



APPENDIX IV.1

Hydrology



IV.I.1

Preliminary Drainage Report





Preliminary Drainage Study

River Park Residential

712 Baker Street
Long Beach, California 90806



Dated: April 22, 2020

Prepared for

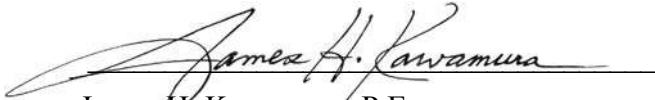
Integral Communities

Prepared by



ATTESTATION

This report has been prepared by, and under the direction of, the undersigned, a duly Registered Civil Engineer in the State of California. Except as noted, the undersigned attests to the technical information contained herein, and has judged to be acceptable the qualifications of any technical specialists providing engineering data for this report, upon which findings, conclusions, and recommendations are based.



James H. Kawamura, P.E.
Registered Civil Engineer No. C30560
Exp. 3/31/22



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Section 1 Purpose and Scope

This Drainage Study presents an analysis of the hydrologic effects for the proposed 53 Carriage Townhomes, 99 Row Townhomes, and 74 condominium unit residential redevelopment project located at 712 Baker Street in the City of Long Beach, California. The study details the general project characteristics, the design, criteria and methodology applied to the analysis of the area in terms of drainage and associated conveyance facilities.

The plans and specifications in the Drainage Study are not for construction purposes; the contractor shall refer to final approved construction documents for plans and specifications.

Section 2 Project Information

2.1 Project Description

Integral Communities is proposing to redevelop approximately 20.66 acres of vacant land with 15.49 acres slated for residential development, 0.36 acres for a gravel roadway with landscaping within an utility easement, and 4.81 acres for open space within the Wrigley Heights community of the City of Long Beach, California. The proposed project will entail the construction of 53 Carriage Townhomes, 99 Row Townhomes, and 74 condominium units. The project site is currently vacant with all former structures demolished and removed.

2.1.1 Project Location

The project site is located at 712 Baker Street, in the City of Long Beach, California, and is bounded by the Los Angeles River to the west, Wardlow Road to the south, Golden Avenue to the east, and the I-405 Freeway to the north. Figure 1 below illustrates the project vicinity.

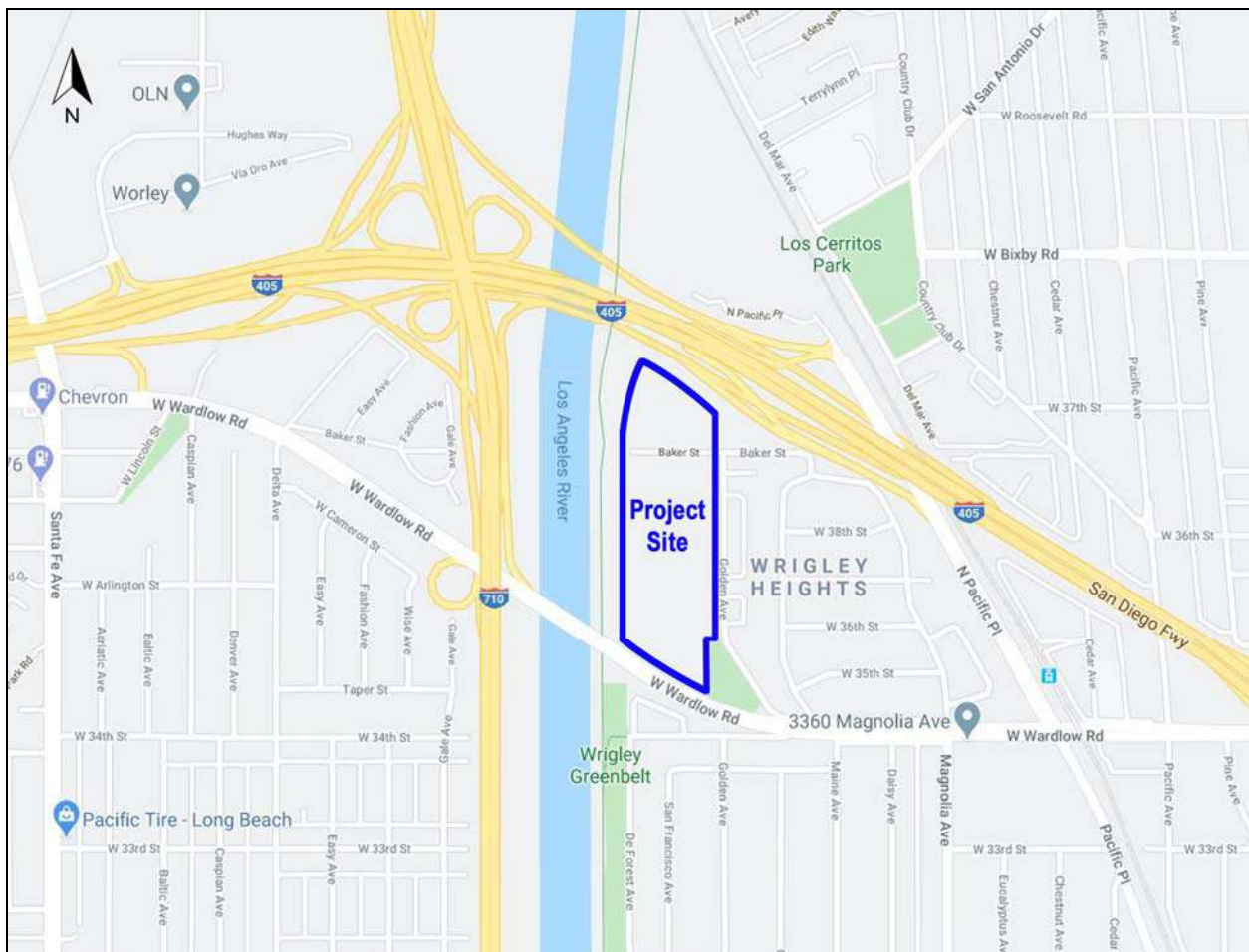


Figure 1 – Project Location Map

2.2 *Hydrologic Setting*

This section summarizes the project's size and location in the context of the larger watershed perspective, topography, soil and vegetation conditions, percent impervious area, natural and infrastructure drainage features, and other relevant hydrologic and environmental factors to be protected specific to the project area's watershed.

2.2.1 *Watershed*

The project site is located within the Los Angeles River Watershed, specifically within Reach 1. This watershed is 834 square miles beginning in the Santa Monica, Santa Susana, and San Gabriel Mountains, and discharging into the Pacific Ocean via San Pedro Bay near Long Beach.

2.2.2 *Existing Topography, Drainage Patterns, and Facilities (Narrative)*

The highest elevation on-site is approximately 52.96 feet near the northeast corner of the site and the lowest elevation is approximately 29.69 feet at the westerly boundary of the site within Baker Street. The higher elevations tend to be along the easterly boundary of the site and the lower elevations tend to be along the westerly boundary of the site. Within the center of the site are large basins that were previously used as part of a water treatment process for produced water and other fluids recovered during oil production. Currently, most of the site flows into these basins. A portion of Golden Avenue and Baker Street drains into the site.

2.2.3 *Adjacent Land Use*

The project area is bounded by residential uses to the east and south; the Los Angeles River to the west, and the I-405 Freeway to the north.

2.2.4 *Soil Conditions*

Albus-Keefe and Associates, Inc., prepared a Preliminary Findings of Geotechnical Investigation dated January 9, 2014 for the site located at 712 Baker Street. According to the report, the area is underlain by undocumented artificial fill, alluvial soils (terrace deposits), and Lakewood Formation bedrock. The artificial fill extends to depths of approximately 32 feet, although depths ranging from 2 to 10 feet are more typical of the overall site. The soils onsite have a range of expansive characteristics from non-expansive to moderately expansive.

According to the GeoTracker website, the project site is under the cleanup program with a status of open site assessment for several potential contaminants of concern. Information on the website stated that groundwater at the site ranges in depths from about 29 feet below ground surface (bgs) along the westerly boundary and 60 feet bgs along the easterly boundary.

2.2.5 Downstream Conditions

This section summarizes the existing downstream conditions and any conditions of concern with respect to erosion and/or sedimentation due to the proposed project.

The project's stormwater will ultimately be collected by an onsite drainage system that will connect into a proposed City of Long Beach maintained storm drain system that discharges into the Los Angeles River. Since the stormwater will eventually discharge into a tidally influenced portion of the Los Angeles River, no erosion or negative downstream impacts are foreseen.

2.2.6 Impervious Cover

The proposed project will not add any significant impervious area that will negatively impact the existing infrastructure located downstream of the project site.

2.3 Proposed Runoff Management Facilities

The proposed facilities managing runoff from the area include:

- LID Bioretention Best Management Practices (BMPs); specifically, biofiltration planters (flow through planters).
- A proposed onsite storm drainage system will drain the project area and will connect into a proposed City of Long Beach storm drain system that discharges into the Los Angeles River.

Section 3 Design Criteria and Methodology

This section summarizes the design criteria and methodology applied during the drainage analysis of the project site. The design criteria and methodology follows the County of Los Angeles Drainage Design Manual (January 2006).

3.1 Design Criteria

3.1.1 Drainage Design Criteria

Local storm drain facilities (street gutters, curb inlets) have been designed to conform to City of Long Beach standards.

3.2 Methodology

3.2.1 HydroCalc Software

The HydroCalc software, developed and provided by Los Angeles County Public Works, calculates various parameters using the modified rational method, which is an iterative process. The table below shows the input data that is entered into the program and the output data that is produced.

Input Data	Output Data
Area (ac)	Modeled (50-yr) Rainfall Depth (in)
Flow Path Length (ft)	Peak Intensity (in/hr)
Flow Path Slope (vft/hft)	Undeveloped Runoff Coefficient (Cu)
24-hr, 50-yr Rainfall Depth (in)	Developed Runoff Coefficient (Cd)
Percent Impervious (0.01-1.0)	Time of Concentration (min)
Soil Type (2-180)	Clear Peak Flow Rate (cfs)
Design Storm Frequency	Burned Peak Flow Rate (cfs)
Fire Factor	24-Hr Clear Runoff Volume (ac-ft)
	24-Hr Clear Runoff Volume (cu-ft)

Once the input data has been entered, HydroCalc then computes the output data using the following steps:

1. Assumes an initial time of concentration (T_c)
2. Uses the assumed T_c to calculate rainfall intensity (I_t) with the following equation:

$$I_t = I_{1440} \times (1440/t)^{0.47}$$

where...
 t = assumed initial time of concentration (min)
 I_t = rainfall intensity for the duration (in/hr)
 I_{1440} = 24-hour rainfall intensity (in/hr)

3. Calculates impervious area and stormwater runoff coefficient using the following equation:

$$IMP = [\sum_{i=1}^n (IMP_i \times A_i) / A_T]$$

where... IMP = site percent impervious
IMP_i = impervious area (i)
A_i = area, i (ft²)
A_T = total project site area (ft²)

$$C_d = (0.9 \times IMP) + (1.0 - IMP) \times C_u$$

where... C_d = developed site stormwater runoff coefficient
IMP = site percent impervious
C_u = undeveloped site stormwater runoff coefficient
(obtained from soil curve data – See Appendix)

4. Calculates the time of concentration (T_c) and compares it to the initial assumption using the following equation:

$$T_c = [0.31 \times L^{0.483}] / [(C_d \times I_t)^{0.519} \times S^{0.135}]$$

where... T_c = time of concentration (min)
L = longest flow path length
C_d = developed site stormwater runoff coefficient
I_t = rainfall intensity for the duration (in/hr)
S = slope of longest flow path (ft/ft)

If the calculated T_c and the assumed T_c are more than 0.5 minutes apart then the process is repeated by rounding the calculated T_c to the nearest minute and using it as the assumed value. The process is complete once the calculated T_c and the assumed T_c are within 0.5 minutes of each other.

3.2.2 Runoff Calculation Method: Peak Flow

Runoff calculations for this study were accomplished using the Rational Method. The Rational Method is a physically-based numerical method where runoff is assumed to be directly proportional to rainfall and area, less losses for infiltration and depression storage. Flows were computed based on the rational formula:

$$Q = C \times I \times A$$

where... Q = Peak discharge (cfs);
C = runoff coefficient, based on land use and soil type;
I = Rainfall intensity (in/hr);
A = watershed area (acre)

The runoff coefficient represents the ratio of rainfall that runs off the watershed versus the portion that infiltrates to the soil or is held in depression storage. The runoff coefficient is dependent on the land use coverage and soil type. The County of Los Angeles Hydrology Map indicates the project site contains hydrologic Soil Types 13 and 15.

For a typical drainage study, rainfall intensity varies with the watershed time of concentration. The watershed time of concentration at any given point is defined as the time it would theoretically take runoff to travel from the most upstream point in the watershed to a concentration point, as calculated by the HydroCalc software, provided by the County.

Rational Method calculations were accomplished using the HydroCalc software. Peak discharges were computed for 25-year hypothetical storm return frequencies and the output results of the HydroCalc software can be found in the Appendix.

Section 4 Hydrology and Drainage Analysis

This section summarizes the quantitative hydrologic analysis of proposed conditions of the project.

4.1 Summary of Drainage Delineation

The existing site is shown as five subareas. Subareas E2 through E5 drain towards their respective basins. Subarea E1 drains into the adjacent Wrigley Heights dog park. The Existing Conditions Hydrology Map can be found in the appendix section of this report. The map shows the existing subareas and quantifies the peak discharge during a 25-Year 24-Hour storm event.

The proposed site is divided into five subareas, see Appendix for the Proposed Hydrology Map. Stormwater runoff in each of the proposed subareas (P1 through P3) will be collected by private onsite catch basins that drain to the subarea’s respective biofiltration planter (flow through planter) for treatment. Filtered and high flows are directed from the biofiltration planters to a private storm drain network that ultimately connects to a new city storm drain line located within a portion of the vacated Baker Street near the intersection with the westerly on-site private road. Subarea P5 is mostly vegetated open space that is collected by area drains that connect to the new city storm drain within the vacated Baker Street. Two city catch basins will be constructed in the right of way of Baker Street near the site’s entrance to collect runoff from a portion of Golden Avenue and Baker Street that currently drains into the project site. The catch basins will be collected by a proposed City storm drain main that runs westerly through the project site and discharges into the Los Angeles River. Subarea P4 is a small portion of the project site’s entrance that will sheet flow untreated into the right of way of Wardlow Road.

4.2 Summary of Results

The table below summarizes the results of the total peak runoff for the proposed conditions. It should be noted that all input data used on the HydroCalc Software can be found in the appendix section of this report.

EXISTING CONDITIONS	
SUBAREA	Flow Rate (CFS)
E1	1.76
E2	2.56
E3	8.86
E4	18.32
E5	13.75
TOTAL	45.25

PROPOSED CONDITIONS	
Outlet Point	Q ₂₅ (CFS)
P1	6.90
P2	4.33
P3	16.95
P4	0.05
P5	14.11
TOTAL	42.34

4.3 Conclusion

The project area will not experience a drastic change in peak discharge and no negative impacts are expected to downstream receiving waters.

APPENDIX

Peak Flow Hydrologic Analysis

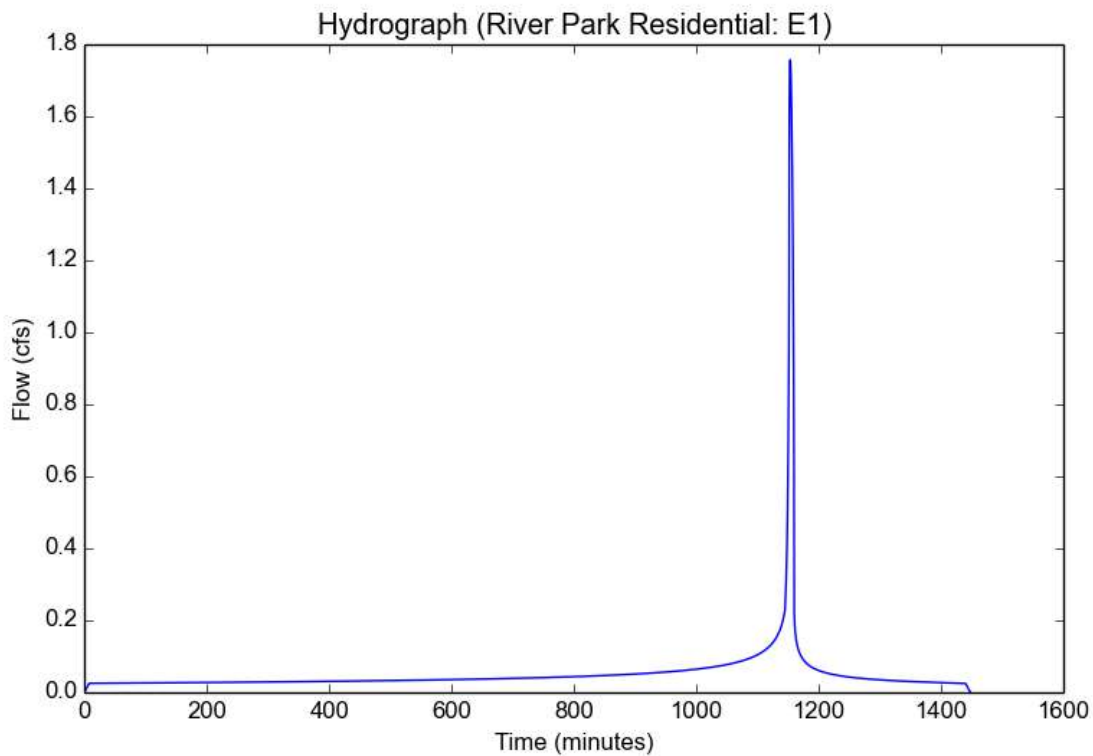
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Version: HydroCalc 1.0.3

Input Parameters

Project Name	River Park Residential
Subarea ID	E1
Area (ac)	2.07
Flow Path Length (ft)	246.82
Flow Path Slope (vft/hft)	0.025
50-yr Rainfall Depth (in)	5.8
Percent Impervious	0.01
Soil Type	15
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.0924
Peak Intensity (in/hr)	2.4361
Undeveloped Runoff Coefficient (Cu)	0.3428
Developed Runoff Coefficient (Cd)	0.3484
Time of Concentration (min)	8.0
Clear Peak Flow Rate (cfs)	1.7567
Burned Peak Flow Rate (cfs)	1.7567
24-Hr Clear Runoff Volume (ac-ft)	0.1067
24-Hr Clear Runoff Volume (cu-ft)	4649.0198



Peak Flow Hydrologic Analysis

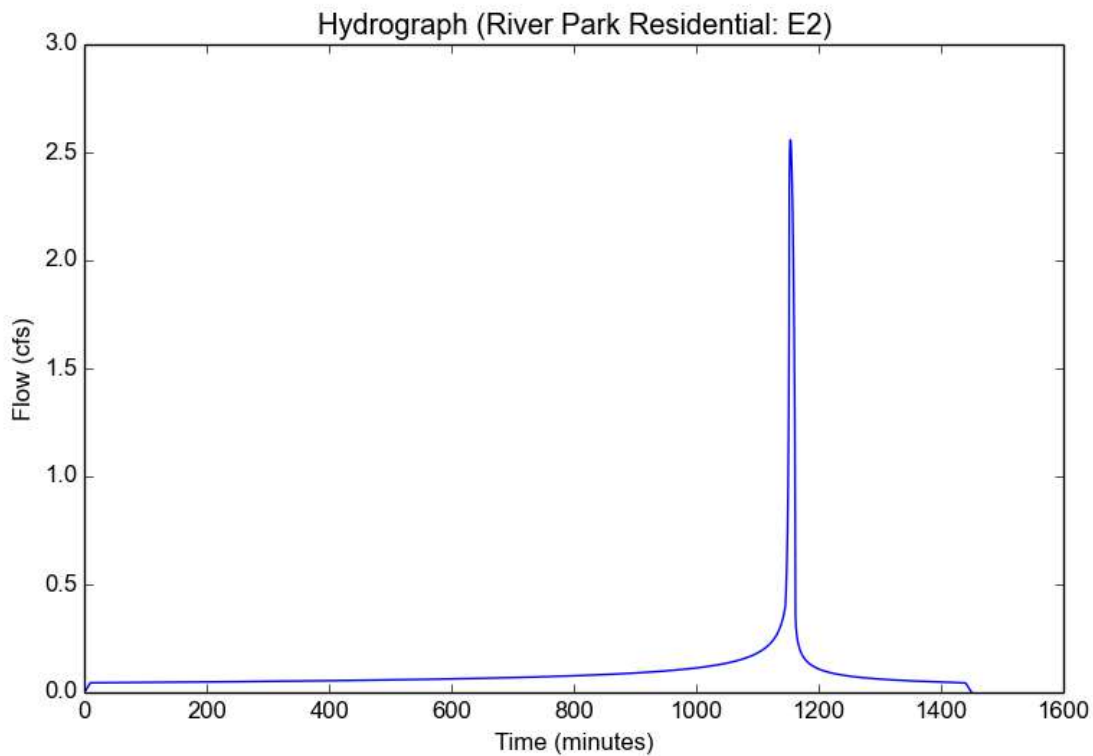
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Version: HydroCalc 1.0.3

Input Parameters

Project Name	River Park Residential
Subarea ID	E2
Area (ac)	3.65
Flow Path Length (ft)	405.49
Flow Path Slope (vft/hft)	0.06
50-yr Rainfall Depth (in)	5.8
Percent Impervious	0.01
Soil Type	15
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.0924
Peak Intensity (in/hr)	2.1935
Undeveloped Runoff Coefficient (Cu)	0.3136
Developed Runoff Coefficient (Cd)	0.3195
Time of Concentration (min)	10.0
Clear Peak Flow Rate (cfs)	2.558
Burned Peak Flow Rate (cfs)	2.558
24-Hr Clear Runoff Volume (ac-ft)	0.1869
24-Hr Clear Runoff Volume (cu-ft)	8140.2179



Peak Flow Hydrologic Analysis

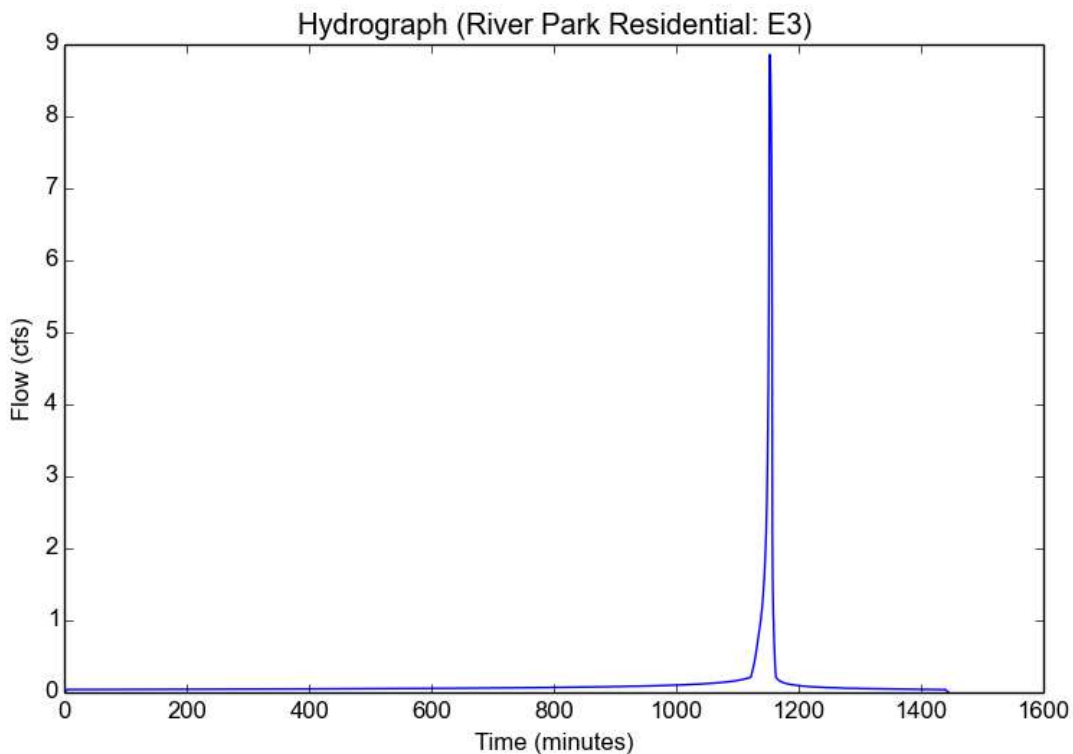
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Version: HydroCalc 1.0.3

Input Parameters

Project Name	River Park Residential
Subarea ID	E3
Area (ac)	3.24
Flow Path Length (ft)	336.13
Flow Path Slope (vft/hft)	0.08
50-yr Rainfall Depth (in)	5.8
Percent Impervious	0.01
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.0924
Peak Intensity (in/hr)	3.0383
Undeveloped Runoff Coefficient (Cu)	0.9
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	8.8596
Burned Peak Flow Rate (cfs)	8.8596
24-Hr Clear Runoff Volume (ac-ft)	0.2419
24-Hr Clear Runoff Volume (cu-ft)	10538.2693



Peak Flow Hydrologic Analysis

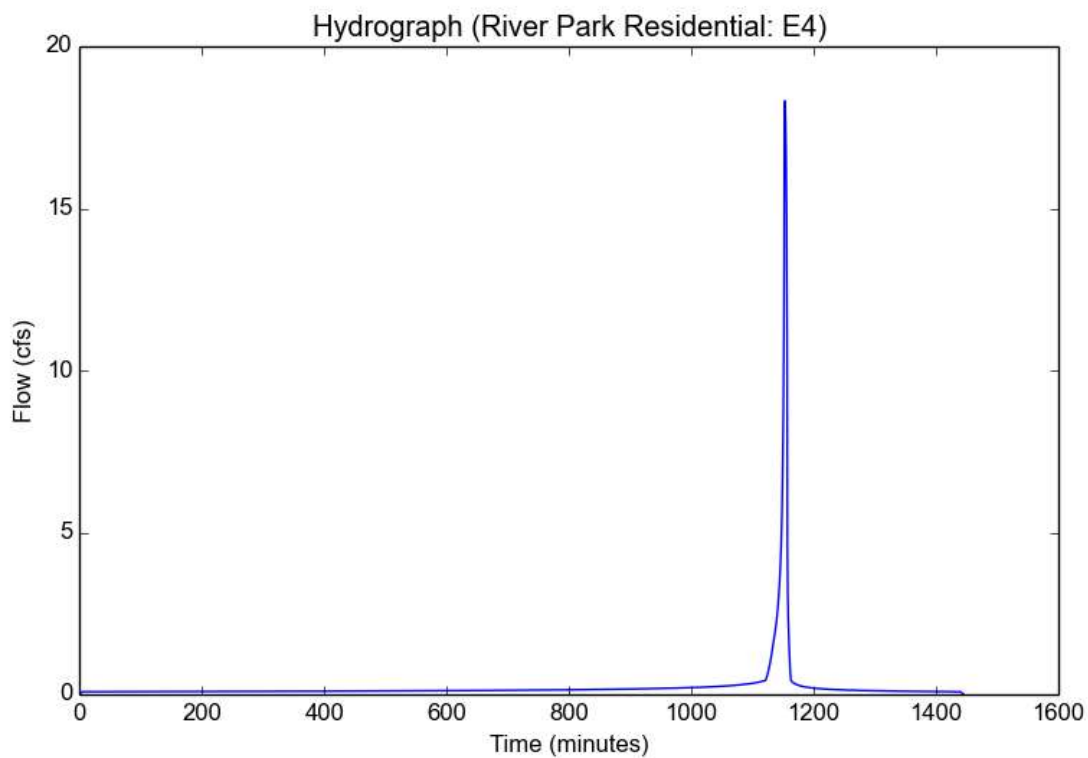
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Version: HydroCalc 1.0.3

Input Parameters

Project Name	River Park Residential
Subarea ID	E4
Area (ac)	6.7
Flow Path Length (ft)	458.74
Flow Path Slope (vft/hft)	0.056
50-yr Rainfall Depth (in)	5.8
Percent Impervious	0.01
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.0924
Peak Intensity (in/hr)	3.0383
Undeveloped Runoff Coefficient (Cu)	0.9
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	18.3207
Burned Peak Flow Rate (cfs)	18.3207
24-Hr Clear Runoff Volume (ac-ft)	0.5003
24-Hr Clear Runoff Volume (cu-ft)	21792.1001



Peak Flow Hydrologic Analysis

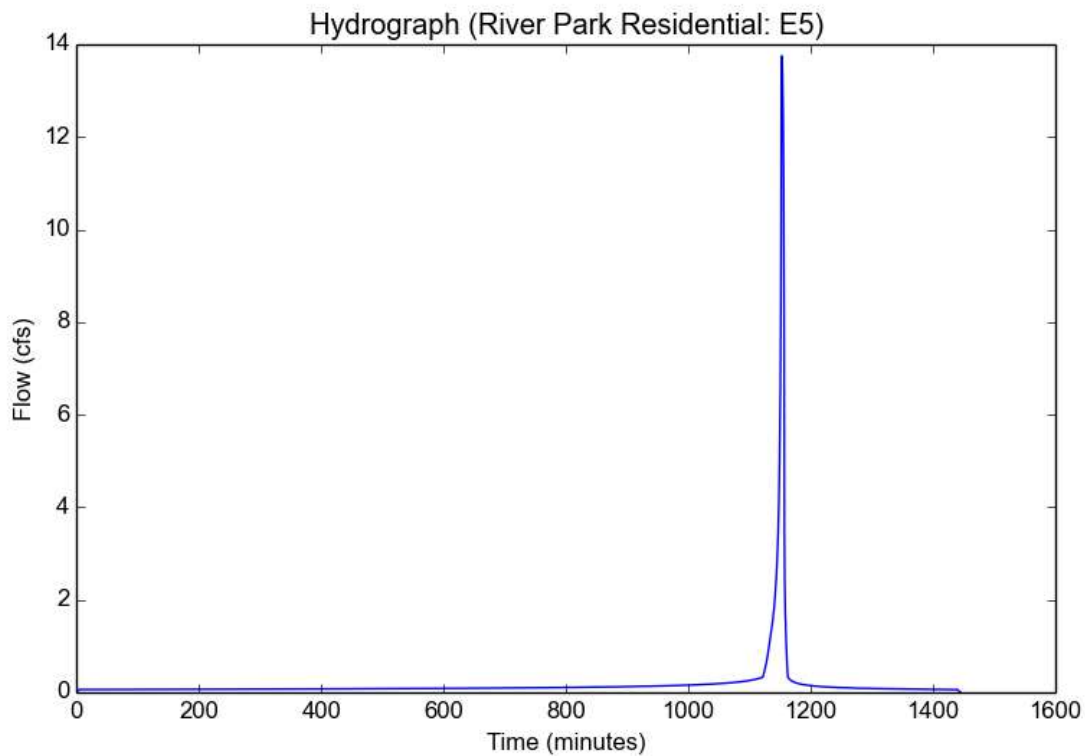
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Version: HydroCalc 1.0.3

Input Parameters

Project Name	River Park Residential
Subarea ID	E5
Area (ac)	5.03
Flow Path Length (ft)	397.81
Flow Path Slope (vft/hft)	0.05
50-yr Rainfall Depth (in)	5.8
Percent Impervious	0.01
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.0924
Peak Intensity (in/hr)	3.0383
Undeveloped Runoff Coefficient (Cu)	0.9
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	13.7542
Burned Peak Flow Rate (cfs)	13.7542
24-Hr Clear Runoff Volume (ac-ft)	0.3756
24-Hr Clear Runoff Volume (cu-ft)	16360.3378



Peak Flow Hydrologic Analysis

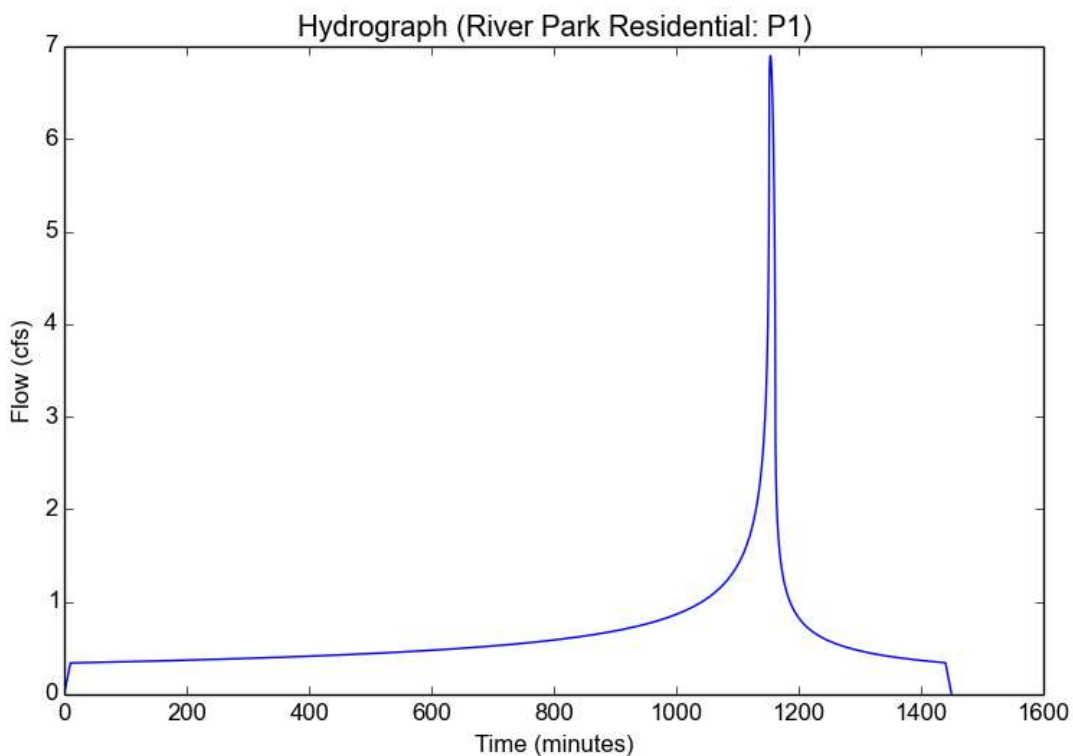
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Version: HydroCalc 1.0.3

Input Parameters

Project Name	River Park Residential
Subarea ID	P1
Area (ac)	3.9
Flow Path Length (ft)	552.44
Flow Path Slope (vft/hft)	0.005
50-yr Rainfall Depth (in)	5.8
Percent Impervious	0.84
Soil Type	15
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.0924
Peak Intensity (in/hr)	2.1935
Undeveloped Runoff Coefficient (Cu)	0.3136
Developed Runoff Coefficient (Cd)	0.8062
Time of Concentration (min)	10.0
Clear Peak Flow Rate (cfs)	6.8967
Burned Peak Flow Rate (cfs)	6.8967
24-Hr Clear Runoff Volume (ac-ft)	1.2707
24-Hr Clear Runoff Volume (cu-ft)	55353.7274



Peak Flow Hydrologic Analysis

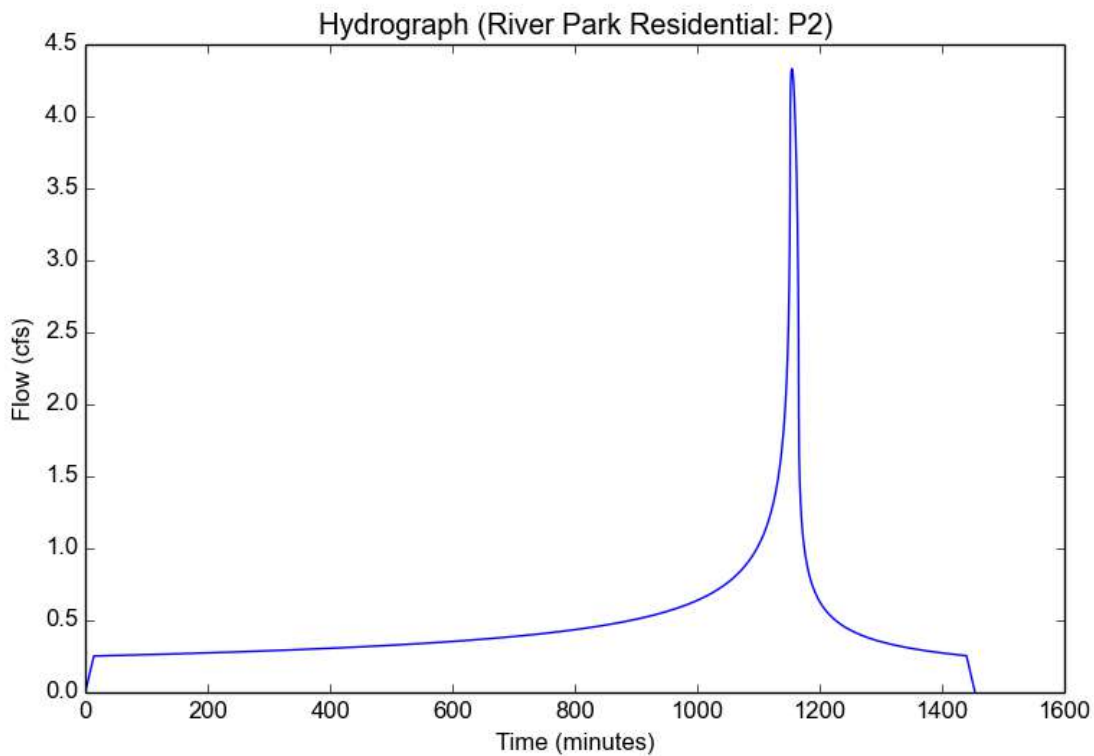
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Version: HydroCalc 1.0.3

Input Parameters

Project Name	River Park Residential
Subarea ID	P2
Area (ac)	2.87
Flow Path Length (ft)	946.91
Flow Path Slope (vft/hft)	0.005
50-yr Rainfall Depth (in)	5.8
Percent Impervious	0.85
Soil Type	15
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.0924
Peak Intensity (in/hr)	1.8727
Undeveloped Runoff Coefficient (Cu)	0.2724
Developed Runoff Coefficient (Cd)	0.8059
Time of Concentration (min)	14.0
Clear Peak Flow Rate (cfs)	4.3312
Burned Peak Flow Rate (cfs)	4.3312
24-Hr Clear Runoff Volume (ac-ft)	0.9443
24-Hr Clear Runoff Volume (cu-ft)	41135.6101



Peak Flow Hydrologic Analysis

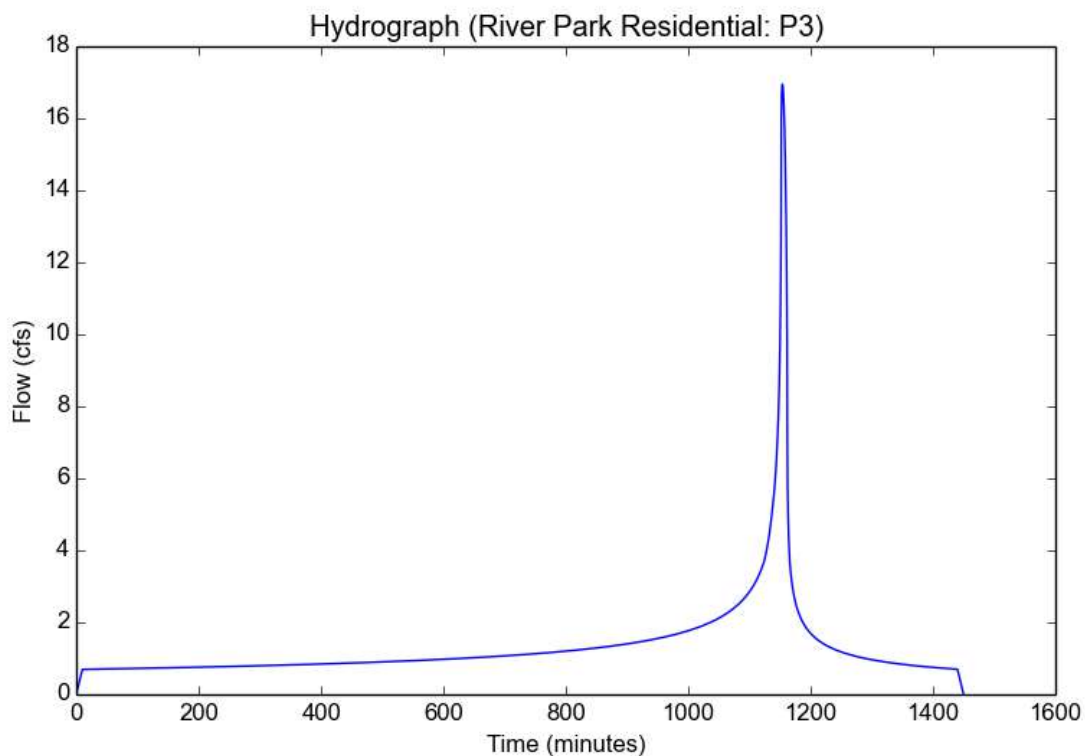
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Version: HydroCalc 1.0.3

Input Parameters

Project Name	River Park Residential
Subarea ID	P3
Area (ac)	8.7
Flow Path Length (ft)	681.71
Flow Path Slope (vft/hft)	0.008
50-yr Rainfall Depth (in)	5.8
Percent Impervious	0.76
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.0924
Peak Intensity (in/hr)	2.1935
Undeveloped Runoff Coefficient (Cu)	0.8507
Developed Runoff Coefficient (Cd)	0.8882
Time of Concentration (min)	10.0
Clear Peak Flow Rate (cfs)	16.9493
Burned Peak Flow Rate (cfs)	16.9493
24-Hr Clear Runoff Volume (ac-ft)	2.6542
24-Hr Clear Runoff Volume (cu-ft)	115618.6454



Peak Flow Hydrologic Analysis

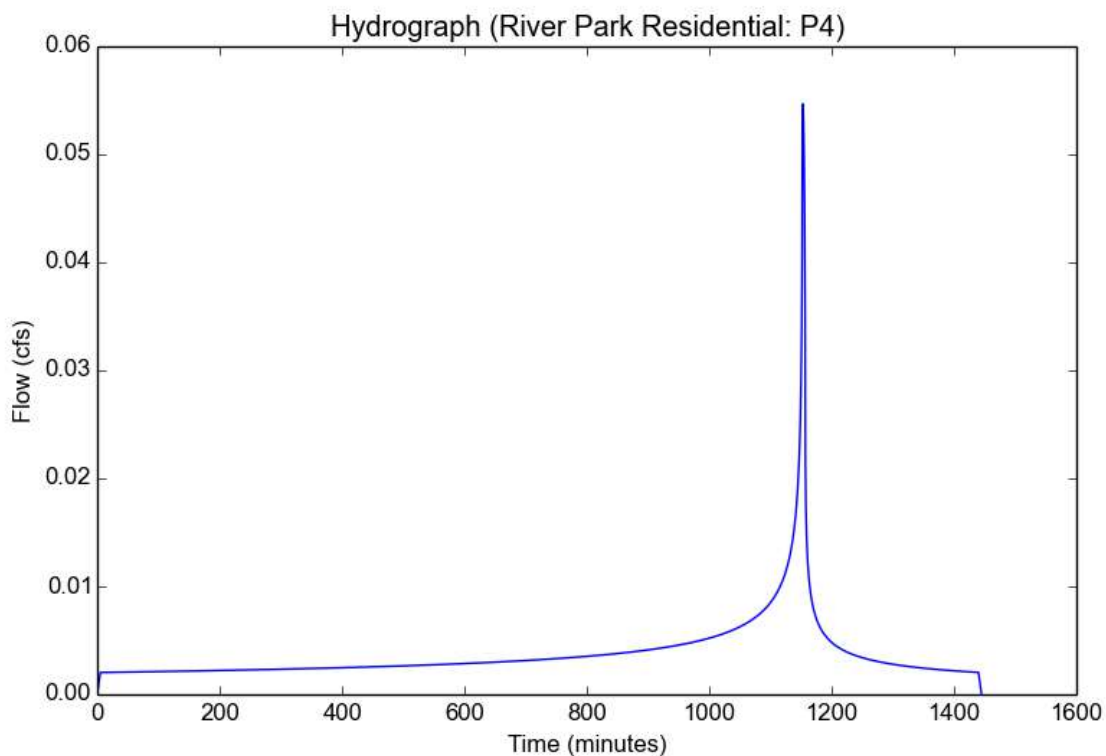
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Version: HydroCalc 1.0.3

Input Parameters

Project Name	River Park Residential
Subarea ID	P4
Area (ac)	0.02
Flow Path Length (ft)	6.87
Flow Path Slope (vft/hft)	0.005
50-yr Rainfall Depth (in)	5.8
Percent Impervious	1.0
Soil Type	15
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.0924
Peak Intensity (in/hr)	3.0383
Undeveloped Runoff Coefficient (Cu)	0.4143
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	0.0547
Burned Peak Flow Rate (cfs)	0.0547
24-Hr Clear Runoff Volume (ac-ft)	0.0076
24-Hr Clear Runoff Volume (cu-ft)	329.9876



Peak Flow Hydrologic Analysis

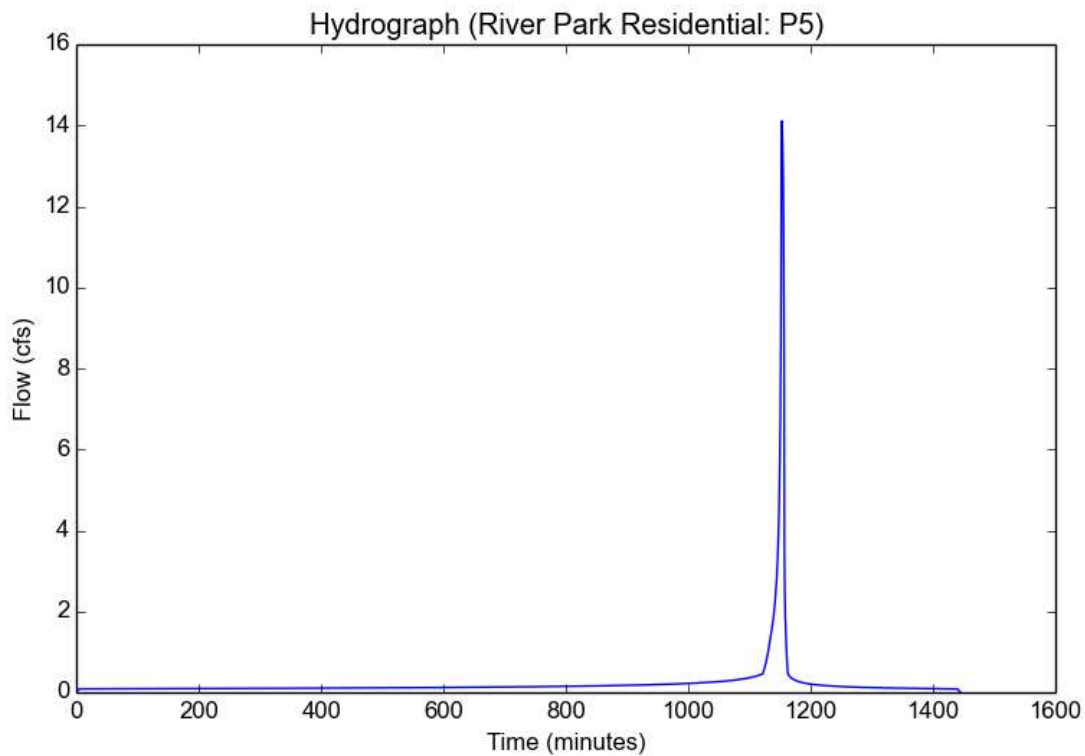
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Version: HydroCalc 1.0.3

Input Parameters

Project Name	River Park Residential
Subarea ID	P5
Area (ac)	5.16
Flow Path Length (ft)	397.81
Flow Path Slope (vft/hft)	0.05
50-yr Rainfall Depth (in)	5.8
Percent Impervious	0.06
Soil Type	13
Design Storm Frequency	25-yr
Fire Factor	0
LID	False

Output Results

Modeled (25-yr) Rainfall Depth (in)	5.0924
Peak Intensity (in/hr)	3.0383
Undeveloped Runoff Coefficient (Cu)	0.9
Developed Runoff Coefficient (Cd)	0.9
Time of Concentration (min)	5.0
Clear Peak Flow Rate (cfs)	14.1097
Burned Peak Flow Rate (cfs)	14.1097
24-Hr Clear Runoff Volume (ac-ft)	0.4645
24-Hr Clear Runoff Volume (cu-ft)	20235.3735



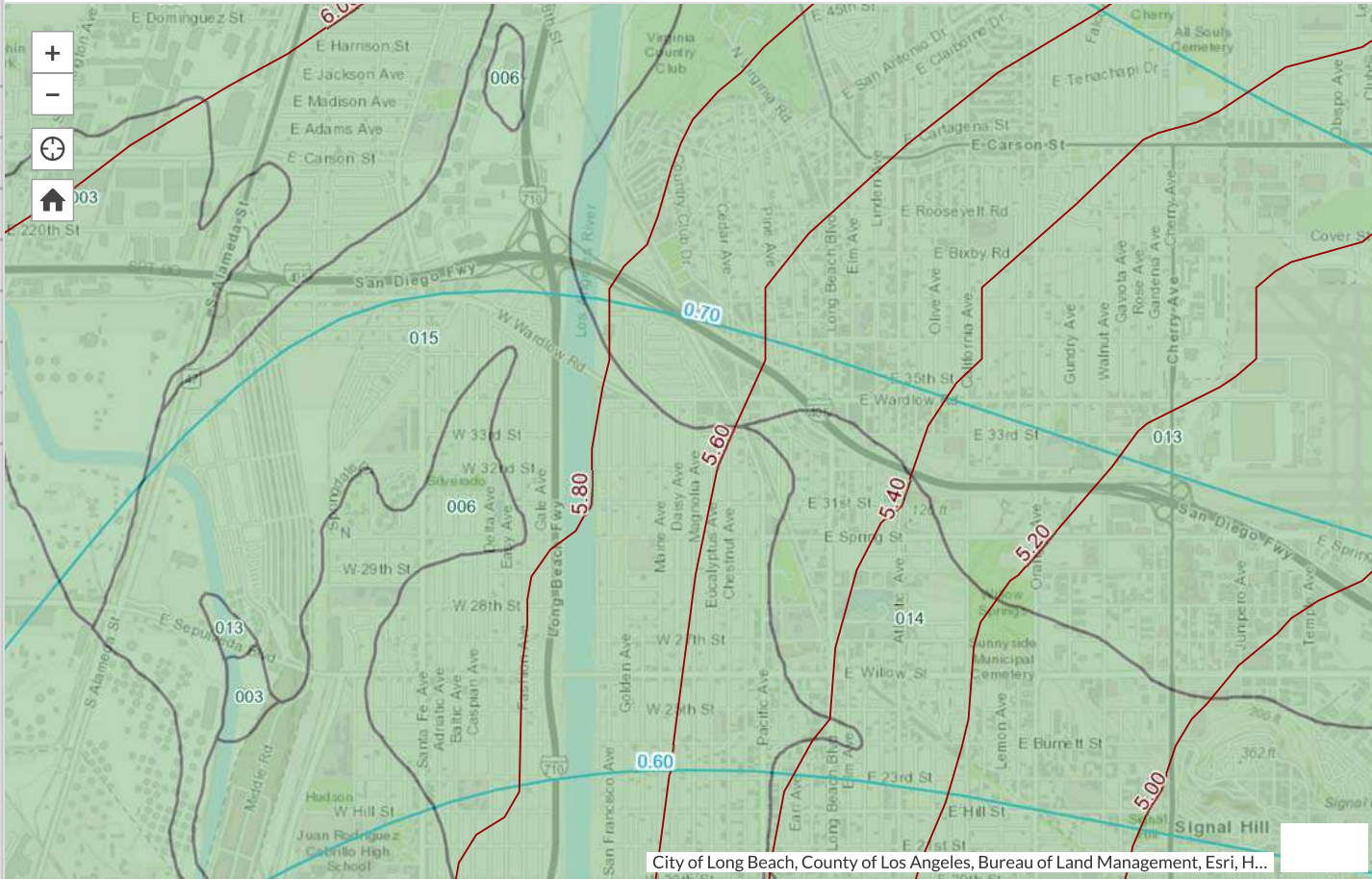
LA County Hydrology Map

About Legend Layers

Layers

- 50yr Two Tenths (Rainfall)
- DPA Zones
- Soils 2004
- Final 85th Percentile, 24-hr Rainfall
- Final 95th Percentile, 24-hr Rainfall
- 1-year, 1-hour Rainfall Intensity
- LA County Parcel

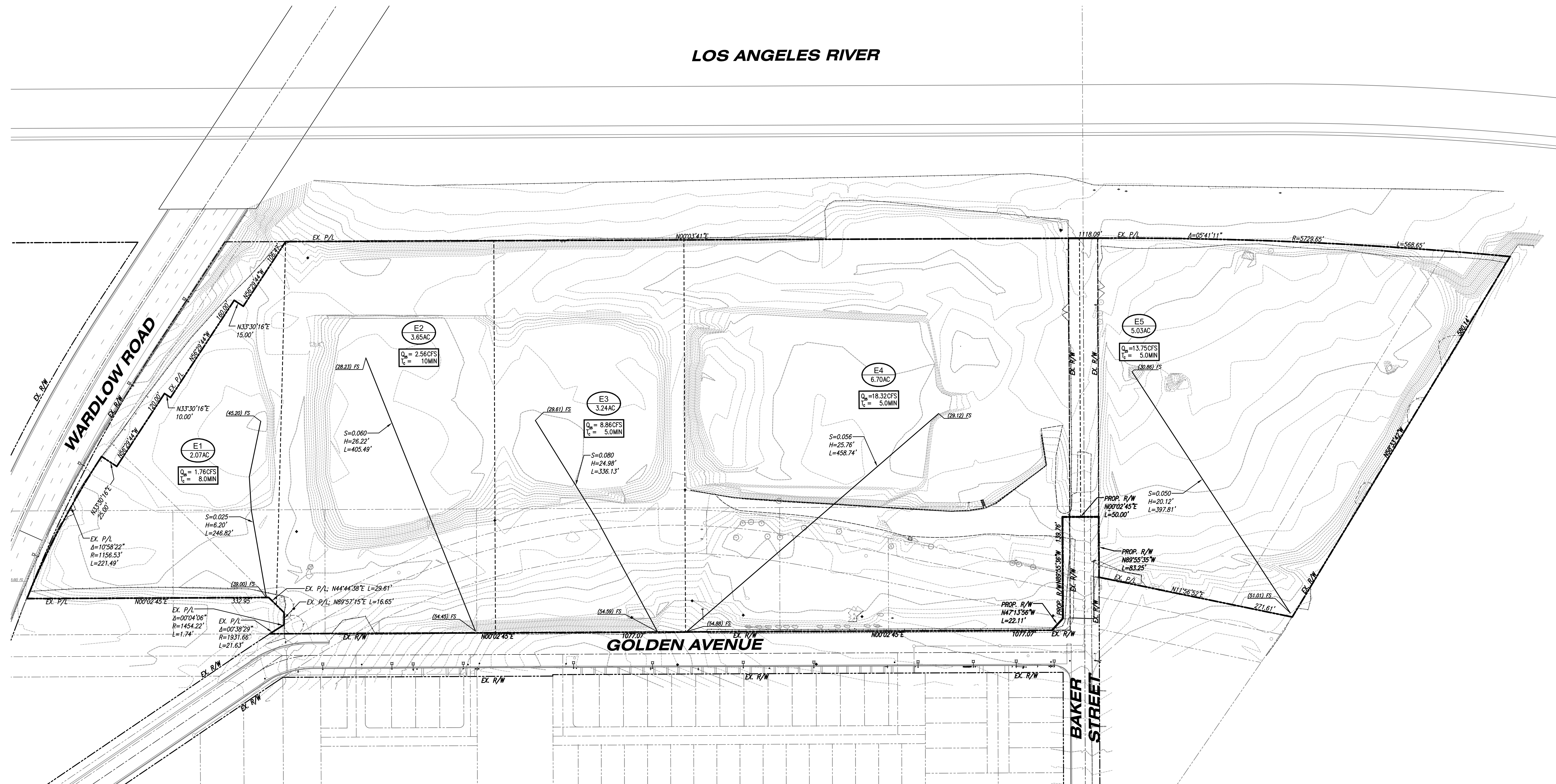
Find address or place



Imagery with Labels

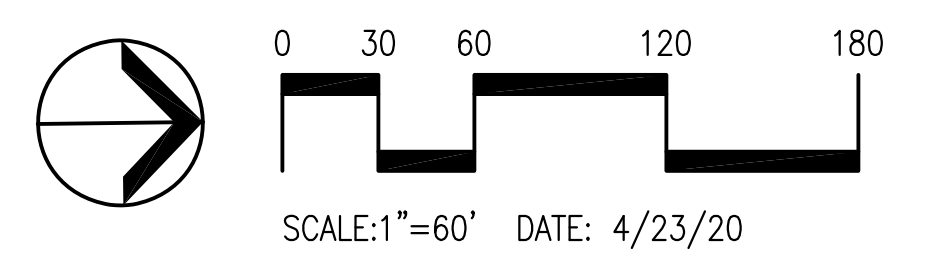
City of Long Beach, County of Los Angeles, Bureau of Land Management, Esri, H...

LOS ANGELES RIVER



LEGEND

- DRAINAGE AREA BOUNDARY
- DRAINAGE AREA ID
- DRAINAGE AREA
- RUNOFF
- TIME OF CONCENTRATION
- FLOW PATH
- SLOPE S
- SLOPE HEIGHT H
- SLOPE LENGTH L



RIVER PARK RESIDENTIAL
INTEGRAL COMMUNITES

EXISTING HYDROLOGY MAP - 25 YEAR STORM EVENT
LONG BEACH, CALIFORNIA

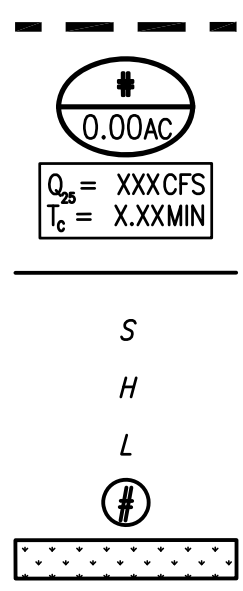
PREPARED BY:
KHR ASSOCIATES
 CONSULTING ENGINEERS/SURVEYORS/PLANNERS
 17530 Van Karman Ave - Suite 200, Irvine, California 92614
 (949) 756-6440

C:\Users\Joan\KHR_Associates\Dropbox\River Park\Integral\Long Beach\Hydro\Long Beach\Hydrology\Map - 25 Year Storm Event - Hydrology.dwg, Apr 23, 2020 - 4:09pm

LOS ANGELES RIVER

LEGEND

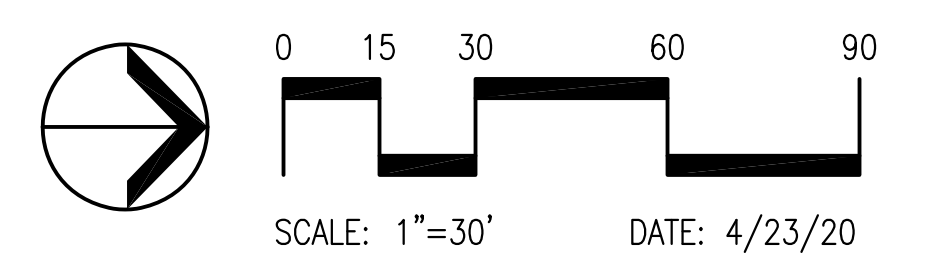
- DRAINAGE AREA BOUNDARY
- DRAINAGE AREA ID
- DRAINAGE AREA
- RUNOFF
- TIME OF CONCENTRATION
- FLOW PATH
- SLOPE
- SLOPE HEIGHT
- SLOPE LENGTH
- BIOFILTRATION (LID BMP) ID
- PROPOSED BIOFILTRATION AREA



WARDLOW ROAD

GOLDEN AVENUE

TOTAL SITE	TOTAL RESIDENTIAL AREA	DMA 1	DMA 2	DMA 3	DMA 4 (UNTREATED)	DMA 5 (OPEN SPACE)
TOTAL AREA: 899,888 S.F. (20.66 ACRES)	TOTAL AREA: 674,922 S.F. (15.49 ACRES)	TOTAL AREA: 169,937 S.F. (3.90 ACRES)	TOTAL AREA: 125,162 S.F. (2.87 ACRES)	TOTAL AREA: 378,921 S.F. (8.70 ACRES)	TOTAL AREA: 902 S.F. (0.02 ACRES)	TOTAL AREA: 224,966 S.F. (5.16 ACRES)
IMPERVIOUS AREA: 549,940 S.F. (12.62 ACRES)	IMPERVIOUS AREA: 536,739 S.F. (12.32 ACRES)	IMPERVIOUS AREA: 142,199 S.F. (3.26 ACRES)	IMPERVIOUS AREA: 106,625 S.F. (2.45 ACRES)	IMPERVIOUS AREA: 287,013 S.F. (6.59 ACRES)	IMPERVIOUS AREA: 902 S.F. (0.02 ACRES)	IMPERVIOUS AREA: 13,201 S.F. (0.30 ACRES)
PERVIOUS AREA: 349,948 S.F. (8.03 ACRES)	PERVIOUS AREA: 138,183 S.F. (3.17 ACRES)	PERVIOUS AREA: 27,738 S.F. (0.64 ACRES)	PERVIOUS AREA: 18,537 S.F. (0.43 ACRES)	PERVIOUS AREA: 91,908 S.F. (2.11 ACRES)	PERVIOUS AREA: 0 S.F. (0.00 ACRES)	PERVIOUS AREA: 211,765 S.F. (4.86 ACRES)
Vdesign: 49,682 CUBIC FEET	Vdesign: 46,583 CUBIC FEET	Vdesign: 12,258 CUBIC FEET	Vdesign: 9,170 CUBIC FEET	Vdesign: 25,078 CUBIC FEET	Vdesign: 76 CUBIC FEET	Vdesign: 3,099 CUBIC FEET
PROVIDED BIOFILTRATION AREA: 30,916 SQUARE FEET	PROVIDED BIOFILTRATION AREA: 30,916 SQUARE FEET	PROVIDED BIOFILTRATION AREA: 7,587 SQUARE FEET	PROVIDED BIOFILTRATION AREA: 6,230 SQUARE FEET	PROVIDED BIOFILTRATION AREA: 17,119 SQUARE FEET	REQUIRED BIOFILTRATION AREA: 47 SQUARE FEET	
REQUIRED BIOFILTRATION AREA: 30,574 SQUARE FEET	REQUIRED BIOFILTRATION AREA: 28,686 SQUARE FEET	REQUIRED BIOFILTRATION AREA: 7,543 SQUARE FEET	REQUIRED BIOFILTRATION AREA: 5,843 SQUARE FEET	REQUIRED BIOFILTRATION AREA: 15,433 SQUARE FEET		



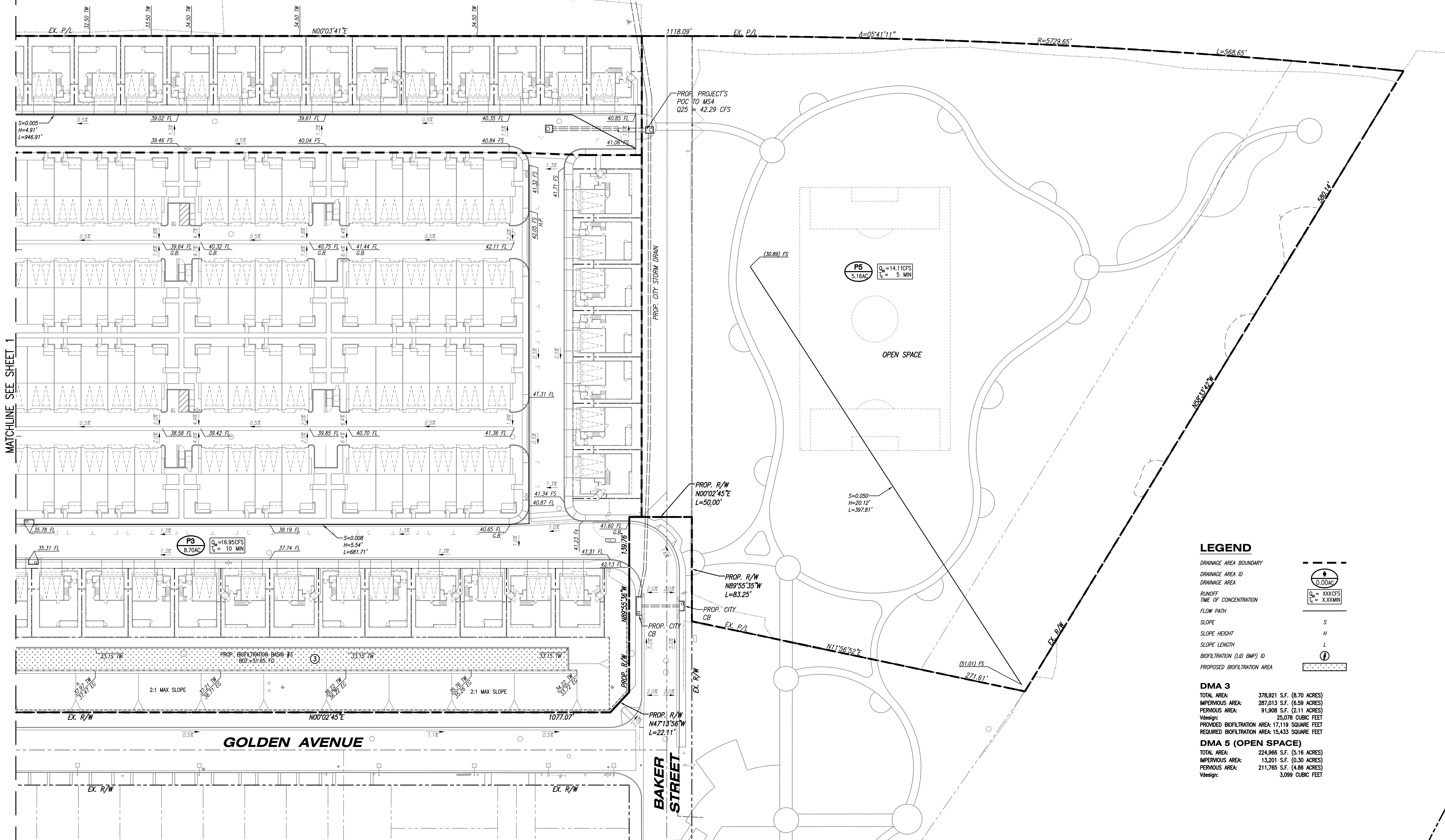
RIVER PARK RESIDENTIAL
INTEGRAL COMMUNITIES

PROPOSED HYDROLOGY MAP (SHEET 1 OF 2)
LONG BEACH, CALIFORNIA

PREPARED BY:
KHR ASSOCIATES
CONSULTING ENGINEERS/SURVEYORS/PLANNERS
17530 Von Karman Avenue - Suite 200 Irvine, California 92614
(949) 756-6440

MATCHLINE SEE SHEET 2

LOS ANGELES RIVER



MATCHLINE SEE SHEET 1

PROJECT'S
POC TO MS4
Q25 = 42.29 CFS

PROP. R/W
N00°02'45"E
L=50.00'

PROP. R/W
N89°55'35"W
L=83.25'

PROP. R/W
N47°13'56"W
L=22.11'

P5
Q_p = 14.11 CFS
t_c = 5 MIN

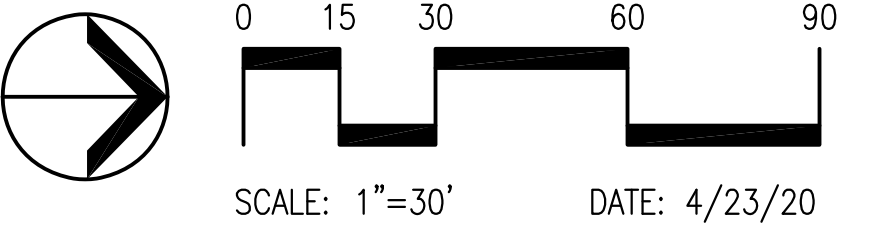
P3
Q_p = 16.95 CFS
t_c = 10 MIN

LEGEND

- DRAINAGE AREA BOUNDARY
- - - DRAINAGE AREA ID
- DRAINAGE AREA
- RUNOFF
- TIME OF CONCENTRATION
- FLOW PATH
- S SLOPE
- H SLOPE HEIGHT
- L SLOPE LENGTH
- BIOFILTRATION (LD BMP) ID
- ▨ PROPOSED BIOFILTRATION AREA

DMA 3
TOTAL AREA: 378,921 S.F. (8.70 ACRES)
IMPERVIOUS AREA: 287,013 S.F. (6.59 ACRES)
PERVIOUS AREA: 91,908 S.F. (2.11 ACRES)
Vdesign: 25,078 CUBIC FEET
PROVIDED BIOFILTRATION AREA: 17,119 SQUARE FEET
REQUIRED BIOFILTRATION AREA: 15,433 SQUARE FEET

DMA 5 (OPEN SPACE)
TOTAL AREA: 224,966 S.F. (5.16 ACRES)
IMPERVIOUS AREA: 13,201 S.F. (0.30 ACRES)
PERVIOUS AREA: 211,765 S.F. (4.86 ACRES)
Vdesign: 3,099 CUBIC FEET





IV.1.2

Conceptual LID BMP Calculations



Conceptual LID BMP Calculations

River Park Residential

712 Baker Street
Long Beach, California 90806



Dated: April 22, 2020

Prepared for

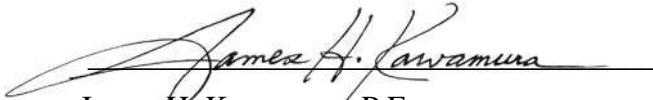
Integral Communities

Prepared by



ATTESTATION

This report has been prepared by, and under the direction of, the undersigned, a duly Registered Civil Engineer in the State of California. Except as noted, the undersigned attests to the technical information contained herein, and has judged to be acceptable the qualifications of any technical specialists providing engineering data for this report, upon which findings, conclusions, and recommendations are based.



James H. Kawamura, P.E.
Registered Civil Engineer No. C30560
Exp. 3/31/22



Section 1 Purpose and Scope

These LID Calculations presents an analysis of each drainage management area for the proposed 53 Carriage Townhomes, 99 Row Townhomes, and 74 condominium unit residential redevelopment project, known as *River Park Residential*. The calculations are done in accordance with the Low Impact Development (LID) Best Management Practices (BMP) Design Manual.

Section 2 Project Information

Integral Communities is proposing to redevelop approximately 20.66 acres of vacant land with 15.85 acres slated for residential development and 4.81 acres for open space within the Wrigley Heights community of the City of Long Beach, California. The proposed project will entail construction of 53 Carriage Townhomes, 99 Row Townhomes, and 74 condominium units.

According to the Preliminary Findings of Geotechnical Investigation prepared by Albus-Keefe and Associates, Inc., dated January 9, 2014, the area is underlain by undocumented artificial fill, alluvial soils (terrace deposits), and Lakewood Formation bedrock. The artificial fill extends to depths of approximately 32 feet, although depths ranging from 2 to 10 feet are more typical of the overall site. The soils onsite have a range of expansive characteristics from non-expansive to moderately expansive.

Section 3 LID Calculation Analysis

A feasibility analysis for the project was performed for infiltration, capture and use, and/or biofiltration BMPs of the first flush. Infiltration along with Capture & Use was deemed infeasible due to potential soil contamination from historic site use by oil companies and the open status as a cleanup site on the State's GeoTracker website. See the following Table 4.1: Infiltration Feasibility Screening, Table 4.2: Capture & Use Feasibility Screening, and the site's summary from the GeoTracker website. Biofiltration planters (flow through planters) were chosen for management of the residential portion of the project's water quality design volume. The proposed residential area is divided into three drainage management areas that are collected by catch basins with each drainage area discharging to a Flow through planter for biofiltration of the water quality design volume. A small portion (902 square feet) of the driveway off Wardlow Road will drain off-site untreated. The open space area at the northern portion of the site is approximately 6 percent impervious walk area that drains into the adjacent landscaping. Once treated, the project's stormwater will be directed to a proposed city storm drain system that discharges into the Los Angeles River.

Table 4.1: Infiltration Feasibility Screening

Section 4: BMP Selection |23

Category 1 Screening (Feasible)	Category 2 Screening (Potentially Feasible)	Category 3 Screening (Infeasible)
<p>Underlying Groundwater</p> <ul style="list-style-type: none"> <input type="checkbox"/> Depth of bottom of infiltration facility to seasonal high groundwater is > 10 ft <input type="checkbox"/> Site Soils <ul style="list-style-type: none"> <input type="checkbox"/> Infiltration rate (K_{sat}) is > 0.5 in/hr <input type="checkbox"/> Geotechnical hazards <input type="checkbox"/> Site Surroundings <ul style="list-style-type: none"> <input type="checkbox"/> Buildings or structures are at least 25 ft away from the potential infiltration BMP <input checked="" type="checkbox"/> Site is not located within the designated hillside grading area. <input checked="" type="checkbox"/> No continuous presence of dry weather flows 	<p>Underlying Groundwater</p> <ul style="list-style-type: none"> <input type="checkbox"/> Depth from bottom of infiltration facility to seasonal high groundwater is ≤ 10 ft <input type="checkbox"/> Unconfined aquifer is present with beneficial uses that may be impaired by infiltration. Full treatment required if this is the case <input type="checkbox"/> Groundwater is known to be polluted. <p>Site Soils</p> <ul style="list-style-type: none"> <input type="checkbox"/> Infiltration rate is ≤ 0.5 in/hr but potential connectivity to higher K_{sat} soils is feasible <input type="checkbox"/> Geotechnical hazards such as liquefaction are a potential near the site <p>Site Surroundings</p> <ul style="list-style-type: none"> <input type="checkbox"/> Buildings or structures are within 10 to 25 ft of the potential infiltration BMP <input type="checkbox"/> High-risk areas such as service/gas stations, truck stops, and heavy industrial sites. Full treatment is required if this is the case, or high-risk areas must be separate from stormwater runoff mingling 	<p>Underlying Groundwater</p> <ul style="list-style-type: none"> <input type="checkbox"/> Depth from bottom of infiltration facility to seasonal high groundwater is ≤ 5 ft <input checked="" type="checkbox"/> Sites with soil and/or groundwater contamination** Infiltration is not feasible <p>Site Soils</p> <ul style="list-style-type: none"> <input type="checkbox"/> Infiltration rate is ≤ 0.3 in/hr and connectivity to higher K_{sat} soils is infeasible <input type="checkbox"/> Geotechnical hazards such as liquefaction, collapsible soils, or expansive soils exist <p>Site Surroundings</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Site is located on a fill site <input type="checkbox"/> Site is located on or within 50 feet upgradient of a steep slope (20% or greater) and has not been approved by a professional geotechnical engineer or geologist
Description		
Instructions	<p>If all of the above boxes are checked, they shall be confirmed by a site-specific geotechnical investigation report and/or hydrologic analysis conducted and certified by a State of California registered professional geotechnical engineer or geologist, verifying that infiltration BMPs are feasible at the site*. Otherwise, proceed to Category 2 screening.</p>	<p>If any of the above boxes are checked, a site-specific geotechnical investigation report and/or hydrologic analysis conducted and certified by a State of California registered professional geotechnical engineer or geologist shall be submitted to prove infiltration practices are not feasible.*</p>

Table 4.1: Infiltration Feasibility Screening

* Geotechnical Reports shall be reviewed by Building and Safety Bureau and Public Works Department. See Geotechnical Report Requirements herein.

** The presence of soil and/or groundwater contamination and/or the presence of existing or removed underground storage tanks shall be documented by CEQA or NEPA environmental reports, approved geotechnical reports, permits on file with the City, or a review of the State of California's Geotracker website.

Table 4.2: Capture & Use Feasibility Screening

Section 4: BMP Selection |27

Category 1 Screening (Feasible)	Category 2 Screening (Potentially Feasible)	Category 3 Screening (Infeasible)
<p>1. Landscaped Area</p> <ul style="list-style-type: none"> <input type="checkbox"/> Landscaped area categorization of 1 exists in accordance with Table 4.3 <input type="checkbox"/> Captured volume equal to or less than the Estimated Total Water Usage (ETWU) from October 1 - April 30. <p>2. Site Soils</p> <ul style="list-style-type: none"> <input type="checkbox"/> Geotechnical hazards are not a potential near the site <p>3. Vector Control</p> <ul style="list-style-type: none"> <input type="checkbox"/> Approved vector control measures will be implemented 	<p>1. Landscaped Area</p> <ul style="list-style-type: none"> <input type="checkbox"/> Landscaped area categorization of 2 exists in accordance with Table 4.3 <input checked="" type="checkbox"/> Captured volume greater than the Estimated Total Water Usage (ETWU) from October 1 - April 30. <p>2. Site Soils</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Geotechnical hazards such as liquefaction are a potential near the site <input type="checkbox"/> Soil hydraulic conductivities are sufficient for the designed water application rate; if not, soil amendments will be implemented 	<p>1. Landscaped Area</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Landscaped area categorization of 3 exists in accordance with Table 4.3 <p>2. Site Soils</p> <ul style="list-style-type: none"> <input type="checkbox"/> Geotechnical hazards such as landsliding, collapsible soils, or expansive soils exist <p>3. Site Surroundings</p> <ul style="list-style-type: none"> <input type="checkbox"/> Site is located on or within 50 feet of a steep slope (20% or greater) as determined by the Department of Building and Safety; irrigation within 3 days of a rain event could cause geotechnical instability
Description		
Instructions	<p>If all of the above boxes are checked, or if corresponding boxes in Category 1 are checked in combination with the above boxes, a site-specific geotechnical investigation report and/or hydrologic analysis conducted and certified by a State of California registered professional civil engineer, geotechnical engineer, geologist, or landscape architect, shall be carried out to approve capture and use measures.* Otherwise, proceed to Category 3 screening.</p>	<p>If any of the above boxes are checked, a site-specific geotechnical investigation report and/or hydrologic analysis conducted and certified by a State of California registered professional geotechnical engineer, geologist, or landscape architect shall be submitted to prove capture & use practices are not feasible.*</p>

Table 4.2: Capture and Use Feasibility Screening

* Geotechnical Reports shall be reviewed by the Building and Safety bureau and Public Works Department. See Geotechnical Report Requirements contained in the Infiltration Feasibility section.

CA .GOV STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER

Home Tools Reports UST Case Closures Information

OIL OPERATORS, INC. (SL2044M1596) - (MAP) [SIGN UP FOR EMAIL ALERTS](#)

712 WEST BAKER ST
LONG BEACH, CA
LOS ANGELES COUNTY
CLEANUP PROGRAM SITE (INEQ)
[PRINTABLE CASE SUMMARY / CSN REPORT](#)

CLEANUP OVERSIGHT AGENCIES
LOS ANGELES RWQCB (REGION 4) **(LEAD)** - CASE #: 0089
CASEWORKER: [RERRIC-CA QRR](#)

[Summary](#) [Cleanup Action Report](#) [Regulatory Activities](#) [Environmental Data \(ES\)](#) [Site Maps / Documents](#)
[Community Involvement](#) [Related Cases](#)

Regulatory Profile [PRINTABLE CASE SUMMARY](#)

CLEANUP STATUS - DEFINITIONS
OPEN - SITE ASSESSMENT AS OF 1/2/2015 - [CLEANUP STATUS HISTORY](#)

POTENTIAL CONTAMINANTS OF CONCERN
ARSENIC, BENZENE, CHROMIUM, CRUDE OIL,
GASOLINE, LEAD, NICKEL, TOLUENE, XYLENE

POTENTIAL MEDIA OF CONCERN
AQUIFER USED FOR DRINKING WATER SUPPLY,
OTHER GROUNDWATER (USES OTHER THAN
DRINKING WATER), SOIL, SOIL VAPOR

FILE LOCATION
REGIONAL BOARD

DESIGNATED GROUNDWATER BENEFICIAL USE(S) - DEFINITIONS
MUN, AGR, IND, PROC

DWR GROUNDWATER SUB-BASIN NAME
Coastal Plain Of Los Angeles - West Coast (4-011.03)

GALWATER WATERSHED NAME
Los Angeles River - Los Angeles (412.10)

Site History

The Oil Operators Incorporated (OOI) property covers approximately 20-acres and is located south of the 405 freeway, east of the 710 freeway and the Los Angeles River, in the City of Long Beach. It is bounded on the south by Wardlow Road and on the east by Golden Avenue. A residential development is present to the east of the property, across Golden Avenue. The site address is 712 West Baker Street. Baker Street divides the property into two parts, a northern part and a larger southern part. The area immediately to the west of the property is the Los Angeles River.

OOI is a non-profit cooperative organization of numerous oil companies, operators and individuals that operate oil wells in the Long Beach/Signal Hill area. OOI owns the subject property and has operated onsite water treatment facilities since 1926 to treat produced water (production brines) and other fluids recovered during oil production. The aforementioned process removed oil and sediment from the water, allowing the treated water to be disposed of offsite. As a by-product of this process, low-grade oil was recovered for recycling. In the mid 1950s, a water treatment plant was constructed onsite consisting of five circular concrete skimming basins and associated pumps, tanks, pipelines and other facilities. The treatment plant was located north of the two large rectangular basins, referred to as Basins 1 and 2.

Basin 1 is a large square settling basin that contained residual oily solids that settled out of the oil production brine water processed throughout the site over the last several decades. Basin 2 received relatively clean water, after it had gone through various stages of skimming. In Basin 2, the treated water was held until it was released to the sanitation district for disposal. Additional smaller basins were historically present south of Basins 1 and 2. These smaller basins were closed in 1986 and 1987.

Prior to ceasing operations in 1998, the OOI facility consisted of five circular concrete skimming basins, Basins 1 and 2, various aboveground storage tanks and surface buildings. Much of the vacant area of the property was formerly leased to a plant nursery. The property had been undergoing decommissioning in phases since 1998. The nursery vacated the site in 1999. In 2000, the City of Long Beach ordered all buildings, sheds and similar structures to be demolished with the debris hauled offsite. In 2001, the remaining aboveground storage tanks were cleaned and demolished. Currently, the site is vacant.

Basin 1 has been the subject of remediation since it contained oily solids/sludge that settled out of the oil production wastewater processed at the site. Cleanup criteria were established for the primary chemicals of concern (COC) in Basin 1, which are total petroleum hydrocarbons (TPH), gasoline components; benzene, toluene, ethylbenzene and xylenes (BTEX) and heavy metals (arsenic, chromium, lead and nickel).

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Calculations

LID CALCULATIONS BIOFILTRATION SITE:

TOTAL SITE

Area:	20.66 acres or	899,888 square feet
Impervious Area:	12.62 acres or	549,940 square feet
Pervious Area:	8.03 acres or	349,948 square feet
Undeveloped Area:	0.00 acres or	0 square feet
T_{fill} :	3.00 hrs	

$$\text{Catchment Area} = (\text{Imp} \times 0.9) + [(\text{Per} + \text{Undeveloped Area}) \times 0.1]$$

$$\text{Catchment Area} = 529,941 \text{ S.F.}$$

$$V_{design} \text{ (CF)} = 1.5 \times 0.0625 \times \text{Catchment Area (Sq. Ft.)}$$

$$V_{design} \text{ (CF)} = 49,682 \text{ C.F.}$$

Determine $K_{sat, design}$

$$K_{sat, design} = K_{sat, media} \div \text{FS} = 5 \text{ in} \div 2$$

$$K_{sat, design} = 2.5 \text{ in/hr}$$

Determine d_p

$$d_p \text{ (FT)} = (K_{sat, design} \times T) \div 12 = (2.5 \text{ in} \times 48 \text{ hr}) \div 12$$

$$d_p \text{ (FT)} = 10 \text{ Ft.} \quad \text{Use:} \quad 1 \text{ Ft.}$$

Determine A_{min}

$$A_{min} = V_{design} \div [(T_{fill} \times K_{sat, design} \div 12) + d_p]$$

$$A_{min} = 30,574 \text{ S.F.}$$

$$\text{Provided Biofiltration Area:} \quad 30,916 \text{ S.F.}$$

LID CALCULATIONS BIOFILTRATION RES. SITE:

TOTAL RESIDENTIAL SITE

Area:	15.49 acres or	674,922 square feet
Impervious Area:	12.32 acres or	536,739 square feet
Pervious Area:	3.17 acres or	138,183 square feet
Undeveloped Area:	0.00 acres or	0 square feet
T_{fill} :	3.00 hrs	

$$\text{Catchment Area} = (\text{Imp} \times 0.9) + [(\text{Per} + \text{Undeveloped Area}) \times 0.1]$$

$$\text{Catchment Area} = 496,883 \text{ S.F.}$$

$$V_{design} \text{ (CF)} = 1.5 \times 0.0625 \times \text{Catchment Area (Sq. Ft.)}$$

$$V_{design} \text{ (CF)} = 46,583 \text{ C.F.}$$

Determine $K_{sat,design}$

$$K_{sat,design} = K_{sat,media} \div \text{FS} = 5 \text{ in} \div 2$$

$$K_{sat,design} = 2.5 \text{ in/hr}$$

Determine d_p

$$d_p \text{ (FT)} = (K_{sat,design} \times T) \div 12 = (2.5 \text{ in} \times 48 \text{ hr}) \div 12$$

$$d_p \text{ (FT)} = 10 \text{ Ft.} \quad \text{Use:} \quad 1 \text{ Ft.}$$

Determine A_{min}

$$A_{min} = V_{design} \div [(T_{fill} \times K_{sat,design} \div 12) + d_p]$$

$$A_{min} = 28,666 \text{ S.F.}$$

$$\text{Provided Biofiltration Area:} \quad 30,916 \text{ S.F.}$$

LID CALCULATIONS BIOFILTRATION 1:

DMA 1

Area:	3.90 acres or	169,937 square feet
Impervious Area:	3.26 acres or	142,199 square feet
Pervious Area:	0.64 acres or	27,738 square feet
Undeveloped Area:	0.00 acres or	0 square feet
T_{fill} :	3.00 hrs	

$$\text{Catchment Area} = (\text{Imp} \times 0.9) + [(\text{Per} + \text{Undeveloped Area}) \times 0.1]$$

$$\text{Catchment Area} = 130,753 \text{ S.F.}$$

$$V_{design} \text{ (CF)} = 1.5 \times 0.0625 \times \text{Catchment Area (Sq. Ft.)}$$

$$V_{design} \text{ (CF)} = 12,258 \text{ C.F.}$$

Determine $K_{sat,design}$

$$K_{sat,design} = K_{sat,media} \div \text{FS} = 5 \text{ in} \div 2$$

$$K_{sat,design} = 2.5 \text{ in/hr}$$

Determine d_p

$$d_p \text{ (FT)} = (K_{sat,design} \times T) \div 12 = (2.5 \text{ in} \times 48 \text{ hr}) \div 12$$

$$d_p \text{ (FT)} = 10 \text{ Ft.} \quad \text{Use:} \quad 1 \text{ Ft.}$$

Determine A_{min}

$$A_{min} = V_{design} \div [(T_{fill} \times K_{sat,design} \div 12) + d_p]$$

$$A_{min} = 7,543 \text{ S.F.}$$

Provided Biofiltration Area: 7,567 S.F.

LID CALCULATIONS BIOFILTRATION 2:

DMA 2

Area:	2.87 acres or	125,162 square feet
Impervious Area:	2.45 acres or	106,625 square feet
Pervious Area:	0.43 acres or	18,537 square feet
Undeveloped Area:	0.00 acres or	0 square feet
T_{fill} :	3.00 hrs	

$$\text{Catchment Area} = (\text{Imp} \times 0.9) + [(\text{Per} + \text{Undeveloped Area}) \times 0.1]$$

$$\text{Catchment Area} = 97,816 \text{ S.F.}$$

$$V_{design} \text{ (CF)} = 1.5 \times 0.0625 \times \text{Catchment Area (Sq. Ft.)}$$

$$V_{design} \text{ (CF)} = 9,170 \text{ C.F.}$$

Determine $K_{sat,design}$

$$K_{sat,design} = K_{sat,media} \div \text{FS} = 5 \text{ in} \div 2$$

$$K_{sat,design} = 2.5 \text{ in/hr}$$

Determine d_p

$$d_p \text{ (FT)} = (K_{sat,design} \times T) \div 12 = (2.5 \text{ in} \times 48 \text{ hr}) \div 12$$

$$d_p \text{ (FT)} = 10 \text{ Ft.} \quad \text{Use:} \quad 1 \text{ Ft.}$$

Determine A_{min}

$$A_{min} = V_{design} \div [(T_{fill} \times K_{sat,design} \div 12) + d_p]$$

$$A_{min} = 5,643 \text{ S.F.}$$

Provided Biofiltration Area: 6,230 S.F.

LID CALCULATIONS BIOFILTRATION 3:

DMA 3

Area:	8.70 acres or	378,921 square feet
Impervious Area:	6.59 acres or	287,013 square feet
Pervious Area:	2.11 acres or	91,908 square feet
Undeveloped Area:	0.00 acres or	0 square feet
T_{fill} :	3.00 hrs	

$$\text{Catchment Area} = (\text{Imp} \times 0.9) + [(\text{Per} + \text{Undeveloped Area}) \times 0.1]$$

$$\text{Catchment Area} = 267,503 \text{ S.F.}$$

$$V_{design} \text{ (CF)} = 1.5 \times 0.0625 \times \text{Catchment Area (Sq. Ft.)}$$

$$V_{design} \text{ (CF)} = 25,078 \text{ C.F.}$$

Determine $K_{sat,design}$

$$K_{sat,design} = K_{sat,media} \div FS = 5 \text{ in} \div 2$$

$$K_{sat,design} = 2.5 \text{ in/hr}$$

Determine d_p

$$d_p \text{ (FT)} = (K_{sat,design} \times T) \div 12 = (2.5 \text{ in} \times 48 \text{ hr}) \div 12$$

$$d_p \text{ (FT)} = 10 \text{ Ft.} \quad \text{Use:} \quad 1 \text{ Ft.}$$

Determine A_{min}

$$A_{min} = V_{design} \div [(T_{fill} \times K_{sat,design} \div 12) + d_p]$$

$$A_{min} = 15,433 \text{ S.F.}$$

Provided Biofiltration Area: 17,119 S.F.

LID CALCULATIONS BIOFILTRATION 4:

DMA 4 Untreated

Area:	0.02 acres or	902 square feet
Impervious Area:	0.02 acres or	902 square feet
Pervious Area:	0.00 acres or	0 square feet
Undeveloped Area:	0.00 acres or	0 square feet
T_{fill} :	3.00 hrs	

$$\text{Catchment Area} = (\text{Imp} \times 0.9) + [(\text{Per} + \text{Undeveloped Area}) \times 0.1]$$

$$\text{Catchment Area} = 812 \text{ S.F.}$$

$$V_{design} \text{ (CF)} = 1.5 \times 0.0625 \times \text{Catchment Area (Sq. Ft.)}$$

$$V_{design} \text{ (CF)} = 76 \text{ C.F.}$$

Determine $K_{sat,design}$

$$K_{sat,design} = K_{sat,media} \div FS = 5 \text{ in} \div 2$$

$$K_{sat,design} = 2.5 \text{ in/hr}$$

Determine d_p

$$d_p \text{ (FT)} = (K_{sat,design} \times T) \div 12 = (2.5 \text{ in} \times 48 \text{ hr}) \div 12$$

$$d_p \text{ (FT)} = 10 \text{ Ft.} \quad \text{Use:} \quad 1 \text{ Ft.}$$

Determine A_{min}

$$A_{min} = V_{design} \div [(T_{fill} \times K_{sat,design} \div 12) + d_p]$$

$$A_{min} = 47 \text{ S.F.}$$

LID CALCULATIONS BIOFILTRATION 5:

DMA 5 Open Space

Area:	5.16 acres or	224,966 square feet
Impervious Area:	0.30 acres or	13,201 square feet
Pervious Area:	4.86 acres or	211,765 square feet
Undeveloped Area:	0.00 acres or	0 square feet
T_{fill} :	3.00 hrs	

$$\text{Catchment Area} = (\text{Imp} \times 0.9) + [(\text{Per} + \text{Undeveloped Area}) \times 0.1]$$

$$\text{Catchment Area} = 33,057 \text{ S.F.}$$

$$V_{design} \text{ (CF)} = 1.5 \times 0.0625 \times \text{Catchment Area (Sq. Ft.)}$$

$$V_{design} \text{ (CF)} = 3,099 \text{ C.F.}$$

Determine $K_{sat,design}$

$$K_{sat,design} = K_{sat,media} \div FS = 5 \text{ in} \div 2$$

$$K_{sat,design} = 2.5 \text{ in/hr}$$

Determine d_p

$$d_p \text{ (FT)} = (K_{sat,design} \times T) \div 12 = (2.5 \text{ in} \times 48 \text{ hr}) \div 12$$

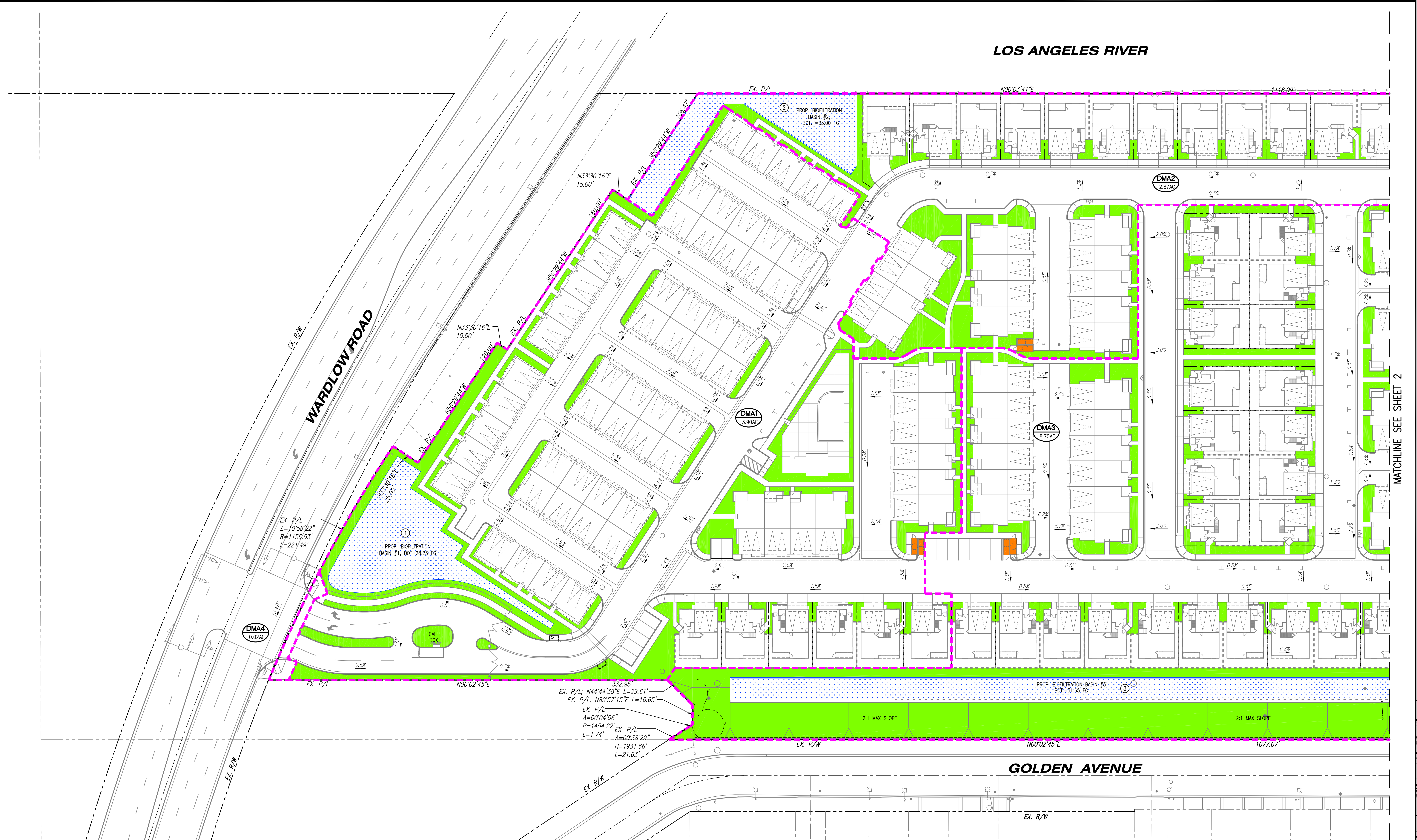
$$d_p \text{ (FT)} = 10 \text{ Ft.} \quad \text{Use:} \quad 1 \text{ Ft.}$$

Determine A_{min}

$$A_{min} = V_{design} \div [(T_{fill} \times K_{sat,design} \div 12) + d_p]$$

$$A_{min} = 1,907 \text{ S.F.}$$

LID Exhibit

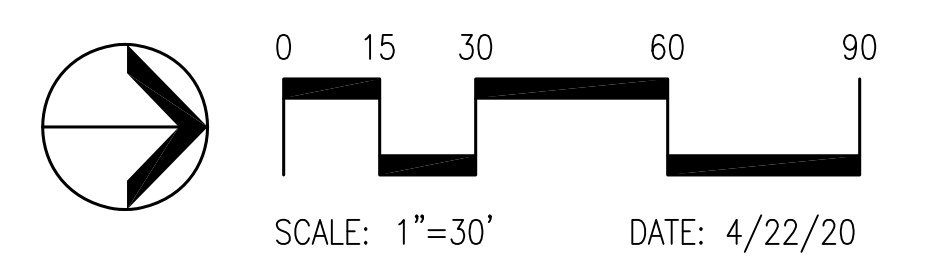


MATCHLINE SEE SHEET 2

LEGEND

- LID BMP AREA BOUNDARY (Pink dashed line)
- BIOFILTRATION (LID BMP) ID (Circle with number)
- DMA ID AREA (Circle with number)
- PROPOSED LANDSCAPE AREA (Green fill)
- PROPOSED TRASH ENCLOSURE (Orange fill)
- PROPOSED GRAVEL AREA (Grey fill)
- PROPOSED BIOFILTRATION AREA (Blue hatched fill)

TOTAL SITE	TOTAL RESIDENTIAL AREA	DMA 1	DMA 2	DMA 3	DMA 4 (UNTREATED)	DMA 5 (OPEN SPACE)
TOTAL AREA: 899,888 S.F. (20.66 ACRES)	TOTAL AREA: 674,922 S.F. (15.49 ACRES)	TOTAL AREA: 169,937 S.F. (3.90 ACRES)	TOTAL AREA: 125,182 S.F. (2.87 ACRES)	TOTAL AREA: 378,921 S.F. (8.70 ACRES)	TOTAL AREA: 902 S.F. (0.02 ACRES)	TOTAL AREA: 224,966 S.F. (5.16 ACRES)
IMPERVIOUS AREA: 549,940 S.F. (12.62 ACRES)	IMPERVIOUS AREA: 536,739 S.F. (12.32 ACRES)	IMPERVIOUS AREA: 142,199 S.F. (3.26 ACRES)	IMPERVIOUS AREA: 106,625 S.F. (2.45 ACRES)	IMPERVIOUS AREA: 287,013 S.F. (6.59 ACRES)	IMPERVIOUS AREA: 902 S.F. (0.02 ACRES)	IMPERVIOUS AREA: 13,201 S.F. (0.30 ACRES)
PERVIOUS AREA: 349,948 S.F. (8.03 ACRES)	PERVIOUS AREA: 138,183 S.F. (3.17 ACRES)	PERVIOUS AREA: 27,738 S.F. (0.64 ACRES)	PERVIOUS AREA: 18,537 S.F. (0.43 ACRES)	PERVIOUS AREA: 91,908 S.F. (2.11 ACRES)	PERVIOUS AREA: 0 S.F. (0.00 ACRES)	PERVIOUS AREA: 211,765 S.F. (4.86 ACRES)
Vdesign: 49,682 CUBIC FEET	Vdesign: 46,583 CUBIC FEET	Vdesign: 12,258 CUBIC FEET	Vdesign: 9,170 CUBIC FEET	Vdesign: 25,078 CUBIC FEET	Vdesign: 76 CUBIC FEET	Vdesign: 3,099 CUBIC FEET
PROVIDED BIOFILTRATION AREA: 30,916 SQUARE FEET	PROVIDED BIOFILTRATION AREA: 30,916 SQUARE FEET	PROVIDED BIOFILTRATION AREA: 7,567 SQUARE FEET	PROVIDED BIOFILTRATION AREA: 6,230 SQUARE FEET	PROVIDED BIOFILTRATION AREA: 17,119 SQUARE FEET	PROVIDED BIOFILTRATION AREA: 0 SQUARE FEET	PROVIDED BIOFILTRATION AREA: 0 SQUARE FEET
REQUIRED BIOFILTRATION AREA: 30,574 SQUARE FEET	REQUIRED BIOFILTRATION AREA: 28,666 SQUARE FEET	REQUIRED BIOFILTRATION AREA: 7,543 SQUARE FEET	REQUIRED BIOFILTRATION AREA: 5,643 SQUARE FEET	REQUIRED BIOFILTRATION AREA: 15,433 SQUARE FEET	REQUIRED BIOFILTRATION AREA: 47 SQUARE FEET	REQUIRED BIOFILTRATION AREA: 0 SQUARE FEET



RIVER PARK RESIDENTIAL

INTEGRAL COMMUNITIES

CONCEPTUAL LID EXHIBIT (SHEET 1 OF 2)

LONG BEACH, CALIFORNIA

PREPARED BY:
KHR ASSOCIATES
 CONSULTING ENGINEERS/SURVEYORS/PLANNERS
 17530 Von Karman Avenue - Suite 200 Irvine, California 92614
 (949) 756-6440

LOS ANGELES RIVER

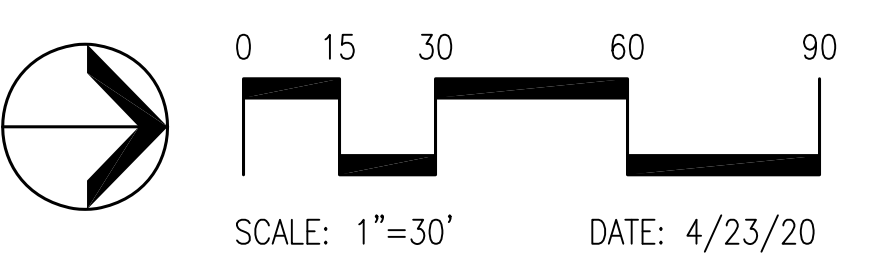


MATCHLINE SEE SHEET 1

LEGEND

- LID BMP AREA BOUNDARY
- BIOFILTRATION (LID BMP) ID 1
- DMA ID AREA 3
- PROPOSED LANDSCAPE AREA
- PROPOSED TRASH ENCLOSURE
- PROPOSED GRAVEL AREA
- PROPOSED BIOFILTRATION AREA

DMA 3	
TOTAL AREA:	378,921 S.F. (8.70 ACRES)
IMPERVIOUS AREA:	287,013 S.F. (6.59 ACRES)
PERVIOUS AREA:	91,908 S.F. (2.11 ACRES)
Volsign:	25,078 CUBIC FEET
PROVIDED BIOFILTRATION AREA:	17,119 SQUARE FEET
REQUIRED BIOFILTRATION AREA:	15,433 SQUARE FEET
DMA 5 (OPEN SPACE)	
TOTAL AREA:	224,966 S.F. (5.16 ACRES)
IMPERVIOUS AREA:	13,201 S.F. (0.30 ACRES)
PERVIOUS AREA:	211,765 S.F. (4.86 ACRES)
Volsign:	3,099 CUBIC FEET





IV.1.3

Supplemental Assessment for Origin of LNAPL Impacts

California



Environmental

**SUPPLEMENTAL ASSESSMENT
FOR ORIGIN OF LNAPL IMPACTS NEAR BRYCON MW1**

Oil Operators, Inc. (OOI) Property
712 Baker Street
Long Beach, California 90806

SUBMITTED TO

**REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION (LARWQCB)**

320 W. Fourth Street, Suite 200
Los Angeles, California 90013
Attention: Ms. Rebecca Orr
SCP Case No. 0093; SCP ID No. 2044M00

FOR

OIL OPERATORS, INC.

2852 Gundry Ave.
Signal Hill, CA 90755
Attention: Mr. Kevin Laney

CE Job No. EP610-3029
July 2019

3029.LNAPL.WP.OOI.2019

30423 Canwood Street, Suite 208, Agoura Hills, CA 91301 • P: (818) 991-1542 • F: (818) 991-1542 • E: ceworks@calenviro.com

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1.0 INTRODUCTION

A soil/groundwater assessment was implemented as outlined in the February 2019 workplan prepared by California Environmental (CE) and approved by the Los Angeles Regional Water Quality Control Board (LARWQCB). This assessment work provides further delineation of the extent and likely source of the LNAPL (light non-aqueous phase liquid, gasoline) accumulation periodically detected in onsite well Brycon–MW1.

Three (3) subsurface petroleum pipelines (as shown on City of Long Beach Substructure Map-Pipeline Atlas G23) that historically contained petroleum products, including crude oil and gasoline, border the subject site to the east (abutting the eastern property line). These pipelines were (are) owned and operated by independent oil companies including Tesoro, the successor to BP, a previous pipeline operator. The LARWQCB in a letter dated November 6, 2012 named BP Pipelines (successor Tesoro) responsible for the contamination associated with leaks of gasoline (Area of Concern - AOC A) from BP Line 34. The LARWQCB letter also mentions the results of product (LNAPL) characterization from Brycon-MW1 as containing evidence of BP pipeline leaks. The chemical testing confirmed the LNAPL sampled from Brycon-MW1 had the chemical composition typically associated with gasoline. OOI never operated or owned crude oil or refined product pipelines within their wastewater treatment facility boundary. OOI has no record of underground fuel or product tanks being installed at the 712 N. Baker Street property. The supplemental assessment data provided herein suggests that the gasoline product detected in soil and groundwater in the vicinity of Brycon-MW1 likely originated from leaks associated with the gasoline pipelines beneath Golden Avenue, adjacent to the east side of the OOI parcel.

Tesoro prepared an *Addendum to January 25, 2019 Pipeline Update Report* dated April 11, 2019. The report includes Figure 1 – Map of Line Repairs (1945-1964 and 2018) that shows nine areas of historical pipeline leaks along Golden Avenue, three (3) leaks along Baker Street to the north and one (1) leak located north of Wardlow Road. Three (3) of the leak/repair locations, shown on the Tesoro Figure 1, correspond to areas where gasoline was identified in sediment and groundwater samples on the adjacent OOI property and beneath the pipelines in Golden Avenue, including near Brycon-MW1. The

Tesoro Pipeline Leak Map confirms that historical leaks from the offsite gasoline pipelines are the likely source for the product found in Brycon – MW1. The approximate locations of the historical pipeline leaks as identified by Tesoro are shown on the attached **FIGURE 2 – SITE PLAN**.

Monitor well Brycon-MW1 was installed during 2011 within three feet of Brycon boring B10, near the southeast corner of the subject property. Boring B10 was part of the nineteen (19) supplemental assessment borings drilled and sampled on and offsite of the OOI property by Brycon during 2010. Soil and groundwater samples were obtained from B10. The soil samples from depths of 10 and 20 feet were not-detect for VOCs and TPH gasoline. Detectable (OVA) vapor readings, gasoline in soil and gasoline odors were found in the 30-foot (capillary fringe/smear zone) soil sample (Brycon B10 at 30 feet, TPHg = 180 mg/kg). Groundwater was encountered in B10 at a depth of 37 feet and a groundwater sample obtained during September 2010 was found to contain LNAPL. Gasoline (LNAPL) was found periodically in Brycon–MW1 from 2013 through 2018. The monitor well thickness of the LNAPL ranged from 0.03 feet (9/2013) to 1.72 feet (12/2017). A product layer (LNAPL) was not detected in Brycon-MW1 during free product evaluations conducted by CE on April 4 and 5, 2019 and on June 25 and 26, 2019.

An AECOM geologist (Mr. Clark Murphy) was onsite during the soil/groundwater sampling activities that occurred from June 25-28, 2019. Split soil and groundwater samples were obtained by AECOM and were reportedly sent to a state certified lab for analysis. AECOM also screened the sediment cores for VOCs using a hand-held RAE Systems PID. Sediment that exhibited high PID readings along with strong gasoline odors were subjected to a qualitative field screening test procedure by AECOM using a colorimetric indicator manufactured by Oil-In-Soil, LLC. The sensitivity range for the Oil-In-Soil field test kit reportedly ranges from approximately 500-2,500+ ppm.

The supplemental assessment to determine the origin and distribution of the LNAPL included the following: 1) Conducting a geophysical survey on April 8, 2019 in the area near Brycon-MW1 to assess for unknown buried sub-structures 2) excavation of eight (8) CPT/UVOST borings to depths of 18.26 to 59.8 feet on April 8/9, 2019 to obtain a qualitative assessment of the LNAPL distribution in the

subsurface, 3) excavation and sampling of seven (7) hydraulic push borings to depths of 42-53 feet and sub-sampling of the continuous sediment cores, 3) installing seven (7) temporary 3/4-inch PVC casings in the borings and sampling of the groundwater, 4) conduct laboratory testing of soil and groundwater for the presence of lead/arsenic, TPH, and VOCs and 5) prepare this report of findings and data interpretation providing an opinion regarding the origin and distribution of the LNAPL present in the vicinity of Brycon-MW1.

The site stratigraphy developed during this supplemental investigation identified an upper and lower saturated sand separated by a middle clayey aquitard. This sedimentary package extends from approximately 30 to 50+ feet below the ground surface. The gasoline-impacted soil zone is mostly restricted to the upper sand and locally extends a few feet into the aquitard. The discontinuous LNAPL zone is entirely within the upper sand and is characterized by high PID readings, strong gasoline odors, and high concentrations of TPHg in soil. As observed in the soil cores the LNAPL zone is typically several to six inches thick and locally (CESB10 and CESB12) up to several feet thick. The LNAPL zone does not penetrate the aquitard where sampled. The lower saturated sand was apparently not significantly impacted by the gasoline release. Monitor wells (Brycon-MW1 & Brycon-MW5) previously installed at the site have continuous screens that extend across all three lithologic units, from the upper impacted sand through the middle aquitard and into the lower sand. This makes the determination of impacted groundwater versus non-impacted groundwater between the upper and lower zones impractical due to the cross-contamination from the upper saturated zone into the lower saturated zone. The data provided herein indicate the historical leaks from the existing petroleum pipelines located beneath Golden Ave. adjacent to the east OOI property are the source of the LNAPL found in the subsurface near Brycon-MW1.

2.0 SITE DESCRIPTION

2.1 DESCRIPTION OF THE PROPERTY

The subject property consists of a 20.12-acre industrial parcel located west of Golden Avenue, south of the San Diego Freeway, north of Wardlow Road, and east of the Los Angeles River, in the city of Long Beach, California, see **FIGURE 1 – VICINITY MAP**. The property is owned by Oil Operators Inc. (OOI) and has been utilized since the 1920s for treatment of oil field production brines and other fluid by-products of oil production. OOI is currently processing low concentration petroleum hydrocarbon impacted soil on the property (bioremediation) under the auspices of the Long Beach Environmental Health Department. The study area for this LNAPL assessment work includes approximately 1 acre near the southeast corner of the property, see **FIGURE 2 – SITE PLAN**. The County of Los Angeles Tax Assessor’s Parcel Numbers (APNs) for the subject property addresses is as follows:

APNs	Address	Acreage
7203-002-001	701 W. Baker Street	4.78
7203-002-005	712 W. Baker Street	13.28
7203-002-007	3801 Golden Avenue	0.58
7203-002-008	3701 Golden Avenue	0.87
7203-002-009	3539 Golden Avenue	0.46
7203-002-010	3501 Golden Avenue	0.15

3.0 PREVIOUS WORK

The OOI property was the subject of extensive environmental testing and investigations from the early 1980s through 2018. The previous investigators include Emcon Associates (1981), Jaykim Engineers, Inc. (JEI, 1986 to 1988c), Jack K. Bryant and Associates (JKB; 1992), Environmental Science & Engineering, Inc., (ESE), California Environmental (2011), AECOM (2015/2016), Tetra Tech (2015) and Brycon, LLC (Brycon, 2001a to 2015c). The Tetra Tech and AECOM reports include comprehensive assessment of the impacts at the OOI property and present summaries of the historical environmental investigations conducted at the OOI property. The previous reports are listed in the references section of this report.

