		12/29/18	ZZ	
N-butylbenzene	ND	1	5	ug/Kg		12/29/18	ZZ	
N-propylbenzene	ND	1	5	ug/Kg		12/29/18	ZZ	
o-Xylene	ND	1	5	ug/Kg		12/29/18	ZZ	
Sec-butylbenzene	ND	1	5	ug/Kg		12/29/18	ZZ	
Styrene	ND	1	5	ug/Kg		12/29/18	ZZ	
t-Butyl alcohol (TBA)	ND	1	10	ug/Kg		12/29/18	ZZ	
Tert-amylmethylether (TAME)	ND	1	5	ug/Kg		12/29/18	ZZ	
Tert-butylbenzene	ND	1	5	ug/Kg		12/29/18	ZZ	
Tetrachloroethene	ND	1	5	ug/Kg		12/29/18	ZZ	
Toluene	ND	1	5	ug/Kg		12/29/18	ZZ	
trans-1,2-dichloroethene	ND	1	5	ug/Kg		12/29/18	ZZ	
trans-1,3-dichloropropene	ND	1	5	ug/Kg		12/29/18	ZZ	
trans-1,4-dichloro-2-butene	ND	1	5	ug/Kg		12/29/18	ZZ	
Trichloroethene	ND	1	5	ug/Kg		12/29/18	ZZ	
Trichlorofluoromethane	ND	1	5	ug/Kg		12/29/18	ZZ	
Vinyl Chloride	ND	1	5	ug/Kg		12/29/18	ZZ	
Xylenes (Total)	ND	1	5	ug/Kg		12/29/18	ZZ	

Surrogate	*% Recovery*	*Limits*	*Notes*
1,2-Dichloroethane-d4 (SUR)	*107*	*70-145*	
4-Bromofluorobenzene (SUR)	*97*	*70-145*	
Dibromofluoromethane (SUR)	*103*	*70-145*	
Toluene-d8 (SUR)	*98*	*70-145*	

QCBatchID: QC1199510 **Analyst:** ssabir **Method:** EPA 8015M

Matrix: Solid **Analyzed:** 12/29/2018 **Instrument:** SVOA-GC (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1199510MB1					
TPH (C10 to C28)	ND	mg/Kg		10	
TPH (C13 to C22)	ND	mg/Kg		10	
TPH (C23 to C40)	ND	mg/Kg		20	
TPH (C28 to C40)	ND	mg/Kg		20	
TPH (C6 to C12)	ND	mg/Kg		10	
TPH (C6 to C44) Total	ND	mg/Kg		20	
TPH (C8 to C10)	ND	mg/Kg		10	
TPH Diesel	ND	mg/Kg		10	
TPH Gasoline	ND	mg/Kg		10	
TPH Motor Oil	ND	mg/Kg		20	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199510LCS1											
TPH (C10 to C28)	250		220		mg/Kg	88			60-133		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199510MS1, QC1199510MSD1												**Source: 410389-001**
TPH (C10 to C28)	3300	250	250	3000	3300	mg/Kg	0	0	9.5	70-130	20	NC

QCBatchID: QC1199511	**Analyst:** nicollez	**Method:** EPA 8260B	
Matrix: Solid	**Analyzed:** 12/29/2018	**Instrument:** VOA-MS (group)	