Brycon (and Bedrock Engineering beginning in December 2016) was the environmental consultant since 2001 assisting OOI with characterization and remediation activities at the Site. Ongoing soil remediation (bioremediation of TPH impacted soil) activities were undertaken in response to the Consent Decree issued in 2002, under the oversight of the City of Long Beach Department of Health and Human Services, Division of Hazardous Materials (LBDHHS). The groundwater monitoring (GWM) activities are being performed under the oversight of the California Regional Water Quality Control Board-Los Angeles Region (LARWQCB).

Brycon operated a vapor extraction system (VES) in the eastern part of the Site from 2012 to 2014 to remove vapor phase VOCs associated with the petroleum pipeline releases adjacent to Golden Avenue. AECOM Technical Services, Inc. (ATSI), on behalf of Tesoro Logistic Operations, LLC (TLO) has operated a VES unit in the northeastern part of the Site since April 2015. The ATSI-operated VES unit is expected to continue to remediate the TLO pipeline releases beneath Golden Avenue. The TLO-related activities are in response to a Cleanup and Abatement Order No. R4-2013-0064 dated September 18, 2014 (CAO) that was issued by the LARWQCB (2014a) to BP Pipelines (North America), Inc. Atlantic Richfield Company, and ARCO Terminal Services Corporation (ATSC). TLO in a letter dated July 24, 2013 assumed responsibility for responding to the CAO.

Monitoring of the groundwater quality beneath the site is ongoing and has occurred intermittently from 1989 and continuously from 1999 through 2019. There are fourteen (14) monitor wells currently

part of the monitoring program at the Site. The wells are identified as ESE-MW1, ESE-MW2, 92-MW1, Brycon MW1, MW2, MW3, MW4, MW5, and Tetra Tech-installed wells TMW1, TMW2, TMW3, TMW4, TMW5 and TMW6. Monitor well Brycon MW1 was installed in 2011 to assess the high concentrations of TPHg found in 2010 during the drilling of Brycon assessment boring B10. Subsequently, gasoline (LNAPL) was found in Brycon–MW1 during quarterly groundwater monitoring events from 2013-2019. The monitor well thickness of the LNAPL has historically ranged from 0.01 feet (2/2019) to 1.72 feet (12/2017). CE did not detect LNAPL in Brycon MW1 during observations made in April and June of 2019.

Groundwater samples are currently tested for total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), dissolved CAM metals, total dissolved solids (TDS), total suspended solids (TSS), total organic carbon (TOC), chlorides and pH. The depth to water varies from approximately 32 to 53 feet bgs, corresponding to elevations of -2.81 to -3.95 feet above mean sea level (amsl). The groundwater gradient is very shallow with a variable flow direction, predominately towards the northwest beneath the area south of Baker Street and southwesterly towards the area north of Baker Street. Petroleum hydrocarbons (primarily C₅-C₁₂) and VOC (primarily BTEX compounds) impacts dissolved in groundwater are present beneath the central-eastern third of the property and are likely associated with historical releases from the petroleum pipelines located adjacent to the eastern property line. Quarterly GWM reports are currently prepared by Bedrock Engineering and submitted to the LARWQCB.

4.0 GEOLOGY - HYDROGEOLOGY

The subject property is located within the southeast portion of the Los Angeles Basin near the western terminus of Signal Hill adjacent to the eastern bank of the Los Angeles River. The property is within the south portion of the Los Angeles Coastal Plain and is underlain by made-made fill (up to 30+ft) and undifferentiated alluvial deposits including Pleistocene-age terrace (Palos Verdes Sand) and alluvium associated with deposition from the Los Angeles River. These deposits range from clayey-silts to poorly graded sands with granule gravels.

The Site is located within the eastern portion of the West Coast Groundwater Basin within the Newport-Inglewood Structural Zone. The groundwater regime within this portion of the West Coast Basin is generally characterized as containing an upper and lower aquifer system. The upper system includes Holocene sediments that typically contain unconfined groundwater of poor quality. The lower portion of the upper aquifer system includes upper Pleistocene deposits of the Gage aquifer, also known as the “200 foot sand”. Beneath the upper aquifer is the lower aquifer system consisting of the Jefferson, Lynwood and Silverado aquifers. The lower aquifer system is under pressure or confined conditions that likely extend to depths of 1,000 feet beneath the Site.

Historical topographic maps indicate that the western portion of the subject property was at the elevation of the adjacent Los Angeles River bank or about 25 feet amsl. The eastern portion of the property is a concealed (obscured by grading/artificial fill) erosional escarpment associated with the Los Angeles River. Subsequent grading at the property has raised the elevation of most of the site to an elevation of approximately 40 feet amsl. Groundwater level data indicate the groundwater elevation beneath the property is approximately at or several feet below mean sea level. The depth to groundwater across the Site ranges from about 30.55 to 50.24 (February 2019) feet below the ground surface. Groundwater level data indicate a variable but predominately northwesterly groundwater flow direction.

The monitor well network is sampled on a quarterly basis since 2017. The wells are tested for TPH, VOCs, CAM metals, pH, Total Organic Carbon, TDS, TSS and Chloride. Bedrock Engineering (previously Brycon) sampled fourteen (14) onsite monitoring wells during February 2019, as part of the required groundwater monitoring work. The groundwater monitoring data from February 2019 (presented in the report, *February 2019 - Quarterly Groundwater Monitoring at the Oil Operators Property, 712 West Baker Street, Long Beach, California*, dated April 15, 2019 and prepared by Bedrock Engineering) show that TPHg (C₄-C₁₂) was detected in six (6) of the fourteen wells. The six (6) wells with TPHg are located within the eastern half of the property and contain the following TPH concentrations; ESE-MW1 0.4 mg/l, Brycon-MW1 100.0 mg/l, Brycon – MW2 0.28 mg/l, Brycon – MW3 13.0 mg/l, Brycon –MW4 0.48

mg/l, and TMW5 9.8 mg/l. Brycon-MW1 was observed to have a 0.01 foot thick Light Non-Aqueous Phase Liquid (LNAPL) on the groundwater surface. TPH-g and VOC impacts to the underlying groundwater resource from onsite releases were not identified.

The detailed hydrogeology developed during this supplemental investigation identified two (2) distinct saturated zones beneath the LNAPL study area. They include an upper and lower saturated sand separated by a middle clayey aquitard. This sedimentary package extends from approximately 30 to 50+ feet below the ground surface. Monitor wells (Brycon-MW1 & Brycon-MW5) previously installed at the site have continuous screens that extend across all three (3) lithologic units, from the upper fuel-impacted sand through the middle aquitard and into the lower sand. This makes the zonal determination of impacted groundwater versus non-impacted groundwater impractical due to the cross-contamination effect from the upper impacted saturated zone into the lower saturated zone. Soundings made during June 2019 within the upper sand from temporary small diameter casings screened in the upper zone and placed within the CE hydraulic push borings typically contained groundwater levels three-five feet higher than the water level in nearby well Brycon MW1. This indicates that the upper sand and lower sand are probably hydraulically distinct water bearing zones and need to be assessed as such. Recommendations are provided for abandoning the existing wells (Brycon-MW1 & 5) and installation of future groundwater monitoring wells that isolate the upper sand and lower sand zones, when present, so these zones can be sampled and assessed separately.

5.0 LNAPL ASSESSMENT

The LNAPL assessment work was carried out in three (3) phases from April through June 2019, following LARWQCB approval of the February CE workplan. A geophysical survey was implemented to clear utilities and to assess for unknown buried sub-structures. Eight (CPT-1 to CPT-8) CPT/UVOST soundings were made beneath the study area to evaluate the site stratigraphy and to tentatively identify LNAPL zones. Finally, seven (7) continuously cored hydraulic push borings were logged and sampled to assess the location and distribution of the suspect LNAPL zone. Seven (7) temporary casings were placed in the boreholes and groundwater samples were obtained. The assessment work and the data developed are discussed below. The locations of the CE borings are shown on **FIGURE 3 – LNAPL ASSESSMENT PLAN**. The sediment interpretations and laboratory test data are depicted on **FIGURE 4 - CROSS SECTION A-A'** and **FIGURE 5 – CROSS SECTION B-B'**.

5.1 GEOPHYSICAL SURVEY

A geophysical survey (magnetics-EM, ground penetrating radar, E-induction) was conducted onsite by Southwest Geophysics on April 8, 2019. An approximately 31,500 sf area bordered by the property line to the east, the north boundary of the dog park to the south, along the east boundary of Basin 2 and then along an east/west line in the vicinity of well 92-MW3; see **FIGURE 3**. The geophysical survey was used to assess for substructures in the boring locations and to assess for unknown substructures.

The geophysical evaluation included the use of a Geonics Electromagnetics (EM) model M61 MK2, GSSI SIR 3000 Ground Penetrating Radar, Schonstedt Model GA-52C magnetic gradiometer, Fisher M-Scope TW-6 pipe and cable locator and RD8000 line tracer. The instruments provided real-time results to facilitate the delineation of subsurface features. The complete Southwest Geophysical Evaluation Report is attached in **APPENDIX II**.

Numerous geophysical anomalies were identified during the survey. Most were determined to be areas of shallow concrete, metal debris, or abandoned piping. Several of the anomaly areas (A, C, D, E and F) were identified as areas that required additional investigation to determine the origin of the EM and

magnetic responses. These anomaly areas were preliminarily investigated by hand augering through the identified zones. In all locations the hand auger was unable to penetrate beyond several feet due to the presence of concrete and metal debris. Future test trenches/pits through the anomaly areas are planned to further delineate these features.

5.2 CPT/UVOST BORINGS

Gregg Drilling and CE mobilized to the site on April 8, 2019 to advance the CPT borings in conjunction with the UVOST (Ultra-Violet Optical Screening Tool) system. The UVOST process uses a down-hole tool that emits a laser source through a sapphire window stimulating fluorescence (laser induced fluorescence – LIF) of the PAHs present in refined petroleum products. The spectral wavelength response is captured, recorded, and resolved into a percent concentration, relative to the reference compound, for a particular hydrocarbon type. The response spectra are typically calibrated with a reference emitter standard that includes the hydrocarbon profile expected at the site. It was anticipated, based on the previous sampling of Brycon-MW1, that a product sample could be obtained and used as the reference emitter standard (weathered gasoline). However, product was not found in Brycon-MW1 during testing conducted on April 8 and 9, 2019. Therefore, the instrument manufacturer (Dakota Technologies) standard reference emitter (light oil) was utilized to calibrate the UVOST system. The UVOST logging was run in conjunction with the standard CPT lithology log, providing a simultaneous soil type in conjunction with the qualitative hydrocarbon concentration. The complete CPT/UVOST report from Gregg Drilling is attached in **APPENDIX III**.

The eight (8) CPT/UVOST borings ranged in depth from 21.33 to 62.99 feet below ground surface. CPT-7 was terminated on a hard layer at a depth of 21.33 feet. The remaining seven CPT/UVOST borings extended to depths of 52.82 to 62.99 feet below the ground surface. No response signatures indicative of LNAPL zones were recorded by the UVOST system. The lithology identified by the CPT logs included an upper silty sand to a depth of 25 + feet, a middle zone (depth 25-40 feet) of silts and clays with occasional sandy layers and a lower sand/silty zone from 40 to 63 feet bgs. Pore water pressure tests were conducted at a depth of approximately 55 feet in CPT-1 and CPT-2. The calculated depth of potentiometric surface in the lower sand unit based on the pore water dissipation test is 20-25 feet

below grade, or approximately 15-20 feet amsl. This value seems high and would need to be confirmed by placing a piezometer isolated within the lower sand unit.

5.3 SOIL BORINGS

On June 25, 2019 a GeoProbe® Model 8040DT track-mounted hydraulic push rig was mobilized to the site by Cascade Drilling. Seven (7) hydraulic push borings were continuously cored to depths of 42-53 feet with drilling activities terminating on June 28, 2019. All borings were abandoned by pressure grouting via tremie pipe using a neat cement mix with the decommissioning activities completed on June 29, 2019. A permit for the borings was obtained from the City of Long Beach Dept. of Health and Human Services; attached in **APPENDIX V**.

The five-foot long by 1-inch wide sediment cores were sub-sampled per the EPA field preservation Method 5035, at approximately 1-5 foot depth intervals, depending on the field screening results. Typically the upper 25 feet of each boring was sub-sampled as intact six-inch long cores. The 5-foot long cores in the lower section of each boring were split open to allow for more detailed logging. The sediment was screened visually and with the use of a field PID for the presence of gasoline and associated VOCs. A temporary ¾-inch diameter PVC casing (new casing for each location) was placed in all borings and allowed to equilibrate for a one to several days to assess for product layers and to obtain a groundwater/product sample for analysis. Groundwater samples were obtained using a new disposal sampler for each sampling event with the groundwater placed in laboratory supplied preserved 40ml VOAs.

The undersigned hydrogeologist was onsite and conducted all the sampling and boring log preparation. The **CE BORING LOGS** are attached as **Plates 1-7**. Mr. Clark Murphy AECOM geologist was onsite during the soil/groundwater sampling activities that occurred on June 25-28, 2019. Split soil and groundwater samples were obtained by AECOM for analysis. Sediment that exhibited high PID readings along with strong gasoline odors were subjected to a qualitative field screening test procedure by AECOM using a colorimetric indicator manufactured by Oil-In-Soil, LLC. The sensitivity range for the Oil-In-Soil field test kit reportedly ranges from approximately 500-2,500+ ppm.

6.0 ANALYTICAL TESTING

Seventy-one (71) individual soil samples (including duplicate samples) were obtained from the borings and tested for total purgeable hydrocarbons, gasoline range hydrocarbons, and VOCs per EPA Method 8260B/5035. Fifty (50) of the seventy-one (71) samples were tested for total petroleum hydrocarbons, gasoline-oil range, per EPA Method 8015 and for lead and arsenic per EPA Method 6010B/7000. Eight (8) grab groundwater samples were obtained and tested for total purgeable hydrocarbons, gasoline range hydrocarbons and VOCs per EPA Method 8260B.

Soil and groundwater samples were couriered daily from the site to a fixed-base State of California certified laboratory, operated by Eurofins in Garden Grove, California. The laboratory tests on soil and groundwater samples are contained on **TABLES I-III in APPENDIX I**, and are summarized below. The complete laboratory test reports are attached in **APPENDIX IV**.

6.1 ANALYTICAL TESTS ON SOIL

TPHg was detected in all seven (7) borings CESB9-CESB15. Detectable and/or elevated concentrations (>100 mg/kg) of TPHg and detectable VOCs were typically not found in soil in the upper 25 feet of the sediment sampled. Elevated concentrations of TPHg were consistently detected within the Upper Sand lithosome (depths 33-38 feet) at concentrations up to 16,000 mg/kg (CESB10-33 feet). The maximum concentration of benzene found in the Upper Sand was 1,900 µg/kg in CESB12-38 feet. Other gasoline related VOCs detected in the Upper Sand zone include toluene, ethylbenzene, xylene, butylbenzene, isopropylbenzene, isopropyltoluene, propylbenzene and trimethylbenzene. MTBE and other oxygenated compounds were not detected in soil, and this is consistent with previous findings. Much lower to non-detect concentrations of TPHg (0.07-2.7 mg/kg) and VOCs (benzene <1.0 ug/kg) were found in the Lower Sand. All concentrations of lead found in soil during this assessment are less than 10 mg/kg, much lower than the site remediation goal of 80 mg/kg. Arsenic concentrations in soil

ranged from <0.7 to 28.1 mg/kg. Native sediment samples from borings CESB15-40 feet and CESB12-6 feet contained arsenic at 24.2 and 28.1 mg/kg, respectively.

6.2 ANALYTICAL TESTS ON GROUNDWATER

All eight (8) groundwater samples contained elevated concentrations of TPHg that ranged from 6,500-79,000 µg/l, as found in CESB14 and CESB10, respectively. Benzene was detected in all groundwater samples at concentrations that ranged from 7.2 to 390 µg/l. Other gasoline related VOCs detected in groundwater include toluene, ethylbenzene, xylene, butylbenzene, isopropylbenzene, isopropyltoluene, propylbenzene and trimethylbenzene. MTBE and other oxygenated compounds were not detected in groundwater, which is consistent with previous findings. A 5-millimeter thick product layer was initially detected in CESB10 on June 26, 2019. Subsequently, on June 27 a product sheen was observed during groundwater sampling of CESB10. The product layer was of insufficient volume to isolate for characterization.

7.0 CONCLUSIONS

The detailed hydrogeology developed during this supplemental investigation identified an upper and lower saturated sand separated by a middle clayey aquitard in all CE borings, CESB9-CESB15. This sedimentary package extends from approximately 30 to 50+ feet below the ground surface. Gasoline impacted soil was identified (above mobile NAPL concentrations) beneath the study area through continuous coring and direct soil sample analysis. The UVOST methodology was not effective in identifying LNAPL in the subsurface. The data presented below indicates that the historical releases from the product pipelines are the source for the LNAPL found beneath the study area.

The gasoline in soil was initially encountered below a depth of 25 feet. The high concentration gasoline impacted zone is primarily restricted to the lower portion of the Upper Sand unit as shown on **Sections**

A & B, and extends to a depth of about 40 feet corresponding to the top of the Middle Aquitard. The LNAPL zone is entirely within the Upper Sand and is correlated with high PID readings (465 ppmv CESB10 at 35.5 feet, 780 ppmv in CESB12 at 35 feet and 903 ppmv CESB15 at 34 feet), strong gasoline odors and high concentrations of TPHg in soil. As observed in the sediment cores the LNAPL zone is typically several to six inches thick and locally (CESB10 and CESB12) up to several feet thick. It appears the LNAPL zone occurs in pockets or sedimentary traps located within the basal portion of the Upper Sand in the vicinity of Brycon-MW1, CESB9, CESB10 and CESB12. The mobile LNAPL zone is probably not continuous through the study area, but rather occurs in pockets.

A distinction needs to be made between residual LNAPL in soil that is not moving and areas where the LNAPL may be subject to movement. Migration of LNAPL in the vadose zone is a complex fluid mechanics process that engages saturated and unsaturated flow, capillary pressure gradients, soil saturation levels and product depletion. Brost (2000) has proposed the use of screening threshold soil concentrations for various types of hydrocarbon products above which LNAPL movement is likely. The Residual Saturation Screening Value for gasoline in a sandy soil as proposed by Brost is 3,000 mg/kg. Using the Brost criteria the extent of the mobile product layer at the study site would include the areas beneath CESB10, CESB12, CESB15 and Brycon MW1. As mentioned previously, the mobile LNAPL zone is not continuous but occurs in sedimentary traps.

The following facts support the conclusion that the LNAPL found beneath the study area originated from pipeline leaks beneath Golden Ave.

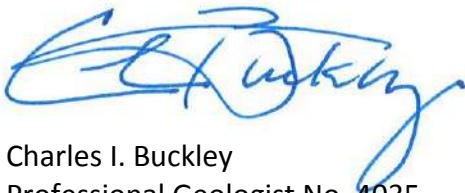
- The pipeline operator (Tesoro) prepared a figure that shows nine (9) areas of historical (1945-1964 and 2018) pipeline leaks (including gasoline) along Golden Avenue, three (3) leaks along Baker Street to the north and one (1) leak located north of Wardlow Road. Three (3) of the leak/repair locations, shown on the Tesoro Figure 1, correspond to areas where gasoline was identified in sediment and groundwater samples on the adjacent OOI property and beneath the pipelines in Golden Avenue, including near Brycon-MW1.
- Characterization (fingerprinting) of the product found in Brycon MW1 by Zymax Forensics in 2012 concluded the sample was gasoline.
- The sampling and observations by CE in 2019 identified a LNAPL migratory pathway from the pipeline area (CESB15) to the vicinity of in CESB10, which is adjacent to Brycon MW1. Gasoline was released from the pipeline beneath Golden Ave., migrated vertically until the saturated Upper Sand was encountered then moved laterally periodically becoming entrained in sedimentary traps as shown on CE Section A-A' (note that CESB15 is close to the reported

location of a historical pipeline leak). Elevated concentrations of gasoline hydrocarbons were not detected in the upper vadose zone (ground surface – 25 feet deep) suggesting no gasoline release points on the OOI property.

- The concentrations of TPHg detected in the Upper Sand were lower towards the west away from the pipeline source area.
- An LNAPL accumulation was detected in CESB10 during groundwater sampling, which is along the LNAPL migratory pathway.
- TPHg dissolved in groundwater is only found in groundwater on the east portion of the OOI property adjacent to the reported leaky pipelines.
- Gasoline was not detected within the upper vadose zone of the study area eliminating the OOI property as the source of the LNAPL.

It is recommended that future groundwater monitoring wells, especially within and near the LNAPL study area, be installed to isolate the Upper and Lower Sand Units. These units need to be assessed and monitored as individual and separate saturated zones to better assess if the pipeline leaks have impacted the aquifer present beneath the Middle Aquitard. The small zone of saturation in the basal portion of the Upper Sand does not meet the accepted definition of an aquifer (will not provide sufficient volume of water for a sustained yield). The Lower Sand probably meets the definition of a useful aquifer. These factors should be considered when developing a plan to mitigate the gasoline releases. It is noted that many of the existing monitor wells will require abandonment during future grading activities. Replacement wells should be sited and installed in light of the hydrogeologic conditions present beneath the area.

Respectfully submitted,



Charles I. Buckley
Professional Geologist No. 4035
Certified Engineering Geologist No. 1250
Certified Hydrogeologist No. 55



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ILLUSTRATIONS

- Plates 1-7 – Logs of Borings**
- Figure 1 – Vicinity Map**
- Figure 2 – Site Plan**
- Figure 3 – LNAPL Assessment Plan**
- Figure 4 – Cross Section A-A'**
- Figure 5 – Cross Section B-B'**


CALIFORNIA ENVIRONMENTAL - LOG OF BORING CESB9

JOB NUMBER: 3029	DATE: 6/25/2019	
CLIENT NAME: Oil Operators Inc.	DRILL RIG: GeoProbe 8040DT	
SITE ADDRESS: 712 N Baker St. Long Beach, CA	SAMPLING METHOD: 1-inch wide x 5 ft long plastic liner	
LOGGED BY: Charles I. Buckley, CHG No. 55	BORING DIAMETER: 2.75- inches	
REVIEWED BY: Greg Buensuceso	SURFACE CONDITIONS: Unpaved	

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Graphic Log	Well Diagram
0	SD	Start drilling at 8:30am - initial 5-foot long core partial recovery 3 to 5 ft				
3	SD	at 3 feet - Silty Sand , reddish brown(5YR4/3), slightly moist, medium dense, no odor, no staining. Contains sub-angular granule gravel <5%.	SM	0.0		
10	SD	at 10 feet Sandy Silt (7.5YR6/4), light brown, moist, firm.	ML	0.0		
12	SD		ML			
14	SD		ML			
16	SD	at 15.5 feet Silty Sand , light gray to pale brown (10YR7/2), moist , dense. medium to fine sand, fine sand at 26 feet.	SM	0.0		
18	SD		SM			
20	SD		SM			
22	SD		SM			
24	SD		SM	0.0		
26	SD	at 27 feet Silty Clay/Clayey Silt , mottled gray brown, moist, firm. Grades to olive (5Y4/3) at 29.5 feet. Intercalated clayey silt/silty clay with fine sand to 32 feet.	CL			
28	SD		ML/CL	0.0		
30	SD		ML/CL			
32	SD	at 32 feet Sand and Silt , Dark Olive Gray (5Y4/2), very moist-wet, medium dense, with strong hydrocarbon odor at 33 feet. Sampler malfunction during the 33-38 foot interval. Drove second liner becomes sandy silt at 38 feet.	ML	25 at 32 feet		
34	SD		ML/SM	535 at 34.5 feet		
36	SD		ML	430 at 35.5 feet		
38		Drove to depth of 42 feet, set 3/4-inch diameter, 0.010-inch slotted pvc casing 10:45am. Blank casing to ground surface. Sampled groundwater. No product observed during well sampling.	ML/SM	<25 at 38 feet		
40			ML			
42						
44		END AT 42 FEET- SET TEMPORARY CASING, SCREEN INTERVAL 32-42 FEET, SAMPLED WELL, THEN ABANDONED BY REMOVING CASING AND FILLING WITH NEAT CEMENT VIA TREMIE. DEPTH TO STATIC WATER LEVELS; 35.0 FEET ON JUNE 25, 2019 AT 2:19 PM, 36.9 FEET ON JUNE 27, 2019 AT 3:20 PM.				
46						
48						
50						

† Sample Type: S=Soil W=Water V=Vapor
D=Drive G=Grab N=No Recovery


CALIFORNIA ENVIRONMENTAL - LOG OF BORING CESB10

JOB NUMBER: 3029	DATE: 6/25/2019	
CLIENT NAME: Oil Operators Inc.	DRILL RIG: GeoProbe 8040DT	
SITE ADDRESS: 712 N Baker St. Long Beach, CA	SAMPLING METHOD: 1-inch wide x 5 ft long plastic liner	
LOGGED BY: Charles I. Buckley, CHG No. 55	BORING DIAMETER: 2.75- inches	
REVIEWED BY: Greg Buensuceso	SURFACE CONDITIONS: Unpaved	

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Graphic Log	Well Diagram	
0	SD	Start drilling at 11:05am -encountered concrete debris - moved boring					
3	SD	at 5 feet - Silty Sand/Sandy Silt , mottled brown-reddish brown (5YR4/3), slightly moist, medium dense, no odor, no staining.					
10	SD		SM	0.0			
12	SD		SM				
14	SD		SM				
16	SD		SM	0.0			
18	SD		SM				
20	SD		at 20 feet Silty Sand , light gray to pale brown (10YR7/2), moist , dense.	SP			
22	SD			SM			
24	SD			SM	0.0		
26	SD		at 27 feet Silt with fine Sand , mottled gray brown, moist, firm. Interbedded	ML			
28	SD	Clayey/Sandy Silt , 28 to 35 feet. Contains fine sand lenses, at 31.5 grades to dark olive gray (5Y4/2) with hydrocarbon odor,	ML/CL	0.0			
30	SD		ML/CL	210 at 30 feet			
32	SD		ML	150 at 32 feet			
34	SD	at 35 feet Silt w/ fine Sand , dark gray (5Y3/1), wet , strong hydrocarbon odor	ML/SM	334 at 35 feet			
36	SD		ML	465 at 35.5 feet			
38	SD	36-38 Silty Clay , mottled brn/gray, moist, very firm. No hydrocarbon odor	CL	0.0			
40	SD	at 41-43 grades to Silt w/sand , mottled brown/gray, moist, very firm no hydrocarbon odor	CL/ML	400 (?) at 40.5			
42	SD		ML	0.0			
44	SD	at 43.5 to 46 Sand , fine-medium sand, gray, wet , dense, no HC odor	SM	2.0			
46	SD	at 47 feet Clayey Silt w/ Sand , mottled brown to light olive gray (5Y6/3), moist, firm with abundant shell fragments. No HC odor	SM	0.0			
48			ML	0.0			
50		END AT 48 FEET, SET TEMPORARY 3/4-INCH PVC CASING SCREEN FROM 33-48 FEET AT 3 PM, SAMPLED WELL THEN ABANDONED BY REMOVING CASING AND FILLING WITH NEAT CEMENT GROUT VIA TREMIE. DEPTH TO STATIC WATER LEVEL 35.6 FEET AT 3PM ON JUNE 27, 2019. APPROXIMATELY A 5 mm PRODUCT LAYER DETECTED ON JUNE 26, 2019 8AM.					

†Sample Type: S=Soil W=Water V=Vapor
D=Drive G=Grab N=No Recovery


CALIFORNIA ENVIRONMENTAL - LOG OF BORING CESB11

JOB NUMBER: 3029	DATE: 6/26/2019	
CLIENT NAME: Oil Operators Inc.	DRILL RIG: GeoProbe 8040DT	
SITE ADDRESS: 712 N Baker St. Long Beach, CA	SAMPLING METHOD: 1-inch wide x 5 ft long plastic liner	
LOGGED BY: Charles I. Buckley, CHG No. 55	BORING DIAMETER: 2.75- inches	
REVIEWED BY: Greg Buensuceso	SURFACE CONDITIONS: Unpaved	

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Graphic Log	Well Diagram
0	SD	Start drilling at 8.00am - unpaved				
3	SD	at 3 feet Silty Sand, mottled brown/dark brown, moist, medium dense at 5 feet -				
10	SD	Silty Sand/Sandy Silt, mottled brown-reddish brown (5YR4/3), slightly moist, medium dense, no odor, no staining.	SM	0.0		
12	SD	at 10 feet, Silt, light gray, slightly moist, firm with concrete fragments	ML			
14	SD	at 14.5 feet, Sand, fine grained, light brown, moist, dense.	SM			
16	SD		SM	0.0		
18	SD	at 18 feet becomes silty	SM/ML			
20	SD	at 20 feet Silty Sand, light gray to pale brown (10YR7/2), moist, dense.	SM	0.0		
22	SD		SM			
24	SD	At 25 feet, Sand, fine grained, light brown, moist, dense.	SM	0.0		
26	SD	Interbedded Clayey/Sandy Silt, 28 to 35 feet. Contains fine sand lenses, at 31.5 feet grades to dark olive gray (5Y4/2) with hydrocarbon odor,	SM			
28	SD		ML/CL	0.0		
30	SD		ML/CL	30 at 30 feet		
32	SD		ML	125 at 32.5 feet		
34	SD		SM	>300 at 35.5 feet		
36	SD	at 35.5 feet Sand, fine sand with silt, dark gray (5Y3/1), wet, strong hydrocarbon odor.	ML			
38	SD	36-37 feet Silt, mottled light gray (5Y7/1), moist, very firm. No HC odor.	ML	<1.0		
40	SD	38-42.5 feet grades to Clay with Clayey Silt, mottled light brown/light gray, moist, firm, no hydrocarbon odor	CL/ML	<1.0		
42	SD		ML			
44	SD	at 42.5 feet Silty Sand, fine-medium sand, gray, wet, dense, no HC odor	SM	0.0		
46	SD	at 43-46.5 feet grades to Silty with sand mottled light-medium brown. At 47.5 to 53 feet Silty Sand, light gray, wet, dense.	SM			
48	SD		SM	0.0		
50	SD		SM			
52	SD		SM	0.0		
54		END AT 53 FEET, SET TEMPORARY 3/4-INCH PVC CASING SCREEN FROM 27-42 FEET DUE TO HOLE COLLAPSE, SAMPLED WELL THEN ABANDONED BY REMOVING CASING AND FILLING WITH NEAT CEMENT GROUT VIA TREMIE. DEPTH TO STATIC WATER LEVEL 35.8 FEET AT 3 PM ON JUNE 26, 2019. NO PRODUCT OBSERVED.				

† Sample Type: S=Soil W=Water V=Vapor
D=Drive G=Grab N=No Recovery


CALIFORNIA ENVIRONMENTAL - LOG OF BORING CESB12

JOB NUMBER: 3029	DATE: 6/26/2019	
CLIENT NAME: Oil Operators Inc.	DRILL RIG: GeoProbe 8040DT	
SITE ADDRESS: 712 N Baker St. Long Beach, CA	SAMPLING METHOD: 1-inch wide x 5 ft long plastic liner	
LOGGED BY: Charles I. Buckley, CHG No. 55	BORING DIAMETER: 2.75- inches	
REVIEWED BY: Greg Buensuceso	SURFACE CONDITIONS: Unpaved	

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Graphic Log	Well Diagram
0	SD	Start drilling at 11:30 am - unpaved				
3	SD	at 3 feet Silty Sand , brown, moist, medium dense. with concrete fragments, native at 5 feet, becomes silty at 7-9 feet. Silty sand, red brown (5YR4/3) at 10 feet.				
10	SD		SM	0.0		
12	SD		ML			
14	SD		SM			
16	SD		SM	0.0		
18	SD	at 18 feet grades to silty light olive (5Y6/2)	SM/ML			
20	SD	at 23-34 feet Silty Sand , light olive gray (5Y6/2), moist, dense. Slight hydrocarbon odor at 23 feet.	SM	0.0		
22	SD		SM	10 at 23 feet		
24	SD		SM	0.0		
26	SD		SM			
28	SD		SM	0.0		
30	SD		SM			
32	SD		SM	25 at 32/35 feet		
34	SD	at 35-38 feet Silt, with fine sand , olive gray (5Y5/2), very moist, strong hydrocarbon odor.	ML	780 at 35 feet		
36	SD		ML/SM			
38	SD		ML	434 at 38 feet		
40	SD	38-42.5 feet grades to Clay with Clayey Silt , mottled light brown/light gray, moist, firm, finely disseminated organic debris, no hydrocarbon odor.	CL/ML	<1.0		
42	SD		ML			
44	SD	at 42.5 feet Silty Sand , fine-medium sand, gray, wet , dense, no HC odor	SM	0.0		
46	SD	at 43-48 feet grades to Silty Sand light gray (5Y7/2) wet, dense. No hydrocarbon odor.	SM			
48	SD		SM	0.0		
		END AT 48 FEET, SET TEMPORARY 3/4-INCH PVC CASING SCREEN FROM 37-42 FEET; HOLE COLLAPSED TO 34 FEET THEN RE-OPENED TO 43 FEET. SAMPLED WELL THEN ABANDONED BY REMOVING CASING AND FILLING WITH NEAT CEMENT GROUT VIA TREMIE. DEPTH TO STATIC WATER LEVEL 35.98 FEET AT NOON ON JUNE 28, 2019. NO PRODUCT OBSERVED.				

† Sample Type: S=Soil W=Water V=Vapor
D=Drive G=Grab N=No Recovery


CALIFORNIA ENVIRONMENTAL - LOG OF BORING CESB13

JOB NUMBER: 3029	DATE: 6/27/2019	
CLIENT NAME: Oil Operators Inc.	DRILL RIG: GeoProbe 8040DT	
SITE ADDRESS: 712 N Baker St. Long Beach, CA	SAMPLING METHOD: 1-inch wide x 5 ft long plastic liner	
LOGGED BY: Charles I. Buckley, CHG No. 55	BORING DIAMETER: 2.75- inches	
REVIEWED BY: Greg Buensuceso	SURFACE CONDITIONS: Unpaved	

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Graphic Log	Well Diagram
0	SD	Start drilling at 7:30 am - unpaved - gravel path of travel				
3	SD	at 3 to 6 feet Silty Sand , brown, slightly moist, medium dense. with concrete fragments/debris at 3 feet. At 6.5-8 feet Silt with fine sand, mottled red brown-brown, moist firm. No odor				
10	SD		SM/ML	0.0		
12	SD	8-13 feet Silt , brown to dark gray, moist firm, slight petroleum odor at 9.5 feet	ML			
14	SD	at 13-18 feet Silt with sand, no odor at 13 feet.	ML	0.0		
16	SD		ML	0.0		
18	SD	at 18-23 feet Silt with sand	SM/ML			
20	SD	at 23-28 feet Silt with sand, light olive gray (5Y6/2), moist, dense. Slight hydrocarbon odor at 23 feet. Fine sand 24-26 feet. Occasional sub-angular granule gravels at 26.5 feet.	SM	0.0		
22	SD		ML	5.0 at 23 feet		
24	SD		ML	0.0		
26	SD		SM			
28	SD	28-31 feet, Silt	ML	0.0		
30	SD		ML			
32	SD	32-33 feet Silty Sand , light olive gray (5Y6/2), moist, dense. Fine sand	SM	25 at 32 feet		
34	SD	33-38.5 feet, Sandy Silt , light gray (5Y7/1), moist, firm.	ML	107 at 34 feet		
36	SD		ML	34 at 36 feet		
38	SD	wet at 38.5 feet, Sandy	ML	115 at 39 feet		
40	SD	40.5 to 44 Silt and Clayey Silt , light olive gray (5Y6/2)- brown, moist, very firm, becomes clayey at 43 feet.	CL/ML	<1 at 41 feet		
42	SD		ML			
44	SD		ML	0.0		
46	SD	at 44-48 feet grades to Silty Sand , mottled brown to light gray (5Y7/2) wet, dense. No hydrocarbon odor.	SM			
48	SD		SM	0.0		
		END AT 48 FEET, SET TEMPORARY 3/4-INCH PVC CASING SCREEN FROM 33-48 FEET; SAMPLED WELL THEN ABANDONED BY REMOVING CASING AND FILLING WITH NEAT CEMENT GROUT VIA TREMIE. DEPTH TO STATIC WATER LEVEL 38.75 FEET AT 12:17 PM ON JUNE 28, 2019. NO PRODUCT OBSERVED.				

†Sample Type: S=Soil W=Water V=Vapor
D=Drive G=Grab N=No Recovery


CALIFORNIA ENVIRONMENTAL - LOG OF BORING CESB14

JOB NUMBER: 3029	DATE: 6/27/2019	
CLIENT NAME: Oil Operators Inc.	DRILL RIG: GeoProbe 8040DT	
SITE ADDRESS: 712 N Baker St. Long Beach, CA	SAMPLING METHOD: 1-inch wide x 5 ft long plastic liner	
LOGGED BY: Charles I. Buckley, CHG No. 55	BORING DIAMETER: 2.75- inches	
REVIEWED BY: Greg Buensuceso	SURFACE CONDITIONS: Unpaved	

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Graphic Log	Well Diagram
0	SD	Start drilling at 11:15 am - unpaved				
3	SD	2 to 13 feet Silty Sand , mottled brown/light brown, slightly moist, medium dense, with asphalt fragments at 2 feet. No odor	SM			
10	SD		SM	0.0		
12	SD		8-13 feet Silt , grades to gray/brown (2.5Y5/2), moist, dense.	ML		
14	SD		ML	0.0		
16	SD		ML	0.0		
18	SD	at 18-23 feet Silty Sand , light brown (2.5Y6/4), moist, dense	SM			
20	SD		SM	0.0		
22	SD		SM	0.0 at 23 feet		
24	SD	at 23 feet Silt , brown, moist, firm	ML/SM	0.0		
26	SD		ML			
28	SD	at 27 feet grades to sandy , at 28 to 34 feet zone of interbedded sands and silts, mottled brown to light olive (5Y6/2), moist, firm/dense. No odor.	SM/ML	2.8		
30	SD		ML	<10 at 31 feet		
32	SD		ML			
34	SD	at 34 to 38 Sandy , very moist to wet at 36-38 feet, strong hydrocarbon odor	SM	148 at 33 feet		
36	SD		SM	252 at 34.5		
38	SD	wet at 38-39 feet, Sandy , strong odor	SM	340 at 36		
40	SD		ML	125 at 38 feet		
42	SD	41 to 48 feet Silt and Clayey Silt , mottled light brown (2.5Y6/4) to light olive gray (5Y6/2), moist, very firm; no odor, 6-inch sandy zone 47.5 to 48.	ML			
44	SD		ML/CL	0.0		
46	SD		ML			
48	SD	48.5 to 50 feet Silty Sand , mottled light brown (2.5Y6/4) wet, dense. No hydrocarbon odor.	SM	0.0		
50		END AT 50 FEET, SET TEMPORARY 3/4-INCH PVC CASING SCREEN FROM 40-45 FEET; HOLE SLOUGHED TO 45 FEET. SAMPLED WELL THEN ABANDONED BY REMOVING CASING AND FILLING WITH NEAT CEMENT GROUT VIA TREMIE. DEPTH TO STATIC WATER LEVEL 37.40 FEET AT 1 PM ON JUNE 28, 2019. NO PRODUCT OBSERVED.				

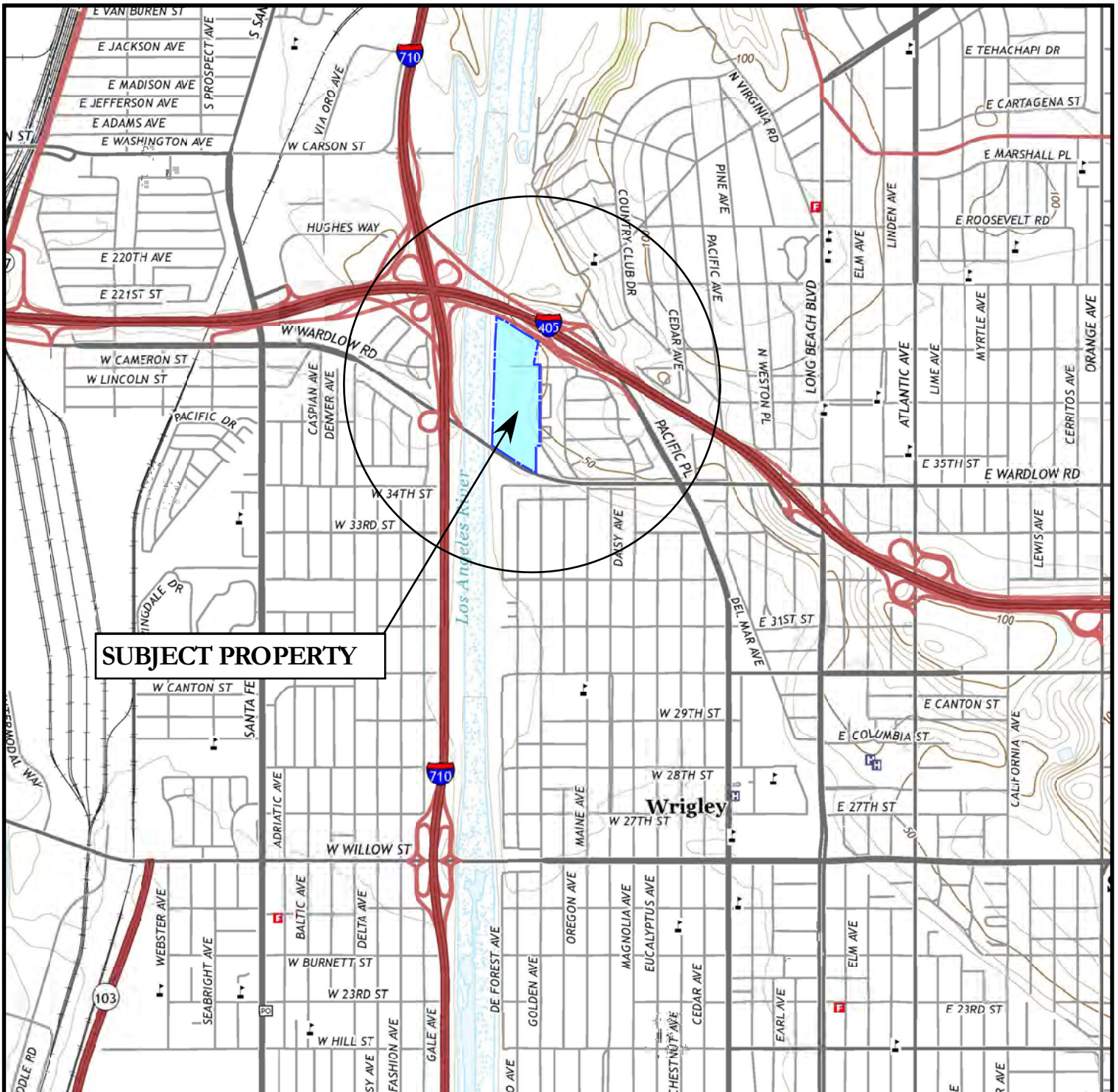
†Sample Type: S=Soil W=Water V=Vapor
D=Drive G=Grab N=No Recovery

CALIFORNIA ENVIRONMENTAL - LOG OF BORING CESB15

JOB NUMBER: 3029	DATE: 6/28/2019	
CLIENT NAME: Oil Operators Inc.	DRILL RIG: GeoProbe 8040DT	
SITE ADDRESS: 712 N Baker St. Long Beach, CA	SAMPLING METHOD: 1-inch wide x 5 ft long plastic liner	
LOGGED BY: Charles I. Buckley, CHG No. 55	BORING DIAMETER: 2.75- inches	
REVIEWED BY: Greg Buensuceso	SURFACE CONDITIONS: Unpaved	

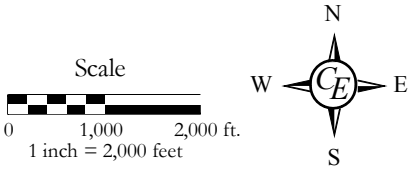
Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Graphic Log	Well Diagram
0	SD	Start drilling at 7:27 am - unpaved				
3	SD	2 to 8 feet Silty Sand , brown/red brown, (5YR4/3) slightly moist, medium dense. No odor. Grades to light brown at 7.5 feet. No odor	SM			
10	SD		SM	0.0		
12	SD	8-12 feet Fine Sand , to gray/brown (2.5Y5/2), moist, dense. 12-13 feet Silt light gray slightly moist, soft.	SP			
14	SD	13-18 feet, Silty Sand/with Silt layers, light brown/pale yellow (2.5Y8/4), slightly moist, medium dense. No odor.	ML	0.0		
16	SD		ML	0.0		
18	SD		SM			
20	SD		SM	0.0		
22	SD	18-31 feet Fine Sand , light brown (2.5Y6/4), moist, dense, no odor.	SM	0.0 at 23 feet		
24	SD		SM	0.0		
26	SD		SM			
28	SD		SM	2.8		
30	SD		SM	<10 at 31 feet		
32	SD	at 31.5 feet Clayey Silt , dark gray (2.5Y4), very moist, firm, strong HC odor.	ML	<10 at 33 feet		
34	SD	at 34 to 38.5 Sandy , olive gray (5Y5/2) very moist to wet at 36-38 feet, strong hydrocarbon odor.	SM	903 at 34 feet		
36	SD		ML	584 at 36 feet		
38	SD		ML	784 at 38 feet		
40	SD	38.5-45 feet, Clayey Silt/Silty Clay , mottled light gray/brown, moist, very firm/stiff. No odor.	ML			
42	SD		ML/CL			
44	SD			0.0		
46	SD	45-46 feet Silty Sand , mottled light brown (2.5Y6/4) wet, dense. No hydrocarbon odor.	SM	<10		
		END AT 46 FEET, SET TEMPORARY 3/4-INCH PVC CASING SCREEN FROM 38-43 FEET; HOLE SLOUGHED TO 43 FEET. SAMPLED WELL THEN ABANDONED BY REMOVING CASING AND FILLING WITH NEAT CEMENT GROUT VIA TREMIE. DEPTH TO STATIC WATER LEVEL 41.33 FEET AT 1:45 PM ON JUNE 28, 2019. NO PRODUCT OBSERVED.				

†Sample Type: S=Soil W=Water V=Vapor
D=Drive G=Grab N=No Recovery



SUBJECT PROPERTY

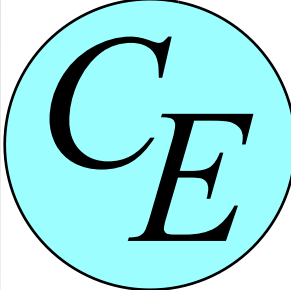
Wrigley



References: USGS 7.5' Long Beach Topographic Quadrangle, 2015.

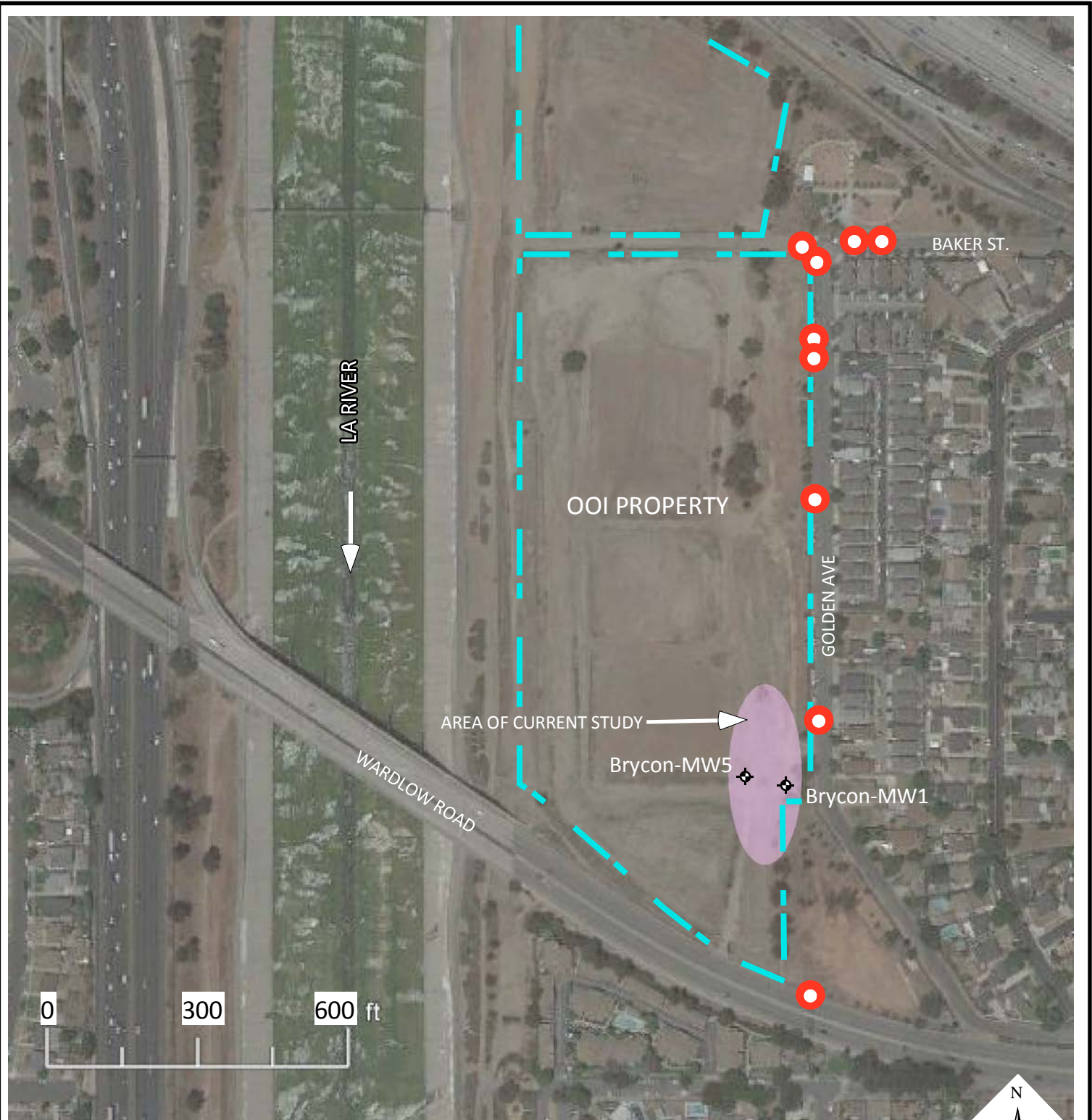
FIGURE 1 - VICINITY MAP

712 W. Baker Street
Long Beach, California



Drawn By:	GHB	Job #	EV610-3029
Checked By:	CIB	Date:	July 2019

*California
Environmental*



● Approximate Locations of Pipeline Leaks/Repairs 1945 - 2018 - Per AECOM Figure 1, Addendum to January 25, 2019 Pipeline Update Report, dated April 11, 2019.

Reference: Google Earth Image

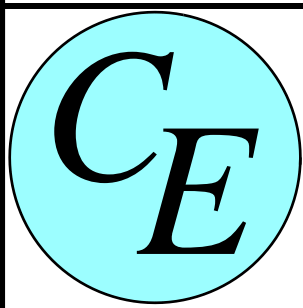
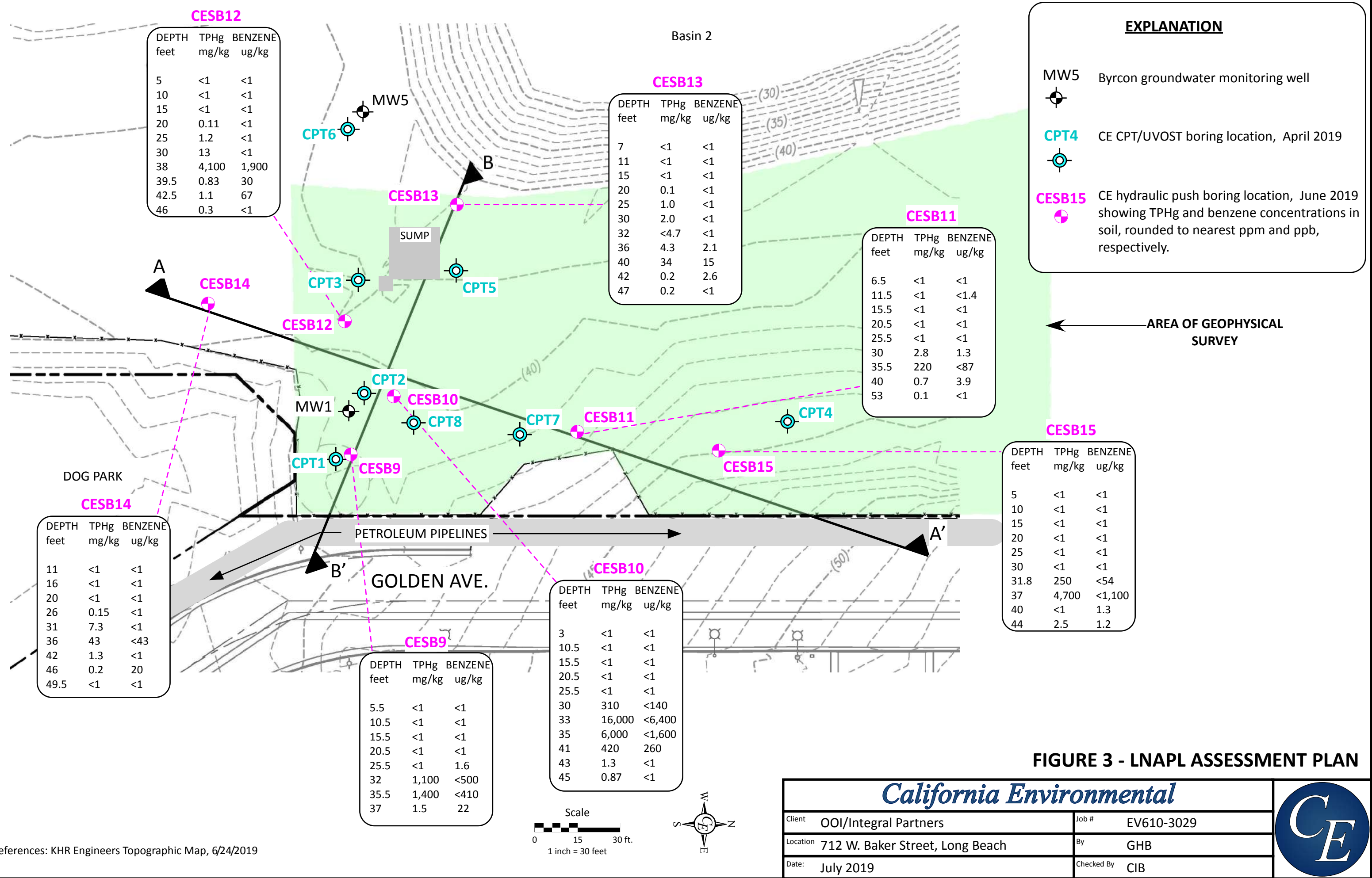


FIGURE 2 - SITE PLAN 712 W. Baker Street Long Beach, California	
Drawn By: RTB	Job # EV610-3029
Checked By: CIB	Date: July 2019

*California
 Environmental*



CESB12

DEPTH feet	TPHg mg/kg	BENZENE ug/kg
5	<1	<1
10	<1	<1
15	<1	<1
20	0.11	<1
25	1.2	<1
30	13	<1
38	4,100	1,900
39.5	0.83	30
42.5	1.1	67
46	0.3	<1

CESB13

DEPTH feet	TPHg mg/kg	BENZENE ug/kg
7	<1	<1
11	<1	<1
15	<1	<1
20	0.1	<1
25	1.0	<1
30	2.0	<1
32	<4.7	<1
36	4.3	2.1
40	34	15
42	0.2	2.6
47	0.2	<1

CESB11

DEPTH feet	TPHg mg/kg	BENZENE ug/kg
6.5	<1	<1
11.5	<1	<1.4
15.5	<1	<1
20.5	<1	<1
25.5	<1	<1
30	2.8	1.3
35.5	220	<87
40	0.7	3.9
53	0.1	<1

EXPLANATION

- MW5 Byrcan groundwater monitoring well
- CPT4 CE CPT/UVOST boring location, April 2019
- CESB15 CE hydraulic push boring location, June 2019 showing TPHg and benzene concentrations in soil, rounded to nearest ppm and ppb, respectively.

← AREA OF GEOPHYSICAL SURVEY

CESB14

DEPTH feet	TPHg mg/kg	BENZENE ug/kg
11	<1	<1
16	<1	<1
20	<1	<1
26	0.15	<1
31	7.3	<1
36	43	<43
42	1.3	<1
46	0.2	20
49.5	<1	<1

CESB9

DEPTH feet	TPHg mg/kg	BENZENE ug/kg
5.5	<1	<1
10.5	<1	<1
15.5	<1	<1
20.5	<1	<1
25.5	<1	1.6
32	1,100	<500
35.5	1,400	<410
37	1.5	22

CESB10

DEPTH feet	TPHg mg/kg	BENZENE ug/kg
3	<1	<1
10.5	<1	<1
15.5	<1	<1
20.5	<1	<1
25.5	<1	<1
30	310	<140
33	16,000	<6,400
35	6,000	<1,600
41	420	260
43	1.3	<1
45	0.87	<1

CESB15

DEPTH feet	TPHg mg/kg	BENZENE ug/kg
5	<1	<1
10	<1	<1
15	<1	<1
20	<1	<1
25	<1	<1
30	<1	<1
31.8	250	<54
37	4,700	<1,100
40	<1	1.3
44	2.5	1.2

References: KHR Engineers Topographic Map, 6/24/2019

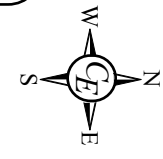
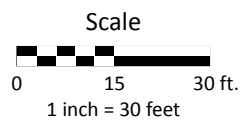
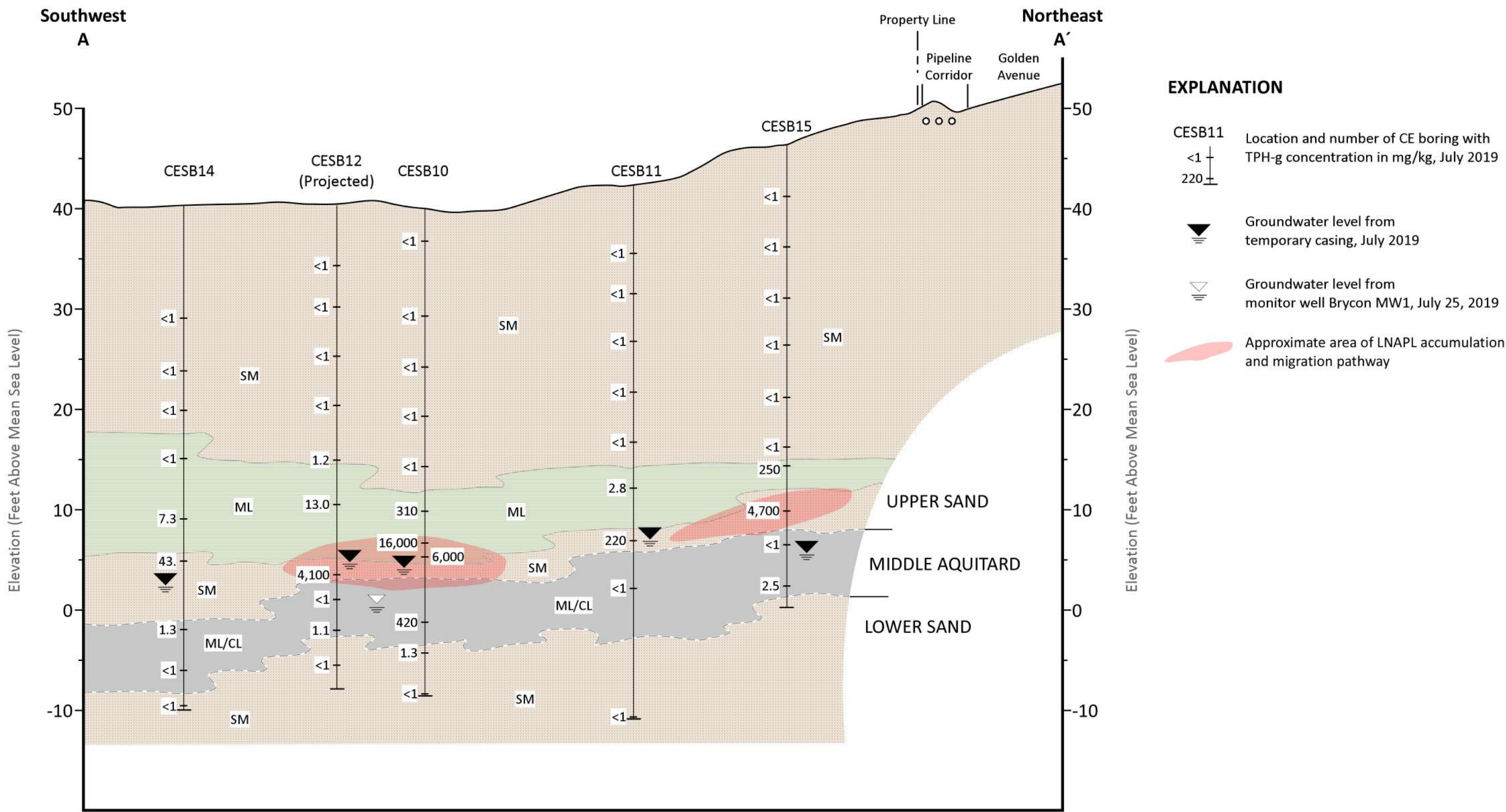


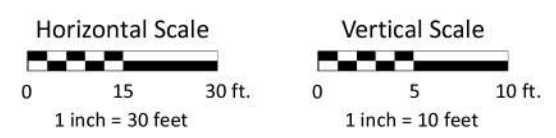
FIGURE 3 - LNAPL ASSESSMENT PLAN

California Environmental				
Client	OOI/Integral Partners		Job #	EV610-3029
Location	712 W. Baker Street, Long Beach		By	GHB
Date:	July 2019		Checked By	CIB



Cross Section A - A' (3x Vertical Exaggeration)

FIGURE 4 - CROSS SECTION A - A'



California Environmental				
Client	Oil Operators / Integral		Job #	EP610-3029
Location	712 Baker Street, Long Beach		By	GHB
Date:	July 2019		Checked By	CIB

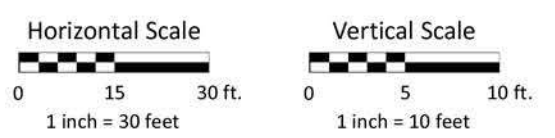
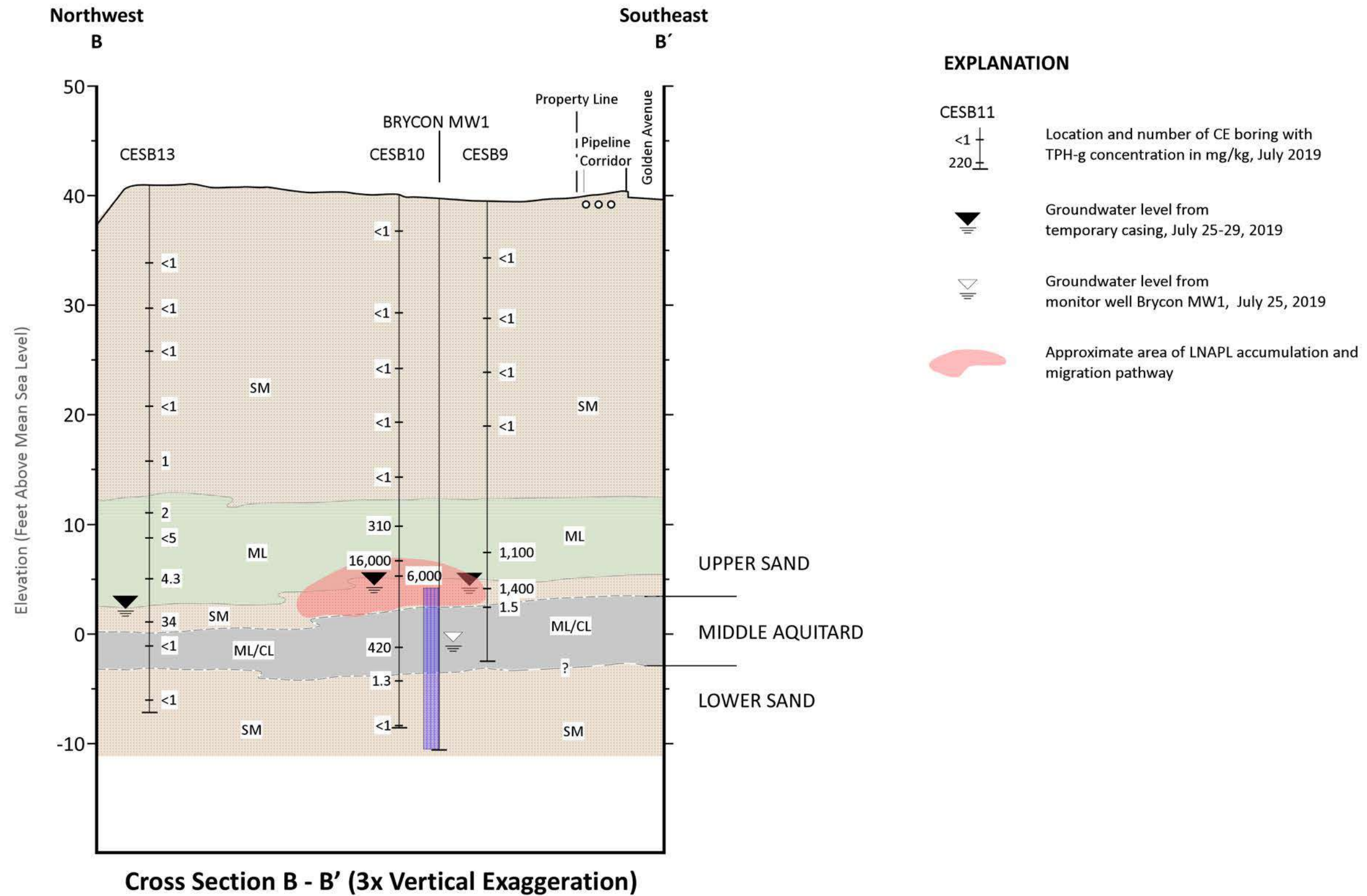


FIGURE 5 - CROSS SECTION B - B'

California Environmental				
Client	Oil Operators / Integral		Job #	EP610-3029
Location	712 Baker Street, Long Beach		By	GHB
Date:	July 2019		Checked By	CIB

APPENDIX I

Data Tables

Table I – Soil VOCs/TPH

Table II – Soil Arsenic/Lead

Table III – Groundwater VOCs/TPH

TABLE II
Laboratory Analysis of Soil - Metals
712 West Baker Street,
Long Beach, California

Sample I.D.	Date	CAM Metals - EPA 6010B/7000 (mg/kg)	
		Arsenic	Lead
CESB9-5.5'	6/25/2019	5.57	1.97
CESB9-10.5'	6/25/2019	8.47	3.91
CESB9-15.5'	6/25/2019	1.78	2.16
CESB9-20.5'	6/25/2019	2.04	3.79
CESB9-25.5'	6/25/2019	3.00	1.14
CESB9-32'	6/25/2019	5.32	2.54
CESB9-37'	6/25/2019	11.5	3.57
CESB10-3'	6/25/2019	<0.743	3.02
CESB10-10.5'	6/25/2019	<0.739	2.11
CESB10-15.5'	6/25/2019	2.71	1.82
CESB10-20.5'	6/25/2019	3.33	1.20
CESB10-25.5'	6/25/2019	0.948	0.827
CESB11-6.5'	6/26/2019	9.37	1.72
CESB11-11.5'	6/26/2019	14.1	2.06
CESB11-15.5'	6/26/2019	17.8	1.76
CESB11-20.5'	6/26/2019	3.98	<0.498
CESB11-25.5'	6/26/2019	1.37	0.795
CESB11-30'	6/26/2019	5.18	1.25
CESB11-35.5'	6/26/2019	14.7	0.956
CESB12-6'	6/26/2019	28.1	1.26
CESB12-10'	6/26/2019	<0.728	<0.485
CESB12-15'	6/26/2019	2.17	1.08
CESB12-20'	6/26/2019	2.88	0.842
CESB12-25'	6/26/2019	2.63	<0.485
CESB13-7'	6/27/2019	<0.735	1.96
CESB13-11'	6/27/2019	<0.718	1.01
CESB13-15'	6/27/2019	<0.735	1.50
CESB13-20'	6/27/2019	<0.750	1.08
CESB13-25'	6/27/2019	12.7	<0.498
CESB13-30'	6/27/2019	1.48	<0.498
CESB13-32'	6/27/2019	<0.750	0.525
CESB13-36'	6/27/2019	<0.746	0.853
CESB13-40'	6/27/2019	<0.743	0.516
CESB14-11'	6/27/2019	<0.743	1.03
CESB14-16'	6/27/2019	2.99	3.29
CESB14-20'	6/27/2019	<0.743	1.43
CESB14-26'	6/27/2019	6.21	1.31
CESB14-31'	6/27/2019	5.45	0.694
CESB14-36'	6/27/2019	0.835	0.818
CESB15-5'	6/28/2019	2.12	1.68
CESB15-10'	6/28/2019	2.29	1.94
CESB15-15'	6/28/2019	4.40	1.70
CESB15-20'	6/28/2019	<0.765	4.23
CESB15-25'	6/28/2019	3.15	0.998
CESB15-30'	6/28/2019	1.32	4.61
CESB15-31.8'	6/28/2019	13.3	7.11
CESB15-37'	6/28/2019	4.47	1.74
CESB15-40'	6/28/2019	24.2	3.8
CESB15-44'	6/28/2019	3.45	2.13
CE DUP 2	6/27/2019	<0.773	<0.515

* - Arsenic concentration compared to background levels - in SoCal 3-15 mg/kg

TABLE III
Laboratory Analysis of Groundwater - TPH & VOCs
712 West Baker Street,
Long Beach California

Sample ID	Date	EPA Method 8260B/5030C (µg/L)													
		TPPH	GRO	B	T	E	X	MTBE	Naphthalene	Butylbenzene	Isopropylbenzene	Isopropyltoluene	Propylbenzene	Trimethylbenzene	All Other Analytes
CESB9-GW	6/25/2019	16,000	15,000	200	13	720	450	<5.0	84	40	150	45	140	402	ND
	6/27/2019	15,000	14,000	190	13	610	361	<5.0	60	37	130	42	130	357	*
CESB10-GW	6/27/2019	92,000	79,000	390	120	1,500	5,000	<50	830	81	290	220	370	3,480	ND
CESB11-GW	6/27/2019	8,900	8,600	93	17	520	468	<1.0	91	16.6	77	17	71	358	ND
CESB12-GW	6/28/2019	38,000	36,000	520	430	1,200	4,200	<10	260	36	220	97	240	1,770	ND
CESB13-GW	6/28/2019	11,000	10,000	220	26	530	199	<5.0	130	8.7	86	21	73	520	ND
CESB14-GW	6/28/2019	7,200	6,500	94	6.5	240	49	<2.0	91	29	94	19	84	5.9	**
CESB15-GW	6/28/2019	44,000	41,000	7.2	<10	610	592	<10	430	124	300	110	300	1,380	ND

TPPH - Total Petroleum Hydrocarbons; GRO - Total Gas Range Organics; ND = Not Detected
B – Benzene; T – Toluene; E – Ethylbenzene; X – Xylene; MTBE - Methyl tert-Butyl Ether
* - (Tert-Butyl Alcohol (TBA) - 54 µg/L)
** - (1,2-Dichloroethane - 12 µg/L)

APPENDIX II

Geophysical Report

**GEOPHYSICAL EVALUATION
OOI
LONG BEACH, CALIFORNIA**

PREPARED FOR:

California Environmental - Engineering
30423 Canwood Street, Suite 208
Agoura Hills, CA 91301

PREPARED BY:

Southwest Geophysics, LLC
6280 Riverdale Street, Suite 200
San Diego, CA 92120

April 24, 2019
Project No. 119191

April 24, 2019
Project No. 119191

Mr. Charles I. Buckley
California Environmental - Engineering
30423 Canwood Street, Suite 208
Agoura Hills, CA 91301

Subject: Geophysical Evaluation
OOI
Long Beach, California

Dear Mr. Buckley:

In accordance with your authorization, we are pleased to submit this report pertaining to our geophysical evaluation for the OOI project in Long Beach, California. The purpose of our evaluation was to assess the presence of buried underground storage tanks (USTs) and/or back-filled excavations associated with UST removal. In addition, the presence of detectable underground utilities was evaluated in the study area. Our services were conducted on April 8, 2019. This report presents the survey methodology, equipment used, analysis, and results from our study.

We appreciate the opportunity to be of service on this project. Should you have any questions please contact the undersigned at your convenience.

Sincerely,
SOUTHWEST GEOPHYSICS, LLC



Eric Carlson
Project Geologist/Geophysicist

ECA/ERC/HV/hv

Distribution: Addressee (electronic)



Hans van de Vrugt, C.E.G., P.Gp.
Principal Geologist/Geophysicist



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1. INTRODUCTION

In accordance with your authorization, we are pleased to submit this report pertaining to our geophysical evaluation for the OOI project in Long Beach, California (Figure 1). The purpose of our evaluation was to assess the presence of buried underground storage tanks (USTs) and/or backfilled excavations associated with UST removal. In addition, the presence of detectable underground utilities was evaluated in the study area. Our services were conducted on April 8, 2019. This report presents the survey methodology, equipment used, analysis, and results from our study.

2. SCOPE OF SERVICES

Our scope of services included:

- Performance of a geophysical survey at the subject site. Our survey included the use of a Geonics model EM61 MK2 time domain instrument, GSSI SIR 3000 Ground Penetrating Radar (GPR) unit using a 400 MHz transducer, Schonstedt GA-52 magnetic gradiometer, Fisher M-Scope TW-6 pipe and cable locator, and RD8000 line tracer.
- Site reconnaissance including field mapping of surface structures at and near the survey area.
- Compilation and analysis of the data collected.
- Preparation of this report presenting our findings, conclusions and recommendations.

3. SITE DESCRIPTION

The project site is located at 712 Baker Street in Long Beach, California (Figure 1). The study area, which was defined by you, lies within a vacant lot, east of the Los Angeles River and west of Golden Avenue in Long Beach, California. An old draining pit lies to the west and an old concrete wall and slab are in the southwest corner of the study area. Based on our discussions with you, it is our understanding that USTs may have been utilized onsite. Details regarding their location and possible removal were reportedly not available.

4. GEOPHYSICAL INSTRUMENTATION AND APPLICATIONS

Our evaluation included the use of a Geonics model EM61 MK2, GSSI SIR 3000 GPR, Schonstedt, model GA-52C magnetic gradiometer, Fisher M-Scope TW-6 pipe and cable locator,

and RD8000 line tracer. These instruments provide real-time results and facilitate the delineation of subsurface features.

The EM61 instrument is a high resolution, electromagnetic (EM) time-domain device for detecting buried conductive objects. It consists of a powerful transmitter that generates a pulsed primary magnetic field when its coils are energized, which induces eddy currents in nearby conductive objects. The decay of the eddy currents, following the input pulse, is measured by the coils, which in turn serve as receiver coils. The decay rate is measured for two coils, mounted concentrically, one above the other. By making the measurements at a relatively long time interval (measured in milliseconds) after termination of the primary pulse, the response is nearly independent of the electrical conductivity of the ground. Thus, the instrument is a super-sensitive metal detector. Due to its unique coil arrangement, the response curve is a single well-defined positive peak directly over a buried conductive object. This facilitates quick and accurate location of targets. Conductive objects to a depth of approximately 11 feet generally can be detected.

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 boundaries in the subsurface across which there are an electrical contrast. The recorder continuously makes a record of the reflected energy as the antenna is moved across the ground surface. The greater the electrical contrast, the higher the amplitude of the returned energy. The EM wave travels at a velocity unique to the material properties of the ground being studied, and when these velocities are known, or closely estimated from ground conductivity values and other information, two-way travel times can be converted to depth. Penetration into the ground and resolution of the GPR images produced are a function of ground electrical conductivity and dielectric constant. Images tend to be graphic, even at considerable depth, in sandy soils, but penetration and resolution may be limited in more conductive clayey moist ground.

The magnetic gradiometer has two fluxgate magnetic fixed sensors that are passed closely to and over the ground. When not in close proximity to a magnetic object, that is, only in the earth's field, the instrument emits an audible signal at a low frequency. When the instrument passes over

buried iron or steel objects (so that the field is significantly different at the two sensors) the frequency of the emitted sound increases. Frequency is a function of the gradient between the two sensors.

The M-Scope TW-6 device energizes the ground by producing an alternating primary magnetic field with alternating current (AC) in the transmitting coil. If conducting materials (including soils) 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 an audio response. The strength of the secondary field is a function of the conductivity of the object, its size, and its depth and position relative to the instrument's two coils. Conductive objects to a depth of approximately 10 feet are sensed. Also, the device is somewhat focused, that is, it is more sensitive to conductors below (and above) the instrument, than to conductors off to the side.

Where risers are present, the RD8000 utility locator transmitter can be connected to the object, and a current is impressed on the conductor pipe or cable. The receiver unit is tuned to this same frequency, and it is used to trace the pipe's surface projection away from the riser. The transmitter and receiver can also be used in a non-connect (induction) mode, whereby the transmitter is positioned on the ground and an electromagnetic signal is emitted. In the presence of buried metal pipes and wires, a discrete signal will be induced on the conductor which can be sensed by the receiver. In addition, the instrument may be used in the passive mode, whereby radio and 60 Hz electromagnetic signals produced by communication and live electric lines are detected.

5. SURVEY METHODOLOGY

In order to facilitate the collection of EM61 data a Trimble Pro XRS Global Positioning System (GPS) was used for spatial control. Measurements were made at 0.5-second intervals along traverses spaced roughly 3 to 5 feet apart across accessible portions of the study area. GPR traverses were conducted along roughly north-south and east-west profiles spaced approximately 5 feet apart. GPR traverses were also performed along random profiles across and near detected features. Traverses with the M-Scope and gradiometer were conducted along traverses spaced

approximately 5 feet apart. The line tracer was used in both passive, direct connect and inductive modes to delineate the presence of underground utilities. The recorded EM61 data were downloaded to a portable computer in the field for preliminary analysis and significant anomalies as well as detectable underground utilities were marked on the ground surface with paint, mapped, and reported to you.

6. RESULTS, CONCLUSIONS AND RECOMMENDATIONS

As previously discussed, the purpose of our evaluation was to assess the presence of buried underground storage tanks (USTs) and/or backfilled excavations associated with UST removal in the study area. The results of our study revealed the presence of six relatively significant anomalies, which are labelled A through F on Figure 2. In addition, a buried reinforce concrete pad extending outside the block wall in the southwestern portion of the study area was observed, and several unidentified lines and a sewer line were detected. Some of the unidentified lines could represent buried foundations/footings. The following is a description of Anomalies A through F:

Anomaly A: This feature is located to the north of the concrete pad. It produced a relatively high EM and magnetic response. Traverses with GPR across this feature were inconclusive. The specific nature of this feature is unknown; however, it should be considered a possible candidate UST due to its size and EM/magnetic response.

Anomaly B: Anomaly B is located to the west of the concrete pad. It produced a relatively small EM and magnetic response. GPR traverses conducted across the feature revealed areas of soil disturbance and, therefore, could be a possible backfilled excavation containing small or deteriorated metal debris.

Anomalies C, D: Anomalies C and D are located adjacent to the concrete pad. Both anomalies produced relatively high EM and magnetic responses separate from that of the reinforced concrete. GPR traverses conducted across these features were inconclusive. Due to the size and instrument response of these features, they could potentially be related to USTs.

Anomaly E: This feature is located south of the sewer manhole that is in the northern portion of the study area. It produced a relatively high EM and magnetic response. GPR traverses conducted across this feature were inconclusive. The specific cause of this feature is unknown, but it may be related to a small UST.

Anomaly F: This feature is located in the southeastern portion of the study area just south of two intersecting unidentified lines. It produced a relatively high EM and magnetic re-

sponse. GPR traverses conducted across this feature were inconclusive. The specific cause of this feature is unknown. It should be noted that the adjacent unidentified lines could be buried foundations and Anomaly F may be related to a former foundation. However, it could also be related to a UST.

Several additional relatively small EM anomalies were detected but based on their size and response they are likely related to small pieces of buried metal debris. Other high EM responses encountered appear to be related to building elements, posts, underground lines and metal fencing.

In order to further assess the features described above, we recommend that more direct methods be used. Such methods may include the excavation of exploratory trenches/test pits or borings.

Our survey utilized industry standard equipment (i.e., GPR, electromagnetic, and magnetic instruments) and was conducted in general accordance with current practice. It should be noted, however, that the presence of existing structures and surface objects (i.e., metal fencing, posts, reinforced concrete, etc.) potentially limited the survey. Where obstructions were present subsurface data could not be collected. Moreover, EM/magnetic responses produced by metal surface objects and underground lines can potentially obscure subsurface features. Figures 2 and 3 present the general site conditions and some of the obstructions encountered. Radar penetration at the site was on the order of 2 to 3 feet below the ground surface; therefore, objects below this depth would not have been detected with GPR.

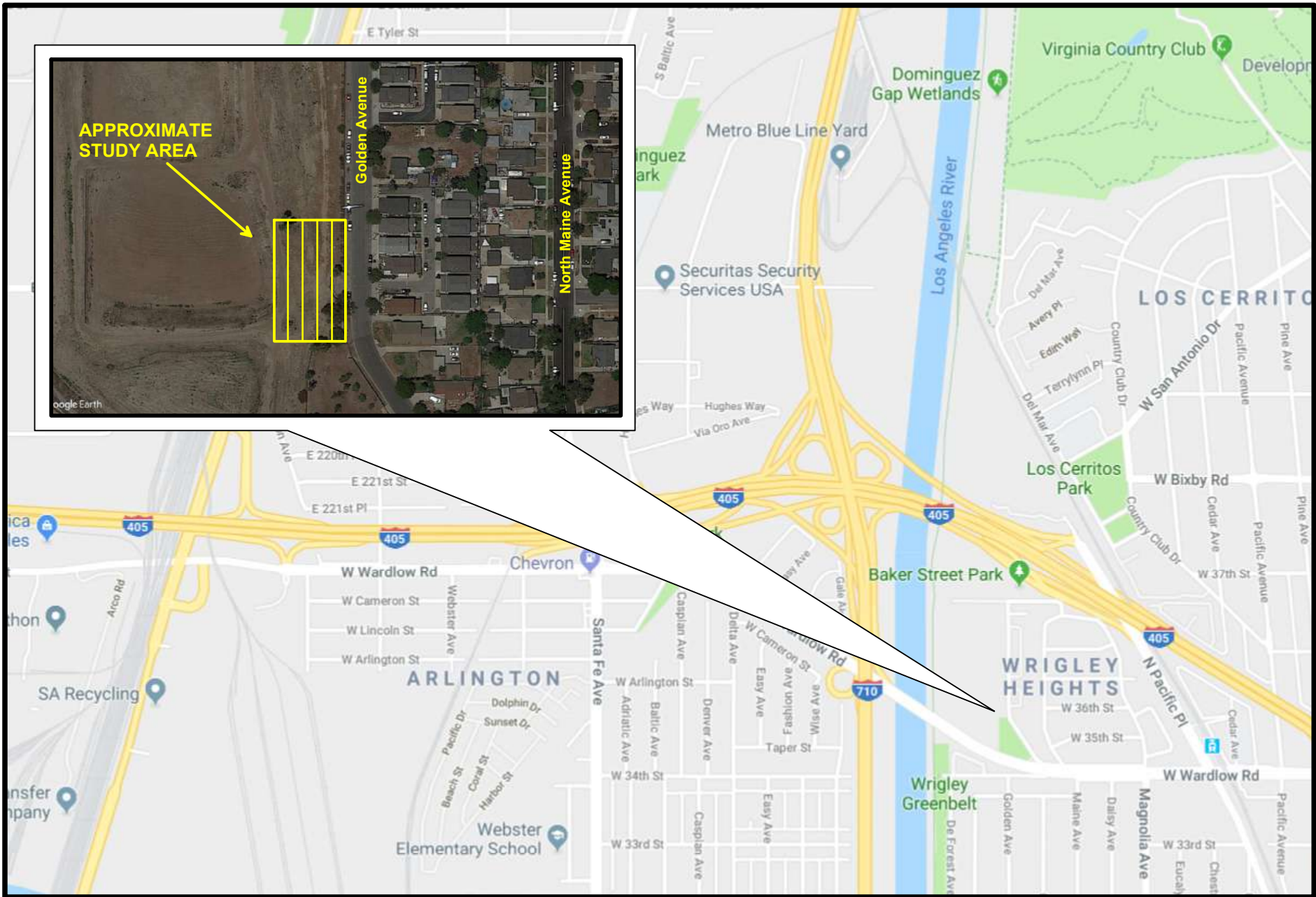
7. LIMITATIONS

The field evaluation and geophysical analyses presented in this report have been conducted in general accordance with current practice and the standard of care exercised by consultants performing similar tasks in the project area. No warranty, express or implied, is made regarding the conclusions and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist and conditions not observed or described in this report may be present. Uncertainties relative to subsurface conditions can be reduced

through additional subsurface surveying and/or exploration. Additional subsurface surveying can be performed upon request.

Please also note that our evaluation was limited to the detection of USTs and/or backfilled tank excavations. “USA” or “Dig Alert” should also be contacted prior to conducting subsurface exploration activities. In addition, we recommend that available utility plans/drawings of the project site be reviewed as appropriate.

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. Southwest Geophysics, LLC should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document. This report is intended exclusively for use by the client. Any use or reuse of this report by parties other than the client is undertaken at said parties’ sole risk.



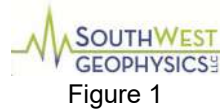
SITE LOCATION MAP




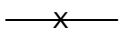


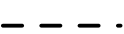











OOI
Long Beach, California

Project No.: 119191

Date: 04/19



LEGEND

- | | | | | | |
|---|---------------------|---|-------------------|---|--------------------|
|  | EM Anomaly |  | Chainlink Fence |  | Unidentified Riser |
|  | Surface Obstruction |  | Unidentified Line |  | Utility Pole |
|  | Reinforced Concrete |  | Sewer Line |  | Monitoring Well |
|  | Block Wall |  | Sewer Manhole |  | Tree |
|  | Iron Fence |  | Unknown Vault |  | Metal Post |
|  | Survey Limit | | | | |

* All dimensions are approximate.
 * Line depths reported where measured.
 * Lines queried where termination uncertain.



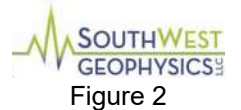
SITE DATA MAP
 EM61 Data CI= 100 mVolts

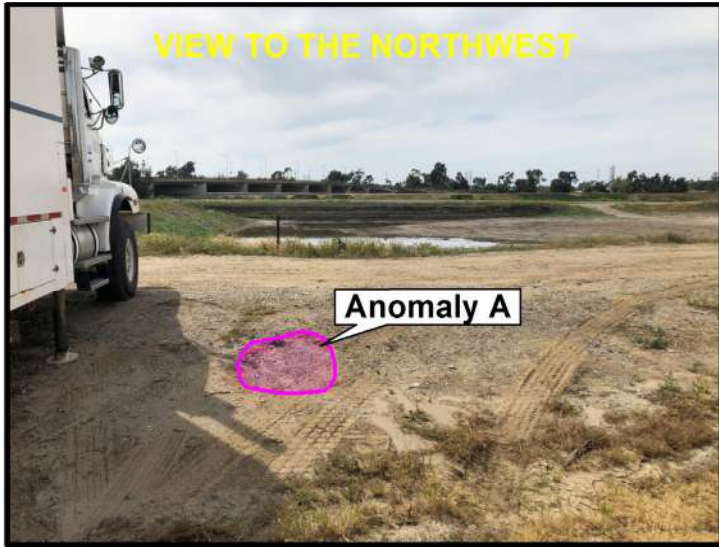


OOI
 Long Beach, California

Project No.: 119191

Date: 04/19





SITE PHOTOGRAPHS

OOI
Long Beach, California

Project No.: 119191

Date: 04/19

APPENDIX III

CPT/UVOST Report



GREGG DRILLING & TESTING, LLC.
 GEOTECHNICAL AND ENVIRONMENTAL INVESTIGATION SERVICES

4/11/19

California Environmental
 Attn: Charles Buckley

Subject: CPT Site Investigation
 712 North Baker Street
 Long Beach, California
 GREGG Project Number: D1190544SH

Dear Mr. Buckley:

The following report presents the results of GREGG Drilling Cone Penetration Test investigation for the above referenced site. The following testing services were performed:

1	Cone Penetration Tests	(CPTU)	<input checked="" type="checkbox"/>
2	Pore Pressure Dissipation Tests	(PPD)	<input checked="" type="checkbox"/>
3	Seismic Cone Penetration Tests	(SCPTU)	<input type="checkbox"/>
4	UVOST Laser Induced Fluorescence	(UVOST)	<input checked="" type="checkbox"/>
5	Groundwater Sampling	(GWS)	<input type="checkbox"/>
6	Soil Sampling	(SS)	<input type="checkbox"/>
7	Vapor Sampling	(VS)	<input type="checkbox"/>
8	Pressuremeter Testing	(PMT)	<input type="checkbox"/>
9	Vane Shear Testing	(VST)	<input type="checkbox"/>
10	Dilatometer Testing	(DMT)	<input type="checkbox"/>

A list of reference papers providing additional background on the specific tests conducted is provided in the bibliography following the text of the report. If you would like a copy of any of these publications or should you have any questions or comments regarding the contents of this report, please do not hesitate to contact our office at (925) 313-5800.

Sincerely,
 GREGG Drilling & Testing, LLC.

Frank Stolfi
 HRSC Division Manager, Gregg Drilling & Testing, LLC.



Cone Penetration Test Sounding Summary

-Table 1-

CPT Sounding Identification	Date	Termination Depth (feet)	Depth of Groundwater Samples (feet)	Depth of Soil Samples (feet)	Depth of Pore Pressure Dissipation Tests (feet)
CPT-01	4/8/2019	55.12	-	-	55.1
CPT-02	4/8/2019	55.12	-	-	54.2
CPT-03	4/8/2019	57.74	-	-	-
CPT-04	4/8/2019	62.99	-	-	-
CPT-05	4/8/2019	55.28	-	-	-
CPT-06	4/9/2019	52.82	-	-	-
CPT-07	4/9/2019	21.33	-	-	-
CPT-08	4/9/2019	52.82	-	-	-



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Robertson, P.K., R.G. Campanella, D. Gillespie and A. Rice, "Seismic CPT to Measure In-Situ Shear Wave Velocity",
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DeGroot, D.J. and A.J. Lutenegeger, "Reliability of Soil Gas Sampling and Characterization Techniques", International
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Woeller, D.J., P.K. Robertson, T.J. Boyd and Dave Thomas, "Detection of Polyaromatic Hydrocarbon Contaminants
Using the UVIF-CPT", 53rd Canadian Geotechnical Conference Montreal, QC October pp. 733-739, 2000.

Zemo, D.A., T.A. Delfino, J.D. Gallinatti, V.A. Baker and L.R. Hilpert, "Field Comparison of Analytical Results from
Discrete-Depth Groundwater Samplers" BAT EnviroProbe and QED HydroPunch, Sixth national Outdoor Action
Conference, Las Vegas, Nevada Proceedings, 1992, pp 299-312.

Copies of ASTM Standards are available through www.astm.org

Cone Penetration Testing Procedure (CPT)

Gregg Drilling carries out all Cone Penetration Tests (CPT) using an integrated electronic cone system, *Figure CPT*.

The cone takes measurements of tip resistance (q_c), sleeve resistance (f_s), and penetration pore water pressure (u_2). Measurements are taken at either 2.5 or 5 cm intervals during penetration to provide a nearly continuous profile. CPT data reduction and basic interpretation is performed in real time facilitating on-site decision making. The CPT parameters are stored electronically for further analysis and reference. All CPT soundings are performed in accordance with revised ASTM standards (D 5778-12).

The 5mm thick porous plastic filter element is located directly behind the cone tip in the u_2 location. A new saturated filter element is used on each sounding to measure both penetration pore pressures as well as measurements during a dissipation test (PPDT). Prior to each test, the filter element is fully saturated with oil under vacuum pressure to improve accuracy.

When the sounding is completed, the test hole is backfilled according to client specifications. If grouting is used, the procedure generally consists of pushing a hollow tremie pipe with a “knock out” plug to the termination depth of the CPT hole. Grout is then pumped under pressure as the tremie pipe is pulled from the hole. Disruption or further contamination to the site is therefore minimized.

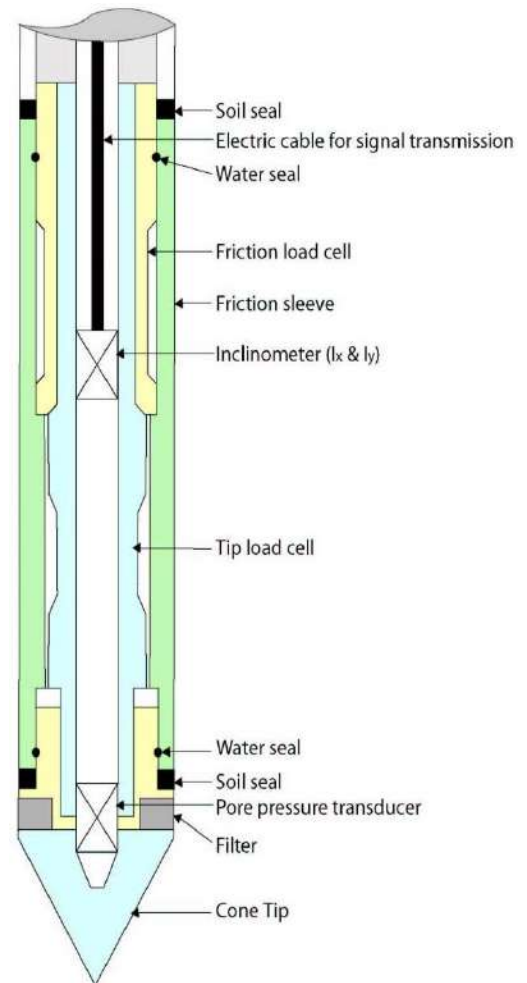


Figure CPT

Gregg 15cm² Standard Cone Specifications

Dimensions	
Cone base area	15 cm ²
Sleeve surface area	225 cm ²
Cone net area ratio	0.80
Specifications	
Cone load cell	
Full scale range	180 kN (20 tons)
Overload capacity	150%
Full scale tip stress	120 MPa (1,200 tsf)
Repeatability	120 kPa (1.2 tsf)
Sleeve load cell	
Full scale range	31 kN (3.5 tons)
Overload capacity	150%
Full scale sleeve stress	1,400 kPa (15 tsf)
Repeatability	1.4 kPa (0.015 tsf)
Pore pressure transducer	
Full scale range	7,000 kPa (1,000 psi)
Overload capacity	150%
Repeatability	7 kPa (1 psi)

Note: The repeatability on site will depend somewhat on ground conditions, abrasion, maintenance and zero load stability.

Cone Penetration Test Data & Interpretation

The Cone Penetration Test (CPT) data collected are presented in graphical and electronic form in the report. The plots include interpreted Soil Behavior Type (SBT) based on the charts described by Robertson (2009 & 2010). Typical plots display SBT based on the non-normalized charts of Robertson (2010). For CPT soundings deeper than 30m, we recommend the use of the normalized charts of Robertson (2009) which can be displayed as SBTn, upon request. The report can also include spreadsheet output of computer calculations of basic interpretation in terms of SBT and SBTn and various geotechnical parameters using current published correlations based on the comprehensive review by Lunne, Robertson and Powell (1997), as well as recent updates by Robertson and Cabal (Guide to Cone Penetration Testing, 2015). The interpretations are presented only as a guide for geotechnical use and should be carefully reviewed. Gregg Drilling does not warranty the correctness or the applicability of any of the geotechnical parameters interpreted by the software and does not assume any liability for use of the results in any design or review. The user should be fully aware of the techniques and limitations of any method used in the software. Some interpretation methods require input of the groundwater level to calculate vertical effective stress. An estimate of the in-situ groundwater level has been made based on field observations and/or CPT results, but should be verified by the user.

A summary of locations and depths is available in Table 1. Note that all penetration depths referenced in the data are with respect to the existing ground surface. Note that it is not always possible to clearly identify a soil type based solely on q_t , f_s , and u_2 . In these situations, experience, judgment, and an assessment of the pore pressure dissipation data should be used to infer the correct soil behavior type.

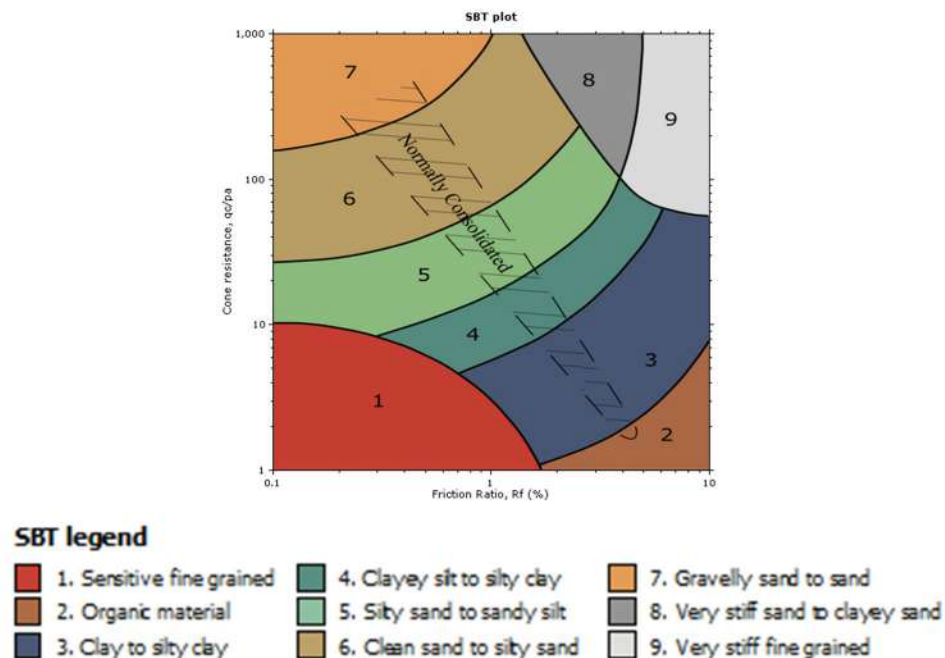


Figure SBT (After Robertson, 2010) – Note: Colors may vary slightly compared to plots

Cone Penetration Test (CPT) Interpretation

Gregg uses a commercial CPT interpretation and plotting software (CPeT-IT <https://geologismiki.gr/products/cpet-it/>). The software takes the CPT data and performs basic interpretation in terms of soil behavior type (SBT) and various geotechnical parameters using current published empirical correlations based on the comprehensive review by Lunne, Robertson and Powell (1997) and updated by Robertson and Cabal (2015). The interpretation is presented in tabular format. The interpretations are presented only as a guide for geotechnical use and should be carefully reviewed. Gregg does not warranty the correctness or the applicability of any of the geotechnical parameters interpreted by the software and does not assume any liability for any use of the results in any design or review. The user should be fully aware of the techniques and limitations of any method used in the software.

The following provides a summary of the methods used for the interpretation. Many of the empirical correlations to estimate geotechnical parameters have constants that have a range of values depending on soil type, geologic origin and other factors. The software uses 'default' values that have been selected to provide, in general, conservatively low estimates of the various geotechnical parameter.

Presented below is a list of formulas used for the estimation of various soil properties. The formulas are presented in SI unit system and assume that all components are expressed in the same units.

:: Unit Weight, g (kN/m³) ::

$$g = g_w \cdot \left(0.27 \cdot \log(R_f) + 0.36 \cdot \log\left(\frac{q_t}{p_a}\right) + 1.236 \right)$$

where g_w = water unit weight

:: Permeability, k (m/s) ::

$$I_c < 3.27 \text{ and } I_c > 1.00 \text{ then } k = 10^{0.952 - 3.04 I_c}$$

$$I_c \leq 4.00 \text{ and } I_c > 3.27 \text{ then } k = 10^{-4.52 - 1.37 I_c}$$

:: N_{SPT} (blows per 30 cm) ::

$$N_{60} = \left(\frac{q_c}{p_s} \right) \cdot \frac{1}{10^{1.1268 - 0.2817 I_c}}$$

$$N_{160} = Q_{tn} \cdot \frac{1}{10^{1.1268 - 0.2817 I_c}}$$

:: Young's Modulus, E_s (MPa) ::

$$(q_t - \sigma_v) \cdot 0.015 \cdot 10^{0.55 I_c + 1.68}$$

(applicable only to $I_c < I_{c, cutoff}$)

:: Relative Density, D_r (%) ::

$$100 \cdot \sqrt{\frac{Q_{tn}}{k_{DR}}} \quad \text{(applicable only to SBT}_n\text{: 5, 6, 7 and 8 or } I_c < I_{c, cutoff}\text{)}$$

:: State Parameter, ψ ::

$$\psi = 0.56 - 0.33 \cdot \log(Q_{30, CS})$$

:: Drained Friction Angle, ϕ (°) ::

$$\phi = \phi'_{cv} + 15.94 \cdot \log(Q_{30, CS}) - 26.88$$

(applicable only to SBT_n: 5, 6, 7 and 8 or $I_c < I_{c, cutoff}$)

:: 1-D constrained modulus, M (MPa) ::

$$\begin{aligned} &\text{If } I_c > 2.20 \\ &a = 14 \text{ for } Q_{tn} > 14 \\ &a = Q_{tn} \text{ for } Q_{tn} \leq 14 \\ &M_{CPT} = a \cdot (q_t - \sigma_v) \end{aligned}$$

$$\text{If } I_c \geq 2.20$$

$$M_{CPT} = 0.03 \cdot (q_t - \sigma_v) \cdot 10^{0.55 I_c + 1.88}$$

:: Small strain shear Modulus, G_0 (MPa) ::

$$G_0 = (q_t - \sigma_v) \cdot 0.0188 \cdot 10^{0.55 I_c + 1.68}$$

:: Shear Wave Velocity, V_s (m/s) ::

$$V_s = \left(\frac{G_0}{\rho} \right)^{0.50}$$

:: Undrained peak shear strength, S_u (kPa) ::

$$N_{kt} = 10.50 + 7 \cdot \log(F_r) \text{ or user defined}$$

$$S_u = \frac{(q_t - \sigma_v)}{N_{kt}}$$

(applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c, cutoff}$)

:: Remolded undrained shear strength, $S_{u(rem)}$ (kPa) ::

$$S_{u(rem)} = f_s \quad \text{(applicable only to SBT}_n\text{: 1, 2, 3, 4 and 9 or } I_c > I_{c, cutoff}\text{)}$$

:: Overconsolidation Ratio, OCR ::

$$k_{OCR} = \left[\frac{Q_{tn}^{0.20}}{0.25 \cdot (10.50 + 7 \cdot \log(F_r))} \right]^{-1.25} \text{ or user defined}$$

$$OCR = k_{OCR} \cdot Q_{tn}$$

(applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c, cutoff}$)

:: In situ Stress Ratio, K_0 ::

$$K_0 = (1 - \sin \phi') \cdot OCR^{\sin \phi'}$$

(applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c, cutoff}$)

:: Soil Sensitivity, S_s ::

$$S_s = \frac{N_s}{F_r}$$

(applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c, cutoff}$)

:: Peak Friction Angle, ϕ' (°) ::

$$\phi' = 29.5^\circ \cdot B_c^{0.121} \cdot (0.256 + 0.336 \cdot B_c + \log Q_t)$$

(applicable for $0.10 < B_c < 1.00$)

Pore Pressure Dissipation Tests (PPDT)

Pore Pressure Dissipation Tests (PPDT's) conducted at various intervals can be used to measure equilibrium water pressure (at the time of the CPT). If conditions are hydrostatic, the equilibrium water pressure can be used to determine the approximate depth of the ground water table. A PPDT is conducted when penetration is halted at specific intervals determined by the field representative. The variation of the penetration pore pressure (u) with time is measured behind the tip of the cone and recorded.

Pore pressure dissipation data can be interpreted to provide estimates of:

- Equilibrium piezometric pressure
- Phreatic Surface
- In-situ horizontal coefficient of consolidation (c_h)
- In-situ horizontal coefficient of permeability (k_h)

In order to correctly interpret the equilibrium piezometric pressure and/or the phreatic surface, the pore pressure must be monitored until it reaches equilibrium, *Figure PPDT*. This time is commonly referred to as t_{100} , the point at which 100% of the excess pore pressure has dissipated.

A complete reference on pore pressure dissipation tests is presented by Robertson et al. 1992 and Lunne et al. 1997.

A summary of the pore pressure dissipation tests is summarized in Table 1.

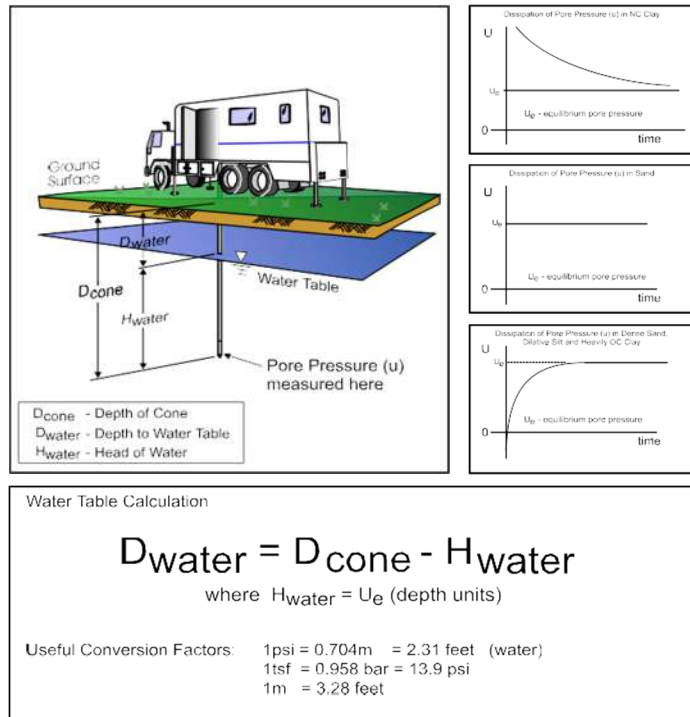


Figure PPDT

Seismic Cone Penetration Testing (SCPT)

Seismic Cone Penetration Testing (SCPT) can be conducted at various intervals during the Cone Penetration Test. Shear wave velocity (V_s) can then be calculated over a specified interval with depth. A small interval for seismic testing, such as 1-1.5m (3-5ft) allows for a detailed look at the shear wave profile with depth. Conversely, a larger interval such as 3-6m (10-20ft) allows for a more average shear wave velocity to be calculated. Gregg's cones have a horizontally active geophone located 0.2m (0.66ft) behind the tip.

To conduct the seismic shear wave test, the penetration of the cone is stopped and the rods are decoupled from the rig. An automatic hammer is triggered to send a shear wave into the soil. The distance from the source to the cone is calculated knowing the total depth of the cone and the horizontal offset distance between the source and the cone. To calculate an interval velocity, a minimum of two tests must be performed at two different depths. The arrival times between the two wave traces are compared to obtain the difference in time (Δt). The difference in depth is calculated (Δd) and velocity can be determined using the simple equation: $v = \Delta d / \Delta t$

Multiple wave traces can be recorded at the same depth to improve quality of the data.

A complete reference on seismic cone penetration tests is presented by Robertson et al. 1986 and Lunne et al. 1997.

A summary the shear wave velocities, arrival times and wave traces are provided with the report.

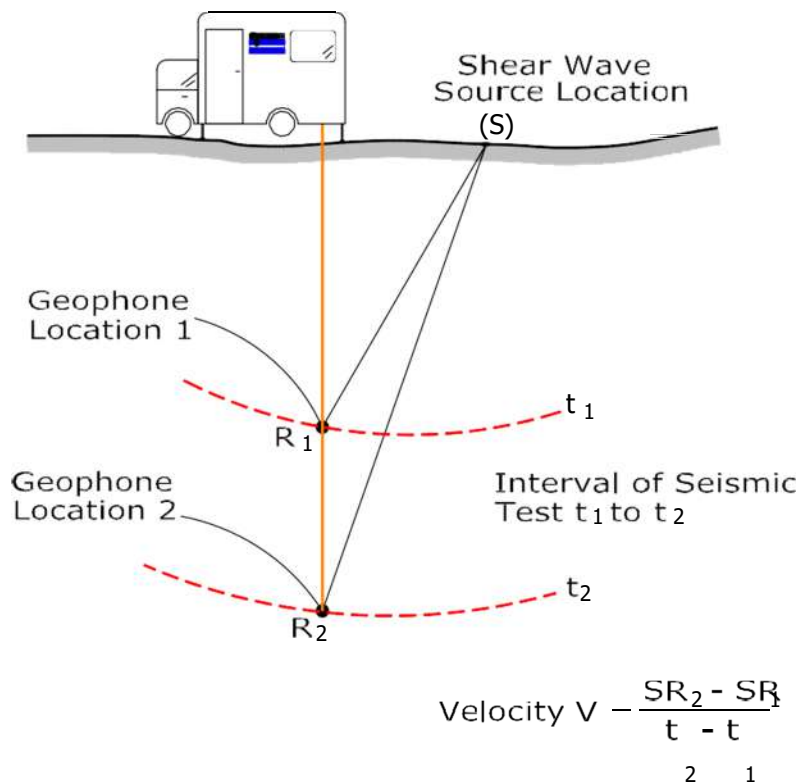


Figure SCPT

Groundwater Sampling

Gregg Drilling & Testing, Inc. conducts groundwater sampling using a sampler as shown in *Figure GWS*. The groundwater sampler has a retrievable stainless steel or disposable PVC screen with steel drop off tip. This allows for samples to be taken at multiple depth intervals within the same sounding location. In areas of slower water recharge, provisions may be made to set temporary PVC well screens during sampling to allow the pushing equipment to advance to the next sample location while the groundwater is allowed to infiltrate.

The groundwater sampler operates by advancing 44.5mm (1¾ inch) hollow push rods with the filter tip in a closed configuration to the base of the desired sampling interval. Once at the desired sample depth, the push rods are retracted; exposing the encased filter screen and allowing groundwater to infiltrate hydrostatically from the formation into the inlet screen. A small diameter bailer (approximately ½ or ¾ inch) is lowered through the push rods into the screen section for sample collection. The number of downhole trips with the bailer and time necessary to complete the sample collection at each depth interval is a function of sampling protocols, volume requirements, and the yield characteristics and storage capacity of the formation. Upon completion of sample collection, the push rods and sampler, with the exception of the PVC screen and steel drop off tip are retrieved to the ground surface, decontaminated and prepared for the next sampling event.

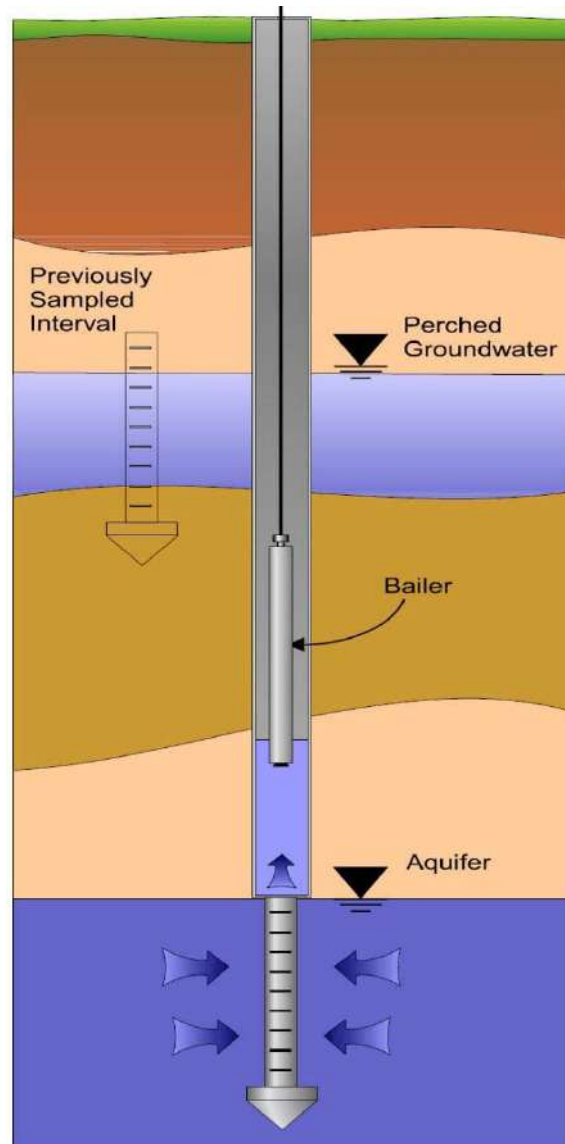


Figure GWS

Soil Sampling

Gregg Drilling & Testing, Inc. uses a piston-type push-in sampler to obtain small soil samples without generating any soil cuttings, *Figure SS*. Two different types of samplers (12 and 18 inch) are used depending on the soil type and density. The soil sampler is initially pushed in a "closed" position to the desired sampling interval using the CPT pushing equipment. Keeping the sampler closed minimizes the potential of cross contamination. The inner tip of the sampler is then retracted leaving a hollow soil sampler with inner 1¼" diameter sample tubes. The hollow sampler is then pushed in a locked "open" position to collect a soil sample. The filled sampler and push rods are then retrieved to the ground surface. Because the soil enters the sampler at a constant rate, the opportunity for 100% recovery is increased. For environmental analysis, the soil sample tube ends are sealed with Teflon and plastic caps. Often, a longer "split tube" can be used for geotechnical sampling.

For a detailed reference on direct push soil sampling, refer to Lunne et al, 1997.

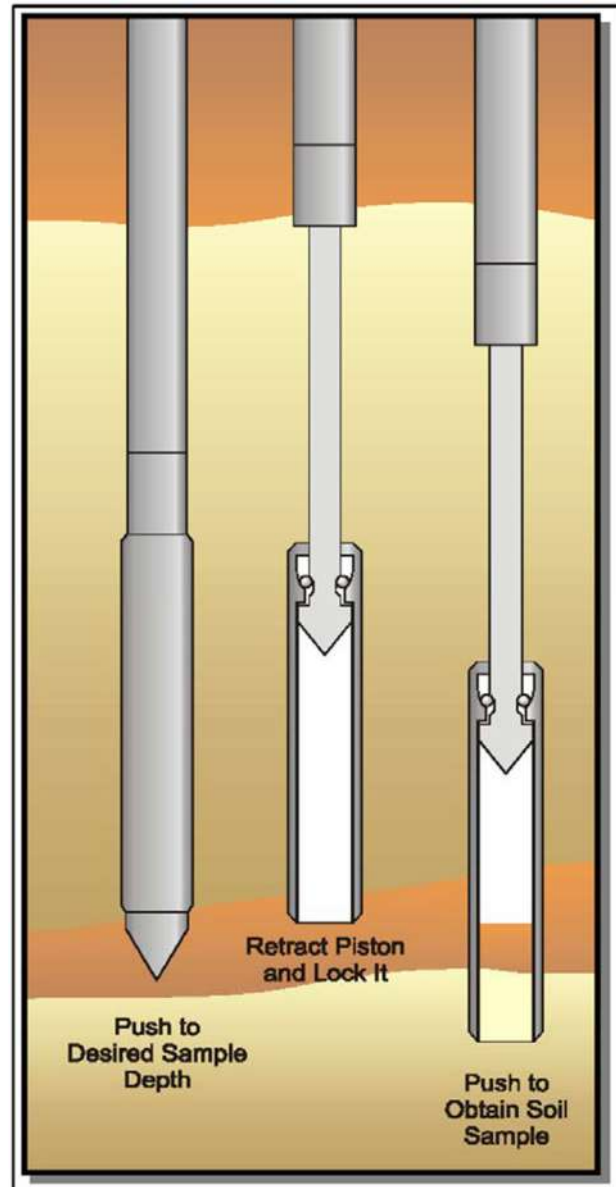


Figure SS

References

ASTM D5778-12, 2012, Standard Test Method for Performing Electronic Friction Cone and Piezocone Penetration Testing of Soils. ASTM West Conshohocken, USA

Lunne, T., Robertson, P.K. and Powell, J.J.M., 1997. Cone Penetration Testing in Geotechnical Practice.

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Robertson, P.K., R.G. Campanella, D. Gillespie and A. Rice, "Seismic CPT to Measure In-situ Shear Wave Velocity", Journal of Geotechnical Engineering, ASCE, Vol. 112, No. 8, pp. 791-803, 1986.

Robertson, P.K., Sully, J., Woeller, D.J., Lunne, T., Powell, J.J.M., and Gillespie, D.J., "Guidelines for Estimating Consolidation Parameters in Soils from Piezocone Tests", Canadian Geotechnical Journal, Vol. 29, No. 4, August 1992, pp. 539-550.

Ultra-Violet Induced Fluorescence (UVOST)

Gregg Drilling conducts Laser Induced Fluorescence (LIF) Cone Penetration Tests using a UVOST module that is located behind the standard piezocone, *Figure UVOST*. The laser induced fluorescence cone works on the principle that polycyclic aromatic hydrocarbons (PAH's), mixed with soil and/or groundwater, fluoresce when irradiated by ultra violet light. Therefore, by measuring the intensity of fluorescence, the lateral and vertical extent of hydrocarbon contamination in the ground can be estimated.

The UVOST module uses principles of fluorescence spectrometry by irradiating the soil with ultra violet light produced by a laser and transmitted to the cone through fiber optic cables. The UV light passes through a small window in the side of the cone into the soil. Any hydrocarbon molecules present in the soil absorb the light energy during radiation and immediately re-emit the light at a longer wavelength. This re-emission is termed fluorescence. The UVOST system also measures the emission decay with time at four different wavelengths (350nm, 400nm, 450nm, and 500nm). This allows the software to determine a product "signature" at each data point. This process provides a method to evaluate the type of contaminant. A sample output from the UVOST system is shown in *Figure Output*. In general, the typical detection limit for the UVOST system is <100 ppm and it will operate effectively above and below the saturated zone.

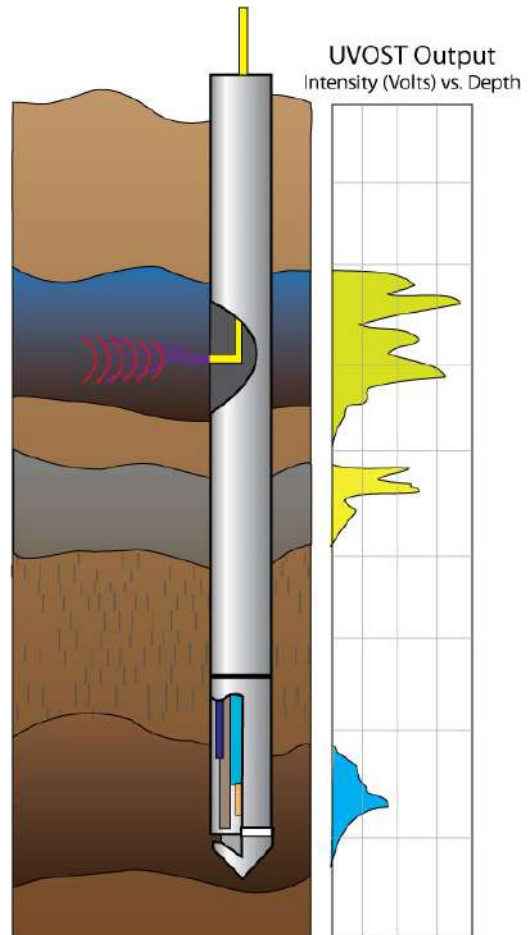


Figure UVOST

With the capability to push up to 200m (600ft) per day, laser induced fluorescence offers a fast and efficient means for delineating PAH contaminant plumes. Color coded logs offer qualitative information in a quick glance and can be produced in the field for real-time decision making. Coupled with the data provided by the CPT, a complete site assessment can be completed with no samples or cuttings, saving laboratory costs as well as site and environmental impact.

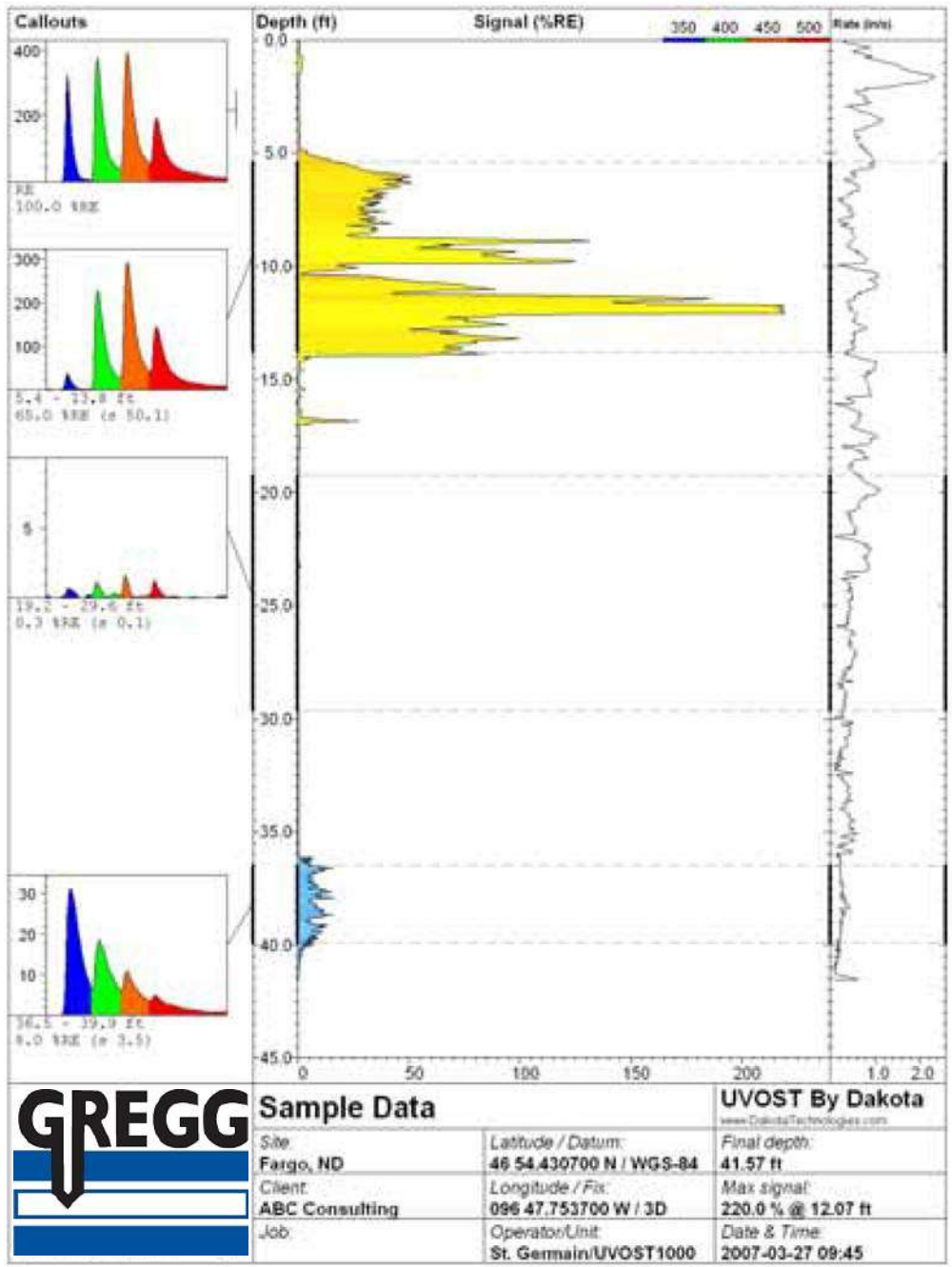


Figure Output

Hydrocarbons detected with UVOST

- Gasoline
- Diesel
- Jet (Kerosene)
- Motor Oil
- Cutting fluids
- Hydraulic fluids
- Crude Oil

Hydrocarbons rarely detected using UVOST

- Extremely weathered gasoline
- Coal tar
- Creosote
- Bunker Oil
- Polychlorinated bi-phenols (PCB's)
- Chlorinated solvent DNAPL
- Dissolved phase (aqueous) PAH's

Potential False Positives (fluorescence observed)

- Sea-shells (weak-medium)
- Paper (medium-strong depending on color)
- Peat/meadow mat (weak)
- Calcite/calcareous sands (weak)
- Tree roots (weak-medium)
- Sewer lines (medium-strong)

Potential False Negatives (do not fluoresce)

- Extremely weathered fuels (especially gasoline)
- Aviation gasoline (weak)
- "Dry" PAHs such as aqueous phase, lamp black, purifier chips
- Creosotes (most)
- Coal tars (most) gasoline (weak)
- Most chlorinated solvents
- Benzene, toluene, xylenes (relatively pure)

DAKOTA TECHNOLOGIES UVOST LOG REFERENCE

2008-12-12

Main Plot :

Signal (total fluorescence) versus depth where signal is relative to the Reference Emitter (RE). The total area of the waveform is divided by the total area of the Reference Emitter yielding the %RE. This %RE scales with the NAPL fluorescence. The fill color is based on relative contribution of each channel's area to the total waveform area (see callout waveform). The channel-to-color relationship and corresponding wavelengths are given in the upper right corner of the main plot.

Callouts :

Waveforms from selected depths or depth ranges showing the multi-wavelength waveform for that depth.

The four peaks are due to fluorescence at four wavelengths and referred to as "channels". Each channel is assigned a color.

Various NAPLs will have a unique waveform "fingerprint" due to the relative amplitude of the four channels and/or broadening of one or more channels.

Basic waveform statistics and any operator notes are given below the callout.

Conductivity Plot :

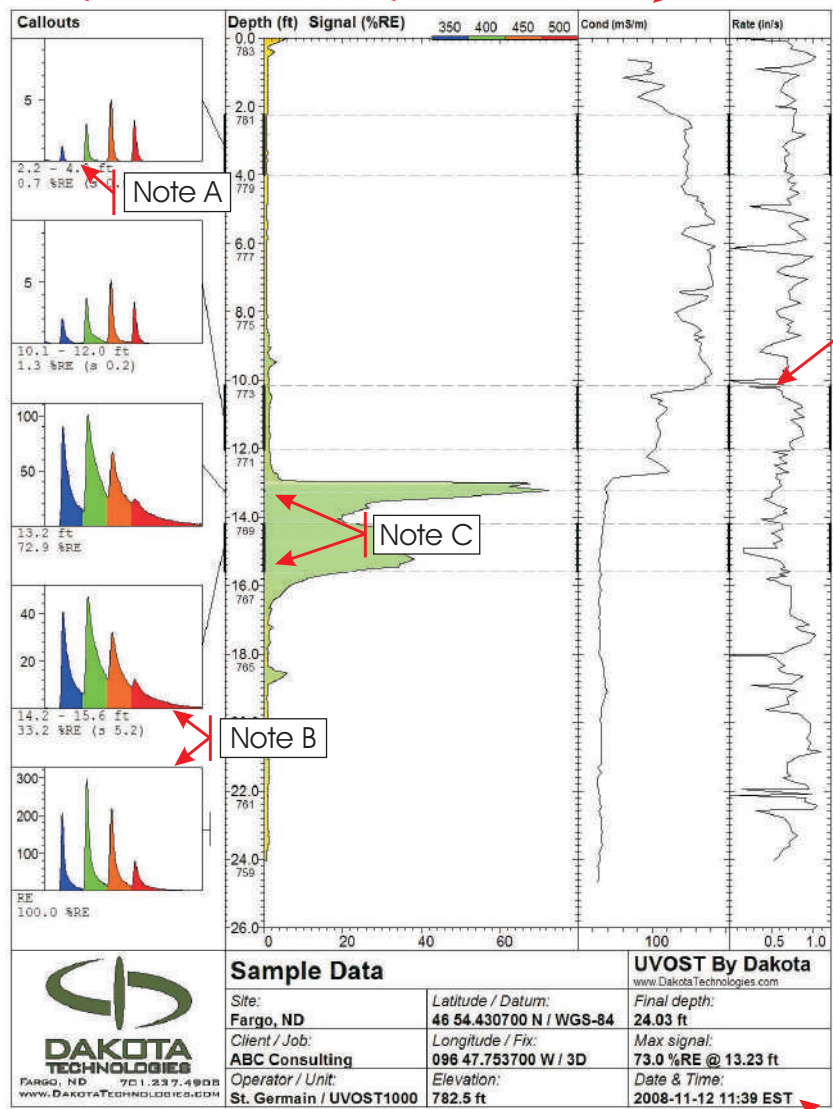
The Electrical Conductivity (EC) of the soil can be logged simultaneously with the UVOST data. EC often provides insight into the stratigraphy. Note the drop in EC from 10 - 13 ft, indicating a shift from consolidated to unconsolidated stratigraphy. This correlates with the observed NAPL distribution.

Rate Plot :

The rate of probe advancement. ~ 0.8in (2cm) per second is preferred.

A noticeable decrease in the rate of advancement may be indicative of difficult probing conditions (gravel, angular sands, etc.) such as that seen here at ~5 ft.

Notice that this log was terminated arbitrarily, not due to "refusal", which would have been indicated by a sudden rate drop at final depth.



Note A :

Time is along the x axis. No scale is given, but it is a consistent 320ns wide. The y axis is in mV and directly corresponds to the amount of light striking the photodetector.

Note B :

These two waveforms are clearly different. The first is weathered diesel from the log itself while the second is the Reference Emitter (a blend of NAPLs) always taken before each log for calibration.

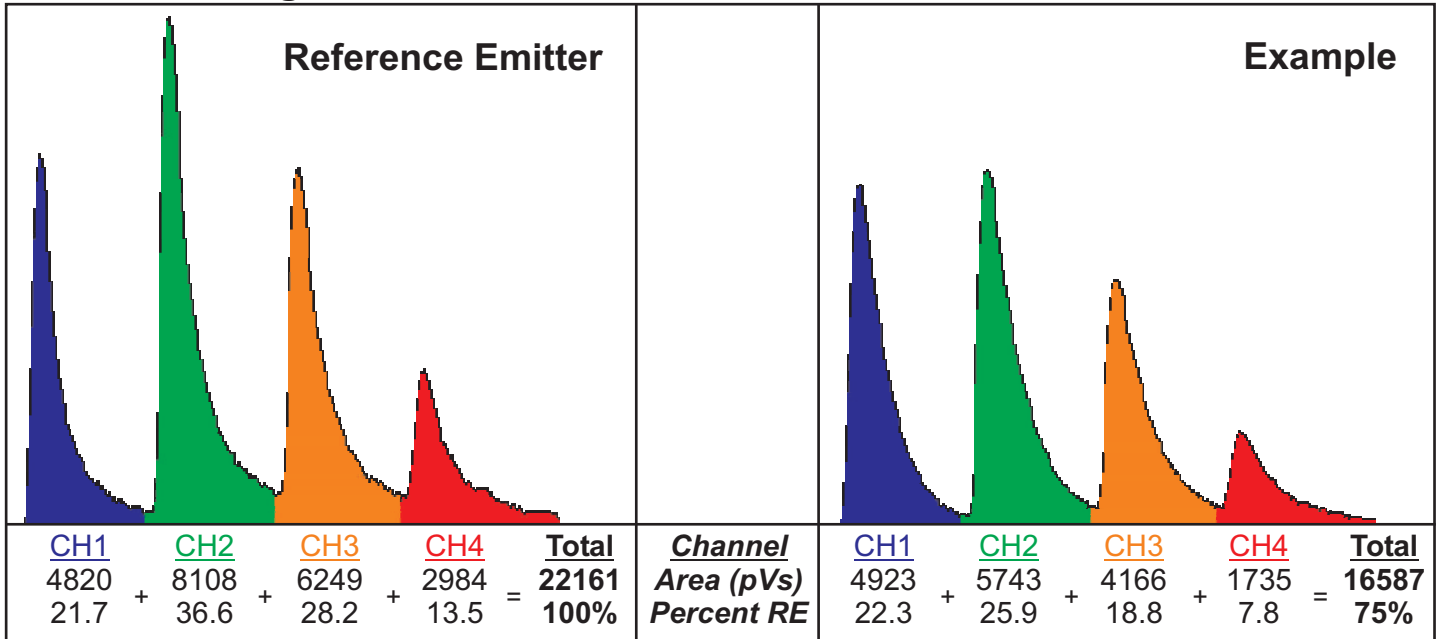
Note C :

Callouts can be a single depth (see 3rd callout) or a range (see 4th callout). The range is noted on the depth axis by a bold line. When the callout is a range, the average and standard deviation in %RE is given below the callout.

Info Box :

Contains pertinent log info including name and location.

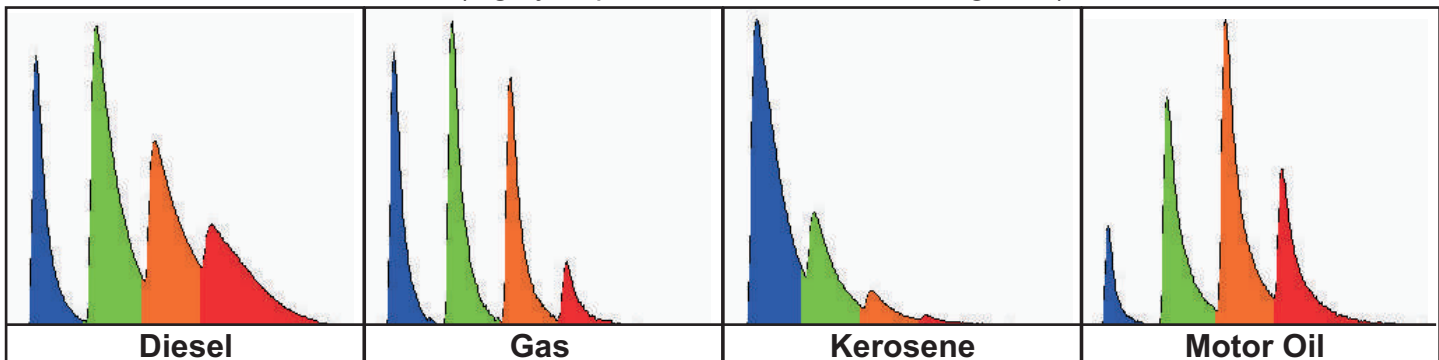
Waveform Signal Calculation



Data Files

*.lif.raw.bin	Raw data file. Header is ASCII format and contains information stored when the file was initially written (e.g. date, total depth, max signal, gps, etc., and any information entered by the operator). All raw waveforms are appended to the bottom of the file in a binary format.
*.lif.plt	Stores the plot scheme history (e.g. callout depths) for associated Raw file. Transfer along with the Raw file in order to recall previous plots.
*.lif.jpg	A jpg image of the OST log including the main signal vs. depth plot, callouts, information, etc.
*.lif.dat.txt	Data export of a single Raw file. ASCII tab delimited format. No string header is provided for the columns (to make importing into other programs easier). Each row is a unique depth reading. The columns are: Depth, Total Signal (%RE), Ch1%, Ch2%, Ch3%, Ch4%, Rate, Conductivity Depth, Conductivity Signal, Hammer Rate. Summing channels 1 to 4 yields the Total Signal.
*.lif.sum.txt	A summary file for a number of Raw files. ASCII tab delimited format. The file contains a string header. The summary includes one row for each Raw file and contains information for each file including: the file name, gps coordinates, max depth, max signal, and depth at which the max signal occurred.
*.lif.log.txt	An activity log generated automatically located in the OST application directory in the 'log' subfolder. Each OST unit the computer operates will generate a separate log file per month. A log file contains much of the header information contained within each separate Raw file, including: date, total depth, max signal, etc.

Common Waveforms (highly dependent on soil, weathering, etc.)



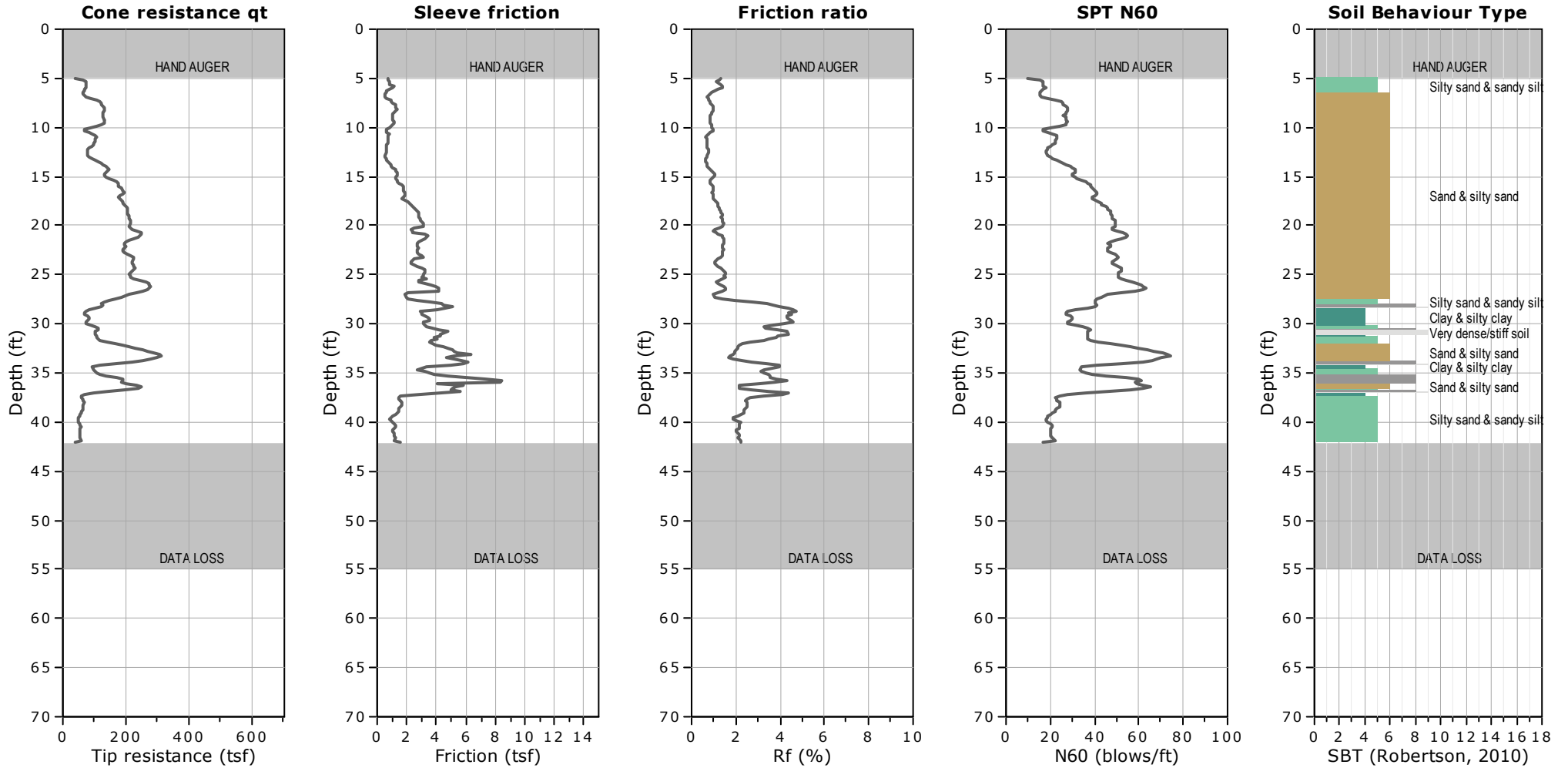


**CONE PENETRATION TEST (CPT)
BORINGS**



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 55.12 ft, Date: 4/8/2019



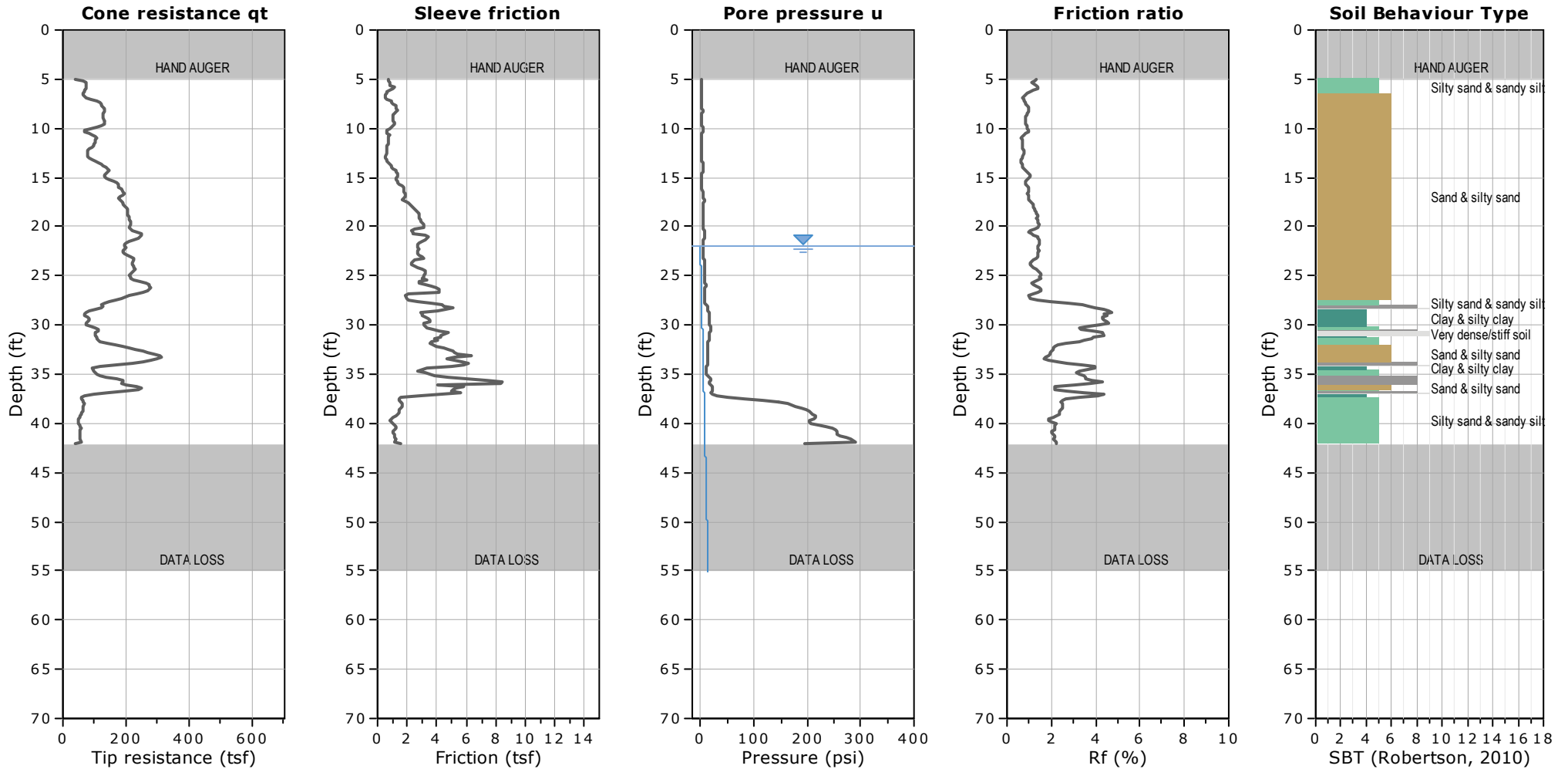
SBTn legend

- | | | |
|---------------------------|------------------------------|-----------------------------------|
| 1. Sensitive fine grained | 4. Clayey silt to silty clay | 7. Gravely sand to sand |
| 2. Organic material | 5. Silty sand to sandy silt | 8. Very stiff sand to clayey sand |
| 3. Clay to silty clay | 6. Clean sand to silty sand | 9. Very stiff fine grained |



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 55.12 ft, Date: 4/8/2019



SBTn legend

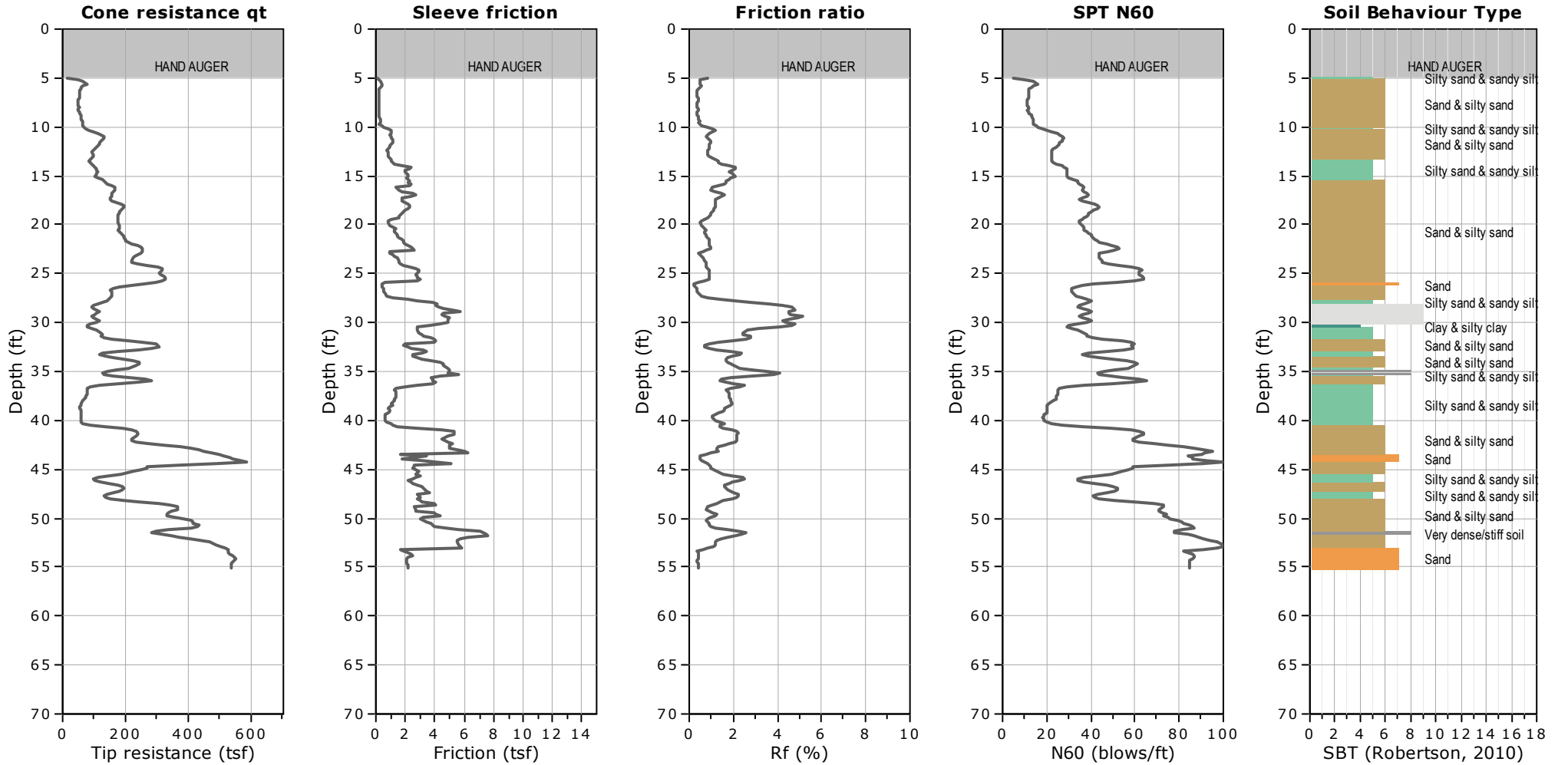
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| 2. Organic material | 5. Silty sand to sandy silt | 8. Very stiff sand to clayey sand |
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WATER TABLE FOR ESTIMATING PURPOSES ONLY



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 55.12 ft, Date: 4/8/2019



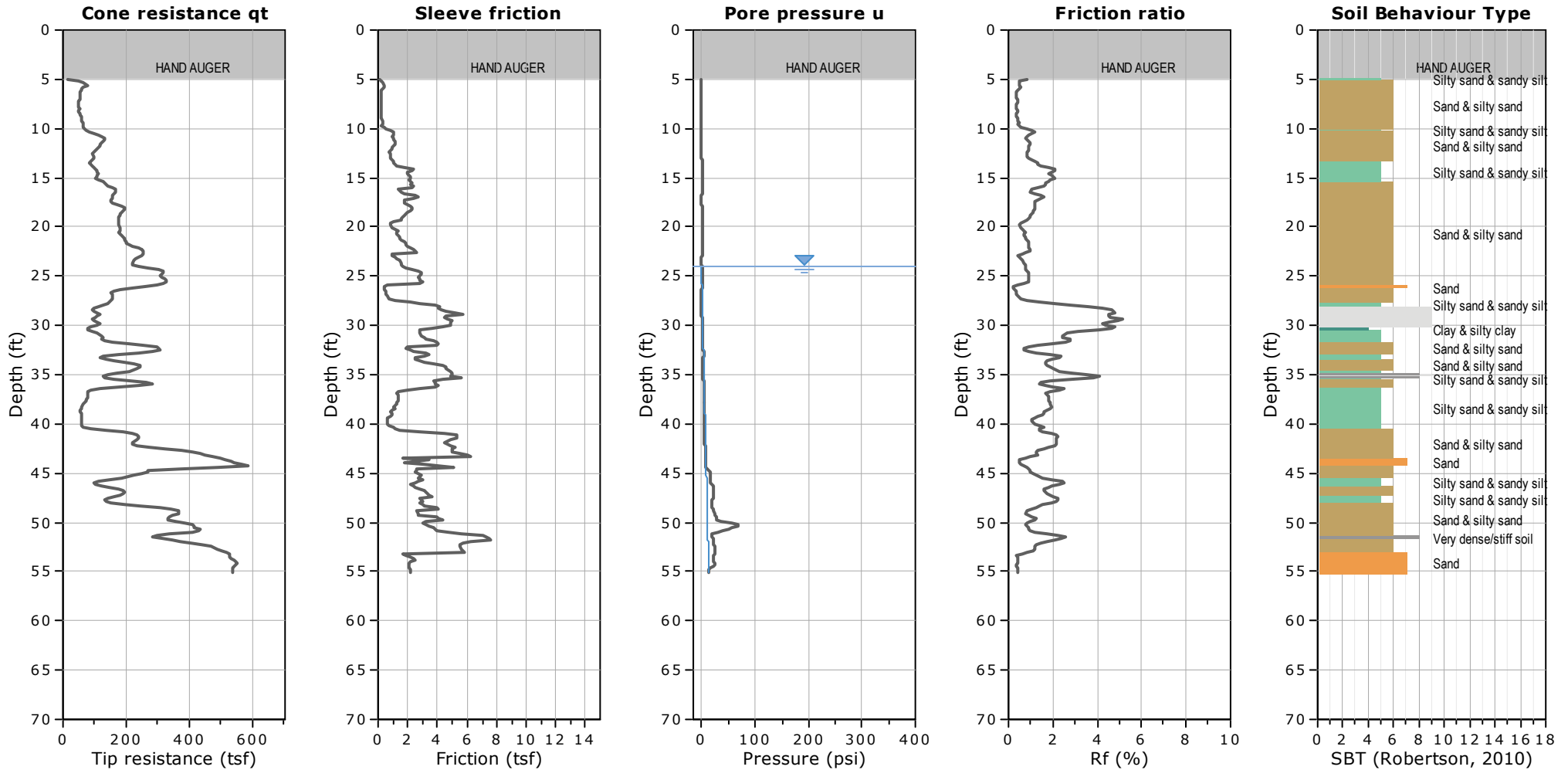
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CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 55.12 ft, Date: 4/8/2019

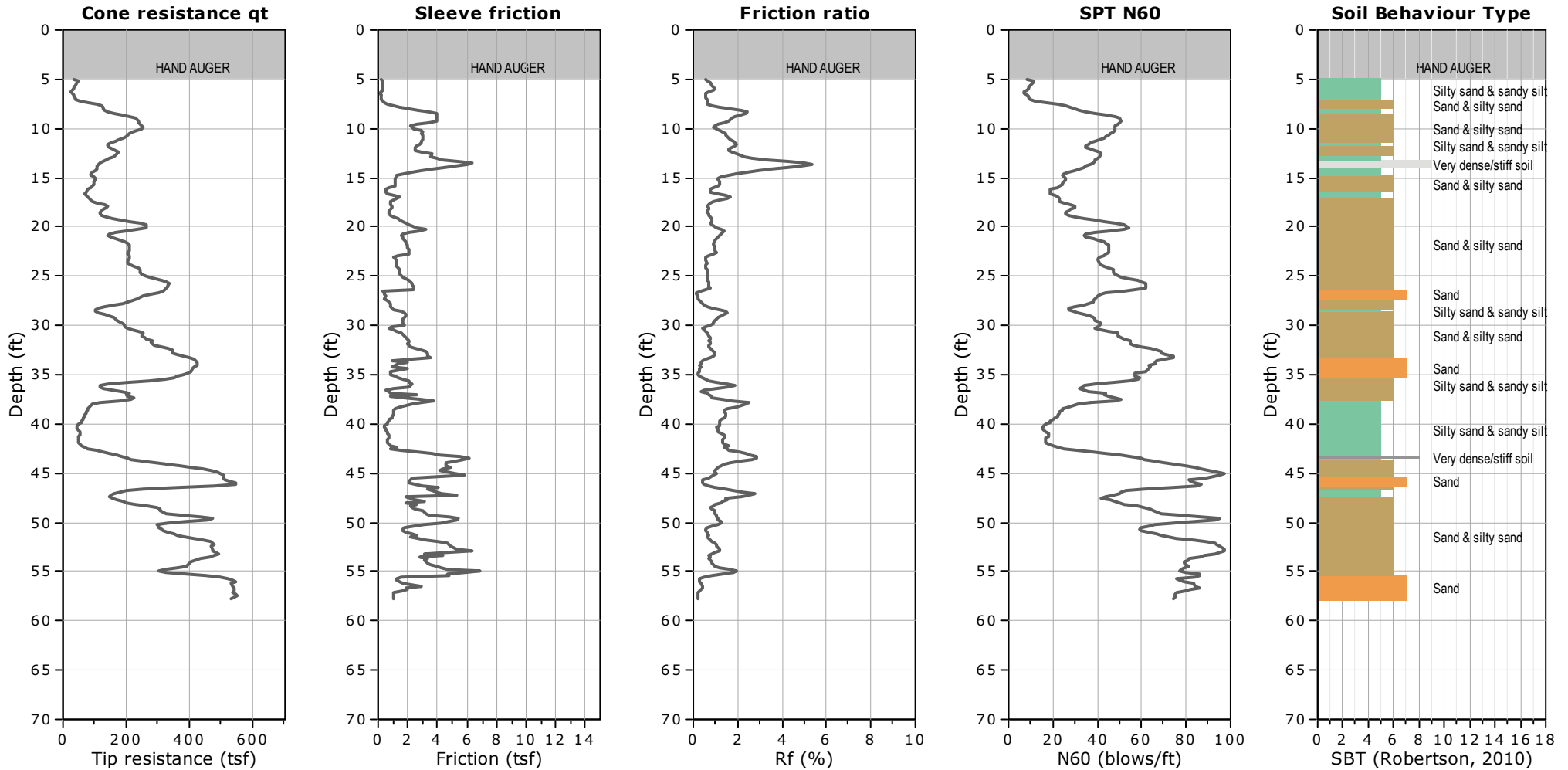


WATER TABLE FOR ESTIMATING PURPOSES ONLY



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 57.74 ft, Date: 4/8/2019



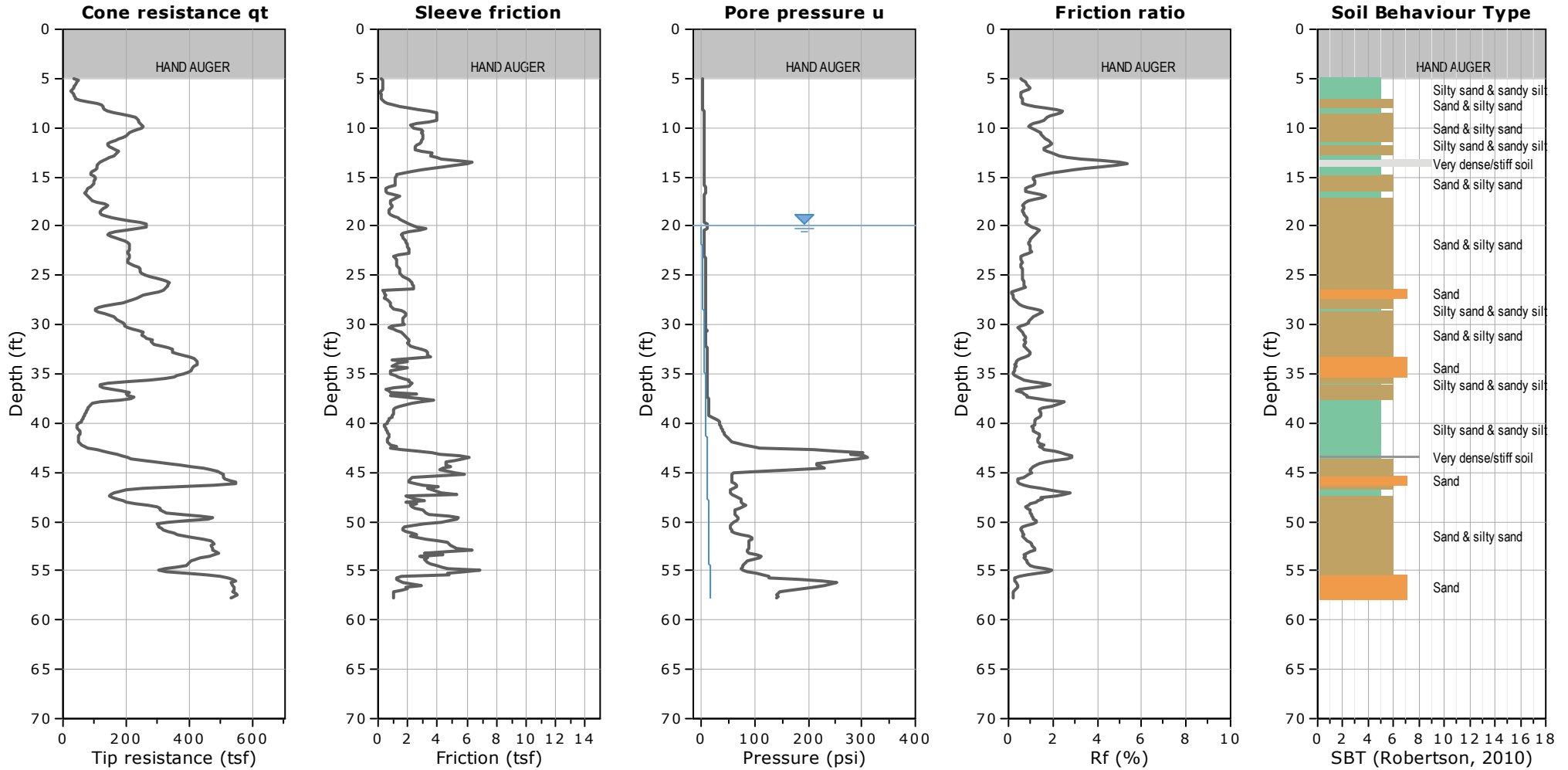
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| ■ 2. Organic material | ■ 5. Silty sand to sandy silt | ■ 8. Very stiff sand to clayey sand |
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CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 57.74 ft, Date: 4/8/2019



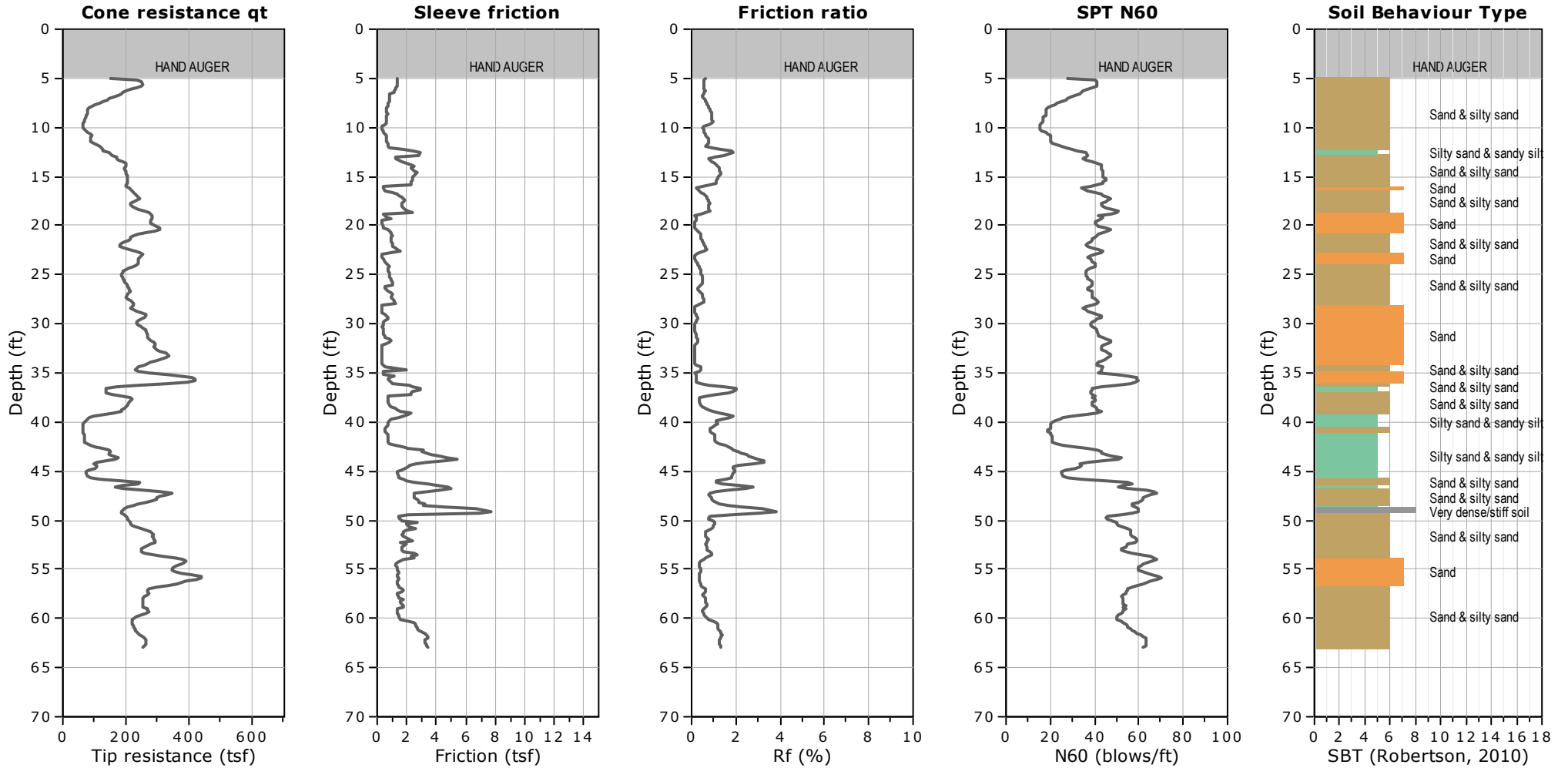
- SBTn legend**
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WATER TABLE FOR ESTIMATING PURPOSES ONLY



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SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

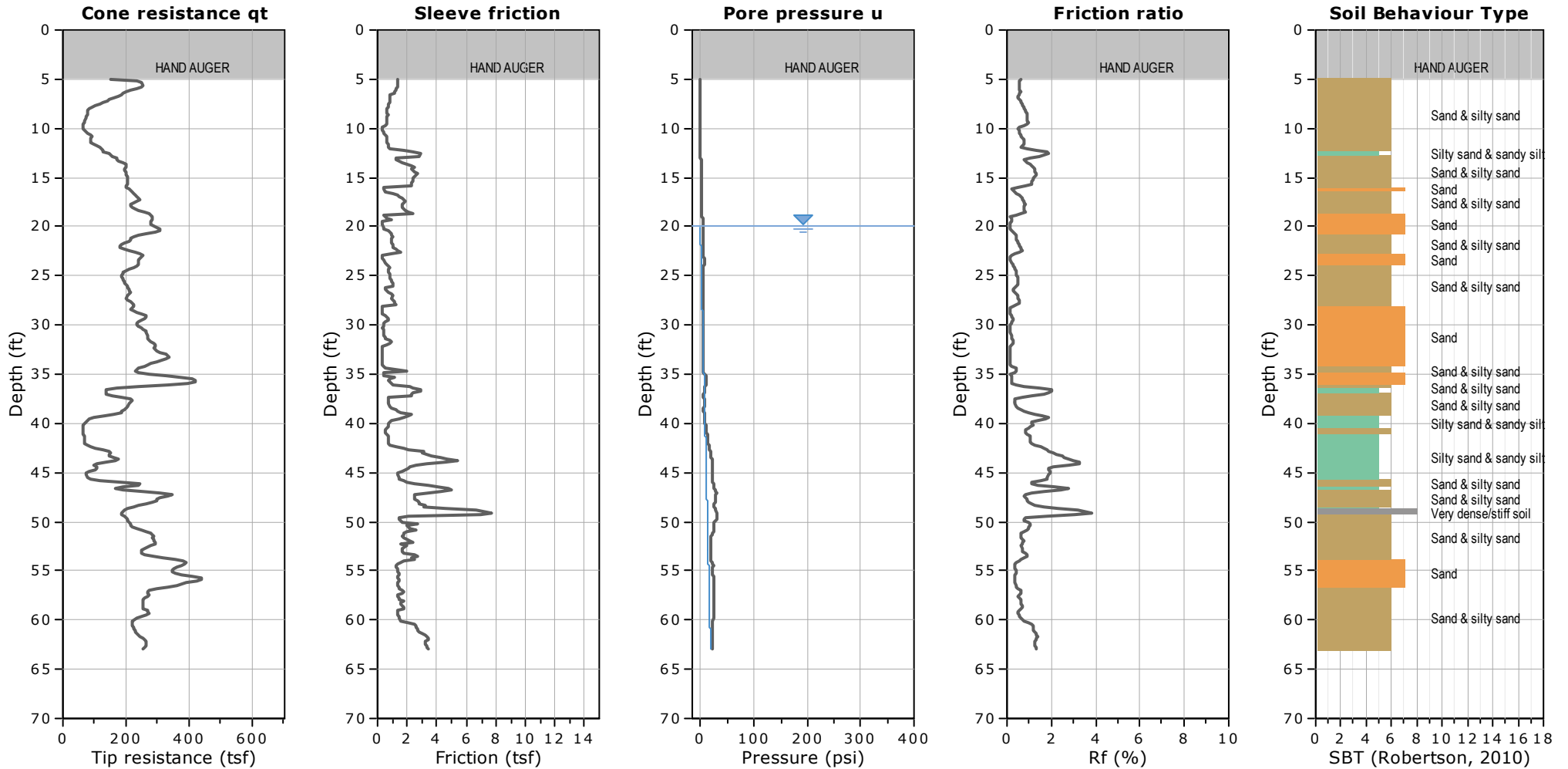
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CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 62.99 ft, Date: 4/8/2019



SBTn legend

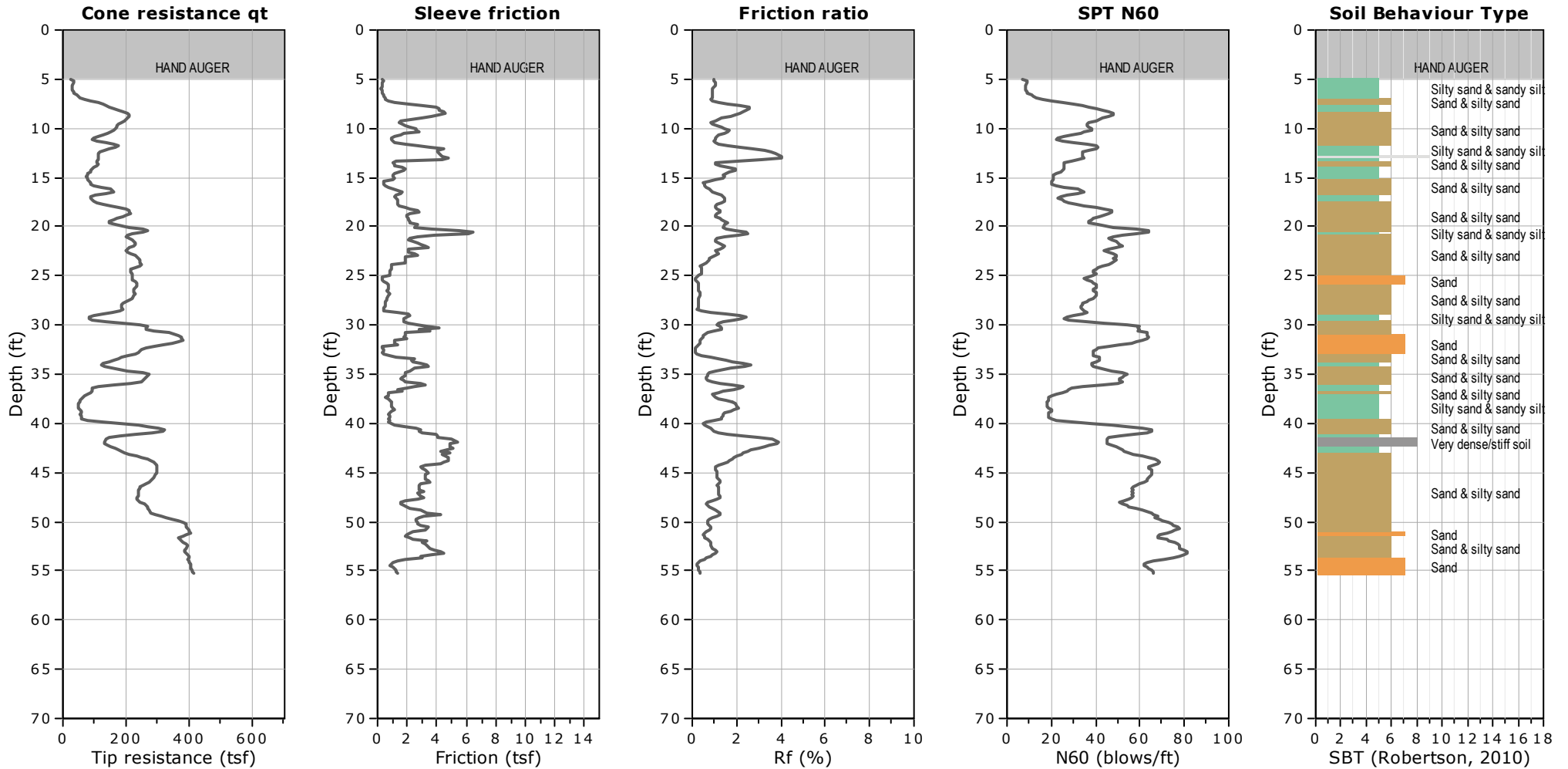
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WATER TABLE FOR ESTIMATING PURPOSES ONLY



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 55.28 ft, Date: 4/8/2019



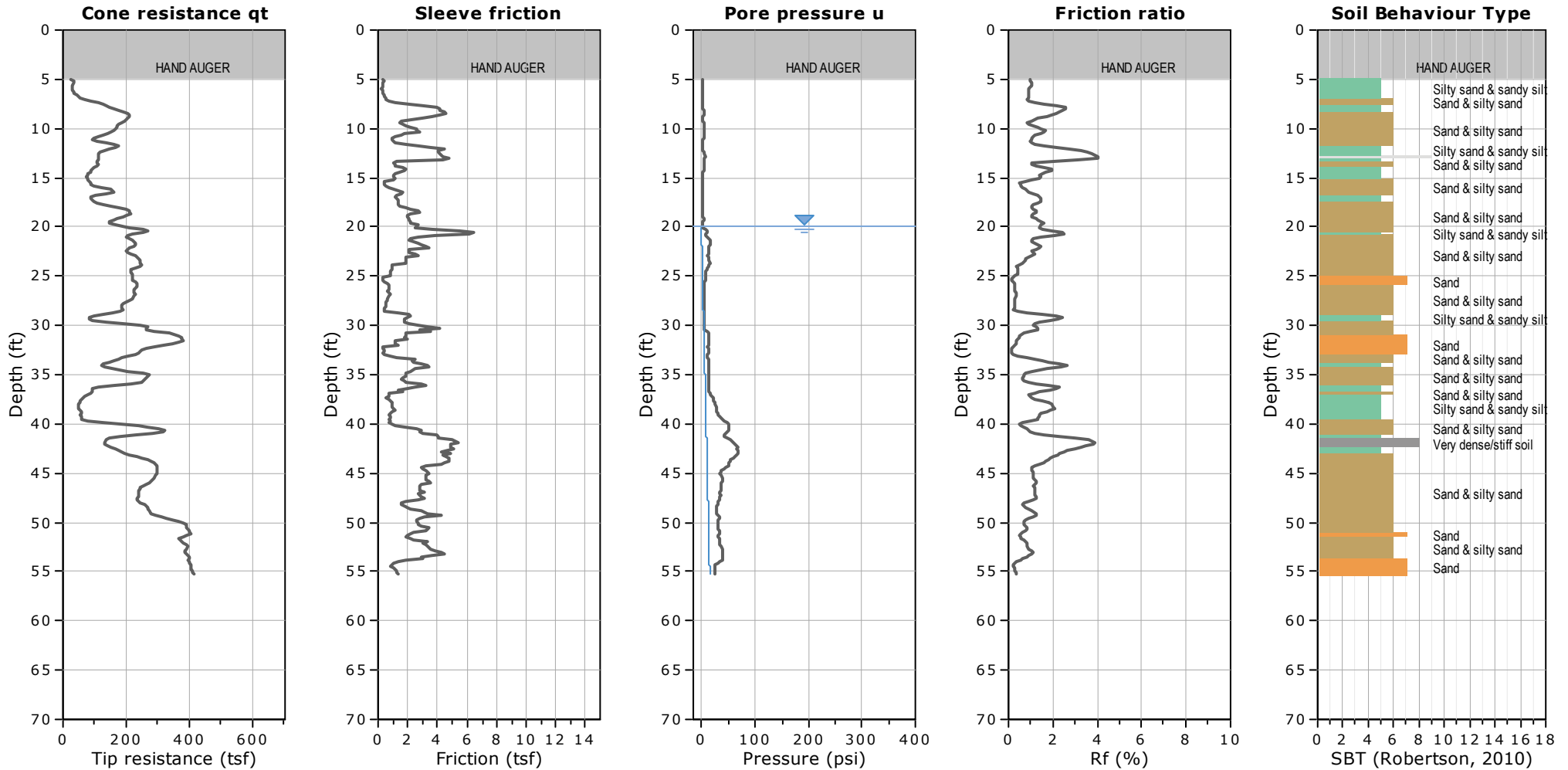
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CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 55.28 ft, Date: 4/8/2019



SBTn legend

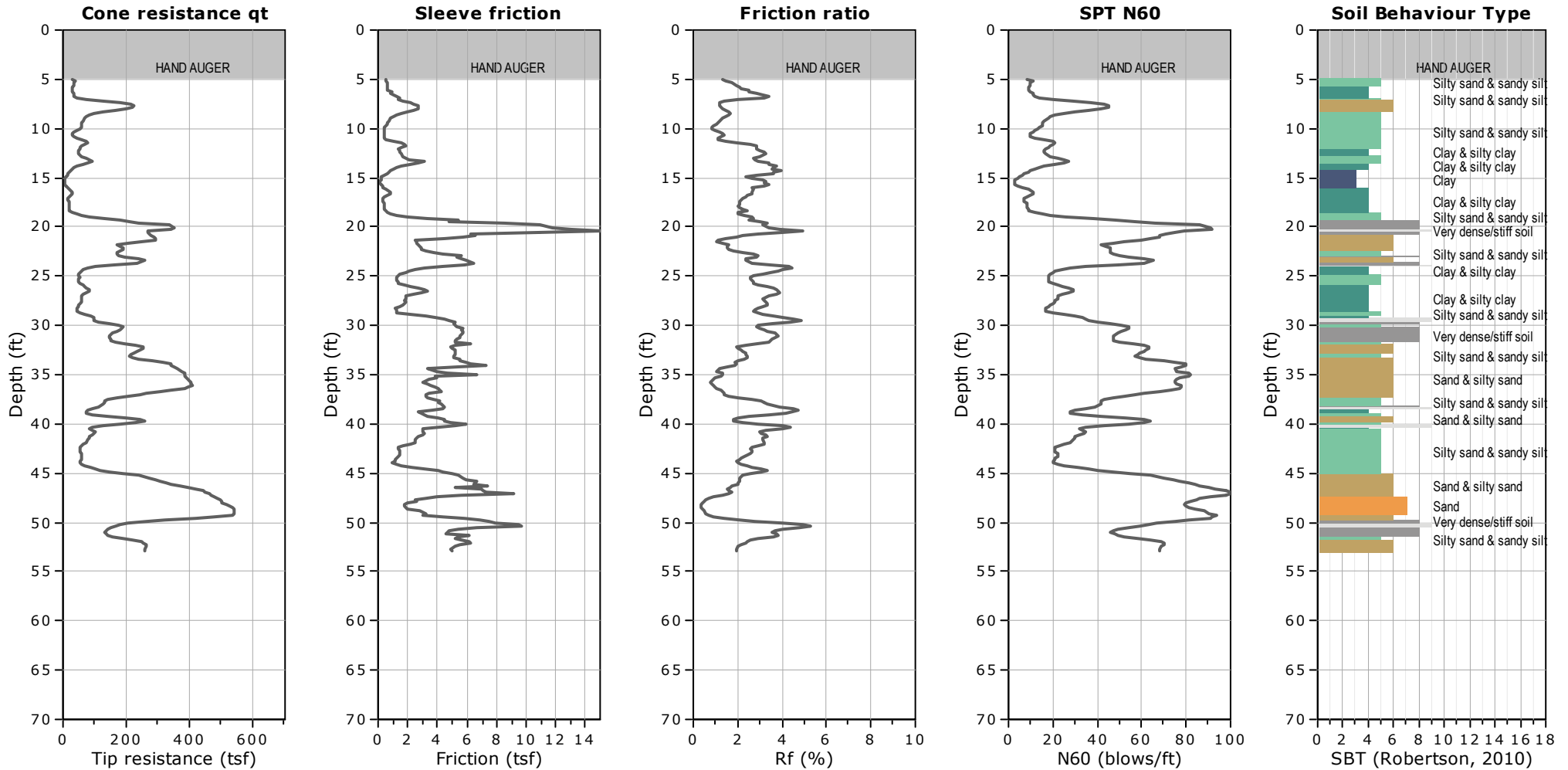
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WATER TABLE FOR ESTIMATING PURPOSES ONLY



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 52.82 ft, Date: 4/9/2019



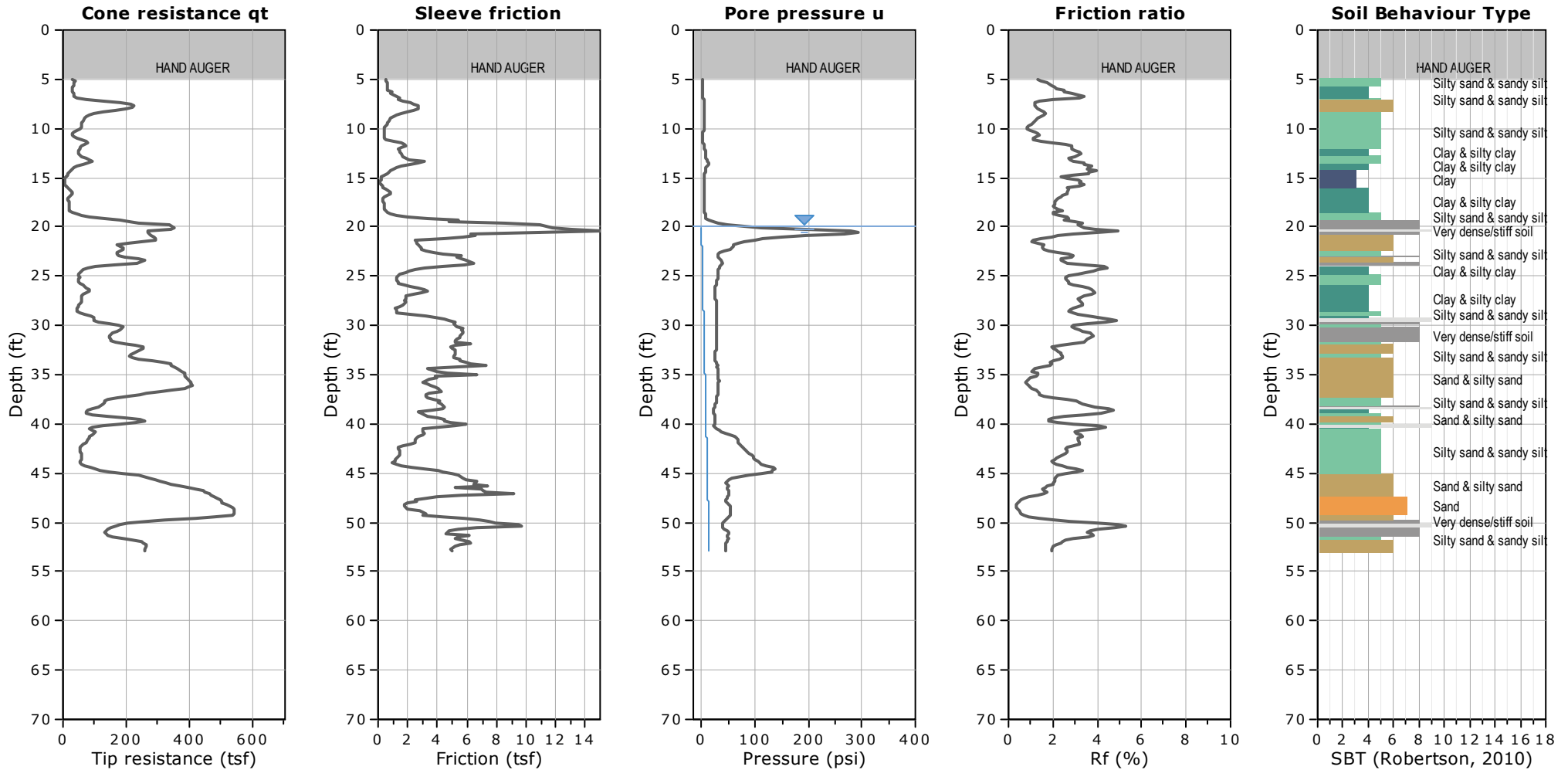
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CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 52.82 ft, Date: 4/9/2019



SBTn legend

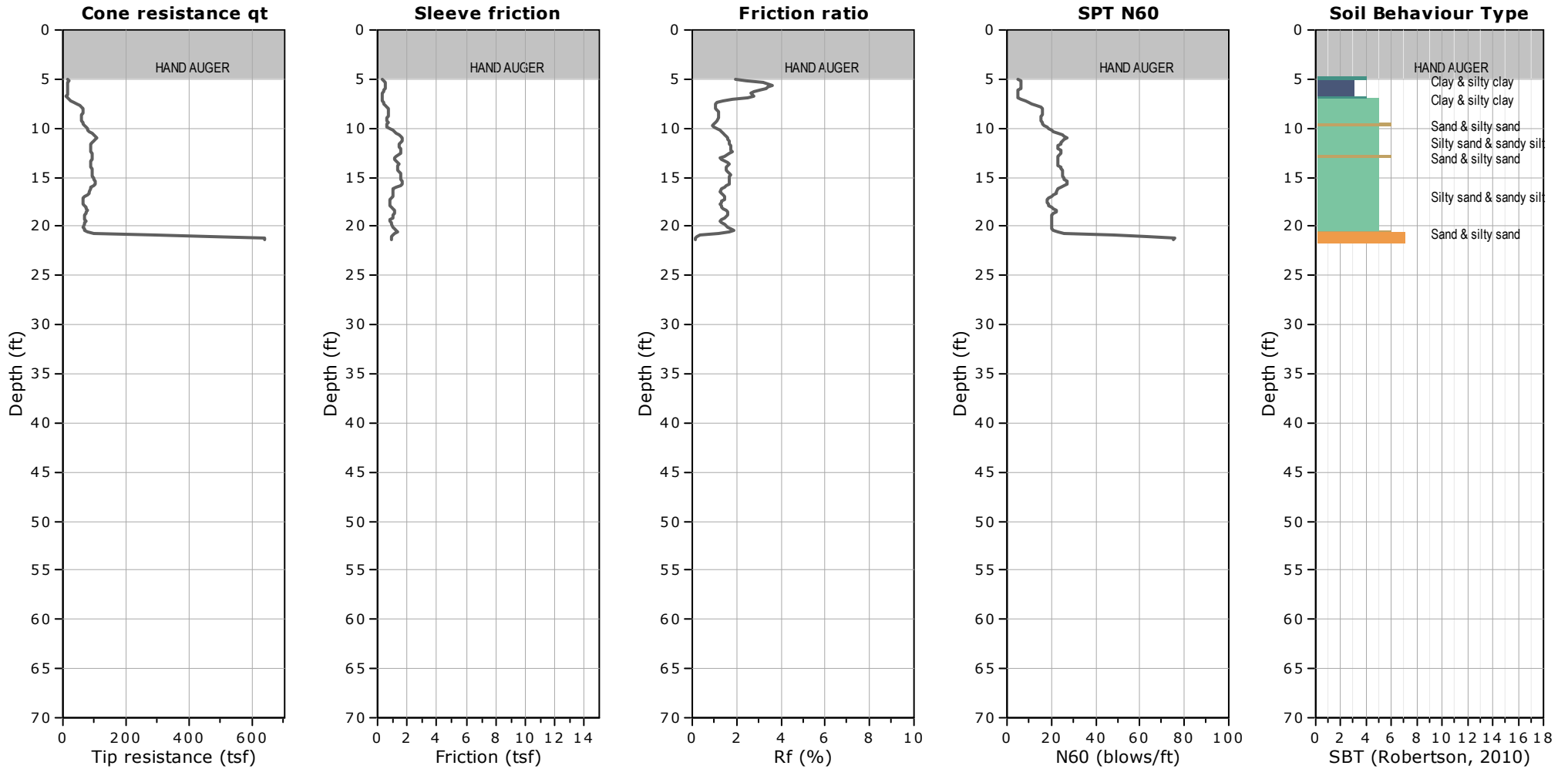
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WATER TABLE FOR ESTIMATING PURPOSES ONLY



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 21.33 ft, Date: 4/9/2019



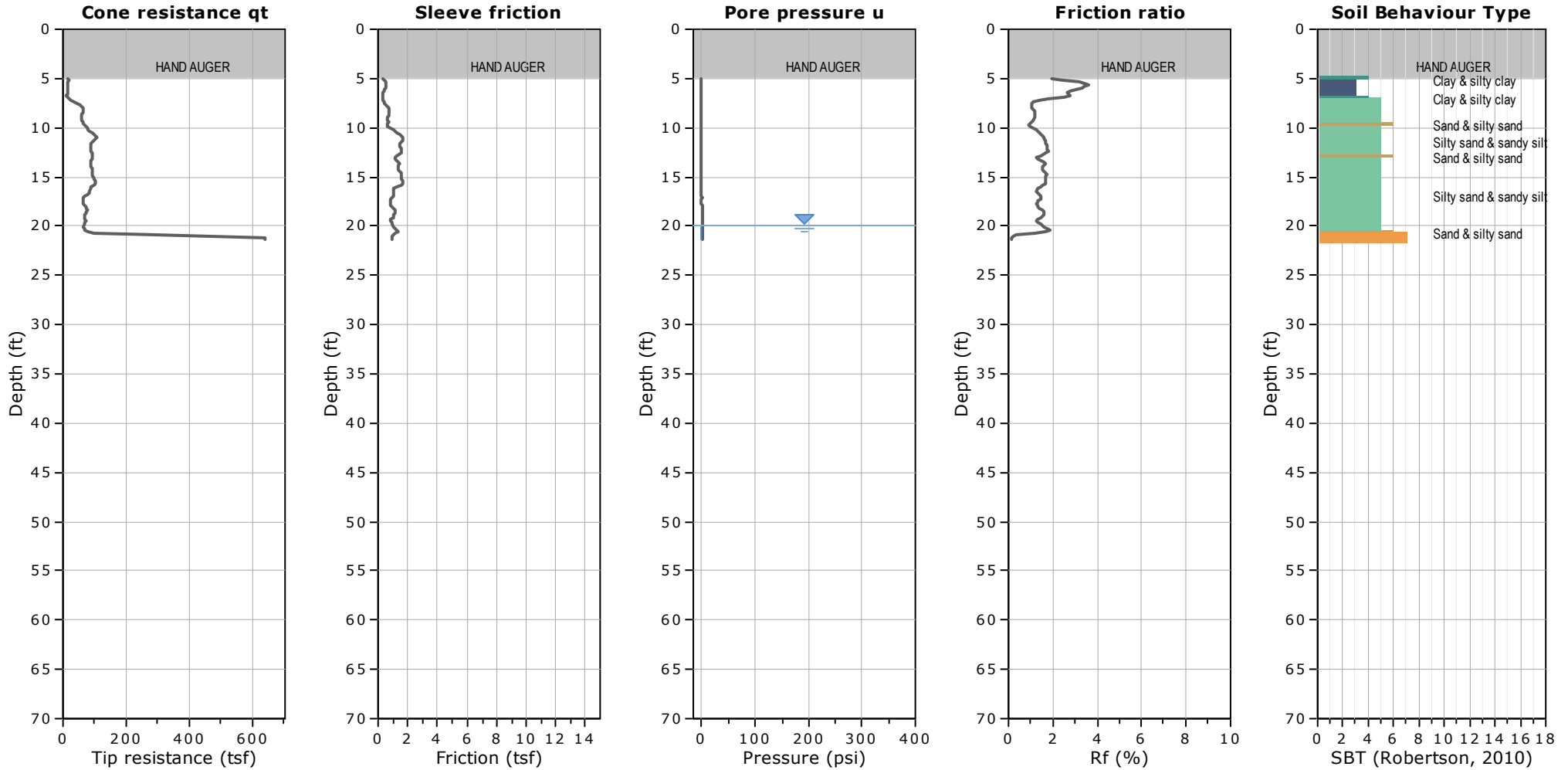
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CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 21.33 ft, Date: 4/9/2019



SBTn legend

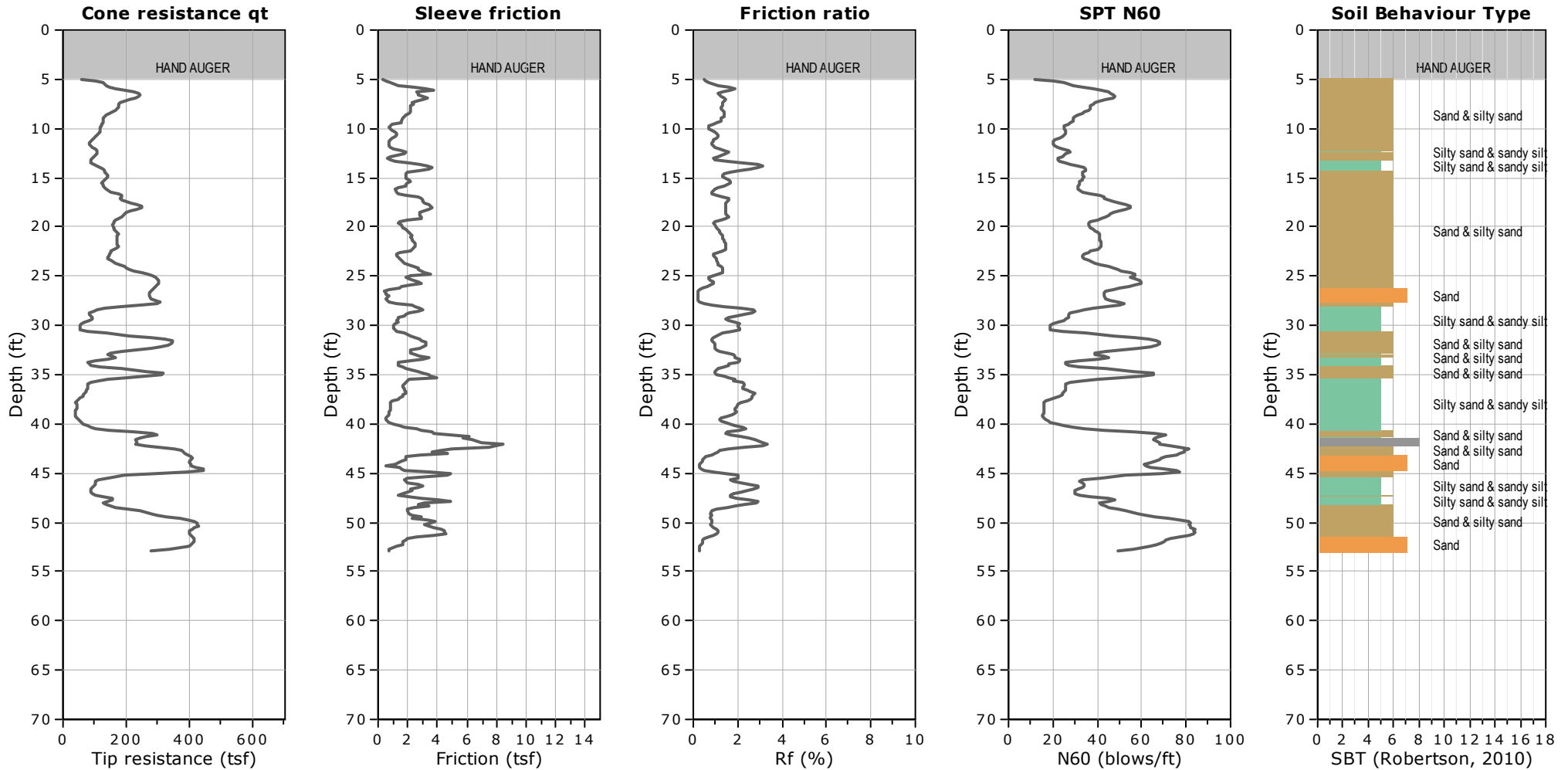
- | | | |
|---------------------------|------------------------------|-----------------------------------|
| 1. Sensitive fine grained | 4. Clayey silt to silty clay | 7. Gravely sand to sand |
| 2. Organic material | 5. Silty sand to sandy silt | 8. Very stiff sand to clayey sand |
| 3. Clay to silty clay | 6. Clean sand to silty sand | 9. Very stiff fine grained |

WATER TABLE FOR ESTIMATING PURPOSES ONLY



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 52.82 ft, Date: 4/9/2019



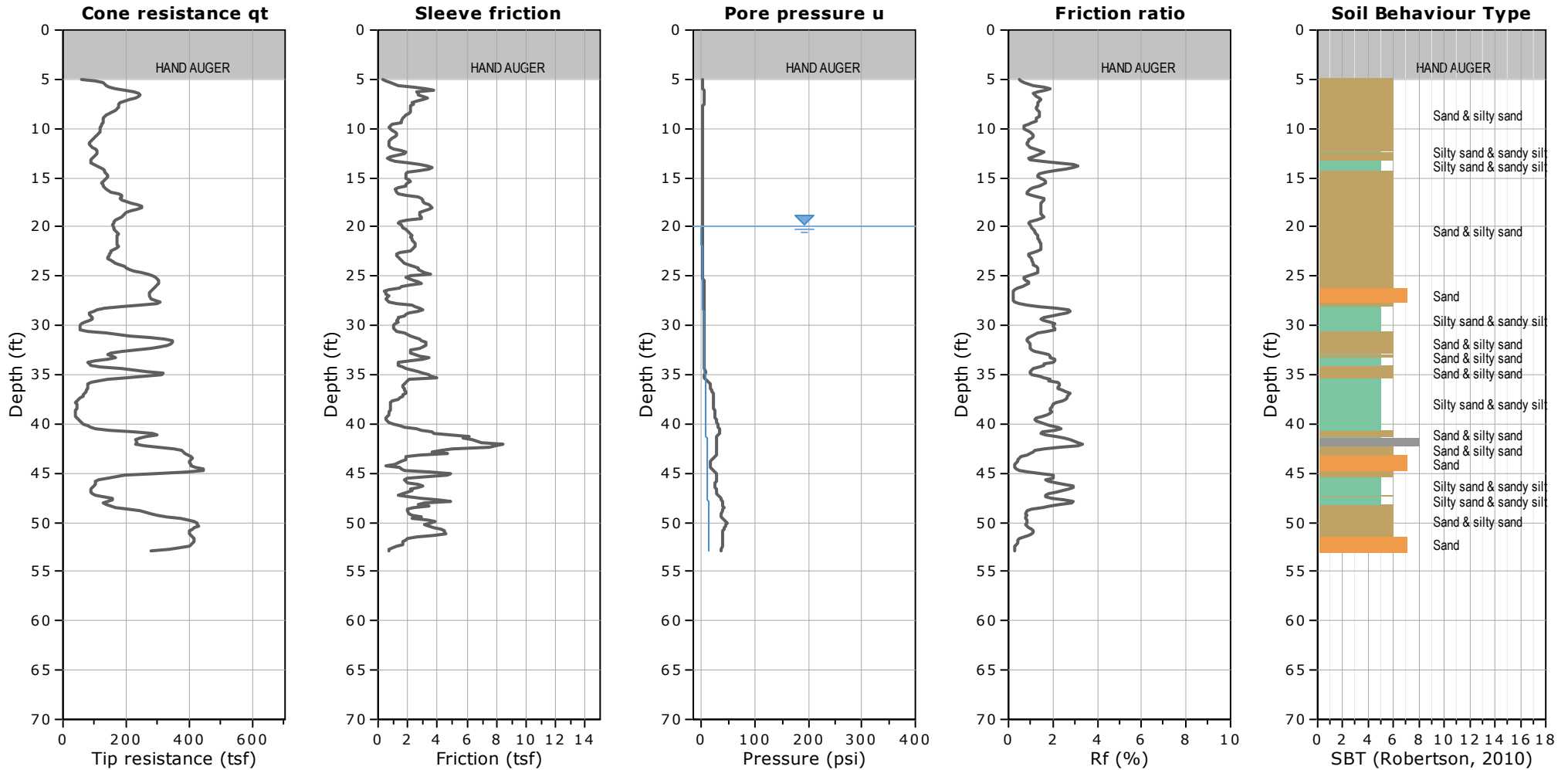
SBTn legend

- | | | |
|---------------------------|------------------------------|-----------------------------------|
| 1. Sensitive fine grained | 4. Clayey silt to silty clay | 7. Gravely sand to sand |
| 2. Organic material | 5. Silty sand to sandy silt | 8. Very stiff sand to clayey sand |
| 3. Clay to silty clay | 6. Clean sand to silty sand | 9. Very stiff fine grained |



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 52.82 ft, Date: 4/9/2019



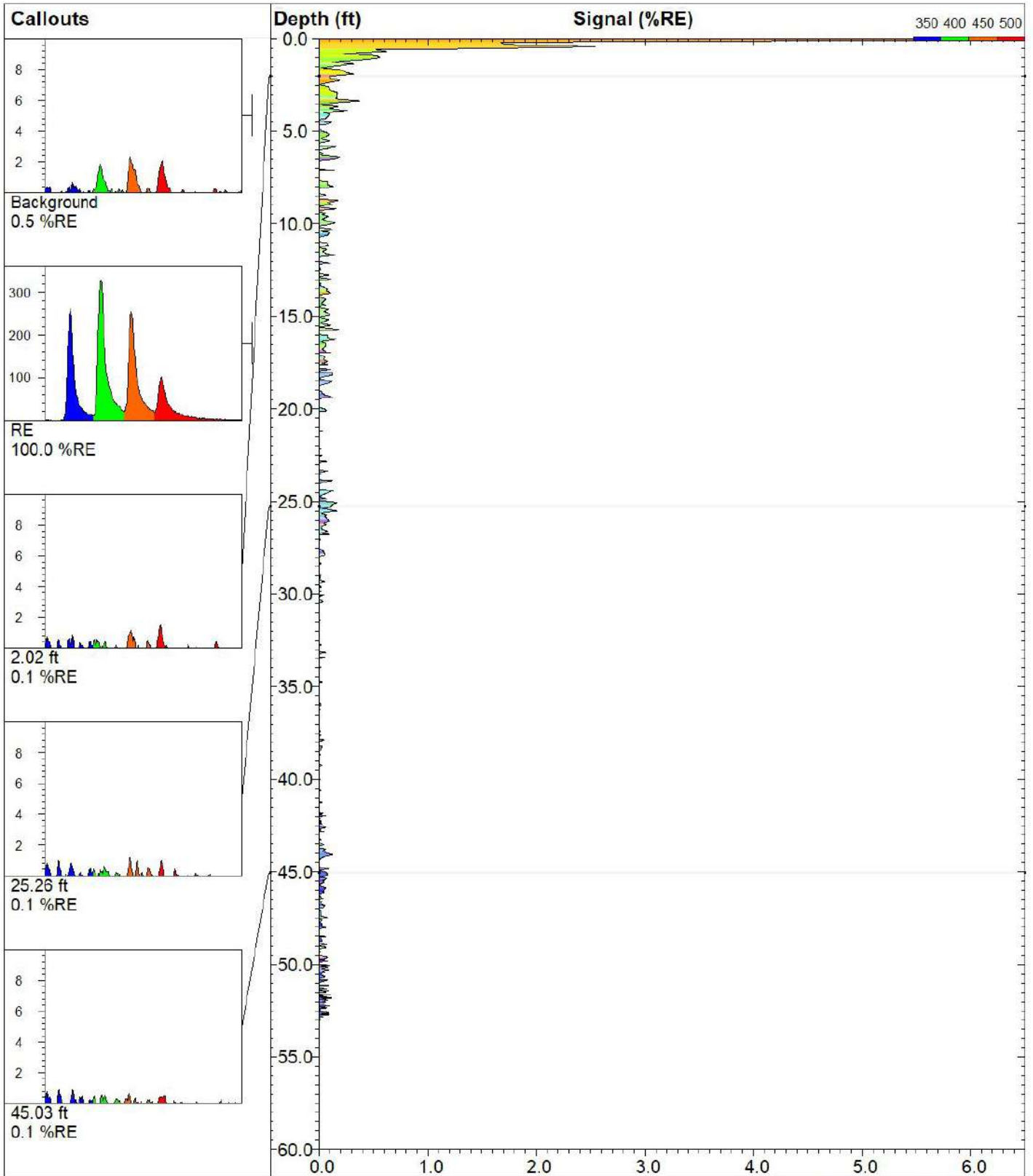
SBTn legend

- | | | |
|---------------------------|------------------------------|-----------------------------------|
| 1. Sensitive fine grained | 4. Clayey silt to silty clay | 7. Gravely sand to sand |
| 2. Organic material | 5. Silty sand to sandy silt | 8. Very stiff sand to clayey sand |
| 3. Clay to silty clay | 6. Clean sand to silty sand | 9. Very stiff fine grained |

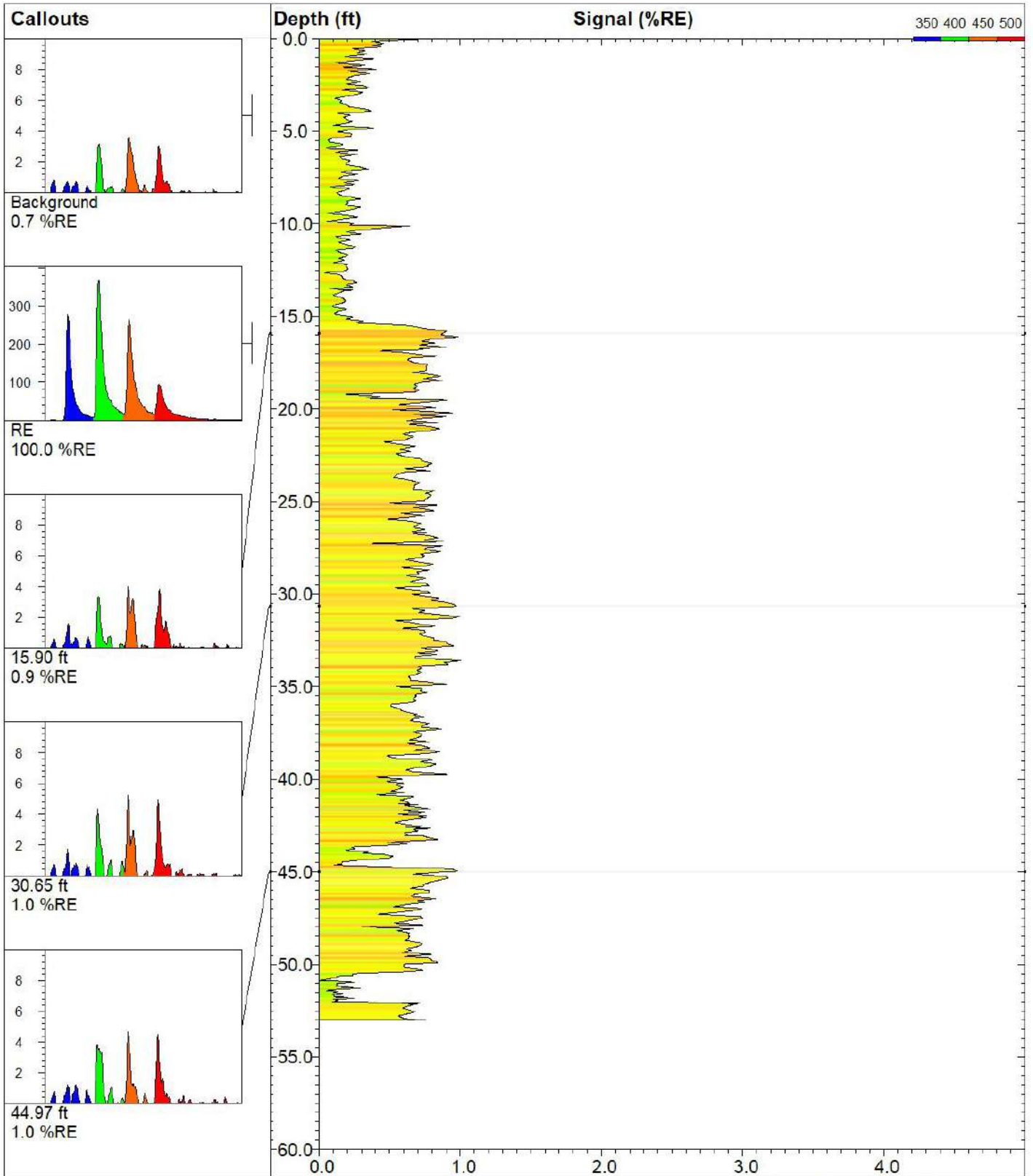
WATER TABLE FOR ESTIMATING PURPOSES ONLY



UVOST BORINGS
(AUTO SCALE)



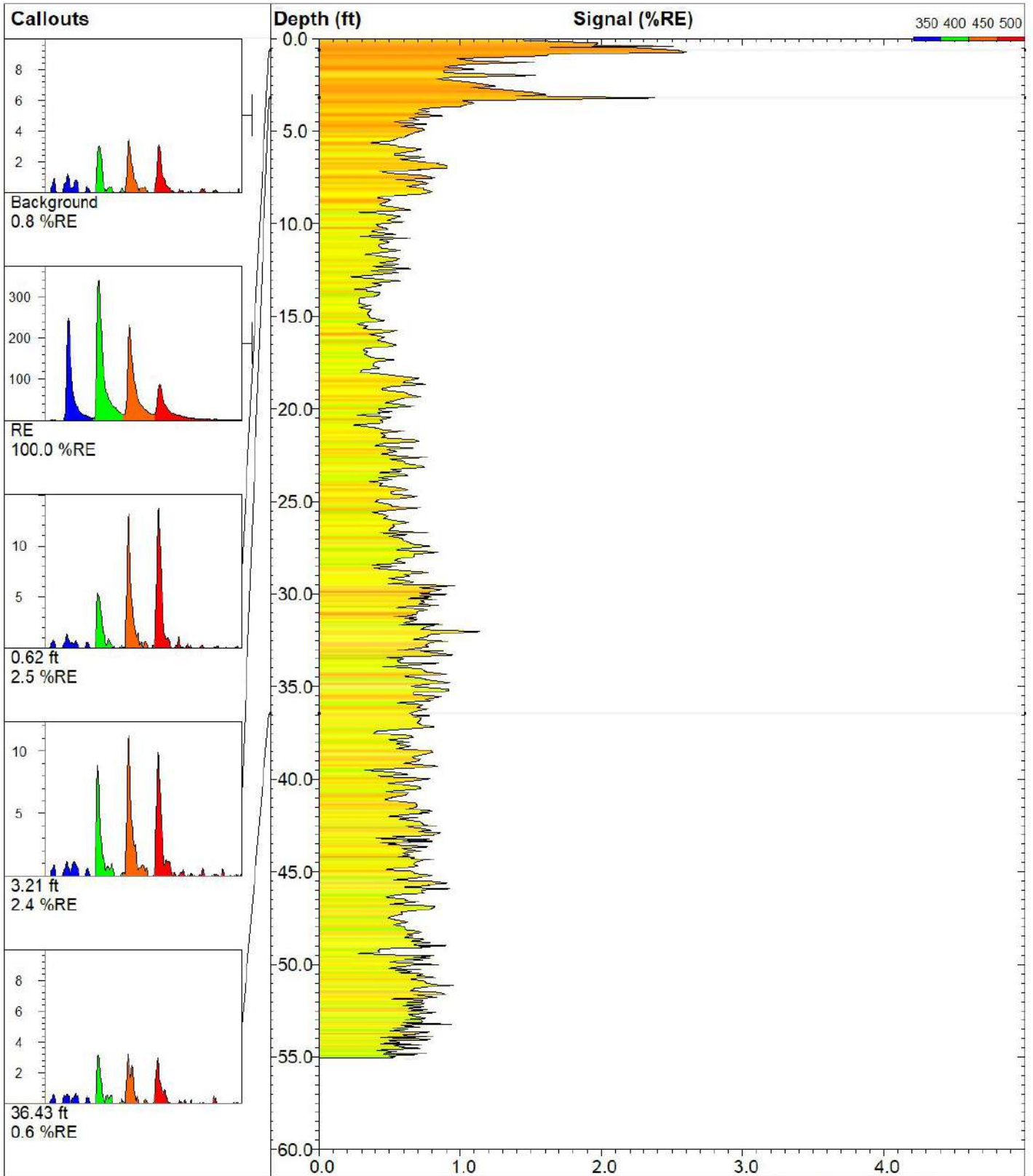
UV-CPT-01		UVOST® By Dakota www.DakotaTechnologies.com
Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 53.01 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 5.9 %RE @ 0.09 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 07:37 PDT



UV-CPT-02

UVOST® By Dakota
www.DakotaTechnologies.com

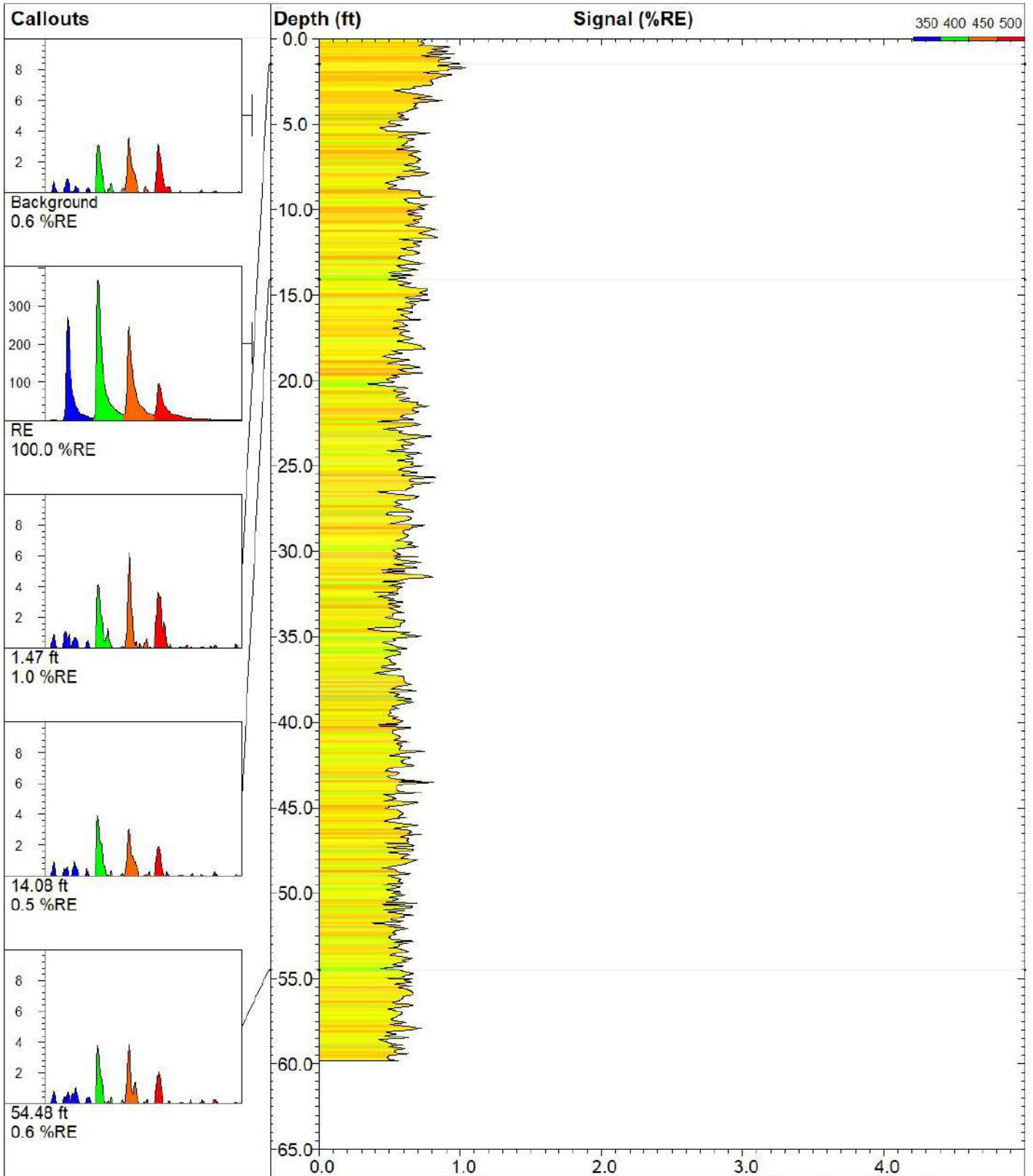
Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 53.02 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 1.0 %RE @ 33.58 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 09:31 PDT



UV-CPT-03

UVOST® By Dakota
www.DakotaTechnologies.com

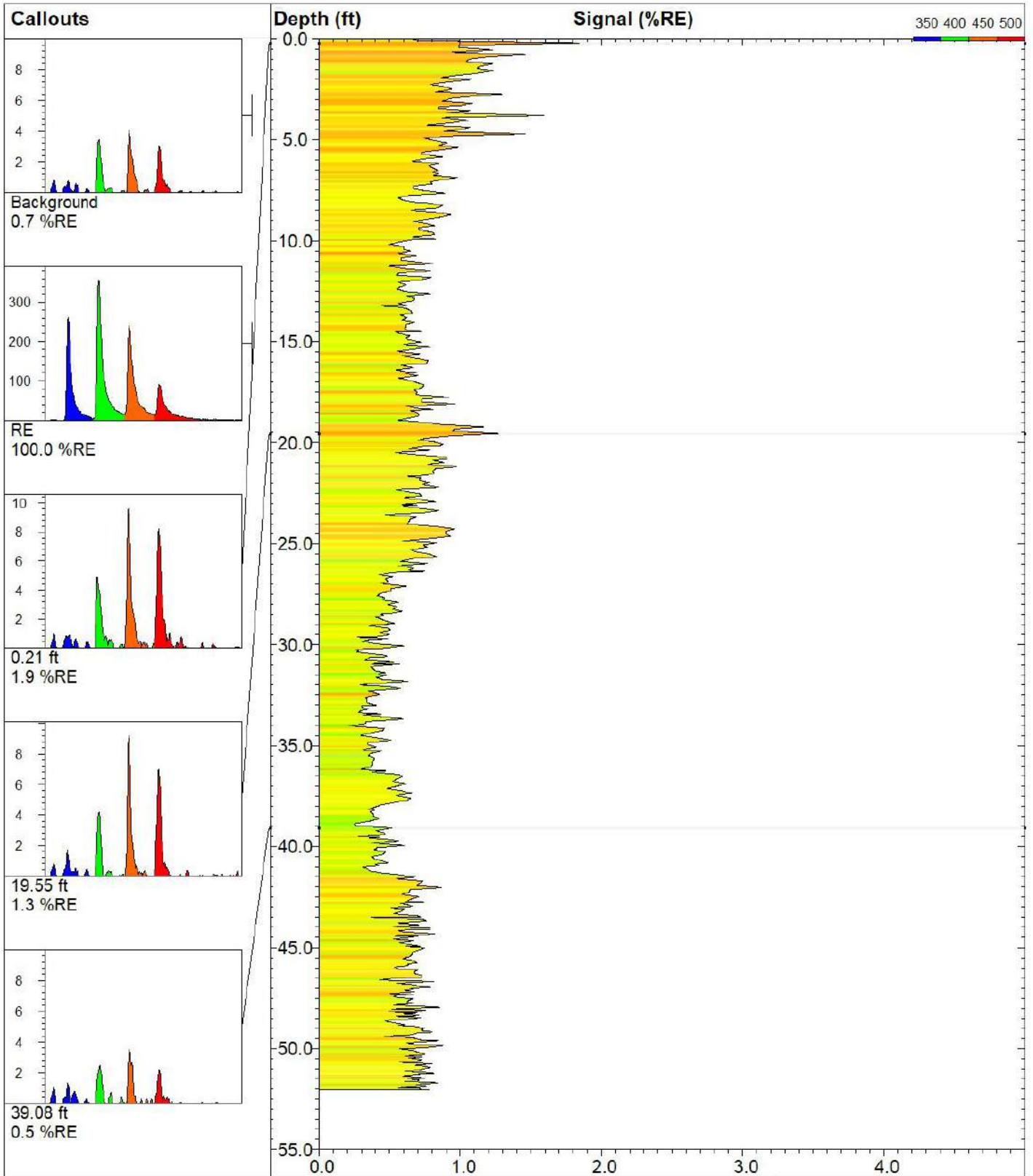
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Client / Job: CALIFORNIA ENV. / UV-D1	X Coord. (Lng-E) / Fix: Unavailable / NA	Max signal: 2.6 %RE @ 0.72 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 10:52 PDT



UV-CPT-04

UVOST® By Dakota
www.DakotaTechnologies.com

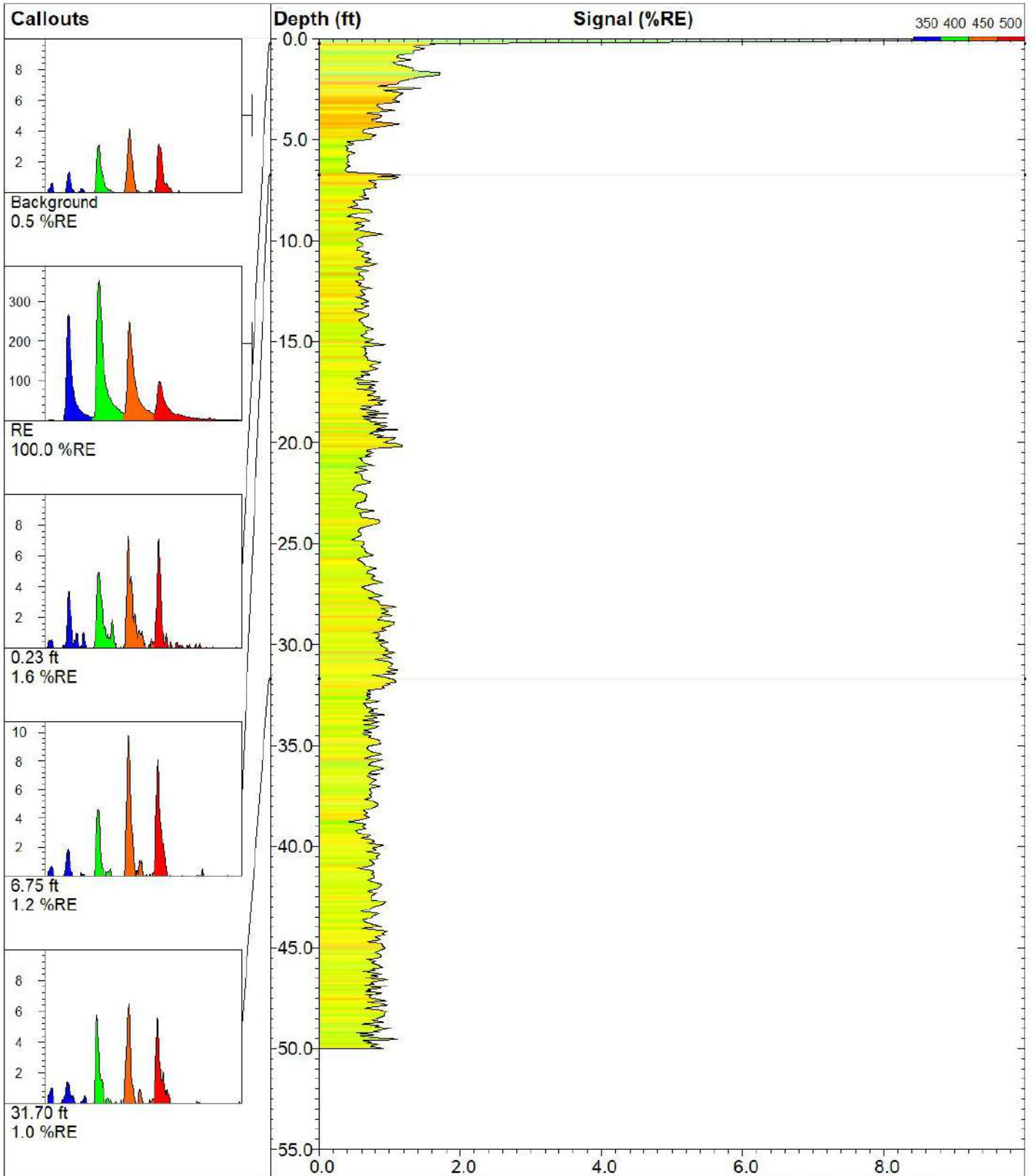
Site: OIL OPERATORS	Y Coord. (Lat-N) / System: Unavailable / NA	Final depth: 59.80 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord. (Lng-E) / Fix: Unavailable / NA	Max signal: 1.0 %RE @ 1.70 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 13:01 PDT