Blank Summary

Analyte	Blank Result	Units		RDL	Notes	
QC1199511MB1						
1,1,1,2-Tetrachloroethane	ND	ug/Kg		5		
1,1,1-Trichloroethane	ND	ug/Kg		5		
1,1,2,2-Tetrachloroethane	ND	ug/Kg		5		
1,1,2-Trichloroethane	ND	ug/Kg		5		
1,1,2-Trichlorotrifluoroethane	ND	ug/Kg		5		
1,1-Dichloroethane	ND	ug/Kg		5		
1,1-Dichloroethene	ND	ug/Kg		5		
1,1-Dichloropropene	ND	ug/Kg		5		
1,2,3-Trichlorobenzene	ND	ug/Kg		5		
1,2,3-Trichloropropane	ND	ug/Kg		5		
1,2,4-Trichlorobenzene	ND	ug/Kg		5		
1,2,4-Trimethylbenzene	ND	ug/Kg		5		
1,2-Dibromo-3-chloropropane	ND	ug/Kg		5		
1,2-Dibromoethane	ND	ug/Kg		5		
1,2-Dichlorobenzene	ND	ug/Kg		5		
1,2-Dichloroethane	ND	ug/Kg		5		
1,2-Dichloropropane	ND	ug/Kg		5		
1,3,5-Trimethylbenzene	ND	ug/Kg		5		
1,3-Dichlorobenzene	ND	ug/Kg		5		
1,3-Dichloropropane	ND	ug/Kg		5		
1,4-Dichlorobenzene	ND	ug/Kg		5		
2,2-Dichloropropane	ND	ug/Kg		5		
2-Butanone (MEK)	ND	ug/Kg		100		
2-Chlorotoluene	ND	ug/Kg		5		
4-Chlorotoluene	ND	ug/Kg		5		
4-Isopropyltoluene	ND	ug/Kg		5		
4-Methyl-2-pentanone (MIBK)	ND	ug/Kg		5		
Acetone	ND	ug/Kg		100		
Allyl Chloride	ND	ug/Kg		5		
Benzene	ND	ug/Kg		5		
Bromobenzene	ND	ug/Kg		5		
Bromochloromethane	ND	ug/Kg		5		
Bromodichloromethane	ND	ug/Kg		5		
Bromoform	ND	ug/Kg		5		
Bromomethane	ND	ug/Kg		5		
Carbon Tetrachloride	ND	ug/Kg		5		
Chlorobenzene	ND	ug/Kg		5		
Chlorodibromomethane	ND	ug/Kg		5		
Chloroethane	ND	ug/Kg		5		
Chloroform	ND	ug/Kg		5		
Chloromethane	ND	ug/Kg		5		
cis-1,2-Dichloroethene	ND	ug/Kg		5		
cis-1,3-dichloropropene	ND	ug/Kg		5		
cis-1,4-dichloro-2-butene	ND	ug/Kg		5		
Dibromomethane	ND	ug/Kg		5		
Dichlorodifluoromethane	ND	ug/Kg		5		
Di-isopropyl ether (DIPE)	ND	ug/Kg		5		
Ethylbenzene	ND	ug/Kg		5		
Ethyl-tertbutylether (ETBE)	ND	ug/Kg		5		
Hexachlorobutadiene	ND	ug/Kg		5		
Isopropylbenzene	ND	ug/Kg		5		
m and p-Xylene	ND	ug/Kg		5		

QCBatchID: QC1199511 **Analyst:** nicollez **Method:** EPA 8260B

Matrix: Solid **Analyzed:** 12/29/2018 **Instrument:** VOA-MS (group)