UV-CPT-05

UVOST® By Dakota
www.DakotaTechnologies.com

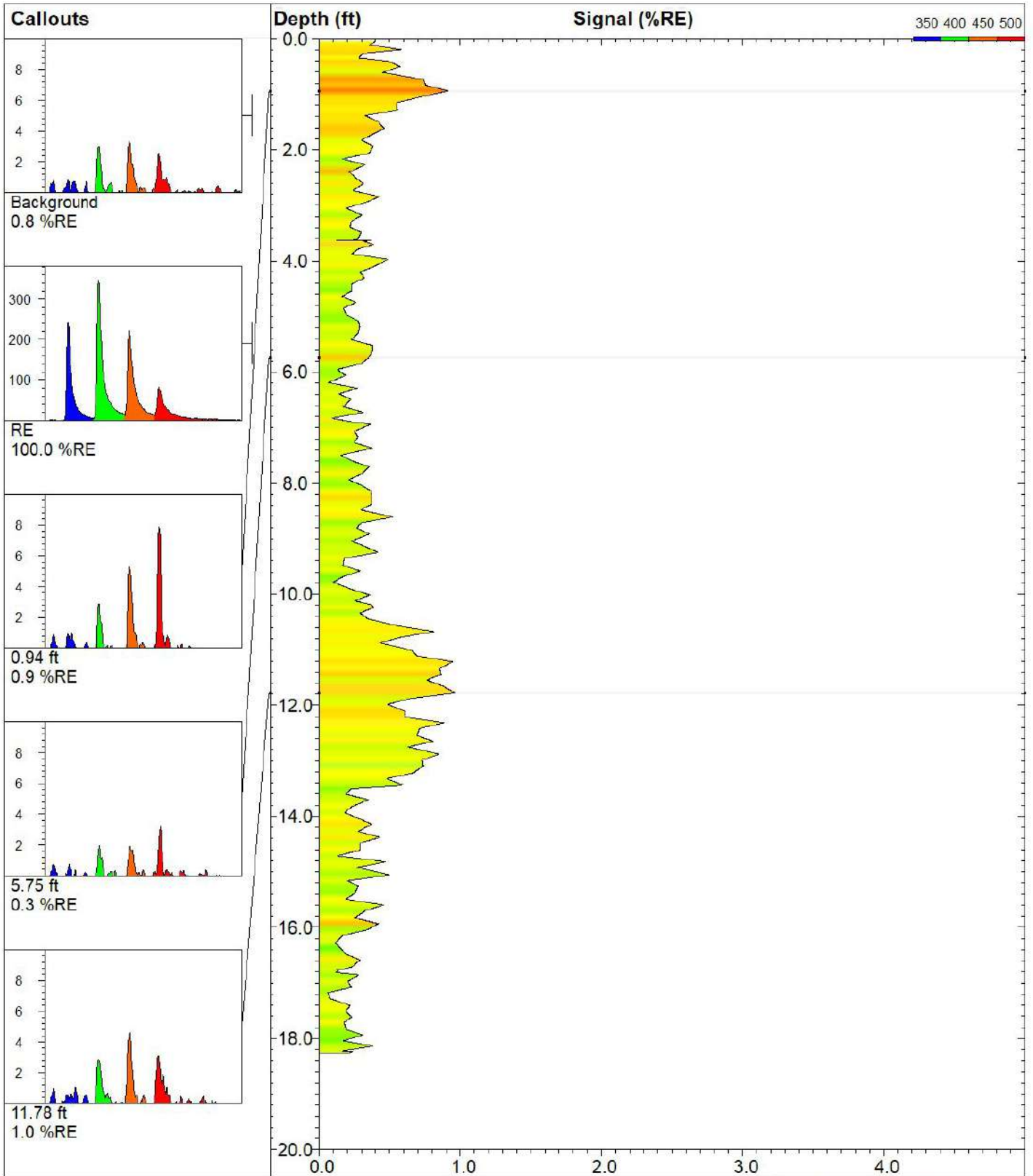
Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 52.05 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 1.9 %RE @ 0.21 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 14:39 PDT



UV-CPT-06

UVOST® By Dakota
www.DakotaTechnologies.com

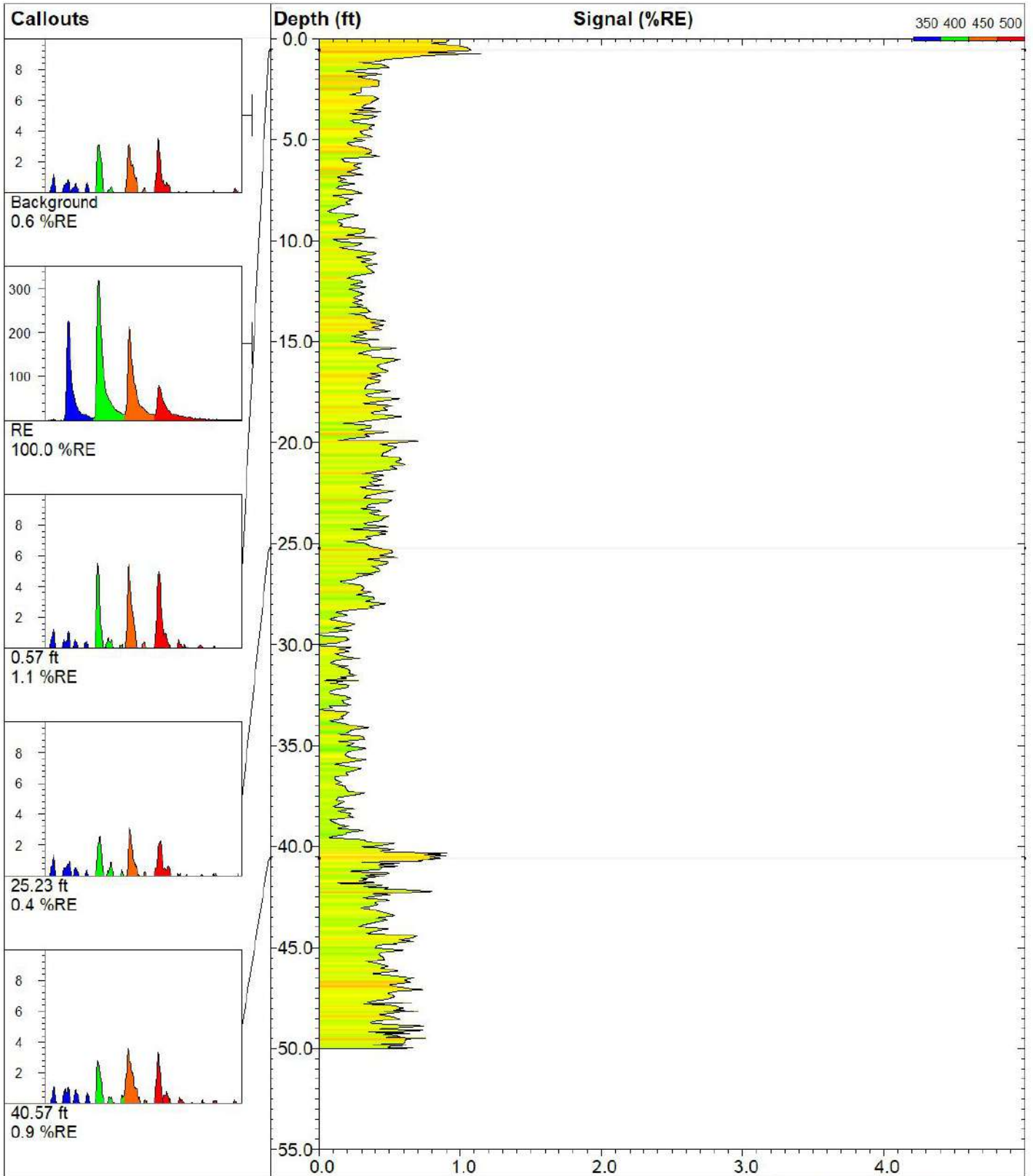
Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 50.00 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 8.6 %RE @ 0.10 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-09 07:27 PDT



UV-CPT-07

UVOST® By Dakota
www.DakotaTechnologies.com

Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 18.26 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 1.0 %RE @ 11.78 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-09 08:57 PDT



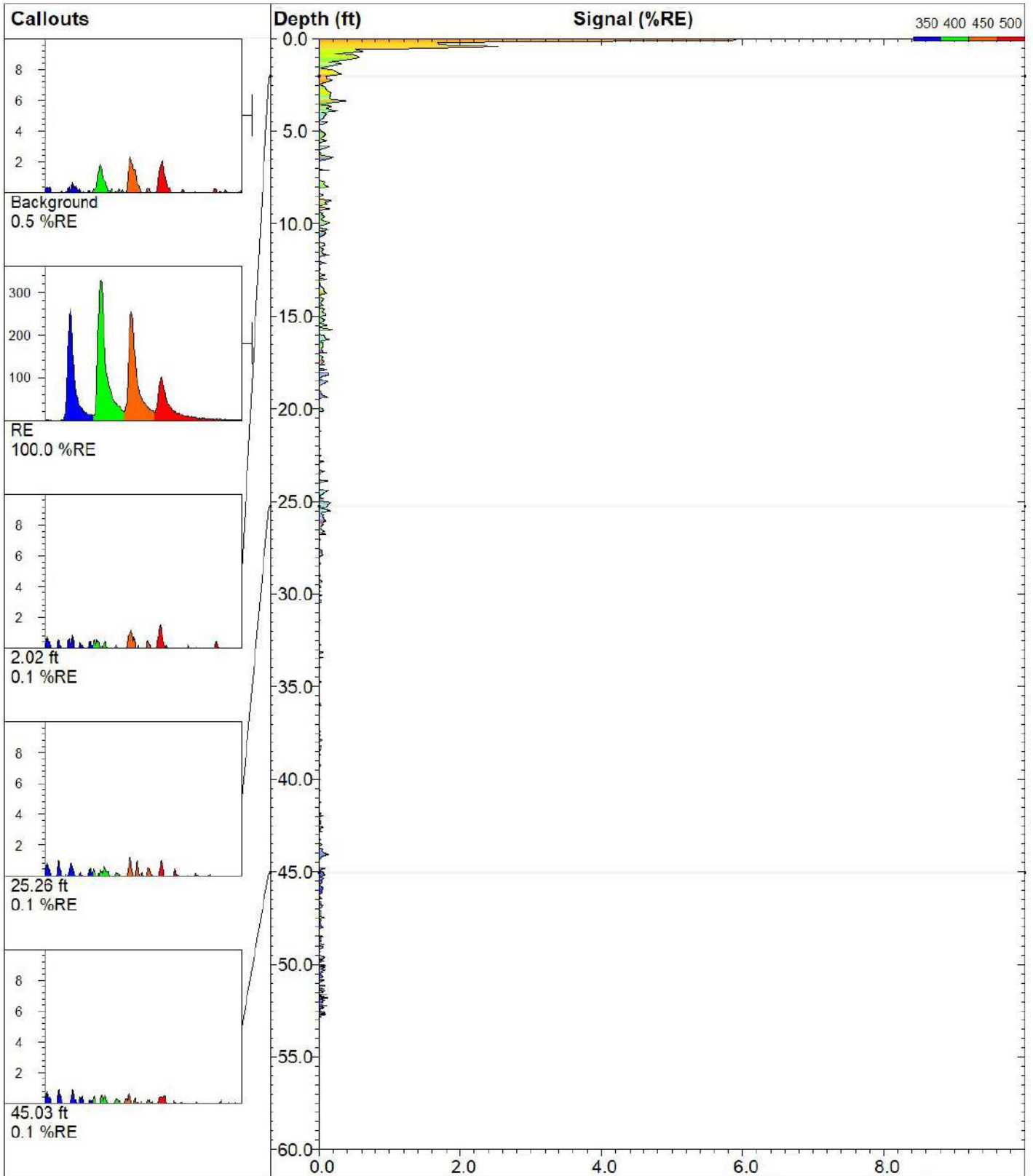
UV-CPT-08

UVOST® By Dakota
www.DakotaTechnologies.com

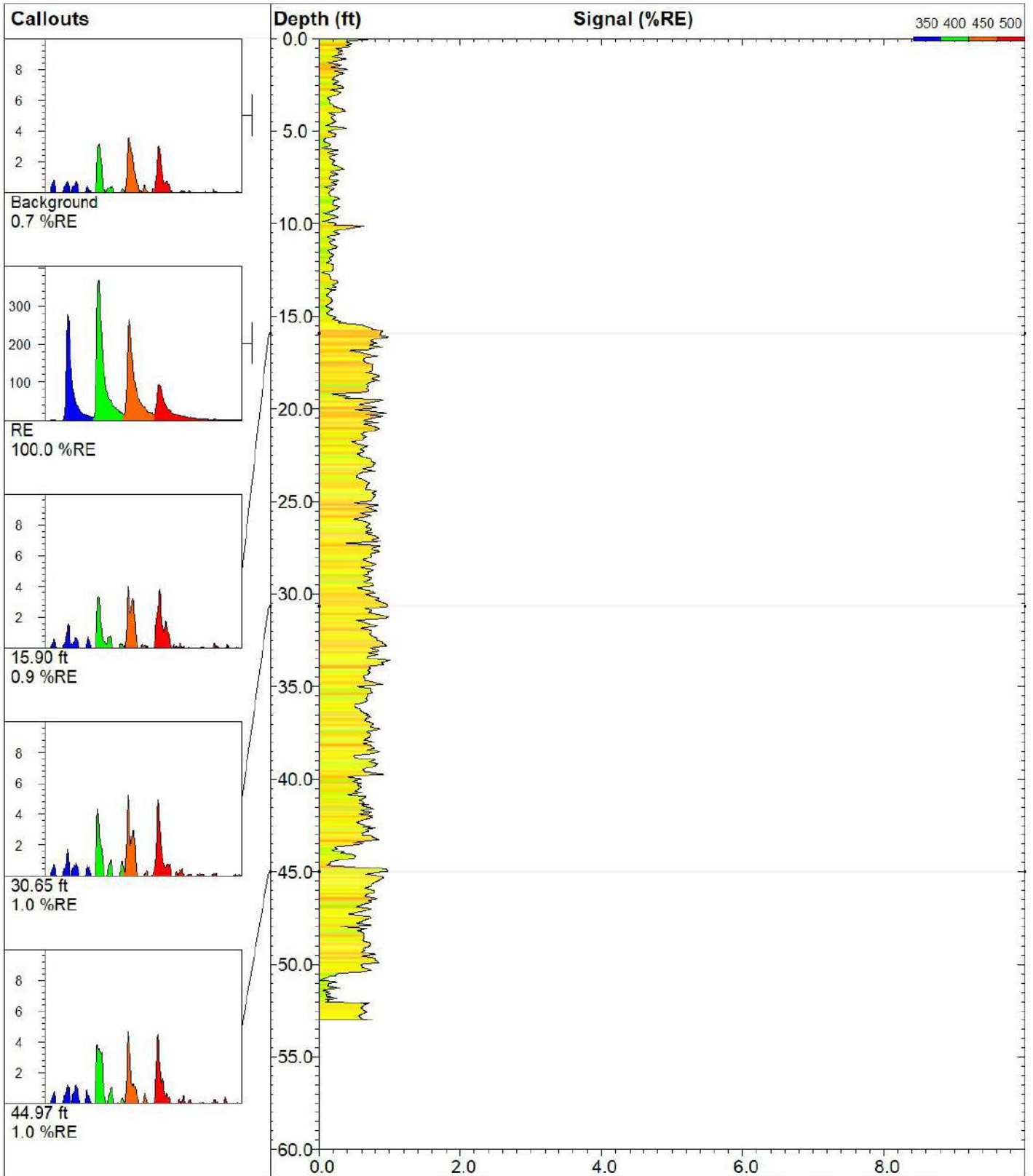
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Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 1.2 %RE @ 0.74 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-09 09:46 PDT



UVOST BORINGS
(NORMALIZED SCALE)



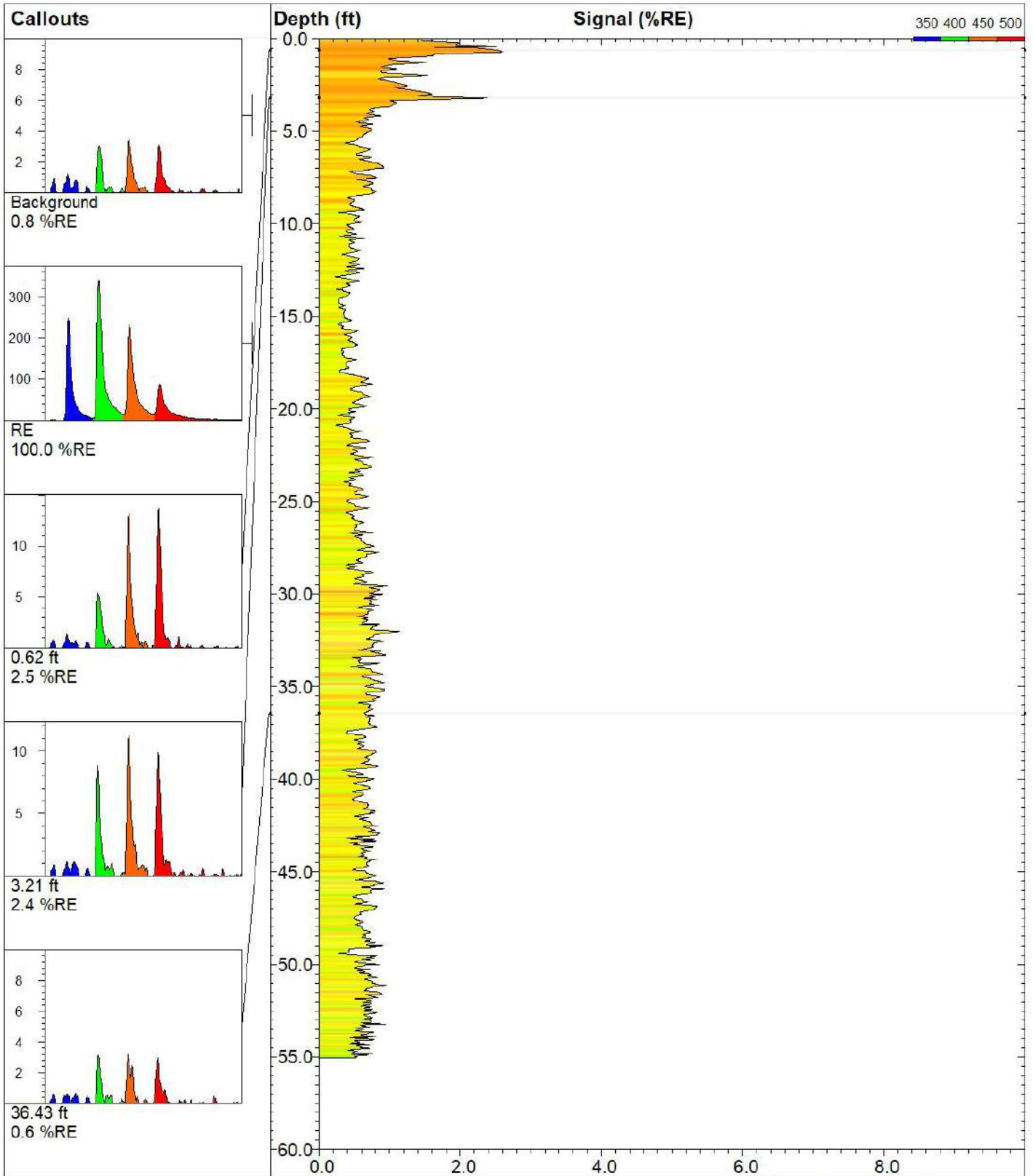
UV-CPT-01		UVOST® By Dakota www.DakotaTechnologies.com
Site: OIL OPERATORS	Y Coord. (Lat-N) / System: Unavailable / NA	Final depth: 53.01 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord. (Lng-E) / Fix: Unavailable / NA	Max signal: 5.9 %RE @ 0.09 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 07:37 PDT



UV-CPT-02

UVOST® By Dakota
www.DakotaTechnologies.com

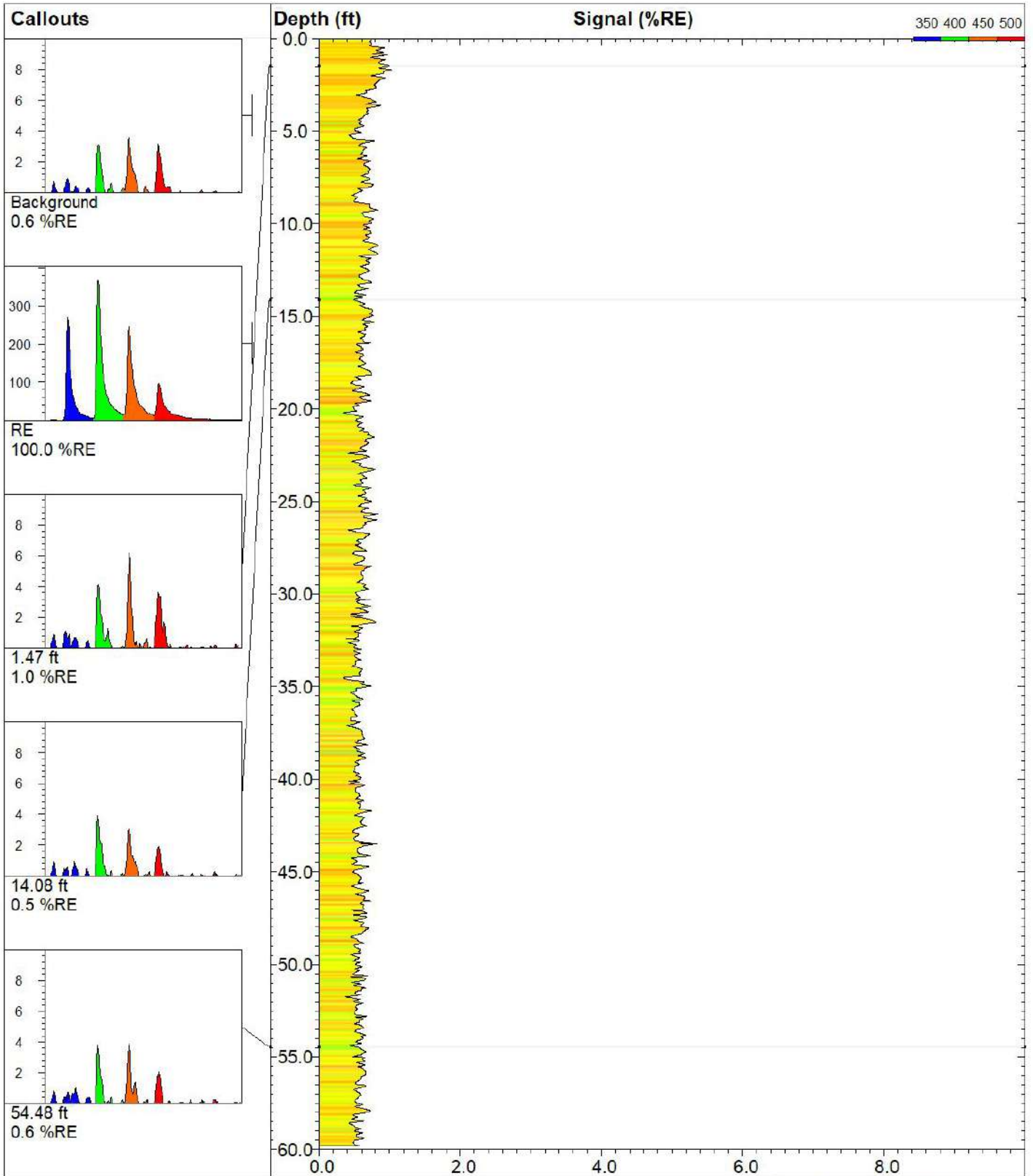
Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 53.02 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 1.0 %RE @ 33.58 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 09:31 PDT



UV-CPT-03

UVOST® By Dakota
www.DakotaTechnologies.com

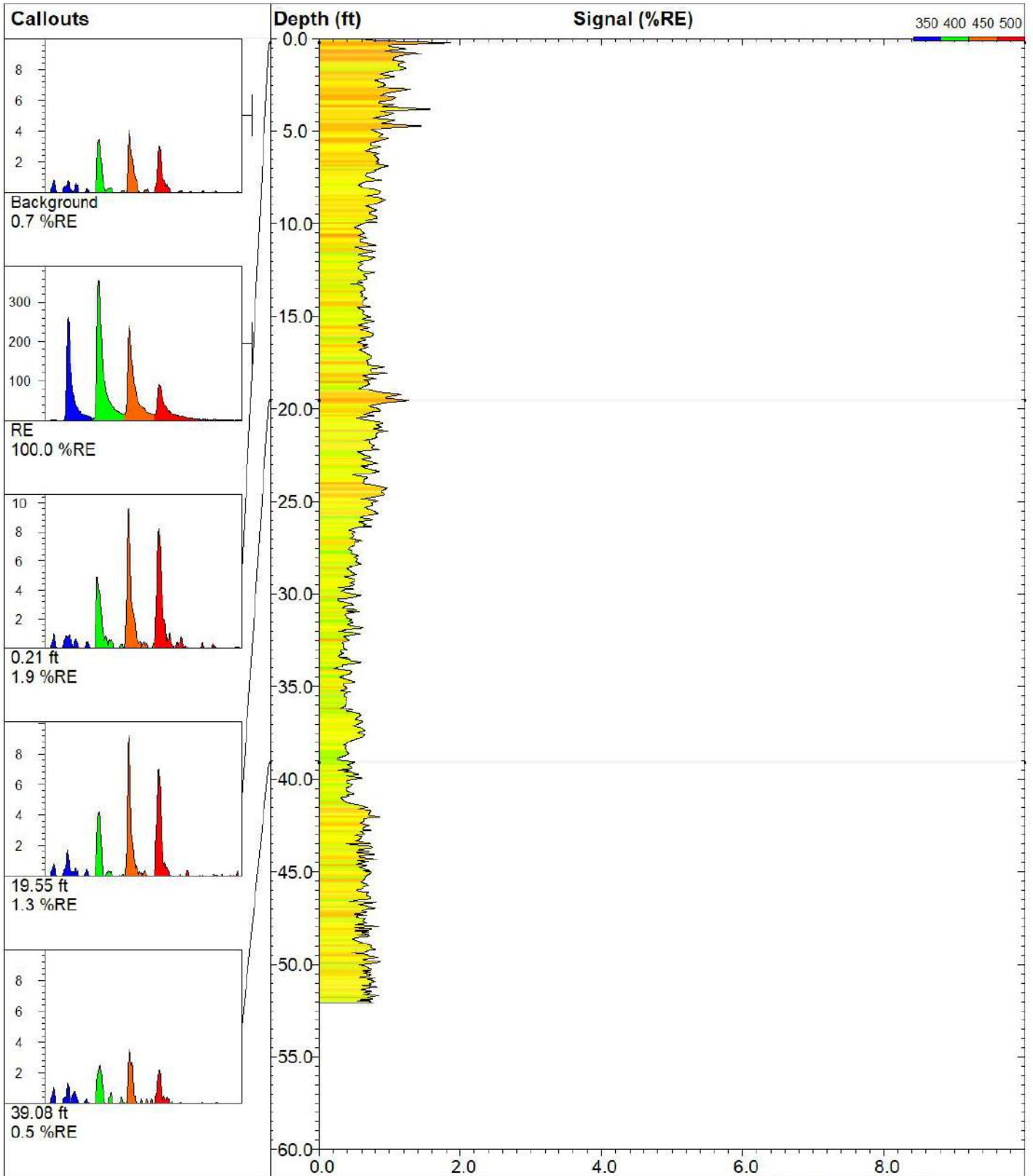
Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 55.06 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 2.6 %RE @ 0.72 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 10:52 PDT



UV-CPT-04

UVOST® By Dakota
www.DakotaTechnologies.com

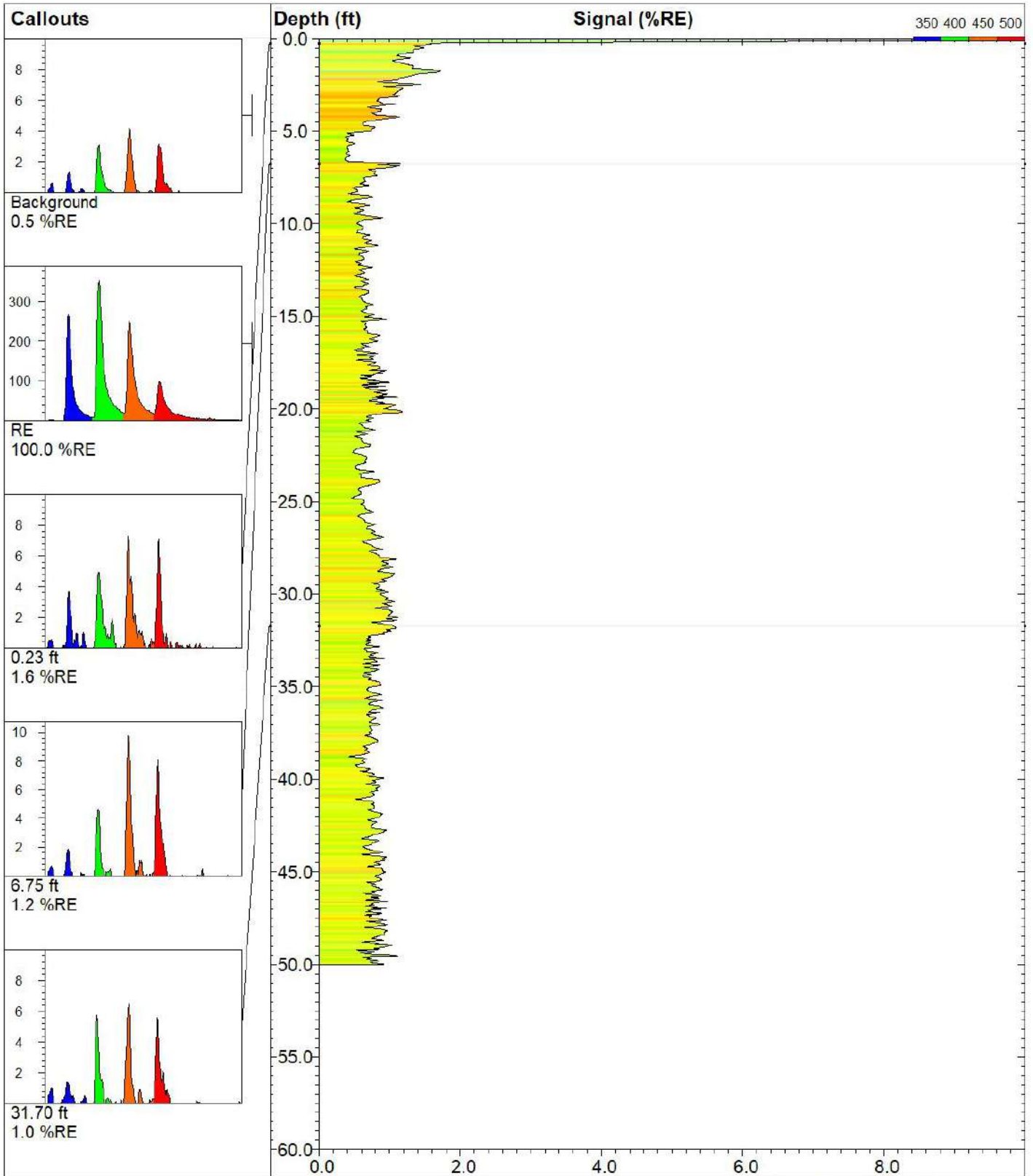
Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 59.80 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 1.0 %RE @ 1.70 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 13:01 PDT



UV-CPT-05

UVOST® By Dakota
www.DakotaTechnologies.com

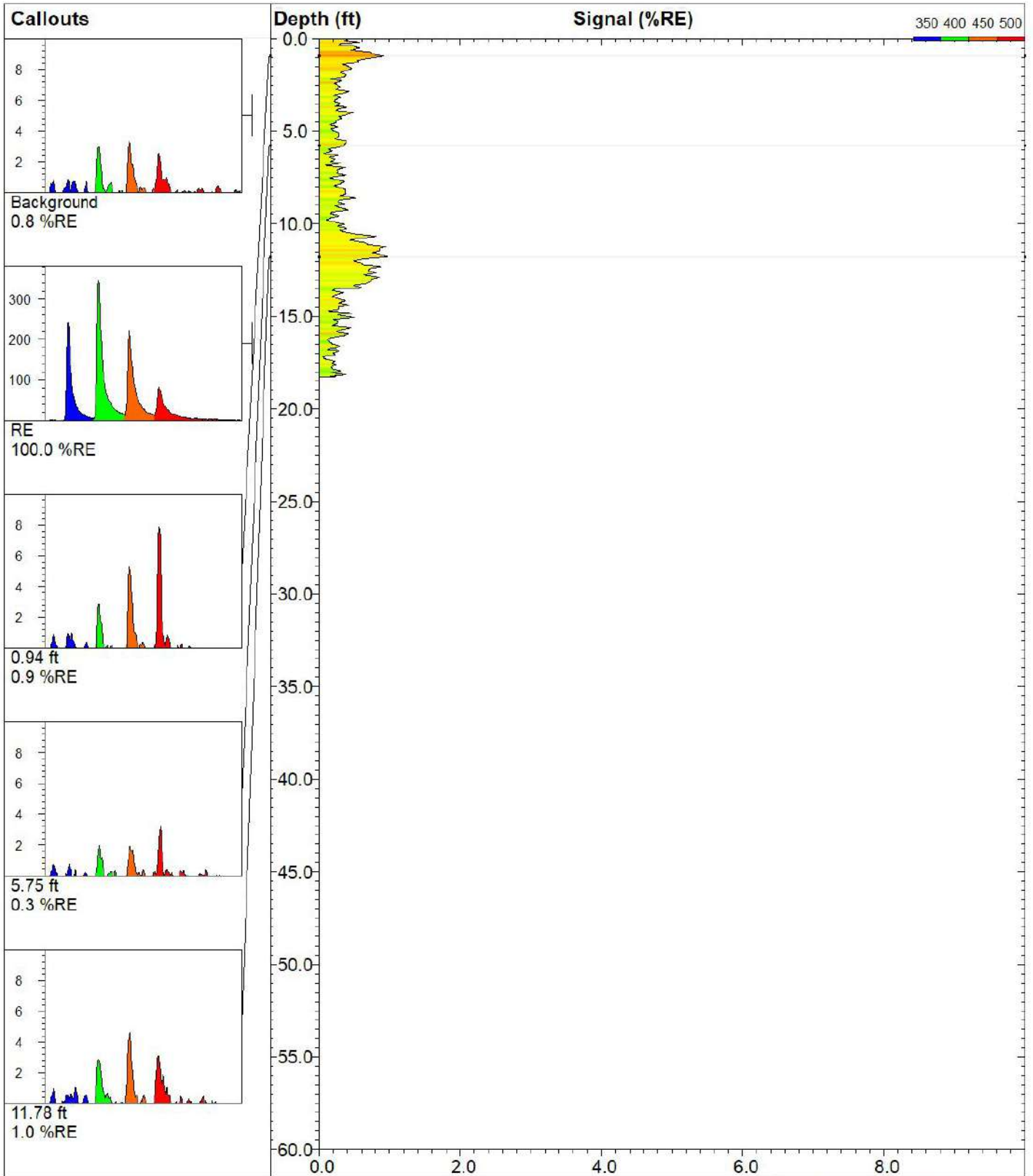
Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 52.05 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 1.9 %RE @ 0.21 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 14:39 PDT



UV-CPT-06

UVOST® By Dakota
www.DakotaTechnologies.com

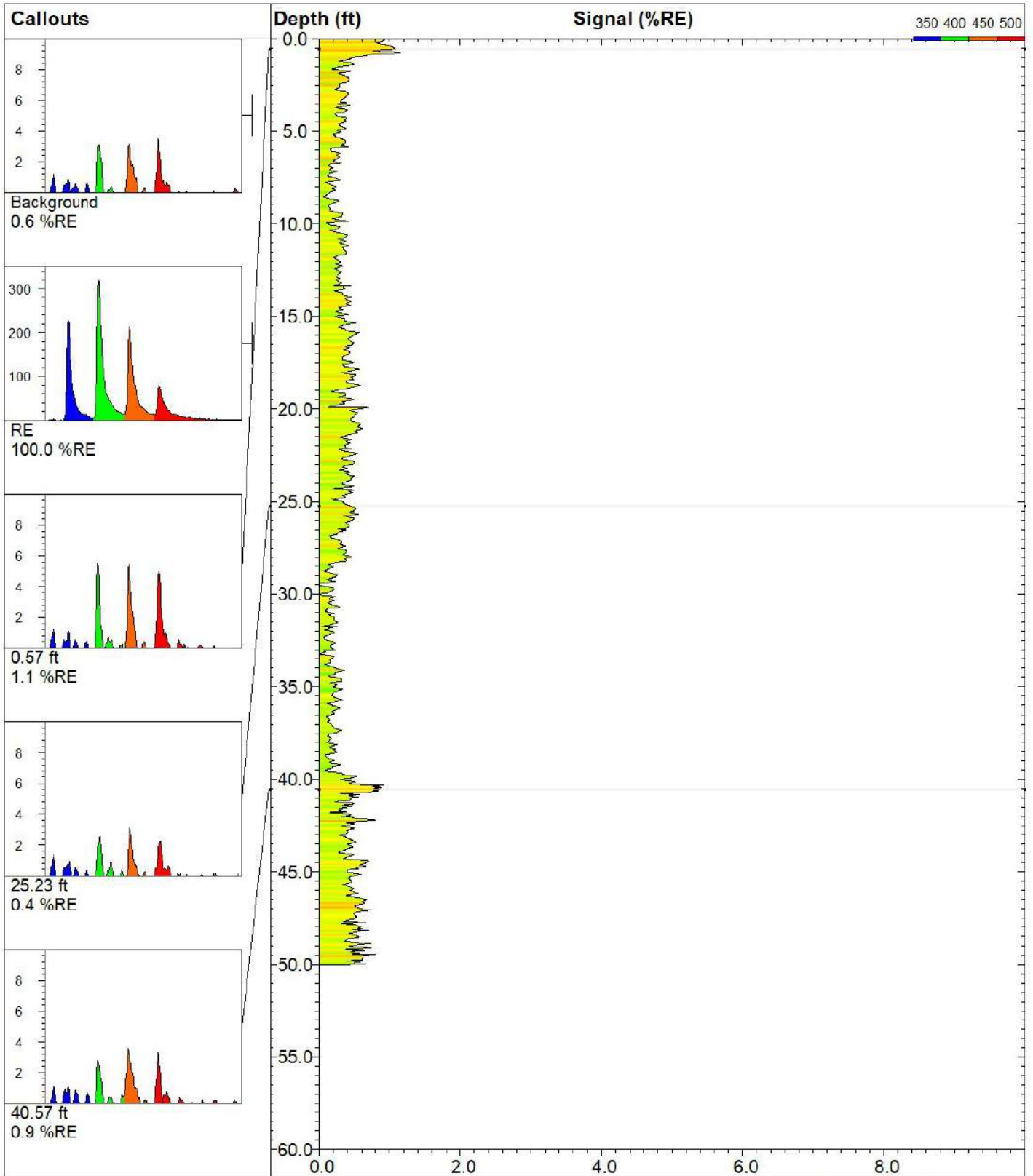
Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 50.00 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 8.6 %RE @ 0.10 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-09 07:27 PDT



UV-CPT-07

UVOST® By Dakota
www.DakotaTechnologies.com

Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 18.26 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 1.0 %RE @ 11.78 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-09 08:57 PDT



UV-CPT-08

UVOST® By Dakota
www.DakotaTechnologies.com

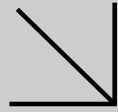
Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 50.00 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 1.2 %RE @ 0.74 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-09 09:46 PDT

APPENDIX IV

Laboratory Test Report

Supplemental Report 1

The original report has been revised/corrected.

**WORK ORDER NUMBER: 19-06-1669***The difference is service*

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For**Client:** California Environmental**Client Project Name:** OOI
Attention: Charles Buckley
 30423 Canwood St.
 Suite 208
 Agoura Hills, CA 91301-4316

 Approved for release on 07/08/2019 by:
 Don Burley
 Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: OOI
Work Order Number: 19-06-1669

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 06/25/19. They were assigned to Work Order 19-06-1669.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-13A): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

The report has been revised to correct the sample IDs.

Sample Summary

Client: California Environmental	Work Order:	19-06-1669
30423 Canwood St., Suite 208	Project Name:	OOI
Agoura Hills, CA 91301-4316	PO Number:	3029
	Date/Time Received:	06/25/19 17:30
	Number of Containers:	87

Attn: Charles Buckley

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
CESB9-5.5'	19-06-1669-1	06/25/19 08:35	5	Solid
CESB9-10.5'	19-06-1669-2	06/25/19 08:43	5	Solid
CESB9-15.5'	19-06-1669-3	06/25/19 08:52	5	Solid
CESB9-20.5'	19-06-1669-4	06/25/19 09:04	5	Solid
CESB9-25.5'	19-06-1669-5	06/25/19 09:14	5	Solid
CESB9-32'	19-06-1669-6	06/25/19 09:27	5	Solid
CESB9-37.0'	19-06-1669-7	06/25/19 10:08	5	Solid
CESB9-35.5'	19-06-1669-8	06/25/19 10:18	4	Solid
CESB10-3'	19-06-1669-9	06/25/19 11:20	5	Solid
CESB10-10.5'	19-06-1669-10	06/25/19 11:40	5	Solid
CESB10-15.5'	19-06-1669-11	06/25/19 12:20	5	Solid
CESB10-20.5'	19-06-1669-12	06/25/19 12:38	5	Solid
CESB10-25.5'	19-06-1669-13	06/25/19 12:51	5	Solid
CESB10-30'	19-06-1669-14	06/25/19 13:01	4	Solid
CESB10-33'	19-06-1669-15	06/25/19 13:15	4	Solid
CESB10-35'	19-06-1669-16	06/25/19 13:40	3	Solid
CESB10-41'	19-06-1669-17	06/25/19 13:56	3	Solid
CESB10-43'	19-06-1669-18	06/25/19 14:06	3	Solid
CESB10-45'	19-06-1669-19	06/25/19 14:35	3	Solid
CESB9-GW	19-06-1669-20	06/25/19 15:20	3	Aqueous

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

Page 1 of 13

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-5.5'	19-06-1669-1-A	06/25/19 08:35	Solid	GC 49	06/26/19	06/27/19 19:26	190626B02

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	4.8	1.00	
C7	ND	4.8	1.00	
C8	ND	4.8	1.00	
C9-C10	ND	4.8	1.00	
C11-C12	ND	4.8	1.00	
C13-C14	ND	4.8	1.00	
C15-C16	ND	4.8	1.00	
C17-C18	ND	4.8	1.00	
C19-C20	ND	4.8	1.00	
C21-C22	ND	4.8	1.00	
C23-C24	ND	4.8	1.00	
C25-C28	ND	4.8	1.00	
C29-C32	ND	4.8	1.00	
C33-C36	ND	4.8	1.00	
C37-C40	ND	4.8	1.00	
C41-C44	ND	4.8	1.00	
C6-C44 Total	6.6	4.8	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	97	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

Page 2 of 13

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-10.5'	19-06-1669-2-A	06/25/19 08:43	Solid	GC 49	06/26/19	06/27/19 19:48	190626B02

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.1	1.00	
C7	ND	5.1	1.00	
C8	ND	5.1	1.00	
C9-C10	ND	5.1	1.00	
C11-C12	ND	5.1	1.00	
C13-C14	ND	5.1	1.00	
C15-C16	ND	5.1	1.00	
C17-C18	ND	5.1	1.00	
C19-C20	ND	5.1	1.00	
C21-C22	ND	5.1	1.00	
C23-C24	ND	5.1	1.00	
C25-C28	9.4	5.1	1.00	
C29-C32	13	5.1	1.00	
C33-C36	8.6	5.1	1.00	
C37-C40	7.9	5.1	1.00	
C41-C44	ND	5.1	1.00	
C6-C44 Total	55	5.1	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	96	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-15.5'	19-06-1669-3-A	06/25/19 08:52	Solid	GC 49	06/26/19	06/27/19 20:08	190626B02

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.2	1.00	
C7	ND	5.2	1.00	
C8	ND	5.2	1.00	
C9-C10	ND	5.2	1.00	
C11-C12	ND	5.2	1.00	
C13-C14	ND	5.2	1.00	
C15-C16	ND	5.2	1.00	
C17-C18	ND	5.2	1.00	
C19-C20	ND	5.2	1.00	
C21-C22	ND	5.2	1.00	
C23-C24	ND	5.2	1.00	
C25-C28	ND	5.2	1.00	
C29-C32	ND	5.2	1.00	
C33-C36	ND	5.2	1.00	
C37-C40	ND	5.2	1.00	
C41-C44	ND	5.2	1.00	
C6-C44 Total	ND	5.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	106	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

Page 4 of 13

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-20.5'	19-06-1669-4-A	06/25/19 09:04	Solid	GC 49	06/26/19	06/27/19 20:30	190626B02

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	4.8	1.00	
C7	ND	4.8	1.00	
C8	ND	4.8	1.00	
C9-C10	ND	4.8	1.00	
C11-C12	ND	4.8	1.00	
C13-C14	ND	4.8	1.00	
C15-C16	ND	4.8	1.00	
C17-C18	ND	4.8	1.00	
C19-C20	ND	4.8	1.00	
C21-C22	ND	4.8	1.00	
C23-C24	ND	4.8	1.00	
C25-C28	ND	4.8	1.00	
C29-C32	ND	4.8	1.00	
C33-C36	ND	4.8	1.00	
C37-C40	ND	4.8	1.00	
C41-C44	ND	4.8	1.00	
C6-C44 Total	11	4.8	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	97	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-25.5'	19-06-1669-5-A	06/25/19 09:14	Solid	GC 49	06/26/19	06/27/19 20:50	190626B02

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.1	1.00	
C7	ND	5.1	1.00	
C8	ND	5.1	1.00	
C9-C10	ND	5.1	1.00	
C11-C12	ND	5.1	1.00	
C13-C14	ND	5.1	1.00	
C15-C16	ND	5.1	1.00	
C17-C18	ND	5.1	1.00	
C19-C20	ND	5.1	1.00	
C21-C22	ND	5.1	1.00	
C23-C24	ND	5.1	1.00	
C25-C28	ND	5.1	1.00	
C29-C32	ND	5.1	1.00	
C33-C36	ND	5.1	1.00	
C37-C40	ND	5.1	1.00	
C41-C44	ND	5.1	1.00	
C6-C44 Total	ND	5.1	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	100	61-145	


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

Page 6 of 13

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-32'	19-06-1669-6-A	06/25/19 09:27	Solid	GC 49	06/26/19	06/27/19 21:12	190626B02

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	4.8	1.00	
C7	24	4.8	1.00	
C8	110	4.8	1.00	
C9-C10	420	4.8	1.00	
C11-C12	150	4.8	1.00	
C13-C14	ND	4.8	1.00	
C15-C16	ND	4.8	1.00	
C17-C18	ND	4.8	1.00	
C19-C20	4.9	4.8	1.00	
C21-C22	5.2	4.8	1.00	
C23-C24	ND	4.8	1.00	
C25-C28	ND	4.8	1.00	
C29-C32	ND	4.8	1.00	
C33-C36	ND	4.8	1.00	
C37-C40	ND	4.8	1.00	
C41-C44	ND	4.8	1.00	
C6-C44 Total	730	4.8	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	98	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-37.0'	19-06-1669-7-A	06/25/19 10:08	Solid	GC 49	06/26/19	06/27/19 21:32	190626B02

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	98	61-145		



Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-3'	19-06-1669-9-B	06/25/19 11:20	Solid	GC 49	06/26/19	06/27/19 21:54	190626B02

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.2	1.00	
C7	ND	5.2	1.00	
C8	ND	5.2	1.00	
C9-C10	ND	5.2	1.00	
C11-C12	ND	5.2	1.00	
C13-C14	ND	5.2	1.00	
C15-C16	ND	5.2	1.00	
C17-C18	ND	5.2	1.00	
C19-C20	ND	5.2	1.00	
C21-C22	ND	5.2	1.00	
C23-C24	ND	5.2	1.00	
C25-C28	ND	5.2	1.00	
C29-C32	ND	5.2	1.00	
C33-C36	ND	5.2	1.00	
C37-C40	ND	5.2	1.00	
C41-C44	ND	5.2	1.00	
C6-C44 Total	7.8	5.2	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	95	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-10.5'	19-06-1669-10-A	06/25/19 11:40	Solid	GC 49	06/26/19	06/28/19 09:58	190626B02

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	24	4.9	1.00	
C29-C32	47	4.9	1.00	
C33-C36	38	4.9	1.00	
C37-C40	27	4.9	1.00	
C41-C44	16	4.9	1.00	
C6-C44 Total	160	4.9	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	90	61-145		

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-15.5'	19-06-1669-11-A	06/25/19 12:20	Solid	GC 49	06/26/19	06/28/19 10:20	190626B02

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	6.1	5.0	1.00	
C23-C24	8.7	5.0	1.00	
C25-C28	51	5.0	1.00	
C29-C32	87	5.0	1.00	
C33-C36	63	5.0	1.00	
C37-C40	46	5.0	1.00	
C41-C44	17	5.0	1.00	
C6-C44 Total	280	5.0	1.00	
 <u>Surrogate</u>	 <u>Rec. (%)</u>	 <u>Control Limits</u>	 <u>Qualifiers</u>	
n-Octacosane	89	61-145		

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-20.5'	19-06-1669-12-A	06/25/19 12:38	Solid	GC 49	06/26/19	06/27/19 22:58	190626B02

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	9.7	5.0	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	78	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-25.5'	19-06-1669-13-A	06/25/19 12:51	Solid	GC 49	06/26/19	06/27/19 23:19	190626B02

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.8	1.00	
C7	ND	4.8	1.00	
C8	ND	4.8	1.00	
C9-C10	ND	4.8	1.00	
C11-C12	ND	4.8	1.00	
C13-C14	ND	4.8	1.00	
C15-C16	ND	4.8	1.00	
C17-C18	ND	4.8	1.00	
C19-C20	ND	4.8	1.00	
C21-C22	ND	4.8	1.00	
C23-C24	ND	4.8	1.00	
C25-C28	ND	4.8	1.00	
C29-C32	ND	4.8	1.00	
C33-C36	ND	4.8	1.00	
C37-C40	ND	4.8	1.00	
C41-C44	ND	4.8	1.00	
C6-C44 Total	ND	4.8	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	87	61-145	



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-15-490-3650	N/A	Solid	GC 49	06/26/19	06/26/19 12:28	190626B02

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	94	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 3050B
 Method: EPA 6010B
 Units: mg/kg

Project: OOI

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-5.5'	19-06-1669-1-A	06/25/19 08:35	Solid	ICP 8300	06/28/19	06/29/19 18:29	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		5.57		0.732		0.976	
Lead		1.97		0.488		0.976	
CESB9-10.5'	19-06-1669-2-A	06/25/19 08:43	Solid	ICP 8300	06/28/19	06/29/19 18:36	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		8.47		0.739		0.985	
Lead		3.91		0.493		0.985	
CESB9-15.5'	19-06-1669-3-A	06/25/19 08:52	Solid	ICP 8300	06/28/19	06/29/19 18:38	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		1.78		0.746		0.995	
Lead		2.16		0.498		0.995	
CESB9-20.5'	19-06-1669-4-A	06/25/19 09:04	Solid	ICP 8300	06/28/19	06/29/19 18:40	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		2.04		0.743		0.990	
Lead		3.79		0.495		0.990	
CESB9-25.5'	19-06-1669-5-A	06/25/19 09:14	Solid	ICP 8300	06/28/19	06/29/19 18:42	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		3.00		0.746		0.995	
Lead		1.14		0.498		0.995	
CESB9-32'	19-06-1669-6-A	06/25/19 09:27	Solid	ICP 8300	06/28/19	06/29/19 18:43	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		5.32		0.746		0.995	
Lead		2.54		0.498		0.995	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-37.0'	19-06-1669-7-A	06/25/19 10:08	Solid	ICP 8300	06/28/19	06/29/19 18:45	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		11.5		0.746		0.995	
Lead		3.57		0.498		0.995	
CESB10-3'	19-06-1669-9-A	06/25/19 11:20	Solid	ICP 8300	06/28/19	06/29/19 18:47	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.743		0.990	
Lead		3.02		0.495		0.990	
CESB10-10.5'	19-06-1669-10-A	06/25/19 11:40	Solid	ICP 8300	06/28/19	06/29/19 18:49	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.739		0.985	
Lead		2.11		0.493		0.985	
CESB10-15.5'	19-06-1669-11-A	06/25/19 12:20	Solid	ICP 8300	06/28/19	06/29/19 18:51	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		2.71		0.739		0.985	
Lead		1.82		0.493		0.985	
CESB10-20.5'	19-06-1669-12-A	06/25/19 12:38	Solid	ICP 8300	06/28/19	06/29/19 18:52	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		3.33		0.739		0.985	
Lead		1.20		0.493		0.985	
CESB10-25.5'	19-06-1669-13-A	06/25/19 12:51	Solid	ICP 8300	06/28/19	06/29/19 18:58	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		0.948		0.739		0.985	
Lead		0.827		0.493		0.985	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental	Date Received:	06/25/19
30423 Canwood St., Suite 208	Work Order:	19-06-1669
Agoura Hills, CA 91301-4316	Preparation:	EPA 3050B
	Method:	EPA 6010B
	Units:	mg/kg
Project: OOI		Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	097-01-002-28068	N/A	Solid	ICP 8300	06/28/19	07/01/19 21:31	190628L01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	ND	0.746	0.995	
Lead	ND	0.498	0.995	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-GW	19-06-1669-20-C	06/25/19 15:20	Aqueous	GC/MS PP	07/01/19	07/02/19 02:55	190701L020

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	100	5.00	
Benzene	200	2.5	5.00	
Bromobenzene	ND	5.0	5.00	
Bromochloromethane	ND	5.0	5.00	
Bromodichloromethane	ND	5.0	5.00	
Bromoform	ND	25	5.00	
Bromomethane	ND	250	5.00	
2-Butanone	ND	50	5.00	
n-Butylbenzene	23	5.0	5.00	
sec-Butylbenzene	17	5.0	5.00	
tert-Butylbenzene	ND	5.0	5.00	
Carbon Disulfide	ND	50	5.00	
Carbon Tetrachloride	ND	2.5	5.00	
Chlorobenzene	ND	5.0	5.00	
Chloroethane	ND	25	5.00	
Chloroform	ND	5.0	5.00	
Chloromethane	ND	50	5.00	
2-Chlorotoluene	ND	5.0	5.00	
4-Chlorotoluene	ND	5.0	5.00	
Dibromochloromethane	ND	5.0	5.00	
1,2-Dibromo-3-Chloropropane	ND	50	5.00	
1,2-Dibromoethane	ND	5.0	5.00	
Dibromomethane	ND	5.0	5.00	
1,2-Dichlorobenzene	ND	5.0	5.00	
1,3-Dichlorobenzene	ND	5.0	5.00	
1,4-Dichlorobenzene	ND	5.0	5.00	
Dichlorodifluoromethane	ND	5.0	5.00	
1,1-Dichloroethane	ND	5.0	5.00	
1,2-Dichloroethane	ND	2.5	5.00	
1,1-Dichloroethene	ND	5.0	5.00	
c-1,2-Dichloroethene	ND	5.0	5.00	
t-1,2-Dichloroethene	ND	5.0	5.00	
1,2-Dichloropropane	ND	5.0	5.00	
1,3-Dichloropropane	ND	5.0	5.00	
2,2-Dichloropropane	ND	5.0	5.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	5.0	5.00	
c-1,3-Dichloropropene	ND	2.5	5.00	
t-1,3-Dichloropropene	ND	2.5	5.00	
Ethylbenzene	720	5.0	5.00	
2-Hexanone	ND	50	5.00	
Isopropylbenzene	150	5.0	5.00	
p-Isopropyltoluene	45	5.0	5.00	
Methylene Chloride	ND	50	5.00	
4-Methyl-2-Pentanone	ND	50	5.00	
Naphthalene	84	50	5.00	
n-Propylbenzene	140	5.0	5.00	
Styrene	ND	5.0	5.00	
1,1,1,2-Tetrachloroethane	ND	5.0	5.00	
1,1,2,2-Tetrachloroethane	ND	5.0	5.00	
Tetrachloroethene	ND	5.0	5.00	
Toluene	13	5.0	5.00	
1,2,3-Trichlorobenzene	ND	5.0	5.00	
1,2,4-Trichlorobenzene	ND	5.0	5.00	
1,1,1-Trichloroethane	ND	5.0	5.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	5.00	
1,1,2-Trichloroethane	ND	5.0	5.00	
Trichloroethene	ND	5.0	5.00	
Trichlorofluoromethane	ND	50	5.00	
1,2,3-Trichloropropane	ND	25	5.00	
1,2,4-Trimethylbenzene	380	5.0	5.00	
1,3,5-Trimethylbenzene	22	5.0	5.00	
Vinyl Acetate	ND	50	5.00	
Vinyl Chloride	ND	2.5	5.00	
p/m-Xylene	340	5.0	5.00	
o-Xylene	110	5.0	5.00	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	5.00	
Tert-Butyl Alcohol (TBA)	ND	50	5.00	
Diisopropyl Ether (DIPE)	ND	10	5.00	
Ethyl-t-Butyl Ether (ETBE)	ND	10	5.00	
Tert-Amyl-Methyl Ether (TAME)	ND	10	5.00	
Ethanol	ND	500	5.00	
TPPH	16000	250	5.00	
Gasoline Range Organics	13000	250	5.00	
Gasoline Range Organics (C4-C12)	15000	250	5.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	96	78-126	
1,2-Dichloroethane-d4	90	75-135	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	96	80-120	
1,4-Bromofluorobenzene	104	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-8589	N/A	Aqueous	GC/MS PP	07/01/19	07/01/19 19:17	190701L020

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	ND	20	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	50	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	1.0	1.00	
1,3,5-Trimethylbenzene	ND	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	78-126	
1,2-Dichloroethane-d4	98	75-135	
Toluene-d8	98	80-120	
Toluene-d8-TPPH	94	80-120	
1,4-Bromofluorobenzene	99	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-5.5'	19-06-1669-1-D	06/25/19 08:35	Solid	GC/MS OO	06/25/19	07/02/19 19:56	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	47	40	1.00	
Benzene	ND	0.81	1.00	
Bromobenzene	ND	0.81	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.81	1.00	
Bromoform	ND	4.0	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.81	1.00	
sec-Butylbenzene	ND	0.81	1.00	
tert-Butylbenzene	ND	0.81	1.00	
Carbon Disulfide	ND	8.1	1.00	
Carbon Tetrachloride	ND	0.81	1.00	
Chlorobenzene	ND	0.81	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.81	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.81	1.00	
4-Chlorotoluene	ND	0.81	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.0	1.00	
1,2-Dibromoethane	ND	0.81	1.00	
Dibromomethane	ND	0.81	1.00	
1,2-Dichlorobenzene	ND	0.81	1.00	
1,3-Dichlorobenzene	ND	0.81	1.00	
1,4-Dichlorobenzene	ND	0.81	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.81	1.00	
1,2-Dichloroethane	ND	0.81	1.00	
1,1-Dichloroethene	ND	0.81	1.00	
c-1,2-Dichloroethene	ND	0.81	1.00	
t-1,2-Dichloroethene	ND	0.81	1.00	
1,2-Dichloropropane	ND	0.81	1.00	
1,3-Dichloropropane	ND	0.81	1.00	
2,2-Dichloropropane	ND	4.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.81	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.81	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.81	1.00	
p-Isopropyltoluene	ND	0.81	1.00	
Methylene Chloride	ND	8.1	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	8.1	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.81	1.00	
1,1,1,2-Tetrachloroethane	ND	0.81	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.81	1.00	
Toluene	ND	0.81	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.81	1.00	
1,1,2-Trichloroethane	ND	0.81	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.1	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	8.1	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	8.1	1.00	
Vinyl Chloride	ND	0.81	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.81	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.81	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.81	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.81	1.00	
Ethanol	ND	400	1.00	
TPPH	ND	40	1.00	
Gasoline Range Organics (C4-C12)	ND	40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	105	79-139	
1,2-Dichloroethane-d4	117	71-155	
1,4-Bromofluorobenzene	100	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-10.5'	19-06-1669-2-D	06/25/19 08:43	Solid	GC/MS OO	06/25/19	07/02/19 20:26	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	58	40	1.00	
Benzene	ND	0.79	1.00	
Bromobenzene	ND	0.79	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.79	1.00	
Bromoform	ND	4.0	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.79	1.00	
sec-Butylbenzene	ND	0.79	1.00	
tert-Butylbenzene	ND	0.79	1.00	
Carbon Disulfide	ND	7.9	1.00	
Carbon Tetrachloride	ND	0.79	1.00	
Chlorobenzene	ND	0.79	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.79	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.79	1.00	
4-Chlorotoluene	ND	0.79	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.0	1.00	
1,2-Dibromoethane	ND	0.79	1.00	
Dibromomethane	ND	0.79	1.00	
1,2-Dichlorobenzene	ND	0.79	1.00	
1,3-Dichlorobenzene	ND	0.79	1.00	
1,4-Dichlorobenzene	ND	0.79	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.79	1.00	
1,2-Dichloroethane	ND	0.79	1.00	
1,1-Dichloroethene	ND	0.79	1.00	
c-1,2-Dichloroethene	ND	0.79	1.00	
t-1,2-Dichloroethene	ND	0.79	1.00	
1,2-Dichloropropane	ND	0.79	1.00	
1,3-Dichloropropane	ND	0.79	1.00	
2,2-Dichloropropane	ND	4.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.79	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.79	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.79	1.00	
p-Isopropyltoluene	ND	0.79	1.00	
Methylene Chloride	ND	7.9	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	7.9	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.79	1.00	
1,1,1,2-Tetrachloroethane	ND	0.79	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.79	1.00	
Toluene	ND	0.79	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.79	1.00	
1,1,2-Trichloroethane	ND	0.79	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.9	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	7.9	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	7.9	1.00	
Vinyl Chloride	ND	0.79	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.79	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.79	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.79	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.79	1.00	
Ethanol	ND	400	1.00	
TPPH	ND	40	1.00	
Gasoline Range Organics (C4-C12)	ND	40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	108	79-139	
1,2-Dichloroethane-d4	118	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-15.5'	19-06-1669-3-D	06/25/19 08:52	Solid	GC/MS OO	06/25/19	07/02/19 20:55	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	43	1.00	
Benzene	ND	0.86	1.00	
Bromobenzene	ND	0.86	1.00	
Bromochloromethane	ND	1.7	1.00	
Bromodichloromethane	ND	0.86	1.00	
Bromoform	ND	4.3	1.00	
Bromomethane	ND	17	1.00	
2-Butanone	ND	17	1.00	
n-Butylbenzene	ND	0.86	1.00	
sec-Butylbenzene	ND	0.86	1.00	
tert-Butylbenzene	ND	0.86	1.00	
Carbon Disulfide	ND	8.6	1.00	
Carbon Tetrachloride	ND	0.86	1.00	
Chlorobenzene	ND	0.86	1.00	
Chloroethane	ND	1.7	1.00	
Chloroform	ND	0.86	1.00	
Chloromethane	ND	17	1.00	
2-Chlorotoluene	ND	0.86	1.00	
4-Chlorotoluene	ND	0.86	1.00	
Dibromochloromethane	ND	1.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.3	1.00	
1,2-Dibromoethane	ND	0.86	1.00	
Dibromomethane	ND	0.86	1.00	
1,2-Dichlorobenzene	ND	0.86	1.00	
1,3-Dichlorobenzene	ND	0.86	1.00	
1,4-Dichlorobenzene	ND	0.86	1.00	
Dichlorodifluoromethane	ND	1.7	1.00	
1,1-Dichloroethane	ND	0.86	1.00	
1,2-Dichloroethane	ND	0.86	1.00	
1,1-Dichloroethene	ND	0.86	1.00	
c-1,2-Dichloroethene	ND	0.86	1.00	
t-1,2-Dichloroethene	ND	0.86	1.00	
1,2-Dichloropropane	ND	0.86	1.00	
1,3-Dichloropropane	ND	0.86	1.00	
2,2-Dichloropropane	ND	4.3	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.7	1.00	
c-1,3-Dichloropropene	ND	0.86	1.00	
t-1,3-Dichloropropene	ND	1.7	1.00	
Ethylbenzene	ND	0.86	1.00	
2-Hexanone	ND	17	1.00	
Isopropylbenzene	ND	0.86	1.00	
p-Isopropyltoluene	ND	0.86	1.00	
Methylene Chloride	ND	8.6	1.00	
4-Methyl-2-Pentanone	ND	17	1.00	
Naphthalene	ND	8.6	1.00	
n-Propylbenzene	ND	1.7	1.00	
Styrene	ND	0.86	1.00	
1,1,1,2-Tetrachloroethane	ND	0.86	1.00	
1,1,2,2-Tetrachloroethane	ND	1.7	1.00	
Tetrachloroethene	ND	0.86	1.00	
Toluene	ND	0.86	1.00	
1,2,3-Trichlorobenzene	ND	1.7	1.00	
1,2,4-Trichlorobenzene	ND	1.7	1.00	
1,1,1-Trichloroethane	ND	0.86	1.00	
1,1,2-Trichloroethane	ND	0.86	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.6	1.00	
Trichloroethene	ND	1.7	1.00	
Trichlorofluoromethane	ND	8.6	1.00	
1,2,3-Trichloropropane	ND	1.7	1.00	
1,2,4-Trimethylbenzene	ND	1.7	1.00	
1,3,5-Trimethylbenzene	ND	1.7	1.00	
Vinyl Acetate	ND	8.6	1.00	
Vinyl Chloride	ND	0.86	1.00	
p/m-Xylene	ND	1.7	1.00	
o-Xylene	ND	0.86	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.7	1.00	
Tert-Butyl Alcohol (TBA)	ND	17	1.00	
Diisopropyl Ether (DIPE)	ND	0.86	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.86	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.86	1.00	
Ethanol	ND	430	1.00	
TPPH	ND	43	1.00	
Gasoline Range Organics (C4-C12)	ND	43	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	106	79-139	
1,2-Dichloroethane-d4	115	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-20.5'	19-06-1669-4-D	06/25/19 09:04	Solid	GC/MS OO	06/25/19	07/02/19 21:25	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	47	1.00	
Benzene	ND	0.95	1.00	
Bromobenzene	ND	0.95	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.95	1.00	
Bromoform	ND	4.7	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.95	1.00	
sec-Butylbenzene	ND	0.95	1.00	
tert-Butylbenzene	ND	0.95	1.00	
Carbon Disulfide	ND	9.5	1.00	
Carbon Tetrachloride	ND	0.95	1.00	
Chlorobenzene	ND	0.95	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.95	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.95	1.00	
4-Chlorotoluene	ND	0.95	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.7	1.00	
1,2-Dibromoethane	ND	0.95	1.00	
Dibromomethane	ND	0.95	1.00	
1,2-Dichlorobenzene	ND	0.95	1.00	
1,3-Dichlorobenzene	ND	0.95	1.00	
1,4-Dichlorobenzene	ND	0.95	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.95	1.00	
1,2-Dichloroethane	ND	0.95	1.00	
1,1-Dichloroethene	ND	0.95	1.00	
c-1,2-Dichloroethene	ND	0.95	1.00	
t-1,2-Dichloroethene	ND	0.95	1.00	
1,2-Dichloropropane	ND	0.95	1.00	
1,3-Dichloropropane	ND	0.95	1.00	
2,2-Dichloropropane	ND	4.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.95	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.95	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.95	1.00	
p-Isopropyltoluene	ND	0.95	1.00	
Methylene Chloride	ND	9.5	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.5	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.95	1.00	
1,1,1,2-Tetrachloroethane	ND	0.95	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	ND	0.95	1.00	
Toluene	ND	0.95	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.95	1.00	
1,1,2-Trichloroethane	ND	0.95	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.5	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.5	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.5	1.00	
Vinyl Chloride	ND	0.95	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.95	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	
Tert-Butyl Alcohol (TBA)	ND	19	1.00	
Diisopropyl Ether (DIPE)	ND	0.95	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.95	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.95	1.00	
Ethanol	ND	470	1.00	
TPPH	ND	47	1.00	
Gasoline Range Organics (C4-C12)	ND	47	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	104	79-139	
1,2-Dichloroethane-d4	116	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-25.5'	19-06-1669-5-D	06/25/19 09:14	Solid	GC/MS OO	06/25/19	07/02/19 21:54	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	51	1.00	
Benzene	1.6	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.1	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.1	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.1	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	510	1.00	
TPPH	ND	51	1.00	
Gasoline Range Organics (C4-C12)	ND	51	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	108	79-139	
1,2-Dichloroethane-d4	116	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-32'	19-06-1669-6-F	06/25/19 09:27	Solid	GC/MS OO	06/25/19	07/04/19 09:04	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	25000	500	
Benzene	ND	500	500	
Bromobenzene	ND	500	500	
Bromochloromethane	ND	1000	500	
Bromodichloromethane	ND	500	500	
Bromoform	ND	2500	500	
Bromomethane	ND	10000	500	
2-Butanone	ND	10000	500	
n-Butylbenzene	2100	500	500	
sec-Butylbenzene	920	500	500	
tert-Butylbenzene	ND	500	500	
Carbon Disulfide	ND	5000	500	
Carbon Tetrachloride	ND	500	500	
Chlorobenzene	ND	500	500	
Chloroethane	ND	1000	500	
Chloroform	ND	500	500	
Chloromethane	ND	10000	500	
2-Chlorotoluene	ND	500	500	
4-Chlorotoluene	ND	500	500	
Dibromochloromethane	ND	1000	500	
1,2-Dibromo-3-Chloropropane	ND	2500	500	
1,2-Dibromoethane	ND	500	500	
Dibromomethane	ND	500	500	
1,2-Dichlorobenzene	ND	500	500	
1,3-Dichlorobenzene	ND	500	500	
1,4-Dichlorobenzene	ND	500	500	
Dichlorodifluoromethane	ND	1000	500	
1,1-Dichloroethane	ND	500	500	
1,2-Dichloroethane	ND	500	500	
1,1-Dichloroethene	ND	500	500	
c-1,2-Dichloroethene	ND	500	500	
t-1,2-Dichloroethene	ND	500	500	
1,2-Dichloropropane	ND	500	500	
1,3-Dichloropropane	ND	500	500	
2,2-Dichloropropane	ND	2500	500	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1000	500	
c-1,3-Dichloropropene	ND	500	500	
t-1,3-Dichloropropene	ND	1000	500	
Ethylbenzene	3000	500	500	
2-Hexanone	ND	10000	500	
Isopropylbenzene	2000	500	500	
p-Isopropyltoluene	2600	500	500	
Methylene Chloride	ND	5000	500	
4-Methyl-2-Pentanone	ND	10000	500	
Naphthalene	ND	5000	500	
n-Propylbenzene	2600	1000	500	
Styrene	ND	500	500	
1,1,1,2-Tetrachloroethane	ND	500	500	
1,1,2,2-Tetrachloroethane	ND	1000	500	
Tetrachloroethene	ND	500	500	
Toluene	ND	500	500	
1,2,3-Trichlorobenzene	ND	1000	500	
1,2,4-Trichlorobenzene	ND	1000	500	
1,1,1-Trichloroethane	ND	500	500	
1,1,2-Trichloroethane	ND	500	500	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	5000	500	
Trichloroethene	ND	1000	500	
Trichlorofluoromethane	ND	5000	500	
1,2,3-Trichloropropane	ND	1000	500	
1,2,4-Trimethylbenzene	11000	1000	500	
1,3,5-Trimethylbenzene	2000	1000	500	
Vinyl Acetate	ND	5000	500	
Vinyl Chloride	ND	500	500	
p/m-Xylene	2500	1000	500	
o-Xylene	ND	500	500	
Methyl-t-Butyl Ether (MTBE)	ND	1000	500	
Tert-Butyl Alcohol (TBA)	ND	10000	500	
Diisopropyl Ether (DIPE)	ND	500	500	
Ethyl-t-Butyl Ether (ETBE)	ND	500	500	
Tert-Amyl-Methyl Ether (TAME)	ND	500	500	
Ethanol	ND	250000	500	
TPPH	1300000	25000	500	
Gasoline Range Organics (C4-C12)	1100000	25000	500	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	96	79-139	
1,2-Dichloroethane-d4	93	71-155	
1,4-Bromofluorobenzene	101	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-37.0'	19-06-1669-7-D	06/25/19 10:08	Solid	GC/MS OO	06/25/19	07/04/19 00:45	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	37	1.00	
Benzene	22	0.74	1.00	
Bromobenzene	ND	0.74	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.74	1.00	
Bromoform	ND	3.7	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	2.0	0.74	1.00	
sec-Butylbenzene	1.6	0.74	1.00	
tert-Butylbenzene	ND	0.74	1.00	
Carbon Disulfide	ND	7.4	1.00	
Carbon Tetrachloride	ND	0.74	1.00	
Chlorobenzene	ND	0.74	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.74	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.74	1.00	
4-Chlorotoluene	ND	0.74	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.7	1.00	
1,2-Dibromoethane	ND	0.74	1.00	
Dibromomethane	ND	0.74	1.00	
1,2-Dichlorobenzene	ND	0.74	1.00	
1,3-Dichlorobenzene	ND	0.74	1.00	
1,4-Dichlorobenzene	ND	0.74	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.74	1.00	
1,2-Dichloroethane	ND	0.74	1.00	
1,1-Dichloroethene	ND	0.74	1.00	
c-1,2-Dichloroethene	ND	0.74	1.00	
t-1,2-Dichloroethene	ND	0.74	1.00	
1,2-Dichloropropane	ND	0.74	1.00	
1,3-Dichloropropane	ND	0.74	1.00	
2,2-Dichloropropane	ND	3.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.74	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	52	0.74	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	13	0.74	1.00	
p-Isopropyltoluene	3.5	0.74	1.00	
Methylene Chloride	ND	7.4	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	11	7.4	1.00	
n-Propylbenzene	12	1.5	1.00	
Styrene	ND	0.74	1.00	
1,1,1,2-Tetrachloroethane	ND	0.74	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.74	1.00	
Toluene	ND	0.74	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.74	1.00	
1,1,2-Trichloroethane	ND	0.74	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.4	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.4	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	41	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.4	1.00	
Vinyl Chloride	ND	0.74	1.00	
p/m-Xylene	42	1.5	1.00	
o-Xylene	1.5	0.74	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.74	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.74	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.74	1.00	
Ethanol	ND	370	1.00	
TPPH	1700	37	1.00	
Gasoline Range Organics (C4-C12)	1500	37	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	107	71-155	
1,4-Bromofluorobenzene	102	80-120	
Toluene-d8	103	80-120	
Toluene-d8-TPPH	95	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-35.5'	19-06-1669-8-E	06/25/19 10:18	Solid	GC/MS OO	06/25/19	07/04/19 09:34	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	21000	500	
Benzene	ND	410	500	
Bromobenzene	ND	410	500	
Bromochloromethane	ND	820	500	
Bromodichloromethane	ND	410	500	
Bromoform	ND	2100	500	
Bromomethane	ND	8200	500	
2-Butanone	ND	8200	500	
n-Butylbenzene	2400	410	500	
sec-Butylbenzene	1300	410	500	
tert-Butylbenzene	ND	410	500	
Carbon Disulfide	ND	4100	500	
Carbon Tetrachloride	ND	410	500	
Chlorobenzene	ND	410	500	
Chloroethane	ND	820	500	
Chloroform	ND	410	500	
Chloromethane	ND	8200	500	
2-Chlorotoluene	ND	410	500	
4-Chlorotoluene	ND	410	500	
Dibromochloromethane	ND	820	500	
1,2-Dibromo-3-Chloropropane	ND	2100	500	
1,2-Dibromoethane	ND	410	500	
Dibromomethane	ND	410	500	
1,2-Dichlorobenzene	ND	410	500	
1,3-Dichlorobenzene	ND	410	500	
1,4-Dichlorobenzene	ND	410	500	
Dichlorodifluoromethane	ND	820	500	
1,1-Dichloroethane	ND	410	500	
1,2-Dichloroethane	ND	410	500	
1,1-Dichloroethene	ND	410	500	
c-1,2-Dichloroethene	ND	410	500	
t-1,2-Dichloroethene	ND	410	500	
1,2-Dichloropropane	ND	410	500	
1,3-Dichloropropane	ND	410	500	
2,2-Dichloropropane	ND	2100	500	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	820	500	
c-1,3-Dichloropropene	ND	410	500	
t-1,3-Dichloropropene	ND	820	500	
Ethylbenzene	5900	410	500	
2-Hexanone	ND	8200	500	
Isopropylbenzene	3500	410	500	
p-Isopropyltoluene	3400	410	500	
Methylene Chloride	ND	4100	500	
4-Methyl-2-Pentanone	ND	8200	500	
Naphthalene	ND	4100	500	
n-Propylbenzene	4100	820	500	
Styrene	ND	410	500	
1,1,1,2-Tetrachloroethane	ND	410	500	
1,1,2,2-Tetrachloroethane	ND	820	500	
Tetrachloroethene	ND	410	500	
Toluene	ND	410	500	
1,2,3-Trichlorobenzene	ND	820	500	
1,2,4-Trichlorobenzene	ND	820	500	
1,1,1-Trichloroethane	ND	410	500	
1,1,2-Trichloroethane	ND	410	500	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	4100	500	
Trichloroethene	ND	820	500	
Trichlorofluoromethane	ND	4100	500	
1,2,3-Trichloropropane	ND	820	500	
1,2,4-Trimethylbenzene	12000	820	500	
1,3,5-Trimethylbenzene	ND	820	500	
Vinyl Acetate	ND	4100	500	
Vinyl Chloride	ND	410	500	
p/m-Xylene	2800	820	500	
o-Xylene	620	410	500	
Methyl-t-Butyl Ether (MTBE)	ND	820	500	
Tert-Butyl Alcohol (TBA)	ND	8200	500	
Diisopropyl Ether (DIPE)	ND	410	500	
Ethyl-t-Butyl Ether (ETBE)	ND	410	500	
Tert-Amyl-Methyl Ether (TAME)	ND	410	500	
Ethanol	ND	210000	500	
TPPH	1600000	21000	500	
Gasoline Range Organics (C4-C12)	1400000	21000	500	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	92	79-139	
1,2-Dichloroethane-d4	92	71-155	
1,4-Bromofluorobenzene	105	80-120	
Toluene-d8	104	80-120	
Toluene-d8-TPPH	94	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-3'	19-06-1669-9-D	06/25/19 11:20	Solid	GC/MS OO	06/25/19	07/02/19 22:24	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	49	1.00	
Benzene	ND	0.98	1.00	
Bromobenzene	ND	0.98	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	0.98	1.00	
Bromoform	ND	4.9	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	0.98	1.00	
sec-Butylbenzene	ND	0.98	1.00	
tert-Butylbenzene	ND	0.98	1.00	
Carbon Disulfide	ND	9.8	1.00	
Carbon Tetrachloride	ND	0.98	1.00	
Chlorobenzene	ND	0.98	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	0.98	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	0.98	1.00	
4-Chlorotoluene	ND	0.98	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.9	1.00	
1,2-Dibromoethane	ND	0.98	1.00	
Dibromomethane	ND	0.98	1.00	
1,2-Dichlorobenzene	ND	0.98	1.00	
1,3-Dichlorobenzene	ND	0.98	1.00	
1,4-Dichlorobenzene	ND	0.98	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	0.98	1.00	
1,2-Dichloroethane	ND	0.98	1.00	
1,1-Dichloroethene	ND	0.98	1.00	
c-1,2-Dichloroethene	ND	0.98	1.00	
t-1,2-Dichloroethene	ND	0.98	1.00	
1,2-Dichloropropane	ND	0.98	1.00	
1,3-Dichloropropane	ND	0.98	1.00	
2,2-Dichloropropane	ND	4.9	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	0.98	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	0.98	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	0.98	1.00	
p-Isopropyltoluene	ND	0.98	1.00	
Methylene Chloride	ND	9.8	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	9.8	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	0.98	1.00	
1,1,1,2-Tetrachloroethane	ND	0.98	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	0.98	1.00	
Toluene	ND	0.98	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	0.98	1.00	
1,1,2-Trichloroethane	ND	0.98	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.8	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	9.8	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	9.8	1.00	
Vinyl Chloride	ND	0.98	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	0.98	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	0.98	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.98	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.98	1.00	
Ethanol	ND	490	1.00	
TPPH	ND	49	1.00	
Gasoline Range Organics (C4-C12)	ND	49	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	110	79-139	
1,2-Dichloroethane-d4	118	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-10.5'	19-06-1669-10-D	06/25/19 11:40	Solid	GC/MS OO	06/25/19	07/02/19 22:53	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	44	41	1.00	
Benzene	ND	0.82	1.00	
Bromobenzene	ND	0.82	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.82	1.00	
Bromoform	ND	4.1	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.82	1.00	
sec-Butylbenzene	ND	0.82	1.00	
tert-Butylbenzene	ND	0.82	1.00	
Carbon Disulfide	ND	8.2	1.00	
Carbon Tetrachloride	ND	0.82	1.00	
Chlorobenzene	ND	0.82	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.82	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.82	1.00	
4-Chlorotoluene	ND	0.82	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.1	1.00	
1,2-Dibromoethane	ND	0.82	1.00	
Dibromomethane	ND	0.82	1.00	
1,2-Dichlorobenzene	ND	0.82	1.00	
1,3-Dichlorobenzene	ND	0.82	1.00	
1,4-Dichlorobenzene	ND	0.82	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.82	1.00	
1,2-Dichloroethane	ND	0.82	1.00	
1,1-Dichloroethene	ND	0.82	1.00	
c-1,2-Dichloroethene	ND	0.82	1.00	
t-1,2-Dichloroethene	ND	0.82	1.00	
1,2-Dichloropropane	ND	0.82	1.00	
1,3-Dichloropropane	ND	0.82	1.00	
2,2-Dichloropropane	ND	4.1	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.82	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.82	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.82	1.00	
p-Isopropyltoluene	ND	0.82	1.00	
Methylene Chloride	ND	8.2	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	8.2	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.82	1.00	
1,1,1,2-Tetrachloroethane	ND	0.82	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.82	1.00	
Toluene	ND	0.82	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.82	1.00	
1,1,2-Trichloroethane	ND	0.82	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.2	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	8.2	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	8.2	1.00	
Vinyl Chloride	ND	0.82	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.82	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.82	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.82	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.82	1.00	
Ethanol	ND	410	1.00	
TPPH	ND	41	1.00	
Gasoline Range Organics (C4-C12)	ND	41	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	106	79-139	
1,2-Dichloroethane-d4	115	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-15.5'	19-06-1669-11-D	06/25/19 12:20	Solid	GC/MS OO	06/25/19	07/02/19 23:23	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	39	1.00	
Benzene	ND	0.78	1.00	
Bromobenzene	ND	0.78	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.78	1.00	
Bromoform	19	3.9	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.78	1.00	
sec-Butylbenzene	ND	0.78	1.00	
tert-Butylbenzene	ND	0.78	1.00	
Carbon Disulfide	ND	7.8	1.00	
Carbon Tetrachloride	ND	0.78	1.00	
Chlorobenzene	ND	0.78	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.78	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.78	1.00	
4-Chlorotoluene	ND	0.78	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.9	1.00	
1,2-Dibromoethane	ND	0.78	1.00	
Dibromomethane	ND	0.78	1.00	
1,2-Dichlorobenzene	ND	0.78	1.00	
1,3-Dichlorobenzene	ND	0.78	1.00	
1,4-Dichlorobenzene	ND	0.78	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.78	1.00	
1,2-Dichloroethane	ND	0.78	1.00	
1,1-Dichloroethene	ND	0.78	1.00	
c-1,2-Dichloroethene	ND	0.78	1.00	
t-1,2-Dichloroethene	ND	0.78	1.00	
1,2-Dichloropropane	ND	0.78	1.00	
1,3-Dichloropropane	ND	0.78	1.00	
2,2-Dichloropropane	ND	3.9	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.78	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.78	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.78	1.00	
p-Isopropyltoluene	ND	0.78	1.00	
Methylene Chloride	ND	7.8	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	7.8	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.78	1.00	
1,1,1,2-Tetrachloroethane	ND	0.78	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.78	1.00	
Toluene	ND	0.78	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.78	1.00	
1,1,2-Trichloroethane	ND	0.78	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.8	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	7.8	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	7.8	1.00	
Vinyl Chloride	ND	0.78	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.78	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.78	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.78	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.78	1.00	
Ethanol	ND	390	1.00	
TPPH	ND	39	1.00	
Gasoline Range Organics (C4-C12)	ND	39	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	107	79-139	
1,2-Dichloroethane-d4	118	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-20.5'	19-06-1669-12-D	06/25/19 12:38	Solid	GC/MS OO	06/25/19	07/02/19 23:52	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	109	79-139	
1,2-Dichloroethane-d4	122	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-25.5'	19-06-1669-13-D	06/25/19 12:51	Solid	GC/MS OO	06/25/19	07/03/19 00:22	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	46	1.00	
Benzene	ND	0.93	1.00	
Bromobenzene	ND	0.93	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.93	1.00	
Bromoform	ND	4.6	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.93	1.00	
sec-Butylbenzene	ND	0.93	1.00	
tert-Butylbenzene	ND	0.93	1.00	
Carbon Disulfide	ND	9.3	1.00	
Carbon Tetrachloride	ND	0.93	1.00	
Chlorobenzene	ND	0.93	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.93	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.93	1.00	
4-Chlorotoluene	ND	0.93	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.6	1.00	
1,2-Dibromoethane	ND	0.93	1.00	
Dibromomethane	ND	0.93	1.00	
1,2-Dichlorobenzene	ND	0.93	1.00	
1,3-Dichlorobenzene	ND	0.93	1.00	
1,4-Dichlorobenzene	ND	0.93	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.93	1.00	
1,2-Dichloroethane	ND	0.93	1.00	
1,1-Dichloroethene	ND	0.93	1.00	
c-1,2-Dichloroethene	ND	0.93	1.00	
t-1,2-Dichloroethene	ND	0.93	1.00	
1,2-Dichloropropane	ND	0.93	1.00	
1,3-Dichloropropane	ND	0.93	1.00	
2,2-Dichloropropane	ND	4.6	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.93	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.93	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.93	1.00	
p-Isopropyltoluene	ND	0.93	1.00	
Methylene Chloride	ND	9.3	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.3	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.93	1.00	
1,1,1,2-Tetrachloroethane	ND	0.93	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	ND	0.93	1.00	
Toluene	ND	0.93	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.93	1.00	
1,1,2-Trichloroethane	ND	0.93	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.3	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.3	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.3	1.00	
Vinyl Chloride	ND	0.93	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.93	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	
Tert-Butyl Alcohol (TBA)	ND	19	1.00	
Diisopropyl Ether (DIPE)	ND	0.93	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.93	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.93	1.00	
Ethanol	ND	460	1.00	
TPPH	ND	46	1.00	
Gasoline Range Organics (C4-C12)	ND	46	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	107	79-139	
1,2-Dichloroethane-d4	117	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-30'	19-06-1669-14-E	06/25/19 13:01	Solid	GC/MS OO	06/25/19	07/04/19 10:03	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	6900	100	
Benzene	ND	140	100	
Bromobenzene	ND	140	100	
Bromochloromethane	ND	270	100	
Bromodichloromethane	ND	140	100	
Bromoform	ND	690	100	
Bromomethane	ND	2700	100	
2-Butanone	ND	2700	100	
n-Butylbenzene	950	140	100	
sec-Butylbenzene	310	140	100	
tert-Butylbenzene	ND	140	100	
Carbon Disulfide	ND	1400	100	
Carbon Tetrachloride	ND	140	100	
Chlorobenzene	ND	140	100	
Chloroethane	ND	270	100	
Chloroform	ND	140	100	
Chloromethane	ND	2700	100	
2-Chlorotoluene	ND	140	100	
4-Chlorotoluene	ND	140	100	
Dibromochloromethane	ND	270	100	
1,2-Dibromo-3-Chloropropane	ND	690	100	
1,2-Dibromoethane	ND	140	100	
Dibromomethane	ND	140	100	
1,2-Dichlorobenzene	ND	140	100	
1,3-Dichlorobenzene	ND	140	100	
1,4-Dichlorobenzene	ND	140	100	
Dichlorodifluoromethane	ND	270	100	
1,1-Dichloroethane	ND	140	100	
1,2-Dichloroethane	ND	140	100	
1,1-Dichloroethene	ND	140	100	
c-1,2-Dichloroethene	ND	140	100	
t-1,2-Dichloroethene	ND	140	100	
1,2-Dichloropropane	ND	140	100	
1,3-Dichloropropane	ND	140	100	
2,2-Dichloropropane	ND	690	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	270	100	
c-1,3-Dichloropropene	ND	140	100	
t-1,3-Dichloropropene	ND	270	100	
Ethylbenzene	1400	140	100	
2-Hexanone	ND	2700	100	
Isopropylbenzene	750	140	100	
p-Isopropyltoluene	860	140	100	
Methylene Chloride	ND	1400	100	
4-Methyl-2-Pentanone	ND	2700	100	
Naphthalene	ND	1400	100	
n-Propylbenzene	1000	270	100	
Styrene	ND	140	100	
1,1,1,2-Tetrachloroethane	ND	140	100	
1,1,2,2-Tetrachloroethane	ND	270	100	
Tetrachloroethene	ND	140	100	
Toluene	ND	140	100	
1,2,3-Trichlorobenzene	ND	270	100	
1,2,4-Trichlorobenzene	ND	270	100	
1,1,1-Trichloroethane	ND	140	100	
1,1,2-Trichloroethane	ND	140	100	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1400	100	
Trichloroethene	ND	270	100	
Trichlorofluoromethane	ND	1400	100	
1,2,3-Trichloropropane	ND	270	100	
1,2,4-Trimethylbenzene	6300	270	100	
1,3,5-Trimethylbenzene	2300	270	100	
Vinyl Acetate	ND	1400	100	
Vinyl Chloride	ND	140	100	
p/m-Xylene	3400	270	100	
o-Xylene	1100	140	100	
Methyl-t-Butyl Ether (MTBE)	ND	270	100	
Tert-Butyl Alcohol (TBA)	ND	2700	100	
Diisopropyl Ether (DIPE)	ND	140	100	
Ethyl-t-Butyl Ether (ETBE)	ND	140	100	
Tert-Amyl-Methyl Ether (TAME)	ND	140	100	
Ethanol	ND	69000	100	
TPPH	360000	6900	100	
Gasoline Range Organics (C4-C12)	310000	6900	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	91	79-139	
1,2-Dichloroethane-d4	87	71-155	
1,4-Bromofluorobenzene	103	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-33'	19-06-1669-15-E	06/25/19 13:15	Solid	GC/MS OO	06/25/19	07/04/19 12:01	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	320000	5000	
Benzene	ND	6400	5000	
Bromobenzene	ND	6400	5000	
Bromochloromethane	ND	13000	5000	
Bromodichloromethane	ND	6400	5000	
Bromoform	ND	32000	5000	
Bromomethane	ND	130000	5000	
2-Butanone	ND	130000	5000	
n-Butylbenzene	36000	6400	5000	
sec-Butylbenzene	12000	6400	5000	
tert-Butylbenzene	ND	6400	5000	
Carbon Disulfide	ND	64000	5000	
Carbon Tetrachloride	ND	6400	5000	
Chlorobenzene	ND	6400	5000	
Chloroethane	ND	13000	5000	
Chloroform	ND	6400	5000	
Chloromethane	ND	130000	5000	
2-Chlorotoluene	ND	6400	5000	
4-Chlorotoluene	ND	6400	5000	
Dibromochloromethane	ND	13000	5000	
1,2-Dibromo-3-Chloropropane	ND	32000	5000	
1,2-Dibromoethane	ND	6400	5000	
Dibromomethane	ND	6400	5000	
1,2-Dichlorobenzene	ND	6400	5000	
1,3-Dichlorobenzene	ND	6400	5000	
1,4-Dichlorobenzene	ND	6400	5000	
Dichlorodifluoromethane	ND	13000	5000	
1,1-Dichloroethane	ND	6400	5000	
1,2-Dichloroethane	ND	6400	5000	
1,1-Dichloroethene	ND	6400	5000	
c-1,2-Dichloroethene	ND	6400	5000	
t-1,2-Dichloroethene	ND	6400	5000	
1,2-Dichloropropane	ND	6400	5000	
1,3-Dichloropropane	ND	6400	5000	
2,2-Dichloropropane	ND	32000	5000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	13000	5000	
c-1,3-Dichloropropene	ND	6400	5000	
t-1,3-Dichloropropene	ND	13000	5000	
Ethylbenzene	54000	6400	5000	
2-Hexanone	ND	130000	5000	
Isopropylbenzene	28000	6400	5000	
p-Isopropyltoluene	32000	6400	5000	
Methylene Chloride	ND	64000	5000	
4-Methyl-2-Pentanone	ND	130000	5000	
Naphthalene	ND	64000	5000	
n-Propylbenzene	40000	13000	5000	
Styrene	ND	6400	5000	
1,1,1,2-Tetrachloroethane	ND	6400	5000	
1,1,2,2-Tetrachloroethane	ND	13000	5000	
Tetrachloroethene	ND	6400	5000	
Toluene	ND	6400	5000	
1,2,3-Trichlorobenzene	ND	13000	5000	
1,2,4-Trichlorobenzene	ND	13000	5000	
1,1,1-Trichloroethane	ND	6400	5000	
1,1,2-Trichloroethane	ND	6400	5000	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	64000	5000	
Trichloroethene	ND	13000	5000	
Trichlorofluoromethane	ND	64000	5000	
1,2,3-Trichloropropane	ND	13000	5000	
1,2,4-Trimethylbenzene	250000	13000	5000	
1,3,5-Trimethylbenzene	89000	13000	5000	
Vinyl Acetate	ND	64000	5000	
Vinyl Chloride	ND	6400	5000	
p/m-Xylene	150000	13000	5000	
o-Xylene	48000	6400	5000	
Methyl-t-Butyl Ether (MTBE)	ND	13000	5000	
Tert-Butyl Alcohol (TBA)	ND	130000	5000	
Diisopropyl Ether (DIPE)	ND	6400	5000	
Ethyl-t-Butyl Ether (ETBE)	ND	6400	5000	
Tert-Amyl-Methyl Ether (TAME)	ND	6400	5000	
Ethanol	ND	3200000	5000	
TPPH	19000000	320000	5000	
Gasoline Range Organics (C4-C12)	16000000	320000	5000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	90	79-139	
1,2-Dichloroethane-d4	86	71-155	
1,4-Bromofluorobenzene	102	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	96	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-35'	19-06-1669-16-D	06/25/19 13:40	Solid	GC/MS OO	06/25/19	07/04/19 11:02	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	80000	2000	
Benzene	ND	1600	2000	
Bromobenzene	ND	1600	2000	
Bromochloromethane	ND	3200	2000	
Bromodichloromethane	ND	1600	2000	
Bromoform	ND	8000	2000	
Bromomethane	ND	32000	2000	
2-Butanone	ND	32000	2000	
n-Butylbenzene	11000	1600	2000	
sec-Butylbenzene	4400	1600	2000	
tert-Butylbenzene	ND	1600	2000	
Carbon Disulfide	ND	16000	2000	
Carbon Tetrachloride	ND	1600	2000	
Chlorobenzene	ND	1600	2000	
Chloroethane	ND	3200	2000	
Chloroform	ND	1600	2000	
Chloromethane	ND	32000	2000	
2-Chlorotoluene	ND	1600	2000	
4-Chlorotoluene	ND	1600	2000	
Dibromochloromethane	ND	3200	2000	
1,2-Dibromo-3-Chloropropane	ND	8000	2000	
1,2-Dibromoethane	ND	1600	2000	
Dibromomethane	ND	1600	2000	
1,2-Dichlorobenzene	ND	1600	2000	
1,3-Dichlorobenzene	ND	1600	2000	
1,4-Dichlorobenzene	ND	1600	2000	
Dichlorodifluoromethane	ND	3200	2000	
1,1-Dichloroethane	ND	1600	2000	
1,2-Dichloroethane	ND	1600	2000	
1,1-Dichloroethene	ND	1600	2000	
c-1,2-Dichloroethene	ND	1600	2000	
t-1,2-Dichloroethene	ND	1600	2000	
1,2-Dichloropropane	ND	1600	2000	
1,3-Dichloropropane	ND	1600	2000	
2,2-Dichloropropane	ND	8000	2000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	3200	2000	
c-1,3-Dichloropropene	ND	1600	2000	
t-1,3-Dichloropropene	ND	3200	2000	
Ethylbenzene	33000	1600	2000	
2-Hexanone	ND	32000	2000	
Isopropylbenzene	13000	1600	2000	
p-Isopropyltoluene	12000	1600	2000	
Methylene Chloride	ND	16000	2000	
4-Methyl-2-Pentanone	ND	32000	2000	
Naphthalene	16000	16000	2000	
n-Propylbenzene	18000	3200	2000	
Styrene	ND	1600	2000	
1,1,1,2-Tetrachloroethane	ND	1600	2000	
1,1,2,2-Tetrachloroethane	ND	3200	2000	
Tetrachloroethene	ND	1600	2000	
Toluene	ND	1600	2000	
1,2,3-Trichlorobenzene	ND	3200	2000	
1,2,4-Trichlorobenzene	ND	3200	2000	
1,1,1-Trichloroethane	ND	1600	2000	
1,1,2-Trichloroethane	ND	1600	2000	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	16000	2000	
Trichloroethene	ND	3200	2000	
Trichlorofluoromethane	ND	16000	2000	
1,2,3-Trichloropropane	ND	3200	2000	
1,2,4-Trimethylbenzene	110000	3200	2000	
1,3,5-Trimethylbenzene	24000	3200	2000	
Vinyl Acetate	ND	16000	2000	
Vinyl Chloride	ND	1600	2000	
p/m-Xylene	53000	3200	2000	
o-Xylene	46000	1600	2000	
Methyl-t-Butyl Ether (MTBE)	ND	3200	2000	
Tert-Butyl Alcohol (TBA)	ND	32000	2000	
Diisopropyl Ether (DIPE)	ND	1600	2000	
Ethyl-t-Butyl Ether (ETBE)	ND	1600	2000	
Tert-Amyl-Methyl Ether (TAME)	ND	1600	2000	
Ethanol	ND	800000	2000	
Gasoline Range Organics (C4-C12)	6000000	80000	2000	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	90	79-139	
1,2-Dichloroethane-d4	83	71-155	
1,4-Bromofluorobenzene	103	80-120	
Toluene-d8	104	80-120	
Toluene-d8-TPPH	93	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-35'	19-06-1669-16-D	06/25/19 13:40	Solid	GC/MS OO	06/25/19	07/04/19 18:36	190704L020

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	7300000	200000	5000	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Toluene-d8-TPPH	98	80-120	

Return to Contents



RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-41'	19-06-1669-17-D	06/25/19 13:56	Solid	GC/MS OO	06/25/19	07/04/19 11:31	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	7300	200	
Benzene	260	150	200	
Bromobenzene	ND	150	200	
Bromochloromethane	ND	290	200	
Bromodichloromethane	ND	150	200	
Bromoform	ND	730	200	
Bromomethane	ND	2900	200	
2-Butanone	ND	2900	200	
n-Butylbenzene	650	150	200	
sec-Butylbenzene	360	150	200	
tert-Butylbenzene	ND	150	200	
Carbon Disulfide	ND	1500	200	
Carbon Tetrachloride	ND	150	200	
Chlorobenzene	ND	150	200	
Chloroethane	ND	290	200	
Chloroform	ND	150	200	
Chloromethane	ND	2900	200	
2-Chlorotoluene	ND	150	200	
4-Chlorotoluene	ND	150	200	
Dibromochloromethane	ND	290	200	
1,2-Dibromo-3-Chloropropane	ND	730	200	
1,2-Dibromoethane	ND	150	200	
Dibromomethane	ND	150	200	
1,2-Dichlorobenzene	ND	150	200	
1,3-Dichlorobenzene	ND	150	200	
1,4-Dichlorobenzene	ND	150	200	
Dichlorodifluoromethane	ND	290	200	
1,1-Dichloroethane	ND	150	200	
1,2-Dichloroethane	ND	150	200	
1,1-Dichloroethene	ND	150	200	
c-1,2-Dichloroethene	ND	150	200	
t-1,2-Dichloroethene	ND	150	200	
1,2-Dichloropropane	ND	150	200	
1,3-Dichloropropane	ND	150	200	
2,2-Dichloropropane	ND	730	200	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	290	200	
c-1,3-Dichloropropene	ND	150	200	
t-1,3-Dichloropropene	ND	290	200	
Ethylbenzene	1100	150	200	
2-Hexanone	ND	2900	200	
Isopropylbenzene	870	150	200	
p-Isopropyltoluene	890	150	200	
Methylene Chloride	ND	1500	200	
4-Methyl-2-Pentanone	ND	2900	200	
Naphthalene	ND	1500	200	
n-Propylbenzene	990	290	200	
Styrene	ND	150	200	
1,1,1,2-Tetrachloroethane	ND	150	200	
1,1,2,2-Tetrachloroethane	ND	290	200	
Tetrachloroethene	ND	150	200	
Toluene	ND	150	200	
1,2,3-Trichlorobenzene	ND	290	200	
1,2,4-Trichlorobenzene	ND	290	200	
1,1,1-Trichloroethane	ND	150	200	
1,1,2-Trichloroethane	ND	150	200	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1500	200	
Trichloroethene	ND	290	200	
Trichlorofluoromethane	ND	1500	200	
1,2,3-Trichloropropane	ND	290	200	
1,2,4-Trimethylbenzene	870	290	200	
1,3,5-Trimethylbenzene	530	290	200	
Vinyl Acetate	ND	1500	200	
Vinyl Chloride	ND	150	200	
p/m-Xylene	ND	290	200	
o-Xylene	ND	150	200	
Methyl-t-Butyl Ether (MTBE)	ND	290	200	
Tert-Butyl Alcohol (TBA)	ND	2900	200	
Diisopropyl Ether (DIPE)	ND	150	200	
Ethyl-t-Butyl Ether (ETBE)	ND	150	200	
Tert-Amyl-Methyl Ether (TAME)	ND	150	200	
Ethanol	ND	73000	200	
TPPH	500000	7300	200	
Gasoline Range Organics (C4-C12)	420000	7300	200	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	89	79-139	
1,2-Dichloroethane-d4	85	71-155	
1,4-Bromofluorobenzene	100	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	96	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-43'	19-06-1669-18-B	06/25/19 14:06	Solid	GC/MS OO	06/25/19	07/04/19 01:14	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	38	1.00	
Benzene	ND	0.75	1.00	
Bromobenzene	ND	0.75	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.75	1.00	
Bromoform	ND	3.8	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	ND	0.75	1.00	
sec-Butylbenzene	0.77	0.75	1.00	
tert-Butylbenzene	ND	0.75	1.00	
Carbon Disulfide	ND	7.5	1.00	
Carbon Tetrachloride	ND	0.75	1.00	
Chlorobenzene	ND	0.75	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.75	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.75	1.00	
4-Chlorotoluene	ND	0.75	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.8	1.00	
1,2-Dibromoethane	ND	0.75	1.00	
Dibromomethane	ND	0.75	1.00	
1,2-Dichlorobenzene	ND	0.75	1.00	
1,3-Dichlorobenzene	ND	0.75	1.00	
1,4-Dichlorobenzene	ND	0.75	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.75	1.00	
1,2-Dichloroethane	4.3	0.75	1.00	
1,1-Dichloroethene	ND	0.75	1.00	
c-1,2-Dichloroethene	ND	0.75	1.00	
t-1,2-Dichloroethene	ND	0.75	1.00	
1,2-Dichloropropane	ND	0.75	1.00	
1,3-Dichloropropane	ND	0.75	1.00	
2,2-Dichloropropane	ND	3.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.75	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	ND	0.75	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	0.76	0.75	1.00	
p-Isopropyltoluene	ND	0.75	1.00	
Methylene Chloride	ND	7.5	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.5	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.75	1.00	
1,1,1,2-Tetrachloroethane	ND	0.75	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.75	1.00	
Toluene	ND	0.75	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.75	1.00	
1,1,2-Trichloroethane	ND	0.75	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.5	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.5	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.5	1.00	
Vinyl Chloride	ND	0.75	1.00	
p/m-Xylene	ND	1.5	1.00	
o-Xylene	ND	0.75	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.75	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.75	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.75	1.00	
Ethanol	ND	380	1.00	
TPPH	1600	38	1.00	
Gasoline Range Organics (C4-C12)	1300	38	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	96	79-139	
1,2-Dichloroethane-d4	105	71-155	
1,4-Bromofluorobenzene	102	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-45'	19-06-1669-19-D	06/25/19 14:35	Solid	GC/MS OO	06/25/19	07/03/19 00:51	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	39	1.00	
Benzene	ND	0.78	1.00	
Bromobenzene	ND	0.78	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.78	1.00	
Bromoform	ND	3.9	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.78	1.00	
sec-Butylbenzene	ND	0.78	1.00	
tert-Butylbenzene	ND	0.78	1.00	
Carbon Disulfide	ND	7.8	1.00	
Carbon Tetrachloride	ND	0.78	1.00	
Chlorobenzene	ND	0.78	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.78	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.78	1.00	
4-Chlorotoluene	ND	0.78	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.9	1.00	
1,2-Dibromoethane	ND	0.78	1.00	
Dibromomethane	ND	0.78	1.00	
1,2-Dichlorobenzene	ND	0.78	1.00	
1,3-Dichlorobenzene	ND	0.78	1.00	
1,4-Dichlorobenzene	ND	0.78	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.78	1.00	
1,2-Dichloroethane	ND	0.78	1.00	
1,1-Dichloroethene	ND	0.78	1.00	
c-1,2-Dichloroethene	ND	0.78	1.00	
t-1,2-Dichloroethene	ND	0.78	1.00	
1,2-Dichloropropane	ND	0.78	1.00	
1,3-Dichloropropane	ND	0.78	1.00	
2,2-Dichloropropane	ND	3.9	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.78	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.78	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.78	1.00	
p-Isopropyltoluene	ND	0.78	1.00	
Methylene Chloride	ND	7.8	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	7.8	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.78	1.00	
1,1,1,2-Tetrachloroethane	ND	0.78	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.78	1.00	
Toluene	ND	0.78	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.78	1.00	
1,1,2-Trichloroethane	ND	0.78	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.8	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	7.8	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	7.8	1.00	
Vinyl Chloride	ND	0.78	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.78	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.78	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.78	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.78	1.00	
Ethanol	ND	390	1.00	
TPPH	930	39	1.00	
Gasoline Range Organics (C4-C12)	870	39	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	103	79-139	
1,2-Dichloroethane-d4	112	71-155	
1,4-Bromofluorobenzene	100	80-120	
Toluene-d8	105	80-120	
Toluene-d8-TPPH	105	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2077	N/A	Solid	GC/MS OO	07/02/19	07/02/19 18:57	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	100	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2079	N/A	Solid	GC/MS OO	07/03/19	07/03/19 18:51	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	100	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2080	N/A	Solid	GC/MS OO	07/03/19	07/04/19 06:08	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	5000	50.0	
Benzene	ND	100	50.0	
Bromobenzene	ND	100	50.0	
Bromochloromethane	ND	200	50.0	
Bromodichloromethane	ND	100	50.0	
Bromoform	ND	500	50.0	
Bromomethane	ND	2000	50.0	
2-Butanone	ND	2000	50.0	
n-Butylbenzene	ND	100	50.0	
sec-Butylbenzene	ND	100	50.0	
tert-Butylbenzene	ND	100	50.0	
Carbon Disulfide	ND	1000	50.0	
Carbon Tetrachloride	ND	100	50.0	
Chlorobenzene	ND	100	50.0	
Chloroethane	ND	200	50.0	
Chloroform	ND	100	50.0	
Chloromethane	ND	2000	50.0	
2-Chlorotoluene	ND	100	50.0	
4-Chlorotoluene	ND	100	50.0	
Dibromochloromethane	ND	200	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	100	50.0	
Dibromomethane	ND	100	50.0	
1,2-Dichlorobenzene	ND	100	50.0	
1,3-Dichlorobenzene	ND	100	50.0	
1,4-Dichlorobenzene	ND	100	50.0	
Dichlorodifluoromethane	ND	200	50.0	
1,1-Dichloroethane	ND	100	50.0	
1,2-Dichloroethane	ND	100	50.0	
1,1-Dichloroethene	ND	100	50.0	
c-1,2-Dichloroethene	ND	100	50.0	
t-1,2-Dichloroethene	ND	100	50.0	
1,2-Dichloropropane	ND	100	50.0	
1,3-Dichloropropane	ND	100	50.0	
2,2-Dichloropropane	ND	500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	200	50.0	
c-1,3-Dichloropropene	ND	100	50.0	
t-1,3-Dichloropropene	ND	200	50.0	
Ethylbenzene	ND	100	50.0	
2-Hexanone	ND	2000	50.0	
Isopropylbenzene	ND	100	50.0	
p-Isopropyltoluene	ND	100	50.0	
Methylene Chloride	ND	1000	50.0	
4-Methyl-2-Pentanone	ND	2000	50.0	
Naphthalene	ND	1000	50.0	
n-Propylbenzene	ND	200	50.0	
Styrene	ND	100	50.0	
1,1,1,2-Tetrachloroethane	ND	100	50.0	
1,1,2,2-Tetrachloroethane	ND	200	50.0	
Tetrachloroethene	ND	100	50.0	
Toluene	ND	100	50.0	
1,2,3-Trichlorobenzene	ND	200	50.0	
1,2,4-Trichlorobenzene	ND	200	50.0	
1,1,1-Trichloroethane	ND	100	50.0	
1,1,2-Trichloroethane	ND	100	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	50.0	
Trichloroethene	ND	200	50.0	
Trichlorofluoromethane	ND	1000	50.0	
1,2,3-Trichloropropane	ND	200	50.0	
1,2,4-Trimethylbenzene	ND	200	50.0	
1,3,5-Trimethylbenzene	ND	200	50.0	
Vinyl Acetate	ND	1000	50.0	
Vinyl Chloride	ND	100	50.0	
p/m-Xylene	ND	200	50.0	
o-Xylene	ND	100	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	200	50.0	
Tert-Butyl Alcohol (TBA)	ND	2000	50.0	
Diisopropyl Ether (DIPE)	ND	100	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	100	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	100	50.0	
Ethanol	ND	50000	50.0	
TPPH	ND	5000	50.0	
Gasoline Range Organics (C4-C12)	ND	5000	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	95	79-139	
1,2-Dichloroethane-d4	94	71-155	
1,4-Bromofluorobenzene	95	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2082	N/A	Solid	GC/MS OO	07/04/19	07/04/19 18:06	190704L020

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	ND	5000	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	92	79-139	
1,2-Dichloroethane-d4	88	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	97	80-120	
Toluene-d8-TPPH	98	80-120	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: N/A
 Method: ASTM D-2216 (M)
 Units: %

Project: OOI

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-5.5'	19-06-1669-1-A	06/25/19 08:35	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		9.3	0.10		1.00		
CESB9-10.5'	19-06-1669-2-A	06/25/19 08:43	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		6.3	0.10		1.00		
CESB9-15.5'	19-06-1669-3-A	06/25/19 08:52	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		7.9	0.10		1.00		
CESB9-20.5'	19-06-1669-4-A	06/25/19 09:04	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		5.1	0.10		1.00		
CESB9-25.5'	19-06-1669-5-A	06/25/19 09:14	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		3.4	0.10		1.00		
CESB9-32'	19-06-1669-6-A	06/25/19 09:27	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		6.0	0.10		1.00		
CESB9-37.0'	19-06-1669-7-A	06/25/19 10:08	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		25	0.10		1.00		
CESB9-35.5'	19-06-1669-8-A	06/25/19 10:18	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		10	0.10		1.00		

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: N/A
 Method: ASTM D-2216 (M)
 Units: %

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-3'	19-06-1669-9-A	06/25/19 11:20	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		2.7		0.10		1.00	
CESB10-10.5'	19-06-1669-10-A	06/25/19 11:40	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		7.8		0.10		1.00	
CESB10-15.5'	19-06-1669-11-A	06/25/19 12:20	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		7.4		0.10		1.00	
CESB10-20.5'	19-06-1669-12-A	06/25/19 12:38	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		4.7		0.10		1.00	
CESB10-25.5'	19-06-1669-13-A	06/25/19 12:51	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		5.7		0.10		1.00	
CESB10-30'	19-06-1669-14-A	06/25/19 13:01	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		5.9		0.10		1.00	
CESB10-33'	19-06-1669-15-A	06/25/19 13:15	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		6.2		0.10		1.00	
Method Blank	099-05-014-8474	N/A	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		ND		0.10		1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
19-06-1681-1	Sample	Solid	GC 49	06/26/19	06/26/19 13:53	190626S02
19-06-1681-1	Matrix Spike	Solid	GC 49	06/26/19	06/26/19 13:10	190626S02
19-06-1681-1	Matrix Spike Duplicate	Solid	GC 49	06/26/19	06/26/19 13:31	190626S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	ND	400.0	399.0	100	400.2	100	64-130	0	0-15	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3050B
Method: EPA 6010B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
19-06-1612-1	Sample	Concrete	ICP 8300	06/28/19	06/29/19 18:18	190628S01
19-06-1612-1	Matrix Spike	Concrete	ICP 8300	06/28/19	07/01/19 21:37	190628S01
19-06-1612-1	Matrix Spike Duplicate	Concrete	ICP 8300	06/28/19	07/01/19 21:39	190628S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	17.61	25.00	46.00	114	47.09	118	75-125	2	0-20	
Lead	19.83	25.00	44.77	100	46.68	107	75-125	4	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Sample Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: N/A
Method: ASTM D-2216 (M)

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
19-06-1740-1	Sample	Solid	N/A	06/27/19 00:00	06/27/19 14:30	J0627MOID1
19-06-1740-1	Sample Duplicate	Solid	N/A	06/27/19 00:00	06/27/19 14:30	J0627MOID1

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Moisture	83.30	83.30	0	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

California Environmental	Date Received:	06/25/19
30423 Canwood St., Suite 208	Work Order:	19-06-1669
Agoura Hills, CA 91301-4316	Preparation:	EPA 3550B
Project: OOI	Method:	EPA 8015B (M)

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-490-3650	LCS	Solid	GC 49	06/26/19	06/26/19 12:49	190626B02

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Diesel	400.0	422.9	106	75-123	

Return to Contents 

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3050B
Method: EPA 6010B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
097-01-002-28068	LCS	Solid	ICP 8300	06/28/19	06/29/19 18:15	190628L01			
097-01-002-28068	LCSD	Solid	ICP 8300	06/28/19	06/29/19 18:17	190628L01			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	23.91	96	25.33	101	80-120	6	0-20	
Lead	25.00	25.05	100	26.44	106	80-120	5	0-20	

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-767-8589	LCS	Aqueous	GC/MS PP	07/01/19	07/01/19 17:45	190701L020				
099-12-767-8589	LCSD	Aqueous	GC/MS PP	07/01/19	07/01/19 18:16	190701L020				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	50.57	101	52.58	105	80-120	73-127	4	0-20	
Carbon Tetrachloride	50.00	46.83	94	49.43	99	67-139	55-151	5	0-20	
Chlorobenzene	50.00	47.96	96	48.98	98	78-120	71-127	2	0-20	
1,2-Dibromoethane	50.00	53.77	108	53.34	107	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	48.63	97	49.96	100	63-129	52-140	3	0-20	
1,2-Dichloroethane	50.00	45.59	91	46.96	94	70-130	60-140	3	0-20	
1,1-Dichloroethene	50.00	46.31	93	48.35	97	66-126	56-136	4	0-20	
Ethylbenzene	50.00	50.28	101	51.39	103	80-123	73-130	2	0-20	
Toluene	50.00	47.83	96	49.81	100	80-120	73-127	4	0-20	
Trichloroethene	50.00	49.21	98	51.24	102	80-122	73-129	4	0-20	
Vinyl Chloride	50.00	44.08	88	46.67	93	70-130	60-140	6	0-20	
p/m-Xylene	100.0	99.09	99	101.8	102	75-123	67-131	3	0-25	
o-Xylene	50.00	50.19	100	51.38	103	74-122	66-130	2	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	41.55	83	41.78	84	69-129	59-139	1	0-22	
Tert-Butyl Alcohol (TBA)	250.0	242.5	97	249.7	100	69-129	59-139	3	0-25	
Diisopropyl Ether (DIPE)	50.00	48.68	97	48.42	97	68-128	58-138	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	45.63	91	46.00	92	63-135	51-147	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.36	103	51.80	104	67-133	56-144	1	0-20	
Ethanol	500.0	470.6	94	492.6	99	42-168	21-189	5	0-20	
TPPH	1000	1079	108	996.7	100	65-135	53-147	8	0-30	
Gasoline Range Organics	1000	1038	104	936.5	94	65-135	53-147	10	0-30	
Gasoline Range Organics (C4-C12)	1000	1070	107	986.7	99	65-135	53-147	8	0-30	

Total number of LCS compounds: 22

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2077	LCS	Solid		GC/MS OO	07/02/19	07/02/19 16:59	190702L028			
099-12-779-2077	LCSD	Solid		GC/MS OO	07/02/19	07/02/19 17:28	190702L028			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	47.77	96	47.05	94	80-120	73-127	2	0-20	
Carbon Tetrachloride	50.00	50.19	100	49.22	98	65-137	53-149	2	0-20	
Chlorobenzene	50.00	49.55	99	48.46	97	80-120	73-127	2	0-20	
1,2-Dibromoethane	50.00	51.41	103	50.74	101	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	50.56	101	49.53	99	80-120	73-127	2	0-20	
1,2-Dichloroethane	50.00	48.86	98	47.12	94	80-120	73-127	4	0-20	
1,1-Dichloroethene	50.00	46.93	94	45.59	91	68-128	58-138	3	0-20	
Ethylbenzene	50.00	51.69	103	50.44	101	80-120	73-127	2	0-20	
Toluene	50.00	50.16	100	48.34	97	80-120	73-127	4	0-20	
Trichloroethene	50.00	49.64	99	48.63	97	80-120	73-127	2	0-20	
Vinyl Chloride	50.00	45.72	91	41.74	83	67-127	57-137	9	0-20	
p/m-Xylene	100.0	105.3	105	102.4	102	75-125	67-133	3	0-25	
o-Xylene	50.00	53.52	107	52.26	105	75-125	67-133	2	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	44.21	88	43.57	87	70-124	61-133	1	0-20	
Tert-Butyl Alcohol (TBA)	250.0	227.5	91	220.8	88	73-121	65-129	3	0-20	
Diisopropyl Ether (DIPE)	50.00	48.56	97	48.28	97	69-129	59-139	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	46.76	94	46.17	92	70-124	61-133	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	50.74	101	48.74	97	74-122	66-130	4	0-20	
Ethanol	500.0	485.6	97	442.6	89	51-135	37-149	9	0-27	
TPPH	1000	982.6	98	946.3	95	65-135	53-147	4	0-30	
Gasoline Range Organics (C4-C12)	1000	886.6	89	847.2	85	65-135	53-147	5	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-2079	LCS	Solid	GC/MS OO	07/03/19	07/03/19 16:53	190703L026				
099-12-779-2079	LCSD	Solid	GC/MS OO	07/03/19	07/03/19 17:23	190703L026				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	50.40	101	48.97	98	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	51.80	104	50.00	100	65-137	53-149	4	0-20	
Chlorobenzene	50.00	51.33	103	49.26	99	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	52.69	105	51.98	104	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	52.61	105	50.67	101	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	50.28	101	50.14	100	80-120	73-127	0	0-20	
1,1-Dichloroethene	50.00	48.48	97	47.18	94	68-128	58-138	3	0-20	
Ethylbenzene	50.00	53.88	108	51.42	103	80-120	73-127	5	0-20	
Toluene	50.00	52.83	106	50.99	102	80-120	73-127	4	0-20	
Trichloroethene	50.00	51.86	104	50.45	101	80-120	73-127	3	0-20	
Vinyl Chloride	50.00	45.90	92	41.55	83	67-127	57-137	10	0-20	
p/m-Xylene	100.0	110.3	110	105.1	105	75-125	67-133	5	0-25	
o-Xylene	50.00	55.34	111	53.09	106	75-125	67-133	4	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.03	86	42.48	85	70-124	61-133	1	0-20	
Tert-Butyl Alcohol (TBA)	250.0	230.0	92	214.5	86	73-121	65-129	7	0-20	
Diisopropyl Ether (DIPE)	50.00	50.21	100	48.63	97	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	46.28	93	45.49	91	70-124	61-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.65	103	51.65	103	74-122	66-130	0	0-20	
Ethanol	500.0	500.2	100	466.2	93	51-135	37-149	7	0-27	
TPPH	1000	963.5	96	980.0	98	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	863.5	86	875.5	88	65-135	53-147	1	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-2080	LCS	Solid	GC/MS OO	07/03/19	07/04/19 04:11	190703L036				
099-12-779-2080	LCSD	Solid	GC/MS OO	07/03/19	07/04/19 04:40	190703L036				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	53.69	107	46.30	93	80-120	73-127	15	0-20	
Carbon Tetrachloride	50.00	53.99	108	45.83	92	65-137	53-149	16	0-20	
Chlorobenzene	50.00	55.51	111	47.26	95	80-120	73-127	16	0-20	
1,2-Dibromoethane	50.00	57.66	115	49.67	99	80-120	73-127	15	0-20	
1,2-Dichlorobenzene	50.00	56.19	112	48.06	96	80-120	73-127	16	0-20	
1,2-Dichloroethane	50.00	52.94	106	46.10	92	80-120	73-127	14	0-20	
1,1-Dichloroethene	50.00	53.25	107	44.72	89	68-128	58-138	17	0-20	
Ethylbenzene	50.00	58.01	116	48.84	98	80-120	73-127	17	0-20	
Toluene	50.00	55.88	112	48.01	96	80-120	73-127	15	0-20	
Trichloroethene	50.00	56.29	113	47.80	96	80-120	73-127	16	0-20	
Vinyl Chloride	50.00	49.64	99	40.38	81	67-127	57-137	21	0-20	X
p/m-Xylene	100.0	117.4	117	99.30	99	75-125	67-133	17	0-25	
o-Xylene	50.00	59.74	119	51.04	102	75-125	67-133	16	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	48.34	97	40.43	81	70-124	61-133	18	0-20	
Tert-Butyl Alcohol (TBA)	250.0	253.2	101	219.4	88	73-121	65-129	14	0-20	
Diisopropyl Ether (DIPE)	50.00	54.56	109	46.39	93	69-129	59-139	16	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	52.04	104	43.02	86	70-124	61-133	19	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	55.89	112	47.49	95	74-122	66-130	16	0-20	
Ethanol	500.0	637.9	128	498.5	100	51-135	37-149	25	0-27	
TPPH	1000	904.2	90	887.4	89	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	861.6	86	799.9	80	65-135	53-147	7	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2082	LCS	Solid		GC/MS OO	07/04/19	07/04/19 14:10	190704L020			
099-12-779-2082	LCSD	Solid		GC/MS OO	07/04/19	07/04/19 14:39	190704L020			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	45.00	90	46.86	94	80-120	73-127	4	0-20	
Carbon Tetrachloride	50.00	43.84	88	46.31	93	65-137	53-149	5	0-20	
Chlorobenzene	50.00	47.42	95	49.04	98	80-120	73-127	3	0-20	
1,2-Dibromoethane	50.00	49.83	100	51.79	104	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	50.00	48.84	98	49.86	100	80-120	73-127	2	0-20	
1,2-Dichloroethane	50.00	44.95	90	45.93	92	80-120	73-127	2	0-20	
1,1-Dichloroethene	50.00	43.20	86	44.49	89	68-128	58-138	3	0-20	
Ethylbenzene	50.00	48.94	98	51.09	102	80-120	73-127	4	0-20	
Toluene	50.00	48.17	96	49.23	98	80-120	73-127	2	0-20	
Trichloroethene	50.00	46.93	94	48.94	98	80-120	73-127	4	0-20	
Vinyl Chloride	50.00	39.76	80	39.65	79	67-127	57-137	0	0-20	
p/m-Xylene	100.0	99.94	100	103.5	103	75-125	67-133	3	0-25	
o-Xylene	50.00	51.08	102	52.52	105	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	44.40	89	44.47	89	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	205.7	82	206.0	82	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	50.00	44.62	89	45.82	92	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.10	94	48.09	96	70-124	61-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	53.46	107	55.18	110	74-122	66-130	3	0-20	
Ethanol	500.0	404.9	81	414.2	83	51-135	37-149	2	0-27	
TPPH	1000	916.0	92	932.6	93	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	823.6	82	832.5	83	65-135	53-147	1	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Sample Analysis Summary Report

Work Order: 19-06-1669

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<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
ASTM D-2216 (M)	N/A	1136	N/A	1
EPA 6010B	EPA 3050B	1080	ICP 8300	1
EPA 8015B (M)	EPA 3550B	972	GC 49	1
GC/MS / EPA 8260B	EPA 5035	316	GC/MS OO	2
GC/MS / EPA 8260B	EPA 5035	1178	GC/MS OO	2
GC/MS / EPA 8260B	EPA 5030C	1191	GC/MS PP	2


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Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 19-06-1669

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



Calscience

CHAIN OF CUSTODY RECORD

DATE: JUNE 25, 2019
PAGE: 1 OF 2

WO # / LAB USE ONLY
19-06-1669

LABORATORY CLIENT: **CALENVIRO**
ADDRESS: **30423 Canwood Street #208** STATE: **CA** ZIP: **91301**
CITY: **Agoura Hills**
TEL: **818-991-1542**

CLIENT PROJECT NAME / NUMBER: **OOI**
PROJECT CONTACT: **C. Buckley**
P.O. NO.: **3029**
SAMPLER(S), (PRINT): **Buckley**

REQUESTED ANALYSES

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
 SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

GLOBAL ID: _____ LOG CODE: _____

SPECIAL INSTRUCTIONS: _____

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	LOG CODE		
		DATE	TIME			Unpreserved	Preserved	Field Filled
1	CE589-5.5'	6/26/19	8:35A	SOIL	5			
2	CE589-10.5'		8:43		✓			
3	CE589-15.5'		8:52		✓			
4	CE589-20.5'		9:04		✓			
5	CE589-25.5'		9:14		✓			
6	CE589-30.5'		9:24		✓			
7	CE589-34.0'		9:08		✓			
8	CE589-35.5'		10:18		4			
9	CE5810-3'		11:20		5			
10	CE5810-10.5'		11:40A		5			

Please check box or fill in blank as needed.

TPH	TPH (g) / GRO (8260)	TPH (d) / DRO	TPH C6-C36 / C6-C44	BTEX / MTBE (8260) / 5035	VOCs (8260)	Oxygenates (8260)	Prep (5035) / En Core / Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs (8270) / 8270 SIM	T22 Metals (6010/747X) / 6020/747X	Cr(VI) (7196) / 7199 / 218.6
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X

Received by: (Signature/Affiliation) **EC** Date: **6-25-19** Time: **16:38**
 Relinquished by: (Signature) **DANIEL** Date: **6-25-19** Time: **17:30**
 Relinquished by: (Signature) _____ Date: _____ Time: _____



SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: CALENVIRO

DATE: 06/25/2019

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)
 Thermometer ID: SC6 (CF: -0.2°C); Temperature (w/o CF): 5.4 °C (w/ CF): 5.2 °C; Blank Sample
 Sample(s) outside temperature criteria (PM/APM contacted by: _____)
 Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling
 Sample(s) received at ambient temperature; placed on ice for transport by courier
 Ambient Temperature: Air Filter
 Checked by: 1053

CUSTODY SEAL:
 Cooler Present and Intact Present but Not Intact Not Present N/A
 Sample(s) Present and Intact Present but Not Intact Not Present N/A
 Checked by: 1053
 Checked by: CR

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Container(s) for certain analysis free of headspace.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tediar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: VOA VOAh VOAna₂ 100PJ 100PJna₂ 125AGB 125AGBh 125AGBp 125PB 125PBz_{na} (pH_9)
 250AGB 250CGB 250CGBs (pH_2) 250PB 250PBn (pH_2) 500AGB 500AGJ 500AGJs (pH_2) 500PB
 1AGB 1AGBna₂ 1AGBs (pH_2) 1AGBs (O&G) 1PB 1PBna (pH_12) _____ _____
 Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (Y) EnCores® (_____) TerraCores® (B) _____
 Air: Tediar™ Canister Sorbent Tube PUF _____ Other Matrix (____): _____
 Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag
 Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: CR
 s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, z_{na} = Zn (CH₃CO₂)₂ + NaOH Reviewed by: 106

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WORK ORDER NUMBER: 19-06-1771

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: California Environmental

Client Project Name: OOI

Attention: Charles Buckley
30423 Canwood St.
Suite 208
Agoura Hills, CA 91301-4316

Approved for release on 07/09/2019 by:
Don Burley
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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 Work Order Number: 19-06-1771

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 06/26/19. They were assigned to Work Order 19-06-1771.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-13A): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: California Environmental	Work Order:	19-06-1771
30423 Canwood St., Suite 208	Project Name:	OOI
Agoura Hills, CA 91301-4316	PO Number:	3029
	Date/Time Received:	06/26/19 17:50
	Number of Containers:	82

Attn: Charles Buckley

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
CESB11-GW	19-06-1771-1	06/26/19 07:50	3	Aqueous
CESB11-6.5'	19-06-1771-2	06/26/19 08:12	5	Solid
CESB11-11.5'	19-06-1771-3	06/26/19 08:26	5	Solid
CESB11-15.5'	19-06-1771-4	06/26/19 08:36	5	Solid
CESB11-20.5'	19-06-1771-5	06/26/19 08:49	5	Solid
CESB11-25.5'	19-06-1771-6	06/26/19 08:59	5	Solid
CESB11-30'	19-06-1771-7	06/26/19 09:17	4	Solid
CESB11-35.5'	19-06-1771-8	06/26/19 09:36	4	Solid
CESB11-40'	19-06-1771-9	06/26/19 10:10	3	Solid
CESB11-53'	19-06-1771-10	06/26/19 10:55	2	Solid
CESB12-6'	19-06-1771-11	06/26/19 11:45	5	Solid
CESB12-10'	19-06-1771-12	06/26/19 11:55	5	Solid
CESB12-15'	19-06-1771-13	06/26/19 12:15	5	Solid
CESB12-20'	19-06-1771-14	06/26/19 12:25	5	Solid
CESB12-25'	19-06-1771-15	06/26/19 12:40	5	Solid
CESB12-30'	19-06-1771-16	06/26/19 12:55	3	Solid
CESB12-38'	19-06-1771-17	06/26/19 13:08	3	Solid
CESB12-39.5'	19-06-1771-18	06/26/19 13:25	3	Solid
CESB12-42.5'	19-06-1771-19	06/26/19 13:45	3	Solid
CE DUP 1	19-06-1771-20	06/26/19 00:00	1	Solid
CESB12-46'	19-06-1771-21	06/26/19 14:05	3	Solid

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-6.5'	19-06-1771-2-A	06/26/19 08:12	Solid	GC 48	06/28/19	06/29/19 00:54	190628B08A

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	ND	4.9	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	82	61-145		


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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-11.5'	19-06-1771-3-A	06/26/19 08:26	Solid	GC 48	06/28/19	06/29/19 01:15	190628B08A

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	ND	4.9	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	73	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-15.5'	19-06-1771-4-A	06/26/19 08:36	Solid	GC 48	06/28/19	06/29/19 01:36	190628B08A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	67	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-20.5'	19-06-1771-5-A	06/26/19 08:49	Solid	GC 48	06/28/19	06/29/19 01:57	190628B08A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.1	1.00	
C7	ND	5.1	1.00	
C8	ND	5.1	1.00	
C9-C10	ND	5.1	1.00	
C11-C12	ND	5.1	1.00	
C13-C14	ND	5.1	1.00	
C15-C16	ND	5.1	1.00	
C17-C18	ND	5.1	1.00	
C19-C20	ND	5.1	1.00	
C21-C22	ND	5.1	1.00	
C23-C24	ND	5.1	1.00	
C25-C28	ND	5.1	1.00	
C29-C32	ND	5.1	1.00	
C33-C36	ND	5.1	1.00	
C37-C40	ND	5.1	1.00	
C41-C44	ND	5.1	1.00	
C6-C44 Total	ND	5.1	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	71	61-145		


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental 30423 Canwood St., Suite 208 Agoura Hills, CA 91301-4316	Date Received: 06/26/19 Work Order: 19-06-1771 Preparation: EPA 3550B Method: EPA 8015B (M) Units: mg/kg
Project: OOI	Page 5 of 13

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-25.5'	19-06-1771-6-A	06/26/19 08:59	Solid	GC 48	06/28/19	06/29/19 13:15	190628B08A

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	ND	4.9	1.00	
 <u>Surrogate</u>	 <u>Rec. (%)</u>	 <u>Control Limits</u>	 <u>Qualifiers</u>	
n-Octacosane	95	61-145		

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-30'	19-06-1771-7-A	06/26/19 09:17	Solid	GC 48	06/28/19	06/29/19 02:40	190628B08A

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.0	1.00	
C7	10	5.0	1.00	
C8	27	5.0	1.00	
C9-C10	64	5.0	1.00	
C11-C12	25	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	130	5.0	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	79	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-35.5'	19-06-1771-8-A	06/26/19 09:36	Solid	GC 48	06/28/19	06/29/19 03:01	190628B08A

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.1	1.00	
C7	ND	5.1	1.00	
C8	10	5.1	1.00	
C9-C10	24	5.1	1.00	
C11-C12	12	5.1	1.00	
C13-C14	ND	5.1	1.00	
C15-C16	ND	5.1	1.00	
C17-C18	ND	5.1	1.00	
C19-C20	ND	5.1	1.00	
C21-C22	ND	5.1	1.00	
C23-C24	ND	5.1	1.00	
C25-C28	ND	5.1	1.00	
C29-C32	ND	5.1	1.00	
C33-C36	ND	5.1	1.00	
C37-C40	ND	5.1	1.00	
C41-C44	ND	5.1	1.00	
C6-C44 Total	52	5.1	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	75	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-6'	19-06-1771-11-A	06/26/19 11:45	Solid	GC 48	06/28/19	06/29/19 03:43	190628B08A

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	5.7	5.0	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	82	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-10'	19-06-1771-12-A	06/26/19 11:55	Solid	GC 48	06/28/19	06/29/19 04:04	190628B08A

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.1	1.00	
C7	ND	5.1	1.00	
C8	ND	5.1	1.00	
C9-C10	ND	5.1	1.00	
C11-C12	ND	5.1	1.00	
C13-C14	ND	5.1	1.00	
C15-C16	ND	5.1	1.00	
C17-C18	ND	5.1	1.00	
C19-C20	ND	5.1	1.00	
C21-C22	ND	5.1	1.00	
C23-C24	ND	5.1	1.00	
C25-C28	ND	5.1	1.00	
C29-C32	ND	5.1	1.00	
C33-C36	ND	5.1	1.00	
C37-C40	ND	5.1	1.00	
C41-C44	ND	5.1	1.00	
C6-C44 Total	5.3	5.1	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	73	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-15'	19-06-1771-13-A	06/26/19 12:15	Solid	GC 48	06/28/19	06/29/19 04:25	190628B08A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	79	61-145		


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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-20'	19-06-1771-14-A	06/26/19 12:25	Solid	GC 48	06/28/19	06/29/19 04:46	190628B08A

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	ND	4.9	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	66	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-25'	19-06-1771-15-A	06/26/19 12:40	Solid	GC 48	06/28/19	06/29/19 05:07	190628B08A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.1	1.00	
C7	ND	5.1	1.00	
C8	ND	5.1	1.00	
C9-C10	ND	5.1	1.00	
C11-C12	ND	5.1	1.00	
C13-C14	ND	5.1	1.00	
C15-C16	ND	5.1	1.00	
C17-C18	ND	5.1	1.00	
C19-C20	ND	5.1	1.00	
C21-C22	ND	5.1	1.00	
C23-C24	ND	5.1	1.00	
C25-C28	ND	5.1	1.00	
C29-C32	ND	5.1	1.00	
C33-C36	ND	5.1	1.00	
C37-C40	ND	5.1	1.00	
C41-C44	ND	5.1	1.00	
C6-C44 Total	ND	5.1	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	77	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-15-490-3654	N/A	Solid	GC 48	06/28/19	06/28/19 23:51	190628B08A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	83	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-6.5'	19-06-1771-2-A	06/26/19 08:12	Solid	ICP 8300	07/01/19	07/01/19 21:53	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		9.37		0.746		0.995	
Lead		1.72		0.498		0.995	
CESB11-11.5'	19-06-1771-3-A	06/26/19 08:26	Solid	ICP 8300	07/01/19	07/01/19 22:04	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		14.1		0.750		1.00	
Lead		2.06		0.500		1.00	
CESB11-15.5'	19-06-1771-4-A	06/26/19 08:36	Solid	ICP 8300	07/01/19	07/01/19 22:06	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		17.8		0.732		0.976	
Lead		1.76		0.488		0.976	
CESB11-20.5'	19-06-1771-5-A	06/26/19 08:49	Solid	ICP 8300	07/01/19	07/01/19 22:07	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		3.98		0.746		0.995	
Lead		ND		0.498		0.995	
CESB11-25.5'	19-06-1771-6-A	06/26/19 08:59	Solid	ICP 8300	07/01/19	07/01/19 22:09	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		1.37		0.750		1.00	
Lead		0.795		0.500		1.00	
CESB11-30'	19-06-1771-7-A	06/26/19 09:17	Solid	ICP 8300	07/01/19	07/01/19 22:11	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		5.18		0.754		1.01	
Lead		1.25		0.503		1.01	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-35.5'	19-06-1771-8-A	06/26/19 09:36	Solid	ICP 8300	07/01/19	07/01/19 22:13	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		14.7		0.725		0.966	
Lead		0.956		0.483		0.966	
CESB12-6'	19-06-1771-11-A	06/26/19 11:45	Solid	ICP 8300	07/01/19	07/01/19 22:15	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		28.1		0.743		0.990	
Lead		1.26		0.495		0.990	
CESB12-10'	19-06-1771-12-A	06/26/19 11:55	Solid	ICP 8300	07/01/19	07/01/19 22:16	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.728		0.971	
Lead		ND		0.485		0.971	
CESB12-15'	19-06-1771-13-A	06/26/19 12:15	Solid	ICP 8300	07/01/19	07/01/19 22:18	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		2.17		0.728		0.971	
Lead		1.08		0.485		0.971	
CESB12-20'	19-06-1771-14-A	06/26/19 12:25	Solid	ICP 8300	07/01/19	07/01/19 22:24	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		2.88		0.735		0.980	
Lead		0.842		0.490		0.980	
CESB12-25'	19-06-1771-15-A	06/26/19 12:40	Solid	ICP 8300	07/01/19	07/01/19 22:26	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		2.63		0.728		0.971	
Lead		ND		0.485		0.971	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental	Date Received:	06/26/19
30423 Canwood St., Suite 208	Work Order:	19-06-1771
Agoura Hills, CA 91301-4316	Preparation:	EPA 3050B
	Method:	EPA 6010B
	Units:	mg/kg
Project: OOI		Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	097-01-002-28071	N/A	Solid	ICP 8300	07/01/19	07/01/19 21:46	190701L02A

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	ND	0.739	0.985	
Lead	ND	0.493	0.985	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-6.5'	19-06-1771-2-D	06/26/19 08:12	Solid	GC/MS OO	06/26/19	07/03/19 19:21	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	46	1.00	
Benzene	ND	0.91	1.00	
Bromobenzene	ND	0.91	1.00	
Bromochloromethane	ND	1.8	1.00	
Bromodichloromethane	ND	0.91	1.00	
Bromoform	ND	4.6	1.00	
Bromomethane	ND	18	1.00	
2-Butanone	ND	18	1.00	
n-Butylbenzene	ND	0.91	1.00	
sec-Butylbenzene	ND	0.91	1.00	
tert-Butylbenzene	ND	0.91	1.00	
Carbon Disulfide	ND	9.1	1.00	
Carbon Tetrachloride	ND	0.91	1.00	
Chlorobenzene	ND	0.91	1.00	
Chloroethane	ND	1.8	1.00	
Chloroform	ND	0.91	1.00	
Chloromethane	ND	18	1.00	
2-Chlorotoluene	ND	0.91	1.00	
4-Chlorotoluene	ND	0.91	1.00	
Dibromochloromethane	ND	1.8	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.6	1.00	
1,2-Dibromoethane	ND	0.91	1.00	
Dibromomethane	ND	0.91	1.00	
1,2-Dichlorobenzene	ND	0.91	1.00	
1,3-Dichlorobenzene	ND	0.91	1.00	
1,4-Dichlorobenzene	ND	0.91	1.00	
Dichlorodifluoromethane	ND	1.8	1.00	
1,1-Dichloroethane	ND	0.91	1.00	
1,2-Dichloroethane	ND	0.91	1.00	
1,1-Dichloroethene	ND	0.91	1.00	
c-1,2-Dichloroethene	ND	0.91	1.00	
t-1,2-Dichloroethene	ND	0.91	1.00	
1,2-Dichloropropane	ND	0.91	1.00	
1,3-Dichloropropane	ND	0.91	1.00	
2,2-Dichloropropane	ND	4.6	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.8	1.00	
c-1,3-Dichloropropene	ND	0.91	1.00	
t-1,3-Dichloropropene	ND	1.8	1.00	
Ethylbenzene	ND	0.91	1.00	
2-Hexanone	ND	18	1.00	
Isopropylbenzene	ND	0.91	1.00	
p-Isopropyltoluene	ND	0.91	1.00	
Methylene Chloride	ND	9.1	1.00	
4-Methyl-2-Pentanone	ND	18	1.00	
Naphthalene	ND	9.1	1.00	
n-Propylbenzene	ND	1.8	1.00	
Styrene	ND	0.91	1.00	
1,1,1,2-Tetrachloroethane	ND	0.91	1.00	
1,1,2,2-Tetrachloroethane	ND	1.8	1.00	
Tetrachloroethene	ND	0.91	1.00	
Toluene	ND	0.91	1.00	
1,2,3-Trichlorobenzene	ND	1.8	1.00	
1,2,4-Trichlorobenzene	ND	1.8	1.00	
1,1,1-Trichloroethane	ND	0.91	1.00	
1,1,2-Trichloroethane	ND	0.91	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.1	1.00	
Trichloroethene	ND	1.8	1.00	
Trichlorofluoromethane	ND	9.1	1.00	
1,2,3-Trichloropropane	ND	1.8	1.00	
1,2,4-Trimethylbenzene	ND	1.8	1.00	
1,3,5-Trimethylbenzene	ND	1.8	1.00	
Vinyl Acetate	ND	9.1	1.00	
Vinyl Chloride	ND	0.91	1.00	
p/m-Xylene	ND	1.8	1.00	
o-Xylene	ND	0.91	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.8	1.00	
Tert-Butyl Alcohol (TBA)	ND	18	1.00	
Diisopropyl Ether (DIPE)	ND	0.91	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.91	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.91	1.00	
Ethanol	ND	460	1.00	
TPPH	ND	46	1.00	
Gasoline Range Organics (C4-C12)	ND	46	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	108	79-139	
1,2-Dichloroethane-d4	113	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-11.5'	19-06-1771-3-D	06/26/19 08:26	Solid	GC/MS OO	06/26/19	07/03/19 19:50	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	68	1.00	
Benzene	ND	1.4	1.00	
Bromobenzene	ND	1.4	1.00	
Bromochloromethane	ND	2.7	1.00	
Bromodichloromethane	ND	1.4	1.00	
Bromoform	ND	6.8	1.00	
Bromomethane	ND	27	1.00	
2-Butanone	ND	27	1.00	
n-Butylbenzene	ND	1.4	1.00	
sec-Butylbenzene	ND	1.4	1.00	
tert-Butylbenzene	ND	1.4	1.00	
Carbon Disulfide	ND	14	1.00	
Carbon Tetrachloride	ND	1.4	1.00	
Chlorobenzene	ND	1.4	1.00	
Chloroethane	ND	2.7	1.00	
Chloroform	ND	1.4	1.00	
Chloromethane	ND	27	1.00	
2-Chlorotoluene	ND	1.4	1.00	
4-Chlorotoluene	ND	1.4	1.00	
Dibromochloromethane	ND	2.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	6.8	1.00	
1,2-Dibromoethane	ND	1.4	1.00	
Dibromomethane	ND	1.4	1.00	
1,2-Dichlorobenzene	ND	1.4	1.00	
1,3-Dichlorobenzene	ND	1.4	1.00	
1,4-Dichlorobenzene	ND	1.4	1.00	
Dichlorodifluoromethane	ND	2.7	1.00	
1,1-Dichloroethane	ND	1.4	1.00	
1,2-Dichloroethane	ND	1.4	1.00	
1,1-Dichloroethene	ND	1.4	1.00	
c-1,2-Dichloroethene	ND	1.4	1.00	
t-1,2-Dichloroethene	ND	1.4	1.00	
1,2-Dichloropropane	ND	1.4	1.00	
1,3-Dichloropropane	ND	1.4	1.00	
2,2-Dichloropropane	ND	6.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.7	1.00	
c-1,3-Dichloropropene	ND	1.4	1.00	
t-1,3-Dichloropropene	ND	2.7	1.00	
Ethylbenzene	ND	1.4	1.00	
2-Hexanone	ND	27	1.00	
Isopropylbenzene	ND	1.4	1.00	
p-Isopropyltoluene	ND	1.4	1.00	
Methylene Chloride	ND	14	1.00	
4-Methyl-2-Pentanone	ND	27	1.00	
Naphthalene	ND	14	1.00	
n-Propylbenzene	ND	2.7	1.00	
Styrene	ND	1.4	1.00	
1,1,1,2-Tetrachloroethane	ND	1.4	1.00	
1,1,2,2-Tetrachloroethane	ND	2.7	1.00	
Tetrachloroethene	ND	1.4	1.00	
Toluene	ND	1.4	1.00	
1,2,3-Trichlorobenzene	ND	2.7	1.00	
1,2,4-Trichlorobenzene	ND	2.7	1.00	
1,1,1-Trichloroethane	ND	1.4	1.00	
1,1,2-Trichloroethane	ND	1.4	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	14	1.00	
Trichloroethene	ND	2.7	1.00	
Trichlorofluoromethane	ND	14	1.00	
1,2,3-Trichloropropane	ND	2.7	1.00	
1,2,4-Trimethylbenzene	ND	2.7	1.00	
1,3,5-Trimethylbenzene	ND	2.7	1.00	
Vinyl Acetate	ND	14	1.00	
Vinyl Chloride	ND	1.4	1.00	
p/m-Xylene	ND	2.7	1.00	
o-Xylene	ND	1.4	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.7	1.00	
Tert-Butyl Alcohol (TBA)	ND	27	1.00	
Diisopropyl Ether (DIPE)	ND	1.4	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.4	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.4	1.00	
Ethanol	ND	680	1.00	
TPPH	ND	68	1.00	
Gasoline Range Organics (C4-C12)	ND	68	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	105	79-139	
1,2-Dichloroethane-d4	116	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-15.5'	19-06-1771-4-D	06/26/19 08:36	Solid	GC/MS OO	06/26/19	07/03/19 20:20	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	42	1.00	
Benzene	ND	0.84	1.00	
Bromobenzene	ND	0.84	1.00	
Bromochloromethane	ND	1.7	1.00	
Bromodichloromethane	ND	0.84	1.00	
Bromoform	ND	4.2	1.00	
Bromomethane	ND	17	1.00	
2-Butanone	ND	17	1.00	
n-Butylbenzene	ND	0.84	1.00	
sec-Butylbenzene	ND	0.84	1.00	
tert-Butylbenzene	ND	0.84	1.00	
Carbon Disulfide	ND	8.4	1.00	
Carbon Tetrachloride	ND	0.84	1.00	
Chlorobenzene	ND	0.84	1.00	
Chloroethane	ND	1.7	1.00	
Chloroform	ND	0.84	1.00	
Chloromethane	ND	17	1.00	
2-Chlorotoluene	ND	0.84	1.00	
4-Chlorotoluene	ND	0.84	1.00	
Dibromochloromethane	ND	1.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.2	1.00	
1,2-Dibromoethane	ND	0.84	1.00	
Dibromomethane	ND	0.84	1.00	
1,2-Dichlorobenzene	ND	0.84	1.00	
1,3-Dichlorobenzene	ND	0.84	1.00	
1,4-Dichlorobenzene	ND	0.84	1.00	
Dichlorodifluoromethane	ND	1.7	1.00	
1,1-Dichloroethane	ND	0.84	1.00	
1,2-Dichloroethane	ND	0.84	1.00	
1,1-Dichloroethene	ND	0.84	1.00	
c-1,2-Dichloroethene	ND	0.84	1.00	
t-1,2-Dichloroethene	ND	0.84	1.00	
1,2-Dichloropropane	ND	0.84	1.00	
1,3-Dichloropropane	ND	0.84	1.00	
2,2-Dichloropropane	ND	4.2	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.7	1.00	
c-1,3-Dichloropropene	ND	0.84	1.00	
t-1,3-Dichloropropene	ND	1.7	1.00	
Ethylbenzene	ND	0.84	1.00	
2-Hexanone	ND	17	1.00	
Isopropylbenzene	ND	0.84	1.00	
p-Isopropyltoluene	ND	0.84	1.00	
Methylene Chloride	ND	8.4	1.00	
4-Methyl-2-Pentanone	ND	17	1.00	
Naphthalene	ND	8.4	1.00	
n-Propylbenzene	ND	1.7	1.00	
Styrene	ND	0.84	1.00	
1,1,1,2-Tetrachloroethane	ND	0.84	1.00	
1,1,2,2-Tetrachloroethane	ND	1.7	1.00	
Tetrachloroethene	ND	0.84	1.00	
Toluene	ND	0.84	1.00	
1,2,3-Trichlorobenzene	ND	1.7	1.00	
1,2,4-Trichlorobenzene	ND	1.7	1.00	
1,1,1-Trichloroethane	ND	0.84	1.00	
1,1,2-Trichloroethane	ND	0.84	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.4	1.00	
Trichloroethene	ND	1.7	1.00	
Trichlorofluoromethane	ND	8.4	1.00	
1,2,3-Trichloropropane	ND	1.7	1.00	
1,2,4-Trimethylbenzene	ND	1.7	1.00	
1,3,5-Trimethylbenzene	ND	1.7	1.00	
Vinyl Acetate	ND	8.4	1.00	
Vinyl Chloride	ND	0.84	1.00	
p/m-Xylene	ND	1.7	1.00	
o-Xylene	ND	0.84	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.7	1.00	
Tert-Butyl Alcohol (TBA)	ND	17	1.00	
Diisopropyl Ether (DIPE)	ND	0.84	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.84	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.84	1.00	
Ethanol	ND	420	1.00	
TPPH	ND	42	1.00	
Gasoline Range Organics (C4-C12)	ND	42	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	108	79-139	
1,2-Dichloroethane-d4	122	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-20.5'	19-06-1771-5-D	06/26/19 08:49	Solid	GC/MS OO	06/26/19	07/04/19 19:05	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	48	1.00	
Benzene	ND	0.97	1.00	
Bromobenzene	ND	0.97	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.97	1.00	
Bromoform	ND	4.8	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.97	1.00	
sec-Butylbenzene	ND	0.97	1.00	
tert-Butylbenzene	ND	0.97	1.00	
Carbon Disulfide	ND	9.7	1.00	
Carbon Tetrachloride	ND	0.97	1.00	
Chlorobenzene	ND	0.97	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.97	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.97	1.00	
4-Chlorotoluene	ND	0.97	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.8	1.00	
1,2-Dibromoethane	ND	0.97	1.00	
Dibromomethane	ND	0.97	1.00	
1,2-Dichlorobenzene	ND	0.97	1.00	
1,3-Dichlorobenzene	ND	0.97	1.00	
1,4-Dichlorobenzene	ND	0.97	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.97	1.00	
1,2-Dichloroethane	ND	0.97	1.00	
1,1-Dichloroethene	ND	0.97	1.00	
c-1,2-Dichloroethene	ND	0.97	1.00	
t-1,2-Dichloroethene	ND	0.97	1.00	
1,2-Dichloropropane	ND	0.97	1.00	
1,3-Dichloropropane	ND	0.97	1.00	
2,2-Dichloropropane	ND	4.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.97	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.97	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.97	1.00	
p-Isopropyltoluene	ND	0.97	1.00	
Methylene Chloride	ND	9.7	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.7	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.97	1.00	
1,1,1,2-Tetrachloroethane	ND	0.97	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	ND	0.97	1.00	
Toluene	ND	0.97	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.97	1.00	
1,1,2-Trichloroethane	ND	0.97	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.7	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.7	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.7	1.00	
Vinyl Chloride	ND	0.97	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.97	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	
Tert-Butyl Alcohol (TBA)	ND	19	1.00	
Diisopropyl Ether (DIPE)	ND	0.97	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.97	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.97	1.00	
Ethanol	ND	480	1.00	
TPPH	ND	48	1.00	
Gasoline Range Organics (C4-C12)	ND	48	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	101	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-25.5'	19-06-1771-6-D	06/26/19 08:59	Solid	GC/MS OO	06/26/19	07/04/19 19:35	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	48	1.00	
Benzene	ND	0.96	1.00	
Bromobenzene	ND	0.96	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.96	1.00	
Bromoform	ND	4.8	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.96	1.00	
sec-Butylbenzene	ND	0.96	1.00	
tert-Butylbenzene	ND	0.96	1.00	
Carbon Disulfide	ND	9.6	1.00	
Carbon Tetrachloride	ND	0.96	1.00	
Chlorobenzene	ND	0.96	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.96	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.96	1.00	
4-Chlorotoluene	ND	0.96	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.8	1.00	
1,2-Dibromoethane	ND	0.96	1.00	
Dibromomethane	ND	0.96	1.00	
1,2-Dichlorobenzene	ND	0.96	1.00	
1,3-Dichlorobenzene	ND	0.96	1.00	
1,4-Dichlorobenzene	ND	0.96	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.96	1.00	
1,2-Dichloroethane	ND	0.96	1.00	
1,1-Dichloroethene	ND	0.96	1.00	
c-1,2-Dichloroethene	ND	0.96	1.00	
t-1,2-Dichloroethene	ND	0.96	1.00	
1,2-Dichloropropane	ND	0.96	1.00	
1,3-Dichloropropane	ND	0.96	1.00	
2,2-Dichloropropane	ND	4.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.96	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.96	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.96	1.00	
p-Isopropyltoluene	ND	0.96	1.00	
Methylene Chloride	ND	9.6	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.6	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.96	1.00	
1,1,1,2-Tetrachloroethane	ND	0.96	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	ND	0.96	1.00	
Toluene	ND	0.96	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.96	1.00	
1,1,2-Trichloroethane	ND	0.96	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.6	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.6	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.6	1.00	
Vinyl Chloride	ND	0.96	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.96	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	
Tert-Butyl Alcohol (TBA)	ND	19	1.00	
Diisopropyl Ether (DIPE)	ND	0.96	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.96	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.96	1.00	
Ethanol	ND	480	1.00	
TPPH	ND	48	1.00	
Gasoline Range Organics (C4-C12)	ND	48	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	97	80-120	
Toluene-d8-TPPH	99	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-30'	19-06-1771-7-C	06/26/19 09:17	Solid	GC/MS OO	06/26/19	07/07/19 20:51	190707L004

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	44	1.00	
Benzene	1.3	0.88	1.00	
Bromobenzene	ND	0.88	1.00	
Bromochloromethane	ND	1.8	1.00	
Bromodichloromethane	ND	0.88	1.00	
Bromoform	ND	4.4	1.00	
Bromomethane	ND	18	1.00	
2-Butanone	ND	18	1.00	
n-Butylbenzene	ND	0.88	1.00	
sec-Butylbenzene	1.9	0.88	1.00	
tert-Butylbenzene	ND	0.88	1.00	
Carbon Disulfide	ND	8.8	1.00	
Carbon Tetrachloride	ND	0.88	1.00	
Chlorobenzene	ND	0.88	1.00	
Chloroethane	ND	1.8	1.00	
Chloroform	ND	0.88	1.00	
Chloromethane	ND	18	1.00	
2-Chlorotoluene	ND	0.88	1.00	
4-Chlorotoluene	ND	0.88	1.00	
Dibromochloromethane	ND	1.8	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.4	1.00	
1,2-Dibromoethane	ND	0.88	1.00	
Dibromomethane	ND	0.88	1.00	
1,2-Dichlorobenzene	ND	0.88	1.00	
1,3-Dichlorobenzene	ND	0.88	1.00	
1,4-Dichlorobenzene	ND	0.88	1.00	
Dichlorodifluoromethane	ND	1.8	1.00	
1,1-Dichloroethane	ND	0.88	1.00	
1,2-Dichloroethane	ND	0.88	1.00	
1,1-Dichloroethene	ND	0.88	1.00	
c-1,2-Dichloroethene	ND	0.88	1.00	
t-1,2-Dichloroethene	ND	0.88	1.00	
1,2-Dichloropropane	ND	0.88	1.00	
1,3-Dichloropropane	ND	0.88	1.00	
2,2-Dichloropropane	ND	4.4	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.8	1.00	
c-1,3-Dichloropropene	ND	0.88	1.00	
t-1,3-Dichloropropene	ND	1.8	1.00	
Ethylbenzene	17	0.88	1.00	
2-Hexanone	ND	18	1.00	
Isopropylbenzene	5.3	0.88	1.00	
p-Isopropyltoluene	4.8	0.88	1.00	
Methylene Chloride	ND	8.8	1.00	
4-Methyl-2-Pentanone	ND	18	1.00	
Naphthalene	ND	8.8	1.00	
n-Propylbenzene	6.0	1.8	1.00	
Styrene	ND	0.88	1.00	
1,1,1,2-Tetrachloroethane	ND	0.88	1.00	
1,1,2,2-Tetrachloroethane	ND	1.8	1.00	
Tetrachloroethene	ND	0.88	1.00	
Toluene	ND	0.88	1.00	
1,2,3-Trichlorobenzene	ND	1.8	1.00	
1,2,4-Trichlorobenzene	ND	1.8	1.00	
1,1,1-Trichloroethane	ND	0.88	1.00	
1,1,2-Trichloroethane	ND	0.88	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.8	1.00	
Trichloroethene	ND	1.8	1.00	
Trichlorofluoromethane	ND	8.8	1.00	
1,2,3-Trichloropropane	ND	1.8	1.00	
1,2,4-Trimethylbenzene	39	1.8	1.00	
1,3,5-Trimethylbenzene	15	1.8	1.00	
Vinyl Acetate	ND	8.8	1.00	
Vinyl Chloride	ND	0.88	1.00	
p/m-Xylene	19	1.8	1.00	
o-Xylene	ND	0.88	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.8	1.00	
Tert-Butyl Alcohol (TBA)	ND	18	1.00	
Diisopropyl Ether (DIPE)	ND	0.88	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.88	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.88	1.00	
Ethanol	ND	440	1.00	
TPPH	3200	44	1.00	
Gasoline Range Organics (C4-C12)	2800	44	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	108	79-139	
1,2-Dichloroethane-d4	112	71-155	
1,4-Bromofluorobenzene	106	80-120	
Toluene-d8	105	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-35.5'	19-06-1771-8-E	06/26/19 09:36	Solid	GC/MS OO	06/26/19	07/04/19 20:33	190704L020

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	4400	100	
Benzene	ND	87	100	
Bromobenzene	ND	87	100	
Bromochloromethane	ND	170	100	
Bromodichloromethane	ND	87	100	
Bromoform	ND	440	100	
Bromomethane	ND	1700	100	
2-Butanone	ND	1700	100	
n-Butylbenzene	320	87	100	
sec-Butylbenzene	150	87	100	
tert-Butylbenzene	ND	87	100	
Carbon Disulfide	ND	870	100	
Carbon Tetrachloride	ND	87	100	
Chlorobenzene	ND	87	100	
Chloroethane	ND	170	100	
Chloroform	ND	87	100	
Chloromethane	ND	1700	100	
2-Chlorotoluene	ND	87	100	
4-Chlorotoluene	ND	87	100	
Dibromochloromethane	ND	170	100	
1,2-Dibromo-3-Chloropropane	ND	440	100	
1,2-Dibromoethane	ND	87	100	
Dibromomethane	ND	87	100	
1,2-Dichlorobenzene	ND	87	100	
1,3-Dichlorobenzene	ND	87	100	
1,4-Dichlorobenzene	ND	87	100	
Dichlorodifluoromethane	ND	170	100	
1,1-Dichloroethane	ND	87	100	
1,2-Dichloroethane	ND	87	100	
1,1-Dichloroethene	ND	87	100	
c-1,2-Dichloroethene	ND	87	100	
t-1,2-Dichloroethene	ND	87	100	
1,2-Dichloropropane	ND	87	100	
1,3-Dichloropropane	ND	87	100	
2,2-Dichloropropane	ND	440	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	170	100	
c-1,3-Dichloropropene	ND	87	100	
t-1,3-Dichloropropene	ND	170	100	
Ethylbenzene	950	87	100	
2-Hexanone	ND	1700	100	
Isopropylbenzene	450	87	100	
p-Isopropyltoluene	360	87	100	
Methylene Chloride	ND	870	100	
4-Methyl-2-Pentanone	ND	1700	100	
Naphthalene	ND	870	100	
n-Propylbenzene	520	170	100	
Styrene	ND	87	100	
1,1,1,2-Tetrachloroethane	ND	87	100	
1,1,2,2-Tetrachloroethane	ND	170	100	
Tetrachloroethene	ND	87	100	
Toluene	ND	87	100	
1,2,3-Trichlorobenzene	ND	170	100	
1,2,4-Trichlorobenzene	ND	170	100	
1,1,1-Trichloroethane	ND	87	100	
1,1,2-Trichloroethane	ND	87	100	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	870	100	
Trichloroethene	ND	170	100	
Trichlorofluoromethane	ND	870	100	
1,2,3-Trichloropropane	ND	170	100	
1,2,4-Trimethylbenzene	1700	170	100	
1,3,5-Trimethylbenzene	310	170	100	
Vinyl Acetate	ND	870	100	
Vinyl Chloride	ND	87	100	
p/m-Xylene	670	170	100	
o-Xylene	100	87	100	
Methyl-t-Butyl Ether (MTBE)	ND	170	100	
Tert-Butyl Alcohol (TBA)	ND	1700	100	
Diisopropyl Ether (DIPE)	ND	87	100	
Ethyl-t-Butyl Ether (ETBE)	ND	87	100	
Tert-Amyl-Methyl Ether (TAME)	ND	87	100	
Ethanol	ND	44000	100	
TPPH	270000	4400	100	
Gasoline Range Organics (C4-C12)	220000	4400	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	92	79-139	
1,2-Dichloroethane-d4	87	71-155	
1,4-Bromofluorobenzene	101	80-120	
Toluene-d8	105	80-120	
Toluene-d8-TPPH	99	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-40'	19-06-1771-9-B	06/26/19 10:10	Solid	GC/MS OO	06/26/19	07/03/19 20:49	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	41	1.00	
Benzene	3.9	0.81	1.00	
Bromobenzene	ND	0.81	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.81	1.00	
Bromoform	ND	4.1	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.81	1.00	
sec-Butylbenzene	0.86	0.81	1.00	
tert-Butylbenzene	ND	0.81	1.00	
Carbon Disulfide	ND	8.1	1.00	
Carbon Tetrachloride	ND	0.81	1.00	
Chlorobenzene	ND	0.81	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.81	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.81	1.00	
4-Chlorotoluene	ND	0.81	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.1	1.00	
1,2-Dibromoethane	ND	0.81	1.00	
Dibromomethane	ND	0.81	1.00	
1,2-Dichlorobenzene	ND	0.81	1.00	
1,3-Dichlorobenzene	ND	0.81	1.00	
1,4-Dichlorobenzene	ND	0.81	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.81	1.00	
1,2-Dichloroethane	ND	0.81	1.00	
1,1-Dichloroethene	ND	0.81	1.00	
c-1,2-Dichloroethene	ND	0.81	1.00	
t-1,2-Dichloroethene	ND	0.81	1.00	
1,2-Dichloropropane	ND	0.81	1.00	
1,3-Dichloropropane	ND	0.81	1.00	
2,2-Dichloropropane	ND	4.1	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.81	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.81	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	5.2	0.81	1.00	
p-Isopropyltoluene	2.2	0.81	1.00	
Methylene Chloride	ND	8.1	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	8.1	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.81	1.00	
1,1,1,2-Tetrachloroethane	ND	0.81	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.81	1.00	
Toluene	1.3	0.81	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.81	1.00	
1,1,2-Trichloroethane	ND	0.81	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.1	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	8.1	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	8.1	1.00	
Vinyl Chloride	ND	0.81	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.81	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.81	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.81	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.81	1.00	
Ethanol	ND	410	1.00	
TPPH	720	41	1.00	
Gasoline Range Organics (C4-C12)	690	41	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	102	79-139	
1,2-Dichloroethane-d4	110	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	103	80-120	
Toluene-d8-TPPH	101	80-120	



Calscience

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-53'	19-06-1771-10-B	06/26/19 10:55	Solid	GC/MS OO	06/26/19	07/03/19 21:19	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	39	1.00	
Benzene	ND	0.79	1.00	
Bromobenzene	ND	0.79	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.79	1.00	
Bromoform	ND	3.9	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.79	1.00	
sec-Butylbenzene	ND	0.79	1.00	
tert-Butylbenzene	ND	0.79	1.00	
Carbon Disulfide	ND	7.9	1.00	
Carbon Tetrachloride	ND	0.79	1.00	
Chlorobenzene	ND	0.79	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.79	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.79	1.00	
4-Chlorotoluene	ND	0.79	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.9	1.00	
1,2-Dibromoethane	ND	0.79	1.00	
Dibromomethane	ND	0.79	1.00	
1,2-Dichlorobenzene	ND	0.79	1.00	
1,3-Dichlorobenzene	ND	0.79	1.00	
1,4-Dichlorobenzene	ND	0.79	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.79	1.00	
1,2-Dichloroethane	ND	0.79	1.00	
1,1-Dichloroethene	ND	0.79	1.00	
c-1,2-Dichloroethene	ND	0.79	1.00	
t-1,2-Dichloroethene	ND	0.79	1.00	
1,2-Dichloropropane	ND	0.79	1.00	
1,3-Dichloropropane	ND	0.79	1.00	
2,2-Dichloropropane	ND	3.9	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.79	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.79	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.79	1.00	
p-Isopropyltoluene	ND	0.79	1.00	
Methylene Chloride	ND	7.9	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	7.9	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.79	1.00	
1,1,1,2-Tetrachloroethane	ND	0.79	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.79	1.00	
Toluene	ND	0.79	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.79	1.00	
1,1,2-Trichloroethane	ND	0.79	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.9	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	7.9	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	7.9	1.00	
Vinyl Chloride	ND	0.79	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.79	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.79	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.79	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.79	1.00	
Ethanol	ND	390	1.00	
TPPH	110	39	1.00	
Gasoline Range Organics (C4-C12)	100	39	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	105	79-139	
1,2-Dichloroethane-d4	111	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-6'	19-06-1771-11-D	06/26/19 11:45	Solid	GC/MS OO	06/26/19	07/03/19 21:48	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	37	1.00	
Benzene	ND	0.74	1.00	
Bromobenzene	ND	0.74	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.74	1.00	
Bromoform	ND	3.7	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	ND	0.74	1.00	
sec-Butylbenzene	ND	0.74	1.00	
tert-Butylbenzene	ND	0.74	1.00	
Carbon Disulfide	ND	7.4	1.00	
Carbon Tetrachloride	ND	0.74	1.00	
Chlorobenzene	ND	0.74	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.74	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.74	1.00	
4-Chlorotoluene	ND	0.74	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.7	1.00	
1,2-Dibromoethane	ND	0.74	1.00	
Dibromomethane	ND	0.74	1.00	
1,2-Dichlorobenzene	ND	0.74	1.00	
1,3-Dichlorobenzene	ND	0.74	1.00	
1,4-Dichlorobenzene	ND	0.74	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.74	1.00	
1,2-Dichloroethane	ND	0.74	1.00	
1,1-Dichloroethene	ND	0.74	1.00	
c-1,2-Dichloroethene	ND	0.74	1.00	
t-1,2-Dichloroethene	ND	0.74	1.00	
1,2-Dichloropropane	ND	0.74	1.00	
1,3-Dichloropropane	ND	0.74	1.00	
2,2-Dichloropropane	ND	3.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.74	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	ND	0.74	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	ND	0.74	1.00	
p-Isopropyltoluene	ND	0.74	1.00	
Methylene Chloride	ND	7.4	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.4	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.74	1.00	
1,1,1,2-Tetrachloroethane	ND	0.74	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.74	1.00	
Toluene	ND	0.74	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.74	1.00	
1,1,2-Trichloroethane	ND	0.74	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.4	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.4	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.4	1.00	
Vinyl Chloride	ND	0.74	1.00	
p/m-Xylene	ND	1.5	1.00	
o-Xylene	ND	0.74	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.74	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.74	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.74	1.00	
Ethanol	ND	370	1.00	
TPPH	ND	37	1.00	
Gasoline Range Organics (C4-C12)	ND	37	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	106	79-139	
1,2-Dichloroethane-d4	114	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-10'	19-06-1771-12-D	06/26/19 11:55	Solid	GC/MS OO	06/26/19	07/03/19 22:18	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	35	1.00	
Benzene	ND	0.70	1.00	
Bromobenzene	ND	0.70	1.00	
Bromochloromethane	ND	1.4	1.00	
Bromodichloromethane	ND	0.70	1.00	
Bromoform	ND	3.5	1.00	
Bromomethane	ND	14	1.00	
2-Butanone	ND	14	1.00	
n-Butylbenzene	ND	0.70	1.00	
sec-Butylbenzene	ND	0.70	1.00	
tert-Butylbenzene	ND	0.70	1.00	
Carbon Disulfide	ND	7.0	1.00	
Carbon Tetrachloride	ND	0.70	1.00	
Chlorobenzene	ND	0.70	1.00	
Chloroethane	ND	1.4	1.00	
Chloroform	ND	0.70	1.00	
Chloromethane	ND	14	1.00	
2-Chlorotoluene	ND	0.70	1.00	
4-Chlorotoluene	ND	0.70	1.00	
Dibromochloromethane	ND	1.4	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.5	1.00	
1,2-Dibromoethane	ND	0.70	1.00	
Dibromomethane	ND	0.70	1.00	
1,2-Dichlorobenzene	ND	0.70	1.00	
1,3-Dichlorobenzene	ND	0.70	1.00	
1,4-Dichlorobenzene	ND	0.70	1.00	
Dichlorodifluoromethane	ND	1.4	1.00	
1,1-Dichloroethane	ND	0.70	1.00	
1,2-Dichloroethane	ND	0.70	1.00	
1,1-Dichloroethene	ND	0.70	1.00	
c-1,2-Dichloroethene	ND	0.70	1.00	
t-1,2-Dichloroethene	ND	0.70	1.00	
1,2-Dichloropropane	ND	0.70	1.00	
1,3-Dichloropropane	ND	0.70	1.00	
2,2-Dichloropropane	ND	3.5	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.4	1.00	
c-1,3-Dichloropropene	ND	0.70	1.00	
t-1,3-Dichloropropene	ND	1.4	1.00	
Ethylbenzene	ND	0.70	1.00	
2-Hexanone	ND	14	1.00	
Isopropylbenzene	ND	0.70	1.00	
p-Isopropyltoluene	ND	0.70	1.00	
Methylene Chloride	ND	7.0	1.00	
4-Methyl-2-Pentanone	ND	14	1.00	
Naphthalene	ND	7.0	1.00	
n-Propylbenzene	ND	1.4	1.00	
Styrene	ND	0.70	1.00	
1,1,1,2-Tetrachloroethane	ND	0.70	1.00	
1,1,2,2-Tetrachloroethane	ND	1.4	1.00	
Tetrachloroethene	ND	0.70	1.00	
Toluene	ND	0.70	1.00	
1,2,3-Trichlorobenzene	ND	1.4	1.00	
1,2,4-Trichlorobenzene	ND	1.4	1.00	
1,1,1-Trichloroethane	ND	0.70	1.00	
1,1,2-Trichloroethane	ND	0.70	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.0	1.00	
Trichloroethene	ND	1.4	1.00	
Trichlorofluoromethane	ND	7.0	1.00	
1,2,3-Trichloropropane	ND	1.4	1.00	
1,2,4-Trimethylbenzene	ND	1.4	1.00	
1,3,5-Trimethylbenzene	ND	1.4	1.00	
Vinyl Acetate	ND	7.0	1.00	
Vinyl Chloride	ND	0.70	1.00	
p/m-Xylene	ND	1.4	1.00	
o-Xylene	ND	0.70	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.4	1.00	
Tert-Butyl Alcohol (TBA)	ND	14	1.00	
Diisopropyl Ether (DIPE)	ND	0.70	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.70	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.70	1.00	
Ethanol	ND	350	1.00	
TPPH	ND	35	1.00	
Gasoline Range Organics (C4-C12)	ND	35	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	108	79-139	
1,2-Dichloroethane-d4	115	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-15'	19-06-1771-13-D	06/26/19 12:15	Solid	GC/MS OO	06/26/19	07/03/19 22:47	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	35	1.00	
Benzene	ND	0.71	1.00	
Bromobenzene	ND	0.71	1.00	
Bromochloromethane	ND	1.4	1.00	
Bromodichloromethane	ND	0.71	1.00	
Bromoform	ND	3.5	1.00	
Bromomethane	ND	14	1.00	
2-Butanone	ND	14	1.00	
n-Butylbenzene	ND	0.71	1.00	
sec-Butylbenzene	ND	0.71	1.00	
tert-Butylbenzene	ND	0.71	1.00	
Carbon Disulfide	ND	7.1	1.00	
Carbon Tetrachloride	ND	0.71	1.00	
Chlorobenzene	ND	0.71	1.00	
Chloroethane	ND	1.4	1.00	
Chloroform	ND	0.71	1.00	
Chloromethane	ND	14	1.00	
2-Chlorotoluene	ND	0.71	1.00	
4-Chlorotoluene	ND	0.71	1.00	
Dibromochloromethane	ND	1.4	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.5	1.00	
1,2-Dibromoethane	ND	0.71	1.00	
Dibromomethane	ND	0.71	1.00	
1,2-Dichlorobenzene	ND	0.71	1.00	
1,3-Dichlorobenzene	ND	0.71	1.00	
1,4-Dichlorobenzene	ND	0.71	1.00	
Dichlorodifluoromethane	ND	1.4	1.00	
1,1-Dichloroethane	ND	0.71	1.00	
1,2-Dichloroethane	ND	0.71	1.00	
1,1-Dichloroethene	ND	0.71	1.00	
c-1,2-Dichloroethene	ND	0.71	1.00	
t-1,2-Dichloroethene	ND	0.71	1.00	
1,2-Dichloropropane	ND	0.71	1.00	
1,3-Dichloropropane	ND	0.71	1.00	
2,2-Dichloropropane	ND	3.5	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.4	1.00	
c-1,3-Dichloropropene	ND	0.71	1.00	
t-1,3-Dichloropropene	ND	1.4	1.00	
Ethylbenzene	ND	0.71	1.00	
2-Hexanone	ND	14	1.00	
Isopropylbenzene	ND	0.71	1.00	
p-Isopropyltoluene	ND	0.71	1.00	
Methylene Chloride	ND	7.1	1.00	
4-Methyl-2-Pentanone	ND	14	1.00	
Naphthalene	ND	7.1	1.00	
n-Propylbenzene	ND	1.4	1.00	
Styrene	ND	0.71	1.00	
1,1,1,2-Tetrachloroethane	ND	0.71	1.00	
1,1,2,2-Tetrachloroethane	ND	1.4	1.00	
Tetrachloroethene	ND	0.71	1.00	
Toluene	ND	0.71	1.00	
1,2,3-Trichlorobenzene	ND	1.4	1.00	
1,2,4-Trichlorobenzene	ND	1.4	1.00	
1,1,1-Trichloroethane	ND	0.71	1.00	
1,1,2-Trichloroethane	ND	0.71	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.1	1.00	
Trichloroethene	ND	1.4	1.00	
Trichlorofluoromethane	ND	7.1	1.00	
1,2,3-Trichloropropane	ND	1.4	1.00	
1,2,4-Trimethylbenzene	ND	1.4	1.00	
1,3,5-Trimethylbenzene	ND	1.4	1.00	
Vinyl Acetate	ND	7.1	1.00	
Vinyl Chloride	ND	0.71	1.00	
p/m-Xylene	ND	1.4	1.00	
o-Xylene	ND	0.71	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.4	1.00	
Tert-Butyl Alcohol (TBA)	ND	14	1.00	
Diisopropyl Ether (DIPE)	ND	0.71	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.71	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.71	1.00	
Ethanol	ND	350	1.00	
TPPH	ND	35	1.00	
Gasoline Range Organics (C4-C12)	ND	35	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	109	79-139	
1,2-Dichloroethane-d4	118	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-20'	19-06-1771-14-D	06/26/19 12:25	Solid	GC/MS OO	06/26/19	07/03/19 23:17	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	43	1.00	
Benzene	ND	0.86	1.00	
Bromobenzene	ND	0.86	1.00	
Bromochloromethane	ND	1.7	1.00	
Bromodichloromethane	ND	0.86	1.00	
Bromoform	ND	4.3	1.00	
Bromomethane	ND	17	1.00	
2-Butanone	ND	17	1.00	
n-Butylbenzene	ND	0.86	1.00	
sec-Butylbenzene	ND	0.86	1.00	
tert-Butylbenzene	ND	0.86	1.00	
Carbon Disulfide	ND	8.6	1.00	
Carbon Tetrachloride	ND	0.86	1.00	
Chlorobenzene	ND	0.86	1.00	
Chloroethane	ND	1.7	1.00	
Chloroform	ND	0.86	1.00	
Chloromethane	ND	17	1.00	
2-Chlorotoluene	ND	0.86	1.00	
4-Chlorotoluene	ND	0.86	1.00	
Dibromochloromethane	ND	1.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.3	1.00	
1,2-Dibromoethane	ND	0.86	1.00	
Dibromomethane	ND	0.86	1.00	
1,2-Dichlorobenzene	ND	0.86	1.00	
1,3-Dichlorobenzene	ND	0.86	1.00	
1,4-Dichlorobenzene	ND	0.86	1.00	
Dichlorodifluoromethane	ND	1.7	1.00	
1,1-Dichloroethane	ND	0.86	1.00	
1,2-Dichloroethane	ND	0.86	1.00	
1,1-Dichloroethene	ND	0.86	1.00	
c-1,2-Dichloroethene	ND	0.86	1.00	
t-1,2-Dichloroethene	ND	0.86	1.00	
1,2-Dichloropropane	ND	0.86	1.00	
1,3-Dichloropropane	ND	0.86	1.00	
2,2-Dichloropropane	ND	4.3	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
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Work Order: 19-06-1771
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Units: ug/kg

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.7	1.00	
c-1,3-Dichloropropene	ND	0.86	1.00	
t-1,3-Dichloropropene	ND	1.7	1.00	
Ethylbenzene	ND	0.86	1.00	
2-Hexanone	ND	17	1.00	
Isopropylbenzene	ND	0.86	1.00	
p-Isopropyltoluene	ND	0.86	1.00	
Methylene Chloride	ND	8.6	1.00	
4-Methyl-2-Pentanone	ND	17	1.00	
Naphthalene	ND	8.6	1.00	
n-Propylbenzene	ND	1.7	1.00	
Styrene	ND	0.86	1.00	
1,1,1,2-Tetrachloroethane	ND	0.86	1.00	
1,1,2,2-Tetrachloroethane	ND	1.7	1.00	
Tetrachloroethene	ND	0.86	1.00	
Toluene	ND	0.86	1.00	
1,2,3-Trichlorobenzene	ND	1.7	1.00	
1,2,4-Trichlorobenzene	ND	1.7	1.00	
1,1,1-Trichloroethane	ND	0.86	1.00	
1,1,2-Trichloroethane	ND	0.86	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.6	1.00	
Trichloroethene	ND	1.7	1.00	
Trichlorofluoromethane	ND	8.6	1.00	
1,2,3-Trichloropropane	ND	1.7	1.00	
1,2,4-Trimethylbenzene	ND	1.7	1.00	
1,3,5-Trimethylbenzene	ND	1.7	1.00	
Vinyl Acetate	ND	8.6	1.00	
Vinyl Chloride	ND	0.86	1.00	
p/m-Xylene	ND	1.7	1.00	
o-Xylene	ND	0.86	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.7	1.00	
Tert-Butyl Alcohol (TBA)	ND	17	1.00	
Diisopropyl Ether (DIPE)	ND	0.86	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.86	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.86	1.00	
Ethanol	ND	430	1.00	
TPPH	150	43	1.00	
Gasoline Range Organics (C4-C12)	110	43	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	109	79-139	
1,2-Dichloroethane-d4	121	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	102	80-120	

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California Environmental
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Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-25'	19-06-1771-15-D	06/26/19 12:40	Solid	GC/MS OO	06/26/19	07/03/19 23:46	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	51	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.1	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	1.4	1.0	1.00	
sec-Butylbenzene	1.1	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.1	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.1	1.00	

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Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	1.7	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	510	1.00	
TPPH	1700	51	1.00	
Gasoline Range Organics (C4-C12)	1200	51	1.00	

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Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	107	79-139	
1,2-Dichloroethane-d4	117	71-155	
1,4-Bromofluorobenzene	104	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-30'	19-06-1771-16-D	06/26/19 12:55	Solid	GC/MS OO	06/26/19	07/04/19 00:16	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	43	1.00	
Benzene	ND	0.87	1.00	
Bromobenzene	ND	0.87	1.00	
Bromochloromethane	ND	1.7	1.00	
Bromodichloromethane	ND	0.87	1.00	
Bromoform	ND	4.3	1.00	
Bromomethane	ND	17	1.00	
2-Butanone	ND	17	1.00	
n-Butylbenzene	8.7	0.87	1.00	
sec-Butylbenzene	3.8	0.87	1.00	
tert-Butylbenzene	ND	0.87	1.00	
Carbon Disulfide	ND	8.7	1.00	
Carbon Tetrachloride	ND	0.87	1.00	
Chlorobenzene	ND	0.87	1.00	
Chloroethane	ND	1.7	1.00	
Chloroform	ND	0.87	1.00	
Chloromethane	ND	17	1.00	
2-Chlorotoluene	ND	0.87	1.00	
4-Chlorotoluene	ND	0.87	1.00	
Dibromochloromethane	ND	1.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.3	1.00	
1,2-Dibromoethane	ND	0.87	1.00	
Dibromomethane	ND	0.87	1.00	
1,2-Dichlorobenzene	ND	0.87	1.00	
1,3-Dichlorobenzene	ND	0.87	1.00	
1,4-Dichlorobenzene	ND	0.87	1.00	
Dichlorodifluoromethane	ND	1.7	1.00	
1,1-Dichloroethane	ND	0.87	1.00	
1,2-Dichloroethane	ND	0.87	1.00	
1,1-Dichloroethene	ND	0.87	1.00	
c-1,2-Dichloroethene	ND	0.87	1.00	
t-1,2-Dichloroethene	ND	0.87	1.00	
1,2-Dichloropropane	ND	0.87	1.00	
1,3-Dichloropropane	ND	0.87	1.00	
2,2-Dichloropropane	ND	4.3	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.7	1.00	
c-1,3-Dichloropropene	ND	0.87	1.00	
t-1,3-Dichloropropene	ND	1.7	1.00	
Ethylbenzene	1.8	0.87	1.00	
2-Hexanone	ND	17	1.00	
Isopropylbenzene	2.6	0.87	1.00	
p-Isopropyltoluene	9.3	0.87	1.00	
Methylene Chloride	ND	8.7	1.00	
4-Methyl-2-Pentanone	ND	17	1.00	
Naphthalene	ND	8.7	1.00	
n-Propylbenzene	2.9	1.7	1.00	
Styrene	ND	0.87	1.00	
1,1,1,2-Tetrachloroethane	ND	0.87	1.00	
1,1,2,2-Tetrachloroethane	ND	1.7	1.00	
Tetrachloroethene	ND	0.87	1.00	
Toluene	ND	0.87	1.00	
1,2,3-Trichlorobenzene	ND	1.7	1.00	
1,2,4-Trichlorobenzene	ND	1.7	1.00	
1,1,1-Trichloroethane	ND	0.87	1.00	
1,1,2-Trichloroethane	ND	0.87	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.7	1.00	
Trichloroethene	ND	1.7	1.00	
Trichlorofluoromethane	ND	8.7	1.00	
1,2,3-Trichloropropane	ND	1.7	1.00	
1,2,4-Trimethylbenzene	3.4	1.7	1.00	
1,3,5-Trimethylbenzene	2.0	1.7	1.00	
Vinyl Acetate	ND	8.7	1.00	
Vinyl Chloride	ND	0.87	1.00	
p/m-Xylene	ND	1.7	1.00	
o-Xylene	ND	0.87	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.7	1.00	
Tert-Butyl Alcohol (TBA)	ND	17	1.00	
Diisopropyl Ether (DIPE)	ND	0.87	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.87	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.87	1.00	
Ethanol	ND	430	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	105	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
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Preparation: EPA 5035
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Units: ug/kg

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	115	71-155	
1,4-Bromofluorobenzene	106	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	102	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-30'	19-06-1771-16-F	06/26/19 12:55	Solid	GC/MS OO	06/26/19	07/04/19 21:03	190704L020

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	19000	2200	50.0	
Gasoline Range Organics (C4-C12)	13000	2200	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	91	79-139	
1,2-Dichloroethane-d4	89	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	98	80-120	
Toluene-d8-TPPH	100	80-120	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
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Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-38'	19-06-1771-17-D	06/26/19 13:08	Solid	GC/MS OO	06/26/19	07/04/19 08:35	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	84000	2000	
Benzene	1900	1700	2000	
Bromobenzene	ND	1700	2000	
Bromochloromethane	ND	3400	2000	
Bromodichloromethane	ND	1700	2000	
Bromoform	ND	8400	2000	
Bromomethane	ND	34000	2000	
2-Butanone	ND	34000	2000	
n-Butylbenzene	16000	1700	2000	
sec-Butylbenzene	5600	1700	2000	
tert-Butylbenzene	ND	1700	2000	
Carbon Disulfide	ND	17000	2000	
Carbon Tetrachloride	ND	1700	2000	
Chlorobenzene	ND	1700	2000	
Chloroethane	ND	3400	2000	
Chloroform	ND	1700	2000	
Chloromethane	ND	34000	2000	
2-Chlorotoluene	ND	1700	2000	
4-Chlorotoluene	ND	1700	2000	
Dibromochloromethane	ND	3400	2000	
1,2-Dibromo-3-Chloropropane	ND	8400	2000	
1,2-Dibromoethane	ND	1700	2000	
Dibromomethane	ND	1700	2000	
1,2-Dichlorobenzene	ND	1700	2000	
1,3-Dichlorobenzene	ND	1700	2000	
1,4-Dichlorobenzene	ND	1700	2000	
Dichlorodifluoromethane	ND	3400	2000	
1,1-Dichloroethane	ND	1700	2000	
1,2-Dichloroethane	ND	1700	2000	
1,1-Dichloroethene	ND	1700	2000	
c-1,2-Dichloroethene	ND	1700	2000	
t-1,2-Dichloroethene	ND	1700	2000	
1,2-Dichloropropane	ND	1700	2000	
1,3-Dichloropropane	ND	1700	2000	
2,2-Dichloropropane	ND	8400	2000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	3400	2000	
c-1,3-Dichloropropene	ND	1700	2000	
t-1,3-Dichloropropene	ND	3400	2000	
Ethylbenzene	45000	1700	2000	
2-Hexanone	ND	34000	2000	
Isopropylbenzene	17000	1700	2000	
p-Isopropyltoluene	15000	1700	2000	
Methylene Chloride	ND	17000	2000	
4-Methyl-2-Pentanone	ND	34000	2000	
Naphthalene	ND	17000	2000	
n-Propylbenzene	22000	3400	2000	
Styrene	ND	1700	2000	
1,1,1,2-Tetrachloroethane	ND	1700	2000	
1,1,2,2-Tetrachloroethane	ND	3400	2000	
Tetrachloroethene	ND	1700	2000	
Toluene	6500	1700	2000	
1,2,3-Trichlorobenzene	ND	3400	2000	
1,2,4-Trichlorobenzene	ND	3400	2000	
1,1,1-Trichloroethane	ND	1700	2000	
1,1,2-Trichloroethane	ND	1700	2000	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	17000	2000	
Trichloroethene	ND	3400	2000	
Trichlorofluoromethane	ND	17000	2000	
1,2,3-Trichloropropane	ND	3400	2000	
1,2,4-Trimethylbenzene	130000	3400	2000	
1,3,5-Trimethylbenzene	45000	3400	2000	
Vinyl Acetate	ND	17000	2000	
Vinyl Chloride	ND	1700	2000	
p/m-Xylene	110000	3400	2000	
o-Xylene	56000	1700	2000	
Methyl-t-Butyl Ether (MTBE)	ND	3400	2000	
Tert-Butyl Alcohol (TBA)	ND	34000	2000	
Diisopropyl Ether (DIPE)	ND	1700	2000	
Ethyl-t-Butyl Ether (ETBE)	ND	1700	2000	
Tert-Amyl-Methyl Ether (TAME)	ND	1700	2000	
Ethanol	ND	840000	2000	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	96	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	93	71-155	
1,4-Bromofluorobenzene	105	80-120	
Toluene-d8	109	80-120	
Toluene-d8-TPPH	96	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-38'	19-06-1771-17-D	06/26/19 13:08	Solid	GC/MS OO	06/26/19	07/07/19 21:20	190707L005

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	4400000	210000	5000	
Gasoline Range Organics (C4-C12)	4100000	210000	5000	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	101	79-139	
1,2-Dichloroethane-d4	97	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	99	80-120	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-39.5'	19-06-1771-18-C	06/26/19 13:25	Solid	GC/MS OO	06/26/19	07/08/19 20:18	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	38	1.00	
Benzene	30	0.75	1.00	
Bromobenzene	ND	0.75	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.75	1.00	
Bromoform	ND	3.8	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	0.98	0.75	1.00	
sec-Butylbenzene	1.3	0.75	1.00	
tert-Butylbenzene	ND	0.75	1.00	
Carbon Disulfide	ND	7.5	1.00	
Carbon Tetrachloride	ND	0.75	1.00	
Chlorobenzene	ND	0.75	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.75	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.75	1.00	
4-Chlorotoluene	ND	0.75	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.8	1.00	
1,2-Dibromoethane	ND	0.75	1.00	
Dibromomethane	ND	0.75	1.00	
1,2-Dichlorobenzene	ND	0.75	1.00	
1,3-Dichlorobenzene	ND	0.75	1.00	
1,4-Dichlorobenzene	ND	0.75	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.75	1.00	
1,2-Dichloroethane	ND	0.75	1.00	
1,1-Dichloroethene	ND	0.75	1.00	
c-1,2-Dichloroethene	ND	0.75	1.00	
t-1,2-Dichloroethene	ND	0.75	1.00	
1,2-Dichloropropane	ND	0.75	1.00	
1,3-Dichloropropane	ND	0.75	1.00	
2,2-Dichloropropane	ND	3.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.75	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	0.93	0.75	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	3.4	0.75	1.00	
p-Isopropyltoluene	2.8	0.75	1.00	
Methylene Chloride	ND	7.5	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.5	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.75	1.00	
1,1,1,2-Tetrachloroethane	ND	0.75	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.75	1.00	
Toluene	1.4	0.75	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.75	1.00	
1,1,2-Trichloroethane	ND	0.75	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.5	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.5	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.5	1.00	
Vinyl Chloride	ND	0.75	1.00	
p/m-Xylene	1.7	1.5	1.00	
o-Xylene	0.95	0.75	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.75	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.75	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.75	1.00	
Ethanol	ND	380	1.00	
TPPH	880	38	1.00	
Gasoline Range Organics (C4-C12)	830	38	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	79-139	
1,2-Dichloroethane-d4	98	71-155	
1,4-Bromofluorobenzene	102	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-42.5'	19-06-1771-19-C	06/26/19 13:45	Solid	GC/MS OO	06/26/19	07/08/19 20:48	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	34	1.00	
Benzene	67	0.69	1.00	
Bromobenzene	ND	0.69	1.00	
Bromochloromethane	ND	1.4	1.00	
Bromodichloromethane	ND	0.69	1.00	
Bromoform	ND	3.4	1.00	
Bromomethane	ND	14	1.00	
2-Butanone	ND	14	1.00	
n-Butylbenzene	0.72	0.69	1.00	
sec-Butylbenzene	0.91	0.69	1.00	
tert-Butylbenzene	ND	0.69	1.00	
Carbon Disulfide	ND	6.9	1.00	
Carbon Tetrachloride	ND	0.69	1.00	
Chlorobenzene	ND	0.69	1.00	
Chloroethane	ND	1.4	1.00	
Chloroform	ND	0.69	1.00	
Chloromethane	ND	14	1.00	
2-Chlorotoluene	ND	0.69	1.00	
4-Chlorotoluene	ND	0.69	1.00	
Dibromochloromethane	ND	1.4	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.4	1.00	
1,2-Dibromoethane	ND	0.69	1.00	
Dibromomethane	ND	0.69	1.00	
1,2-Dichlorobenzene	ND	0.69	1.00	
1,3-Dichlorobenzene	ND	0.69	1.00	
1,4-Dichlorobenzene	ND	0.69	1.00	
Dichlorodifluoromethane	ND	1.4	1.00	
1,1-Dichloroethane	ND	0.69	1.00	
1,2-Dichloroethane	ND	0.69	1.00	
1,1-Dichloroethene	ND	0.69	1.00	
c-1,2-Dichloroethene	ND	0.69	1.00	
t-1,2-Dichloroethene	ND	0.69	1.00	
1,2-Dichloropropane	ND	0.69	1.00	
1,3-Dichloropropane	ND	0.69	1.00	
2,2-Dichloropropane	ND	3.4	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.4	1.00	
c-1,3-Dichloropropene	ND	0.69	1.00	
t-1,3-Dichloropropene	ND	1.4	1.00	
Ethylbenzene	9.4	0.69	1.00	
2-Hexanone	ND	14	1.00	
Isopropylbenzene	6.3	0.69	1.00	
p-Isopropyltoluene	1.7	0.69	1.00	
Methylene Chloride	ND	6.9	1.00	
4-Methyl-2-Pentanone	ND	14	1.00	
Naphthalene	ND	6.9	1.00	
n-Propylbenzene	3.2	1.4	1.00	
Styrene	ND	0.69	1.00	
1,1,1,2-Tetrachloroethane	ND	0.69	1.00	
1,1,2,2-Tetrachloroethane	ND	1.4	1.00	
Tetrachloroethene	ND	0.69	1.00	
Toluene	0.83	0.69	1.00	
1,2,3-Trichlorobenzene	ND	1.4	1.00	
1,2,4-Trichlorobenzene	ND	1.4	1.00	
1,1,1-Trichloroethane	ND	0.69	1.00	
1,1,2-Trichloroethane	ND	0.69	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	6.9	1.00	
Trichloroethene	ND	1.4	1.00	
Trichlorofluoromethane	ND	6.9	1.00	
1,2,3-Trichloropropane	ND	1.4	1.00	
1,2,4-Trimethylbenzene	ND	1.4	1.00	
1,3,5-Trimethylbenzene	ND	1.4	1.00	
Vinyl Acetate	ND	6.9	1.00	
Vinyl Chloride	ND	0.69	1.00	
p/m-Xylene	ND	1.4	1.00	
o-Xylene	ND	0.69	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.4	1.00	
Tert-Butyl Alcohol (TBA)	ND	14	1.00	
Diisopropyl Ether (DIPE)	ND	0.69	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.69	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.69	1.00	
Ethanol	ND	340	1.00	
TPPH	1100	34	1.00	
Gasoline Range Organics (C4-C12)	1100	34	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	99	71-155	
1,4-Bromofluorobenzene	103	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	99	80-120	



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Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CE DUP 1	19-06-1771-20-B	06/26/19 00:00	Solid	GC/MS OO	06/26/19	07/07/19 20:21	190707L004

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	42	1.00	
Benzene	ND	0.83	1.00	
Bromobenzene	ND	0.83	1.00	
Bromochloromethane	ND	1.7	1.00	
Bromodichloromethane	ND	0.83	1.00	
Bromoform	ND	4.2	1.00	
Bromomethane	ND	17	1.00	
2-Butanone	ND	17	1.00	
n-Butylbenzene	ND	0.83	1.00	
sec-Butylbenzene	ND	0.83	1.00	
tert-Butylbenzene	ND	0.83	1.00	
Carbon Disulfide	ND	8.3	1.00	
Carbon Tetrachloride	ND	0.83	1.00	
Chlorobenzene	ND	0.83	1.00	
Chloroethane	ND	1.7	1.00	
Chloroform	ND	0.83	1.00	
Chloromethane	ND	17	1.00	
2-Chlorotoluene	ND	0.83	1.00	
4-Chlorotoluene	ND	0.83	1.00	
Dibromochloromethane	ND	1.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.2	1.00	
1,2-Dibromoethane	ND	0.83	1.00	
Dibromomethane	ND	0.83	1.00	
1,2-Dichlorobenzene	ND	0.83	1.00	
1,3-Dichlorobenzene	ND	0.83	1.00	
1,4-Dichlorobenzene	ND	0.83	1.00	
Dichlorodifluoromethane	ND	1.7	1.00	
1,1-Dichloroethane	ND	0.83	1.00	
1,2-Dichloroethane	ND	0.83	1.00	
1,1-Dichloroethene	ND	0.83	1.00	
c-1,2-Dichloroethene	ND	0.83	1.00	
t-1,2-Dichloroethene	ND	0.83	1.00	
1,2-Dichloropropane	ND	0.83	1.00	
1,3-Dichloropropane	ND	0.83	1.00	
2,2-Dichloropropane	ND	4.2	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.7	1.00	
c-1,3-Dichloropropene	ND	0.83	1.00	
t-1,3-Dichloropropene	ND	1.7	1.00	
Ethylbenzene	ND	0.83	1.00	
2-Hexanone	ND	17	1.00	
Isopropylbenzene	ND	0.83	1.00	
p-Isopropyltoluene	ND	0.83	1.00	
Methylene Chloride	ND	8.3	1.00	
4-Methyl-2-Pentanone	ND	17	1.00	
Naphthalene	ND	8.3	1.00	
n-Propylbenzene	ND	1.7	1.00	
Styrene	ND	0.83	1.00	
1,1,1,2-Tetrachloroethane	ND	0.83	1.00	
1,1,2,2-Tetrachloroethane	ND	1.7	1.00	
Tetrachloroethene	ND	0.83	1.00	
Toluene	ND	0.83	1.00	
1,2,3-Trichlorobenzene	ND	1.7	1.00	
1,2,4-Trichlorobenzene	ND	1.7	1.00	
1,1,1-Trichloroethane	ND	0.83	1.00	
1,1,2-Trichloroethane	ND	0.83	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.3	1.00	
Trichloroethene	ND	1.7	1.00	
Trichlorofluoromethane	ND	8.3	1.00	
1,2,3-Trichloropropane	ND	1.7	1.00	
1,2,4-Trimethylbenzene	ND	1.7	1.00	
1,3,5-Trimethylbenzene	ND	1.7	1.00	
Vinyl Acetate	ND	8.3	1.00	
Vinyl Chloride	ND	0.83	1.00	
p/m-Xylene	ND	1.7	1.00	
o-Xylene	ND	0.83	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.7	1.00	
Tert-Butyl Alcohol (TBA)	ND	17	1.00	
Diisopropyl Ether (DIPE)	ND	0.83	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.83	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.83	1.00	
Ethanol	ND	420	1.00	
TPPH	87	42	1.00	
Gasoline Range Organics (C4-C12)	92	42	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	111	79-139	
1,2-Dichloroethane-d4	119	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-46'	19-06-1771-21-B	06/26/19 14:05	Solid	GC/MS OO	06/26/19	07/07/19 22:49	190707L004

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	39	1.00	
Benzene	ND	0.78	1.00	
Bromobenzene	ND	0.78	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.78	1.00	
Bromoform	ND	3.9	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.78	1.00	
sec-Butylbenzene	ND	0.78	1.00	
tert-Butylbenzene	ND	0.78	1.00	
Carbon Disulfide	ND	7.8	1.00	
Carbon Tetrachloride	ND	0.78	1.00	
Chlorobenzene	ND	0.78	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.78	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.78	1.00	
4-Chlorotoluene	ND	0.78	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.9	1.00	
1,2-Dibromoethane	ND	0.78	1.00	
Dibromomethane	ND	0.78	1.00	
1,2-Dichlorobenzene	ND	0.78	1.00	
1,3-Dichlorobenzene	ND	0.78	1.00	
1,4-Dichlorobenzene	ND	0.78	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.78	1.00	
1,2-Dichloroethane	5.4	0.78	1.00	
1,1-Dichloroethene	ND	0.78	1.00	
c-1,2-Dichloroethene	ND	0.78	1.00	
t-1,2-Dichloroethene	ND	0.78	1.00	
1,2-Dichloropropane	ND	0.78	1.00	
1,3-Dichloropropane	ND	0.78	1.00	
2,2-Dichloropropane	ND	3.9	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.78	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.78	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.78	1.00	
p-Isopropyltoluene	ND	0.78	1.00	
Methylene Chloride	ND	7.8	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	7.8	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.78	1.00	
1,1,1,2-Tetrachloroethane	ND	0.78	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.78	1.00	
Toluene	ND	0.78	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.78	1.00	
1,1,2-Trichloroethane	ND	0.78	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.8	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	7.8	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	7.8	1.00	
Vinyl Chloride	ND	0.78	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.78	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.78	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.78	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.78	1.00	
Ethanol	ND	390	1.00	
TPPH	340	39	1.00	
Gasoline Range Organics (C4-C12)	310	39	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	100	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2079	N/A	Solid	GC/MS OO	07/03/19	07/03/19 18:51	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	100	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2080	N/A	Solid	GC/MS OO	07/03/19	07/04/19 06:08	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	5000	50.0	
Benzene	ND	100	50.0	
Bromobenzene	ND	100	50.0	
Bromochloromethane	ND	200	50.0	
Bromodichloromethane	ND	100	50.0	
Bromoform	ND	500	50.0	
Bromomethane	ND	2000	50.0	
2-Butanone	ND	2000	50.0	
n-Butylbenzene	ND	100	50.0	
sec-Butylbenzene	ND	100	50.0	
tert-Butylbenzene	ND	100	50.0	
Carbon Disulfide	ND	1000	50.0	
Carbon Tetrachloride	ND	100	50.0	
Chlorobenzene	ND	100	50.0	
Chloroethane	ND	200	50.0	
Chloroform	ND	100	50.0	
Chloromethane	ND	2000	50.0	
2-Chlorotoluene	ND	100	50.0	
4-Chlorotoluene	ND	100	50.0	
Dibromochloromethane	ND	200	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	100	50.0	
Dibromomethane	ND	100	50.0	
1,2-Dichlorobenzene	ND	100	50.0	
1,3-Dichlorobenzene	ND	100	50.0	
1,4-Dichlorobenzene	ND	100	50.0	
Dichlorodifluoromethane	ND	200	50.0	
1,1-Dichloroethane	ND	100	50.0	
1,2-Dichloroethane	ND	100	50.0	
1,1-Dichloroethene	ND	100	50.0	
c-1,2-Dichloroethene	ND	100	50.0	
t-1,2-Dichloroethene	ND	100	50.0	
1,2-Dichloropropane	ND	100	50.0	
1,3-Dichloropropane	ND	100	50.0	
2,2-Dichloropropane	ND	500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	200	50.0	
c-1,3-Dichloropropene	ND	100	50.0	
t-1,3-Dichloropropene	ND	200	50.0	
Ethylbenzene	ND	100	50.0	
2-Hexanone	ND	2000	50.0	
Isopropylbenzene	ND	100	50.0	
p-Isopropyltoluene	ND	100	50.0	
Methylene Chloride	ND	1000	50.0	
4-Methyl-2-Pentanone	ND	2000	50.0	
Naphthalene	ND	1000	50.0	
n-Propylbenzene	ND	200	50.0	
Styrene	ND	100	50.0	
1,1,1,2-Tetrachloroethane	ND	100	50.0	
1,1,2,2-Tetrachloroethane	ND	200	50.0	
Tetrachloroethene	ND	100	50.0	
Toluene	ND	100	50.0	
1,2,3-Trichlorobenzene	ND	200	50.0	
1,2,4-Trichlorobenzene	ND	200	50.0	
1,1,1-Trichloroethane	ND	100	50.0	
1,1,2-Trichloroethane	ND	100	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	50.0	
Trichloroethene	ND	200	50.0	
Trichlorofluoromethane	ND	1000	50.0	
1,2,3-Trichloropropane	ND	200	50.0	
1,2,4-Trimethylbenzene	ND	200	50.0	
1,3,5-Trimethylbenzene	ND	200	50.0	
Vinyl Acetate	ND	1000	50.0	
Vinyl Chloride	ND	100	50.0	
p/m-Xylene	ND	200	50.0	
o-Xylene	ND	100	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	200	50.0	
Tert-Butyl Alcohol (TBA)	ND	2000	50.0	
Diisopropyl Ether (DIPE)	ND	100	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	100	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	100	50.0	
Ethanol	ND	50000	50.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	95	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	94	71-155	
1,4-Bromofluorobenzene	95	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2081	N/A	Solid	GC/MS OO	07/04/19	07/04/19 17:37	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	94	79-139	
1,2-Dichloroethane-d4	93	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2082	N/A	Solid	GC/MS OO	07/04/19	07/04/19 18:06	190704L020

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	5000	50.0	
Benzene	ND	100	50.0	
Bromobenzene	ND	100	50.0	
Bromochloromethane	ND	200	50.0	
Bromodichloromethane	ND	100	50.0	
Bromoform	ND	500	50.0	
Bromomethane	ND	2000	50.0	
2-Butanone	ND	2000	50.0	
n-Butylbenzene	ND	100	50.0	
sec-Butylbenzene	ND	100	50.0	
tert-Butylbenzene	ND	100	50.0	
Carbon Disulfide	ND	1000	50.0	
Carbon Tetrachloride	ND	100	50.0	
Chlorobenzene	ND	100	50.0	
Chloroethane	ND	200	50.0	
Chloroform	ND	100	50.0	
Chloromethane	ND	2000	50.0	
2-Chlorotoluene	ND	100	50.0	
4-Chlorotoluene	ND	100	50.0	
Dibromochloromethane	ND	200	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	100	50.0	
Dibromomethane	ND	100	50.0	
1,2-Dichlorobenzene	ND	100	50.0	
1,3-Dichlorobenzene	ND	100	50.0	
1,4-Dichlorobenzene	ND	100	50.0	
Dichlorodifluoromethane	ND	200	50.0	
1,1-Dichloroethane	ND	100	50.0	
1,2-Dichloroethane	ND	100	50.0	
1,1-Dichloroethene	ND	100	50.0	
c-1,2-Dichloroethene	ND	100	50.0	
t-1,2-Dichloroethene	ND	100	50.0	
1,2-Dichloropropane	ND	100	50.0	
1,3-Dichloropropane	ND	100	50.0	
2,2-Dichloropropane	ND	500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	200	50.0	
c-1,3-Dichloropropene	ND	100	50.0	
t-1,3-Dichloropropene	ND	200	50.0	
Ethylbenzene	ND	100	50.0	
2-Hexanone	ND	2000	50.0	
Isopropylbenzene	ND	100	50.0	
p-Isopropyltoluene	ND	100	50.0	
Methylene Chloride	ND	1000	50.0	
4-Methyl-2-Pentanone	ND	2000	50.0	
Naphthalene	ND	1000	50.0	
n-Propylbenzene	ND	200	50.0	
Styrene	ND	100	50.0	
1,1,1,2-Tetrachloroethane	ND	100	50.0	
1,1,2,2-Tetrachloroethane	ND	200	50.0	
Tetrachloroethene	ND	100	50.0	
Toluene	ND	100	50.0	
1,2,3-Trichlorobenzene	ND	200	50.0	
1,2,4-Trichlorobenzene	ND	200	50.0	
1,1,1-Trichloroethane	ND	100	50.0	
1,1,2-Trichloroethane	ND	100	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	50.0	
Trichloroethene	ND	200	50.0	
Trichlorofluoromethane	ND	1000	50.0	
1,2,3-Trichloropropane	ND	200	50.0	
1,2,4-Trimethylbenzene	ND	200	50.0	
1,3,5-Trimethylbenzene	ND	200	50.0	
Vinyl Acetate	ND	1000	50.0	
Vinyl Chloride	ND	100	50.0	
p/m-Xylene	ND	200	50.0	
o-Xylene	ND	100	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	200	50.0	
Tert-Butyl Alcohol (TBA)	ND	2000	50.0	
Diisopropyl Ether (DIPE)	ND	100	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	100	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	100	50.0	
Ethanol	ND	50000	50.0	
TPPH	ND	5000	50.0	
Gasoline Range Organics (C4-C12)	ND	5000	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	92	79-139	
1,2-Dichloroethane-d4	88	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	97	80-120	
Toluene-d8-TPPH	98	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2089	N/A	Solid	GC/MS OO	07/07/19	07/07/19 17:54	190707L004

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	105	79-139	
1,2-Dichloroethane-d4	103	71-155	
1,4-Bromofluorobenzene	94	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	104	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2090	N/A	Solid	GC/MS OO	07/07/19	07/07/19 18:24	190707L005

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	ND	5000	50.0	
Gasoline Range Organics (C4-C12)	ND	5000	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	94	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	103	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2091	N/A	Solid	GC/MS OO	07/08/19	07/08/19 18:50	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	94	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: N/A
Method: ASTM D-2216 (M)
Units: %

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-6.5'	19-06-1771-2-A	06/26/19 08:12	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		8.8		0.10		1.00	
CESB11-11.5'	19-06-1771-3-A	06/26/19 08:26	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		17		0.10		1.00	
CESB11-15.5'	19-06-1771-4-A	06/26/19 08:36	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		11		0.10		1.00	
CESB11-20.5'	19-06-1771-5-A	06/26/19 08:49	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		3.0		0.10		1.00	
CESB11-25.5'	19-06-1771-6-A	06/26/19 08:59	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		3.6		0.10		1.00	
CESB11-30'	19-06-1771-7-A	06/26/19 09:17	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		15		0.10		1.00	
CESB11-35.5'	19-06-1771-8-A	06/26/19 09:36	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		21		0.10		1.00	
CESB12-6'	19-06-1771-11-A	06/26/19 11:45	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		12		0.10		1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: N/A
 Method: ASTM D-2216 (M)
 Units: %

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-10'	19-06-1771-12-A	06/26/19 11:55	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		11		0.10		1.00	
CESB12-15'	19-06-1771-13-A	06/26/19 12:15	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		11		0.10		1.00	
CESB12-20'	19-06-1771-14-A	06/26/19 12:25	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		12		0.10		1.00	
CESB12-25'	19-06-1771-15-A	06/26/19 12:40	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		3.0		0.10		1.00	
Method Blank	099-05-014-8482	N/A	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		ND		0.10		1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
19-06-1424-2	Sample	Sediment	GC 48	06/28/19	06/28/19 22:48	190628S08				
19-06-1424-2	Matrix Spike	Sediment	GC 48	06/28/19	06/28/19 21:45	190628S08				
19-06-1424-2	Matrix Spike Duplicate	Sediment	GC 48	06/28/19	06/28/19 22:06	190628S08				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	ND	400.0	361.8	90	396.6	99	64-130	9	0-15	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3050B
Method: EPA 6010B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
CESB11-6.5'	Sample	Solid	ICP 8300	07/01/19	07/01/19 21:53	190701S02				
CESB11-6.5'	Matrix Spike	Solid	ICP 8300	07/01/19	07/01/19 21:55	190701S02				
CESB11-6.5'	Matrix Spike Duplicate	Solid	ICP 8300	07/01/19	07/01/19 22:02	190701S02				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	9.372	25.00	34.58	101	32.42	92	75-125	6	0-20	
Lead	1.721	25.00	26.95	101	26.45	99	75-125	2	0-20	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Sample Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: N/A
Method: ASTM D-2216 (M)

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
19-06-1878-17	Sample	Solid	N/A	06/28/19 00:00	06/28/19 16:00	J0628MOID3
19-06-1878-17	Sample Duplicate	Solid	N/A	06/28/19 00:00	06/28/19 16:00	J0628MOID3

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Moisture	15.10	16.50	9	0-10	

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RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

California Environmental	Date Received:	06/26/19
30423 Canwood St., Suite 208	Work Order:	19-06-1771
Agoura Hills, CA 91301-4316	Preparation:	EPA 3550B
Project: OOI	Method:	EPA 8015B (M)

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-490-3654	LCS	Solid	GC 48	06/28/19	06/29/19 00:12	190628B08A
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Diesel		400.0	388.1	97	75-123	



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Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3050B
Method: EPA 6010B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
097-01-002-28071	LCS	Solid	ICP 8300	07/01/19	07/01/19 21:48	190701L02A			
097-01-002-28071	LCSD	Solid	ICP 8300	07/01/19	07/01/19 21:51	190701L02A			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	23.89	96	25.07	100	80-120	5	0-20	
Lead	25.00	26.42	106	27.42	110	80-120	4	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2079	LCS	Solid		GC/MS OO	07/03/19	07/03/19 16:53	190703L026			
099-12-779-2079	LCSD	Solid		GC/MS OO	07/03/19	07/03/19 17:23	190703L026			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	50.40	101	48.97	98	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	51.80	104	50.00	100	65-137	53-149	4	0-20	
Chlorobenzene	50.00	51.33	103	49.26	99	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	52.69	105	51.98	104	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	52.61	105	50.67	101	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	50.28	101	50.14	100	80-120	73-127	0	0-20	
1,1-Dichloroethene	50.00	48.48	97	47.18	94	68-128	58-138	3	0-20	
Ethylbenzene	50.00	53.88	108	51.42	103	80-120	73-127	5	0-20	
Toluene	50.00	52.83	106	50.99	102	80-120	73-127	4	0-20	
Trichloroethene	50.00	51.86	104	50.45	101	80-120	73-127	3	0-20	
Vinyl Chloride	50.00	45.90	92	41.55	83	67-127	57-137	10	0-20	
p/m-Xylene	100.0	110.3	110	105.1	105	75-125	67-133	5	0-25	
o-Xylene	50.00	55.34	111	53.09	106	75-125	67-133	4	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.03	86	42.48	85	70-124	61-133	1	0-20	
Tert-Butyl Alcohol (TBA)	250.0	230.0	92	214.5	86	73-121	65-129	7	0-20	
Diisopropyl Ether (DIPE)	50.00	50.21	100	48.63	97	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	46.28	93	45.49	91	70-124	61-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.65	103	51.65	103	74-122	66-130	0	0-20	
Ethanol	500.0	500.2	100	466.2	93	51-135	37-149	7	0-27	
TPPH	1000	963.5	96	980.0	98	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	863.5	86	875.5	88	65-135	53-147	1	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-2080	LCS	Solid	GC/MS OO	07/03/19	07/04/19 04:11	190703L036				
099-12-779-2080	LCSD	Solid	GC/MS OO	07/03/19	07/04/19 04:40	190703L036				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	53.69	107	46.30	93	80-120	73-127	15	0-20	
Carbon Tetrachloride	50.00	53.99	108	45.83	92	65-137	53-149	16	0-20	
Chlorobenzene	50.00	55.51	111	47.26	95	80-120	73-127	16	0-20	
1,2-Dibromoethane	50.00	57.66	115	49.67	99	80-120	73-127	15	0-20	
1,2-Dichlorobenzene	50.00	56.19	112	48.06	96	80-120	73-127	16	0-20	
1,2-Dichloroethane	50.00	52.94	106	46.10	92	80-120	73-127	14	0-20	
1,1-Dichloroethene	50.00	53.25	107	44.72	89	68-128	58-138	17	0-20	
Ethylbenzene	50.00	58.01	116	48.84	98	80-120	73-127	17	0-20	
Toluene	50.00	55.88	112	48.01	96	80-120	73-127	15	0-20	
Trichloroethene	50.00	56.29	113	47.80	96	80-120	73-127	16	0-20	
Vinyl Chloride	50.00	49.64	99	40.38	81	67-127	57-137	21	0-20	X
p/m-Xylene	100.0	117.4	117	99.30	99	75-125	67-133	17	0-25	
o-Xylene	50.00	59.74	119	51.04	102	75-125	67-133	16	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	48.34	97	40.43	81	70-124	61-133	18	0-20	
Tert-Butyl Alcohol (TBA)	250.0	253.2	101	219.4	88	73-121	65-129	14	0-20	
Diisopropyl Ether (DIPE)	50.00	54.56	109	46.39	93	69-129	59-139	16	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	52.04	104	43.02	86	70-124	61-133	19	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	55.89	112	47.49	95	74-122	66-130	16	0-20	
Ethanol	500.0	637.9	128	498.5	100	51-135	37-149	25	0-27	
TPPH	1000	904.2	90	887.4	89	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	861.6	86	799.9	80	65-135	53-147	7	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2081	LCS	Solid		GC/MS OO	07/04/19	07/04/19 15:39	190704L017			
099-12-779-2081	LCSD	Solid		GC/MS OO	07/04/19	07/04/19 16:08	190704L017			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	45.00	90	46.86	94	80-120	73-127	4	0-20	
Carbon Tetrachloride	50.00	43.84	88	46.31	93	65-137	53-149	5	0-20	
Chlorobenzene	50.00	47.42	95	49.04	98	80-120	73-127	3	0-20	
1,2-Dibromoethane	50.00	49.83	100	51.79	104	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	50.00	48.84	98	49.86	100	80-120	73-127	2	0-20	
1,2-Dichloroethane	50.00	44.95	90	45.93	92	80-120	73-127	2	0-20	
1,1-Dichloroethene	50.00	43.20	86	44.49	89	68-128	58-138	3	0-20	
Ethylbenzene	50.00	48.94	98	51.09	102	80-120	73-127	4	0-20	
Toluene	50.00	48.17	96	49.23	98	80-120	73-127	2	0-20	
Trichloroethene	50.00	46.93	94	48.94	98	80-120	73-127	4	0-20	
Vinyl Chloride	50.00	39.76	80	39.65	79	67-127	57-137	0	0-20	
p/m-Xylene	100.0	99.94	100	103.5	103	75-125	67-133	3	0-25	
o-Xylene	50.00	51.08	102	52.52	105	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	44.40	89	44.47	89	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	205.7	82	206.0	82	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	50.00	44.62	89	45.82	92	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.10	94	48.09	96	70-124	61-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	53.46	107	55.18	110	74-122	66-130	3	0-20	
Ethanol	500.0	404.9	81	414.2	83	51-135	37-149	2	0-27	
TPPH	1000	916.0	92	932.6	93	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	823.6	82	832.5	83	65-135	53-147	1	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2082	LCS	Solid		GC/MS OO	07/04/19	07/04/19 14:10	190704L020			
099-12-779-2082	LCSD	Solid		GC/MS OO	07/04/19	07/04/19 14:39	190704L020			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	45.00	90	46.86	94	80-120	73-127	4	0-20	
Carbon Tetrachloride	50.00	43.84	88	46.31	93	65-137	53-149	5	0-20	
Chlorobenzene	50.00	47.42	95	49.04	98	80-120	73-127	3	0-20	
1,2-Dibromoethane	50.00	49.83	100	51.79	104	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	50.00	48.84	98	49.86	100	80-120	73-127	2	0-20	
1,2-Dichloroethane	50.00	44.95	90	45.93	92	80-120	73-127	2	0-20	
1,1-Dichloroethene	50.00	43.20	86	44.49	89	68-128	58-138	3	0-20	
Ethylbenzene	50.00	48.94	98	51.09	102	80-120	73-127	4	0-20	
Toluene	50.00	48.17	96	49.23	98	80-120	73-127	2	0-20	
Trichloroethene	50.00	46.93	94	48.94	98	80-120	73-127	4	0-20	
Vinyl Chloride	50.00	39.76	80	39.65	79	67-127	57-137	0	0-20	
p/m-Xylene	100.0	99.94	100	103.5	103	75-125	67-133	3	0-25	
o-Xylene	50.00	51.08	102	52.52	105	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	44.40	89	44.47	89	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	205.7	82	206.0	82	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	50.00	44.62	89	45.82	92	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.10	94	48.09	96	70-124	61-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	53.46	107	55.18	110	74-122	66-130	3	0-20	
Ethanol	500.0	404.9	81	414.2	83	51-135	37-149	2	0-27	
TPPH	1000	916.0	92	932.6	93	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	823.6	82	832.5	83	65-135	53-147	1	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2089	LCS	Solid		GC/MS OO	07/07/19	07/07/19 15:56	190707L004			
099-12-779-2089	LCSD	Solid		GC/MS OO	07/07/19	07/07/19 16:26	190707L004			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	49.62	99	48.47	97	80-120	73-127	2	0-20	
Carbon Tetrachloride	50.00	51.40	103	48.80	98	65-137	53-149	5	0-20	
Chlorobenzene	50.00	49.54	99	49.27	99	80-120	73-127	1	0-20	
1,2-Dibromoethane	50.00	49.74	99	49.67	99	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	50.00	49.77	100	50.10	100	80-120	73-127	1	0-20	
1,2-Dichloroethane	50.00	49.45	99	47.86	96	80-120	73-127	3	0-20	
1,1-Dichloroethene	50.00	47.22	94	45.28	91	68-128	58-138	4	0-20	
Ethylbenzene	50.00	50.63	101	50.47	101	80-120	73-127	0	0-20	
Toluene	50.00	50.76	102	50.24	100	80-120	73-127	1	0-20	
Trichloroethene	50.00	50.60	101	49.39	99	80-120	73-127	2	0-20	
Vinyl Chloride	50.00	47.99	96	46.75	93	67-127	57-137	3	0-20	
p/m-Xylene	100.0	105.6	106	104.7	105	75-125	67-133	1	0-25	
o-Xylene	50.00	53.06	106	52.57	105	75-125	67-133	1	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	41.97	84	40.85	82	70-124	61-133	3	0-20	
Tert-Butyl Alcohol (TBA)	250.0	204.3	82	204.8	82	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	50.00	51.53	103	50.21	100	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.10	94	45.76	92	70-124	61-133	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.81	104	51.04	102	74-122	66-130	1	0-20	
Ethanol	500.0	475.2	95	459.6	92	51-135	37-149	3	0-27	
TPPH	1000	900.1	90	931.6	93	65-135	53-147	3	0-30	
Gasoline Range Organics (C4-C12)	1000	814.1	81	841.2	84	65-135	53-147	3	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-2090	LCS	Solid	GC/MS OO	07/07/19	07/07/19 15:56	190707L005				
099-12-779-2090	LCSD	Solid	GC/MS OO	07/07/19	07/07/19 16:26	190707L005				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	49.62	99	48.47	97	80-120	73-127	2	0-20	
Carbon Tetrachloride	50.00	51.40	103	48.80	98	65-137	53-149	5	0-20	
Chlorobenzene	50.00	49.54	99	49.27	99	80-120	73-127	1	0-20	
1,2-Dibromoethane	50.00	49.74	99	49.67	99	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	50.00	49.77	100	50.10	100	80-120	73-127	1	0-20	
1,2-Dichloroethane	50.00	49.45	99	47.86	96	80-120	73-127	3	0-20	
1,1-Dichloroethene	50.00	47.22	94	45.28	91	68-128	58-138	4	0-20	
Ethylbenzene	50.00	50.63	101	50.47	101	80-120	73-127	0	0-20	
Toluene	50.00	50.76	102	50.24	100	80-120	73-127	1	0-20	
Trichloroethene	50.00	50.60	101	49.39	99	80-120	73-127	2	0-20	
Vinyl Chloride	50.00	47.99	96	46.75	93	67-127	57-137	3	0-20	
p/m-Xylene	100.0	105.6	106	104.7	105	75-125	67-133	1	0-25	
o-Xylene	50.00	53.06	106	52.57	105	75-125	67-133	1	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	41.97	84	40.85	82	70-124	61-133	3	0-20	
Tert-Butyl Alcohol (TBA)	250.0	204.3	82	204.8	82	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	50.00	51.53	103	50.21	100	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.10	94	45.76	92	70-124	61-133	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.81	104	51.04	102	74-122	66-130	1	0-20	
Ethanol	500.0	475.2	95	459.6	92	51-135	37-149	3	0-27	
TPPH	1000	900.1	90	931.6	93	65-135	53-147	3	0-30	
Gasoline Range Organics (C4-C12)	1000	814.1	81	841.2	84	65-135	53-147	3	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2091	LCS	Solid		GC/MS OO	07/08/19	07/08/19 16:52	190708L017			
099-12-779-2091	LCSD	Solid		GC/MS OO	07/08/19	07/08/19 17:21	190708L017			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	48.31	97	46.90	94	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.70	95	47.08	94	65-137	53-149	1	0-20	
Chlorobenzene	50.00	50.03	100	48.23	96	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	51.22	102	50.75	101	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	50.84	102	49.04	98	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	46.11	92	45.69	91	80-120	73-127	1	0-20	
1,1-Dichloroethene	50.00	44.88	90	43.30	87	68-128	58-138	4	0-20	
Ethylbenzene	50.00	51.93	104	49.73	99	80-120	73-127	4	0-20	
Toluene	50.00	50.65	101	48.89	98	80-120	73-127	4	0-20	
Trichloroethene	50.00	50.49	101	48.13	96	80-120	73-127	5	0-20	
Vinyl Chloride	50.00	44.24	88	43.65	87	67-127	57-137	1	0-20	
p/m-Xylene	100.0	106.2	106	101.3	101	75-125	67-133	5	0-25	
o-Xylene	50.00	53.69	107	51.69	103	75-125	67-133	4	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.31	87	43.21	86	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	212.4	85	209.5	84	73-121	65-129	1	0-20	
Diisopropyl Ether (DIPE)	50.00	47.91	96	46.72	93	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	48.64	97	48.22	96	70-124	61-133	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	56.21	112	56.24	112	74-122	66-130	0	0-20	
Ethanol	500.0	426.5	85	397.8	80	51-135	37-149	7	0-27	
TPPH	1000	970.0	97	892.2	89	65-135	53-147	8	0-30	
Gasoline Range Organics (C4-C12)	1000	879.4	88	802.7	80	65-135	53-147	9	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Sample Analysis Summary Report

Work Order: 19-06-1771

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
ASTM D-2216 (M)	N/A	1215	N/A	1
EPA 6010B	EPA 3050B	1080	ICP 8300	1
EPA 8015B (M)	EPA 3550B	972	GC 48	1
GC/MS / EPA 8260B	EPA 5035	316	GC/MS OO	2
GC/MS / EPA 8260B	EPA 5035	1178	GC/MS OO	2


Return to Contents

Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

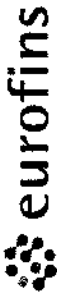
Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 19-06-1771

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



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7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 896-5494
For courier service / sample drop off information, contact us26_sales@eurofins.com or call us.