Analyte	Blank Result	Units		RDL	Notes
QC1199511MB1					
Methylene chloride	ND	ug/Kg		5	
Methyl-t-butyl Ether (MTBE)	ND	ug/Kg		5	
Naphthalene	ND	ug/Kg		5	
N-butylbenzene	ND	ug/Kg		5	
N-propylbenzene	ND	ug/Kg		5	
o-Xylene	ND	ug/Kg		5	
Sec-butylbenzene	ND	ug/Kg		5	
Styrene	ND	ug/Kg		5	
t-Butyl alcohol (TBA)	ND	ug/Kg		10	
Tert-amylmethylether (TAME)	ND	ug/Kg		5	
Tert-butylbenzene	ND	ug/Kg		5	
Tetrachloroethene	ND	ug/Kg		5	
Toluene	ND	ug/Kg		5	
trans-1,2-dichloroethene	ND	ug/Kg		5	
trans-1,3-dichloropropene	ND	ug/Kg		5	
trans-1,4-dichloro-2-butene	ND	ug/Kg		5	
Trichloroethene	ND	ug/Kg		5	
Trichlorofluoromethane	ND	ug/Kg		5	
Vinyl Chloride	ND	ug/Kg		5	
Xylenes (Total)	ND	ug/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199511LCS1											
1,1-Dichloroethene	50		59		ug/Kg	118			59-172		
Benzene	50		49		ug/Kg	98			62-137		
Chlorobenzene	50		51		ug/Kg	102			60-133		
Methyl-t-butyl Ether (MTBE)	50		38		ug/Kg	76			62-137		
Toluene	50		54		ug/Kg	108			59-139		
Trichloroethene	50		53		ug/Kg	106			66-142		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199511MS1, QC1199511MSD1												**Source: 410375-001**
1,1-Dichloroethene	ND	50	50	58	60	ug/Kg	116	120	3.4	59-172	22	
Benzene	0.95	50	50	48	50	ug/Kg	94	98	4.1	62-137	24	
Chlorobenzene	ND	50	50	49	49	ug/Kg	98	98	0.0	60-133	24	
Methyl-t-butyl Ether (MTBE)	ND	50	50	43	44	ug/Kg	86	88	2.3	62-137	21	
Toluene	ND	50	50	51	52	ug/Kg	102	104	1.9	59-139	21	
Trichloroethene	ND	50	50	51	52	ug/Kg	102	104	1.9	66-142	21	

QCBatchID: QC1199549 **Analyst:** cota **Method:** EPA 7471A

Matrix: Solid **Analyzed:** 12/31/2018 **Instrument:** AAICP-HG1

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1199549MB1					
Mercury	ND	mg/Kg		0.14	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199549LCS1											
Mercury	0.83		0.82		mg/Kg	99			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199549MS1, QC1199549MSD1												**Source: 410397-001**
Mercury	ND	0.83	0.83	0.77	0.72	mg/Kg	93	87	6.7	75-125	20	

QCBatchID: QC1199568 **Analyst:** dswafford **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 01/02/2019 **Instrument:** AAICP (group)

Blank Summary

Analyte	Blank Result	Units		RDL	Notes
QC1199568MB1					
Antimony	ND	mg/Kg		3	
Arsenic	ND	mg/Kg		1	
Barium	ND	mg/Kg		1	
Beryllium	ND	mg/Kg		0.5	
Cadmium	ND	mg/Kg		0.5	
Chromium	ND	mg/Kg		1	
Cobalt	ND	mg/Kg		0.5	
Copper	ND	mg/Kg		1	
Lead	ND	mg/Kg		1	
Molybdenum	ND	mg/Kg		1	
Nickel	ND	mg/Kg		1.5	
Selenium	ND	mg/Kg		3	
Silver	ND	mg/Kg		0.5	
Thallium	ND	mg/Kg		3	
Vanadium	ND	mg/Kg		0.5	
Zinc	ND	mg/Kg		5	

Lab Control Spike/ Lab Control Spike Duplicate Summary

Analyte	Spike Amount LCS	Spike Amount LCSD	Spike Result LCS	Spike Result LCSD	Units	Recoveries LCS	Recoveries LCSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199568LCS1											
Antimony	100		98.6		mg/Kg	99			80-120		
Arsenic	100		95.3		mg/Kg	95			80-120		
Barium	100		102		mg/Kg	102			80-120		
Beryllium	100		91.2		mg/Kg	91			80-120		
Cadmium	100		96.4		mg/Kg	96			80-120		
Chromium	100		93.5		mg/Kg	94			80-120		
Cobalt	100		101		mg/Kg	101			80-120		
Copper	100		95.6		mg/Kg	96			80-120		
Lead	100		103		mg/Kg	103			80-120		
Molybdenum	100		95.9		mg/Kg	96			80-120		
Nickel	100		104		mg/Kg	104			80-120		
Selenium	100		89.4		mg/Kg	89			80-120		
Silver	100		103		mg/Kg	103			80-120		
Thallium	100		98.1		mg/Kg	98			80-120		
Vanadium	100		101		mg/Kg	101			80-120		
Zinc	100		96.1		mg/Kg	96			80-120		

Matrix Spike/Matrix Spike Duplicate Summary

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199568MS1, QC1199568MSD1												**Source: 410305-131**
Antimony	ND	100	100	73.8	58.9	mg/Kg	74	59	22.5	75-125	20	M
Arsenic	1.63	100	100	111	104	mg/Kg	109	102	6.5	75-125	20	
Barium	112	100	100	214	204	mg/Kg	102	92	4.8	75-125	20	
Beryllium	ND	100	100	98.0	95.8	mg/Kg	98	96	2.3	75-125	20	
Cadmium	0.63	100	100	96.9	90.4	mg/Kg	96	90	6.9	75-125	20	
Chromium	12.0	100	100	107	99.2	mg/Kg	95	87	7.6	75-125	20	
Cobalt	9.08	100	100	110	102	mg/Kg	101	93	7.5	75-125	20	
Copper	13.1	100	100	111	104	mg/Kg	98	91	6.5	75-125	20	
Lead	15.2	100	100	131	120	mg/Kg	116	105	8.8	75-125	20	
Molybdenum	0.56	100	100	105	96.8	mg/Kg	104	96	8.1	75-125	20	

QCBatchID: QC1199568 **Analyst:** dswafford **Method:** EPA 6010B

Matrix: Solid **Analyzed:** 01/02/2019 **Instrument:** AAICP (group)

Analyte	Sample Amount	Spike Amount MS	Spike Amount MSD	Spike Result MS	Spike Result MSD	Units	Recoveries MS	Recoveries MSD	RPD	Limits %Rec	Limits RPD	Notes
QC1199568MS1, QC1199568MSD1												**Source: 410305-131**
Nickel	9.28	100	100	121	111	mg/Kg	112	102	8.6	75-125	20	
Selenium	ND	100	100	102	95.2	mg/Kg	102	95	6.9	75-125	20	
Silver	ND	100	100	109	100	mg/Kg	109	100	8.6	75-125	20	
Thallium	2.20	100	100	104	98.2	mg/Kg	102	96	5.7	75-125	20	
Vanadium	30.6	100	100	137	127	mg/Kg	106	96	7.6	75-125	20	
Zinc	59.4	100	100	172	159	mg/Kg	113	100	7.9	75-125	20	