LABORATORY CLIENT:

CALENVIRO

ADDRESS: 30423 Canwood Street #208
CITY: Agoura Hills STATE: CA ZIP: 91301

TEL: 818-991-1542

TURNAROUND TIME (Rush surcharges may apply to any TAT not STANDARD):

SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

GLOBAL ID:

LOG CODE:

SPECIAL INSTRUCTIONS:

CHAIN OF CUSTODY RECORD
DATE: JUNE 26, 2019
PAGE: 1 OF 2

WO # / LAB USE ONLY
19-06-1771

CLIENT PROJECT NAME / NUMBER:

OOI

PROJECT CONTACT:

C. Buckley

P.O. NO.:

3029

SAMPLER(S): (PRINT)

Buckley

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH (g) GRO	TPH (d) DRO	TPH C6-C38 C6-C44	TPH	BTEX / MTBE 8260	VOCs (8260) Full list +	Oxygenates (8260) Oxy	Prep (5035) En Core Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs 8270 8270 SIM	T22 Metals 6010/747X 6020/747X	Cr(VI) 7196 7199 218.6	ASBESTIC/LEAD	OTHER ANALYSES	
	1 CESB11-6W	6/26/19	7:50	A20	3		X		X		X			X		X									
	2 CESB11-6.5		8:12	50UL	5				X		X			X		X									
	3 CESB11-11.5		8:26	✓	5				X		X			X		X									
	4 CESB11-15.5		8:36	✓	5				X		X			X		X									
	5 CESB11-20.5		8:49	✓	5				X		X			X		X									
	6 CESB11-25.5		8:57	✓	5				X		X			X		X									
	7 CESB11-30		9:17	-	4				X		X			X		X									
	8 CESB11-35.5		9:36	✓	4				X		X			X		X									
	9 CESB11-40		10:10	✓	3				X		X			X		X									
	10 CESB11-53		10:55	✓	2				X		X			X		X									

Received by: (Signature/Affiliation)

Rudy F

Received by: (Signature/Affiliation)

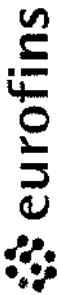
Rudy F

Received by: (Signature/Affiliation)

Date: 6/26/19 Time: 1920

Date: 6/26/19 Time: 1750

Date: Time:



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For courier service / sample drop off information, contact us26_sales@eurofins.com or call us.
LABORATORY CLIENT:

CHAIN OF CUSTODY RECORD
DATE: JUNE 26 2019
PAGE: 2 OF 2

WO # / LAB USE ONLY
1771

CLIENT PROJECT NAME / NUMBER: OOI P.O. NO.: 3029

PROJECT CONTACT: C. Buckley SAMPLER(S): (PRINT) Buckley

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
 SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

GLOBAL ID: 818-991-1542 Agoura Hills

ADDRESS: CALENVIRO 30423 Canwood Street #208 STATE: CA ZIP: 91301

CITY: Agoura Hills

TEL: 818-991-1542

LABORATORY CLIENT: Calscience

GLOBAL ID: 818-991-1542

GLOBAL ID: 818-991-1542

GLOBAL ID: 818-991-1542

GLOBAL ID: 818-991-1542

GLOBAL ID: 818-991-1542

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GLOBAL ID: 818-991-1542

GLOBAL ID: 818-991-1542

GLOBAL ID: 818-991-1542

GLOBAL ID: 818-991-1542

GLOBAL ID: 818-991-1542

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Field Filtered	Preserved	Unpreserved	TPH(g) or GRO	TPH	TPH □ C6-C36 □ C6-C44	TPH □ C6-C36 □ C6-C44	Oxygenates (8260)	VOCs (8260)	BTEX / MTBE □ 8260 □ Fony	Prep (5035) □ En Core □ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs □ 8270 □ 8270 SIM	T22 Metals □ 6010/747X □ 6020/747X	Cr(VI) □ 7196 □ 7199 □ 218.6	
11	CE5B12-6'	6/26/19	11:45	Soil	5				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
12	CE5B12-10'		11:55		5				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
13	CE5B12-15'		12:15		5				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
14	CE5B12-20'		12:25		5				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
15	CE5B12-25'		12:40		5				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
16	CE5B12-30'		12:55		3				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
17	CE5B12-38'		1:08		3				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
18	CE5B12-38.5'		1:25		3				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
19	CE5B12-42.5'		1:45		3				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
20	CE DUPI	6/26/19		Soil	1				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
21	CE5B12-046	6/26/19	2:05	Soil	3				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Received by: (Signature/Affiliation) Rudolph et al Time: 6/26/19 15:20 AM

Received by: (Signature/Affiliation) Rudolph et al Time: 6/26/19 15:20

Received by: (Signature/Affiliation) Rudolph et al Time: 6/26/19 17:50



SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: CALENVIRD

DATE: 06/26/2019

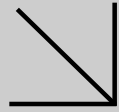
TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)
 Thermometer ID: SC6 (CF: -0.2°C); Temperature (w/o CF): 2.5 °C (w/ CF): 2.3 °C; Blank Sample
 Sample(s) outside temperature criteria (PM/APM contacted by: _____)
 Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling
 Sample(s) received at ambient temperature; placed on ice for transport by courier
 Ambient Temperature: Air Filter
 Checked by: 676

CUSTODY SEAL:
 Cooler Present and Intact Present but Not Intact Not Present N/A Checked by: 676
 Sample(s) Present and Intact Present but Not Intact Not Present N/A Checked by: 1198

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Container(s) for certain analysis free of headspace.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE: (Trip Blank Lot Number: _____)
 Aqueous: VOA VOAh VOAna₂ 100PJ 100PJna₂ 125AGB 125AGBh 125AGBp 125PB 125PBz_{na} (pH__9)
 250AGB 250CGB 250CGBs (pH__2) 250PB 250PBn (pH__2) 500AGB 500AGJ 500AGJs (pH__2) 500PB
 1AGB 1AGBna₂ 1AGBs (pH__2) 1AGBs (O&G) 1PB 1PBna (pH__12) _____ _____
 Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (P) EnCores® (____) TerraCores® (3) 2oz PJ _____ _____
 Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (____): _____ _____
 Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag
 Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1198
 s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, z_{na} = Zn (CH₃CO₂)₂ + NaOH Reviewed by: 1053



WORK ORDER NUMBER: 19-06-1878

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: California Environmental

Client Project Name: OOI

Attention: Charles Buckley
30423 Canwood St.
Suite 208
Agoura Hills, CA 91301-4316

Approved for release on 07/11/2019 by:
Don Burley
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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 Work Order Number: 19-06-1878

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 06/27/19. They were assigned to Work Order 19-06-1878.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-13A): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: California Environmental	Work Order:	19-06-1878
30423 Canwood St., Suite 208	Project Name:	OOI
Agoura Hills, CA 91301-4316	PO Number:	
	Date/Time Received:	06/27/19 17:25
	Number of Containers:	102

Attn: Charles Buckley

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
CESB13-7'	19-06-1878-1	06/27/19 07:40	5	Solid
CESB13-11'	19-06-1878-2	06/27/19 07:50	5	Solid
CESB13-15'	19-06-1878-3	06/27/19 08:02	5	Solid
CESB13-20'	19-06-1878-4	06/27/19 08:10	5	Solid
CESB13-25'	19-06-1878-5	06/27/19 08:18	5	Solid
CESB13-30'	19-06-1878-6	06/27/19 08:38	5	Solid
CESB13-32	19-06-1878-7	06/27/19 08:50	5	Solid
CESB13-36	19-06-1878-8	06/27/19 09:00	5	Solid
CESB13-40	19-06-1878-9	06/27/19 09:20	5	Solid
CESB13-42	19-06-1878-10	06/27/19 09:45	3	Solid
CESB13-47'	19-06-1878-11	06/27/19 10:01	3	Solid
CESB14-11'	19-06-1878-12	06/27/19 11:51	5	Solid
CESB14-16'	19-06-1878-13	06/27/19 12:13	5	Solid
CESB14-20'	19-06-1878-14	06/27/19 12:18	5	Solid
CESB14-26'	19-06-1878-15	06/27/19 12:30	5	Solid
CESB14-31	19-06-1878-16	06/27/19 12:45	5	Solid
CESB14-36	19-06-1878-17	06/27/19 13:00	4	Solid
CESB14-42	19-06-1878-18	06/27/19 13:16	3	Solid
CESB14-49.5	19-06-1878-19	06/27/19 14:05	3	Solid
CE DUP 2	19-06-1878-20	06/27/19 00:00	4	Solid
CESB14-46	19-06-1878-21	06/27/19 13:59	3	Solid
CESB14-49.5	19-06-1878-22	06/27/19 14:15	3	Solid
CESB9-GW	19-06-1878-23	06/27/19 15:00	3	Aqueous
CESB10-GW	19-06-1878-24	06/27/19 15:20	1	Aqueous
CESB11-GW	19-06-1878-25	06/27/19 15:50	2	Aqueous

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

Page 1 of 17

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-7'	19-06-1878-1-A	06/27/19 07:40	Solid	GC 49	07/02/19	07/02/19 20:06	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	74	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

Page 2 of 17

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-11'	19-06-1878-2-A	06/27/19 07:50	Solid	GC 49	07/02/19	07/02/19 20:26	190702B04

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	7.6	5.0	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	79	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-15'	19-06-1878-3-A	06/27/19 08:02	Solid	GC 49	07/02/19	07/02/19 20:49	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	ND	4.9	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	72	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-20'	19-06-1878-4-A	06/27/19 08:10	Solid	GC 49	07/02/19	07/02/19 21:10	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	ND	4.9	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	74	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-25'	19-06-1878-5-A	06/27/19 08:18	Solid	GC 49	07/02/19	07/02/19 21:32	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	75	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-30'	19-06-1878-6-A	06/27/19 08:38	Solid	GC 49	07/02/19	07/02/19 21:53	190702B04

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	6.0	4.9	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	86	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-32	19-06-1878-7-A	06/27/19 08:50	Solid	GC 49	07/02/19	07/02/19 22:16	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	67	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-36	19-06-1878-8-A	06/27/19 09:00	Solid	GC 49	07/02/19	07/02/19 22:37	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	65	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-40	19-06-1878-9-A	06/27/19 09:20	Solid	GC 49	07/02/19	07/02/19 22:58	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	68	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-11'	19-06-1878-12-A	06/27/19 11:51	Solid	GC 49	07/02/19	07/02/19 23:20	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	65	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-16'	19-06-1878-13-A	06/27/19 12:13	Solid	GC 49	07/02/19	07/02/19 23:41	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	ND	4.9	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	70	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-20'	19-06-1878-14-A	06/27/19 12:18	Solid	GC 49	07/02/19	07/03/19 00:03	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	67	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-26'	19-06-1878-15-A	06/27/19 12:30	Solid	GC 49	07/02/19	07/03/19 13:50	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	99	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-31	19-06-1878-16-A	06/27/19 12:45	Solid	GC 49	07/02/19	07/03/19 01:08	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	62	61-145	


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-36	19-06-1878-17-A	06/27/19 13:00	Solid	GC 49	07/02/19	07/03/19 01:29	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	61	61-145	



Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CE DUP 2	19-06-1878-20-A	06/27/19 00:00	Solid	GC 49	07/02/19	07/03/19 01:52	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	62	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-15-490-3658	N/A	Solid	GC 49	07/02/19	07/02/19 18:38	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	88	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-7'	19-06-1878-1-A	06/27/19 07:40	Solid	ICP 8300	07/02/19	07/03/19 19:39	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.735		0.980	
Lead		1.96		0.490		0.980	
CESB13-11'	19-06-1878-2-A	06/27/19 07:50	Solid	ICP 8300	07/02/19	07/03/19 19:44	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.718		0.957	
Lead		1.01		0.478		0.957	
CESB13-15'	19-06-1878-3-A	06/27/19 08:02	Solid	ICP 8300	07/02/19	07/03/19 19:46	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.735		0.980	
Lead		1.50		0.490		0.980	
CESB13-20'	19-06-1878-4-A	06/27/19 08:10	Solid	ICP 8300	07/02/19	07/03/19 19:48	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.750		1.00	
Lead		1.08		0.500		1.00	
CESB13-25'	19-06-1878-5-A	06/27/19 08:18	Solid	ICP 8300	07/02/19	07/03/19 19:55	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		12.7		0.746		0.995	
Lead		ND		0.498		0.995	
CESB13-30'	19-06-1878-6-A	06/27/19 08:38	Solid	ICP 8300	07/02/19	07/03/19 19:57	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		1.48		0.777		1.04	
Lead		ND		0.518		1.04	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-32	19-06-1878-7-A	06/27/19 08:50	Solid	ICP 8300	07/02/19	07/03/19 19:59	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.750		1.00	
Lead		0.525		0.500		1.00	
CESB13-36	19-06-1878-8-A	06/27/19 09:00	Solid	ICP 8300	07/02/19	07/03/19 20:01	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.746		0.995	
Lead		0.853		0.498		0.995	
CESB13-40	19-06-1878-9-A	06/27/19 09:20	Solid	ICP 8300	07/02/19	07/03/19 20:03	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.743		0.990	
Lead		0.516		0.495		0.990	
CESB14-11'	19-06-1878-12-A	06/27/19 11:51	Solid	ICP 8300	07/02/19	07/03/19 20:04	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.754		1.01	
Lead		1.03		0.503		1.01	
CESB14-16'	19-06-1878-13-A	06/27/19 12:13	Solid	ICP 8300	07/02/19	07/03/19 20:06	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		2.99		0.758		1.01	
Lead		3.29		0.505		1.01	
CESB14-20'	19-06-1878-14-A	06/27/19 12:18	Solid	ICP 8300	07/02/19	07/03/19 20:08	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.743		0.990	
Lead		1.43		0.495		0.990	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3050B
 Method: EPA 6010B
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-26'	19-06-1878-15-A	06/27/19 12:30	Solid	ICP 8300	07/02/19	07/03/19 20:10	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		6.21		0.785		1.05	
Lead		1.31		0.524		1.05	
CESB14-31	19-06-1878-16-A	06/27/19 12:45	Solid	ICP 8300	07/02/19	07/03/19 20:12	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		5.45		0.769		1.03	
Lead		0.694		0.513		1.03	
CESB14-36	19-06-1878-17-A	06/27/19 13:00	Solid	ICP 8300	07/02/19	07/03/19 20:17	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		0.835		0.777		1.04	
Lead		0.818		0.518		1.04	
CE DUP 2	19-06-1878-20-A	06/27/19 00:00	Solid	ICP 8300	07/02/19	07/03/19 20:19	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.773		1.03	
Lead		ND		0.515		1.03	
Method Blank	097-01-002-28079	N/A	Solid	ICP 8300	07/02/19	07/03/19 19:33	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.721		0.962	
Lead		ND		0.481		0.962	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-GW	19-06-1878-23-C	06/27/19 15:00	Aqueous	GC/MS PP	07/05/19	07/05/19 21:07	190705L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	100	5.00	
Benzene	190	2.5	5.00	
Bromobenzene	ND	5.0	5.00	
Bromochloromethane	ND	5.0	5.00	
Bromodichloromethane	ND	5.0	5.00	
Bromoform	ND	25	5.00	
Bromomethane	ND	250	5.00	
2-Butanone	ND	50	5.00	
n-Butylbenzene	21	5.0	5.00	
sec-Butylbenzene	16	5.0	5.00	
tert-Butylbenzene	ND	5.0	5.00	
Carbon Disulfide	ND	50	5.00	
Carbon Tetrachloride	ND	2.5	5.00	
Chlorobenzene	ND	5.0	5.00	
Chloroethane	ND	25	5.00	
Chloroform	ND	5.0	5.00	
Chloromethane	ND	50	5.00	
2-Chlorotoluene	ND	5.0	5.00	
4-Chlorotoluene	ND	5.0	5.00	
Dibromochloromethane	ND	5.0	5.00	
1,2-Dibromo-3-Chloropropane	ND	50	5.00	
1,2-Dibromoethane	ND	5.0	5.00	
Dibromomethane	ND	5.0	5.00	
1,2-Dichlorobenzene	ND	5.0	5.00	
1,3-Dichlorobenzene	ND	5.0	5.00	
1,4-Dichlorobenzene	ND	5.0	5.00	
Dichlorodifluoromethane	ND	5.0	5.00	
1,1-Dichloroethane	ND	5.0	5.00	
1,2-Dichloroethane	ND	2.5	5.00	
1,1-Dichloroethene	ND	5.0	5.00	
c-1,2-Dichloroethene	ND	5.0	5.00	
t-1,2-Dichloroethene	ND	5.0	5.00	
1,2-Dichloropropane	ND	5.0	5.00	
1,3-Dichloropropane	ND	5.0	5.00	
2,2-Dichloropropane	ND	5.0	5.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	5.0	5.00	
c-1,3-Dichloropropene	ND	2.5	5.00	
t-1,3-Dichloropropene	ND	2.5	5.00	
Ethylbenzene	610	5.0	5.00	
2-Hexanone	ND	50	5.00	
Isopropylbenzene	130	5.0	5.00	
p-Isopropyltoluene	42	5.0	5.00	
Methylene Chloride	ND	50	5.00	
4-Methyl-2-Pentanone	ND	50	5.00	
Naphthalene	60	50	5.00	
n-Propylbenzene	130	5.0	5.00	
Styrene	ND	5.0	5.00	
1,1,1,2-Tetrachloroethane	ND	5.0	5.00	
1,1,2,2-Tetrachloroethane	ND	5.0	5.00	
Tetrachloroethene	ND	5.0	5.00	
Toluene	13	5.0	5.00	
1,2,3-Trichlorobenzene	ND	5.0	5.00	
1,2,4-Trichlorobenzene	ND	5.0	5.00	
1,1,1-Trichloroethane	ND	5.0	5.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	5.00	
1,1,2-Trichloroethane	ND	5.0	5.00	
Trichloroethene	ND	5.0	5.00	
Trichlorofluoromethane	ND	50	5.00	
1,2,3-Trichloropropane	ND	25	5.00	
1,2,4-Trimethylbenzene	330	5.0	5.00	
1,3,5-Trimethylbenzene	27	5.0	5.00	
Vinyl Acetate	ND	50	5.00	
Vinyl Chloride	ND	2.5	5.00	
p/m-Xylene	280	5.0	5.00	
o-Xylene	81	5.0	5.00	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	5.00	
Tert-Butyl Alcohol (TBA)	54	50	5.00	
Diisopropyl Ether (DIPE)	ND	10	5.00	
Ethyl-t-Butyl Ether (ETBE)	ND	10	5.00	
Tert-Amyl-Methyl Ether (TAME)	ND	10	5.00	
Ethanol	ND	500	5.00	
TPPH	15000	250	5.00	
Gasoline Range Organics (C4-C12)	14000	250	5.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	94	78-126	
1,2-Dichloroethane-d4	85	75-135	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	95	80-120	
1,4-Bromofluorobenzene	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-GW	19-06-1878-24-A	06/27/19 15:20	Aqueous	GC/MS PP	07/05/19	07/05/19 21:38	190705L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	1000	50.0	
Benzene	390	25	50.0	
Bromobenzene	ND	50	50.0	
Bromochloromethane	ND	50	50.0	
Bromodichloromethane	ND	50	50.0	
Bromoform	ND	250	50.0	
Bromomethane	ND	2500	50.0	
2-Butanone	ND	500	50.0	
n-Butylbenzene	ND	50	50.0	
sec-Butylbenzene	81	50	50.0	
tert-Butylbenzene	ND	50	50.0	
Carbon Disulfide	ND	500	50.0	
Carbon Tetrachloride	ND	25	50.0	
Chlorobenzene	ND	50	50.0	
Chloroethane	ND	250	50.0	
Chloroform	ND	50	50.0	
Chloromethane	ND	500	50.0	
2-Chlorotoluene	ND	50	50.0	
4-Chlorotoluene	ND	50	50.0	
Dibromochloromethane	ND	50	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	50	50.0	
Dibromomethane	ND	50	50.0	
1,2-Dichlorobenzene	ND	50	50.0	
1,3-Dichlorobenzene	ND	50	50.0	
1,4-Dichlorobenzene	ND	50	50.0	
Dichlorodifluoromethane	ND	50	50.0	
1,1-Dichloroethane	ND	50	50.0	
1,2-Dichloroethane	ND	25	50.0	
1,1-Dichloroethene	ND	50	50.0	
c-1,2-Dichloroethene	ND	50	50.0	
t-1,2-Dichloroethene	ND	50	50.0	
1,2-Dichloropropane	ND	50	50.0	
1,3-Dichloropropane	ND	50	50.0	
2,2-Dichloropropane	ND	50	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	50	50.0	
c-1,3-Dichloropropene	ND	25	50.0	
t-1,3-Dichloropropene	ND	25	50.0	
Ethylbenzene	1500	50	50.0	
2-Hexanone	ND	500	50.0	
Isopropylbenzene	290	50	50.0	
p-Isopropyltoluene	220	50	50.0	
Methylene Chloride	ND	500	50.0	
4-Methyl-2-Pentanone	ND	500	50.0	
Naphthalene	830	500	50.0	
n-Propylbenzene	370	50	50.0	
Styrene	ND	50	50.0	
1,1,1,2-Tetrachloroethane	ND	50	50.0	
1,1,2,2-Tetrachloroethane	ND	50	50.0	
Tetrachloroethene	ND	50	50.0	
Toluene	120	50	50.0	
1,2,3-Trichlorobenzene	ND	50	50.0	
1,2,4-Trichlorobenzene	ND	50	50.0	
1,1,1-Trichloroethane	ND	50	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	500	50.0	
1,1,2-Trichloroethane	ND	50	50.0	
Trichloroethene	ND	50	50.0	
Trichlorofluoromethane	ND	500	50.0	
1,2,3-Trichloropropane	ND	250	50.0	
1,2,4-Trimethylbenzene	2800	50	50.0	
1,3,5-Trimethylbenzene	680	50	50.0	
Vinyl Acetate	ND	500	50.0	
Vinyl Chloride	ND	25	50.0	
p/m-Xylene	2700	50	50.0	
o-Xylene	2300	50	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	50	50.0	
Tert-Butyl Alcohol (TBA)	ND	500	50.0	
Diisopropyl Ether (DIPE)	ND	100	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	100	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	100	50.0	
Ethanol	ND	5000	50.0	
TPPH	92000	2500	50.0	
Gasoline Range Organics (C4-C12)	79000	2500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	95	78-126	
1,2-Dichloroethane-d4	90	75-135	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	93	80-120	
1,4-Bromofluorobenzene	99	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-GW	19-06-1878-25-B	06/27/19 15:50	Aqueous	GC/MS PP	07/02/19	07/03/19 00:44	190702L023

Parameter	Result	RL	DF	Qualifiers
Acetone	20	20	1.00	
Benzene	93	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	50	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	9.6	1.0	1.00	
sec-Butylbenzene	7.0	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	77	1.0	1.00	
p-Isopropyltoluene	17	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	91	10	1.00	
n-Propylbenzene	71	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	17	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,3,5-Trimethylbenzene	68	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
o-Xylene	48	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	95	78-126		
1,2-Dichloroethane-d4	88	75-135		
Toluene-d8	105	80-120		
Toluene-d8-TPPH	99	80-120		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 5030C
 Method: GC/MS / EPA 8260B
 Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	108	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-GW	19-06-1878-25-B	06/27/19 15:50	Aqueous	GC/MS PP	07/05/19	07/05/19 22:08	190705L008

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Ethylbenzene	520	10	10.0	
1,2,4-Trimethylbenzene	290	10	10.0	
p/m-Xylene	420	10	10.0	
TPPH	8900	500	10.0	
Gasoline Range Organics (C4-C12)	8600	500	10.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	95	78-126	
1,2-Dichloroethane-d4	90	75-135	
Toluene-d8	98	80-120	
Toluene-d8-TPPH	93	80-120	
1,4-Bromofluorobenzene	98	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-8590	N/A	Aqueous	GC/MS PP	07/02/19	07/02/19 18:20	190702L023

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	50	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,3,5-Trimethylbenzene	ND	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	96	78-126		
1,2-Dichloroethane-d4	95	75-135		
Toluene-d8	99	80-120		
Toluene-d8-TPPH	93	80-120		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental	Date Received:	06/27/19
30423 Canwood St., Suite 208	Work Order:	19-06-1878
Agoura Hills, CA 91301-4316	Preparation:	EPA 5030C
	Method:	GC/MS / EPA 8260B
	Units:	ug/L

Project: OOI Page 12 of 15

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	80-120	


Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-8591	N/A	Aqueous	GC/MS PP	07/05/19	07/05/19 19:05	190705L008

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	ND	20	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	50	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	1.0	1.00	
1,3,5-Trimethylbenzene	ND	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	78-126	
1,2-Dichloroethane-d4	91	75-135	
Toluene-d8	97	80-120	
Toluene-d8-TPPH	91	80-120	
1,4-Bromofluorobenzene	96	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-7'	19-06-1878-1-D	06/27/19 07:40	Solid	GC/MS OO	06/27/19	07/04/19 21:32	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	34	1.00	
Benzene	ND	0.68	1.00	
Bromobenzene	ND	0.68	1.00	
Bromochloromethane	ND	1.4	1.00	
Bromodichloromethane	ND	0.68	1.00	
Bromoform	ND	3.4	1.00	
Bromomethane	ND	14	1.00	
2-Butanone	ND	14	1.00	
n-Butylbenzene	ND	0.68	1.00	
sec-Butylbenzene	ND	0.68	1.00	
tert-Butylbenzene	ND	0.68	1.00	
Carbon Disulfide	ND	6.8	1.00	
Carbon Tetrachloride	ND	0.68	1.00	
Chlorobenzene	ND	0.68	1.00	
Chloroethane	ND	1.4	1.00	
Chloroform	ND	0.68	1.00	
Chloromethane	ND	14	1.00	
2-Chlorotoluene	ND	0.68	1.00	
4-Chlorotoluene	ND	0.68	1.00	
Dibromochloromethane	ND	1.4	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.4	1.00	
1,2-Dibromoethane	ND	0.68	1.00	
Dibromomethane	ND	0.68	1.00	
1,2-Dichlorobenzene	ND	0.68	1.00	
1,3-Dichlorobenzene	ND	0.68	1.00	
1,4-Dichlorobenzene	ND	0.68	1.00	
Dichlorodifluoromethane	ND	1.4	1.00	
1,1-Dichloroethane	ND	0.68	1.00	
1,2-Dichloroethane	ND	0.68	1.00	
1,1-Dichloroethene	ND	0.68	1.00	
c-1,2-Dichloroethene	ND	0.68	1.00	
t-1,2-Dichloroethene	ND	0.68	1.00	
1,2-Dichloropropane	ND	0.68	1.00	
1,3-Dichloropropane	ND	0.68	1.00	
2,2-Dichloropropane	ND	3.4	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.4	1.00	
c-1,3-Dichloropropene	ND	0.68	1.00	
t-1,3-Dichloropropene	ND	1.4	1.00	
Ethylbenzene	ND	0.68	1.00	
2-Hexanone	ND	14	1.00	
Isopropylbenzene	ND	0.68	1.00	
p-Isopropyltoluene	ND	0.68	1.00	
Methylene Chloride	ND	6.8	1.00	
4-Methyl-2-Pentanone	ND	14	1.00	
Naphthalene	ND	6.8	1.00	
n-Propylbenzene	ND	1.4	1.00	
Styrene	ND	0.68	1.00	
1,1,1,2-Tetrachloroethane	ND	0.68	1.00	
1,1,2,2-Tetrachloroethane	ND	1.4	1.00	
Tetrachloroethene	ND	0.68	1.00	
Toluene	ND	0.68	1.00	
1,2,3-Trichlorobenzene	ND	1.4	1.00	
1,2,4-Trichlorobenzene	ND	1.4	1.00	
1,1,1-Trichloroethane	ND	0.68	1.00	
1,1,2-Trichloroethane	ND	0.68	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	6.8	1.00	
Trichloroethene	ND	1.4	1.00	
Trichlorofluoromethane	ND	6.8	1.00	
1,2,3-Trichloropropane	ND	1.4	1.00	
1,2,4-Trimethylbenzene	ND	1.4	1.00	
1,3,5-Trimethylbenzene	ND	1.4	1.00	
Vinyl Acetate	ND	6.8	1.00	
Vinyl Chloride	ND	0.68	1.00	
p/m-Xylene	ND	1.4	1.00	
o-Xylene	ND	0.68	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.4	1.00	
Tert-Butyl Alcohol (TBA)	ND	14	1.00	
Diisopropyl Ether (DIPE)	ND	0.68	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.68	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.68	1.00	
Ethanol	ND	340	1.00	
TPPH	ND	34	1.00	
Gasoline Range Organics (C4-C12)	ND	34	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	102	79-139	
1,2-Dichloroethane-d4	106	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-11'	19-06-1878-2-D	06/27/19 07:50	Solid	GC/MS OO	06/27/19	07/04/19 22:02	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	35	1.00	
Benzene	ND	0.70	1.00	
Bromobenzene	ND	0.70	1.00	
Bromochloromethane	ND	1.4	1.00	
Bromodichloromethane	ND	0.70	1.00	
Bromoform	ND	3.5	1.00	
Bromomethane	ND	14	1.00	
2-Butanone	ND	14	1.00	
n-Butylbenzene	ND	0.70	1.00	
sec-Butylbenzene	ND	0.70	1.00	
tert-Butylbenzene	ND	0.70	1.00	
Carbon Disulfide	ND	7.0	1.00	
Carbon Tetrachloride	ND	0.70	1.00	
Chlorobenzene	ND	0.70	1.00	
Chloroethane	ND	1.4	1.00	
Chloroform	ND	0.70	1.00	
Chloromethane	ND	14	1.00	
2-Chlorotoluene	ND	0.70	1.00	
4-Chlorotoluene	ND	0.70	1.00	
Dibromochloromethane	ND	1.4	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.5	1.00	
1,2-Dibromoethane	ND	0.70	1.00	
Dibromomethane	ND	0.70	1.00	
1,2-Dichlorobenzene	ND	0.70	1.00	
1,3-Dichlorobenzene	ND	0.70	1.00	
1,4-Dichlorobenzene	ND	0.70	1.00	
Dichlorodifluoromethane	ND	1.4	1.00	
1,1-Dichloroethane	ND	0.70	1.00	
1,2-Dichloroethane	ND	0.70	1.00	
1,1-Dichloroethene	ND	0.70	1.00	
c-1,2-Dichloroethene	ND	0.70	1.00	
t-1,2-Dichloroethene	ND	0.70	1.00	
1,2-Dichloropropane	ND	0.70	1.00	
1,3-Dichloropropane	ND	0.70	1.00	
2,2-Dichloropropane	ND	3.5	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.4	1.00	
c-1,3-Dichloropropene	ND	0.70	1.00	
t-1,3-Dichloropropene	ND	1.4	1.00	
Ethylbenzene	ND	0.70	1.00	
2-Hexanone	ND	14	1.00	
Isopropylbenzene	ND	0.70	1.00	
p-Isopropyltoluene	ND	0.70	1.00	
Methylene Chloride	ND	7.0	1.00	
4-Methyl-2-Pentanone	ND	14	1.00	
Naphthalene	ND	7.0	1.00	
n-Propylbenzene	ND	1.4	1.00	
Styrene	ND	0.70	1.00	
1,1,1,2-Tetrachloroethane	ND	0.70	1.00	
1,1,2,2-Tetrachloroethane	ND	1.4	1.00	
Tetrachloroethene	ND	0.70	1.00	
Toluene	ND	0.70	1.00	
1,2,3-Trichlorobenzene	ND	1.4	1.00	
1,2,4-Trichlorobenzene	ND	1.4	1.00	
1,1,1-Trichloroethane	ND	0.70	1.00	
1,1,2-Trichloroethane	ND	0.70	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.0	1.00	
Trichloroethene	ND	1.4	1.00	
Trichlorofluoromethane	ND	7.0	1.00	
1,2,3-Trichloropropane	ND	1.4	1.00	
1,2,4-Trimethylbenzene	ND	1.4	1.00	
1,3,5-Trimethylbenzene	ND	1.4	1.00	
Vinyl Acetate	ND	7.0	1.00	
Vinyl Chloride	ND	0.70	1.00	
p/m-Xylene	ND	1.4	1.00	
o-Xylene	ND	0.70	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.4	1.00	
Tert-Butyl Alcohol (TBA)	ND	14	1.00	
Diisopropyl Ether (DIPE)	ND	0.70	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.70	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.70	1.00	
Ethanol	ND	350	1.00	
TPPH	47	35	1.00	
Gasoline Range Organics (C4-C12)	42	35	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	102	79-139	
1,2-Dichloroethane-d4	104	71-155	
1,4-Bromofluorobenzene	100	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-15'	19-06-1878-3-D	06/27/19 08:02	Solid	GC/MS OO	06/27/19	07/04/19 22:31	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	34	1.00	
Benzene	ND	0.67	1.00	
Bromobenzene	ND	0.67	1.00	
Bromochloromethane	ND	1.3	1.00	
Bromodichloromethane	ND	0.67	1.00	
Bromoform	ND	3.4	1.00	
Bromomethane	ND	13	1.00	
2-Butanone	ND	13	1.00	
n-Butylbenzene	ND	0.67	1.00	
sec-Butylbenzene	ND	0.67	1.00	
tert-Butylbenzene	ND	0.67	1.00	
Carbon Disulfide	ND	6.7	1.00	
Carbon Tetrachloride	ND	0.67	1.00	
Chlorobenzene	ND	0.67	1.00	
Chloroethane	ND	1.3	1.00	
Chloroform	ND	0.67	1.00	
Chloromethane	ND	13	1.00	
2-Chlorotoluene	ND	0.67	1.00	
4-Chlorotoluene	ND	0.67	1.00	
Dibromochloromethane	ND	1.3	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.4	1.00	
1,2-Dibromoethane	ND	0.67	1.00	
Dibromomethane	ND	0.67	1.00	
1,2-Dichlorobenzene	ND	0.67	1.00	
1,3-Dichlorobenzene	ND	0.67	1.00	
1,4-Dichlorobenzene	ND	0.67	1.00	
Dichlorodifluoromethane	ND	1.3	1.00	
1,1-Dichloroethane	ND	0.67	1.00	
1,2-Dichloroethane	ND	0.67	1.00	
1,1-Dichloroethene	ND	0.67	1.00	
c-1,2-Dichloroethene	ND	0.67	1.00	
t-1,2-Dichloroethene	ND	0.67	1.00	
1,2-Dichloropropane	ND	0.67	1.00	
1,3-Dichloropropane	ND	0.67	1.00	
2,2-Dichloropropane	ND	3.4	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.3	1.00	
c-1,3-Dichloropropene	ND	0.67	1.00	
t-1,3-Dichloropropene	ND	1.3	1.00	
Ethylbenzene	ND	0.67	1.00	
2-Hexanone	ND	13	1.00	
Isopropylbenzene	ND	0.67	1.00	
p-Isopropyltoluene	ND	0.67	1.00	
Methylene Chloride	ND	6.7	1.00	
4-Methyl-2-Pentanone	ND	13	1.00	
Naphthalene	ND	6.7	1.00	
n-Propylbenzene	ND	1.3	1.00	
Styrene	ND	0.67	1.00	
1,1,1,2-Tetrachloroethane	ND	0.67	1.00	
1,1,2,2-Tetrachloroethane	ND	1.3	1.00	
Tetrachloroethene	ND	0.67	1.00	
Toluene	ND	0.67	1.00	
1,2,3-Trichlorobenzene	ND	1.3	1.00	
1,2,4-Trichlorobenzene	ND	1.3	1.00	
1,1,1-Trichloroethane	ND	0.67	1.00	
1,1,2-Trichloroethane	ND	0.67	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	6.7	1.00	
Trichloroethene	ND	1.3	1.00	
Trichlorofluoromethane	ND	6.7	1.00	
1,2,3-Trichloropropane	ND	1.3	1.00	
1,2,4-Trimethylbenzene	ND	1.3	1.00	
1,3,5-Trimethylbenzene	ND	1.3	1.00	
Vinyl Acetate	ND	6.7	1.00	
Vinyl Chloride	ND	0.67	1.00	
p/m-Xylene	ND	1.3	1.00	
o-Xylene	ND	0.67	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.3	1.00	
Tert-Butyl Alcohol (TBA)	ND	13	1.00	
Diisopropyl Ether (DIPE)	ND	0.67	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.67	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.67	1.00	
Ethanol	ND	340	1.00	
TPPH	41	34	1.00	
Gasoline Range Organics (C4-C12)	56	34	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	103	79-139	
1,2-Dichloroethane-d4	107	71-155	
1,4-Bromofluorobenzene	100	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-20'	19-06-1878-4-D	06/27/19 08:10	Solid	GC/MS OO	06/27/19	07/04/19 23:01	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	39	1.00	
Benzene	ND	0.77	1.00	
Bromobenzene	ND	0.77	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.77	1.00	
Bromoform	ND	3.9	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	ND	0.77	1.00	
sec-Butylbenzene	ND	0.77	1.00	
tert-Butylbenzene	ND	0.77	1.00	
Carbon Disulfide	ND	7.7	1.00	
Carbon Tetrachloride	ND	0.77	1.00	
Chlorobenzene	ND	0.77	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.77	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.77	1.00	
4-Chlorotoluene	ND	0.77	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.9	1.00	
1,2-Dibromoethane	ND	0.77	1.00	
Dibromomethane	ND	0.77	1.00	
1,2-Dichlorobenzene	ND	0.77	1.00	
1,3-Dichlorobenzene	ND	0.77	1.00	
1,4-Dichlorobenzene	ND	0.77	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.77	1.00	
1,2-Dichloroethane	ND	0.77	1.00	
1,1-Dichloroethene	ND	0.77	1.00	
c-1,2-Dichloroethene	ND	0.77	1.00	
t-1,2-Dichloroethene	ND	0.77	1.00	
1,2-Dichloropropane	ND	0.77	1.00	
1,3-Dichloropropane	ND	0.77	1.00	
2,2-Dichloropropane	ND	3.9	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.77	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	ND	0.77	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	ND	0.77	1.00	
p-Isopropyltoluene	ND	0.77	1.00	
Methylene Chloride	ND	7.7	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.7	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.77	1.00	
1,1,1,2-Tetrachloroethane	ND	0.77	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.77	1.00	
Toluene	ND	0.77	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.77	1.00	
1,1,2-Trichloroethane	ND	0.77	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.7	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.7	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.7	1.00	
Vinyl Chloride	ND	0.77	1.00	
p/m-Xylene	ND	1.5	1.00	
o-Xylene	ND	0.77	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.77	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.77	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.77	1.00	
Ethanol	ND	390	1.00	
TPPH	150	39	1.00	
Gasoline Range Organics (C4-C12)	110	39	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	103	79-139	
1,2-Dichloroethane-d4	110	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-25'	19-06-1878-5-D	06/27/19 08:18	Solid	GC/MS OO	06/27/19	07/04/19 23:30	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	58	1.00	
Benzene	ND	1.2	1.00	
Bromobenzene	ND	1.2	1.00	
Bromochloromethane	ND	2.3	1.00	
Bromodichloromethane	ND	1.2	1.00	
Bromoform	ND	5.8	1.00	
Bromomethane	ND	23	1.00	
2-Butanone	ND	23	1.00	
n-Butylbenzene	ND	1.2	1.00	
sec-Butylbenzene	ND	1.2	1.00	
tert-Butylbenzene	ND	1.2	1.00	
Carbon Disulfide	ND	12	1.00	
Carbon Tetrachloride	ND	1.2	1.00	
Chlorobenzene	ND	1.2	1.00	
Chloroethane	ND	2.3	1.00	
Chloroform	ND	1.2	1.00	
Chloromethane	ND	23	1.00	
2-Chlorotoluene	ND	1.2	1.00	
4-Chlorotoluene	ND	1.2	1.00	
Dibromochloromethane	ND	2.3	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.8	1.00	
1,2-Dibromoethane	ND	1.2	1.00	
Dibromomethane	ND	1.2	1.00	
1,2-Dichlorobenzene	ND	1.2	1.00	
1,3-Dichlorobenzene	ND	1.2	1.00	
1,4-Dichlorobenzene	ND	1.2	1.00	
Dichlorodifluoromethane	ND	2.3	1.00	
1,1-Dichloroethane	ND	1.2	1.00	
1,2-Dichloroethane	ND	1.2	1.00	
1,1-Dichloroethene	ND	1.2	1.00	
c-1,2-Dichloroethene	ND	1.2	1.00	
t-1,2-Dichloroethene	ND	1.2	1.00	
1,2-Dichloropropane	ND	1.2	1.00	
1,3-Dichloropropane	ND	1.2	1.00	
2,2-Dichloropropane	ND	5.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.3	1.00	
c-1,3-Dichloropropene	ND	1.2	1.00	
t-1,3-Dichloropropene	ND	2.3	1.00	
Ethylbenzene	ND	1.2	1.00	
2-Hexanone	ND	23	1.00	
Isopropylbenzene	ND	1.2	1.00	
p-Isopropyltoluene	ND	1.2	1.00	
Methylene Chloride	ND	12	1.00	
4-Methyl-2-Pentanone	ND	23	1.00	
Naphthalene	ND	12	1.00	
n-Propylbenzene	ND	2.3	1.00	
Styrene	ND	1.2	1.00	
1,1,1,2-Tetrachloroethane	ND	1.2	1.00	
1,1,2,2-Tetrachloroethane	ND	2.3	1.00	
Tetrachloroethene	ND	1.2	1.00	
Toluene	ND	1.2	1.00	
1,2,3-Trichlorobenzene	ND	2.3	1.00	
1,2,4-Trichlorobenzene	ND	2.3	1.00	
1,1,1-Trichloroethane	ND	1.2	1.00	
1,1,2-Trichloroethane	ND	1.2	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	12	1.00	
Trichloroethene	ND	2.3	1.00	
Trichlorofluoromethane	ND	12	1.00	
1,2,3-Trichloropropane	ND	2.3	1.00	
1,2,4-Trimethylbenzene	ND	2.3	1.00	
1,3,5-Trimethylbenzene	ND	2.3	1.00	
Vinyl Acetate	ND	12	1.00	
Vinyl Chloride	ND	1.2	1.00	
p/m-Xylene	ND	2.3	1.00	
o-Xylene	ND	1.2	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.3	1.00	
Tert-Butyl Alcohol (TBA)	ND	23	1.00	
Diisopropyl Ether (DIPE)	ND	1.2	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.2	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.2	1.00	
Ethanol	ND	580	1.00	
TPPH	1500	58	1.00	
Gasoline Range Organics (C4-C12)	1000	58	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	103	79-139	
1,2-Dichloroethane-d4	110	71-155	
1,4-Bromofluorobenzene	102	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	103	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-30'	19-06-1878-6-D	06/27/19 08:38	Solid	GC/MS OO	06/27/19	07/04/19 23:59	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	47	1.00	
Benzene	ND	0.94	1.00	
Bromobenzene	ND	0.94	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.94	1.00	
Bromoform	ND	4.7	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.94	1.00	
sec-Butylbenzene	1.8	0.94	1.00	
tert-Butylbenzene	ND	0.94	1.00	
Carbon Disulfide	ND	9.4	1.00	
Carbon Tetrachloride	ND	0.94	1.00	
Chlorobenzene	ND	0.94	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.94	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.94	1.00	
4-Chlorotoluene	ND	0.94	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.7	1.00	
1,2-Dibromoethane	ND	0.94	1.00	
Dibromomethane	ND	0.94	1.00	
1,2-Dichlorobenzene	ND	0.94	1.00	
1,3-Dichlorobenzene	ND	0.94	1.00	
1,4-Dichlorobenzene	ND	0.94	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.94	1.00	
1,2-Dichloroethane	ND	0.94	1.00	
1,1-Dichloroethene	ND	0.94	1.00	
c-1,2-Dichloroethene	ND	0.94	1.00	
t-1,2-Dichloroethene	ND	0.94	1.00	
1,2-Dichloropropane	ND	0.94	1.00	
1,3-Dichloropropane	ND	0.94	1.00	
2,2-Dichloropropane	ND	4.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.94	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.94	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.94	1.00	
p-Isopropyltoluene	ND	0.94	1.00	
Methylene Chloride	ND	9.4	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.4	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.94	1.00	
1,1,1,2-Tetrachloroethane	ND	0.94	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	ND	0.94	1.00	
Toluene	ND	0.94	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.94	1.00	
1,1,2-Trichloroethane	ND	0.94	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.4	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.4	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.4	1.00	
Vinyl Chloride	ND	0.94	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.94	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	
Tert-Butyl Alcohol (TBA)	ND	19	1.00	
Diisopropyl Ether (DIPE)	ND	0.94	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.94	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.94	1.00	
Ethanol	ND	470	1.00	
TPPH	3000	47	1.00	
Gasoline Range Organics (C4-C12)	2000	47	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	100	79-139	
1,2-Dichloroethane-d4	106	71-155	
1,4-Bromofluorobenzene	105	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-32	19-06-1878-7-D	06/27/19 08:50	Solid	GC/MS OO	06/27/19	07/05/19 00:29	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	44	1.00	
Benzene	ND	0.88	1.00	
Bromobenzene	ND	0.88	1.00	
Bromochloromethane	ND	1.8	1.00	
Bromodichloromethane	ND	0.88	1.00	
Bromoform	ND	4.4	1.00	
Bromomethane	ND	18	1.00	
2-Butanone	ND	18	1.00	
n-Butylbenzene	8.5	0.88	1.00	
sec-Butylbenzene	5.0	0.88	1.00	
tert-Butylbenzene	ND	0.88	1.00	
Carbon Disulfide	ND	8.8	1.00	
Carbon Tetrachloride	ND	0.88	1.00	
Chlorobenzene	ND	0.88	1.00	
Chloroethane	ND	1.8	1.00	
Chloroform	ND	0.88	1.00	
Chloromethane	ND	18	1.00	
2-Chlorotoluene	ND	0.88	1.00	
4-Chlorotoluene	ND	0.88	1.00	
Dibromochloromethane	ND	1.8	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.4	1.00	
1,2-Dibromoethane	ND	0.88	1.00	
Dibromomethane	ND	0.88	1.00	
1,2-Dichlorobenzene	ND	0.88	1.00	
1,3-Dichlorobenzene	ND	0.88	1.00	
1,4-Dichlorobenzene	ND	0.88	1.00	
Dichlorodifluoromethane	ND	1.8	1.00	
1,1-Dichloroethane	ND	0.88	1.00	
1,2-Dichloroethane	ND	0.88	1.00	
1,1-Dichloroethene	ND	0.88	1.00	
c-1,2-Dichloroethene	ND	0.88	1.00	
t-1,2-Dichloroethene	ND	0.88	1.00	
1,2-Dichloropropane	ND	0.88	1.00	
1,3-Dichloropropane	ND	0.88	1.00	
2,2-Dichloropropane	ND	4.4	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.8	1.00	
c-1,3-Dichloropropene	ND	0.88	1.00	
t-1,3-Dichloropropene	ND	1.8	1.00	
Ethylbenzene	ND	0.88	1.00	
2-Hexanone	ND	18	1.00	
Isopropylbenzene	2.5	0.88	1.00	
p-Isopropyltoluene	5.7	0.88	1.00	
Methylene Chloride	ND	8.8	1.00	
4-Methyl-2-Pentanone	ND	18	1.00	
Naphthalene	ND	8.8	1.00	
n-Propylbenzene	2.0	1.8	1.00	
Styrene	ND	0.88	1.00	
1,1,1,2-Tetrachloroethane	ND	0.88	1.00	
1,1,2,2-Tetrachloroethane	ND	1.8	1.00	
Tetrachloroethene	ND	0.88	1.00	
Toluene	ND	0.88	1.00	
1,2,3-Trichlorobenzene	ND	1.8	1.00	
1,2,4-Trichlorobenzene	ND	1.8	1.00	
1,1,1-Trichloroethane	ND	0.88	1.00	
1,1,2-Trichloroethane	ND	0.88	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.8	1.00	
Trichloroethene	ND	1.8	1.00	
Trichlorofluoromethane	ND	8.8	1.00	
1,2,3-Trichloropropane	ND	1.8	1.00	
1,2,4-Trimethylbenzene	ND	1.8	1.00	
1,3,5-Trimethylbenzene	ND	1.8	1.00	
Vinyl Acetate	ND	8.8	1.00	
Vinyl Chloride	ND	0.88	1.00	
p/m-Xylene	ND	1.8	1.00	
o-Xylene	ND	0.88	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.8	1.00	
Tert-Butyl Alcohol (TBA)	ND	18	1.00	
Diisopropyl Ether (DIPE)	ND	0.88	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.88	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.88	1.00	
Ethanol	ND	440	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	101	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	106	71-155	
1,4-Bromofluorobenzene	109	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-32	19-06-1878-7-F	06/27/19 08:50	Solid	GC/MS OO	06/27/19	07/06/19 23:23	190706L022

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	6400	4700	100	
Gasoline Range Organics (C4-C12)	ND	4700	100	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	101	79-139	
1,2-Dichloroethane-d4	101	71-155	
1,4-Bromofluorobenzene	94	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	103	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-36	19-06-1878-8-D	06/27/19 09:00	Solid	GC/MS OO	06/27/19	07/05/19 00:58	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	58	1.00	
Benzene	2.1	1.2	1.00	
Bromobenzene	ND	1.2	1.00	
Bromochloromethane	ND	2.3	1.00	
Bromodichloromethane	ND	1.2	1.00	
Bromoform	ND	5.8	1.00	
Bromomethane	ND	23	1.00	
2-Butanone	ND	23	1.00	
n-Butylbenzene	11	1.2	1.00	
sec-Butylbenzene	6.6	1.2	1.00	
tert-Butylbenzene	ND	1.2	1.00	
Carbon Disulfide	ND	12	1.00	
Carbon Tetrachloride	ND	1.2	1.00	
Chlorobenzene	ND	1.2	1.00	
Chloroethane	ND	2.3	1.00	
Chloroform	ND	1.2	1.00	
Chloromethane	ND	23	1.00	
2-Chlorotoluene	ND	1.2	1.00	
4-Chlorotoluene	ND	1.2	1.00	
Dibromochloromethane	ND	2.3	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.8	1.00	
1,2-Dibromoethane	ND	1.2	1.00	
Dibromomethane	ND	1.2	1.00	
1,2-Dichlorobenzene	ND	1.2	1.00	
1,3-Dichlorobenzene	ND	1.2	1.00	
1,4-Dichlorobenzene	ND	1.2	1.00	
Dichlorodifluoromethane	ND	2.3	1.00	
1,1-Dichloroethane	ND	1.2	1.00	
1,2-Dichloroethane	ND	1.2	1.00	
1,1-Dichloroethene	ND	1.2	1.00	
c-1,2-Dichloroethene	ND	1.2	1.00	
t-1,2-Dichloroethene	ND	1.2	1.00	
1,2-Dichloropropane	ND	1.2	1.00	
1,3-Dichloropropane	ND	1.2	1.00	
2,2-Dichloropropane	ND	5.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.3	1.00	
c-1,3-Dichloropropene	ND	1.2	1.00	
t-1,3-Dichloropropene	ND	2.3	1.00	
Ethylbenzene	1.9	1.2	1.00	
2-Hexanone	ND	23	1.00	
Isopropylbenzene	5.2	1.2	1.00	
p-Isopropyltoluene	8.7	1.2	1.00	
Methylene Chloride	ND	12	1.00	
4-Methyl-2-Pentanone	ND	23	1.00	
Naphthalene	ND	12	1.00	
n-Propylbenzene	2.6	2.3	1.00	
Styrene	ND	1.2	1.00	
1,1,1,2-Tetrachloroethane	ND	1.2	1.00	
1,1,2,2-Tetrachloroethane	ND	2.3	1.00	
Tetrachloroethene	ND	1.2	1.00	
Toluene	ND	1.2	1.00	
1,2,3-Trichlorobenzene	ND	2.3	1.00	
1,2,4-Trichlorobenzene	ND	2.3	1.00	
1,1,1-Trichloroethane	ND	1.2	1.00	
1,1,2-Trichloroethane	ND	1.2	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	12	1.00	
Trichloroethene	ND	2.3	1.00	
Trichlorofluoromethane	ND	12	1.00	
1,2,3-Trichloropropane	ND	2.3	1.00	
1,2,4-Trimethylbenzene	3.8	2.3	1.00	
1,3,5-Trimethylbenzene	2.9	2.3	1.00	
Vinyl Acetate	ND	12	1.00	
Vinyl Chloride	ND	1.2	1.00	
p/m-Xylene	ND	2.3	1.00	
o-Xylene	ND	1.2	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.3	1.00	
Tert-Butyl Alcohol (TBA)	ND	23	1.00	
Diisopropyl Ether (DIPE)	ND	1.2	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.2	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.2	1.00	
Ethanol	ND	580	1.00	
Gasoline Range Organics (C4-C12)	4300	58	1.00	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	107	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	101	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-36	19-06-1878-8-F	06/27/19 09:00	Solid	GC/MS OO	06/27/19	07/06/19 23:52	190706L022

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	5900	4500	100	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	101	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	101	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-40	19-06-1878-9-D	06/27/19 09:20	Solid	GC/MS OO	06/27/19	07/07/19 23:18	190707L004

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	43	1.00	
Benzene	15	0.86	1.00	
Bromobenzene	ND	0.86	1.00	
Bromochloromethane	ND	1.7	1.00	
Bromodichloromethane	ND	0.86	1.00	
Bromoform	ND	4.3	1.00	
Bromomethane	ND	17	1.00	
2-Butanone	ND	17	1.00	
n-Butylbenzene	9.4	0.86	1.00	
sec-Butylbenzene	4.2	0.86	1.00	
tert-Butylbenzene	ND	0.86	1.00	
Carbon Disulfide	ND	8.6	1.00	
Carbon Tetrachloride	ND	0.86	1.00	
Chlorobenzene	ND	0.86	1.00	
Chloroethane	ND	1.7	1.00	
Chloroform	ND	0.86	1.00	
Chloromethane	ND	17	1.00	
2-Chlorotoluene	ND	0.86	1.00	
4-Chlorotoluene	ND	0.86	1.00	
Dibromochloromethane	ND	1.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.3	1.00	
1,2-Dibromoethane	ND	0.86	1.00	
Dibromomethane	ND	0.86	1.00	
1,2-Dichlorobenzene	ND	0.86	1.00	
1,3-Dichlorobenzene	ND	0.86	1.00	
1,4-Dichlorobenzene	ND	0.86	1.00	
Dichlorodifluoromethane	ND	1.7	1.00	
1,1-Dichloroethane	ND	0.86	1.00	
1,2-Dichloroethane	ND	0.86	1.00	
1,1-Dichloroethene	ND	0.86	1.00	
c-1,2-Dichloroethene	ND	0.86	1.00	
t-1,2-Dichloroethene	ND	0.86	1.00	
1,2-Dichloropropane	ND	0.86	1.00	
1,3-Dichloropropane	ND	0.86	1.00	
2,2-Dichloropropane	ND	4.3	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.7	1.00	
c-1,3-Dichloropropene	ND	0.86	1.00	
t-1,3-Dichloropropene	ND	1.7	1.00	
Ethylbenzene	45	0.86	1.00	
2-Hexanone	ND	17	1.00	
Isopropylbenzene	15	0.86	1.00	
p-Isopropyltoluene	11	0.86	1.00	
Methylene Chloride	ND	8.6	1.00	
4-Methyl-2-Pentanone	ND	17	1.00	
Naphthalene	15	8.6	1.00	
n-Propylbenzene	15	1.7	1.00	
Styrene	ND	0.86	1.00	
1,1,1,2-Tetrachloroethane	ND	0.86	1.00	
1,1,2,2-Tetrachloroethane	ND	1.7	1.00	
Tetrachloroethene	ND	0.86	1.00	
Toluene	1.5	0.86	1.00	
1,2,3-Trichlorobenzene	ND	1.7	1.00	
1,2,4-Trichlorobenzene	ND	1.7	1.00	
1,1,1-Trichloroethane	ND	0.86	1.00	
1,1,2-Trichloroethane	ND	0.86	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.6	1.00	
Trichloroethene	ND	1.7	1.00	
Trichlorofluoromethane	ND	8.6	1.00	
1,2,3-Trichloropropane	ND	1.7	1.00	
1,2,4-Trimethylbenzene	78	1.7	1.00	
1,3,5-Trimethylbenzene	21	1.7	1.00	
Vinyl Acetate	ND	8.6	1.00	
Vinyl Chloride	ND	0.86	1.00	
p/m-Xylene	7.5	1.7	1.00	
o-Xylene	9.0	0.86	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.7	1.00	
Tert-Butyl Alcohol (TBA)	ND	17	1.00	
Diisopropyl Ether (DIPE)	ND	0.86	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.86	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.86	1.00	
Ethanol	ND	430	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	101	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	105	71-155	
1,4-Bromofluorobenzene	108	80-120	
Toluene-d8	114	80-120	
Toluene-d8-TPPH	89	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-40	19-06-1878-9-F	06/27/19 09:20	Solid	GC/MS OO	06/27/19	07/06/19 21:25	190706L022

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	39000	3900	100	
Gasoline Range Organics (C4-C12)	34000	3900	100	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	103	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	103	80-120	
Toluene-d8-TPPH	103	80-120	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-42	19-06-1878-10-B	06/27/19 09:45	Solid	GC/MS OO	06/27/19	07/06/19 17:30	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	37	1.00	
Benzene	2.6	0.74	1.00	
Bromobenzene	ND	0.74	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.74	1.00	
Bromoform	ND	3.7	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	ND	0.74	1.00	
sec-Butylbenzene	ND	0.74	1.00	
tert-Butylbenzene	ND	0.74	1.00	
Carbon Disulfide	ND	7.4	1.00	
Carbon Tetrachloride	ND	0.74	1.00	
Chlorobenzene	ND	0.74	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.74	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.74	1.00	
4-Chlorotoluene	ND	0.74	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.7	1.00	
1,2-Dibromoethane	ND	0.74	1.00	
Dibromomethane	ND	0.74	1.00	
1,2-Dichlorobenzene	ND	0.74	1.00	
1,3-Dichlorobenzene	ND	0.74	1.00	
1,4-Dichlorobenzene	ND	0.74	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.74	1.00	
1,2-Dichloroethane	2.1	0.74	1.00	
1,1-Dichloroethene	ND	0.74	1.00	
c-1,2-Dichloroethene	ND	0.74	1.00	
t-1,2-Dichloroethene	ND	0.74	1.00	
1,2-Dichloropropane	ND	0.74	1.00	
1,3-Dichloropropane	ND	0.74	1.00	
2,2-Dichloropropane	ND	3.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.74	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	ND	0.74	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	ND	0.74	1.00	
p-Isopropyltoluene	ND	0.74	1.00	
Methylene Chloride	ND	7.4	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.4	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.74	1.00	
1,1,1,2-Tetrachloroethane	ND	0.74	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.74	1.00	
Toluene	ND	0.74	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.74	1.00	
1,1,2-Trichloroethane	ND	0.74	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.4	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.4	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.4	1.00	
Vinyl Chloride	ND	0.74	1.00	
p/m-Xylene	ND	1.5	1.00	
o-Xylene	ND	0.74	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.74	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.74	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.74	1.00	
Ethanol	ND	370	1.00	
TPPH	230	37	1.00	
Gasoline Range Organics (C4-C12)	220	37	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	106	79-139	
1,2-Dichloroethane-d4	117	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	103	80-120	
Toluene-d8-TPPH	104	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-47'	19-06-1878-11-B	06/27/19 10:01	Solid	GC/MS OO	06/27/19	07/06/19 17:59	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	40	1.00	
Benzene	ND	0.80	1.00	
Bromobenzene	ND	0.80	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.80	1.00	
Bromoform	ND	4.0	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.80	1.00	
sec-Butylbenzene	ND	0.80	1.00	
tert-Butylbenzene	ND	0.80	1.00	
Carbon Disulfide	ND	8.0	1.00	
Carbon Tetrachloride	ND	0.80	1.00	
Chlorobenzene	ND	0.80	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.80	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.80	1.00	
4-Chlorotoluene	ND	0.80	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.0	1.00	
1,2-Dibromoethane	ND	0.80	1.00	
Dibromomethane	ND	0.80	1.00	
1,2-Dichlorobenzene	ND	0.80	1.00	
1,3-Dichlorobenzene	ND	0.80	1.00	
1,4-Dichlorobenzene	ND	0.80	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.80	1.00	
1,2-Dichloroethane	6.2	0.80	1.00	
1,1-Dichloroethene	ND	0.80	1.00	
c-1,2-Dichloroethene	ND	0.80	1.00	
t-1,2-Dichloroethene	ND	0.80	1.00	
1,2-Dichloropropane	ND	0.80	1.00	
1,3-Dichloropropane	ND	0.80	1.00	
2,2-Dichloropropane	ND	4.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.80	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.80	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.80	1.00	
p-Isopropyltoluene	ND	0.80	1.00	
Methylene Chloride	ND	8.0	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	8.0	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.80	1.00	
1,1,1,2-Tetrachloroethane	ND	0.80	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.80	1.00	
Toluene	ND	0.80	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.80	1.00	
1,1,2-Trichloroethane	ND	0.80	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.0	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	8.0	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	8.0	1.00	
Vinyl Chloride	ND	0.80	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.80	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.80	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.80	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.80	1.00	
Ethanol	ND	400	1.00	
TPPH	220	40	1.00	
Gasoline Range Organics (C4-C12)	210	40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	107	79-139	
1,2-Dichloroethane-d4	113	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	103	80-120	
Toluene-d8-TPPH	104	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-11'	19-06-1878-12-D	06/27/19 11:51	Solid	GC/MS OO	06/27/19	07/06/19 18:29	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	37	1.00	
Benzene	ND	0.74	1.00	
Bromobenzene	ND	0.74	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.74	1.00	
Bromoform	ND	3.7	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	ND	0.74	1.00	
sec-Butylbenzene	ND	0.74	1.00	
tert-Butylbenzene	ND	0.74	1.00	
Carbon Disulfide	ND	7.4	1.00	
Carbon Tetrachloride	ND	0.74	1.00	
Chlorobenzene	ND	0.74	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.74	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.74	1.00	
4-Chlorotoluene	ND	0.74	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.7	1.00	
1,2-Dibromoethane	ND	0.74	1.00	
Dibromomethane	ND	0.74	1.00	
1,2-Dichlorobenzene	ND	0.74	1.00	
1,3-Dichlorobenzene	ND	0.74	1.00	
1,4-Dichlorobenzene	ND	0.74	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.74	1.00	
1,2-Dichloroethane	ND	0.74	1.00	
1,1-Dichloroethene	ND	0.74	1.00	
c-1,2-Dichloroethene	ND	0.74	1.00	
t-1,2-Dichloroethene	ND	0.74	1.00	
1,2-Dichloropropane	ND	0.74	1.00	
1,3-Dichloropropane	ND	0.74	1.00	
2,2-Dichloropropane	ND	3.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.74	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	ND	0.74	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	ND	0.74	1.00	
p-Isopropyltoluene	ND	0.74	1.00	
Methylene Chloride	ND	7.4	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.4	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.74	1.00	
1,1,1,2-Tetrachloroethane	ND	0.74	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.74	1.00	
Toluene	ND	0.74	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.74	1.00	
1,1,2-Trichloroethane	ND	0.74	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.4	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.4	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.4	1.00	
Vinyl Chloride	ND	0.74	1.00	
p/m-Xylene	ND	1.5	1.00	
o-Xylene	ND	0.74	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.74	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.74	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.74	1.00	
Ethanol	ND	370	1.00	
TPPH	ND	37	1.00	
Gasoline Range Organics (C4-C12)	ND	37	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	113	79-139	
1,2-Dichloroethane-d4	118	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-16'	19-06-1878-13-D	06/27/19 12:13	Solid	GC/MS OO	06/27/19	07/06/19 18:58	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	38	1.00	
Benzene	ND	0.76	1.00	
Bromobenzene	ND	0.76	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.76	1.00	
Bromoform	ND	3.8	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	ND	0.76	1.00	
sec-Butylbenzene	ND	0.76	1.00	
tert-Butylbenzene	ND	0.76	1.00	
Carbon Disulfide	ND	7.6	1.00	
Carbon Tetrachloride	ND	0.76	1.00	
Chlorobenzene	ND	0.76	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.76	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.76	1.00	
4-Chlorotoluene	ND	0.76	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.8	1.00	
1,2-Dibromoethane	ND	0.76	1.00	
Dibromomethane	ND	0.76	1.00	
1,2-Dichlorobenzene	ND	0.76	1.00	
1,3-Dichlorobenzene	ND	0.76	1.00	
1,4-Dichlorobenzene	ND	0.76	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.76	1.00	
1,2-Dichloroethane	ND	0.76	1.00	
1,1-Dichloroethene	ND	0.76	1.00	
c-1,2-Dichloroethene	ND	0.76	1.00	
t-1,2-Dichloroethene	ND	0.76	1.00	
1,2-Dichloropropane	ND	0.76	1.00	
1,3-Dichloropropane	ND	0.76	1.00	
2,2-Dichloropropane	ND	3.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.76	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	ND	0.76	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	ND	0.76	1.00	
p-Isopropyltoluene	ND	0.76	1.00	
Methylene Chloride	ND	7.6	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.6	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.76	1.00	
1,1,1,2-Tetrachloroethane	ND	0.76	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.76	1.00	
Toluene	ND	0.76	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.76	1.00	
1,1,2-Trichloroethane	ND	0.76	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.6	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.6	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.6	1.00	
Vinyl Chloride	ND	0.76	1.00	
p/m-Xylene	ND	1.5	1.00	
o-Xylene	ND	0.76	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.76	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.76	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.76	1.00	
Ethanol	ND	380	1.00	
TPPH	ND	38	1.00	
Gasoline Range Organics (C4-C12)	ND	38	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	113	79-139	
1,2-Dichloroethane-d4	118	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-20'	19-06-1878-14-D	06/27/19 12:18	Solid	GC/MS OO	06/27/19	07/06/19 19:28	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	37	1.00	
Benzene	ND	0.73	1.00	
Bromobenzene	ND	0.73	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.73	1.00	
Bromoform	ND	3.7	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	ND	0.73	1.00	
sec-Butylbenzene	ND	0.73	1.00	
tert-Butylbenzene	ND	0.73	1.00	
Carbon Disulfide	ND	7.3	1.00	
Carbon Tetrachloride	ND	0.73	1.00	
Chlorobenzene	ND	0.73	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.73	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.73	1.00	
4-Chlorotoluene	ND	0.73	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.7	1.00	
1,2-Dibromoethane	ND	0.73	1.00	
Dibromomethane	ND	0.73	1.00	
1,2-Dichlorobenzene	ND	0.73	1.00	
1,3-Dichlorobenzene	ND	0.73	1.00	
1,4-Dichlorobenzene	ND	0.73	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.73	1.00	
1,2-Dichloroethane	ND	0.73	1.00	
1,1-Dichloroethene	ND	0.73	1.00	
c-1,2-Dichloroethene	ND	0.73	1.00	
t-1,2-Dichloroethene	ND	0.73	1.00	
1,2-Dichloropropane	ND	0.73	1.00	
1,3-Dichloropropane	ND	0.73	1.00	
2,2-Dichloropropane	ND	3.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.73	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	ND	0.73	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	ND	0.73	1.00	
p-Isopropyltoluene	ND	0.73	1.00	
Methylene Chloride	ND	7.3	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.3	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.73	1.00	
1,1,1,2-Tetrachloroethane	ND	0.73	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.73	1.00	
Toluene	ND	0.73	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.73	1.00	
1,1,2-Trichloroethane	ND	0.73	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.3	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.3	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.3	1.00	
Vinyl Chloride	ND	0.73	1.00	
p/m-Xylene	ND	1.5	1.00	
o-Xylene	ND	0.73	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.73	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.73	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.73	1.00	
Ethanol	ND	370	1.00	
TPPH	93	37	1.00	
Gasoline Range Organics (C4-C12)	93	37	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	115	79-139	
1,2-Dichloroethane-d4	119	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-26'	19-06-1878-15-D	06/27/19 12:30	Solid	GC/MS OO	06/27/19	07/06/19 19:57	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	40	1.00	
Benzene	ND	0.80	1.00	
Bromobenzene	ND	0.80	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.80	1.00	
Bromoform	ND	4.0	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.80	1.00	
sec-Butylbenzene	ND	0.80	1.00	
tert-Butylbenzene	ND	0.80	1.00	
Carbon Disulfide	ND	8.0	1.00	
Carbon Tetrachloride	ND	0.80	1.00	
Chlorobenzene	ND	0.80	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.80	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.80	1.00	
4-Chlorotoluene	ND	0.80	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.0	1.00	
1,2-Dibromoethane	ND	0.80	1.00	
Dibromomethane	ND	0.80	1.00	
1,2-Dichlorobenzene	ND	0.80	1.00	
1,3-Dichlorobenzene	ND	0.80	1.00	
1,4-Dichlorobenzene	ND	0.80	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.80	1.00	
1,2-Dichloroethane	ND	0.80	1.00	
1,1-Dichloroethene	ND	0.80	1.00	
c-1,2-Dichloroethene	ND	0.80	1.00	
t-1,2-Dichloroethene	ND	0.80	1.00	
1,2-Dichloropropane	ND	0.80	1.00	
1,3-Dichloropropane	ND	0.80	1.00	
2,2-Dichloropropane	ND	4.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.80	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.80	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.80	1.00	
p-Isopropyltoluene	ND	0.80	1.00	
Methylene Chloride	ND	8.0	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	8.0	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.80	1.00	
1,1,1,2-Tetrachloroethane	ND	0.80	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.80	1.00	
Toluene	ND	0.80	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.80	1.00	
1,1,2-Trichloroethane	ND	0.80	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.0	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	8.0	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	8.0	1.00	
Vinyl Chloride	ND	0.80	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.80	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.80	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.80	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.80	1.00	
Ethanol	ND	400	1.00	
TPPH	240	40	1.00	
Gasoline Range Organics (C4-C12)	150	40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	112	79-139	
1,2-Dichloroethane-d4	122	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-31	19-06-1878-16-E	06/27/19 12:45	Solid	GC/MS OO	06/27/19	07/08/19 22:16	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	58	1.00	
Benzene	ND	1.2	1.00	
Bromobenzene	ND	1.2	1.00	
Bromochloromethane	ND	2.3	1.00	
Bromodichloromethane	ND	1.2	1.00	
Bromoform	ND	5.8	1.00	
Bromomethane	ND	23	1.00	
2-Butanone	ND	23	1.00	
n-Butylbenzene	18	1.2	1.00	
sec-Butylbenzene	8.1	1.2	1.00	
tert-Butylbenzene	ND	1.2	1.00	
Carbon Disulfide	ND	12	1.00	
Carbon Tetrachloride	ND	1.2	1.00	
Chlorobenzene	ND	1.2	1.00	
Chloroethane	ND	2.3	1.00	
Chloroform	ND	1.2	1.00	
Chloromethane	ND	23	1.00	
2-Chlorotoluene	ND	1.2	1.00	
4-Chlorotoluene	ND	1.2	1.00	
Dibromochloromethane	ND	2.3	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.8	1.00	
1,2-Dibromoethane	ND	1.2	1.00	
Dibromomethane	ND	1.2	1.00	
1,2-Dichlorobenzene	ND	1.2	1.00	
1,3-Dichlorobenzene	ND	1.2	1.00	
1,4-Dichlorobenzene	ND	1.2	1.00	
Dichlorodifluoromethane	ND	2.3	1.00	
1,1-Dichloroethane	ND	1.2	1.00	
1,2-Dichloroethane	ND	1.2	1.00	
1,1-Dichloroethene	ND	1.2	1.00	
c-1,2-Dichloroethene	ND	1.2	1.00	
t-1,2-Dichloroethene	ND	1.2	1.00	
1,2-Dichloropropane	ND	1.2	1.00	
1,3-Dichloropropane	ND	1.2	1.00	
2,2-Dichloropropane	ND	5.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.3	1.00	
c-1,3-Dichloropropene	ND	1.2	1.00	
t-1,3-Dichloropropene	ND	2.3	1.00	
Ethylbenzene	3.8	1.2	1.00	
2-Hexanone	ND	23	1.00	
Isopropylbenzene	8.0	1.2	1.00	
p-Isopropyltoluene	19	1.2	1.00	
Methylene Chloride	ND	12	1.00	
4-Methyl-2-Pentanone	ND	23	1.00	
Naphthalene	ND	12	1.00	
n-Propylbenzene	7.8	2.3	1.00	
Styrene	ND	1.2	1.00	
1,1,1,2-Tetrachloroethane	ND	1.2	1.00	
1,1,2,2-Tetrachloroethane	ND	2.3	1.00	
Tetrachloroethene	ND	1.2	1.00	
Toluene	ND	1.2	1.00	
1,2,3-Trichlorobenzene	ND	2.3	1.00	
1,2,4-Trichlorobenzene	ND	2.3	1.00	
1,1,1-Trichloroethane	ND	1.2	1.00	
1,1,2-Trichloroethane	ND	1.2	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	12	1.00	
Trichloroethene	ND	2.3	1.00	
Trichlorofluoromethane	ND	12	1.00	
1,2,3-Trichloropropane	ND	2.3	1.00	
1,2,4-Trimethylbenzene	ND	2.3	1.00	
1,3,5-Trimethylbenzene	ND	2.3	1.00	
Vinyl Acetate	ND	12	1.00	
Vinyl Chloride	ND	1.2	1.00	
p/m-Xylene	ND	2.3	1.00	
o-Xylene	ND	1.2	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.3	1.00	
Tert-Butyl Alcohol (TBA)	ND	23	1.00	
Diisopropyl Ether (DIPE)	ND	1.2	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.2	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.2	1.00	
Ethanol	ND	580	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	97	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>				
1,2-Dichloroethane-d4	98	71-155					
1,4-Bromofluorobenzene	107	80-120					
Toluene-d8	102	80-120					
Toluene-d8-TPPH	100	80-120					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-31	19-06-1878-16-F	06/27/19 12:45	Solid	GC/MS OO	06/27/19	07/06/19 21:55	190706L022

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	11000	4900	100	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	104	79-139		
1,2-Dichloroethane-d4	102	71-155		
1,4-Bromofluorobenzene	95	80-120		
Toluene-d8	100	80-120		
Toluene-d8-TPPH	101	80-120		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-36	19-06-1878-17-E	06/27/19 13:00	Solid	GC/MS OO	06/27/19	07/10/19 20:41	190710L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	2100	50.0	
Benzene	ND	43	50.0	
Bromobenzene	ND	43	50.0	
Bromochloromethane	ND	85	50.0	
Bromodichloromethane	ND	43	50.0	
Bromoform	ND	210	50.0	
Bromomethane	ND	850	50.0	
2-Butanone	ND	850	50.0	
n-Butylbenzene	110	43	50.0	
sec-Butylbenzene	62	43	50.0	
tert-Butylbenzene	ND	43	50.0	
Carbon Disulfide	ND	430	50.0	
Carbon Tetrachloride	ND	43	50.0	
Chlorobenzene	ND	43	50.0	
Chloroethane	ND	85	50.0	
Chloroform	ND	43	50.0	
Chloromethane	ND	850	50.0	
2-Chlorotoluene	ND	43	50.0	
4-Chlorotoluene	ND	43	50.0	
Dibromochloromethane	ND	85	50.0	
1,2-Dibromo-3-Chloropropane	ND	210	50.0	
1,2-Dibromoethane	ND	43	50.0	
Dibromomethane	ND	43	50.0	
1,2-Dichlorobenzene	ND	43	50.0	
1,3-Dichlorobenzene	ND	43	50.0	
1,4-Dichlorobenzene	ND	43	50.0	
Dichlorodifluoromethane	ND	85	50.0	
1,1-Dichloroethane	ND	43	50.0	
1,2-Dichloroethane	ND	43	50.0	
1,1-Dichloroethene	ND	43	50.0	
c-1,2-Dichloroethene	ND	43	50.0	
t-1,2-Dichloroethene	ND	43	50.0	
1,2-Dichloropropane	ND	43	50.0	
1,3-Dichloropropane	ND	43	50.0	
2,2-Dichloropropane	ND	210	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	85	50.0	
c-1,3-Dichloropropene	ND	43	50.0	
t-1,3-Dichloropropene	ND	85	50.0	
Ethylbenzene	150	43	50.0	
2-Hexanone	ND	850	50.0	
Isopropylbenzene	110	43	50.0	
p-Isopropyltoluene	74	43	50.0	
Methylene Chloride	ND	430	50.0	
4-Methyl-2-Pentanone	ND	850	50.0	
Naphthalene	ND	430	50.0	
n-Propylbenzene	140	85	50.0	
Styrene	ND	43	50.0	
1,1,1,2-Tetrachloroethane	ND	43	50.0	
1,1,2,2-Tetrachloroethane	ND	85	50.0	
Tetrachloroethene	ND	43	50.0	
Toluene	ND	43	50.0	
1,2,3-Trichlorobenzene	ND	85	50.0	
1,2,4-Trichlorobenzene	ND	85	50.0	
1,1,1-Trichloroethane	ND	43	50.0	
1,1,2-Trichloroethane	ND	43	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	430	50.0	
Trichloroethene	ND	85	50.0	
Trichlorofluoromethane	ND	430	50.0	
1,2,3-Trichloropropane	ND	85	50.0	
1,2,4-Trimethylbenzene	ND	85	50.0	
1,3,5-Trimethylbenzene	ND	85	50.0	
Vinyl Acetate	ND	430	50.0	
Vinyl Chloride	ND	43	50.0	
p/m-Xylene	ND	85	50.0	
o-Xylene	ND	43	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	85	50.0	
Tert-Butyl Alcohol (TBA)	ND	850	50.0	
Diisopropyl Ether (DIPE)	ND	43	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	43	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	43	50.0	
Ethanol	ND	21000	50.0	
TPPH	56000	2100	50.0	
Gasoline Range Organics (C4-C12)	43000	2100	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	103	79-139	
1,2-Dichloroethane-d4	101	71-155	
1,4-Bromofluorobenzene	101	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-42	19-06-1878-18-B	06/27/19 13:16	Solid	GC/MS OO	06/27/19	07/08/19 23:15	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	40	1.00	
Benzene	0.98	0.79	1.00	
Bromobenzene	ND	0.79	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.79	1.00	
Bromoform	ND	4.0	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	1.3	0.79	1.00	
sec-Butylbenzene	1.9	0.79	1.00	
tert-Butylbenzene	ND	0.79	1.00	
Carbon Disulfide	ND	7.9	1.00	
Carbon Tetrachloride	ND	0.79	1.00	
Chlorobenzene	ND	0.79	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.79	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.79	1.00	
4-Chlorotoluene	ND	0.79	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.0	1.00	
1,2-Dibromoethane	ND	0.79	1.00	
Dibromomethane	ND	0.79	1.00	
1,2-Dichlorobenzene	ND	0.79	1.00	
1,3-Dichlorobenzene	ND	0.79	1.00	
1,4-Dichlorobenzene	ND	0.79	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.79	1.00	
1,2-Dichloroethane	ND	0.79	1.00	
1,1-Dichloroethene	ND	0.79	1.00	
c-1,2-Dichloroethene	ND	0.79	1.00	
t-1,2-Dichloroethene	ND	0.79	1.00	
1,2-Dichloropropane	ND	0.79	1.00	
1,3-Dichloropropane	ND	0.79	1.00	
2,2-Dichloropropane	ND	4.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.79	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.79	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	0.90	0.79	1.00	
p-Isopropyltoluene	1.6	0.79	1.00	
Methylene Chloride	ND	7.9	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	7.9	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.79	1.00	
1,1,1,2-Tetrachloroethane	ND	0.79	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.79	1.00	
Toluene	ND	0.79	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.79	1.00	
1,1,2-Trichloroethane	ND	0.79	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.9	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	7.9	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	7.9	1.00	
Vinyl Chloride	ND	0.79	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.79	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.79	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.79	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.79	1.00	
Ethanol	ND	400	1.00	
TPPH	1500	40	1.00	
Gasoline Range Organics (C4-C12)	1300	40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	95	79-139	
1,2-Dichloroethane-d4	93	71-155	
1,4-Bromofluorobenzene	102	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	93	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-49.5	19-06-1878-19-C	06/27/19 14:05	Solid	GC/MS OO	06/27/19	07/06/19 20:27	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	38	1.00	
Benzene	ND	0.77	1.00	
Bromobenzene	ND	0.77	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.77	1.00	
Bromoform	ND	3.8	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	ND	0.77	1.00	
sec-Butylbenzene	ND	0.77	1.00	
tert-Butylbenzene	ND	0.77	1.00	
Carbon Disulfide	ND	7.7	1.00	
Carbon Tetrachloride	ND	0.77	1.00	
Chlorobenzene	ND	0.77	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.77	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.77	1.00	
4-Chlorotoluene	ND	0.77	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.8	1.00	
1,2-Dibromoethane	ND	0.77	1.00	
Dibromomethane	ND	0.77	1.00	
1,2-Dichlorobenzene	ND	0.77	1.00	
1,3-Dichlorobenzene	ND	0.77	1.00	
1,4-Dichlorobenzene	ND	0.77	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.77	1.00	
1,2-Dichloroethane	3.8	0.77	1.00	
1,1-Dichloroethene	ND	0.77	1.00	
c-1,2-Dichloroethene	ND	0.77	1.00	
t-1,2-Dichloroethene	ND	0.77	1.00	
1,2-Dichloropropane	ND	0.77	1.00	
1,3-Dichloropropane	ND	0.77	1.00	
2,2-Dichloropropane	ND	3.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.77	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	ND	0.77	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	ND	0.77	1.00	
p-Isopropyltoluene	ND	0.77	1.00	
Methylene Chloride	ND	7.7	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.7	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.77	1.00	
1,1,1,2-Tetrachloroethane	ND	0.77	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.77	1.00	
Toluene	ND	0.77	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.77	1.00	
1,1,2-Trichloroethane	ND	0.77	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.7	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.7	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.7	1.00	
Vinyl Chloride	ND	0.77	1.00	
p/m-Xylene	ND	1.5	1.00	
o-Xylene	ND	0.77	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.77	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.77	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.77	1.00	
Ethanol	ND	380	1.00	
TPPH	78	38	1.00	
Gasoline Range Organics (C4-C12)	71	38	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	109	79-139	
1,2-Dichloroethane-d4	113	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CE DUP 2	19-06-1878-20-E	06/27/19 00:00	Solid	GC/MS OO	06/27/19	07/08/19 21:47	190708L023

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	8200	50.0	
Benzene	ND	160	50.0	
Bromobenzene	ND	160	50.0	
Bromochloromethane	ND	330	50.0	
Bromodichloromethane	ND	160	50.0	
Bromoform	ND	820	50.0	
Bromomethane	ND	3300	50.0	
2-Butanone	ND	3300	50.0	
n-Butylbenzene	ND	160	50.0	
sec-Butylbenzene	ND	160	50.0	
tert-Butylbenzene	ND	160	50.0	
Carbon Disulfide	ND	1600	50.0	
Carbon Tetrachloride	ND	160	50.0	
Chlorobenzene	ND	160	50.0	
Chloroethane	ND	330	50.0	
Chloroform	ND	160	50.0	
Chloromethane	ND	3300	50.0	
2-Chlorotoluene	ND	160	50.0	
4-Chlorotoluene	ND	160	50.0	
Dibromochloromethane	ND	330	50.0	
1,2-Dibromo-3-Chloropropane	ND	820	50.0	
1,2-Dibromoethane	ND	160	50.0	
Dibromomethane	ND	160	50.0	
1,2-Dichlorobenzene	ND	160	50.0	
1,3-Dichlorobenzene	ND	160	50.0	
1,4-Dichlorobenzene	ND	160	50.0	
Dichlorodifluoromethane	ND	330	50.0	
1,1-Dichloroethane	ND	160	50.0	
1,2-Dichloroethane	ND	160	50.0	
1,1-Dichloroethene	ND	160	50.0	
c-1,2-Dichloroethene	ND	160	50.0	
t-1,2-Dichloroethene	ND	160	50.0	
1,2-Dichloropropane	ND	160	50.0	
1,3-Dichloropropane	ND	160	50.0	
2,2-Dichloropropane	ND	820	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	330	50.0	
c-1,3-Dichloropropene	ND	160	50.0	
t-1,3-Dichloropropene	ND	330	50.0	
Ethylbenzene	ND	160	50.0	
2-Hexanone	ND	3300	50.0	
Isopropylbenzene	ND	160	50.0	
p-Isopropyltoluene	ND	160	50.0	
Methylene Chloride	ND	1600	50.0	
4-Methyl-2-Pentanone	ND	3300	50.0	
Naphthalene	ND	1600	50.0	
n-Propylbenzene	ND	330	50.0	
Styrene	ND	160	50.0	
1,1,1,2-Tetrachloroethane	ND	160	50.0	
1,1,2,2-Tetrachloroethane	ND	330	50.0	
Tetrachloroethene	ND	160	50.0	
Toluene	ND	160	50.0	
1,2,3-Trichlorobenzene	ND	330	50.0	
1,2,4-Trichlorobenzene	ND	330	50.0	
1,1,1-Trichloroethane	ND	160	50.0	
1,1,2-Trichloroethane	ND	160	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1600	50.0	
Trichloroethene	ND	330	50.0	
Trichlorofluoromethane	ND	1600	50.0	
1,2,3-Trichloropropane	ND	330	50.0	
1,2,4-Trimethylbenzene	ND	330	50.0	
1,3,5-Trimethylbenzene	ND	330	50.0	
Vinyl Acetate	ND	1600	50.0	
Vinyl Chloride	ND	160	50.0	
p/m-Xylene	ND	330	50.0	
o-Xylene	ND	160	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	330	50.0	
Tert-Butyl Alcohol (TBA)	ND	3300	50.0	
Diisopropyl Ether (DIPE)	ND	160	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	160	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	160	50.0	
Ethanol	ND	82000	50.0	
TPPH	65000	8200	50.0	
Gasoline Range Organics (C4-C12)	44000	8200	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	88	79-139	
1,2-Dichloroethane-d4	82	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-46	19-06-1878-21-C	06/27/19 13:59	Solid	GC/MS OO	06/27/19	07/06/19 20:56	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	40	1.00	
Benzene	20	0.79	1.00	
Bromobenzene	ND	0.79	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.79	1.00	
Bromoform	ND	4.0	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.79	1.00	
sec-Butylbenzene	ND	0.79	1.00	
tert-Butylbenzene	ND	0.79	1.00	
Carbon Disulfide	ND	7.9	1.00	
Carbon Tetrachloride	ND	0.79	1.00	
Chlorobenzene	ND	0.79	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.79	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.79	1.00	
4-Chlorotoluene	ND	0.79	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.0	1.00	
1,2-Dibromoethane	ND	0.79	1.00	
Dibromomethane	ND	0.79	1.00	
1,2-Dichlorobenzene	ND	0.79	1.00	
1,3-Dichlorobenzene	ND	0.79	1.00	
1,4-Dichlorobenzene	ND	0.79	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.79	1.00	
1,2-Dichloroethane	ND	0.79	1.00	
1,1-Dichloroethene	ND	0.79	1.00	
c-1,2-Dichloroethene	ND	0.79	1.00	
t-1,2-Dichloroethene	ND	0.79	1.00	
1,2-Dichloropropane	ND	0.79	1.00	
1,3-Dichloropropane	ND	0.79	1.00	
2,2-Dichloropropane	ND	4.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.79	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.79	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	0.83	0.79	1.00	
p-Isopropyltoluene	ND	0.79	1.00	
Methylene Chloride	ND	7.9	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	7.9	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.79	1.00	
1,1,1,2-Tetrachloroethane	ND	0.79	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.79	1.00	
Toluene	ND	0.79	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.79	1.00	
1,1,2-Trichloroethane	ND	0.79	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.9	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	7.9	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	7.9	1.00	
Vinyl Chloride	ND	0.79	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.79	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.79	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.79	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.79	1.00	
Ethanol	ND	400	1.00	
TPPH	270	40	1.00	
Gasoline Range Organics (C4-C12)	250	40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	108	79-139	
1,2-Dichloroethane-d4	120	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	103	80-120	
Toluene-d8-TPPH	104	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2081	N/A	Solid	GC/MS OO	07/04/19	07/04/19 17:37	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	94	79-139	
1,2-Dichloroethane-d4	93	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2085	N/A	Solid	GC/MS OO	07/06/19	07/06/19 16:31	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	106	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	95	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2087	N/A	Solid	GC/MS OO	07/06/19	07/06/19 17:00	190706L022

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	ND	5000	50.0	
Gasoline Range Organics (C4-C12)	ND	5000	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	94	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2089	N/A	Solid	GC/MS OO	07/07/19	07/07/19 17:54	190707L004

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	105	79-139	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental	Date Received:	06/27/19
30423 Canwood St., Suite 208	Work Order:	19-06-1878
Agoura Hills, CA 91301-4316	Preparation:	EPA 5035
	Method:	GC/MS / EPA 8260B
	Units:	ug/kg
Project: OOI		Page 72 of 81

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	103	71-155	
1,4-Bromofluorobenzene	94	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	104	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2091	N/A	Solid	GC/MS OO	07/08/19	07/08/19 18:50	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	94	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2092	N/A	Solid	GC/MS OO	07/08/19	07/08/19 19:20	190708L023

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	5000	50.0	
Benzene	ND	100	50.0	
Bromobenzene	ND	100	50.0	
Bromochloromethane	ND	200	50.0	
Bromodichloromethane	ND	100	50.0	
Bromoform	ND	500	50.0	
Bromomethane	ND	2000	50.0	
2-Butanone	ND	2000	50.0	
n-Butylbenzene	ND	100	50.0	
sec-Butylbenzene	ND	100	50.0	
tert-Butylbenzene	ND	100	50.0	
Carbon Disulfide	ND	1000	50.0	
Carbon Tetrachloride	ND	100	50.0	
Chlorobenzene	ND	100	50.0	
Chloroethane	ND	200	50.0	
Chloroform	ND	100	50.0	
Chloromethane	ND	2000	50.0	
2-Chlorotoluene	ND	100	50.0	
4-Chlorotoluene	ND	100	50.0	
Dibromochloromethane	ND	200	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	100	50.0	
Dibromomethane	ND	100	50.0	
1,2-Dichlorobenzene	ND	100	50.0	
1,3-Dichlorobenzene	ND	100	50.0	
1,4-Dichlorobenzene	ND	100	50.0	
Dichlorodifluoromethane	ND	200	50.0	
1,1-Dichloroethane	ND	100	50.0	
1,2-Dichloroethane	ND	100	50.0	
1,1-Dichloroethene	ND	100	50.0	
c-1,2-Dichloroethene	ND	100	50.0	
t-1,2-Dichloroethene	ND	100	50.0	
1,2-Dichloropropane	ND	100	50.0	
1,3-Dichloropropane	ND	100	50.0	
2,2-Dichloropropane	ND	500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	200	50.0	
c-1,3-Dichloropropene	ND	100	50.0	
t-1,3-Dichloropropene	ND	200	50.0	
Ethylbenzene	ND	100	50.0	
2-Hexanone	ND	2000	50.0	
Isopropylbenzene	ND	100	50.0	
p-Isopropyltoluene	ND	100	50.0	
Methylene Chloride	ND	1000	50.0	
4-Methyl-2-Pentanone	ND	2000	50.0	
Naphthalene	ND	1000	50.0	
n-Propylbenzene	ND	200	50.0	
Styrene	ND	100	50.0	
1,1,1,2-Tetrachloroethane	ND	100	50.0	
1,1,2,2-Tetrachloroethane	ND	200	50.0	
Tetrachloroethene	ND	100	50.0	
Toluene	ND	100	50.0	
1,2,3-Trichlorobenzene	ND	200	50.0	
1,2,4-Trichlorobenzene	ND	200	50.0	
1,1,1-Trichloroethane	ND	100	50.0	
1,1,2-Trichloroethane	ND	100	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	50.0	
Trichloroethene	ND	200	50.0	
Trichlorofluoromethane	ND	1000	50.0	
1,2,3-Trichloropropane	ND	200	50.0	
1,2,4-Trimethylbenzene	ND	200	50.0	
1,3,5-Trimethylbenzene	ND	200	50.0	
Vinyl Acetate	ND	1000	50.0	
Vinyl Chloride	ND	100	50.0	
p/m-Xylene	ND	200	50.0	
o-Xylene	ND	100	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	200	50.0	
Tert-Butyl Alcohol (TBA)	ND	2000	50.0	
Diisopropyl Ether (DIPE)	ND	100	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	100	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	100	50.0	
Ethanol	ND	50000	50.0	
TPPH	ND	5000	50.0	
Gasoline Range Organics (C4-C12)	ND	5000	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	96	79-139	
1,2-Dichloroethane-d4	93	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2094	N/A	Solid	GC/MS OO	07/10/19	07/10/19 19:39	190710L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	5000	50.0	
Benzene	ND	100	50.0	
Bromobenzene	ND	100	50.0	
Bromochloromethane	ND	200	50.0	
Bromodichloromethane	ND	100	50.0	
Bromoform	ND	500	50.0	
Bromomethane	ND	2000	50.0	
2-Butanone	ND	2000	50.0	
n-Butylbenzene	ND	100	50.0	
sec-Butylbenzene	ND	100	50.0	
tert-Butylbenzene	ND	100	50.0	
Carbon Disulfide	ND	1000	50.0	
Carbon Tetrachloride	ND	100	50.0	
Chlorobenzene	ND	100	50.0	
Chloroethane	ND	200	50.0	
Chloroform	ND	100	50.0	
Chloromethane	ND	2000	50.0	
2-Chlorotoluene	ND	100	50.0	
4-Chlorotoluene	ND	100	50.0	
Dibromochloromethane	ND	200	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	100	50.0	
Dibromomethane	ND	100	50.0	
1,2-Dichlorobenzene	ND	100	50.0	
1,3-Dichlorobenzene	ND	100	50.0	
1,4-Dichlorobenzene	ND	100	50.0	
Dichlorodifluoromethane	ND	200	50.0	
1,1-Dichloroethane	ND	100	50.0	
1,2-Dichloroethane	ND	100	50.0	
1,1-Dichloroethene	ND	100	50.0	
c-1,2-Dichloroethene	ND	100	50.0	
t-1,2-Dichloroethene	ND	100	50.0	
1,2-Dichloropropane	ND	100	50.0	
1,3-Dichloropropane	ND	100	50.0	
2,2-Dichloropropane	ND	500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	200	50.0	
c-1,3-Dichloropropene	ND	100	50.0	
t-1,3-Dichloropropene	ND	200	50.0	
Ethylbenzene	ND	100	50.0	
2-Hexanone	ND	2000	50.0	
Isopropylbenzene	ND	100	50.0	
p-Isopropyltoluene	ND	100	50.0	
Methylene Chloride	ND	1000	50.0	
4-Methyl-2-Pentanone	ND	2000	50.0	
Naphthalene	ND	1000	50.0	
n-Propylbenzene	ND	200	50.0	
Styrene	ND	100	50.0	
1,1,1,2-Tetrachloroethane	ND	100	50.0	
1,1,2,2-Tetrachloroethane	ND	200	50.0	
Tetrachloroethene	ND	100	50.0	
Toluene	ND	100	50.0	
1,2,3-Trichlorobenzene	ND	200	50.0	
1,2,4-Trichlorobenzene	ND	200	50.0	
1,1,1-Trichloroethane	ND	100	50.0	
1,1,2-Trichloroethane	ND	100	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	50.0	
Trichloroethene	ND	200	50.0	
Trichlorofluoromethane	ND	1000	50.0	
1,2,3-Trichloropropane	ND	200	50.0	
1,2,4-Trimethylbenzene	ND	200	50.0	
1,3,5-Trimethylbenzene	ND	200	50.0	
Vinyl Acetate	ND	1000	50.0	
Vinyl Chloride	ND	100	50.0	
p/m-Xylene	ND	200	50.0	
o-Xylene	ND	100	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	200	50.0	
Tert-Butyl Alcohol (TBA)	ND	2000	50.0	
Diisopropyl Ether (DIPE)	ND	100	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	100	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	100	50.0	
Ethanol	ND	50000	50.0	
TPPH	ND	5000	50.0	
Gasoline Range Organics (C4-C12)	ND	5000	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	97	71-155	
1,4-Bromofluorobenzene	93	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: N/A
Method: ASTM D-2216 (M)
Units: %

Project: OOI

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-7'	19-06-1878-1-A	06/27/19 07:40	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		12		0.10		1.00	
CESB13-11'	19-06-1878-2-A	06/27/19 07:50	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		12		0.10		1.00	
CESB13-15'	19-06-1878-3-A	06/27/19 08:02	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		12		0.10		1.00	
CESB13-20'	19-06-1878-4-A	06/27/19 08:10	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		8.2		0.10		1.00	
CESB13-25'	19-06-1878-5-A	06/27/19 08:18	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		9.0		0.10		1.00	
CESB13-30'	19-06-1878-6-A	06/27/19 08:38	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		4.1		0.10		1.00	
CESB13-32	19-06-1878-7-A	06/27/19 08:50	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		4.3		0.10		1.00	
CESB13-36	19-06-1878-8-A	06/27/19 09:00	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		19		0.10		1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: N/A
Method: ASTM D-2216 (M)
Units: %

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-40	19-06-1878-9-A	06/27/19 09:20	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		21		0.10		1.00	
CESB14-11'	19-06-1878-12-A	06/27/19 11:51	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		7.3		0.10		1.00	
CESB14-16'	19-06-1878-13-A	06/27/19 12:13	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		11		0.10		1.00	
CESB14-20'	19-06-1878-14-A	06/27/19 12:18	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		8.1		0.10		1.00	
CESB14-26'	19-06-1878-15-A	06/27/19 12:30	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		4.5		0.10		1.00	
CESB14-31	19-06-1878-16-A	06/27/19 12:45	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		15		0.10		1.00	
CESB14-36	19-06-1878-17-A	06/27/19 13:00	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		15		0.10		1.00	
CE DUP 2	19-06-1878-20-A	06/27/19 00:00	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		12		0.10		1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental	Date Received:	06/27/19
30423 Canwood St., Suite 208	Work Order:	19-06-1878
Agoura Hills, CA 91301-4316	Preparation:	N/A
	Method:	ASTM D-2216 (M)
	Units:	%

Project: OOI Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-05-014-8483	N/A	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Moisture	ND	0.10	1.00	

Method Blank	099-05-014-8482	N/A	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Moisture	ND	0.10	1.00	



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Quality Control - Spike/Spike Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: OOI

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
CESB14-20'	Sample	Solid	GC 49	07/02/19	07/03/19 00:03	190702S04				
CESB14-20'	Matrix Spike	Solid	GC 49	07/02/19	07/02/19 19:22	190702S04				
CESB14-20'	Matrix Spike Duplicate	Solid	GC 49	07/02/19	07/02/19 19:43	190702S04				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	ND	400.0	396.1	99	403.8	101	64-130	2	0-15	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3050B
Method: EPA 6010B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
CESB13-7'	Sample	Solid	ICP 8300	07/02/19	07/03/19 19:39	190702S01				
CESB13-7'	Matrix Spike	Solid	ICP 8300	07/02/19	07/03/19 19:41	190702S01				
CESB13-7'	Matrix Spike Duplicate	Solid	ICP 8300	07/02/19	07/03/19 19:42	190702S01				
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Arsenic	ND	25.00	25.65	103	24.55	98	75-125	4	0-20	
Lead	1.964	25.00	27.84	104	27.01	100	75-125	3	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Sample Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: N/A
Method: ASTM D-2216 (M)

Project: OOI

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
19-06-1826-1	Sample	Solid	N/A	06/28/19 00:00	06/28/19 16:00	J0628MOID1
19-06-1826-1	Sample Duplicate	Solid	N/A	06/28/19 00:00	06/28/19 16:00	J0628MOID1

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Moisture	86.30	85.80	1	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Sample Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: N/A
Method: ASTM D-2216 (M)

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
CESB14-36	Sample	Solid	N/A	06/28/19 00:00	06/28/19 16:00	J0628MOID3
CESB14-36	Sample Duplicate	Solid	N/A	06/28/19 00:00	06/28/19 16:00	J0628MOID3
<u>Parameter</u>		<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Moisture		15.10	16.50	9	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-490-3658	LCS	Solid	GC 49	07/02/19	07/02/19 19:01	190702B04
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Diesel		400.0	390.3	98	75-123	

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3050B
Method: EPA 6010B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
097-01-002-28079	LCS	Solid	ICP 8300	07/02/19	07/03/19 19:35	190702L01			
097-01-002-28079	LCSD	Solid	ICP 8300	07/02/19	07/03/19 19:37	190702L01			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	26.04	104	26.45	106	80-120	2	0-20	
Lead	25.00	28.18	113	28.45	114	80-120	1	0-20	

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-767-8590	LCS	Aqueous	GC/MS PP	07/02/19	07/02/19 16:48	190702L023				
099-12-767-8590	LCSD	Aqueous	GC/MS PP	07/02/19	07/02/19 17:18	190702L023				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	51.01	102	52.82	106	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.70	95	49.71	99	67-139	55-151	4	0-20	
Chlorobenzene	50.00	48.58	97	50.40	101	78-120	71-127	4	0-20	
1,2-Dibromoethane	50.00	54.31	109	54.93	110	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	49.75	99	50.50	101	63-129	52-140	1	0-20	
1,2-Dichloroethane	50.00	47.23	94	47.66	95	70-130	60-140	1	0-20	
1,1-Dichloroethene	50.00	46.86	94	48.49	97	66-126	56-136	3	0-20	
Ethylbenzene	50.00	50.81	102	53.42	107	80-123	73-130	5	0-20	
Toluene	50.00	49.29	99	50.50	101	80-120	73-127	2	0-20	
Trichloroethene	50.00	50.13	100	51.72	103	80-122	73-129	3	0-20	
Vinyl Chloride	50.00	42.26	85	43.48	87	70-130	60-140	3	0-20	
p/m-Xylene	100.0	100.2	100	104.5	105	75-123	67-131	4	0-25	
o-Xylene	50.00	51.24	102	52.97	106	74-122	66-130	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.10	86	43.80	88	69-129	59-139	2	0-22	
Tert-Butyl Alcohol (TBA)	250.0	254.1	102	245.0	98	69-129	59-139	4	0-25	
Diisopropyl Ether (DIPE)	50.00	49.02	98	50.63	101	68-128	58-138	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.13	94	47.82	96	63-135	51-147	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	53.21	106	53.79	108	67-133	56-144	1	0-20	
Ethanol	500.0	521.7	104	489.7	98	42-168	21-189	6	0-20	
TPPH	1000	1051	105	1022	102	65-135	53-147	3	0-30	
Gasoline Range Organics (C4-C12)	1000	1035	104	1012	101	65-135	53-147	2	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-767-8591	LCS	Aqueous		GC/MS PP	07/05/19	07/05/19 17:33	190705L008			
099-12-767-8591	LCSD	Aqueous		GC/MS PP	07/05/19	07/05/19 18:04	190705L008			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	49.24	98	50.73	101	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	44.53	89	46.67	93	67-139	55-151	5	0-20	
Chlorobenzene	50.00	46.94	94	48.06	96	78-120	71-127	2	0-20	
1,2-Dibromoethane	50.00	52.45	105	52.29	105	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	50.00	48.97	98	50.17	100	63-129	52-140	2	0-20	
1,2-Dichloroethane	50.00	44.89	90	44.40	89	70-130	60-140	1	0-20	
1,1-Dichloroethene	50.00	42.91	86	43.99	88	66-126	56-136	2	0-20	
Ethylbenzene	50.00	48.43	97	49.80	100	80-123	73-130	3	0-20	
Toluene	50.00	47.21	94	49.30	99	80-120	73-127	4	0-20	
Trichloroethene	50.00	49.03	98	49.82	100	80-122	73-129	2	0-20	
Vinyl Chloride	50.00	35.30	71	36.37	73	70-130	60-140	3	0-20	
p/m-Xylene	100.0	95.51	96	96.98	97	75-123	67-131	2	0-25	
o-Xylene	50.00	48.41	97	49.32	99	74-122	66-130	2	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	40.18	80	39.76	80	69-129	59-139	1	0-22	
Tert-Butyl Alcohol (TBA)	250.0	245.6	98	241.7	97	69-129	59-139	2	0-25	
Diisopropyl Ether (DIPE)	50.00	45.07	90	45.15	90	68-128	58-138	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	43.13	86	42.95	86	63-135	51-147	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	50.59	101	50.63	101	67-133	56-144	0	0-20	
Ethanol	500.0	477.1	95	485.6	97	42-168	21-189	2	0-20	
TPPH	1000	1002	100	966.9	97	65-135	53-147	4	0-30	
Gasoline Range Organics (C4-C12)	1000	987.7	99	953.1	95	65-135	53-147	4	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2081	LCS	Solid		GC/MS OO	07/04/19	07/04/19 15:39	190704L017			
099-12-779-2081	LCSD	Solid		GC/MS OO	07/04/19	07/04/19 16:08	190704L017			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	45.00	90	46.86	94	80-120	73-127	4	0-20	
Carbon Tetrachloride	50.00	43.84	88	46.31	93	65-137	53-149	5	0-20	
Chlorobenzene	50.00	47.42	95	49.04	98	80-120	73-127	3	0-20	
1,2-Dibromoethane	50.00	49.83	100	51.79	104	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	50.00	48.84	98	49.86	100	80-120	73-127	2	0-20	
1,2-Dichloroethane	50.00	44.95	90	45.93	92	80-120	73-127	2	0-20	
1,1-Dichloroethene	50.00	43.20	86	44.49	89	68-128	58-138	3	0-20	
Ethylbenzene	50.00	48.94	98	51.09	102	80-120	73-127	4	0-20	
Toluene	50.00	48.17	96	49.23	98	80-120	73-127	2	0-20	
Trichloroethene	50.00	46.93	94	48.94	98	80-120	73-127	4	0-20	
Vinyl Chloride	50.00	39.76	80	39.65	79	67-127	57-137	0	0-20	
p/m-Xylene	100.0	99.94	100	103.5	103	75-125	67-133	3	0-25	
o-Xylene	50.00	51.08	102	52.52	105	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	44.40	89	44.47	89	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	205.7	82	206.0	82	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	50.00	44.62	89	45.82	92	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.10	94	48.09	96	70-124	61-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	53.46	107	55.18	110	74-122	66-130	3	0-20	
Ethanol	500.0	404.9	81	414.2	83	51-135	37-149	2	0-27	
TPPH	1000	916.0	92	932.6	93	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	823.6	82	832.5	83	65-135	53-147	1	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2085	LCS	Solid		GC/MS OO	07/06/19	07/06/19 15:02	190706L008			
099-12-779-2085	LCSD	Solid		GC/MS OO	07/06/19	07/06/19 15:32	190706L008			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	47.19	94	48.58	97	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.02	94	50.73	101	65-137	53-149	8	0-20	
Chlorobenzene	50.00	48.25	97	49.52	99	80-120	73-127	3	0-20	
1,2-Dibromoethane	50.00	48.12	96	50.33	101	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	50.00	47.72	95	49.87	100	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	48.35	97	48.95	98	80-120	73-127	1	0-20	
1,1-Dichloroethene	50.00	43.98	88	47.53	95	68-128	58-138	8	0-20	
Ethylbenzene	50.00	49.19	98	50.95	102	80-120	73-127	4	0-20	
Toluene	50.00	49.41	99	50.64	101	80-120	73-127	2	0-20	
Trichloroethene	50.00	47.41	95	49.70	99	80-120	73-127	5	0-20	
Vinyl Chloride	50.00	39.37	79	42.11	84	67-127	57-137	7	0-20	
p/m-Xylene	100.0	102.3	102	105.6	106	75-125	67-133	3	0-25	
o-Xylene	50.00	51.47	103	53.13	106	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	38.70	77	41.44	83	70-124	61-133	7	0-20	
Tert-Butyl Alcohol (TBA)	250.0	203.8	82	209.2	84	73-121	65-129	3	0-20	
Diisopropyl Ether (DIPE)	50.00	47.78	96	51.28	103	69-129	59-139	7	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	42.36	85	45.41	91	70-124	61-133	7	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	48.47	97	50.01	100	74-122	66-130	3	0-20	
Ethanol	500.0	476.0	95	459.2	92	51-135	37-149	4	0-27	
TPPH	1000	924.3	92	948.7	95	65-135	53-147	3	0-30	
Gasoline Range Organics (C4-C12)	1000	822.0	82	857.9	86	65-135	53-147	4	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2087	LCS	Solid		GC/MS OO	07/06/19	07/06/19 15:02	190706L022			
099-12-779-2087	LCSD	Solid		GC/MS OO	07/06/19	07/06/19 15:32	190706L022			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	47.19	94	48.58	97	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.02	94	50.73	101	65-137	53-149	8	0-20	
Chlorobenzene	50.00	48.25	97	49.52	99	80-120	73-127	3	0-20	
1,2-Dibromoethane	50.00	48.12	96	50.33	101	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	50.00	47.72	95	49.87	100	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	48.35	97	48.95	98	80-120	73-127	1	0-20	
1,1-Dichloroethene	50.00	43.98	88	47.53	95	68-128	58-138	8	0-20	
Ethylbenzene	50.00	49.19	98	50.95	102	80-120	73-127	4	0-20	
Toluene	50.00	49.41	99	50.64	101	80-120	73-127	2	0-20	
Trichloroethene	50.00	47.41	95	49.70	99	80-120	73-127	5	0-20	
Vinyl Chloride	50.00	39.37	79	42.11	84	67-127	57-137	7	0-20	
p/m-Xylene	100.0	102.3	102	105.6	106	75-125	67-133	3	0-25	
o-Xylene	50.00	51.47	103	53.13	106	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	38.70	77	41.44	83	70-124	61-133	7	0-20	
Tert-Butyl Alcohol (TBA)	250.0	203.8	82	209.2	84	73-121	65-129	3	0-20	
Diisopropyl Ether (DIPE)	50.00	47.78	96	51.28	103	69-129	59-139	7	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	42.36	85	45.41	91	70-124	61-133	7	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	48.47	97	50.01	100	74-122	66-130	3	0-20	
Ethanol	500.0	476.0	95	459.2	92	51-135	37-149	4	0-27	
TPPH	1000	924.3	92	948.7	95	65-135	53-147	3	0-30	
Gasoline Range Organics (C4-C12)	1000	822.0	82	857.9	86	65-135	53-147	4	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2089	LCS	Solid		GC/MS OO	07/07/19	07/07/19 15:56	190707L004			
099-12-779-2089	LCSD	Solid		GC/MS OO	07/07/19	07/07/19 16:26	190707L004			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	49.62	99	48.47	97	80-120	73-127	2	0-20	
Carbon Tetrachloride	50.00	51.40	103	48.80	98	65-137	53-149	5	0-20	
Chlorobenzene	50.00	49.54	99	49.27	99	80-120	73-127	1	0-20	
1,2-Dibromoethane	50.00	49.74	99	49.67	99	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	50.00	49.77	100	50.10	100	80-120	73-127	1	0-20	
1,2-Dichloroethane	50.00	49.45	99	47.86	96	80-120	73-127	3	0-20	
1,1-Dichloroethene	50.00	47.22	94	45.28	91	68-128	58-138	4	0-20	
Ethylbenzene	50.00	50.63	101	50.47	101	80-120	73-127	0	0-20	
Toluene	50.00	50.76	102	50.24	100	80-120	73-127	1	0-20	
Trichloroethene	50.00	50.60	101	49.39	99	80-120	73-127	2	0-20	
Vinyl Chloride	50.00	47.99	96	46.75	93	67-127	57-137	3	0-20	
p/m-Xylene	100.0	105.6	106	104.7	105	75-125	67-133	1	0-25	
o-Xylene	50.00	53.06	106	52.57	105	75-125	67-133	1	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	41.97	84	40.85	82	70-124	61-133	3	0-20	
Tert-Butyl Alcohol (TBA)	250.0	204.3	82	204.8	82	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	50.00	51.53	103	50.21	100	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.10	94	45.76	92	70-124	61-133	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.81	104	51.04	102	74-122	66-130	1	0-20	
Ethanol	500.0	475.2	95	459.6	92	51-135	37-149	3	0-27	
TPPH	1000	900.1	90	931.6	93	65-135	53-147	3	0-30	
Gasoline Range Organics (C4-C12)	1000	814.1	81	841.2	84	65-135	53-147	3	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

Page 9 of 11

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2091	LCS	Solid		GC/MS OO	07/08/19	07/08/19 16:52	190708L017			
099-12-779-2091	LCSD	Solid		GC/MS OO	07/08/19	07/08/19 17:21	190708L017			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	48.31	97	46.90	94	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.70	95	47.08	94	65-137	53-149	1	0-20	
Chlorobenzene	50.00	50.03	100	48.23	96	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	51.22	102	50.75	101	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	50.84	102	49.04	98	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	46.11	92	45.69	91	80-120	73-127	1	0-20	
1,1-Dichloroethene	50.00	44.88	90	43.30	87	68-128	58-138	4	0-20	
Ethylbenzene	50.00	51.93	104	49.73	99	80-120	73-127	4	0-20	
Toluene	50.00	50.65	101	48.89	98	80-120	73-127	4	0-20	
Trichloroethene	50.00	50.49	101	48.13	96	80-120	73-127	5	0-20	
Vinyl Chloride	50.00	44.24	88	43.65	87	67-127	57-137	1	0-20	
p/m-Xylene	100.0	106.2	106	101.3	101	75-125	67-133	5	0-25	
o-Xylene	50.00	53.69	107	51.69	103	75-125	67-133	4	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.31	87	43.21	86	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	212.4	85	209.5	84	73-121	65-129	1	0-20	
Diisopropyl Ether (DIPE)	50.00	47.91	96	46.72	93	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	48.64	97	48.22	96	70-124	61-133	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	56.21	112	56.24	112	74-122	66-130	0	0-20	
Ethanol	500.0	426.5	85	397.8	80	51-135	37-149	7	0-27	
TPPH	1000	970.0	97	892.2	89	65-135	53-147	8	0-30	
Gasoline Range Organics (C4-C12)	1000	879.4	88	802.7	80	65-135	53-147	9	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

Page 10 of 11

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2092	LCS	Solid		GC/MS OO	07/08/19	07/08/19 16:52	190708L023			
099-12-779-2092	LCSD	Solid		GC/MS OO	07/08/19	07/08/19 17:21	190708L023			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	48.31	97	46.90	94	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.70	95	47.08	94	65-137	53-149	1	0-20	
Chlorobenzene	50.00	50.03	100	48.23	96	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	51.22	102	50.75	101	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	50.84	102	49.04	98	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	46.11	92	45.69	91	80-120	73-127	1	0-20	
1,1-Dichloroethene	50.00	44.88	90	43.30	87	68-128	58-138	4	0-20	
Ethylbenzene	50.00	51.93	104	49.73	99	80-120	73-127	4	0-20	
Toluene	50.00	50.65	101	48.89	98	80-120	73-127	4	0-20	
Trichloroethene	50.00	50.49	101	48.13	96	80-120	73-127	5	0-20	
Vinyl Chloride	50.00	44.24	88	43.65	87	67-127	57-137	1	0-20	
p/m-Xylene	100.0	106.2	106	101.3	101	75-125	67-133	5	0-25	
o-Xylene	50.00	53.69	107	51.69	103	75-125	67-133	4	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.31	87	43.21	86	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	212.4	85	209.5	84	73-121	65-129	1	0-20	
Diisopropyl Ether (DIPE)	50.00	47.91	96	46.72	93	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	48.64	97	48.22	96	70-124	61-133	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	56.21	112	56.24	112	74-122	66-130	0	0-20	
Ethanol	500.0	426.5	85	397.8	80	51-135	37-149	7	0-27	
TPPH	1000	970.0	97	892.2	89	65-135	53-147	8	0-30	
Gasoline Range Organics (C4-C12)	1000	879.4	88	802.7	80	65-135	53-147	9	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

Page 11 of 11

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-2094	LCS	Solid	GC/MS OO	07/10/19	07/10/19 17:11	190710L008				
099-12-779-2094	LCSD	Solid	GC/MS OO	07/10/19	07/10/19 17:41	190710L008				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	45.99	92	47.04	94	80-120	73-127	2	0-20	
Carbon Tetrachloride	50.00	47.48	95	47.51	95	65-137	53-149	0	0-20	
Chlorobenzene	50.00	46.07	92	47.94	96	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	49.00	98	51.79	104	80-120	73-127	6	0-20	
1,2-Dichlorobenzene	50.00	46.43	93	48.49	97	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	46.24	92	48.38	97	80-120	73-127	5	0-20	
1,1-Dichloroethene	50.00	42.66	85	43.14	86	68-128	58-138	1	0-20	
Ethylbenzene	50.00	46.23	92	48.42	97	80-120	73-127	5	0-20	
Toluene	50.00	46.67	93	48.43	97	80-120	73-127	4	0-20	
Trichloroethene	50.00	47.10	94	47.79	96	80-120	73-127	1	0-20	
Vinyl Chloride	50.00	39.78	80	41.05	82	67-127	57-137	3	0-20	
p/m-Xylene	100.0	95.25	95	100.5	100	75-125	67-133	5	0-25	
o-Xylene	50.00	48.29	97	50.91	102	75-125	67-133	5	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	41.61	83	43.42	87	70-124	61-133	4	0-20	
Tert-Butyl Alcohol (TBA)	250.0	193.3	77	203.2	81	73-121	65-129	5	0-20	
Diisopropyl Ether (DIPE)	50.00	48.05	96	49.42	99	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	46.21	92	47.57	95	70-124	61-133	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.75	103	53.76	108	74-122	66-130	4	0-20	
Ethanol	500.0	367.0	73	397.1	79	51-135	37-149	8	0-27	
TPPH	1000	920.5	92	938.7	94	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	895.1	90	850.0	85	65-135	53-147	5	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



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Sample Analysis Summary Report

Work Order: 19-06-1878

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
ASTM D-2216 (M)	N/A	1215	N/A	1
EPA 6010B	EPA 3050B	1080	ICP 8300	1
EPA 8015B (M)	EPA 3550B	1028	GC 49	1
GC/MS / EPA 8260B	EPA 5035	1178	GC/MS OO	2
GC/MS / EPA 8260B	EPA 5030C	1191	GC/MS PP	2


Return to Contents

Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

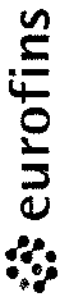
Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 19-06-1878

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



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LABORATORY CLIENT:

CALENVIRO

ADDRESS: 30423 Canwood Street #208 STATE: CA ZIP: 91301

CITY: Agoura Hills

TEL: 818-991-1542

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

GLOBAL ID:

LOG CODE:

SPECIAL INSTRUCTIONS:

CHAIN OF CUSTODY RECORD
DATE: JUNE 27, 2019
PAGE: 1 OF 3

WO # / LAB USE ONLY
19-06-1878

CLIENT PROJECT NAME / NUMBER:

OOI

P.O. NO.:

3029

PROJECT CONTACT:

C. Buckley

SAMPLER(S): (PRINT)

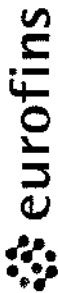
Buckley

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Field Filtered	Preserved	Unpreserved	Field Filtered	Preserved	Unpreserved	TPH (g) <input checked="" type="checkbox"/> GRO 8260	<input type="checkbox"/> TPH(d) <input type="checkbox"/> DRO	TPH <input type="checkbox"/> C6-C13 <input checked="" type="checkbox"/> C6-C4 BOLS	TPH	BTEX / MTBE <input type="checkbox"/> 8260 <input type="checkbox"/>	VOCs (8260) <input checked="" type="checkbox"/> Dry	Oxygenates (8260)	Prep (5035) <input checked="" type="checkbox"/> En Core <input checked="" type="checkbox"/> Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs <input type="checkbox"/> 8270 <input type="checkbox"/> 8270 SIM	T22 Metals <input type="checkbox"/> 8010/747X <input type="checkbox"/> 6020/747X	Cr(VI) <input type="checkbox"/> 7196 <input type="checkbox"/> 7199 <input type="checkbox"/> 218.6	ARSENIC/LEAD	MERCURY		
1	CE5813-71	6/24/19	7:40	Soil	5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
2	-11		7:50		5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
3	-15		8:02		5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4	-20		8:10		5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
5	-25		8:15		5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
6	-30		8:38		5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
7	-32		8:50		5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
8	-36		9:00		5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
9	-40		9:20		5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10	-42		9:45		3							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date: 06/27/19	Time: 16:07
Relinquished by: (Signature) Santayana	Received by: (Signature/Affiliation) Cory van Dannglu	Date: 06/27/19	Time: 17:25
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:



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CHAIN OF CUSTODY RECORD

DATE: JUNE 27, 2019
PAGE: 2 OF 3

WO # / LAB USE ONLY
19-06-1878

LABORATORY CLIENT: **CALENVIRO**

ADDRESS: 30423 Canwood Street #208 STATE: CA ZIP: 91301

CITY: Agoura Hills

TEL: 818-991-1542

CLIENT PROJECT NAME / NUMBER: OOI P.O. NO.: 3029

PROJECT CONTACT: C. Buckley SAMPLER(S) (PRINT): Buckley

REQUESTED ANALYSES

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
 SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

COELTEDF GLOBAL ID: _____ LOG CODE: _____

SPECIAL INSTRUCTIONS: _____

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	LOG CODE:		
		DATE	TIME			Unpreserved	Preserved	Field Filtered
11	CE5B13-47	6/21/19	10:01	Soil	3			
12	CE5B14-11		11:51		5			
13	CE5B14-16		12:13		5			
14	CE5B14-20		12:18		5			
15	CE5B14-26		12:30		5			
16	CE5B14-31		12:45		5			
17	CE5B14-36		1PM		4			
18	CE5B14-42		1:16		3			
19	CE5B14-49.5		2:05		3			
20	CE DUP 2				4			

Please check box or fill in blank as needed.

TPH (G) GRO	TPH (G) DR0	TPH □ C6-C36 □ C6-C44	TPH	BTEX / MTBE □ 8260 □	VOCs (8260) + ORY	Oxygenates (8260)	Prep (5035) □ En Core □ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs □ 8270 □ 8270 SIM	T22 Metals □ 6010/747X □ 6020/747X	Cr(VI) □ 7196 □ 7199 □ 218.6
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X
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Received by: (Signature/Affiliation) Sally Over Date: 06/27/19 Time: 16:07

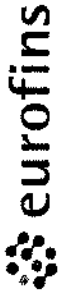
Relinquished by: (Signature) Sally Over

Received by: (Signature/Affiliation) Danmye G Date: 06/27/19 Time: 17:25

Relinquished by: (Signature) Sally Over

Received by: (Signature/Affiliation) _____ Date: _____ Time: _____





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 LABORATORY CLIENT:

CHAIN OF CUSTODY RECORD
 DATE: JUNE 27
 PAGE: 3 OF 3

WO # / LAB USE ONLY
19-06-1878

LABORATORY CLIENT: **CALENVIRO**

ADDRESS: **30423 Canwood Street #208** STATE: **CA** ZIP: **91301**

CITY: **Agoura Hills**

TEL: **818-991-1542**

GLOBAL ID:

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
 SAME DAY 24 HR 48 HR 72 HR **5 DAYS** STANDARD

COELT EDF

SPECIAL INSTRUCTIONS:

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	LOG CODE:		
		DATE	TIME			Unpreserved	Preserved	Field Filtered
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22	CE5B4-47	6/29/17	2:15	✓	3			
23	CE5B1-GW	6/29/17	3P	H20	3	XX		
24	CE5B10-GW	6/29/17	3:20	H20	1	XX		
25	CE5B10-GW	6/29/17	3:50	H20	2	XX		

CLIENT PROJECT NAME / NUMBER: **001**

PROJECT CONTACT: **C. Buckley**

SAMPLER(S) (PRINT): **Buckley**

P.O. NO.: **3029**

REQUESTED ANALYSES

Please check box or fill in blank as needed.

TPH (g) & GRO	TPH (d) & DRO	TPH & C6-C38 & C6-C44	TPH	BTEX / MTBE & 8260	VOCs (8260)	Oxygenates (8260)	Prep (5035) & En Core / Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs & 8270 & 8270 SIM	T22 Metals & 6010/747X & 6020/747X	Cr(VI) & 7196 & 7199 & 218.6
					XX	XX							

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
	Santa Clara	06/27/19	16:07
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Santa Clara	Dannagle Sr	06/27/19	17:25
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:



SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: CALENVERO

DATE: 06/27/2019

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.2°C); Temperature (w/o CF): 5.1 °C (w/ CF): 4.9 °C; Blank Sample
 Sample(s) outside temperature criteria (PM/APM contacted by: _____)
 Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling
 Sample(s) received at ambient temperature; placed on ice for transport by courier
 Ambient Temperature: Air Filter Checked by: 1167

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A Checked by: 1167
 Sample(s) Present and Intact Present but Not Intact Not Present N/A Checked by: 728

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Container(s) for certain analysis free of headspace	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

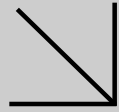
(Trip Blank Lot Number: _____)

Aqueous: VOA VOAh VOAna₂ 100PJ 100PJna₂ 125AGB 125AGBh 125AGBp 125PB 125PBz_{na} (pH__9)
 250AGB 250CGB 250CGBs (pH__2) 250PB 250PBn (pH__2) 500AGB 500AGJ 500AGJs (pH__2) 500PB
 1AGB 1AGBna₂ 1AGBs (pH__2) 1AGBs (O&G) 1PB 1PBna (pH__12) _____ _____
 Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (P) EnCores® (____) TerraCores® (3) 2 OR PJ _____ _____
 Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (____): _____ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag
 Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 728
 s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, z_{na} = Zn (CH₃CO₂)₂ + NaOH Reviewed by: 13

* 4) 6715-9)

Return to Contents



WORK ORDER NUMBER: 19-06-1989

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: California Environmental

Client Project Name: OOI

Attention: Charles Buckley
30423 Canwood St.
Suite 208
Agoura Hills, CA 91301-4316

Approved for release on 07/12/2019 by:
Don Burley
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

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Work Order Number: 19-06-1989

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 06/28/19. They were assigned to Work Order 19-06-1989.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-13A): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: California Environmental	Work Order:	19-06-1989
30423 Canwood St., Suite 208	Project Name:	OOI
Agoura Hills, CA 91301-4316	PO Number:	
	Date/Time Received:	06/28/19 17:26
	Number of Containers:	61

Attn: Charles Buckley

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
CESB15-5	19-06-1989-1	06/28/19 07:39	5	Solid
CESB15-10	19-06-1989-2	06/28/19 07:50	5	Solid
CESB15-15	19-06-1989-3	06/28/19 08:02	5	Solid
CESB15-20	19-06-1989-4	06/28/19 08:18	5	Solid
CESB15-25	19-06-1989-5	06/28/19 08:42	5	Solid
CESB15-30	19-06-1989-6	06/28/19 08:51	5	Solid
CESB15-31.8	19-06-1989-7	06/28/19 08:59	4	Solid
CESB15-37	19-06-1989-8	06/28/19 09:45	4	Solid
CESB15-40	19-06-1989-9	06/28/19 10:07	4	Solid
CESB15-44	19-06-1989-10	06/28/19 10:55	4	Solid
CESB12-GW	19-06-1989-11	06/28/19 12:03	3	Aqueous
CESB13-GW	19-06-1989-12	06/28/19 12:35	3	Aqueous
CESB14-GW	19-06-1989-13	06/28/19 13:05	3	Aqueous
CESB15-GW	19-06-1989-14	06/28/19 13:50	3	Aqueous
CE Dup #3	19-06-1989-15	06/28/19 00:00	3	Solid

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-5	19-06-1989-1-A	06/28/19 07:39	Solid	GC 50	07/01/19	07/02/19 05:12	190701B02A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	84	61-145		



Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-10	19-06-1989-2-A	06/28/19 07:50	Solid	GC 50	07/01/19	07/02/19 05:33	190701B02A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	82	61-145		


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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-15	19-06-1989-3-A	06/28/19 08:02	Solid	GC 50	07/01/19	07/02/19 05:53	190701B02A

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	ND	4.9	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	71	61-145		

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-20	19-06-1989-4-A	06/28/19 08:18	Solid	GC 50	07/01/19	07/02/19 06:14	190701B02A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	88	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-25	19-06-1989-5-A	06/28/19 08:42	Solid	GC 50	07/01/19	07/02/19 06:34	190701B02A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	79	61-145		


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-30	19-06-1989-6-A	06/28/19 08:51	Solid	GC 50	07/01/19	07/02/19 07:16	190701B02A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	78	61-145		


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-31.8	19-06-1989-7-A	06/28/19 08:59	Solid	GC 50	07/01/19	07/02/19 07:36	190701B02A

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	7.2	5.0	1.00	
C11-C12	7.5	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	17	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	80	61-145		

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-37	19-06-1989-8-A	06/28/19 09:45	Solid	GC 50	07/01/19	07/02/19 12:05	190701B02A

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	83	50	10.0	
C7	390	50	10.0	
C8	460	50	10.0	
C9-C10	970	50	10.0	
C11-C12	330	50	10.0	
C13-C14	ND	50	10.0	
C15-C16	ND	50	10.0	
C17-C18	ND	50	10.0	
C19-C20	ND	50	10.0	
C21-C22	ND	50	10.0	
C23-C24	ND	50	10.0	
C25-C28	ND	50	10.0	
C29-C32	ND	50	10.0	
C33-C36	ND	50	10.0	
C37-C40	ND	50	10.0	
C41-C44	ND	50	10.0	
C6-C44 Total	2300	50	10.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	86	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-40	19-06-1989-9-A	06/28/19 10:07	Solid	GC 50	07/01/19	07/02/19 08:17	190701B02A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	72	61-145		

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-44	19-06-1989-10-A	06/28/19 10:55	Solid	GC 50	07/01/19	07/02/19 08:38	190701B02A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	69	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-15-490-3657	N/A	Solid	GC 50	07/01/19	07/02/19 00:25	190701B02A

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	88	61-145	


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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-5	19-06-1989-1-A	06/28/19 07:39	Solid	ICP 8300	07/01/19	07/02/19 16:14	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		2.12		0.773		1.03	
Lead		1.68		0.515		1.03	
CESB15-10	19-06-1989-2-A	06/28/19 07:50	Solid	ICP 8300	07/01/19	07/02/19 16:19	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		2.29		0.765		1.02	
Lead		1.94		0.510		1.02	
CESB15-15	19-06-1989-3-A	06/28/19 08:02	Solid	ICP 8300	07/01/19	07/02/19 16:25	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		4.40		0.725		0.966	
Lead		1.70		0.483		0.966	
CESB15-20	19-06-1989-4-A	06/28/19 08:18	Solid	ICP 8300	07/01/19	07/02/19 16:27	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.765		1.02	
Lead		4.23		0.510		1.02	
CESB15-25	19-06-1989-5-A	06/28/19 08:42	Solid	ICP 8300	07/01/19	07/02/19 16:29	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		3.15		0.773		1.03	
Lead		0.998		0.515		1.03	
CESB15-30	19-06-1989-6-A	06/28/19 08:51	Solid	ICP 8300	07/01/19	07/02/19 16:31	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		1.32		0.781		1.04	
Lead		4.61		0.521		1.04	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-31.8	19-06-1989-7-A	06/28/19 08:59	Solid	ICP 8300	07/01/19	07/02/19 16:33	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		13.3		0.777		1.04	
Lead		7.11		0.518		1.04	
CESB15-37	19-06-1989-8-A	06/28/19 09:45	Solid	ICP 8300	07/01/19	07/02/19 16:34	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		4.47		0.777		1.04	
Lead		1.74		0.518		1.04	
CESB15-40	19-06-1989-9-A	06/28/19 10:07	Solid	ICP 8300	07/01/19	07/02/19 16:36	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		24.2		0.718		0.957	
Lead		3.80		0.478		0.957	
CESB15-44	19-06-1989-10-A	06/28/19 10:55	Solid	ICP 8300	07/01/19	07/02/19 16:38	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		3.45		0.735		0.980	
Lead		2.13		0.490		0.980	
Method Blank	097-01-002-28084	N/A	Solid	ICP 8300	07/01/19	07/02/19 16:05	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.732		0.976	
Lead		ND		0.488		0.976	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-GW	19-06-1989-11-B	06/28/19 12:03	Aqueous	GC/MS PP	07/05/19	07/05/19 20:06	190705L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	200	10.0	
Benzene	520	5.0	10.0	
Bromobenzene	ND	10	10.0	
Bromochloromethane	ND	10	10.0	
Bromodichloromethane	ND	10	10.0	
Bromoform	ND	50	10.0	
Bromomethane	ND	500	10.0	
2-Butanone	ND	100	10.0	
n-Butylbenzene	ND	10	10.0	
sec-Butylbenzene	36	10	10.0	
tert-Butylbenzene	ND	10	10.0	
Carbon Disulfide	ND	100	10.0	
Carbon Tetrachloride	ND	5.0	10.0	
Chlorobenzene	ND	10	10.0	
Chloroethane	ND	50	10.0	
Chloroform	ND	10	10.0	
Chloromethane	ND	100	10.0	
2-Chlorotoluene	ND	10	10.0	
4-Chlorotoluene	ND	10	10.0	
Dibromochloromethane	ND	10	10.0	
1,2-Dibromo-3-Chloropropane	ND	100	10.0	
1,2-Dibromoethane	ND	10	10.0	
Dibromomethane	ND	10	10.0	
1,2-Dichlorobenzene	ND	10	10.0	
1,3-Dichlorobenzene	ND	10	10.0	
1,4-Dichlorobenzene	ND	10	10.0	
Dichlorodifluoromethane	ND	10	10.0	
1,1-Dichloroethane	ND	10	10.0	
1,2-Dichloroethane	ND	5.0	10.0	
1,1-Dichloroethene	ND	10	10.0	
c-1,2-Dichloroethene	ND	10	10.0	
t-1,2-Dichloroethene	ND	10	10.0	
1,2-Dichloropropane	ND	10	10.0	
1,3-Dichloropropane	ND	10	10.0	
2,2-Dichloropropane	ND	10	10.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	10	10.0	
c-1,3-Dichloropropene	ND	5.0	10.0	
t-1,3-Dichloropropene	ND	5.0	10.0	
Ethylbenzene	1200	10	10.0	
2-Hexanone	ND	100	10.0	
Isopropylbenzene	220	10	10.0	
p-Isopropyltoluene	97	10	10.0	
Methylene Chloride	ND	100	10.0	
4-Methyl-2-Pentanone	ND	100	10.0	
Naphthalene	260	100	10.0	
n-Propylbenzene	240	10	10.0	
Styrene	ND	10	10.0	
1,1,1,2-Tetrachloroethane	ND	10	10.0	
1,1,2,2-Tetrachloroethane	ND	10	10.0	
Tetrachloroethene	ND	10	10.0	
Toluene	430	10	10.0	
1,2,3-Trichlorobenzene	ND	10	10.0	
1,2,4-Trichlorobenzene	ND	10	10.0	
1,1,1-Trichloroethane	ND	10	10.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	100	10.0	
1,1,2-Trichloroethane	ND	10	10.0	
Trichloroethene	ND	10	10.0	
Trichlorofluoromethane	ND	100	10.0	
1,2,3-Trichloropropane	ND	50	10.0	
1,2,4-Trimethylbenzene	1300	10	10.0	
1,3,5-Trimethylbenzene	470	10	10.0	
Vinyl Acetate	ND	100	10.0	
Vinyl Chloride	ND	5.0	10.0	
p/m-Xylene	2700	10	10.0	
o-Xylene	1500	10	10.0	
Methyl-t-Butyl Ether (MTBE)	ND	10	10.0	
Tert-Butyl Alcohol (TBA)	ND	100	10.0	
Diisopropyl Ether (DIPE)	ND	20	10.0	
Ethyl-t-Butyl Ether (ETBE)	ND	20	10.0	
Tert-Amyl-Methyl Ether (TAME)	ND	20	10.0	
Ethanol	ND	1000	10.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	96	78-126		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	90	75-135	
Toluene-d8	103	80-120	
Toluene-d8-TPPH	98	80-120	
1,4-Bromofluorobenzene	109	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-GW	19-06-1989-11-A	06/28/19 12:03	Aqueous	GC/MS PP	07/02/19	07/03/19 01:14	190702L023

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	38000	2500	50.0	
Gasoline Range Organics (C4-C12)	36000	2500	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Toluene-d8-TPPH	95	80-120	



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-GW	19-06-1989-12-A	06/28/19 12:35	Aqueous	GC/MS PP	07/02/19	07/03/19 01:45	190702L023

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	100	5.00	
Benzene	220	2.5	5.00	
Bromobenzene	ND	5.0	5.00	
Bromochloromethane	ND	5.0	5.00	
Bromodichloromethane	ND	5.0	5.00	
Bromoform	ND	25	5.00	
Bromomethane	ND	250	5.00	
2-Butanone	ND	50	5.00	
n-Butylbenzene	ND	5.0	5.00	
sec-Butylbenzene	8.7	5.0	5.00	
tert-Butylbenzene	ND	5.0	5.00	
Carbon Disulfide	ND	50	5.00	
Carbon Tetrachloride	ND	2.5	5.00	
Chlorobenzene	ND	5.0	5.00	
Chloroethane	ND	25	5.00	
Chloroform	ND	5.0	5.00	
Chloromethane	ND	50	5.00	
2-Chlorotoluene	ND	5.0	5.00	
4-Chlorotoluene	ND	5.0	5.00	
Dibromochloromethane	ND	5.0	5.00	
1,2-Dibromo-3-Chloropropane	ND	50	5.00	
1,2-Dibromoethane	ND	5.0	5.00	
Dibromomethane	ND	5.0	5.00	
1,2-Dichlorobenzene	ND	5.0	5.00	
1,3-Dichlorobenzene	ND	5.0	5.00	
1,4-Dichlorobenzene	ND	5.0	5.00	
Dichlorodifluoromethane	ND	5.0	5.00	
1,1-Dichloroethane	ND	5.0	5.00	
1,2-Dichloroethane	ND	2.5	5.00	
1,1-Dichloroethene	ND	5.0	5.00	
c-1,2-Dichloroethene	ND	5.0	5.00	
t-1,2-Dichloroethene	ND	5.0	5.00	
1,2-Dichloropropane	ND	5.0	5.00	
1,3-Dichloropropane	ND	5.0	5.00	
2,2-Dichloropropane	ND	5.0	5.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	5.0	5.00	
c-1,3-Dichloropropene	ND	2.5	5.00	
t-1,3-Dichloropropene	ND	2.5	5.00	
Ethylbenzene	530	5.0	5.00	
2-Hexanone	ND	50	5.00	
Isopropylbenzene	86	5.0	5.00	
p-Isopropyltoluene	21	5.0	5.00	
Methylene Chloride	ND	50	5.00	
4-Methyl-2-Pentanone	ND	50	5.00	
Naphthalene	130	50	5.00	
n-Propylbenzene	73	5.0	5.00	
Styrene	ND	5.0	5.00	
1,1,1,2-Tetrachloroethane	ND	5.0	5.00	
1,1,2,2-Tetrachloroethane	ND	5.0	5.00	
Tetrachloroethene	ND	5.0	5.00	
Toluene	26	5.0	5.00	
1,2,3-Trichlorobenzene	ND	5.0	5.00	
1,2,4-Trichlorobenzene	ND	5.0	5.00	
1,1,1-Trichloroethane	ND	5.0	5.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	5.00	
1,1,2-Trichloroethane	ND	5.0	5.00	
Trichloroethene	ND	5.0	5.00	
Trichlorofluoromethane	ND	50	5.00	
1,2,3-Trichloropropane	ND	25	5.00	
1,2,4-Trimethylbenzene	420	5.0	5.00	
1,3,5-Trimethylbenzene	100	5.0	5.00	
Vinyl Acetate	ND	50	5.00	
Vinyl Chloride	ND	2.5	5.00	
p/m-Xylene	89	5.0	5.00	
o-Xylene	110	5.0	5.00	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	5.00	
Tert-Butyl Alcohol (TBA)	ND	50	5.00	
Diisopropyl Ether (DIPE)	ND	10	5.00	
Ethyl-t-Butyl Ether (ETBE)	ND	10	5.00	
Tert-Amyl-Methyl Ether (TAME)	ND	10	5.00	
Ethanol	ND	500	5.00	
TPPH	11000	250	5.00	
Gasoline Range Organics (C4-C12)	10000	250	5.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	95	78-126	
1,2-Dichloroethane-d4	88	75-135	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	94	80-120	
1,4-Bromofluorobenzene	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-GW	19-06-1989-13-B	06/28/19 13:05	Aqueous	GC/MS PP	07/10/19	07/10/19 23:20	190710L010

Parameter	Result	RL	DF	Qualifiers
Acetone	260	40	2.00	
Benzene	94	1.0	2.00	
Bromobenzene	ND	2.0	2.00	
Bromochloromethane	ND	2.0	2.00	
Bromodichloromethane	ND	2.0	2.00	
Bromoform	ND	10	2.00	
Bromomethane	ND	100	2.00	
2-Butanone	ND	20	2.00	
n-Butylbenzene	14	2.0	2.00	
sec-Butylbenzene	15	2.0	2.00	
tert-Butylbenzene	ND	2.0	2.00	
Carbon Disulfide	ND	20	2.00	
Carbon Tetrachloride	ND	1.0	2.00	
Chlorobenzene	ND	2.0	2.00	
Chloroethane	ND	10	2.00	
Chloroform	ND	2.0	2.00	
Chloromethane	ND	20	2.00	
2-Chlorotoluene	ND	2.0	2.00	
4-Chlorotoluene	ND	2.0	2.00	
Dibromochloromethane	ND	2.0	2.00	
1,2-Dibromo-3-Chloropropane	ND	20	2.00	
1,2-Dibromoethane	ND	2.0	2.00	
Dibromomethane	ND	2.0	2.00	
1,2-Dichlorobenzene	ND	2.0	2.00	
1,3-Dichlorobenzene	ND	2.0	2.00	
1,4-Dichlorobenzene	ND	2.0	2.00	
Dichlorodifluoromethane	ND	2.0	2.00	
1,1-Dichloroethane	ND	2.0	2.00	
1,2-Dichloroethane	12	1.0	2.00	
1,1-Dichloroethene	ND	2.0	2.00	
c-1,2-Dichloroethene	ND	2.0	2.00	
t-1,2-Dichloroethene	ND	2.0	2.00	
1,2-Dichloropropane	ND	2.0	2.00	
1,3-Dichloropropane	ND	2.0	2.00	
2,2-Dichloropropane	ND	2.0	2.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	2.00	
c-1,3-Dichloropropene	ND	1.0	2.00	
t-1,3-Dichloropropene	ND	1.0	2.00	
Ethylbenzene	240	2.0	2.00	
2-Hexanone	ND	20	2.00	
Isopropylbenzene	94	2.0	2.00	
p-Isopropyltoluene	19	2.0	2.00	
Methylene Chloride	ND	20	2.00	
4-Methyl-2-Pentanone	ND	20	2.00	
Naphthalene	91	20	2.00	
n-Propylbenzene	84	2.0	2.00	
Styrene	ND	2.0	2.00	
1,1,1,2-Tetrachloroethane	ND	2.0	2.00	
1,1,2,2-Tetrachloroethane	ND	2.0	2.00	
Tetrachloroethene	ND	2.0	2.00	
Toluene	6.5	2.0	2.00	
1,2,3-Trichlorobenzene	ND	2.0	2.00	
1,2,4-Trichlorobenzene	ND	2.0	2.00	
1,1,1-Trichloroethane	ND	2.0	2.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	20	2.00	
1,1,2-Trichloroethane	ND	2.0	2.00	
Trichloroethene	ND	2.0	2.00	
Trichlorofluoromethane	ND	20	2.00	
1,2,3-Trichloropropane	ND	10	2.00	
1,2,4-Trimethylbenzene	2.1	2.0	2.00	
1,3,5-Trimethylbenzene	3.8	2.0	2.00	
Vinyl Acetate	ND	20	2.00	
Vinyl Chloride	ND	1.0	2.00	
p/m-Xylene	23	2.0	2.00	
o-Xylene	26	2.0	2.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	2.00	
Tert-Butyl Alcohol (TBA)	ND	20	2.00	
Diisopropyl Ether (DIPE)	ND	4.0	2.00	
Ethyl-t-Butyl Ether (ETBE)	ND	4.0	2.00	
Tert-Amyl-Methyl Ether (TAME)	ND	4.0	2.00	
Ethanol	ND	200	2.00	
TPPH	7200	100	2.00	
Gasoline Range Organics (C4-C12)	6500	100	2.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	78-126	
1,2-Dichloroethane-d4	92	75-135	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	94	80-120	
1,4-Bromofluorobenzene	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-GW	19-06-1989-14-A	06/28/19 13:50	Aqueous	GC/MS PP	07/05/19	07/05/19 19:35	190705L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	200	10.0	
Benzene	7.2	5.0	10.0	
Bromobenzene	ND	10	10.0	
Bromochloromethane	ND	10	10.0	
Bromodichloromethane	ND	10	10.0	
Bromoform	ND	50	10.0	
Bromomethane	ND	500	10.0	
2-Butanone	ND	100	10.0	
n-Butylbenzene	78	10	10.0	
sec-Butylbenzene	46	10	10.0	
tert-Butylbenzene	ND	10	10.0	
Carbon Disulfide	ND	100	10.0	
Carbon Tetrachloride	ND	5.0	10.0	
Chlorobenzene	ND	10	10.0	
Chloroethane	ND	50	10.0	
Chloroform	ND	10	10.0	
Chloromethane	ND	100	10.0	
2-Chlorotoluene	ND	10	10.0	
4-Chlorotoluene	ND	10	10.0	
Dibromochloromethane	ND	10	10.0	
1,2-Dibromo-3-Chloropropane	ND	100	10.0	
1,2-Dibromoethane	ND	10	10.0	
Dibromomethane	ND	10	10.0	
1,2-Dichlorobenzene	ND	10	10.0	
1,3-Dichlorobenzene	ND	10	10.0	
1,4-Dichlorobenzene	ND	10	10.0	
Dichlorodifluoromethane	ND	10	10.0	
1,1-Dichloroethane	ND	10	10.0	
1,2-Dichloroethane	ND	5.0	10.0	
1,1-Dichloroethene	ND	10	10.0	
c-1,2-Dichloroethene	ND	10	10.0	
t-1,2-Dichloroethene	ND	10	10.0	
1,2-Dichloropropane	ND	10	10.0	
1,3-Dichloropropane	ND	10	10.0	
2,2-Dichloropropane	ND	10	10.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	10	10.0	
c-1,3-Dichloropropene	ND	5.0	10.0	
t-1,3-Dichloropropene	ND	5.0	10.0	
Ethylbenzene	610	10	10.0	
2-Hexanone	ND	100	10.0	
Isopropylbenzene	300	10	10.0	
p-Isopropyltoluene	110	10	10.0	
Methylene Chloride	ND	100	10.0	
4-Methyl-2-Pentanone	ND	100	10.0	
Naphthalene	430	100	10.0	
n-Propylbenzene	300	10	10.0	
Styrene	ND	10	10.0	
1,1,1,2-Tetrachloroethane	ND	10	10.0	
1,1,2,2-Tetrachloroethane	ND	10	10.0	
Tetrachloroethene	ND	10	10.0	
Toluene	ND	10	10.0	
1,2,3-Trichlorobenzene	ND	10	10.0	
1,2,4-Trichlorobenzene	ND	10	10.0	
1,1,1-Trichloroethane	ND	10	10.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	100	10.0	
1,1,2-Trichloroethane	ND	10	10.0	
Trichloroethene	ND	10	10.0	
Trichlorofluoromethane	ND	100	10.0	
1,2,3-Trichloropropane	ND	50	10.0	
1,2,4-Trimethylbenzene	1100	10	10.0	
1,3,5-Trimethylbenzene	280	10	10.0	
Vinyl Acetate	ND	100	10.0	
Vinyl Chloride	ND	5.0	10.0	
p/m-Xylene	570	10	10.0	
o-Xylene	22	10	10.0	
Methyl-t-Butyl Ether (MTBE)	ND	10	10.0	
Tert-Butyl Alcohol (TBA)	ND	100	10.0	
Diisopropyl Ether (DIPE)	ND	20	10.0	
Ethyl-t-Butyl Ether (ETBE)	ND	20	10.0	
Tert-Amyl-Methyl Ether (TAME)	ND	20	10.0	
Ethanol	ND	1000	10.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	95	78-126		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 5030C
 Method: GC/MS / EPA 8260B
 Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	91	75-135	
Toluene-d8	106	80-120	
Toluene-d8-TPPH	99	80-120	
1,4-Bromofluorobenzene	103	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-GW	19-06-1989-14-B	06/28/19 13:50	Aqueous	GC/MS PP	07/05/19	07/05/19 20:36	190705L008

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	44000	2000	40.0	
Gasoline Range Organics (C4-C12)	41000	2000	40.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Toluene-d8-TPPH	94	80-120	


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-8590	N/A	Aqueous	GC/MS PP	07/02/19	07/02/19 18:20	190702L023

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	50	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	1.0	1.00	
1,3,5-Trimethylbenzene	ND	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	96	78-126	
1,2-Dichloroethane-d4	95	75-135	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	93	80-120	
1,4-Bromofluorobenzene	98	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-8591	N/A	Aqueous	GC/MS PP	07/05/19	07/05/19 19:05	190705L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	50	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	1.0	1.00	
1,3,5-Trimethylbenzene	ND	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	78-126	
1,2-Dichloroethane-d4	91	75-135	
Toluene-d8	97	80-120	
Toluene-d8-TPPH	91	80-120	
1,4-Bromofluorobenzene	96	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-8594	N/A	Aqueous	GC/MS PP	07/10/19	07/10/19 19:17	190710L010

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	ND	20	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	50	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	1.0	1.00	
1,3,5-Trimethylbenzene	ND	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	78-126	
1,2-Dichloroethane-d4	98	75-135	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	92	80-120	
1,4-Bromofluorobenzene	98	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-5	19-06-1989-1-D	06/28/19 07:39	Solid	GC/MS LL	06/28/19	07/06/19 16:12	190706L002

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	42	1.00	
Benzene	ND	0.83	1.00	
Bromobenzene	ND	0.83	1.00	
Bromochloromethane	ND	1.7	1.00	
Bromodichloromethane	ND	0.83	1.00	
Bromoform	ND	4.2	1.00	
Bromomethane	ND	17	1.00	
2-Butanone	ND	17	1.00	
n-Butylbenzene	ND	0.83	1.00	
sec-Butylbenzene	ND	0.83	1.00	
tert-Butylbenzene	ND	0.83	1.00	
Carbon Disulfide	ND	8.3	1.00	
Carbon Tetrachloride	ND	0.83	1.00	
Chlorobenzene	ND	0.83	1.00	
Chloroethane	ND	1.7	1.00	
Chloroform	ND	0.83	1.00	
Chloromethane	ND	17	1.00	
2-Chlorotoluene	ND	0.83	1.00	
4-Chlorotoluene	ND	0.83	1.00	
Dibromochloromethane	ND	1.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.2	1.00	
1,2-Dibromoethane	ND	0.83	1.00	
Dibromomethane	ND	0.83	1.00	
1,2-Dichlorobenzene	ND	0.83	1.00	
1,3-Dichlorobenzene	ND	0.83	1.00	
1,4-Dichlorobenzene	ND	0.83	1.00	
Dichlorodifluoromethane	ND	1.7	1.00	
1,1-Dichloroethane	ND	0.83	1.00	
1,2-Dichloroethane	ND	0.83	1.00	
1,1-Dichloroethene	ND	0.83	1.00	
c-1,2-Dichloroethene	ND	0.83	1.00	
t-1,2-Dichloroethene	ND	0.83	1.00	
1,2-Dichloropropane	ND	0.83	1.00	
1,3-Dichloropropane	ND	0.83	1.00	
2,2-Dichloropropane	ND	4.2	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.7	1.00	
c-1,3-Dichloropropene	ND	0.83	1.00	
t-1,3-Dichloropropene	ND	1.7	1.00	
Ethylbenzene	ND	0.83	1.00	
2-Hexanone	ND	17	1.00	
Isopropylbenzene	ND	0.83	1.00	
p-Isopropyltoluene	ND	0.83	1.00	
Methylene Chloride	ND	8.3	1.00	
4-Methyl-2-Pentanone	ND	17	1.00	
Naphthalene	ND	8.3	1.00	
n-Propylbenzene	ND	1.7	1.00	
Styrene	ND	0.83	1.00	
1,1,1,2-Tetrachloroethane	ND	0.83	1.00	
1,1,2,2-Tetrachloroethane	ND	1.7	1.00	
Tetrachloroethene	ND	0.83	1.00	
Toluene	ND	0.83	1.00	
1,2,3-Trichlorobenzene	ND	1.7	1.00	
1,2,4-Trichlorobenzene	ND	1.7	1.00	
1,1,1-Trichloroethane	ND	0.83	1.00	
1,1,2-Trichloroethane	ND	0.83	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.3	1.00	
Trichloroethene	ND	1.7	1.00	
Trichlorofluoromethane	ND	8.3	1.00	
1,2,3-Trichloropropane	ND	1.7	1.00	
1,2,4-Trimethylbenzene	ND	1.7	1.00	
1,3,5-Trimethylbenzene	ND	1.7	1.00	
Vinyl Acetate	ND	8.3	1.00	
Vinyl Chloride	ND	0.83	1.00	
p/m-Xylene	ND	1.7	1.00	
o-Xylene	ND	0.83	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.7	1.00	
Tert-Butyl Alcohol (TBA)	ND	17	1.00	
Diisopropyl Ether (DIPE)	ND	0.83	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.83	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.83	1.00	
Ethanol	ND	420	1.00	
TPPH	ND	42	1.00	
Gasoline Range Organics (C4-C12)	ND	42	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	109	79-139	
1,2-Dichloroethane-d4	115	71-155	
1,4-Bromofluorobenzene	95	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-10	19-06-1989-2-D	06/28/19 07:50	Solid	GC/MS LL	06/28/19	07/06/19 16:38	190706L002

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	47	1.00	
Benzene	ND	0.93	1.00	
Bromobenzene	ND	0.93	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.93	1.00	
Bromoform	ND	4.7	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.93	1.00	
sec-Butylbenzene	ND	0.93	1.00	
tert-Butylbenzene	ND	0.93	1.00	
Carbon Disulfide	ND	9.3	1.00	
Carbon Tetrachloride	ND	0.93	1.00	
Chlorobenzene	ND	0.93	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.93	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.93	1.00	
4-Chlorotoluene	ND	0.93	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.7	1.00	
1,2-Dibromoethane	ND	0.93	1.00	
Dibromomethane	ND	0.93	1.00	
1,2-Dichlorobenzene	ND	0.93	1.00	
1,3-Dichlorobenzene	ND	0.93	1.00	
1,4-Dichlorobenzene	ND	0.93	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.93	1.00	
1,2-Dichloroethane	ND	0.93	1.00	
1,1-Dichloroethene	ND	0.93	1.00	
c-1,2-Dichloroethene	ND	0.93	1.00	
t-1,2-Dichloroethene	ND	0.93	1.00	
1,2-Dichloropropane	ND	0.93	1.00	
1,3-Dichloropropane	ND	0.93	1.00	
2,2-Dichloropropane	ND	4.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.93	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.93	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.93	1.00	
p-Isopropyltoluene	ND	0.93	1.00	
Methylene Chloride	ND	9.3	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.3	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.93	1.00	
1,1,1,2-Tetrachloroethane	ND	0.93	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	ND	0.93	1.00	
Toluene	ND	0.93	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.93	1.00	
1,1,2-Trichloroethane	ND	0.93	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.3	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.3	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.3	1.00	
Vinyl Chloride	ND	0.93	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.93	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	
Tert-Butyl Alcohol (TBA)	ND	19	1.00	
Diisopropyl Ether (DIPE)	ND	0.93	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.93	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.93	1.00	
Ethanol	ND	470	1.00	
TPPH	ND	47	1.00	
Gasoline Range Organics (C4-C12)	ND	47	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	109	79-139	
1,2-Dichloroethane-d4	116	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	97	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-15	19-06-1989-3-D	06/28/19 08:02	Solid	GC/MS LL	06/28/19	07/06/19 17:04	190706L002

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	77	1.00	
Benzene	ND	1.5	1.00	
Bromobenzene	ND	1.5	1.00	
Bromochloromethane	ND	3.1	1.00	
Bromodichloromethane	ND	1.5	1.00	
Bromoform	ND	7.7	1.00	
Bromomethane	ND	31	1.00	
2-Butanone	ND	31	1.00	
n-Butylbenzene	ND	1.5	1.00	
sec-Butylbenzene	ND	1.5	1.00	
tert-Butylbenzene	ND	1.5	1.00	
Carbon Disulfide	ND	15	1.00	
Carbon Tetrachloride	ND	1.5	1.00	
Chlorobenzene	ND	1.5	1.00	
Chloroethane	ND	3.1	1.00	
Chloroform	ND	1.5	1.00	
Chloromethane	ND	31	1.00	
2-Chlorotoluene	ND	1.5	1.00	
4-Chlorotoluene	ND	1.5	1.00	
Dibromochloromethane	ND	3.1	1.00	
1,2-Dibromo-3-Chloropropane	ND	7.7	1.00	
1,2-Dibromoethane	ND	1.5	1.00	
Dibromomethane	ND	1.5	1.00	
1,2-Dichlorobenzene	ND	1.5	1.00	
1,3-Dichlorobenzene	ND	1.5	1.00	
1,4-Dichlorobenzene	ND	1.5	1.00	
Dichlorodifluoromethane	ND	3.1	1.00	
1,1-Dichloroethane	ND	1.5	1.00	
1,2-Dichloroethane	ND	1.5	1.00	
1,1-Dichloroethene	ND	1.5	1.00	
c-1,2-Dichloroethene	ND	1.5	1.00	
t-1,2-Dichloroethene	ND	1.5	1.00	
1,2-Dichloropropane	ND	1.5	1.00	
1,3-Dichloropropane	ND	1.5	1.00	
2,2-Dichloropropane	ND	7.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	3.1	1.00	
c-1,3-Dichloropropene	ND	1.5	1.00	
t-1,3-Dichloropropene	ND	3.1	1.00	
Ethylbenzene	ND	1.5	1.00	
2-Hexanone	ND	31	1.00	
Isopropylbenzene	ND	1.5	1.00	
p-Isopropyltoluene	ND	1.5	1.00	
Methylene Chloride	ND	15	1.00	
4-Methyl-2-Pentanone	ND	31	1.00	
Naphthalene	ND	15	1.00	
n-Propylbenzene	ND	3.1	1.00	
Styrene	ND	1.5	1.00	
1,1,1,2-Tetrachloroethane	ND	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	3.1	1.00	
Tetrachloroethene	ND	1.5	1.00	
Toluene	ND	1.5	1.00	
1,2,3-Trichlorobenzene	ND	3.1	1.00	
1,2,4-Trichlorobenzene	ND	3.1	1.00	
1,1,1-Trichloroethane	ND	1.5	1.00	
1,1,2-Trichloroethane	ND	1.5	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	15	1.00	
Trichloroethene	ND	3.1	1.00	
Trichlorofluoromethane	ND	15	1.00	
1,2,3-Trichloropropane	ND	3.1	1.00	
1,2,4-Trimethylbenzene	ND	3.1	1.00	
1,3,5-Trimethylbenzene	ND	3.1	1.00	
Vinyl Acetate	ND	15	1.00	
Vinyl Chloride	ND	1.5	1.00	
p/m-Xylene	ND	3.1	1.00	
o-Xylene	ND	1.5	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	3.1	1.00	
Tert-Butyl Alcohol (TBA)	ND	31	1.00	
Diisopropyl Ether (DIPE)	ND	1.5	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.5	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.5	1.00	
Ethanol	ND	770	1.00	
TPPH	84	77	1.00	
Gasoline Range Organics (C4-C12)	80	77	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	100	79-139	
1,2-Dichloroethane-d4	113	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-20	19-06-1989-4-D	06/28/19 08:18	Solid	GC/MS LL	06/28/19	07/06/19 17:30	190706L002

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	49	1.00	
Benzene	ND	0.97	1.00	
Bromobenzene	ND	0.97	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.97	1.00	
Bromoform	ND	4.9	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.97	1.00	
sec-Butylbenzene	ND	0.97	1.00	
tert-Butylbenzene	ND	0.97	1.00	
Carbon Disulfide	ND	9.7	1.00	
Carbon Tetrachloride	ND	0.97	1.00	
Chlorobenzene	ND	0.97	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.97	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.97	1.00	
4-Chlorotoluene	ND	0.97	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.9	1.00	
1,2-Dibromoethane	ND	0.97	1.00	
Dibromomethane	ND	0.97	1.00	
1,2-Dichlorobenzene	ND	0.97	1.00	
1,3-Dichlorobenzene	ND	0.97	1.00	
1,4-Dichlorobenzene	ND	0.97	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.97	1.00	
1,2-Dichloroethane	ND	0.97	1.00	
1,1-Dichloroethene	ND	0.97	1.00	
c-1,2-Dichloroethene	ND	0.97	1.00	
t-1,2-Dichloroethene	ND	0.97	1.00	
1,2-Dichloropropane	ND	0.97	1.00	
1,3-Dichloropropane	ND	0.97	1.00	
2,2-Dichloropropane	ND	4.9	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.97	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.97	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.97	1.00	
p-Isopropyltoluene	ND	0.97	1.00	
Methylene Chloride	ND	9.7	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.7	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.97	1.00	
1,1,1,2-Tetrachloroethane	ND	0.97	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	ND	0.97	1.00	
Toluene	ND	0.97	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.97	1.00	
1,1,2-Trichloroethane	ND	0.97	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.7	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.7	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.7	1.00	
Vinyl Chloride	ND	0.97	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.97	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	
Tert-Butyl Alcohol (TBA)	ND	19	1.00	
Diisopropyl Ether (DIPE)	ND	0.97	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.97	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.97	1.00	
Ethanol	ND	490	1.00	
TPPH	ND	49	1.00	
Gasoline Range Organics (C4-C12)	ND	49	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	106	79-139	
1,2-Dichloroethane-d4	110	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-25	19-06-1989-5-D	06/28/19 08:42	Solid	GC/MS OO	06/28/19	07/08/19 23:45	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	51	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.1	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.1	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.1	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	510	1.00	
TPPH	ND	51	1.00	
Gasoline Range Organics (C4-C12)	ND	51	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	92	79-139	
1,2-Dichloroethane-d4	94	71-155	
1,4-Bromofluorobenzene	101	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-30	19-06-1989-6-D	06/28/19 08:51	Solid	GC/MS OO	06/28/19	07/09/19 00:14	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	51	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.1	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.1	1.00	
Bromomethane	ND	21	1.00	
2-Butanone	ND	21	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.1	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	21	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.1	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.1	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.1	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.1	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.1	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.1	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	21	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	21	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.1	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.1	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.1	1.00	
1,2,4-Trichlorobenzene	ND	2.1	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.1	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.1	1.00	
1,2,4-Trimethylbenzene	ND	2.1	1.00	
1,3,5-Trimethylbenzene	ND	2.1	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.1	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.1	1.00	
Tert-Butyl Alcohol (TBA)	ND	21	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	510	1.00	
TPPH	ND	51	1.00	
Gasoline Range Organics (C4-C12)	ND	51	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	79-139	
1,2-Dichloroethane-d4	95	71-155	
1,4-Bromofluorobenzene	100	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	100	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-31.8	19-06-1989-7-E	06/28/19 08:59	Solid	GC/MS LL	06/28/19	07/06/19 19:15	190706L003

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	2700	50.0	
Benzene	ND	54	50.0	
Bromobenzene	ND	54	50.0	
Bromochloromethane	ND	110	50.0	
Bromodichloromethane	ND	54	50.0	
Bromoform	ND	270	50.0	
Bromomethane	ND	1100	50.0	
2-Butanone	ND	1100	50.0	
n-Butylbenzene	ND	54	50.0	
sec-Butylbenzene	230	54	50.0	
tert-Butylbenzene	ND	54	50.0	
Carbon Disulfide	ND	540	50.0	
Carbon Tetrachloride	ND	54	50.0	
Chlorobenzene	ND	54	50.0	
Chloroethane	ND	110	50.0	
Chloroform	ND	54	50.0	
Chloromethane	ND	1100	50.0	
2-Chlorotoluene	ND	54	50.0	
4-Chlorotoluene	ND	54	50.0	
Dibromochloromethane	ND	110	50.0	
1,2-Dibromo-3-Chloropropane	ND	270	50.0	
1,2-Dibromoethane	ND	54	50.0	
Dibromomethane	ND	54	50.0	
1,2-Dichlorobenzene	ND	54	50.0	
1,3-Dichlorobenzene	ND	54	50.0	
1,4-Dichlorobenzene	ND	54	50.0	
Dichlorodifluoromethane	ND	110	50.0	
1,1-Dichloroethane	ND	54	50.0	
1,2-Dichloroethane	ND	54	50.0	
1,1-Dichloroethene	ND	54	50.0	
c-1,2-Dichloroethene	ND	54	50.0	
t-1,2-Dichloroethene	ND	54	50.0	
1,2-Dichloropropane	ND	54	50.0	
1,3-Dichloropropane	ND	54	50.0	
2,2-Dichloropropane	ND	270	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	110	50.0	
c-1,3-Dichloropropene	ND	54	50.0	
t-1,3-Dichloropropene	ND	110	50.0	
Ethylbenzene	130	54	50.0	
2-Hexanone	ND	1100	50.0	
Isopropylbenzene	190	54	50.0	
p-Isopropyltoluene	1000	54	50.0	
Methylene Chloride	ND	540	50.0	
4-Methyl-2-Pentanone	ND	1100	50.0	
Naphthalene	ND	540	50.0	
n-Propylbenzene	240	110	50.0	
Styrene	ND	54	50.0	
1,1,1,2-Tetrachloroethane	ND	54	50.0	
1,1,2,2-Tetrachloroethane	ND	110	50.0	
Tetrachloroethene	ND	54	50.0	
Toluene	ND	54	50.0	
1,2,3-Trichlorobenzene	ND	110	50.0	
1,2,4-Trichlorobenzene	ND	110	50.0	
1,1,1-Trichloroethane	ND	54	50.0	
1,1,2-Trichloroethane	ND	54	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	540	50.0	
Trichloroethene	ND	110	50.0	
Trichlorofluoromethane	ND	540	50.0	
1,2,3-Trichloropropane	ND	110	50.0	
1,2,4-Trimethylbenzene	360	110	50.0	
1,3,5-Trimethylbenzene	1600	110	50.0	
Vinyl Acetate	ND	540	50.0	
Vinyl Chloride	ND	54	50.0	
p/m-Xylene	ND	110	50.0	
o-Xylene	ND	54	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	110	50.0	
Tert-Butyl Alcohol (TBA)	ND	1100	50.0	
Diisopropyl Ether (DIPE)	ND	54	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	54	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	54	50.0	
Ethanol	ND	27000	50.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	101	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	96	71-155	
1,4-Bromofluorobenzene	105	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	100	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-31.8	19-06-1989-7-E	06/28/19 08:59	Solid	GC/MS OO	06/28/19	07/09/19 02:11	190708L023

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	320000	14000	250	
Gasoline Range Organics (C4-C12)	250000	14000	250	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	89	79-139	
1,2-Dichloroethane-d4	80	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	100	80-120	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-37	19-06-1989-8-E	06/28/19 09:45	Solid	GC/MS OO	06/28/19	07/09/19 01:13	190708L023

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	53000	1000	
Benzene	ND	1100	1000	
Bromobenzene	ND	1100	1000	
Bromochloromethane	ND	2100	1000	
Bromodichloromethane	ND	1100	1000	
Bromoform	ND	5300	1000	
Bromomethane	ND	21000	1000	
2-Butanone	ND	21000	1000	
n-Butylbenzene	2100	1100	1000	
sec-Butylbenzene	ND	1100	1000	
tert-Butylbenzene	ND	1100	1000	
Carbon Disulfide	ND	11000	1000	
Carbon Tetrachloride	ND	1100	1000	
Chlorobenzene	ND	1100	1000	
Chloroethane	ND	2100	1000	
Chloroform	ND	1100	1000	
Chloromethane	ND	21000	1000	
2-Chlorotoluene	ND	1100	1000	
4-Chlorotoluene	ND	1100	1000	
Dibromochloromethane	ND	2100	1000	
1,2-Dibromo-3-Chloropropane	ND	5300	1000	
1,2-Dibromoethane	ND	1100	1000	
Dibromomethane	ND	1100	1000	
1,2-Dichlorobenzene	ND	1100	1000	
1,3-Dichlorobenzene	ND	1100	1000	
1,4-Dichlorobenzene	ND	1100	1000	
Dichlorodifluoromethane	ND	2100	1000	
1,1-Dichloroethane	ND	1100	1000	
1,2-Dichloroethane	ND	1100	1000	
1,1-Dichloroethene	ND	1100	1000	
c-1,2-Dichloroethene	ND	1100	1000	
t-1,2-Dichloroethene	ND	1100	1000	
1,2-Dichloropropane	ND	1100	1000	
1,3-Dichloropropane	ND	1100	1000	
2,2-Dichloropropane	ND	5300	1000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2100	1000	
c-1,3-Dichloropropene	ND	1100	1000	
t-1,3-Dichloropropene	ND	2100	1000	
Ethylbenzene	3700	1100	1000	
2-Hexanone	ND	21000	1000	
Isopropylbenzene	3500	1100	1000	
p-Isopropyltoluene	2600	1100	1000	
Methylene Chloride	ND	11000	1000	
4-Methyl-2-Pentanone	ND	21000	1000	
Naphthalene	ND	11000	1000	
n-Propylbenzene	3900	2100	1000	
Styrene	ND	1100	1000	
1,1,1,2-Tetrachloroethane	ND	1100	1000	
1,1,2,2-Tetrachloroethane	ND	2100	1000	
Tetrachloroethene	ND	1100	1000	
Toluene	ND	1100	1000	
1,2,3-Trichlorobenzene	ND	2100	1000	
1,2,4-Trichlorobenzene	ND	2100	1000	
1,1,1-Trichloroethane	ND	1100	1000	
1,1,2-Trichloroethane	ND	1100	1000	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11000	1000	
Trichloroethene	ND	2100	1000	
Trichlorofluoromethane	ND	11000	1000	
1,2,3-Trichloropropane	ND	2100	1000	
1,2,4-Trimethylbenzene	13000	2100	1000	
1,3,5-Trimethylbenzene	3900	2100	1000	
Vinyl Acetate	ND	11000	1000	
Vinyl Chloride	ND	1100	1000	
p/m-Xylene	3800	2100	1000	
o-Xylene	ND	1100	1000	
Methyl-t-Butyl Ether (MTBE)	ND	2100	1000	
Tert-Butyl Alcohol (TBA)	ND	21000	1000	
Diisopropyl Ether (DIPE)	ND	1100	1000	
Ethyl-t-Butyl Ether (ETBE)	ND	1100	1000	
Tert-Amyl-Methyl Ether (TAME)	ND	1100	1000	
Ethanol	ND	530000	1000	
TPPH	2000000	53000	1000	
Gasoline Range Organics (C4-C12)	1700000	53000	1000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	92	79-139	
1,2-Dichloroethane-d4	83	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	95	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-40	19-06-1989-9-C	06/28/19 10:07	Solid	GC/MS LL	06/28/19	07/06/19 17:57	190706L002

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	41	1.00	
Benzene	3.2	0.82	1.00	
Bromobenzene	ND	0.82	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.82	1.00	
Bromoform	ND	4.1	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.82	1.00	
sec-Butylbenzene	ND	0.82	1.00	
tert-Butylbenzene	ND	0.82	1.00	
Carbon Disulfide	ND	8.2	1.00	
Carbon Tetrachloride	ND	0.82	1.00	
Chlorobenzene	ND	0.82	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.82	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.82	1.00	
4-Chlorotoluene	ND	0.82	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.1	1.00	
1,2-Dibromoethane	ND	0.82	1.00	
Dibromomethane	ND	0.82	1.00	
1,2-Dichlorobenzene	ND	0.82	1.00	
1,3-Dichlorobenzene	ND	0.82	1.00	
1,4-Dichlorobenzene	ND	0.82	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.82	1.00	
1,2-Dichloroethane	ND	0.82	1.00	
1,1-Dichloroethene	ND	0.82	1.00	
c-1,2-Dichloroethene	ND	0.82	1.00	
t-1,2-Dichloroethene	ND	0.82	1.00	
1,2-Dichloropropane	ND	0.82	1.00	
1,3-Dichloropropane	ND	0.82	1.00	
2,2-Dichloropropane	ND	4.1	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.82	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	1.3	0.82	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.82	1.00	
p-Isopropyltoluene	ND	0.82	1.00	
Methylene Chloride	ND	8.2	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	9.5	8.2	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.82	1.00	
1,1,1,2-Tetrachloroethane	ND	0.82	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.82	1.00	
Toluene	ND	0.82	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.82	1.00	
1,1,2-Trichloroethane	ND	0.82	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.2	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	8.2	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	8.2	1.00	
Vinyl Chloride	ND	0.82	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.82	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.82	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.82	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.82	1.00	
Ethanol	ND	410	1.00	
TPPH	320	41	1.00	
Gasoline Range Organics (C4-C12)	320	41	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	108	79-139	
1,2-Dichloroethane-d4	111	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	98	80-120	
Toluene-d8-TPPH	97	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-44	19-06-1989-10-C	06/28/19 10:55	Solid	GC/MS OO	06/28/19	07/09/19 00:43	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	40	1.00	
Benzene	2.1	0.81	1.00	
Bromobenzene	ND	0.81	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.81	1.00	
Bromoform	ND	4.0	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.81	1.00	
sec-Butylbenzene	1.3	0.81	1.00	
tert-Butylbenzene	ND	0.81	1.00	
Carbon Disulfide	ND	8.1	1.00	
Carbon Tetrachloride	ND	0.81	1.00	
Chlorobenzene	ND	0.81	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.81	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.81	1.00	
4-Chlorotoluene	ND	0.81	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.0	1.00	
1,2-Dibromoethane	ND	0.81	1.00	
Dibromomethane	ND	0.81	1.00	
1,2-Dichlorobenzene	ND	0.81	1.00	
1,3-Dichlorobenzene	ND	0.81	1.00	
1,4-Dichlorobenzene	ND	0.81	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.81	1.00	
1,2-Dichloroethane	ND	0.81	1.00	
1,1-Dichloroethene	ND	0.81	1.00	
c-1,2-Dichloroethene	ND	0.81	1.00	
t-1,2-Dichloroethene	ND	0.81	1.00	
1,2-Dichloropropane	ND	0.81	1.00	
1,3-Dichloropropane	ND	0.81	1.00	
2,2-Dichloropropane	ND	4.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.81	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	1.2	0.81	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	5.8	0.81	1.00	
p-Isopropyltoluene	2.3	0.81	1.00	
Methylene Chloride	ND	8.1	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	8.1	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.81	1.00	
1,1,1,2-Tetrachloroethane	ND	0.81	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.81	1.00	
Toluene	ND	0.81	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.81	1.00	
1,1,2-Trichloroethane	ND	0.81	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.1	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	8.1	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	1.8	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	8.1	1.00	
Vinyl Chloride	ND	0.81	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.81	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.81	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.81	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.81	1.00	
Ethanol	ND	400	1.00	
TPPH	2700	40	1.00	
Gasoline Range Organics (C4-C12)	2500	40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	94	79-139	
1,2-Dichloroethane-d4	92	71-155	
1,4-Bromofluorobenzene	102	80-120	
Toluene-d8	104	80-120	
Toluene-d8-TPPH	95	80-120	



RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CE Dup #3	19-06-1989-15-D	06/28/19 00:00	Solid	GC/MS OO	06/28/19	07/09/19 01:42	190708L023

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	57000	1000	
Benzene	ND	1100	1000	
Bromobenzene	ND	1100	1000	
Bromochloromethane	ND	2300	1000	
Bromodichloromethane	ND	1100	1000	
Bromoform	ND	5700	1000	
Bromomethane	ND	23000	1000	
2-Butanone	ND	23000	1000	
n-Butylbenzene	9300	1100	1000	
sec-Butylbenzene	4300	1100	1000	
tert-Butylbenzene	ND	1100	1000	
Carbon Disulfide	ND	11000	1000	
Carbon Tetrachloride	ND	1100	1000	
Chlorobenzene	ND	1100	1000	
Chloroethane	ND	2300	1000	
Chloroform	ND	1100	1000	
Chloromethane	ND	23000	1000	
2-Chlorotoluene	ND	1100	1000	
4-Chlorotoluene	ND	1100	1000	
Dibromochloromethane	ND	2300	1000	
1,2-Dibromo-3-Chloropropane	ND	5700	1000	
1,2-Dibromoethane	ND	1100	1000	
Dibromomethane	ND	1100	1000	
1,2-Dichlorobenzene	ND	1100	1000	
1,3-Dichlorobenzene	ND	1100	1000	
1,4-Dichlorobenzene	ND	1100	1000	
Dichlorodifluoromethane	ND	2300	1000	
1,1-Dichloroethane	ND	1100	1000	
1,2-Dichloroethane	ND	1100	1000	
1,1-Dichloroethene	ND	1100	1000	
c-1,2-Dichloroethene	ND	1100	1000	
t-1,2-Dichloroethene	ND	1100	1000	
1,2-Dichloropropane	ND	1100	1000	
1,3-Dichloropropane	ND	1100	1000	
2,2-Dichloropropane	ND	5700	1000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2300	1000	
c-1,3-Dichloropropene	ND	1100	1000	
t-1,3-Dichloropropene	ND	2300	1000	
Ethylbenzene	30000	1100	1000	
2-Hexanone	ND	23000	1000	
Isopropylbenzene	16000	1100	1000	
p-Isopropyltoluene	11000	1100	1000	
Methylene Chloride	ND	11000	1000	
4-Methyl-2-Pentanone	ND	23000	1000	
Naphthalene	17000	11000	1000	
n-Propylbenzene	18000	2300	1000	
Styrene	ND	1100	1000	
1,1,1,2-Tetrachloroethane	ND	1100	1000	
1,1,2,2-Tetrachloroethane	ND	2300	1000	
Tetrachloroethene	ND	1100	1000	
Toluene	ND	1100	1000	
1,2,3-Trichlorobenzene	ND	2300	1000	
1,2,4-Trichlorobenzene	ND	2300	1000	
1,1,1-Trichloroethane	ND	1100	1000	
1,1,2-Trichloroethane	ND	1100	1000	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11000	1000	
Trichloroethene	ND	2300	1000	
Trichlorofluoromethane	ND	11000	1000	
1,2,3-Trichloropropane	ND	2300	1000	
1,2,4-Trimethylbenzene	78000	2300	1000	
1,3,5-Trimethylbenzene	20000	2300	1000	
Vinyl Acetate	ND	11000	1000	
Vinyl Chloride	ND	1100	1000	
p/m-Xylene	29000	2300	1000	
o-Xylene	ND	1100	1000	
Methyl-t-Butyl Ether (MTBE)	ND	2300	1000	
Tert-Butyl Alcohol (TBA)	ND	23000	1000	
Diisopropyl Ether (DIPE)	ND	1100	1000	
Ethyl-t-Butyl Ether (ETBE)	ND	1100	1000	
Tert-Amyl-Methyl Ether (TAME)	ND	1100	1000	
Ethanol	ND	570000	1000	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	90	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	81	71-155	
1,4-Bromofluorobenzene	103	80-120	
Toluene-d8	106	80-120	
Toluene-d8-TPPH	92	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CE Dup #3	19-06-1989-15-D	06/28/19 00:00	Solid	GC/MS OO	06/28/19	07/10/19 21:10	190710L008

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	5200000	280000	5000	
Gasoline Range Organics (C4-C12)	4700000	280000	5000	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	102	79-139	
1,2-Dichloroethane-d4	99	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	99	80-120	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2084	N/A	Solid	GC/MS LL	07/06/19	07/06/19 15:20	190706L002

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	93	71-155	
1,4-Bromofluorobenzene	93	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	98	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2086	N/A	Solid	GC/MS LL	07/06/19	07/06/19 15:46	190706L003

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	5000	50.0	
Benzene	ND	100	50.0	
Bromobenzene	ND	100	50.0	
Bromochloromethane	ND	200	50.0	
Bromodichloromethane	ND	100	50.0	
Bromoform	ND	500	50.0	
Bromomethane	ND	2000	50.0	
2-Butanone	ND	2000	50.0	
n-Butylbenzene	ND	100	50.0	
sec-Butylbenzene	ND	100	50.0	
tert-Butylbenzene	ND	100	50.0	
Carbon Disulfide	ND	1000	50.0	
Carbon Tetrachloride	ND	100	50.0	
Chlorobenzene	ND	100	50.0	
Chloroethane	ND	200	50.0	
Chloroform	ND	100	50.0	
Chloromethane	ND	2000	50.0	
2-Chlorotoluene	ND	100	50.0	
4-Chlorotoluene	ND	100	50.0	
Dibromochloromethane	ND	200	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	100	50.0	
Dibromomethane	ND	100	50.0	
1,2-Dichlorobenzene	ND	100	50.0	
1,3-Dichlorobenzene	ND	100	50.0	
1,4-Dichlorobenzene	ND	100	50.0	
Dichlorodifluoromethane	ND	200	50.0	
1,1-Dichloroethane	ND	100	50.0	
1,2-Dichloroethane	ND	100	50.0	
1,1-Dichloroethene	ND	100	50.0	
c-1,2-Dichloroethene	ND	100	50.0	
t-1,2-Dichloroethene	ND	100	50.0	
1,2-Dichloropropane	ND	100	50.0	
1,3-Dichloropropane	ND	100	50.0	
2,2-Dichloropropane	ND	500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	200	50.0	
c-1,3-Dichloropropene	ND	100	50.0	
t-1,3-Dichloropropene	ND	200	50.0	
Ethylbenzene	ND	100	50.0	
2-Hexanone	ND	2000	50.0	
Isopropylbenzene	ND	100	50.0	
p-Isopropyltoluene	ND	100	50.0	
Methylene Chloride	ND	1000	50.0	
4-Methyl-2-Pentanone	ND	2000	50.0	
Naphthalene	ND	1000	50.0	
n-Propylbenzene	ND	200	50.0	
Styrene	ND	100	50.0	
1,1,1,2-Tetrachloroethane	ND	100	50.0	
1,1,2,2-Tetrachloroethane	ND	200	50.0	
Tetrachloroethene	ND	100	50.0	
Toluene	ND	100	50.0	
1,2,3-Trichlorobenzene	ND	200	50.0	
1,2,4-Trichlorobenzene	ND	200	50.0	
1,1,1-Trichloroethane	ND	100	50.0	
1,1,2-Trichloroethane	ND	100	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	50.0	
Trichloroethene	ND	200	50.0	
Trichlorofluoromethane	ND	1000	50.0	
1,2,3-Trichloropropane	ND	200	50.0	
1,2,4-Trimethylbenzene	ND	200	50.0	
1,3,5-Trimethylbenzene	ND	200	50.0	
Vinyl Acetate	ND	1000	50.0	
Vinyl Chloride	ND	100	50.0	
p/m-Xylene	ND	200	50.0	
o-Xylene	ND	100	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	200	50.0	
Tert-Butyl Alcohol (TBA)	ND	2000	50.0	
Diisopropyl Ether (DIPE)	ND	100	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	100	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	100	50.0	
Ethanol	ND	50000	50.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	98	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	96	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	98	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2091	N/A	Solid	GC/MS OO	07/08/19	07/08/19 18:50	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	94	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2092	N/A	Solid	GC/MS OO	07/08/19	07/08/19 19:20	190708L023

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	5000	50.0	
Benzene	ND	100	50.0	
Bromobenzene	ND	100	50.0	
Bromochloromethane	ND	200	50.0	
Bromodichloromethane	ND	100	50.0	
Bromoform	ND	500	50.0	
Bromomethane	ND	2000	50.0	
2-Butanone	ND	2000	50.0	
n-Butylbenzene	ND	100	50.0	
sec-Butylbenzene	ND	100	50.0	
tert-Butylbenzene	ND	100	50.0	
Carbon Disulfide	ND	1000	50.0	
Carbon Tetrachloride	ND	100	50.0	
Chlorobenzene	ND	100	50.0	
Chloroethane	ND	200	50.0	
Chloroform	ND	100	50.0	
Chloromethane	ND	2000	50.0	
2-Chlorotoluene	ND	100	50.0	
4-Chlorotoluene	ND	100	50.0	
Dibromochloromethane	ND	200	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	100	50.0	
Dibromomethane	ND	100	50.0	
1,2-Dichlorobenzene	ND	100	50.0	
1,3-Dichlorobenzene	ND	100	50.0	
1,4-Dichlorobenzene	ND	100	50.0	
Dichlorodifluoromethane	ND	200	50.0	
1,1-Dichloroethane	ND	100	50.0	
1,2-Dichloroethane	ND	100	50.0	
1,1-Dichloroethene	ND	100	50.0	
c-1,2-Dichloroethene	ND	100	50.0	
t-1,2-Dichloroethene	ND	100	50.0	
1,2-Dichloropropane	ND	100	50.0	
1,3-Dichloropropane	ND	100	50.0	
2,2-Dichloropropane	ND	500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	200	50.0	
c-1,3-Dichloropropene	ND	100	50.0	
t-1,3-Dichloropropene	ND	200	50.0	
Ethylbenzene	ND	100	50.0	
2-Hexanone	ND	2000	50.0	
Isopropylbenzene	ND	100	50.0	
p-Isopropyltoluene	ND	100	50.0	
Methylene Chloride	ND	1000	50.0	
4-Methyl-2-Pentanone	ND	2000	50.0	
Naphthalene	ND	1000	50.0	
n-Propylbenzene	ND	200	50.0	
Styrene	ND	100	50.0	
1,1,1,2-Tetrachloroethane	ND	100	50.0	
1,1,2,2-Tetrachloroethane	ND	200	50.0	
Tetrachloroethene	ND	100	50.0	
Toluene	ND	100	50.0	
1,2,3-Trichlorobenzene	ND	200	50.0	
1,2,4-Trichlorobenzene	ND	200	50.0	
1,1,1-Trichloroethane	ND	100	50.0	
1,1,2-Trichloroethane	ND	100	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	50.0	
Trichloroethene	ND	200	50.0	
Trichlorofluoromethane	ND	1000	50.0	
1,2,3-Trichloropropane	ND	200	50.0	
1,2,4-Trimethylbenzene	ND	200	50.0	
1,3,5-Trimethylbenzene	ND	200	50.0	
Vinyl Acetate	ND	1000	50.0	
Vinyl Chloride	ND	100	50.0	
p/m-Xylene	ND	200	50.0	
o-Xylene	ND	100	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	200	50.0	
Tert-Butyl Alcohol (TBA)	ND	2000	50.0	
Diisopropyl Ether (DIPE)	ND	100	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	100	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	100	50.0	
Ethanol	ND	50000	50.0	
TPPH	ND	5000	50.0	
Gasoline Range Organics (C4-C12)	ND	5000	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	96	79-139	
1,2-Dichloroethane-d4	93	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2094	N/A	Solid	GC/MS OO	07/10/19	07/10/19 19:39	190710L008

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	ND	5000	50.0	
Gasoline Range Organics (C4-C12)	ND	5000	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	97	71-155	
1,4-Bromofluorobenzene	93	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	102	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: N/A
Method: ASTM D-2216 (M)
Units: %

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-5	19-06-1989-1-A	06/28/19 07:39	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		12	0.10		1.00		
CESB15-10	19-06-1989-2-A	06/28/19 07:50	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		4.7	0.10		1.00		
CESB15-15	19-06-1989-3-A	06/28/19 08:02	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		3.5	0.10		1.00		
CESB15-20	19-06-1989-4-A	06/28/19 08:18	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		2.9	0.10		1.00		
CESB15-25	19-06-1989-5-A	06/28/19 08:42	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		5.4	0.10		1.00		
CESB15-30	19-06-1989-6-A	06/28/19 08:51	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		5.2	0.10		1.00		
CESB15-31.8	19-06-1989-7-A	06/28/19 08:59	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		20	0.10		1.00		
CESB15-37	19-06-1989-8-A	06/28/19 09:45	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		22	0.10		1.00		

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: N/A
Method: ASTM D-2216 (M)
Units: %

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-40	19-06-1989-9-A	06/28/19 10:07	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		21		0.10		1.00	
CESB15-44	19-06-1989-10-A	06/28/19 10:55	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		16		0.10		1.00	
Method Blank	099-05-014-8477	N/A	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		ND		0.10		1.00	


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: OOI

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
19-06-1493-32	Sample	Solid	GC 50	07/01/19	07/02/19 04:10	190701S02
19-06-1493-32	Matrix Spike	Solid	GC 50	07/01/19	07/02/19 01:06	190701S02
19-06-1493-32	Matrix Spike Duplicate	Solid	GC 50	07/01/19	07/02/19 01:26	190701S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	ND	400.0	401.2	100	399.1	100	64-130	1	0-15	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 3050B
Method: EPA 6010B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CESB15-5	Sample	Solid	ICP 8300	07/01/19	07/02/19 16:14	190701S05
CESB15-5	Matrix Spike	Solid	ICP 8300	07/01/19	07/02/19 16:15	190701S05
CESB15-5	Matrix Spike Duplicate	Solid	ICP 8300	07/01/19	07/02/19 16:17	190701S05

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	2.115	25.00	28.78	107	29.38	109	75-125	2	0-20	
Lead	1.684	25.00	27.28	102	28.23	106	75-125	3	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Sample Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: N/A
Method: ASTM D-2216 (M)

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
CESB15-5	Sample	Solid	N/A	07/01/19 00:00	07/01/19 16:00	J0701MOID1
CESB15-5	Sample Duplicate	Solid	N/A	07/01/19 00:00	07/01/19 16:00	J0701MOID1

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Moisture	12.00	12.00	0	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

California Environmental	Date Received:	06/28/19
30423 Canwood St., Suite 208	Work Order:	19-06-1989
Agoura Hills, CA 91301-4316	Preparation:	EPA 3550B
Project: OOI	Method:	EPA 8015B (M)
		Page 1 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-490-3657	LCS	Solid	GC 50	07/01/19	07/02/19 00:45	190701B02A

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Diesel	400.0	413.6	103	75-123	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 3050B
Method: EPA 6010B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
097-01-002-28084	LCS	Solid	ICP 8300	07/01/19	07/02/19 16:07	190701L05			
097-01-002-28084	LCSD	Solid	ICP 8300	07/01/19	07/02/19 16:09	190701L05			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	24.78	99	24.21	97	80-120	2	0-20	
Lead	25.00	26.81	107	26.25	105	80-120	2	0-20	

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-767-8590	LCS	Aqueous	GC/MS PP	07/02/19	07/02/19 16:48	190702L023				
099-12-767-8590	LCSD	Aqueous	GC/MS PP	07/02/19	07/02/19 17:18	190702L023				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	51.01	102	52.82	106	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.70	95	49.71	99	67-139	55-151	4	0-20	
Chlorobenzene	50.00	48.58	97	50.40	101	78-120	71-127	4	0-20	
1,2-Dibromoethane	50.00	54.31	109	54.93	110	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	49.75	99	50.50	101	63-129	52-140	1	0-20	
1,2-Dichloroethane	50.00	47.23	94	47.66	95	70-130	60-140	1	0-20	
1,1-Dichloroethene	50.00	46.86	94	48.49	97	66-126	56-136	3	0-20	
Ethylbenzene	50.00	50.81	102	53.42	107	80-123	73-130	5	0-20	
Toluene	50.00	49.29	99	50.50	101	80-120	73-127	2	0-20	
Trichloroethene	50.00	50.13	100	51.72	103	80-122	73-129	3	0-20	
Vinyl Chloride	50.00	42.26	85	43.48	87	70-130	60-140	3	0-20	
p/m-Xylene	100.0	100.2	100	104.5	105	75-123	67-131	4	0-25	
o-Xylene	50.00	51.24	102	52.97	106	74-122	66-130	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.10	86	43.80	88	69-129	59-139	2	0-22	
Tert-Butyl Alcohol (TBA)	250.0	254.1	102	245.0	98	69-129	59-139	4	0-25	
Diisopropyl Ether (DIPE)	50.00	49.02	98	50.63	101	68-128	58-138	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.13	94	47.82	96	63-135	51-147	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	53.21	106	53.79	108	67-133	56-144	1	0-20	
Ethanol	500.0	521.7	104	489.7	98	42-168	21-189	6	0-20	
TPPH	1000	1051	105	1022	102	65-135	53-147	3	0-30	
Gasoline Range Organics (C4-C12)	1000	1035	104	1012	101	65-135	53-147	2	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-767-8591	LCS	Aqueous		GC/MS PP	07/05/19	07/05/19 17:33	190705L008			
099-12-767-8591	LCSD	Aqueous		GC/MS PP	07/05/19	07/05/19 18:04	190705L008			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	49.24	98	50.73	101	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	44.53	89	46.67	93	67-139	55-151	5	0-20	
Chlorobenzene	50.00	46.94	94	48.06	96	78-120	71-127	2	0-20	
1,2-Dibromoethane	50.00	52.45	105	52.29	105	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	50.00	48.97	98	50.17	100	63-129	52-140	2	0-20	
1,2-Dichloroethane	50.00	44.89	90	44.40	89	70-130	60-140	1	0-20	
1,1-Dichloroethene	50.00	42.91	86	43.99	88	66-126	56-136	2	0-20	
Ethylbenzene	50.00	48.43	97	49.80	100	80-123	73-130	3	0-20	
Toluene	50.00	47.21	94	49.30	99	80-120	73-127	4	0-20	
Trichloroethene	50.00	49.03	98	49.82	100	80-122	73-129	2	0-20	
Vinyl Chloride	50.00	35.30	71	36.37	73	70-130	60-140	3	0-20	
p/m-Xylene	100.0	95.51	96	96.98	97	75-123	67-131	2	0-25	
o-Xylene	50.00	48.41	97	49.32	99	74-122	66-130	2	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	40.18	80	39.76	80	69-129	59-139	1	0-22	
Tert-Butyl Alcohol (TBA)	250.0	245.6	98	241.7	97	69-129	59-139	2	0-25	
Diisopropyl Ether (DIPE)	50.00	45.07	90	45.15	90	68-128	58-138	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	43.13	86	42.95	86	63-135	51-147	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	50.59	101	50.63	101	67-133	56-144	0	0-20	
Ethanol	500.0	477.1	95	485.6	97	42-168	21-189	2	0-20	
TPPH	1000	1002	100	966.9	97	65-135	53-147	4	0-30	
Gasoline Range Organics (C4-C12)	1000	987.7	99	953.1	95	65-135	53-147	4	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-767-8594	LCS	Aqueous		GC/MS PP	07/10/19	07/10/19 17:45	190710L010			
099-12-767-8594	LCSD	Aqueous		GC/MS PP	07/10/19	07/10/19 18:16	190710L010			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	49.79	100	50.08	100	80-120	73-127	1	0-20	
Carbon Tetrachloride	50.00	50.26	101	50.68	101	67-139	55-151	1	0-20	
Chlorobenzene	50.00	48.30	97	49.15	98	78-120	71-127	2	0-20	
1,2-Dibromoethane	50.00	52.56	105	50.04	100	80-120	73-127	5	0-20	
1,2-Dichlorobenzene	50.00	49.75	100	49.81	100	63-129	52-140	0	0-20	
1,2-Dichloroethane	50.00	49.31	99	49.74	99	70-130	60-140	1	0-20	
1,1-Dichloroethene	50.00	48.52	97	49.33	99	66-126	56-136	2	0-20	
Ethylbenzene	50.00	51.37	103	51.60	103	80-123	73-130	0	0-20	
Toluene	50.00	48.70	97	49.77	100	80-120	73-127	2	0-20	
Trichloroethene	50.00	50.21	100	51.79	104	80-122	73-129	3	0-20	
Vinyl Chloride	50.00	46.37	93	47.71	95	70-130	60-140	3	0-20	
p/m-Xylene	100.0	98.66	99	99.40	99	75-123	67-131	1	0-25	
o-Xylene	50.00	50.14	100	50.30	101	74-122	66-130	0	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.64	87	42.39	85	69-129	59-139	3	0-22	
Tert-Butyl Alcohol (TBA)	250.0	230.0	92	236.1	94	69-129	59-139	3	0-25	
Diisopropyl Ether (DIPE)	50.00	50.73	101	50.54	101	68-128	58-138	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	48.02	96	46.68	93	63-135	51-147	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	52.70	105	51.19	102	67-133	56-144	3	0-20	
Ethanol	500.0	479.6	96	505.1	101	42-168	21-189	5	0-20	
TPPH	1000	1023	102	998.0	100	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	1003	100	983.1	98	65-135	53-147	2	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2084	LCS	Solid		GC/MS LL	07/06/19	07/06/19 14:02	190706L002			
099-12-779-2084	LCSD	Solid		GC/MS LL	07/06/19	07/06/19 14:28	190706L002			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	44.33	89	44.70	89	80-120	73-127	1	0-20	
Carbon Tetrachloride	50.00	48.35	97	48.74	97	65-137	53-149	1	0-20	
Chlorobenzene	50.00	47.29	95	47.61	95	80-120	73-127	1	0-20	
1,2-Dibromoethane	50.00	49.27	99	50.58	101	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	50.00	47.17	94	48.47	97	80-120	73-127	3	0-20	
1,2-Dichloroethane	50.00	46.46	93	48.31	97	80-120	73-127	4	0-20	
1,1-Dichloroethene	50.00	46.21	92	45.96	92	68-128	58-138	1	0-20	
Ethylbenzene	50.00	45.74	91	46.29	93	80-120	73-127	1	0-20	
Toluene	50.00	44.97	90	46.04	92	80-120	73-127	2	0-20	
Trichloroethene	50.00	47.10	94	45.87	92	80-120	73-127	3	0-20	
Vinyl Chloride	50.00	44.84	90	45.40	91	67-127	57-137	1	0-20	
p/m-Xylene	100.0	94.84	95	96.23	96	75-125	67-133	1	0-25	
o-Xylene	50.00	45.02	90	46.32	93	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	39.94	80	41.75	83	70-124	61-133	4	0-20	
Tert-Butyl Alcohol (TBA)	250.0	217.9	87	222.8	89	73-121	65-129	2	0-20	
Diisopropyl Ether (DIPE)	50.00	43.93	88	45.04	90	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	42.19	84	44.22	88	70-124	61-133	5	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	47.62	95	48.66	97	74-122	66-130	2	0-20	
Ethanol	500.0	494.2	99	446.5	89	51-135	37-149	10	0-27	
TPPH	1000	989.3	99	975.3	98	65-135	53-147	1	0-30	
Gasoline Range Organics (C4-C12)	1000	988.1	99	970.9	97	65-135	53-147	2	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2086	LCS	Solid		GC/MS LL	07/06/19	07/06/19 14:02	190706L003			
099-12-779-2086	LCSD	Solid		GC/MS LL	07/06/19	07/06/19 14:28	190706L003			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	44.33	89	44.70	89	80-120	73-127	1	0-20	
Carbon Tetrachloride	50.00	48.35	97	48.74	97	65-137	53-149	1	0-20	
Chlorobenzene	50.00	47.29	95	47.61	95	80-120	73-127	1	0-20	
1,2-Dibromoethane	50.00	49.27	99	50.58	101	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	50.00	47.17	94	48.47	97	80-120	73-127	3	0-20	
1,2-Dichloroethane	50.00	46.46	93	48.31	97	80-120	73-127	4	0-20	
1,1-Dichloroethene	50.00	46.21	92	45.96	92	68-128	58-138	1	0-20	
Ethylbenzene	50.00	45.74	91	46.29	93	80-120	73-127	1	0-20	
Toluene	50.00	44.97	90	46.04	92	80-120	73-127	2	0-20	
Trichloroethene	50.00	47.10	94	45.87	92	80-120	73-127	3	0-20	
Vinyl Chloride	50.00	44.84	90	45.40	91	67-127	57-137	1	0-20	
p/m-Xylene	100.0	94.84	95	96.23	96	75-125	67-133	1	0-25	
o-Xylene	50.00	45.02	90	46.32	93	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	39.94	80	41.75	83	70-124	61-133	4	0-20	
Tert-Butyl Alcohol (TBA)	250.0	217.9	87	222.8	89	73-121	65-129	2	0-20	
Diisopropyl Ether (DIPE)	50.00	43.93	88	45.04	90	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	42.19	84	44.22	88	70-124	61-133	5	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	47.62	95	48.66	97	74-122	66-130	2	0-20	
Ethanol	500.0	494.2	99	446.5	89	51-135	37-149	10	0-27	
TPPH	1000	989.3	99	975.3	98	65-135	53-147	1	0-30	
Gasoline Range Organics (C4-C12)	1000	988.1	99	970.9	97	65-135	53-147	2	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2091	LCS	Solid		GC/MS OO	07/08/19	07/08/19 16:52	190708L017			
099-12-779-2091	LCSD	Solid		GC/MS OO	07/08/19	07/08/19 17:21	190708L017			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	48.31	97	46.90	94	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.70	95	47.08	94	65-137	53-149	1	0-20	
Chlorobenzene	50.00	50.03	100	48.23	96	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	51.22	102	50.75	101	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	50.84	102	49.04	98	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	46.11	92	45.69	91	80-120	73-127	1	0-20	
1,1-Dichloroethene	50.00	44.88	90	43.30	87	68-128	58-138	4	0-20	
Ethylbenzene	50.00	51.93	104	49.73	99	80-120	73-127	4	0-20	
Toluene	50.00	50.65	101	48.89	98	80-120	73-127	4	0-20	
Trichloroethene	50.00	50.49	101	48.13	96	80-120	73-127	5	0-20	
Vinyl Chloride	50.00	44.24	88	43.65	87	67-127	57-137	1	0-20	
p/m-Xylene	100.0	106.2	106	101.3	101	75-125	67-133	5	0-25	
o-Xylene	50.00	53.69	107	51.69	103	75-125	67-133	4	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.31	87	43.21	86	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	212.4	85	209.5	84	73-121	65-129	1	0-20	
Diisopropyl Ether (DIPE)	50.00	47.91	96	46.72	93	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	48.64	97	48.22	96	70-124	61-133	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	56.21	112	56.24	112	74-122	66-130	0	0-20	
Ethanol	500.0	426.5	85	397.8	80	51-135	37-149	7	0-27	
TPPH	1000	970.0	97	892.2	89	65-135	53-147	8	0-30	
Gasoline Range Organics (C4-C12)	1000	879.4	88	802.7	80	65-135	53-147	9	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



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Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2092	LCS	Solid		GC/MS OO	07/08/19	07/08/19 16:52	190708L023			
099-12-779-2092	LCSD	Solid		GC/MS OO	07/08/19	07/08/19 17:21	190708L023			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	48.31	97	46.90	94	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.70	95	47.08	94	65-137	53-149	1	0-20	
Chlorobenzene	50.00	50.03	100	48.23	96	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	51.22	102	50.75	101	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	50.84	102	49.04	98	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	46.11	92	45.69	91	80-120	73-127	1	0-20	
1,1-Dichloroethene	50.00	44.88	90	43.30	87	68-128	58-138	4	0-20	
Ethylbenzene	50.00	51.93	104	49.73	99	80-120	73-127	4	0-20	
Toluene	50.00	50.65	101	48.89	98	80-120	73-127	4	0-20	
Trichloroethene	50.00	50.49	101	48.13	96	80-120	73-127	5	0-20	
Vinyl Chloride	50.00	44.24	88	43.65	87	67-127	57-137	1	0-20	
p/m-Xylene	100.0	106.2	106	101.3	101	75-125	67-133	5	0-25	
o-Xylene	50.00	53.69	107	51.69	103	75-125	67-133	4	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.31	87	43.21	86	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	212.4	85	209.5	84	73-121	65-129	1	0-20	
Diisopropyl Ether (DIPE)	50.00	47.91	96	46.72	93	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	48.64	97	48.22	96	70-124	61-133	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	56.21	112	56.24	112	74-122	66-130	0	0-20	
Ethanol	500.0	426.5	85	397.8	80	51-135	37-149	7	0-27	
TPPH	1000	970.0	97	892.2	89	65-135	53-147	8	0-30	
Gasoline Range Organics (C4-C12)	1000	879.4	88	802.7	80	65-135	53-147	9	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

Page 10 of 10

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-2094	LCS	Solid	GC/MS OO	07/10/19	07/10/19 17:11	190710L008				
099-12-779-2094	LCSD	Solid	GC/MS OO	07/10/19	07/10/19 17:41	190710L008				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	45.99	92	47.04	94	80-120	73-127	2	0-20	
Carbon Tetrachloride	50.00	47.48	95	47.51	95	65-137	53-149	0	0-20	
Chlorobenzene	50.00	46.07	92	47.94	96	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	49.00	98	51.79	104	80-120	73-127	6	0-20	
1,2-Dichlorobenzene	50.00	46.43	93	48.49	97	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	46.24	92	48.38	97	80-120	73-127	5	0-20	
1,1-Dichloroethene	50.00	42.66	85	43.14	86	68-128	58-138	1	0-20	
Ethylbenzene	50.00	46.23	92	48.42	97	80-120	73-127	5	0-20	
Toluene	50.00	46.67	93	48.43	97	80-120	73-127	4	0-20	
Trichloroethene	50.00	47.10	94	47.79	96	80-120	73-127	1	0-20	
Vinyl Chloride	50.00	39.78	80	41.05	82	67-127	57-137	3	0-20	
p/m-Xylene	100.0	95.25	95	100.5	100	75-125	67-133	5	0-25	
o-Xylene	50.00	48.29	97	50.91	102	75-125	67-133	5	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	41.61	83	43.42	87	70-124	61-133	4	0-20	
Tert-Butyl Alcohol (TBA)	250.0	193.3	77	203.2	81	73-121	65-129	5	0-20	
Diisopropyl Ether (DIPE)	50.00	48.05	96	49.42	99	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	46.21	92	47.57	95	70-124	61-133	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.75	103	53.76	108	74-122	66-130	4	0-20	
Ethanol	500.0	367.0	73	397.1	79	51-135	37-149	8	0-27	
TPPH	1000	920.5	92	938.7	94	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	895.1	90	850.0	85	65-135	53-147	5	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Sample Analysis Summary Report

Work Order: 19-06-1989

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
ASTM D-2216 (M)	N/A	1215	N/A	1
EPA 6010B	EPA 3050B	1080	ICP 8300	1
EPA 8015B (M)	EPA 3550B	1028	GC 50	1
GC/MS / EPA 8260B	EPA 5035	1120	GC/MS LL	2
GC/MS / EPA 8260B	EPA 5035	1178	GC/MS OO	2
GC/MS / EPA 8260B	EPA 5030C	1191	GC/MS PP	2


Return to Contents

Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

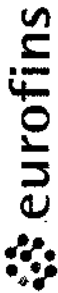
Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 19-06-1989

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



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LABORATORY CLIENT:

CHAIN OF CUSTODY RECORD

DATE: JUNE 28, 2019

PAGE: 1 OF 2

WO# / LAB USE ONLY
19-06-1989

CLIENT PROJECT NAME / NUMBER: OOI

P.O. NO.: 3029

ADDRESS: **CALENVIRO**
30423 Canwood Street #208 STATE: CA ZIP: 91301
CITY: **Agoura Hills**
TEL: **818-991-1542**

PROJECT CONTACT: **C. Buckley**
SAMPLER(S) (PRINT): **Buckley CB**

REQUESTED ANALYSES

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
 SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD
 COELT EDF GLOBAL ID: LOG CODE:

Please check box or fill in blank as needed.		Cr(VI) <input type="checkbox"/> 7196 <input type="checkbox"/> 7199 <input type="checkbox"/> 218.6
		T22 Metals <input type="checkbox"/> 6010/747X <input type="checkbox"/> 6020/747X
		PAHs <input type="checkbox"/> 8270 <input type="checkbox"/> 8270 SIM
		PCBs (8082)
		Pesticides (8081)
		SVOCs (8270)
		Prep (5035) <input type="checkbox"/> En Core <input checked="" type="checkbox"/> Terra Core
		Oxygenates (8260)
		VOCs (8260) <input checked="" type="checkbox"/> <i>Full list + Oxy 8260</i>
		BTEX / MTBE <input type="checkbox"/> 8260 <input type="checkbox"/>
		TPH
		TPH <input checked="" type="checkbox"/> C6-C36 <input checked="" type="checkbox"/> C6-C4 <input checked="" type="checkbox"/> B015
		<input type="checkbox"/> TPH(d) <input type="checkbox"/> DRO
		<input checked="" type="checkbox"/> TPH(G) GRO <i>8260</i>

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	LOG CODE:	
		DATE	TIME			Unpreserved	Preserved
1	CE5B15-5'	5/28/17	7:37	Soil	5		
2	15-10'		7:50				
3	15-15'		8:02				
4	15-20'		8:18				
5	15-25'		8:42				
6	15-30'		8:51				
7	15-31.8'		8:57				
8	15-37'		9:45				
9	15-40'		10:07				
10	15-44'		10:55				

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature/Affiliation) <i>DK</i>	Date: 6-28-19	Time: 16:00
Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature/Affiliation) <i>DONALD R</i>	Date: 6-28-19	Time: 17:26
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:



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CHAIN OF CUSTODY RECORD

DATE: June 28, 2019
PAGE: 2 OF 2

WOP / LAB USE ONLY
19-06-1989

LABORATORY CLIENT: CALENVIRO
ADDRESS: 30423 Canwood St 208
CITY: Agoura Hills CA
TEL: 818 991-1549
E-MAIL: [redacted]
STATE: CA ZIP: [redacted]
P.O. NO.: 001
3027
SAMPLER(S): (PRINT)
Buckey B
PROJECT CONTACT: [redacted]
C. Buckey

REQUESTED ANALYSES

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
 SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

COELT EDF GLOBAL ID: [redacted]
LOG CODE: [redacted]

SPECIAL INSTRUCTIONS: [redacted]

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	Field Filtered	Preserved	Unpreserved	Received by: (Signature/Affiliation)
		DATE	TIME						
11	CESB12-GW	6/28/19	12:03P	water	3		X		Received by: (Signature/Affiliation) <u>[redacted]</u>
12	CESB13-GW		12:35P		2		X		Received by: (Signature/Affiliation) <u>[redacted]</u>
13	CESB14-GW		1:05P		3		X		Received by: (Signature/Affiliation) <u>[redacted]</u>
14	CESB15-GW		1:50P		3		X		Received by: (Signature/Affiliation) <u>[redacted]</u>
15	CE DVO #3	5/28/19			3		X		Received by: (Signature/Affiliation) <u>[redacted]</u>

Please check box or fill in blank as needed.

Container Type: 40 mL
VOA preserved with HCL

Field Point Names
Turbid
clear
Turbid

Requested Analyzes
LEAD/ARSENIC
PREP 5035 TETA
VOCs + OH - 82605
Tetra C6-C14 8015
Tolxns - 82608

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: CAL ENVIRO

DATE: 06/28/2019

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)
 Thermometer ID: SC6 (CF: -0.2°C); Temperature (w/o CF): 5.1 °C (w/ CF): 4.9 °C; Blank Sample
 Sample(s) outside temperature criteria (PM/APM contacted by: _____)
 Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling
 Sample(s) received at ambient temperature; placed on ice for transport by courier
 Ambient Temperature: Air Filter Checked by: 1053

CUSTODY SEAL:
 Cooler Present and Intact Present but Not Intact Not Present N/A Checked by: 1053
 Sample(s) Present and Intact Present but Not Intact Not Present N/A Checked by: 718

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input checked="" type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Container(s) for certain analysis free of headspace.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tediar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE: (Trip Blank Lot Number: _____)
 Aqueous: VOA VOA^h VOA_{na2} 100PJ 100PJ_{na2} 125AGB 125AGB_h 125AGB_p 125PB 125PB_{znna} (pH__9)
 250AGB 250CGB 250CGB_s (pH__2) 250PB 250PB_n (pH__2) 500AGB 500AGJ 500AGJ_s (pH__2) 500PB
 1AGB 1AGB_{na2} 1AGB_s (pH__2) 1AGB_s (O&G) 1PB 1PB_{na} (pH__12) _____ _____
 Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (2) EnCores® (____) TerraCores® (3) 202 RT _____ _____
 Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (____): _____ _____
 Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag
 Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 718
 s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, znna = Zn (CH₃CO₂)₂ + NaOH Reviewed by: 691

* (7) 85-10

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APPENDIX V

Long Beach City - Boring Permit



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

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



WELL PERMIT

PERMIT#: **2599**

DATE ISSUED: **April 8, 2019**

PROPOSED DATE: **April 8, 2019**

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

Site Address: **712 N. Baker Street
Long Beach, CA 90806**

Owner: **OOI Inc.**

Owner Address: **2852 Gundry Avenue
Signal Hill, CA 90755
(562) 595-6440**

Consulting Firm: **California Environmental**

Consulting Firm Address **30423 Can wood Street, Suite 208
Agoura Hills, CA 91301
(818) 903-6530**

Drilling Company: **Gregg Drilling, LLC**

Drilling Co. Address: **2726 Walnut Avenue
Signal Hill, CA 90755
(562) 427-6849**

Type of Permit: **Soil Boring**

Type of Well:

Total No. of Well/Soil Boring: **12 Borings**

This permit valid for one year from proposed date above.

Vanna Kho
Cross-Connection/Water Quality



CITY OF LONG BEACH



Date: 4/8/19

Check #: _____

Cash Credit Card

TO: CASHIER HE0610 HE0612 HE0613 HE0617 HE0620 HE0621 HE0905A

FROM: BUREAU OF ENVIRONMENTAL HEALTH
SUBJECT: PAYMENT FOR SERVICES RENDERED

CHARLES BUCKLEY W/CAL ENVIRONMENTAL
NAME/COMPANY

BORING PERMIT FOR 712 N. BAKER ST ON 4/8/19
DESCRIPTION/EVENT/ADDRESS

Clerk Signature: [Signature]

Consumer Protection Program: 543001 543003 543004 543005 710001 778004

Non-Profit Profit Organizer FM Organizer \$ _____ Certified FM @ \$ _____

TFF FM TFF Special Event Mobile FTP \$ _____ Tobacco Facility @ \$ _____

_____ Un-Pkgd TFF @ \$ _____ Pre-pkgd TFF @ \$ _____ Hawkers @ \$ _____

20% Discount Organizer/TFF \$ - _____ TFF Late Fee \$ _____ TFF Field Licensing \$ _____

Administrative Citation \$ _____ Demolition \$ _____ Cal Code Booklet @ \$ _____

Food Cart/Vehicle Impound 1st 2nd 3rd \$ _____ Copies @ \$ _____

Food Facility Walk-thru first 1 1/2 hr. \$ _____ Walk-thru Hourly \$ _____ Plan Check Consultation \$ _____

Plan Revision \$ _____ Return Check \$ _____ Other: _____

Well Permits: 543004 543005 New Well Construction Destruction

Construction of Monitoring Well(s) @ \$ _____ 12 Soil Boring \$ 420.⁰⁰

Well Abandonment/Destruction @ \$ _____ Cathodic Well @ \$ _____

Construction of Drinking Water Well(s) @ \$ _____ Water Shut Down Test \$ _____

Cross Connection Test/Survey \$ _____ Water Line Clearance \$ _____

Cross Connection Test/Survey after Hours \$ _____ Water Line Clearance Sample \$ _____

Other: EXPEDITE FEE: \$ 420.⁰⁰

Hazmat Program: 543004 543005 643007 778020

UST Removal Report \$ _____ UST Removal Reports - Add'l. Hrs. \$ _____

Site Characterization/Mitigation \$ _____ Noise Variance \$ _____

Body Art Practitioner Annual Registration \$ _____ Body Art Event Organizer \$ _____

Tattooing Body Piercing Branding Permanent Cosmetic Application Temporary Body Artist \$ _____

Other: _____

\$35.00 charge will be added to all returned checks

OFFICE USE ONLY

Sub Total Amount: \$ 840.⁰⁰ Discount: - _____ Total Amount Paid: \$ _____

Cashier Signature: [Signature] Date: 4-8-19

White Copy - File

Yellow Copy - Customer

Pink Copy - Operator



IV.1.4

Draft Remedial Action Plan



California



Environmental

REMEDIAL ACTION PLAN

Proposed Residential Redevelopment Project
Oil Operators, Inc. (OOI) Property
712 Baker Street
Approximately 20 Acres
Long Beach, California 90806

FOR

INTEGRAL PARTNERS FUNDING, LLC

888 San Clemente, Suite 100
Newport Beach, California 92660
Attention: Mr. Eric Weeks

SUBMITTED TO

**REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION (LARWQCB)**

320 W. Fourth Street, Suite 200
Los Angeles, California 90013
Attention: Ms. Rebecca Orr
SCP Case No. 0093; SCP ID No. 2044M00

CE Job No. EP610-3029
August 2019

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EXECUTIVE SUMMARY

This report presents a site-specific Remedial Action Plan (RAP) developed using the data collected from the extensive soil gas, soil, and groundwater assessment investigations implemented at the Oil Operators, Inc. (OOI) site (subject property) from 1984 through 2018. The property was adequately characterized and the extent of the chemicals of concern (COCs) and the impacted media are well defined. The purpose of the RAP is to outline a pathway for completion of remediation activities that leads to the issuance of a No Further Action determination by the lead enforcement agencies (the City of Long Beach and the state of California – Los Angeles Regional Water Quality Control Board, LARWQCB). Integral Partners Funding, LLC is currently under contract to purchase the property from OOI. Residential development of the property is contemplated. It is proposed to coordinate the future geotechnical grading work (soil removal and recompaction) during implementation of the RAP (site remediation) to achieve residential building pads.

A new single-family residential development is proposed with building pad elevations approximately 32.4 feet to 41.20 feet above mean sea level (msl). The proposed development includes townhome-type residences with associated recreational facilities on the southern parcel (APN 7203-002-005). The northern parcel at 701 Baker Street (APN 7203-002-001) will remain undeveloped as open space. A future homeowner's association will have overall responsibility for maintenance of common areas, the recreation centers, maintaining drainage facilities, and for management of future operations and maintenance plan associated with the proposed engineering controls.

The primary chemicals of concern (COCs) associated with the onsite releases are TPH-impacted soil primarily total petroleum hydrocarbons (TPH) in the oil range (TPH-o), and concentrations of lead. Chlorinated pesticides, chlorinated herbicides, SVOCs, or PCBs were not detected in soil at concentrations requiring additional characterization or remediation. Crude oil related TPH is present in the onsite fill and native earth materials. TPH carbon range C₁₃-C₄₀ is the predominant type of hydrocarbon in soil. TPH-g and VOCs (BTEX) in the vapor phase and adsorbed onto soil, are present in the vadose zone along the east property boundary associated with the historical releases from the offsite petroleum Tesoro product pipelines located beneath the east side of Golden Avenue. The site-related vapor phase COCs are primarily methane (from anaerobic decomposition of TPH) and BTEX associated with the offsite pipeline releases.

Groundwater beneath the eastern portion of the site is impacted with TPH-g and VOCs that migrated onsite from the offsite pipeline releases. Accumulations of gasoline product (LNAPL) were periodically found in monitor well Brycon MW1 from 2013-2019. The pipeline release RP (Tesoro), as required by the LARWQCB Clean-up and Abatement Order (CAO) R4-2013-0064, will install an expanded vapor extraction system (VES) for removal of the vapor phase pipeline-related VOCs present beneath the OOI property. Quarterly groundwater monitoring shows the OOI site COCs (TPH-o and lead) have not significantly impacted the groundwater quality beneath the site and therefore a remedial response for these COCs in groundwater is not required. Arsenic is present in groundwater at concentrations up to 0.711 mg/L. Arsenic is present in onsite native soil (Brycon12 @ 30 feet, 41 mg/Kg) and in fill associated with bio-remediated TPH (Albus-Keefe B20@15 feet, 170 mg/Kg). The concentrations of arsenic in groundwater are correlated with the TPHg plume in groundwater.