Data Qualifiers and Definitions

Qualifiers

A	See Report Comments.
B	Analyte was present in an associated method blank.
B1	Analyte was present in a sample and associated method blank greater than MDL but less than RDL.
BQ1	No valid test replicates. Sample Toxicity is possible. Best result was reported.
BQ2	No valid test replicates.
BQ3	No valid test replicates. Final DO is less than 1.0 mg/L. Result may be greater.
BQ4	Minor Dissolved Oxygen loss was observed in the blank water check, however, the LCS was within criteria, validating the batch.
BQ5	Minor Dissolved Oxygen loss was observed in the blank water check.
C	Possible laboratory contamination.
D	RPD was not within control limits. The sample data was reported without further clarification.
D1	Lesser amount of sample was used due to insufficient amount of sample supplied.
D2	Reporting limit is elevated due to sample matrix. Target analyte was not detected above the elevated reporting limit.
D3	Insufficient sample was supplied for TCLP. Client was notified. TCLP was performed per the Client's instructions.
DW	Sample result is calculated on a dry weigh basis.
E	Concentration is estimated because it exceeds the quantification limits of the method.
I	The sample was read outside of the method required incubation period.
IR	Inconclusive Result. Legionella is present, however, there is possible non-specific agglutination preventing specific identification.
J	Reported value is estimated
L	The laboratory control sample (LCS) or laboratory control sample duplicate (LCSD) was out of control limits. Associated sample data was reported with qualifier.
L2	LCS did not meet recovery criteria, however, the MS and/or MSD met LCS recovery criteria, validating the batch.
M	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits due to matrix interference. The associated LCS and/or LCSD was within control limits and the sample data was reported without further clarification.
M1	The matrix spike (MS) or matrix spike duplicate (MSD) is not within control limits due to matrix interference.
M2	The matrix spike (MS) or matrix spike duplicate (MSD) was not within control limits. The associated LCS and/or LCSD was not within control limits. Sample result is estimated.
N1	Sample chromatography does not match the specified TPH standard pattern.
NC	The analyte concentration in the sample exceeded the spike level by a factor of four or greater, spike recovery and limits do not apply.
P	Sample was received without proper preservation according to EPA guidelines.
P1	Temperature of sample storage refrigerator was out of acceptance limits.
P2	The sample was preserved within 24 hours of collection in accordance with EPA 218.6.
P3	Per Client request, sample was composited for volatile analysis. Sample compositing for volatile analysis is not recommended due to potential loss of target analytes. Results may be biased low.
Q1	Analyte Calibration Verification exceeds criteria. The result is estimated.
Q2	Analyte calibration was not verified and the result was estimated.
Q3	Analyte initial calibration was not available or exceeds criteria. The result was estimated.
S	The surrogate recovery was out of control limits due to matrix interference. The associated method blank surrogate recovery was within control limits and the sample data was reported without further clarification.
S1	The associated surrogate recovery was out of control limits; result is estimated.
S2	The surrogate was diluted out due to the presence of high concentrations of target and/or non-target compounds. Surrogate recoveries in the associated batch QC met recovery criteria.
S3	Internal Standard did not meet recovery limits. Analyte concentration is estimated.
T	Sample was extracted/analyzed past the holding time.
T1	Reanalysis was reported past hold time due to failing replicates in the original analysis (BOD only).
T2	Sample was analyzed ASAP but received and analyzed past the 15 minute holding time.
T3	Sample received and analyzed out of hold time per client's request.
T4	Sample was analyzed out of hold time per client's request.
T5	Reanalysis was reported past hold time. The original analysis was within hold time, but not reportable.
T6	Hold time is indeterminable due to unspecified sampling time.
T7	Sample was analyzed past hold time due to insufficient time remaining at time of receipt.

Definitions

DF	Dilution Factor
MDL	Method Detection Limit. Result is reported ND when it is less than or equal to MDL.
ND	Analyte was not detected or was less than the detection limit.
NR	Not Reported. See Report Comments.
RDL	Reporting Detection Limit
TIC	Tentatively Identified Compounds

ENTHALPY ANALYTICAL, INC.		Chain of Custody Record		Turn Around Time (Rush by advanced notice only)					
931 W. Barkley Ave, Orange, CA 92868		Lab No: 410375		Standard:	X	4 Day:		3 Day:	
Phone: (714) 771-6900 Fax: (714)771-9933		Page: 1 of 1		2 Day:		1 Day:		Same Day:	
Billing: Enthalpy - Orange c/o Montrose Environmental Group P.O. Box 741137, Los Angeles, CA 90074-1137		**Matrix:** A = Air DW = Drinking Water FL = Food Liquid FS = Food Solid L = Liquid PP = Pure Product S = Solid SeaW = Sea Water SW = Swab W = Water WP = Wipe O = Other		**Preservatives:** 1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3 4 = H_2SO_4 5 = NaOH 6 = Other					

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Ninyo & Moore	Name:	Cypress Ltd Phase II ESA
Report To:	Patrick Cullip Kristina Hill	Number:	210784002
Email:	pcullip@ninyoandmoore.com khill	P.O. #:	11
Address:	475 Goddard	Address:	APN 244-221-23
	Irvine, CA 92618		Cypress, CA
Phone:	949-753-7070	Global ID:	—
Fax:	949-753-7071	Sampled By:	KMH (Kristina Hill

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	T22 Metals (6010B/7471A)	TPHcc (8015B)	VOCs (8260B)	Test Instructions / Comments
1	WC-1	12/27/18	—	SOIL	1-8oz jar	ICE	X	X	X	
2										
3										
4										
5										
6										
7										
8										
9										
10										

	Signature	Print Name	Company / Title	Date / Time
[1] Relinquished By:	Kristi Hejo	Kristina Hill	Ninyo & Moore/Geologist	12/27/18 1535
[1] Received By:		Khm	Gm	12/27/18 1535
[2] Relinquished By:				
[2] Received By:				
[3] Relinquished By:				
[3] Received By:				

ENTHALPY ANALYTICAL

SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Ninyo & Moore Project: _____

Date Received: 12/27/18 Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 8.5 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☐ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: -0.1 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)	✓		
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 12/27/18

APPENDIX E

Waste Manifest

Manifest

SOIL SAFE OF CA – TPST
Non-Hazardous Soils

↓ Manifest # ↓

Generator and/or Consultant

Date of Shipment:	Responsible for Payment:	Transport Truck #:	Facility #:	Approval Number:	Load #
/ /			A07	49939	

Generator's Name and Billing Address: CITY OF CYPRESS 5275 ORANGE AVENUE CYPRESS CYPRESS , CA 90630	Generator's Phone #: 714-229-6741	
	Person to Contact:	
	FAX#:	Customer Account Number
Consultant's Name and Billing Address:	Consultant's Phone #:	
	Person to Contact:	
	FAX#:	Customer Account Number
Generation Site (Transport from): *(name & address)* WEST CERRITOS AVENUE AND LEXINGTON DRIVE WEST CERRITOS AVENUE AND LEXINGTON DRIVE CYPRESS , CA 90630	Site Phone #:	
	Person to Contact:	
	FAX#:	
Designated Facility (Transport to): *(name & address)* SOIL SAFE 12328 HIBISCUS AVENUE ADELANTO, CA 92301	Facility Phone #: (800) 862-8001	
	Person to Contact: JOE PROVANSAL	
	FAX#: (760) 246-8004	
Transporter Name and Mailing Address: BELSHIRE 25971 TOWNE CENTRE DRIVE FOOTHILL RANCH, CA 92610 BESI: 302635	Transporter's Phone #: 949-460-5200	CAR000183913
	Person to Contact: LARRY MOOTHART	450647
	FAX#: 949-460-5210	Customer Account Number

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand ❑ Organic ❑ Clay ❑ Other ❑	0 - 10% ❑ 10 - 20% ❑ 20% - over ❑	Gas ❑ Diesel ❑ Other ❑	001 DM	S.I			
Sand ❑ Organic ❑ Clay ❑ Other ❑	0 - 10% ❑ 10 - 20% ❑ 20% - over ❑	Gas ❑ Diesel ❑ Other ❑					

List any exception to items listed above: Scale Ticket #

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils descried in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: Generator ❑ Consultant ❑	Signature and date:	Month	Day	Year
Kristina Hill (on behalf of City of Cypress)	Kristina Hill	01	29	19

Transporter

Transporter's certification: I/We acknowledge receipt of the soil referenced above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that the soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name:	Signature and date:	Month	Day	Year
Thomas Todd		01	29	19

Recycling Facility

Discrepancies:

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name:	Signature and date:
J. PROVANSAL	

Please print or type.

GENERATOR/CONSULTANTS COPY

Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

355 South Grand Avenue, Ste. 2450 | Los Angeles, California 90071 | p. 213.488.5111

ARIZONA | CALIFORNIA | COLORADO | NEVADA | TEXAS | UTAH

www.ninyoandmoore.com