The source of the arsenic in groundwater is likely from native sediment within the saturated zone. The trend of arsenic concentrations in groundwater across the OOI property are attributed to an arsenic solution/dissolution process promulgated by the presence of TPHg in groundwater. An arsenic mobilization model proposed by Cozzarelli, et al, 2016 shows that arsenic in sediment can dissolve into groundwater under low dissolved oxygen (anoxic) conditions associated with hydrocarbon (TPH) plumes. TPH biodegradation processes in the saturated zone create low oxygen (reducing) conditions near and within petroleum product plumes. The low concentrations of dissolved oxygen condition in combination with other geochemical processes promote the solubility of the stable form of arsenic raising the concentration of arsenic dissolved in groundwater. This reaction is reversible (arsenic resorbs onto the aquifer soil matrix) as the oxygen content of the groundwater increases along with decreasing TPHg content. The reabsorption of arsenic onto the aquifer sediment is occurring on the west portion of the site where low to non-detect concentrations of arsenic are found in groundwater.

EXECUTIVE SUMMARY (continued)

A supplemental investigation to assess the extent and origin of the LNAPL (gasoline product) near Brycon MW1 was completed at the site during April-June 2019. The assessment work was requested by the LARWQCB and included a geophysical survey to clear utilities and to assess for unknown buried sub-structures, drilling of eight CPT/UVOST borings to evaluate the site stratigraphy and to tentatively identify LNAPL zones and placement of seven (7) continuously cored hydraulic push borings to assess the location and distribution of the suspect LNAPL zone. Seven (7) temporary casings were placed in the boreholes and groundwater samples were obtained. The supplemental soil and groundwater sampling identified a discontinuous layer of mobile LNAPL confined to a narrow zone near Brycon MW1 and extending to the east property line, within the lower portion of a saturated sand layer. The LNAPL impacted zone is separated from the uppermost groundwater aquifer by a clayey aquitard. It was concluded the LNAPL found near Brycon MW1 originated from the historical Tesoro gasoline pipeline leaks located offsite and adjacent to the east property line of the site.

A conceptual site model (CSM) was developed in 2016 for the purpose of developing site-specific risk based concentrations (RBCs) for the chemicals-of-concern (COCs) identified in soil at the subject property in connection with the proposed at-grade single-family residential redevelopment project. The COCs were identified along with exposure pathways for future residential/worker receptors. Mearns Consulting, LLC, prepared a site-specific Human Health Risk Assessment (HHRA) for the proposed residential development project. The toxicologist utilized the CSM to evaluate the COCs in developing the site-specific COC risk-based concentrations (RBCs) proposed during implementation of the RAP. The following site-specific risk-based remediation goals (RBGs) for soil were developed following review and consultation with the LARWQCB and CalEPA Office of Environmental Health Hazard Assessment, OEHHA. OEHHA concurred with the following clean up goals for the site COCs in soil: Lead in soil ≤ 80 mg/Kg (upper 10 ft); Arsenic in soil ≤ 10 mg/Kg (upper 5 ft); TPH in soil based upon carbon range (upper 0-10 ft), $C_4-C_{12} < 370$ mg/Kg, $C_{13}-C_{22} < 5,500$ mg/Kg, $C_{23}-C_{32} < 5,000$ mg/Kg and $C_{33}-C_{40} < 6,500$ mg/Kg. The LARWQCB requested a table of possible RBGs for COCs in soil for cleanup goals showing a range values. Using the range of values table and in conjunction with the HHRA depth specific clean-up goals are proposed for parcel 7203-002-005.

The RAP proposes removal and treatment of TPH impacted soil that exceeds the site-specific cleanup goals for the 13.3-acre south parcel (7203-002-005) to be developed as a new residential community. Containment through placement of an Engineered Cap is recommended for the 4.8-acre north parcel (APN 7203-002-001) that will remain as open space or developed as a park. Civil engineering drawings that include provisions for VOC/methane vapor control, grading, drainage control, and design drawings for the Engineered Cap will be prepared and submitted once the major components of the RAP are approved by the LARWQCB.

The proposed RAP includes the following components:

- 1) Continued bioremediation under the oversight from the city of Long Beach and the LARWQCB of the TPH impacted soil to meet the proposed RBCs associated with the identified COCs.
- 2) Obtain an LARWQCB issued WDR (if required) for onsite reuse of the treated TPH impacted soil.
- 3) Verification sampling of all treated and imported soil prior to placement as engineered-compacted fill to ensure conformance with the approved RBCs.
- 4) Placement of the soil that meets the proposed RBGs as engineered compacted fill below the proposed finish grade.
- 5) The RAP defines the Remedial Earth Interval (REI) at the site as the area from the future ground surface to a depth of 10 feet below grade. The residential risk-based clean up goals (RBCs) are applicable within the REI.

EXECUTIVE SUMMARY (continued)

- 6) Segregation and selective grading for the onsite soil that contains low or non-detect concentrations of the COCs for use as engineered fill within the upper portion of the REI.
- 7) Engineering design and placement of an Engineered Cap on the north parcel that will remain as open space. Civil engineering drawings that include provisions for grading, drainage control, and design of the Engineered Cap, a soil management plan (SMP) and plans for VOC/methane vapor control system. As part of the cap engineering design, a treatability study will be performed on the TPH, arsenic and lead-affected soil located at the North Parcel. The purpose of the treatability study is to ensure that the affected soil can be mixed with cement and cement kiln dust, to develop a suitable soil/cement mixture that when cured develops a 1×10^{-7} cm/sec vertical hydraulic conductivity. Thus, protecting (long-term) human health and groundwater quality.
- 8) Continuous environmental monitoring and implementation of a Soil Management Plan (SMP) for all remediation earthwork until final rough grades are achieved.
- 9) Design and future installation of a passive sub-slab vapor intrusion mitigation system (membrane and venting) for all future onsite residential and associated structures. Future HOA to enforce operations and maintenance implementation plan (OMIP) for the vapor intrusion mitigation system.
- 10) Continued operation by Tesoro of the VES unit(s) associated with remediation of the TPHg/VOC release from the offsite petroleum pipelines.
- 11) Abandonment of the existing monitor wells and establishment of the final monitor well network for use in post-remediation groundwater monitoring. Sampling of the deeper groundwater zone beneath Area 3 to assess for impacts below the upper saturated zone.
- 12) Development of a land use covenant (LUC) including and restriction on development for the CAP parcel, protection and maintenance of engineering controls, including the Engineered Cap, on the north parcel, a prohibition of pumping and use of groundwater; for future access requirements associated with operation of the VES unit(s) and for groundwater monitoring activities, to limit exposure to soils below the recommended REI, and the requirement for installation of a vapor intrusion mitigation system for all onsite structures.
- 13) It is anticipated that a future homeowner's association will have overall responsibility for maintenance of common areas, the recreation centers, maintaining drainage facilities, and for management of future operations and maintenance plan for the anticipated engineering controls. Financial assurance instruments for the maintenance operations may need to be implemented. An access agreement will be required for the RP to sample and ultimately decommission the groundwater monitor well network.

1.0 INTRODUCTION

This report presents a site-specific Remedial Action Plan (RAP) developed using the data collected from the numerous soil gas, soil and groundwater assessment investigations implemented at the Oil Operators, Inc. (OOI) site (subject property) from 1984-2019. The purpose of the RAP is to outline a pathway for completion of remediation activities that leads to the issuance of a No Further Action determination by the lead enforcement agencies (the City of Long Beach and the state of California Los Angeles Regional Water Quality Control Board). Integral Partners Funding, LLC is currently under contract to purchase the property from Oil Operators, Inc. Residential development of the site is contemplated. It is proposed to coordinate the future geotechnical grading work (soil removals and recompaction) during implementation of the RAP (site remediation) to achieve residential building pads.

OOI is a non-profit cooperative organization consisting of numerous oil companies, operators, and individuals who operate oil wells in the Long Beach/Signal Hill area. OOI operated an onsite wastewater collection facility from 1926 to 1998 that treated produced water (oil field brines) recovered during oil production. Onsite bioremediation of onsite TPH impacted soil has been carried onsite since the 1980s under permits issued by the city of Long Beach. Tetra Tech (TT), under contract with Integral Partners Funding, LLC, prepared a Supplemental Site Assessment report for the OOI facility that included analysis of remedial alternatives. The TT assessment work expanded upon earlier testing consisting of soil gas, soil, and groundwater sampling and analysis. California Environmental (CE) prepared a Soil Gas Assessment Report for the property in September 2011. The Site has been investigated extensively by a number of environmental consultants including Emcon Associates (1981), Jaykim Engineers, Inc. (JEI, 1986 to 1988c), Jack K. Bryant and Associates (JKB;1992), Environmental Science & Engineering, Inc., (ESE), and Brycon, LLC (Brycon, 2001a to 2015c). The Brycon *Report on Additional Site Characterization* presents a summary of the historical investigations at the Site (Brycon, 2011e). Brycon was the environmental consultant from 2001-2016 assisting OOI with characterization and remediation activities at the Site. Bedrock Engineering is now conducting the groundwater monitoring and bioremediation sampling at the site.

Ongoing soil remediation (bioremediation) activities were undertaken in response to the Consent Decree issued in 2002, under the oversight of the City of Long Beach Department of Health and Human Services, Division of Hazardous Materials (LBDHHS). The groundwater monitoring (GWM) activities are performed under the oversight of the California Regional Water Quality Control Board - Los Angeles Region (LARWQCB). Brycon operated a VES in the eastern part of the Site from 2012 to 2014 to reduce vapor phase benzene concentrations adjacent to Golden Avenue. AECOM Technical Services, Inc. (ATSI), on behalf of Tesoro Logistic Operations LLC (TLO) operates a VES unit in the northeastern part of

the Site since April 2015. On February 8, 2017 the LARWQCB approved implementation of the TLO (TLO now referred to herein as “Tesoro”) Expanded Remedial Action Plan consisting of installation of twelve horizontal VES wells and four angled VES wells to extend beneath Golden Ave from the east side of the OOI property. That plan was amended in 2018 to include five new vertical extraction wells as part of the proposed Interim Remedial Action Plan (IRAP) in response to a Cleanup and Abatement Order No. R4-2013-0064 dated 18 September 2014 (CAO) that was issued by the LARWQCB (2014a) to BP Pipelines (North America), Inc. Atlantic Richfield Company, and ARCO Terminal Services Corporation (ATSC). Tesoro in a letter dated 24 July 2013 assumed responsibility for responding to the CAO. The LARWQCB approved the amended IRAP proposal by Tesoro in a letter dated December 27, 2018.

Wastewater treatment activities have occurred at the site since the 1920s. OOI operated an oilfield wastewater treatment facility, for its member oil companies, that treated oil field brines (“produced water”), which were a direct by-product of crude oil drilling and oil production. This produced water was a high salinity wastewater that contained high dissolved solids and included drilling mud and other oil drilling and oil production waste materials. The produced wastewater could, at times, have contained crude oil, which was separated from the wastewater and transported to the local oil refineries. OOI’s oilfield wastewater treatment facility did not receive or treat refined petroleum products such as gasoline and diesel. The wastewater treatment plant was constructed onsite in 1959 and consisted of five circular concrete-walled skimming basins and associated pumps, aboveground storage tanks (ASTs), pipelines, and related small buildings and facilities. The treatment plant was located north of the two rectangular-shaped, clay-lined settling basins in the southern part of the Site, south of Baker Street. These settling basins were referred to as Basins 1 and 2. The OOI wastewater treatment (primarily oil separation) took place within the former onsite settling basins. The basins were designed to remove oil and sediment from the produced water prior to discharge of the treated water. The treated water was discharged to the Los Angeles County Sanitation District (LACSD) sewer system under a permit issued by the LACSD. The crude oil residue was recovered for recycling.

Basin 1 received TPH-impacted sediment that settled out of the produced water. Basin 2 received relatively clean water, after the produced water had undergone retention, skimming, flocculation, and aeration. Treated water was held in Basin 2, until it was discharged off-site. Additional smaller basins were historically present south of Basins 1 and 2. These smaller basins were closed in 1986 and 1987. In 1998 the wastewater treatment facility ceased operations. In 2000, a Remediation Permit issued by the City of Long Beach and coordinated with the Long Beach Fire Department (LBFD) and the Long Beach Department of Health and Human Services (LBDHHS) required that “contaminated” soil and groundwater be remediated and coordinated with the LBDHHS and LARWQCB. Buildings, ASTs, and related aboveground structures (except for the concrete-walled skimming basins and small, concrete-lined vaults with control valves) were cleaned, demolished, and disposed of off-site in 2000 and 2001.

The Consent Decree with OOI dated 28 August 2002 directed that remediation of Basin 1 occur in accordance with the standards specified by LBDHHS consistent with the Brycon-prepared *Pilot Test Work Plan for the Removal, Handling, Treatment and Disposal of Oily Materials from North Pond (Basin I)* dated October 1, 2001 (Brycon, 2001). The Pilot Test Work Plan was approved by LBDHHS in a letter dated 1 November 2001. Pilot Test Work Plan-related activities were completed in 2003. Full scale bioremediation then commenced in the first quarter 2004 (Brycon, 2008b) consistent with the *Corrective Action Plan for Basin I at the Oil Operators Incorporated Property, Long Beach, California* (CAP) prepared by Brycon (2003b; 2003c). The CAP was reviewed and approved by LBDHHS. LBDHHS then issued OOI Permit to Operate No.10-03-01, dated October 7, 2003.

Former settling basins (Basins 1 and 2) were reconfigured for bioremediation of TPH-impacted soil. These areas are referred to collectively here as the Bio-Treatment Area. Bioremediation has been underway since the first quarter 2004. Bioremediation activities include periodic disking of the upper approximately nine-inches of TPH-impacted soil to enhance oxygenation of the TPH-impacted soil, and monitoring of moisture levels for conditions conducive to bioremediation. The bioremediated TPH-impacted soil was then placed in the southern and western parts of the Site. In 2011, the concrete-walled skimming basins were removed and that area, designated Area 3, is also used for soil treatment and placement of the bioremediated TPH-impacted soil. The approximate thickness of the bioremediated TPH-impacted soil in these areas is approximately 5 to 10 feet in Area 3, up to 12 feet along the west side of the Site and up to 26 feet near the south property line. The approximate areas of placement and thickness of treated TPH-impacted soil that has been placed in these areas, based on information provided by Brycon and through the logging of borings, are shown on **Figures 7-12**. Quarterly soil monitoring reports documenting the bioremediation activities were submitted by Brycon/Bedrock Engineering to the LBDHHS and the LARWQCB since the first quarter 2004.

Bedrock Engineering (previously Brycon) has conducted quarterly groundwater monitoring using 14 onsite wells since 2010. The wells are tested for TPH, VOCs, CAM metals, pH, Total Organic Carbon, TDS, TSS and Chloride. Bedrock Engineering (previously Brycon) sampled fourteen (14) onsite monitoring wells during February 2019, as part of the required groundwater monitoring work. The groundwater monitoring data from February 2019 (presented in the report, *February 2019 - Quarterly Groundwater Monitoring at the Oil Operators Property, 712 West Baker Street, Long Beach, California*, dated April 15, 2019 and prepared by Bedrock Engineering) show that TPHg (C₄-C₁₂) was detected in six (6) of the fourteen wells. The six (6) wells with TPHg are located within the eastern half of the property and contain the following TPH concentrations; ESE-MW1 0.4 mg/l, Brycon-MW1 100.0 mg/l, Brycon – MW2 0.28 mg/l, Brycon – MW3 13.0 mg/l, Brycon – MW4 0.48 mg/l, and TMW5 9.8 mg/l. Brycon-MW1 was observed to have a 0.01 foot thick Light Non-Aqueous Phase Liquid (LNAPL) on the groundwater surface. The February 2019 data depict the TPHg plume is stable or shrinking as concentrations of the

TPHg constituents appear to be decreasing. It is expected this trend of decreasing TPHg concentrations in groundwater will continue as Tesoro implements the approved IRAP related to remediation of the gasoline impacts in soil. It is noted the approved IRAP does not specifically address gasoline constituents dissolved in groundwater, only the installation and operation of an expanded vapor extraction system. Tesoro's groundwater remediation plan (for Tesoro's numerous gasoline fuel pipeline releases) has not been defined or approved by the LARWQCB. At this time, the scope, magnitude and timing of Tesoro's groundwater remediation program is not known.

The arsenic concentrations in groundwater continue to fluctuate in response to the variable geochemical conditions though the wells located along the west property line of the 712 Baker continue to have less the 0.02 mg/l of arsenic dissolved in groundwater.

1.1 Site Description

The subject property consists of a 20.12-acre industrial parcel located west of Golden Avenue, south of the San Diego Freeway, north of Wardlow Road, and east of the Los Angeles River, in the city of Long Beach, California, see **Figure 1 – Vicinity Map**. Oil Operators Inc. (OOI) owns the property. The property was utilized since the 1920s for treatment of oil field production brines and other fluid by-products of oil production. OOI is processing low concentration petroleum hydrocarbon impacted soil on the property (bioremediation) under the auspices of the Long Beach Environmental Health Department. The County of Los Angeles Tax Assessor's Parcel Numbers (APN) for the subject property addresses is as follows:

APNs	Address	Acres
7203-002-001	701 W. Baker Street	4.78
7203-002-005	712 W. Baker Street	13.28
7203-002-007	3801 Golden Avenue	0.58
7203-002-008	3701 Golden Avenue	0.87
7203-002-009	3539 Golden Avenue	0.46
7203-002-010	3501 Golden Avenue	0.15

1.2 Proposed Development

A new single-family residential development (River Park) with building pad elevations approximately 34.2 feet to 41.1 feet above mean sea level (msl) is proposed for parcel 7203-002-005, 712 Baker Street. The north parcel, 7203-002-001, 701 Baker Street will remain as an open-space/park area. The conceptual **Site Development Plan – Figure 2** depicts the general areas of the proposed development. Recreation areas

are planned north of Baker St. and in the southern half of the project north of Wardlow Road. A future homeowner's association will have overall responsibility for maintenance of common areas, the recreation centers, maintaining drainage facilities, and for management of future operations and maintenance plan for the anticipated engineering controls.

The preliminary design depicts excavated areas on the east portion of the property with an overall east to west project slope. A four-foot deep, retention basin for stormwater runoff control is planned along the western length of the property. The proposed grading is generally a balanced cut/fill operation except for the possible export of impacted soil that does not meet the recommended RB. Imported fill is required to makeup for impacted soil that needs to be disposed of offsite during implementation of the approved RAP.

2.0 HISTORICAL SITE CHARACTERIZATION

The OOI property was the subject of extensive environmental testing and investigations from the early 1980s-2019. The test data from these investigations are incorporated into this RAP (enclosed maps and sections) that outlines our recommendations for remediation of the identified chemicals of concern, primarily crude oil production related compounds. The previous investigators include Emcon Associates (1981), Jaykim Engineers, Inc. (JEI, 1986 to 1988c), Jack K. Bryant and Associates (JKB; 1992), Environmental Science & Engineering, Inc., (ESE), California Environmental (2011, 2019), AECOM (2015/2016), Tetra Tech (2015), Brycon, LLC (Brycon, 2001a to 2015c) and Bedrock Engineering (2016-2019). The Tetra Tech and AECOM reports include comprehensive assessment of the impacts at the OOI property and present summaries of the historical environmental investigations conducted at the OOI property. These investigations were previously submitted to the LARWQCB and have defined the extent of TPH/Lead/LNAPL/VOC impacts in soil gas, soil and groundwater at the site. VOCs (including benzene) impacts were caused by leaks from offsite gasoline fuel pipeline releases and not OOI's operations. Arsenic impacts in groundwater were not caused by OOI's operations and appear to be a direct consequence of natural and anthropogenic sources of arsenic in sediment being mobilized by geochemical conditions in groundwater associated with the gasoline pipeline releases.

Geotechnical investigations occurred at the site from 1998-March 2018. The geotechnical exploration included test pits/trenches, borings and CPT analysis. The locations and extent of the geotechnical analysis is shown on **Figure 3 – Grading/Geotechnical Plan**. The location and identification of the environmental assessment borings are shown on **Figure 4 – Historical Assessment Plan**. The areal distribution of TPH and arsenic/lead in soil is depicted on **Figures 5 & 6**, respectively. **Cross Sections A-F, Figures 7-12** show the distribution of COCs in the subsurface along with the proposed future grading

for the proposed development. The previous reports related to the subject site are listed in the **References** section of this report.

Bioremediation of TPH impacted soil was implemented onsite since the 1980s under permits issued by the city of Long Beach. The descriptor "TPH-impacted soil" is a generic term used herein and a term used by the City of Long Beach to describe sediments generated from gravity separation within onsite wastewater process tanks and within the clay-lined evaporation basins (Basins 1 and 2). TPH-impacted soil was not transported onto the OOI facility for bioremediation or for any other treatment. Tetra Tech, under contract with Integral Partners Funding, LLC, prepared a Supplemental Site Assessment (2015) and an analysis of remedial alternatives. Tesoro contracted with AECOM to complete soil gas, soil, and groundwater assessment associated with petroleum pipeline releases beneath Golden Avenue. The assessment work expanded upon earlier testing consisting of soil gas, soil, and groundwater sampling and analysis.

Brycon (and Bedrock Engineering beginning in December 2016) has been the environmental consultant since 2001 assisting OOI with characterization and remediation activities at the Site. Ongoing soil remediation activities were undertaken in response to the Consent Decree issued in 2002, under the oversight of the City of Long Beach Department of Health and Human Services, Division of Hazardous Materials (LBDHHS). The groundwater monitoring (GWM) activities are being performed under the oversight of the California Regional Water Quality Control Board-Los Angeles Region (LARWQCB).

Brycon operated a VES in the eastern part of the Site from 2012 to 2014 to remove vapor phase VOCs associated with the offsite petroleum pipeline releases adjacent to Golden Avenue. AECOM Technical Services, Inc. (ATSI), on behalf of Tesoro has operated a VES unit in the northeastern part of the Site since April 2015. The ATSI-operated VES unit is expected to continue to remediate the TESORO pipeline beneath Golden Avenue. The TESORO-related activities are in response to a Cleanup and Abatement Order No. R4-2013-0064 dated 18 September 2014 (CAO) that was issued by the LARWQCB (2014a) to BP Pipelines (North America), Inc. Atlantic Richfield Company, and ARCO Terminal Services Corporation (ATSC). TESORO in a letter dated 24 July 2013 assumed responsibility for responding to the CAO. On December 27, 2018 the LARWQCB approved a proposal by Tesoro for installation and operation of an expanded vapor extraction system (IRAP).

The water treatment (primarily oil separation) took place in onsite settling basins. The basins were designed to remove oil and sediment from the produced water and then discharge the treated water. The treated water was discharged to the Los Angeles County Sanitation District (LACSD) sewer system under a permit issued by the LACSD. The crude oil residue was recovered for recycling. In 1959, a wastewater treatment plant was constructed that consisted of five circular concrete-walled skimming

basins and associated pumps, aboveground storage tanks (ASTs), pipelines and related small buildings and facilities. The treatment plant was located north of the two rectangular-shaped, clay-lined settling basins in the southern part of the Site, south of Baker Street. These settling basins were referred to as Basins 1 and 2.

Basin 1 received oily residual solids (TPH-impacted soil) that settled out of the produced water. Basin 2 received relatively clean water, after the produced water had undergone retention, skimming, flocculation, and aeration. Treated water was held in Basin 2, until it was discharged off-site. Additional smaller basins were historically present south of Basins 1 and 2. These smaller basins were closed in 1986 and 1987. The LARWQCB issued a WDR for land treatment operation-related Order No. 86-93. This WDR Order was for land treatment by bioremediation of the TPH-impacted soil in Basins 1 and 2. WDR Order No. 86-93 included monitoring requirements.

In 1998 the water treatment facility ceased operations. In October 2000 the City of Long Beach Fire Department (LBFD, 2000) directed that liquid hydrocarbon products, wastewater, and sludge be removed from the Site under a Site Remediation Permit issued by the City of Long Beach and coordinated with the LBFD and LBDHHS. It was required and that TPH-impacted soil and groundwater be remediated and coordinated with the LBDHHS and LARWQCB. Buildings, ASTs, and related aboveground structures (except for the concrete-walled skimming basins and small, concrete-lined vaults with control valves) were cleaned, demolished, and disposed of off-site in 2000 and 2001.

The Consent Decree with OOI dated 28 August 2002 directed that remediation of Basin 1 occur in accordance with the standards specified by LBDHHS consistent with the Brycon-prepared *Pilot Test Work Plan for the Removal, Handling, Treatment and Disposal of Oily Materials from North Pond (Basin I)* dated October 1, 2001 (Brycon, 2001). The Pilot Test Work Plan was approved by LBDHHS in a letter dated 1 November 2001. Pilot Test Work Plan-related activities were completed in 2003. Full scale bioremediation then commenced in the first quarter 2004 (Brycon, 2008b) consistent with the *Corrective Action Plan for Basin I at the Oil Operators Incorporated Property, Long Beach, California* (CAP) prepared by Brycon (2003b; 2003c). The CAP was reviewed and approved by LBDHHS. LBDHHS then issued OOI Permit to Operate No.10-03-01, dated October 7, 2003.

Settling basins (Basins 1 and 2) were reconfigured for bioremediation of TPH-impacted soil. These two basins are referred to collectively here as the Bioremediation Basins. Bioremediation of TPH-impacted soil has occurred since the first quarter 2004. Bioremediation activities include periodic disking of the TPH-impacted soil to enhance oxygenation of the TPH-impacted soil and maintaining the moisture levels conducive to bioremediation. The remaining thickness of TPH-impacted soil in the Bioremediation Basins is approximately 6-10 feet (Paspalof, 2015a). The completed bioremediated soil

was placed within storage areas located to the north, south, and west of the treatment cells. In 2011, the concrete-walled skimming basins were removed and that area, designated Area 3, was used for placement of the bioremediated TPH-impacted soil. The approximate thickness of the bioremediated TPH-impacted soil in these areas is approximately 5 to 10 feet in Area 3, up to 12 feet along the western side of the Site, and up to 26 feet near the south property line. The approximate areas of placement and thickness of treated TPH-impacted soil are shown on **Figures 5 & 7-12**. Quarterly soil monitoring reports documenting bioremediation activities have been submitted by Brycon and Bedrock Engineering to the LBDHHS/LARWQCB since the first quarter 2004.

Monitoring of the groundwater quality beneath the site is ongoing and has occurred from 2001 through 2019. There are 14 monitor wells at the Site. The wells are identified as ESE-MW1, ESE-MW2, 92-MW1, Brycon MW1 to MW5, and Tetra Tech-installed wells TMW1 to TMW6. The monitor well locations are shown on **Figure 13**. Groundwater samples are currently tested for total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), dissolved Title-22 metals, total dissolved solids (TDS), total suspended solids (TSS), total organic carbon (TOC), chlorides and pH. The depth to groundwater across the Site ranges from about 30.55 to 50.24 (February 2019) feet below the ground surface. Groundwater level data indicate gradient is very shallow with a variable flow direction, predominately towards the northwest beneath the area south of Baker St. Gasoline hydrocarbons (primarily C₅-C₁₂) and VOC (primarily BTEX compounds) impacts dissolved in groundwater are present beneath the central-eastern third of the property and are the result of multiple historical releases from the Tesoro petroleum pipelines located adjacent to the eastern property line. GWM reports are currently prepared by Bedrock Engineering and submitted to the LARWQCB.

CE conducted soil sampling from seven of eight geotechnical borings excavated on the south portion of the property by Albus-Keefe during March 2018. The borings were drilled to evaluate the extent and compaction of a fill deposit present beneath the south portion of the site. CE obtained soil samples at depth intervals of 3-5 feet to a total depth of 32 feet bgs. The 37 individual soil samples were tested for Total Petroleum Hydrocarbons (TPH) gasoline though oil ranges, for total arsenic and total lead. The soil data is summarized on **Table IA**, in **Appendix II**. The testing found fill extending to a maximum depth of 26 feet, with total TPH concentrations ranging from <10-10,000 mg/Kg. Arsenic concentrations ranged from 2.7-170 mg/Kg. The native sediment (alluvium in B22 @ 25 feet) contained up to 28 mg/Kg of arsenic. Lead was detected at concentrations that ranged from <3 to 260 mg/Kg.

A supplemental investigation to assess the extent and origin of the LNAPL (gasoline product) near Brycon MW1 was completed at the site by CE during April-June 2019. The assessment work was requested by the LARWQCB and included a geophysical survey to clear utilities and to assess for unknown buried sub-structures, drilling of eight CPT/UVOST borings to evaluate the site stratigraphy and to tentatively identify LNAPL zones and placement of seven (7) continuously cored hydraulic push

borings to assess the location and distribution of the suspect LNAPL zone. Seven (7) temporary casings were placed in the boreholes and groundwater samples were obtained. The supplemental soil and groundwater sampling identified a discontinuous layer of mobile LNAPL (gasoline) confined to a narrow zone a few inches to several feet) near Brycon MW1 and extending to the east property line, within the lower portion of a saturated sand layer. The identified LNAPL impacted zone is separated from the uppermost groundwater aquifer by a clayey aquitard. It was concluded the LNAPL found near Brycon MW1 originated from gasoline pipeline leaks located offsite and adjacent to the east property line of the site. Tabulated soil and groundwater test data from the LNAPL study are attached in **Appendices I and II**. Laboratory test data for the historical assessment work including soil gas, soil and groundwater are contained in **Appendices I, II & II**.

3.0 GEOLOGY AND HYDROGEOLOGY

The subject property is located within the southeast portion of the Los Angeles Basin near the western terminus of Signal Hill adjacent to the eastern bank of the Los Angeles River. The property is within the south portion of the Los Angeles Coastal Plain and is underlain by made-made fill (up to 26 ft) and undifferentiated alluvial deposits including Pleistocene-age terrace (Palos Verdes Sand) and alluvium associated with deposition from the Los Angeles River. These deposits range from clayey-silts to poorly graded sands with granule gravels.

The Site is located within the eastern portion of the West Coast Groundwater Basin within the Newport-Inglewood Structural (Fault) Zone. The groundwater regime within this portion of the West Coast Basin is generally characterized as containing an upper and lower aquifer system. The upper system includes Holocene sediments that typically contain unconfined groundwater of poor quality. The lower portion of the upper aquifer system includes upper Pleistocene deposits of the Gage aquifer, also known as the "200 foot sand". Beneath the upper aquifer is the lower aquifer system consisting of the Jefferson, Lynwood and Silverado aquifers. The lower aquifer system is under pressure or confined conditions that extend to depths of 1000 feet beneath the site

Historical topographic maps indicate that the western portion of the subject property was at the elevation of the adjacent Los Angeles River bank or about 25 feet above mean sea level. The eastern portion of the property is a concealed (obscured by grading/artificial fill) erosional escarpment associated with the Los Angeles River. Subsequent grading at the property has raised the elevation of most of the site to an elevation of approximately 40 feet above mean sea level. Groundwater level data indicate the groundwater elevation beneath the property is about at or several feet below mean sea level. The depth to groundwater across the Site ranges from about 30.55 to 50.24 (February 2019)

feet below the ground surface. Historical groundwater level data indicate a variable but predominately northwesterly groundwater flow direction.

The detailed hydrogeology developed during the supplemental LNAPL investigation in 2019 identified two (2) distinct saturated zones beneath the LNAPL study area (southeast portion of the site). These zones include an upper and lower saturated sand separated by a middle clayey aquitard. Gasoline impacts were primarily restricted to sediment within the upper sand and the upper portion of the aquitard. Gasoline-related VOCs in sediment were not detected in the lower sand. These sedimentary layers extend from approximately 30 to 50+ feet below the ground surface. Monitor wells (Brycon-MW1 & Brycon-MW5) previously installed at the site have continuous screens that extend across all three (3) lithologic units, from the upper fuel-impacted sand through the middle aquitard and into the lower sand. This makes the zonal determination of impacted groundwater versus non-impacted groundwater impractical due to the potential cross-contamination effect from the upper impacted saturated zone into the lower saturated zone. Soundings made during June 2019 within the upper sand from temporary small diameter casings screened in the upper zone and placed within the hydraulic push borings typically contained groundwater levels three-five feet higher than the water level in nearby well Brycon MW1. This indicates that the upper sand and lower sand are hydraulically distinct water bearing zones and need to be assessed as such. The installation of future groundwater monitoring wells must isolate the upper sand and lower sand zones, when present, so these zones can be sampled and assessed separately. The narrow zone of saturation in the basal portion of the upper sand does not meet the definition of a useable aquifer (will not provide sufficient volume of water for a sustained yield). The identified lower sand satisfies the definition of a useful aquifer. The existing monitor wells will require abandonment during future grading activities. Replacement wells should be sited and installed in light of the hydrogeologic conditions present beneath the area.

3.1 COCs in Groundwater

The primary chemicals of concern (COCs) in soil at the site associated with the onsite historical activities of OOI include TPH-o and lead. The TPH-o in soil is associated with the operation of the wastewater treatment facility at the site. The lead and arsenic may be associated with the OOI activities, though onsite elevated background concentrations (up to 28 mg/kg, B22@25 feet, **Table IA, Appendix II**) of arsenic were identified (March 2018, June 2019) in onsite native sediment (alluvium). Mobilization of the arsenic present in native soil would result in arsenic concentrations much greater than the drinking water MCL of 10 ug/L. The groundwater arsenic mobilization model is discussed below. A comparison of the soil COCs with the detected COCs in groundwater was made using the groundwater monitoring data from 2012-2019 (**Table IIB, Appendix III**). The data analysis shown on **Table IIB** indicate that TPH-d and TPH-o are typically non-detect (<0.4-0.8 mg/L) in the monitor well

network; that lead has not been detected in groundwater over that time period and that elevated concentrations of arsenic in nine (9) of fourteen (14) wells are present in groundwater. TPH-g (up to 100 mg/Kg, Brycon MW1) and VOCs (benzene up to 1,800 ug/L, TMW5) are present in 6 of the 14 monitor wells are associated with the Tesoro gasoline plume in groundwater at the site; see **Figure 13-TPH-g in Groundwater** and **Figure 14 – Benzene in Groundwater**. The gasoline plume originated from a BP/Arco pipeline leak beneath Golden Ave impacting the groundwater beneath the site. The RP for the gasoline pipeline release is required to prepare a RAP for remediation of the TPH-g/VOCs in groundwater at the OOI site.

3.2 Arsenic in Groundwater

The source of the arsenic in groundwater was determined to be from native sediment and possibly other anthropomorphic sources. A technical PowerPoint presentation, along with supporting technical papers by Cozzarelli et al. and an Executive Summary (Naturally Occurring Arsenic and the Cozzarelli Mobilization Model), were provided to the LARWQCB. The presentation outlined the geochemical model, which explains the occurrence and distribution of arsenic in groundwater beneath the site (The Brownfield Redevelopment Group Co, TBRG 2019). Arsenic concentrations up to 41 mg/kg were documented in native sediment beneath the site. Aquifer sediment was found to contain up to 24.2 mg/kg of arsenic. A recent case study (Cozzarelli, et al, 2016) indicates that arsenic in sediment becomes mobilized into groundwater under low dissolved oxygen (anoxic) conditions associated with hydrocarbon plumes. Biodegradation processes prevalent within hydrocarbon plumes in the saturated zone create low oxygen (reducing) conditions near and within the plume. The low concentration of dissolved oxygen condition in combination with other geochemical processes promotes the stable low solubility form of arsenic to reduce and dissolve, raising the concentration of arsenic dissolved groundwater. Technical data documenting the geochemical processes that promote arsenic dissolving into the groundwater at the site was provided to the LARWQCB by TBRG in March 2019.

Arsenic (As) and iron (Fe) occur naturally in the aquifer sediments and As is often adsorbed to Fe and Mn hydroxides. Secondary mobilization of this naturally occurring As into the groundwater is due to the reduction of the Fe-hydroxides (reductive dissolution of Fe-hydroxides.) The presence of the TPHg plume dissolved in groundwater promotes the reducing environment necessary for the arsenic transformation to occur. A vertical profile of varying groundwater geochemistry conditions provides for variable vertical As concentrations in the groundwater. Similarly, a horizontal profile of varying groundwater geochemistry conditions provides for varying horizontal (upgradient and down gradient) As concentrations in the groundwater. These geochemical conditions were documented beneath the OOI property.

The fuel hydrocarbon plume associated with the BP/Arco pipeline releases is present beneath the east and central portion of the site. The high concentrations of arsenic found dissolved in groundwater beneath the OOI site (see **Figure 15 – Arsenic in Groundwater**) are associated with the dissolved TPHg hydrocarbon plume. Cozzarelli et al (2016) also found that the dissolved arsenic becomes resorbed onto the aquifer sediment downgradient of the plume where oxic conditions are re-established. This condition (resorbing of arsenic) is apparent at the OOI site where non-detect concentrations of arsenic were found in wells 92-MW1, TMW3, TMW4 and ESE-MW2 at the western site perimeter downgradient and cross gradient of the TPH plume, see **Figure 15** and **Figure 16 – Groundwater Contour Map**. The recent groundwater monitor data shows the arsenic plume in groundwater is contained within the site boundary. The arsenic concentrations in groundwater are unrelated to the historical activities on the OOI site.

4.0 CONCEPTUAL SITE MODEL - CSM

The toxicologist in connection with the proposed at-grade single-family residential redevelopment project developed a conceptual site model for the subject property. The chemicals of concern are identified along with exposure pathways for future receptors. The toxicologist then utilizes the CSM to evaluate the chemicals of concern in developing the site-specific risk-based concentrations proposed for use during implementation of the proposed RAP.

The subject property occupies the western portion of a mesa that is the western termination of Signal Hill against the east bank of the Los Angeles River. The property is underlain by terrace and alluvial sediment that underlies artificial fill. The OOI property has an industrial use history since the 1920's primarily for the treatment of oil field production waste fluids. Ongoing bioremediation of petroleum-impacted soil (crude oil) currently occurs on the property under permits issued by the city of Long Beach and the LARWQCB. The primary chemicals of concern (COCs) identified during previous assessment at the property include crude oil related petroleum hydrocarbons and refined petroleum hydrocarbons, principally gasoline and diesel. The refined product COCs, gasoline and diesel, are related to the nine documented historical releases (1945-2018) from the Tesoro pipelines beneath Golden Ave adjacent to the OOI property. The COCs are present in soil and groundwater. A petroleum pipeline corridor (four buried pipelines - two gasoline, one crude oil, and one abandoned) border the OOI property to the east and are located five (5) feet beneath the west side of Golden Avenue. The pipeline releases that are unrelated to OOI's activities have impacted soil and groundwater beneath the site with vapor phase and soil-absorbed phase TPH-g/TPH-d and related VOCs.

Potential exposure pathways include leaching of petroleum hydrocarbon constituents into the underlying groundwater, vapor phase migration and the associated vapor intrusion hazard, and exposure to contaminated soil and sediment (dermal contact and dust inhalation). The following chemicals of concern were identified at the property: Methane and VOCs (benzene) are present in soil gas; elevated concentrations of petroleum hydrocarbons, lead and arsenic are found in soil and TPH-g/VOCs and arsenic are present in groundwater. The TPH-g and associated VOCs are unrelated to the onsite historical activities and result from buried pipeline leaks located beneath Golden Ave. Elevated concentrations of arsenic (up to 41 mg/kg) were identified in native sediment beneath the site. The distributions of these COCs at the subject site are discussed below. This data is incorporated into the Human Health Risk Analysis (HHRA) prepared by Mearns (2016) that is summarized in Section 5.0 and attached as **Appendix IV**.

4.1 Soil Gas

CE (2011) and Tetra Tech (2015) implemented site-wide soil gas assessment at the site. AECOM (2015) also obtained soil gas samples that were analyzed for VOCs, methane, carbon dioxide, oxygen and nitrogen. Isotope testing of the methane (CE 2011) determined a microbial origin for the methane gas. The microbial origin of the methane is consistent with the presence of active TPH bioremediation cells on the property along with the biologic breakdown of the TPH in the lower vadose zone. Further, the methane gas was not under pressure, as might be expected if the methane was associated with a near surface oil/gas reservoir or a leaky oil well casing. Vapor phase benzene, TPH-g, and methane concentrations were evaluated in the shallow soil gas samples collected at 5 feet bgs during the Tetra Tech SSI, 2015. The onsite VOCs in soil gas are related to the Tesoro pipeline leaks.

The maximum vapor phase TPH-g concentration was 78,000 ug/l in TSO15-35 feet, located adjacent to the historical pipeline leaks. Elevated concentrations of methane were found in the eastern, central, and southern portions of the property. Beneath Basins 1 and 2 at the Site, south of Baker Street, the highest methane concentration detected at 5 feet bgs was 374,000 ppmv. This location is within the active bioremediation zone where ephemeral pockets of elevated methane are expected due to the active bioremediation being conducted. Methane gas concentrations were typically lower (~5,000 ppmv) in the 5-foot depth samples outside of the bioremediation cells as compared to the deeper 15-foot samples.

4.2 Soil

The primary chemicals of concern in soil are TPH, arsenic, lead and to a much lesser extent isolated concentrations of VOCs (benzene, ethylbenzene, naphthalene and xylene). Chlorinated pesticides, chlorinated herbicides, SVOC, or PCBs were not present in soil at concentrations requiring additional characterization or remediation. Crude oil related TPH is present in the onsite fill and native earth materials. TPH-d-o carbon range C₁₃-C₄₀ is the predominant type of hydrocarbon in soil at the OOI property. The TPH-d-o occurs in shallow sediments in the central portion of the Site associated with the bioremediation activities. Up to 11,320 mg/kg of TPH-d-o was found at 5 feet in the bioremediation cell area. Gasoline range TPH-g, C₄-C₁₂, is typically restricted to the east-central portion of the Site, associated with numerous historical releases from the offsite Tesoro petroleum pipelines beneath Golden Avenue. Tetra Tech borings B8 and B12, were located adjacent to Golden Avenue where up to 16,500 mg/kg of TPH-g-d was detected at 10 feet in B8. The TPH-g concentrations in soil beneath the east portion of the Site appear consistent with a separate offsite pipeline release located to the east of the subject property. The pipeline release is being remediated using a vapor extraction system (located on the subject site- adjacent to east property line) operated by Tesoro's consultant (AECOM) per the requirements of the LARWQCB Cleanup and Abatement Order No R4-2013-0064. The distribution of TPH impacted soil at the property is depicted on **Figures 5 & 7-12**.

Elevated concentrations of lead were detected in soil at the site. Lead up to 520 mg/kg occurs in shallow soil north of Baker Street. Lead is not a significant COC in soil south of Baker Street. The lead impacts are prevalent in the upper 10 feet of soil though elevated lead concentrations extend to depths of 20 feet (290 mg/Kg) near TB2. Arsenic in soil above the recommended RBC occurs sporadically beneath the southern portion of the property. The maximum concentration of arsenic detected was 170 mg/kg, though the maximum background concentration of arsenic in native alluvium ranges from 28-41 mg/kg in soil borings B-22 (25 feet bgs) and B-12 (BC at 30 feet bgs) as illustrated on Figure 6.

4.3 Groundwater

The monitor well network is sampled on a quarterly basis since 2011. The wells are tested for TPH, VOCs, CAM metals, pH, Total Organic Carbon, TDS, TSS and Chloride. Bedrock Engineering (previously Brycon) sampled fourteen (14) onsite monitoring wells during February 2019, as part of the required groundwater monitoring work. The groundwater monitoring data from February 2019 (presented in the report, *February 2019 - Quarterly Groundwater Monitoring at the Oil Operators Property, 712 West Baker Street, Long Beach, California*, dated April 15, 2019 and prepared by Bedrock Engineering) show that TPHg (C₄-C₁₂) was detected in six (6) of the fourteen wells. The six (6) wells with TPHg are located

within the eastern half of the property and contain the following TPH concentrations; ESE-MW1 0.4 mg/l, Brycon-MW1 100.0 mg/l, Brycon – MW2 0.28 mg/l, Brycon – MW3 13.0 mg/l, Brycon –MW4 0.48 mg/l, and TMW5 9.8 mg/l. Brycon-MW1 was observed to have a 0.01 foot thick Light Non-Aqueous Phase Liquid (LNAPL) on the groundwater surface. LNAPL was not found in Brycon MW1 during April/June 2019. TPH-g and VOC impacts to the underlying groundwater resource from onsite releases were not identified. Lead has not been detected in groundwater from 2012-2019. Concentrations of arsenic (0.032 to 711 ug/L) in eight (8) of fourteen (14) wells were also detected in groundwater. TPH-o is not present in groundwater.

5.0 HUMAN HEALTH RISK ASSESSMENT (HHRA)

Mearns Consulting, LLC, prepared a site-specific Human Health Risk Assessment (HHRA) dated 14 January 2016 for the proposed residential development project. The complete HHRA is attached in **Appendix IV**. The Mearns HHRA was provided to the LARWQCB and was forwarded to the CalEPA Office of Environmental Human Health Hazard Assessment (OEHHA) for review and comment. The following site-specific risk-based residential remediation goals (RBGs) for soil were agreed to following review and consultation with Dr. James Carlisle of OEHHA.

Lead in Soil \leq 80 mg/Kg (upper 10 ft)

Arsenic in Soil \leq 10 mg/Kg (upper 5 ft)

Arsenic in Soil \leq 12 mg/Kg (upper 5-10 ft)

TPH in Soil Based upon Carbon Range (upper 0-10 ft)

$C_4-C_{12} < 370$ mg/Kg

$C_{13}-C_{22} < 5,500$ mg/Kg

$C_{23}-C_{32} < 5,000$ mg/Kg

$C_{32}-C_{40} < 6,500$ mg/Kg

The following is a modified excerpt from the Mearns HHRA, attached in **Appendix IV**. The objectives of the attached Human Health Risk Assessment (HHRA) were: (1) to evaluate potential health risks to human receptors posed by concentrations of constituents detected at least one time in the soil matrix, soil vapor, and shallow groundwater underlying the 20-acre property located at 712 Baker Street in Long Beach California 90806 (the Site), and (2) to determine risk-based cleanup goals and/or mitigation measures protective of human health. This HHRA followed the guidance of the Department of Toxic Substances Control (DTSC) Preliminary Endangerment Assessment (PEA) guidance manual (DTSC 2013), U.S. Environmental Protection Agency Risk Assessment Guidance for Superfund Volume 1, Human Health Evaluation Manual (RAGs) (USEPA, 2004), the U.S. Environmental Protection Agency Risk

Assessment Guidance for Superfund volume 1, Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment, the DTSC Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (DTSC, October 2011), the Massachusetts Department of Environmental Protection (MADEP) Characterizing Risks posed by Petroleum Contaminated Sites manual (MADEP October 31, 2002), the DTSC LeadSpread 8.0 Model, the DTSC modified Johnson & Ettinger soil gas screen, USEPA version 2.0 model (April 2003), and the DTSC modified Johnson & Ettinger groundwater screen, USEPA version 3.0 model (April 2003) both modified by DTSC Office of Human and Ecological Risk (HERO) December 2014.

The property is to be developed as a mixture of single-family residences and townhomes with recreation centers, parks and a homeowners' association. The maximum detected concentration or the upper confidence level, whichever was lower pursuant to the ProUCL guidance (USEPA 2004), of the constituent detected in the top 10-feet was used as the exposure point concentration for the residential, commercial worker, and construction worker scenarios. Those chemicals of concern that had both reference doses or reference concentrations and slope factors or unit risk factors available, were assessed as both non-carcinogenic and carcinogenic compounds. DTSC's LeadSpread 8.0 Model estimates the hazard due to exposure to lead in air and onsite soils/dust for adults and children within a residential scenario. Typically lead concentrations in air are not measured onsite. Therefore the model extrapolates these concentrations from the measured concentrations of lead in onsite soils. The percentile blood lead concentration is estimated by the model to provide an estimate of the percentage of a population of children and adults that would be expected to have blood lead levels that exceed the threshold value for a residential exposure scenario. DTSC's LeadSpread 8.0 Model results indicates that lead does pose an unacceptable hazard to children or adults in a residential exposure scenario; therefore removal of soil to a depth of 10 ft below ground surface (bgs) is necessary at locations that exceed lead concentrations of 80 milligrams per kilogram (mg/kg).

The Johnson & Ettinger soil gas screen model modified by DTSC HERO (December 2014) was used to assess the potential risks and hazards due to exposure to the maximum concentrations of 1,2,4-trimethylbenzene, benzene, ethylbenzene, isopropylbenzene (cumene), naphthalene, n-butylbenzene, n-propylbenzene, toluene, xylenes and styrene detected in the vapor phase at 5-feet and/or 15-feet bgs for a residential exposure scenario. The Johnson & Ettinger model estimated a risk greater than the threshold of 1×10^{-6} , and a hazard of 26 greater than the threshold of 1. The Johnson & Ettinger groundwater screen model modified by DTSC HERO (December 2014) was used to assess the potential risks and hazards due to exposure to the maximum concentrations of 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,2,4-trimethylbenzene, 1,2-dibromoethane, 1,2-dichloroethane, 1,2-dichlorobenzene, 1,3,5-trimethylbenzene, 2-butanone (MEK), acetone, benzene, chlorobenzene, chloroform, cis-1,2-dichloroethene, diisopropylether, ethyl benzene, naphthalene, n-butylbenzene, n-

opylbenzene, sec-butylbenzene, tert-butylbenzene, toluene, xylenes and vinyl chloride detected in the groundwater at 47-feet bgs for a residential exposure scenario. The Johnson & Ettinger model estimated a risk of 2.6×10^{-4} , greater than the threshold of 1×10^{-6} , and a hazard of 8.1 greater than the threshold of 1. Microbial methane (produced through the biologic breakdown of TPH) is generated onsite at concentrations that require mitigation. The methane/VOC mitigation system will consist of a sub-slab membrane above an atmospheric venting system. The existing and proposed vapor extraction system operated by AECOM Technical Services, Inc. on behalf of Tesoro is removing the volatile organic compounds (VOCs) released by pipelines adjacent to the site along the eastern site boundary with Golden Avenue.

Even though the non-carcinogenic constituents impact different target organs the estimated hazard quotients (HQ) of each constituent detected in soil at 5-feet and 10-feet bgs were summed to provide a hazard index. The results of the HHRA indicate that the estimated summed hazard index (HI) of the non-carcinogenic constituents in soil did exceed the target hazard threshold for the residential child. The estimated hazards of the metals, cadmium and arsenic, via the ingestion and dermal contact exposure routes contributed the greatest hazard to the residential child. The estimated HI of the non-carcinogenic constituents detected in soil did not exceed the target threshold for the residential adult, commercial worker and construction worker scenarios. The estimated risk of each carcinogenic constituent detected in soil at 5-feet and 10-feet bgs were summed to provide a summed risk. The results of the HHRA indicate the summed risk of the carcinogenic constituents in soil did exceed the target threshold 1×10^{-6} for the residential child and residential adult and the target threshold of 1×10^{-5} for the commercial worker. The estimated risks due to exposure to arsenic via ingestion and dermal contact pathways for the residential child and due to exposure to arsenic via ingestion and dermal contact pathways for the residential adult and commercial worker contributed to the risks. The proposed Remedial Earth Interval (REI) is the upper 10 feet of soil immediately beneath the proposed future residential grade. Therefore, removal of soil to a depth of 10-feet bgs containing concentrations of arsenic greater than 10 mg/kg is necessary. The results of the HHRA indicate that soil removal to a depth of 10-feet bgs at locations with concentrations of lead greater than 80 mg/kg and arsenic greater than 10 mg/kg is necessary prior to development; additionally installation of a subslab methane/VOC mitigation (engineered vapor barrier) system will be required during development.

6.0 RECOMMENDED REMEDIAL RESPONSE

The following recommended remedial response is selected following a review of alternatives available considering the proposed redevelopment project. The alternatives considered included 1) No Action, 2) Excavation of all Soil Exceeding RBCs and 3) Clean up to RBCs within the Proposed Remedial Earth Interval (REI).

The No Action Alternative 1 is rejected since it yields a site where exposure to the near surface COCs is likely and is therefore incompatible with the proposed residential development.

Alternative 2 - complete excavation of all COCs exceeding the RBCs would require excavation of soil to depths of over 30 feet. Excavation and offsite disposal is a well-proven, readily implementable technology that is a common method for addressing soils similar to those identified onsite. This alternative may also include the onsite processing of hazardous lead impacted soil into a non-hazardous waste using an onsite treatment unit. The treated soil could be disposed of in a local landfill as non-hazardous soil at a lower cost. This option would require excavation, treatment and disposal of more than 77,000 cubic yards of impacted soil, just from the north of Baker parcel alone. Over 10,000 end-dump truck trips would be required to transport the impacted soil and import clean fill. The truck traffic, noise and associated deep excavation work would pose risks and nuisances that would be unacceptable for the adjacent residential community. This option has a large carbon footprint that cannot easily be offset.

6.1 Proposed RAP

The recommended alternative (3) includes placement of an Engineered Cap over the impacted soil north of Baker Street for future use as open space or a park and clean-up of the south parcel to the proposed RBCs to allow for construction of the proposed residential community. The Engineered Cap will eliminate the exposure pathways for the COCs that remain onsite. The historical groundwater sampling data indicate minimal to no impact for the residual onsite COCs to impact groundwater quality beneath the north of Baker parcel. The proposed remediation work on the south of Baker parcel, primarily the continuation of the onsite bioremediation in conjunction with the future geotechnical grading work, may include some off-site disposal of impacted soil that exceeds the RBCs within the REI. Import of soil to account for the off-site disposal may also be required. The following summarizes the proposed mitigation measures for the site COCs within the affected media for the selected remediation option.

Table of Proposed COC Mitigation Measures

COC		Location	Proposed Mitigation Measure
Vapor Phase	Methane	NoB	Engineered Cap
		SoB	Engineering control – vapor intrusion membrane – residential/ VES implemented by Tesoro
	TPH-g/VOCs	NoB	None (no structures)
		SoB	Engineering control - passive, membrane –residential/ VES implemented by Tesoro
Soil	TPH	NoB	Engineered Cap
	Lead		Engineered Cap
	Arsenic		Engineered Cap
	TPH	SoB	Bioremediated to RBCs or dispose offsite
	Lead		Remove and dispose > RBC within the REI
	Arsenic		Remove and dispose > RBC within the REI
Groundwater	TPH-g/VOCs	NoB & SoB	RP for pipeline release to implement clean-up as required by LARWQCB
	Arsenic		Remediation not required - Monitor

NoB = North of Baker Street, SoB = South of Baker Street, RBC = Risk-Based Concentrations

The following table lists the various RBCs and the sources from which the RBCs were derived. The recommended soil interval with the associated RBC is also proposed. Note that civil engineering drawings that include provisions for vapor intrusion control, grading, drainage control, and formal design of the Engineered Cap will be prepared once the major components of the RAP are approved by the LARWQCB.

Table of Soil Clean-Up Goals (RBCs)
712 Baker Street
Long Beach, California 90806

COC	Clean-Up Goals in mg/Kg					IN REI 0-5 ft	In REI 5-10 ft	Below REI
	LARWQCB SSL*	OEHHA 2016**	SFRWQCB ESLs***	HERO NOTE 3 ^ø	USEPA REGION 9 RSLs [∫]			
TPH - C ⁴ -C ¹²	500	370	100	--	--	<370	<370	<370
TPH - C ¹³ -C ²²	1,000	5,500	260	--	--	<1000	<1000	<5,500
TPH - C ²³ -C ³²	10,000	5,000	260	--	--	<5,500	<5,500	<5,500
TPH - C ³² -C ⁴⁰	--	6,500	12,000	--	--	<6,500	<6,500	<6,500
LEAD	--	80	80	80	82	≤80	≤80	≤400
ARSENIC [^]	--	10	0.067	0.11	0.77	≤10	≤12	<41

REI = Remedial Earth Interval is the zone 10 feet below future grade

* - LARWQCB SSL from Table 4-1 (depth to GW 20-150 feet), Site Assessment and Cleanup Guidebook, May 1996.

** - Recommended Site Specific OEHHA approved Residential Soil Goals based on HHRA by Mearns, 2017, 2019

*** - SFRWQCB ESLs Residential Shallow Soil, Jan. 2019

ø - CalEPA-DTSC, HERO HHRA Note 3, modified residential soil screening levels, January 2018

∫ - USEPA Region 9 REGIONAL SCREENING LEVELS - Residential RSLs, April 2019.

^ - Arsenic Cleanup Goals Adjusted for DTSC SoCal regional soil background concentration = 12 mg/Kg

The geotechnical engineer indicates that up to 13 feet of fill located in the vicinity of former Basins 4 and 14 (south portion of site near Wardlow Road) will require removal and recompaction for support of future site improvements. A minimum of five (5) feet of compacted fill will be placed across the site to provide for a uniform foundation condition beneath cut and cut/fill transition lots. The distribution of the impacted soil beneath the site is depicted on the attached **Figures 5-12**. Also identified on these figures is the Remedial Earth Interval (REI). The REI is the upper 10 feet of soil immediately beneath the proposed future residential grade in which the recommended RBCs are enforced. Selective grading and stockpiling of onsite generated non-impacted soil should be placed in the upper 5 feet of the REI where feasible. Non-impacted soil can be generated from onsite or import that has been tested for all constituents outlined below. The proposed RAP includes the following components:

- 1) Continued bioremediation under the guidance from the city of Long Beach and the LARWQCB of the TPH impacted soil to meet the proposed RBCs associated with the identified COCs.
- 2) Obtain an LARWQCB issued WDR (if required) for onsite reuse of the treated TPH impacted soil.
- 3) Verification sampling of all treated and imported soil prior to placement as engineered-compacted fill to ensure conformance with the approved RBCs.
- 4) Placement of the soil that meets the proposed RBGs as engineered compacted fill below the proposed finish grade.
- 5) The RAP defines the Remedial Earth Interval (REI) at the site as the area from the future ground surface to a depth of 10 feet below grade. The residential risk-based clean up goals (RBCs) are applicable within the REI.
- 6) Segregation and selective grading for the onsite soil that contains low or non-detect concentrations of the COCs for use as engineered fill within the upper portion of the REI.
- 7) Engineering and placement of an Engineered Cap on the north parcel that will remain as open space. Civil engineering drawings that include provisions for grading, drainage control, design of the Engineered Cap, and plans for VOC/methane vapor control.
- 8) Continuous environmental monitoring and implementation of a Soil Management Plan (SMP) for all remediation earthwork until final rough grades are achieved.
- 9) Design and future installation of a passive sub-slab vapor intrusion mitigation system (membrane and venting) for all future onsite residential and associated inhabitable structures. Future HOA to enforce operations and maintenance implementation plan (OMIP) for the vapor intrusion mitigation system.
- 10) Continued operation by others of the VES unit(s) associated with the TPHg/VOC release from the adjacent petroleum pipelines.
- 11) Abandonment of the existing monitor wells and establishment of the final monitor well network for use in post remediation groundwater. Sampling of the deeper groundwater zone beneath Area 3 to assess for impacts below the upper saturated zone.
- 12) Development of a land use covenant (LUC) including and restriction on development for the north parcel, a prohibition of pumping and use of groundwater; for future access requirements associated with operation of the VES unit(s) and for groundwater monitoring activities, to limit exposure to soils below the recommended REI, the requirement for installation of a vapor intrusion mitigation system for all onsite

structures and provisions for the protection and maintenance of engineering controls, including the Engineered Cap, on the north parcel.

- 13) It is anticipated that a future homeowner's association will have overall responsibility for maintenance of common areas, the recreation centers, maintaining drainage facilities, and for management of future operations and maintenance plan for the anticipated engineering controls. Financial assurance instruments for the maintenance operations may need to be implemented. An access agreement will be required for the RP to sample and ultimately decommission the groundwater monitor well network.

The onsite bioremediation activities will continue pursuant to the current permit requirements as required by the city of Long Beach and the LARWQCB. An updated WDR may be required from the LARWQCB for onsite reuse of the treated soil. The bioremediation may be accelerated to achieve the proposed RBCs in soil. These activities may include, the addition of nutrients and/or composting material to enhance microbial degradation. The maximum removal depths for the TPH impacted soil will be dictated by the requirements of the geotechnical engineer, minimum removal depths for soil that exceed the RBGs will be 10 feet (the depth of the REI) below the proposed grade. Following completion of bioremediation activities, the remediated TPH-impacted soil that is verified to meet the treatment criteria (RBCs) can be reused as engineered fill at the Site.

The remediation of vapor/adsorbed phase VOCs associated with the historical Tesoro pipeline leaks beneath the eastern portion of the property will continue to be implemented via vapor extraction methods by ATSI on behalf of TESORO, in accordance with the Tesoro proposed Interim Remedial Action Plan that was approved by the LARWQCB in a letter dated December 27, 2018. The vapor intrusion potential for methane and VOCs beneath subject site will be further mitigated through the installation of a sub-slab vapor intrusion mitigation system beneath all future inhabitable structures. The proposed vapor mitigation plans will be submitted to the local agency and the LARWQCB for review and approval. An Operations and Implementation Plan (OMIP) for the engineering controls will require the future HOA to manage the LUCs adopted for the project. The LUCs are expected to include restriction of pumping and use of groundwater, future access requirements associated with operation of the VES unit(s) and for groundwater monitoring activities, to limit future excavation activities and the subsequent exposure to soils below the recommended REI, and the requirement for installation of a vapor intrusion mitigation system for all onsite structures.

Verification soil sampling is an important component of the RAP to ensure the treated soil and any imported soil meets the site-specific RBCs. The soil sampling requirements include testing the bioremediated soil, testing of the soil imported to the site and post-grading REI sampling to ensure conformance to the proposed RBCs within the REI. The sampling requirements are outlined below in section **6.3**. Field screening of soil during grading operations using XRF instruments for As/Pb and field

test kits for TPH will assist in the bulk soil segregation with follow-up verification sampling at a state certified lab.

6.2 Groundwater Monitoring

Groundwater monitoring (GWM) has shown non-detect to low concentrations in groundwater for the onsite derived COCs, lead and TPH-o. The offsite derived TPH-g and VOCs in groundwater are present mostly beneath the eastern portion of the site. The distribution of dissolved arsenic in groundwater was determined to result from arsenic in native soil in conjunction with geochemical reactions associated with the TPH-g plume in groundwater. All the existing wells will require abandonment during the execution of the remedial grading at the site. The wells will be abandoned by completely removing the well casings and associated filter pack and then pressure grouting the well with a neat cement grout. CE is proposing the new monitor well network (see **Figure 17 – Proposed Monitoring Well Network**) to consist of seven locations to be installed following completion of the rough grading. Two individual wells, one well screened in the upper saturated zone and the second well screened in the lower saturated zone may be required to properly assess impacts within the Upper Sand and Lower Sand units as described in the CE LNAPL Assessment Report, see **Appendix VI**. The existing wells and future wells should be monitored on a semi-annual basis until the new well network is installed. The LARWQCB indicates after the Tesoro groundwater remediation is completed (as determined by RWQCB), the groundwater monitoring wells should be evaluated (each individual well on a well to well basis) to determine if the arsenic concentrations are above a “normal range.”

It is recommended the analytical tests for the existing and future wells will include the following constituents.

- Total petroleum hydrocarbons (TPH-C₄-C₄₀) by EPA Method 8015M
- Volatile organic Compounds (VOCs) by EPA Method 8260B
- Dissolved CAM metals by EPA Methods 6010B and 7470A
- pH, chloride, TOC, TSS & TDS per EPA Methods 9040, 300, 5310D, 160.2 and 160.1 , respectively.

All future monitoring well abandonment and installation work will be conducted under permits issued by the City of Long Beach Department of Health and Human Services.

6.2.1 Deep Groundwater Sampling/Groundwater Closure

The LARWQCB has requested sampling of the deep groundwater zone beneath Area 3 as shown on **Figure 17**. In lieu of a dedicated well the RWQCB has agreed to consider the use of grab groundwater sampling techniques that minimizes the potential for cross-contamination between the upper and lower saturated zones. A workplan for the deep groundwater sampling will be prepared and submitted to the LARWQCB for approval. If the “grab” groundwater analytical results indicate significant concentrations of chemicals of concern, then the RWQCB would require further investigation with the use of traditional groundwater monitoring wells into the deeper aquifer.

Closure of the groundwater monitoring activities and issuance of the groundwater NFA will occur once the LARWQCB approved groundwater remediation plan associated with the TPHg plume is implemented and completed by Tesoro and post-remediation COC concentrations in groundwater are below levels of concern.

6.3 Pre-field Activities

Upon LARWQCB approval of the RAP components contained herein, civil engineering drawings will be prepared that include provisions for grading, drainage control, design of the Engineered Cap, and a site-specific Soil Management Plan (SMP). The selected remediation contractor will implement the Remedial Action Plan as outlined on the civil drawings. The timing of the remediation work is dependent upon the construction schedule for the proposed development project. It is planned to begin the enhanced bioremediation work upon approval of the RAP.

Permits will be obtained as required from the City of Long Beach, LARWQCB and the South Coast Air Quality Management District. The LARWQCB will be notified at least 15 days prior to commencement of the fieldwork. Prior to remedial excavation work, construction flagging will be placed to identify soils subject to excavation. The site is currently fenced and secure. Appropriate signage will be placed on the fencing. A project schedule will be provided upon approval of the RAP.

6.3.1 Mobilization

A California licensed remediation contractor (Class A-HAZ) will conduct the excavation, treatment, loading, transport and offsite disposal of the impacted soil as directed by the owner. All fieldwork and monitoring will be conducted under the general guidelines set forth in the attached Site-Specific Health and Safety Plan. Site infrastructure will be established prior to the start-up of excavation activities. Infrastructure will include portable office/restrooms, wash sinks and a separate eyewash station. Storm water pollution controls (SWPPP) and erosion controls as outlined on the future civil drawings will be installed prior to the start of the remediation work.

Equipment proposed for the remedial excavation of the site may include: a high gallon capacity water truck or water pull, a CAT 980 loader, a track excavator, small scrapers and maintenance vehicles. A stabilized construction entrance with shaker plates will be installed to remove soil from vehicles exiting the site. Every vehicle exiting the site will have to cross the shaker plates and the gravel stabilized entrance. Site perimeter fencing will be maintained to prevent public access to the site.

Storm water mitigation measures (site specific SWPPP per civil drawings) will be constructed at the site. Mitigation measures will consist of a series of catchment dams that catch and trap fine-grained soil particles entrained in the water stream prior to entering area drains or exiting offsite.

Mechanized equipment, with the exception of vehicles used for site access (automobiles and pickup trucks) will operate between the hours of 8 a.m. and 5 p.m. Monday through Friday. If excavation activities are conducted on Saturday, the hours of operation will be between 8 a.m. and 4 p.m. The future grade and excavation depth survey points will be marked prior to excavation activities at the site.

6.3.2 Air Monitoring and Dust Control

The air monitoring and dust control measures are required to insure compliance with SCAQMD Rules 403, 1466 and 1166. Adherence to these requirements will prevent adverse impacts to the community during implementation of this plan. The goal is no off-site emission of particulate matter, noxious odors, or VOCs entrained in the ambient air as a result of the earth moving activities during the remediation work. Monitoring of fugitive dust and VOC emissions will be conducted during the remedial excavation work. Best available control measures consistent with SCAQMD Rules 403, 1466 and 1166 will be employed prior to, during, and after remedial earth moving and placement operations at the Site. The following fugitive dust emissions control measures will be employed at the site during clearing and grubbing, earth moving, bio-remediation, soil piling, and loading activities at the site. VOC and PM₁₀ and metals sampling at the property line, upwind and downwind, will be implemented as required by SCAQMD Rules 403, 1166 and 1466, as applicable. The following procedures will be implemented:

- Clear & Grub:** Maintain stability of soil through pre-watering of site prior to clearing and grubbing and apply water in sufficient quantities to prevent generation of fugitive dust plumes. Soil binder shall be applied to a freshly excavated area at the end of each working day.
- Earth-moving:** Pre-apply water to the depth of proposed cuts; and re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction. Stabilize soils once earth-moving activities are completed.
- Soil Piles:** Apply water (w/Simple Green) to stabilize soil stockpiles. Maintain soil piles to avoid steep sides or faces. Add and remove soil from the downwind portion of the soil piles. Soil piles within 100 yards of off-site occupied buildings must not be greater than eight (8) feet in height; or must have a road bladed to the top to allow water truck access; or must have an operational water irrigation system that is capable of complete stockpile coverage.
- Loading:** Pre-water material prior to loading. The free fall of soil from the loader into the truck bed will be minimized to prevent excess dust emissions. Empty loader bucket such that no visible dust plumes are created and ensure that the loader bucket is close to the truck to minimize drop height while loading. The loaded trucks will have freeboard space above the top of the load that exceeds six (6) inches. The onsite truck speed limit will be 10 miles per hour. Limit the size of staging area and limit the number and size of staging area entrances and exits. Apply water to stabilize the staging area during use and at project completion.
- Crushing:** Apply water to stabilize surface soils prior to operation of crushing equipment; and, after the completion of crushing operation and removal of equipment. Follow permit conditions for crushing equipment. Pre-water material prior to loading into the crusher. Monitor the opacity of the crusher emissions. Apply water to crushed material to prevent dust plumes.
- General:** A water truck will be on site for the duration of the project. Restrict vehicular access to established paved parking lots. Barriers can be used to ensure vehicles are only on established haul routes and parking areas. Use tarps on haul trucks. Dust emission will be further suppressed by placing crushed rock on the ingress and egress routes from the site.

6.4 EXCAVATION OF SOIL

Excavation, treatment, stockpiling, sampling and placement of the onsite bioremediated soil will be subject to the requirements outlined in the future **Soil Management Plan – SMP** and the attached project specific **Health and Safety Plan (HASP)**, see **Appendix VII**. A future WDR may be issued by the LARWQCB outlining additional requirements for the onsite reuse of bio-treated soil.

6.5 VERIFICATION SOIL SAMPLING

Confirmation soil samples will be obtained from the stockpiles of treated soil, from any soil imported (at the import location) to the project and within the REI upon reaching the sampling grade. The sampling frequency and analytical test methods are summarized below on the Soil Sampling Verification Matrix. Samples for VOC analysis samples will be collected by pushing a Terra-Core (or equivalent 5035 preservation method) sampling device into the freshly exposed soil surface (stockpile, soil core etc.) and preserving the aliquot using EPA Method 5035. Soil samples for EPA methods 8015/8015/8015/8015/8015 shall be stored in appropriately preserved containers, such as lab supplied sterile 4-ounce jars or drive tubes. The preserved soil 5035 cores will be placed directly into laboratory provided 40 ml VOAs (3), containing sodium bisulfate (2) and methanol (1) preservatives. The preserved samples will then be placed in a cooler chilled with ice. The consultant or a courier will transport the soil samples following chain of custody procedures to the laboratory at the end of each workday. The soil samples will be analyzed for VOCs per EPA method 8260B within 48 hours. A mobile laboratory may also be used for the TPH/VOC testing.

Soil Verification Sampling Matrix

Location / Type		Analytical Method					
		TPH (C4- C40) 8015M	VOCs 8260/5035	Pb / As	Title 22 Metals	SVOCs 8270	Pesticides & PCBs 8080/8081
Onsite Bioremediated Soil Treated Stockpile		1 sample / 250 c.y.	1 sample / 500 c.y.	1 sample / 250 c.y.	1 sample / 500 c.y.	--	--
Post-grading REI	Ground Surface/Sample Depth 6-inches	1 sample / 20,000 s.f.	1 sample / 40,000 s.f.	1 sample / 20,000 s.f.	--	--	--
	6 feet bgs	1 sample / 40,000 s.f.	1 sample / 40,000 s.f.	1 sample / 40,000 s.f.	--	--	--
Soil Imported to site – Provide ESA ASTM E 1527-2013 report for import site property**		1 sample / 250 c.y.	1 sample / 250 c.y.	--	1 sample / 250 c.y.	1 sample / 250 c.y.	1 sample / 250 c.y.
Acceptance criteria for soil import		<100 mg/kg	<5 ug/kg (all)	<RBCs	<RBCs + all other metals background	Non-detect	Non-detect

**Sampling requirements may be adjusted based upon the site history presented in the Phase I - ESA

The sample analysis turn-around time will be dependent upon the urgency of the sample result at the time of collection. All sampling equipment will be properly decontaminated between sample locations. Disposable latex gloves and Ziploc bags will be used to prevent cross contamination of the samples. Sample handling, transport, and delivery to the laboratory will be documented using Chain-of-Custody procedures, including the use of Chain-of-Custody forms. A state of California ELAP certified laboratory will be used to perform the required lab tests on soil. All lab data will be subject to a minimum of Tier 2 QA/QC requirements.

6.6 PROFILING AND DISPOSAL OF SOIL (HAUL ROUTE)

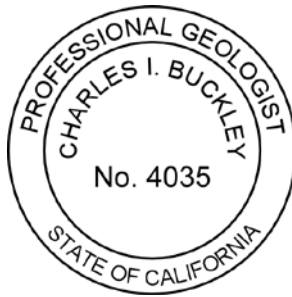
Soil impacted with TPH and metals may be hauled off-site for disposal to a licensed landfill upon completion of a waste profile and acceptance by the receiving facility. Waste classification will be conducted in accordance with 22 CCR Division 4.5, Chapter 11, Article 3 and 40 CFR 261 Subpart C. The onsite TPH impacted soil may meet the criteria for use as daily cover. Onsite treatment of metals (lead) impacted soil may be implemented prior to transfer offsite for disposal. Trucks loaded with soil for disposal will enter the shaker plates to remove excess soil from the tires and under-carriage of the truck. Each truck leaving the Site will carry a completed waste manifest. Trucks will follow the designated hauling route as required by the City of Long Beach.

6.7 PROJECT COMPLETION REPORT

A Project Completion Report will be submitted which includes the results of the completed soil treatment, soil removal/disposal areas, backfilling operations and will contain the results of all the soil verification samples, the manifests for removed soil, and laboratory reports for the verification soil samples. The LARWQCB will issue a NFA letter determination to the property owner upon review and acceptance of the project Completion Report.

Should you have any questions or desire any additional information, please contact the undersigned.

Respectfully submitted,



Charles I. Buckley
Professional Geologist No. 4035
Certified Engineering Geologist No. 1250
Certified Hydrogeologist No. 55



Gregory H. Buensuceso
Staff Geologist

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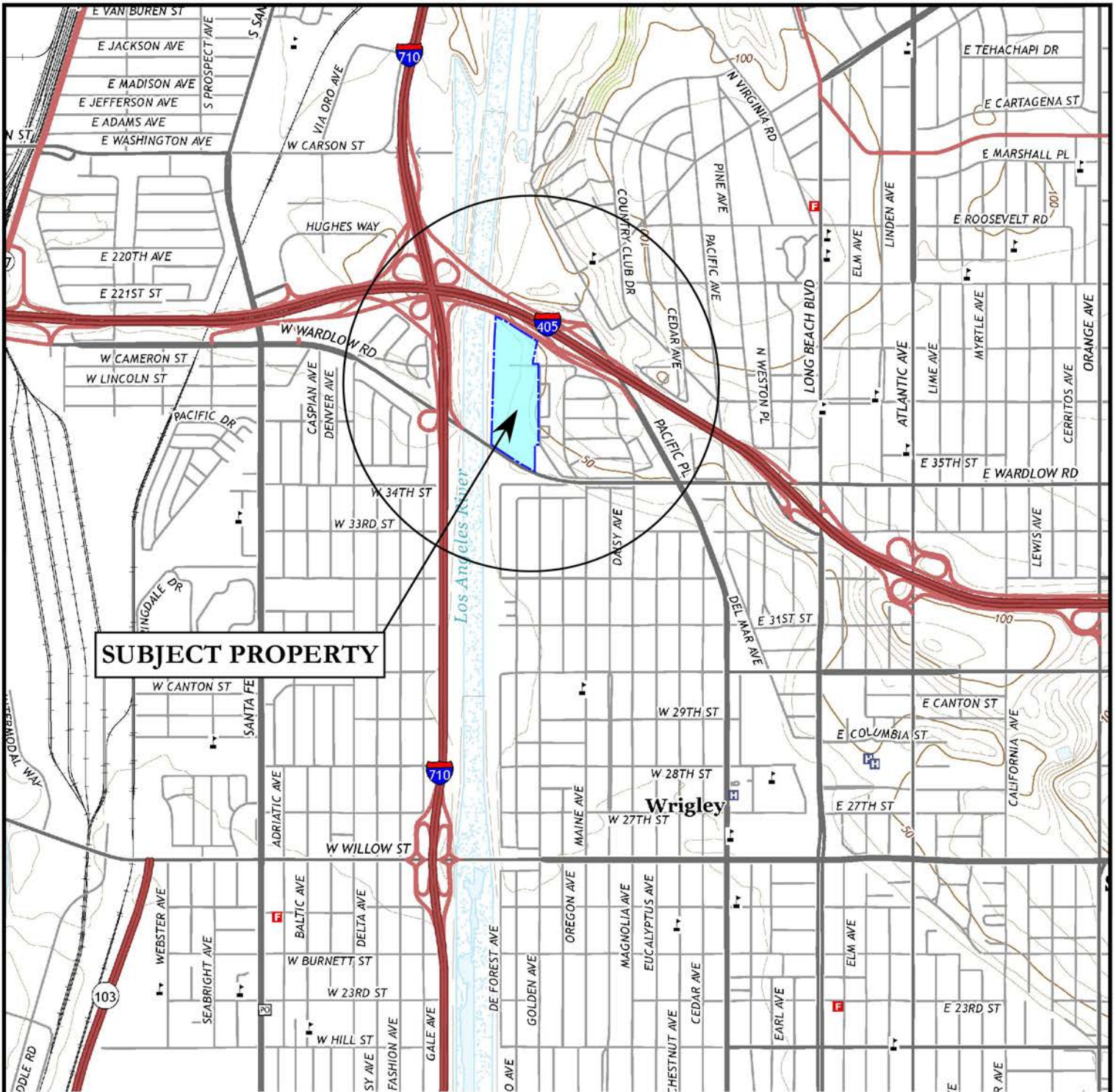
8.0 LIST OF ACRYNOMS

1,1-DCA	1,1-dichloroethane	F	Fahrenheit
1,1,1-TCA	1,1,1-trichloroethane		
1,1-DCE	1,1-dichloroethene		
		GC/MS	gas chromatogram/mass spectrometer
		GPR	ground penetrating radar
AEMC	American Environmental Management Corporation	GSI	Global Solutions, Inc.
		GWM	groundwater monitoring
APN	Assessor Parcel Number		
AST	aboveground storage tank		
ATSDR	Agency for Toxic Substances and Disease Registry	HASP	health and safety plan
		HCL	hydrochloric acid
ATSC	ARCO Terminal Services Corp.	HEAST	Health Effects Assessment Summary Tables
ATSI	AECOM Technical Services, Inc.		
		HERO	DTSC Human and Environmental Risk Office
bgs	below ground surface	Hex Cr	hexavalent chromium (also referred to as Cr ⁶⁺)
B(a)P	benzo(a)pyrene		
		HHRA	human health risk assessment
		HIST UST	Historical Underground Storage Tank database
C	Celsius		
CAP	corrective action plan	HSC	California Health and Safety Code.
CCR	California Code of Regulations	HW	hazardous waste
CE	California Environmental Geologists & Engineers, Inc.	HI	hazard Index
		HQ	hazard quotient
CHHSL	California Human Health Screening Level; see also CHHSL		
cis-1,2 DCE	cis-1,2-dichloroethene	IDW	investigation-derived waste
cm ²	square centimeter	IPF	Integral Partners Funding, LLC
COPC	constituent of potential concern	IRIS	Integrated Risk Information System
Cr	chromium		
CSM	conceptual site model		
cu. yds.	cubic yards	JEI	Jaykim Engineers, Inc.
		JKB	Jack K. Bryant and Associates
DHS	California Department of Health Services		
DO	dissolved oxygen	LACSD	Sanitation Districts of Los Angeles County
DOT	California Department of Transportation	LARWQCB	California Regional Water Quality Control Board – Los Angeles Region
DQOs	data quality objectives	LBDHHS	City of Long Beach Department of Health and Human Services, Division of Hazardous Materials
Draft RAP	Draft remedial action plan		
DTSC	California Department of Toxic Substances Control	LUC	land use covenant
ELAP	State of California Environmental Laboratory Accreditation Program	MCL	California maximum contaminant level
EM	electromagnetometer	MDL	method detection limit
ESA	Environmental Site Assessment	mg/cm ²	milligrams per square centimeter
ESE	Environmental Science & Engineering, Inc.	mg/kg	milligrams per kilogram
		mg/L	milligrams per liter
ESS	Environmental Sampling Supply	MNA	monitored natural attenuations
		mph	miles per hour
		MRL	method reporting limit

MRL	minimal risk level	SSI	Supplemental Site Investigation
msl	mean sea level	SVE	soil vapor extraction
		SVOC	semi-volatile organic compound
		SVOC-SIM	semi-volatile organic compound – selected ion monitoring
NC	non-carcinogen		
ND	not detected	SWPPP	stormwater pollution prevention plan
NFA	no further action	SWRCB	State Water Resources Control Board
OOI	Oil Operators, Inc.	TCE	trichloroethene
OVM	organic vapor meter	TLO	Tesoro Logistic Operations LLC
		TOC	total organic carbon
		TPH	total petroleum hydrocarbons (as analyzed by USEPA Method No. 8015m)
PAH	polycyclic aromatic hydrocarbon		
PAOC	potential area of concern		
PCB	polychlorinated biphenyl	TPHcc	total petroleum hydrocarbons with carbon chain speciation (includes TPH-g, TPH-d, & TPH-o)
PCE	tetrachloroethene		
PID	photoionization detector		
PNFA	pathway to no further action	TDS	total dissolved solids
ppm	parts per million	TPH-g	total petroleum hydrocarbons in the gasoline range
ppmv	parts per million by volume		
PPRTV	provisional peer reviewed toxicity value	TPH-d	total petroleum hydrocarbons in the diesel range
PQL	practical quantification limit	TPH-o	total petroleum hydrocarbons in the oil range
		TRPH	total recoverable petroleum hydrocarbons (as analyzed by USEPA Method No. 418.1)
QA/QC	quality assurance/quality control		
		TSS	total suspended solids
RAO	remedial action objective		
RAP	remedial action plan		
RBC	Risk-Based Concentrations	µg/L (liquid)	micrograms per liter
RBG	Risk-Based Goals	µg/L (vapor)	micrograms per liter
REI	Remedial Earth Interval	µg/kg	micrograms per kilogram
rCHHSL	California Human Health Screening Level - residential	µg/m ³ (vapor)	micrograms per cubic meter
RCRIS	Resource Conservation and Recovery Information System	USCS	United Soil Classification System
		USEPA	United States Environmental Protection Agency
Rfc	reference concentration		
Rfd	reference dose	USGS	United States Geological Survey
RL	reporting limit		
RSL	regional screening level		
		VES	vapor extraction system
		VIMS	vapor intrusion mitigation system
SCAQMD	South Coast Air Quality Management District	VOC	volatile organic compound
SMP	Site management plan		
sf	square feet	WDR	waste discharge requirements for land treatment
SSCG	Site-specific cleanup goal		

ILLUSTRATIONS

- Figure 1. Vicinity Map**
- Figure 2. Development Plan**
- Figure 3. Grading/Geotechnical Plan**
- Figure 4. Historical Assessment Plan**
- Figure 5. TPH in Soil**
- Figure 6. Lead/Arsenic in Soil**
- Figure 7. Section A-A'**
- Figure 8. Section B-B'**
- Figure 9. Section C-C'**
- Figure 10. Section D-D'**
- Figure 11. Section E-E'**
- Figure 12. Section F-F'**
- Figure 13. TPH-g in Groundwater**
- Figure 14. Benzene in Groundwater**
- Figure 15. Arsenic in Groundwater**
- Figure 16. Groundwater Contour Map**
- Figure 17. Proposed Monitor Well Network**



References: USGS 7.5' Long Beach Topographic Quadrangle, 2015.



FIGURE 1 - VICINITY MAP

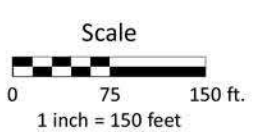
712 W. Baker Street
Long Beach, California

Drawn By:	GHB	Job #	EV610-3029
Checked By:	CIB	Date:	August 2019

*California
Environmental*



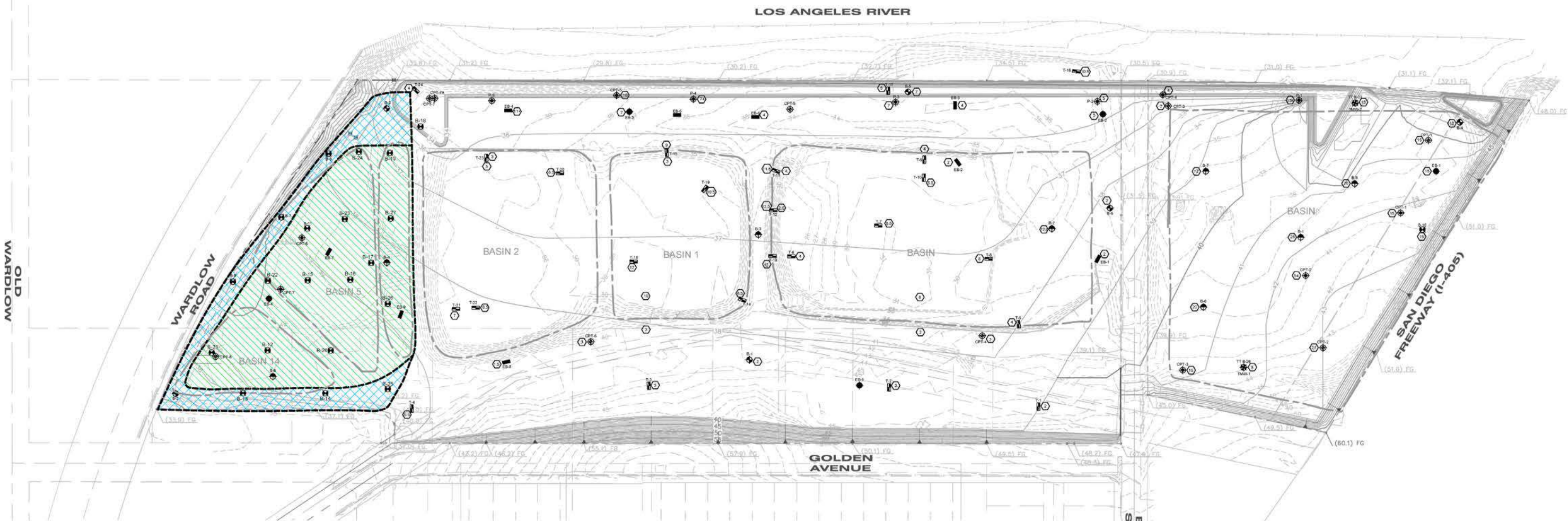
FIGURE 2- DEVELOPMENT PLAN



<i>California Environmental</i>	
Client	Integral Partners
Job #	EO610-3029
Location	712 W. Baker Street, Long Beach, CA
By	GHB
Date:	August 2019
Checked By	CIB



References: KHR Associates, Preliminary Grading Plan



EXPLANATION
(LOCATIONS APPROXIMATE)

<p>B-11 [Symbol] - Exploratory Boring (Albus-Keefe, this investigation)</p> <p>B-8 [Symbol] - Exploratory Boring (Petra, May 2015)</p> <p>P-5 [Symbol] - Percolation Test Boring (Petra, May 2015)</p> <p>CPT-8 [Symbol] - Exploratory CPT Boring (Petra, May 2015)</p> <p>TT B-27 [Symbol] - Monitoring Well Exploratory Boring (Petra & TetraTech, May 2015)</p> <p>TMW-2 [Symbol]</p> <p>[Hatched Area] - Removal Area: Anticipating Removals 5' to 7' Below Present Grades.</p> <p>[Cross-hatched Area] - Removal Area: Anticipating Removals 10' to 13' Below Present Grades.</p>	<p>B-6 [Symbol] - Exploratory Boring (Albus-Keefe, 1/19/14)</p> <p>CPT-7 [Symbol] - Exploratory CPT (Albus-Keefe, 1/19/14)</p> <p>T-24 [Symbol] - Exploratory Trench (Albus-Keefe, 1/19/14)</p> <p>EB-7 [Symbol] - Exploratory Trench (Eberhart & Stone, 10/7/98)</p> <p>EB-5 [Symbol] - Exploratory Boring (Eberhart & Stone, 10/7/98)</p> <p>32 [Symbol] - Estimated Depth of Unsuitable Materials (in feet)</p> <p>[Dashed Line] - Limit of Existing or Former Basin</p>
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LEGEND:
 - - - - - PROPERTY LINE
 - - - - - REVISION IMP.

FIGURE 3 - GRADING/GEOTECHNICAL PLAN

CALIFORNIA ENVIRONMENTAL				
Client	INTEGRAL PARTNERS		Job #	EP610-3029
Location	712 W. BAKER ST., LONG BEACH, CA		By	GHB
Date:	August 2019		Checked By	CIB

References: KimleyHorn, Albus-Keefe & Associates - Preliminary Rough Grading Plan (Feb 2016)

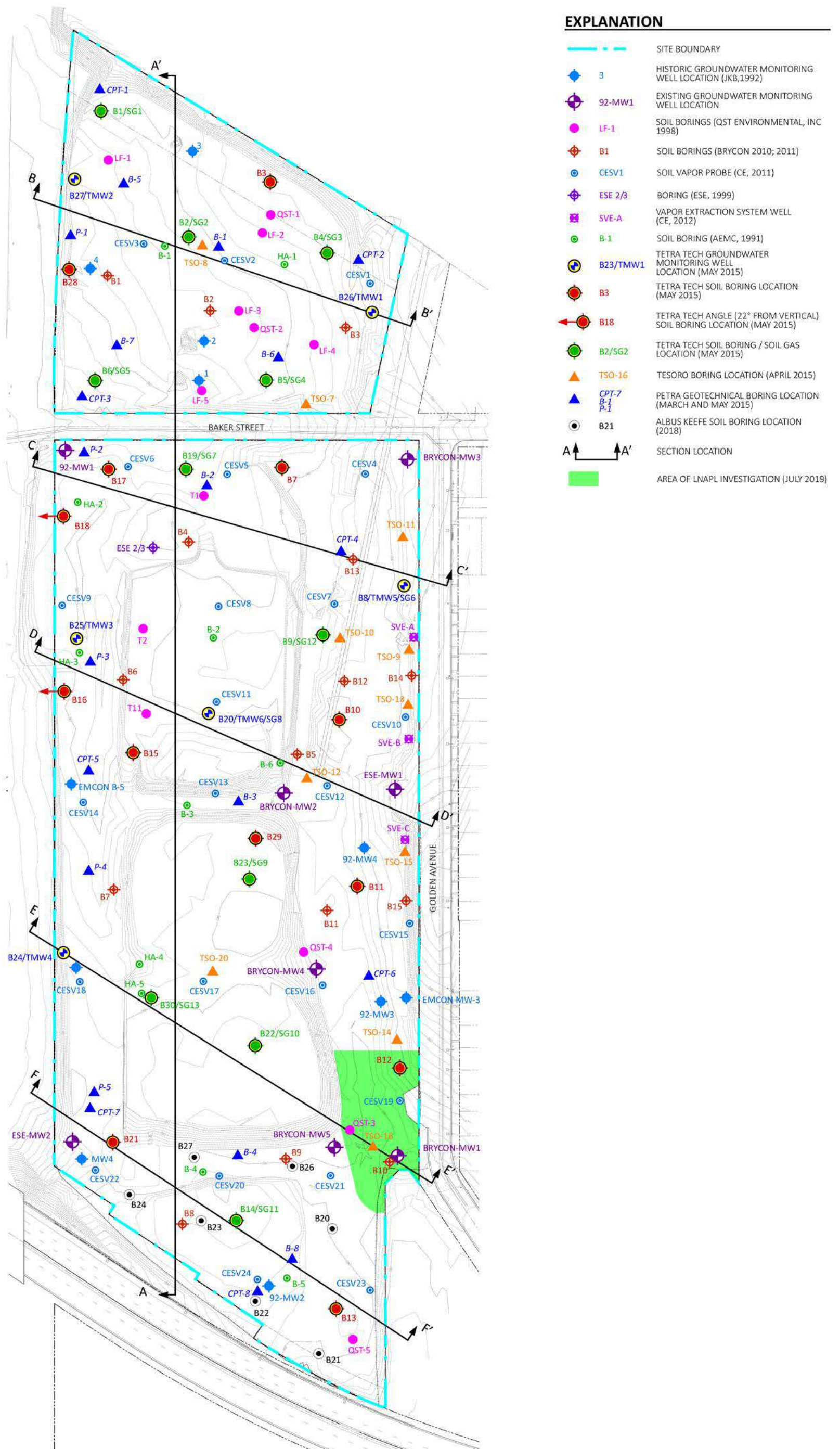
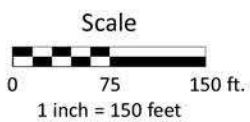


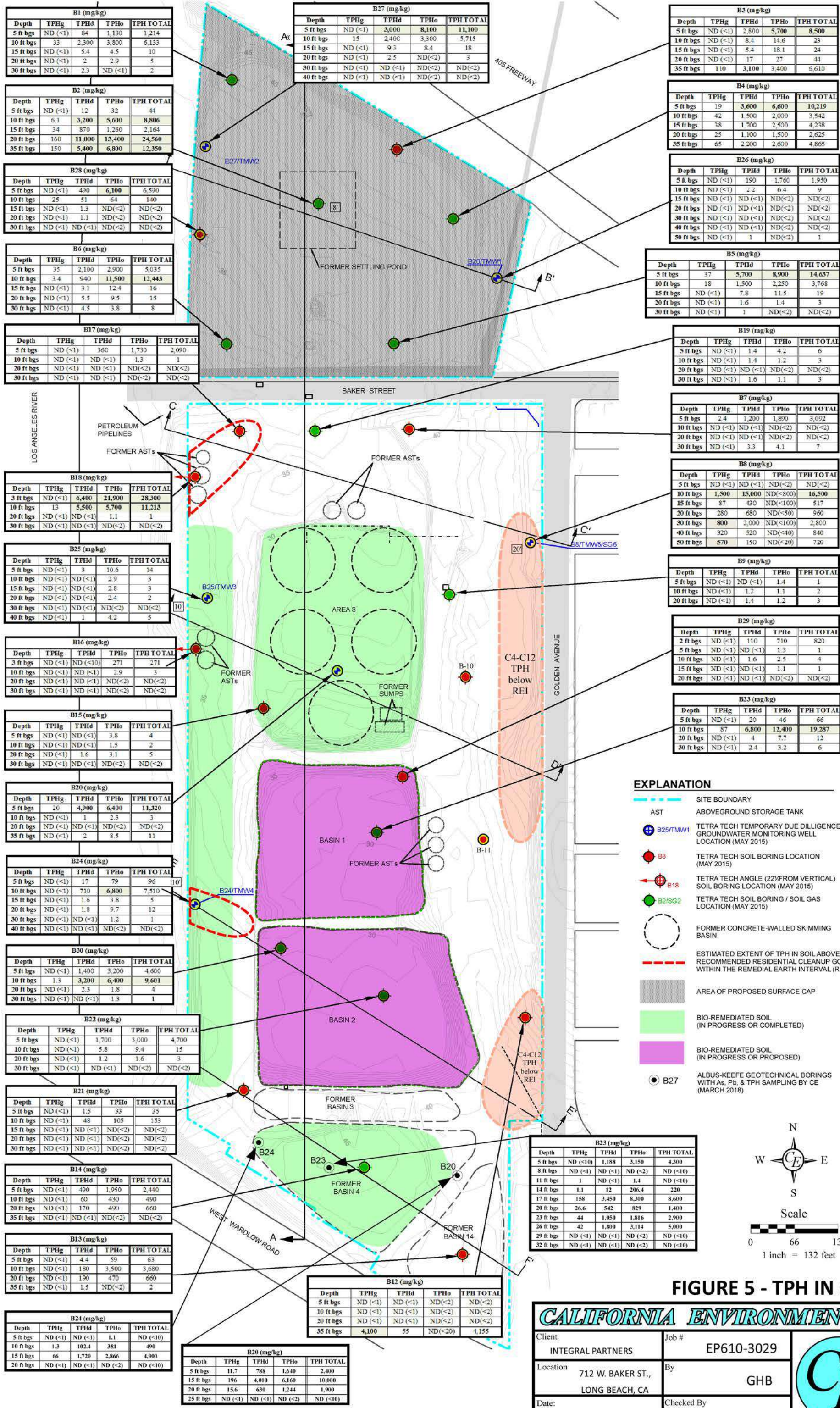
FIGURE 4 - HISTORICAL ASSESSMENT PLAN



References: KHR Associates, Topographic Map of River Park Residential, 6.24.19

California Environmental	
Client	Integral Partners
Job #	EO610-3029
Location	712 W. Baker Street, Long Beach, CA
By	GHB
Date:	August 2019
Checked By	CIB



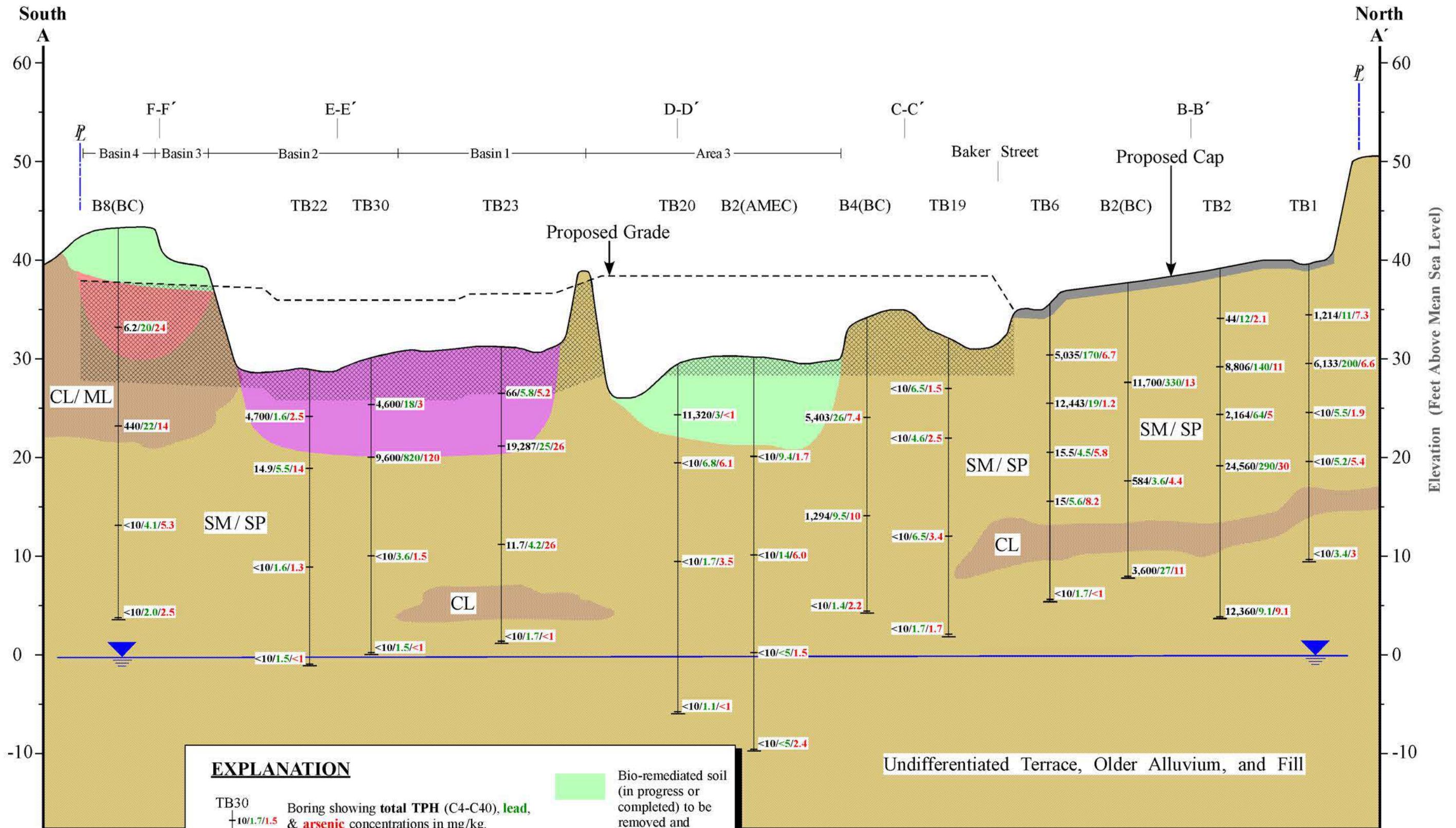


B23 (mg/kg)				
Depth	TPHg	TPHd	TPHo	TPH TOTAL
5 ft bgs	ND (<1)	1,188	3,150	4,300
8 ft bgs	ND (<1)	ND (<1)	ND (<2)	ND (<10)
11 ft bgs	1	ND (<1)	1.4	ND (<10)
14 ft bgs	1.1	12	206.4	220
17 ft bgs	158	3,450	8,300	8,600
20 ft bgs	26.6	542	829	1,400
23 ft bgs	44	1,050	1,816	2,900
26 ft bgs	42	1,800	3,114	5,000
29 ft bgs	ND (<1)	ND (<1)	ND (<2)	ND (<10)
32 ft bgs	ND (<1)	ND (<1)	ND (<2)	ND (<10)

CALIFORNIA ENVIRONMENTAL

Client	INTEGRAL PARTNERS	Job #	EP610-3029
Location	712 W. BAKER ST., LONG BEACH, CA	By	GHB
Date:	August 2019	Checked By	CIB

References: Tetra Tech (2015)



EXPLANATION

- TB30
+ 10/1.7/1.5 Boring showing total TPH (C4-C40), lead, & arsenic concentrations in mg/kg.
- Grid pattern: Recommended 10-foot remedial earth interval (REI) below future residential development.
- Red box: Soil that exceeds recommended clean-up goals within the remedial earth interval (REI).
- Green box: Bio-remediated soil (in progress or completed) to be removed and recompacted.
- Purple box: Bio-remediated soil (in progress or proposed) to be removed and recompacted.

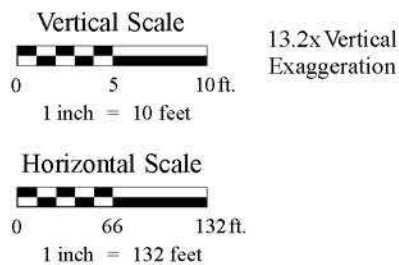
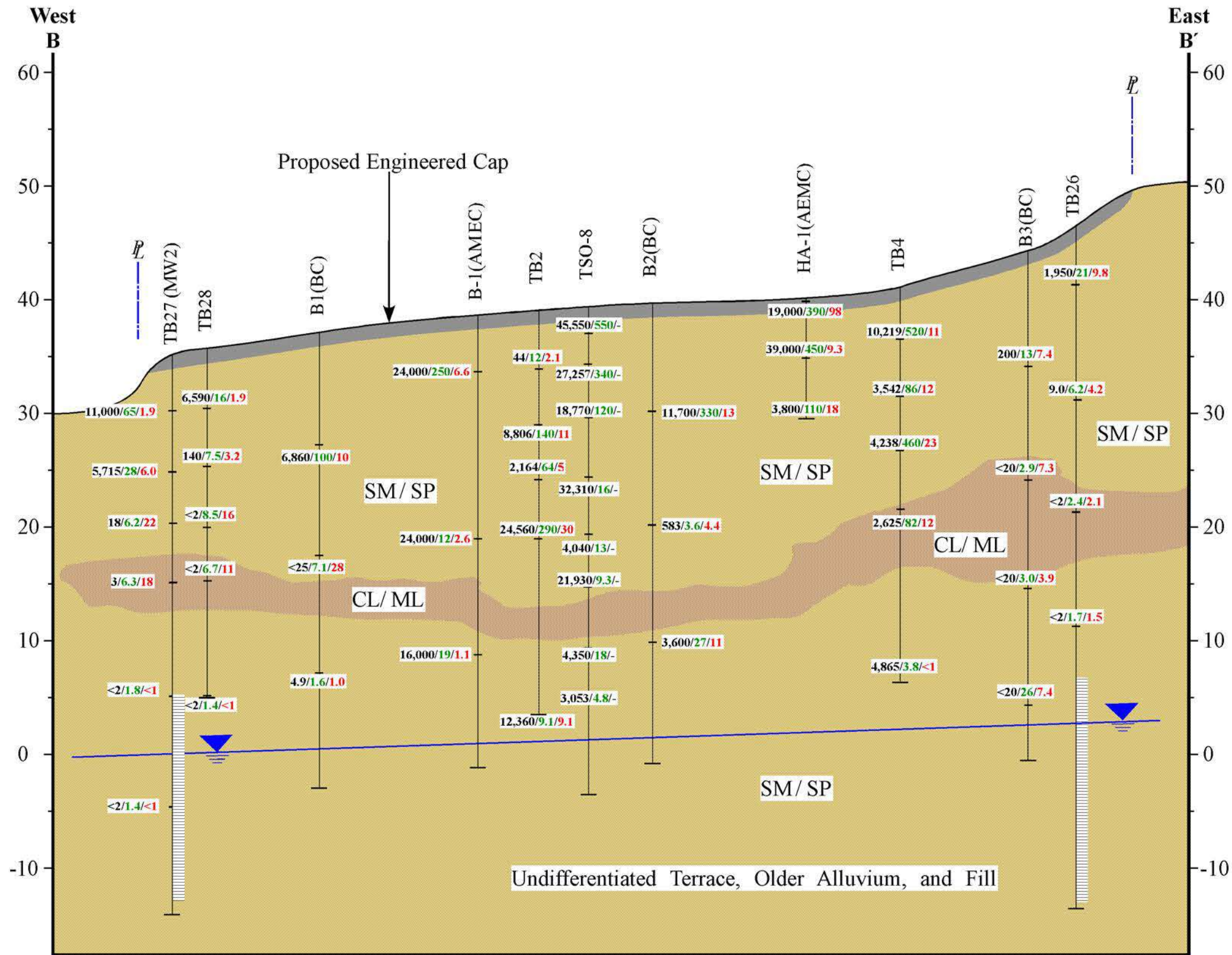


FIGURE 7 - CROSS SECTION A-A'

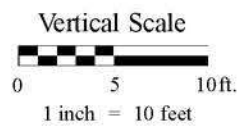
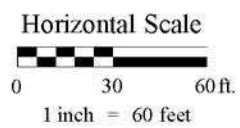
CALIFORNIA ENVIRONMENTAL		
Client: INTEGRAL PARTNERS	Job #: EP610-3029	
Location: 712 W. BAKER ST., LONG BEACH, CA	By: GHB	
Date: August 2019	Checked By: CIB	

References: Preliminary Grading Plan, KHR Associates (June 14, 2019)

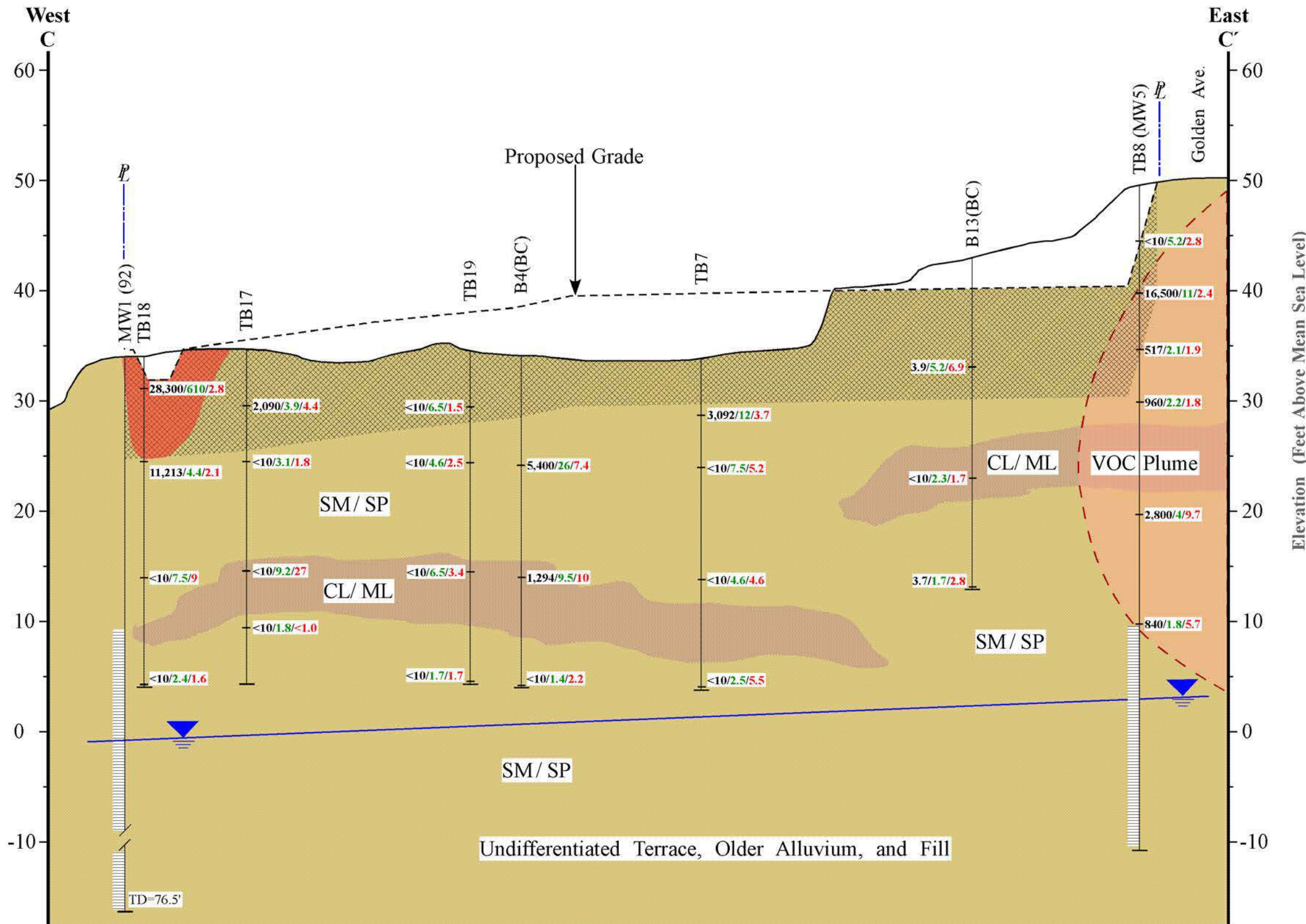


6x Vertical Exaggeration

FIGURE 8 - CROSS SECTION B-B'



CALIFORNIA ENVIRONMENTAL				
Client:	INTEGRAL PARTNERS		Job #:	EP610-3029
Location:	712 W. BAKER ST., LONG BEACH, CA		By:	GHB
Date:	August 2019		Checked By:	CIB



EXPLANATION

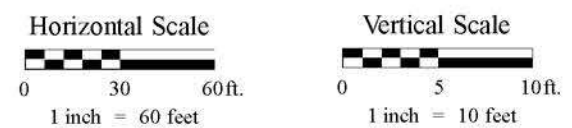
TB30 Boring showing total TPH (C4-C40), lead, & arsenic concentrations in mg/kg.

Recommended 10-foot remedial earth interval (REI) below future residential development.

Soil that exceeds site specific clean-up goals per HHRA within the remedial earth interval.

6x Vertical Exaggeration

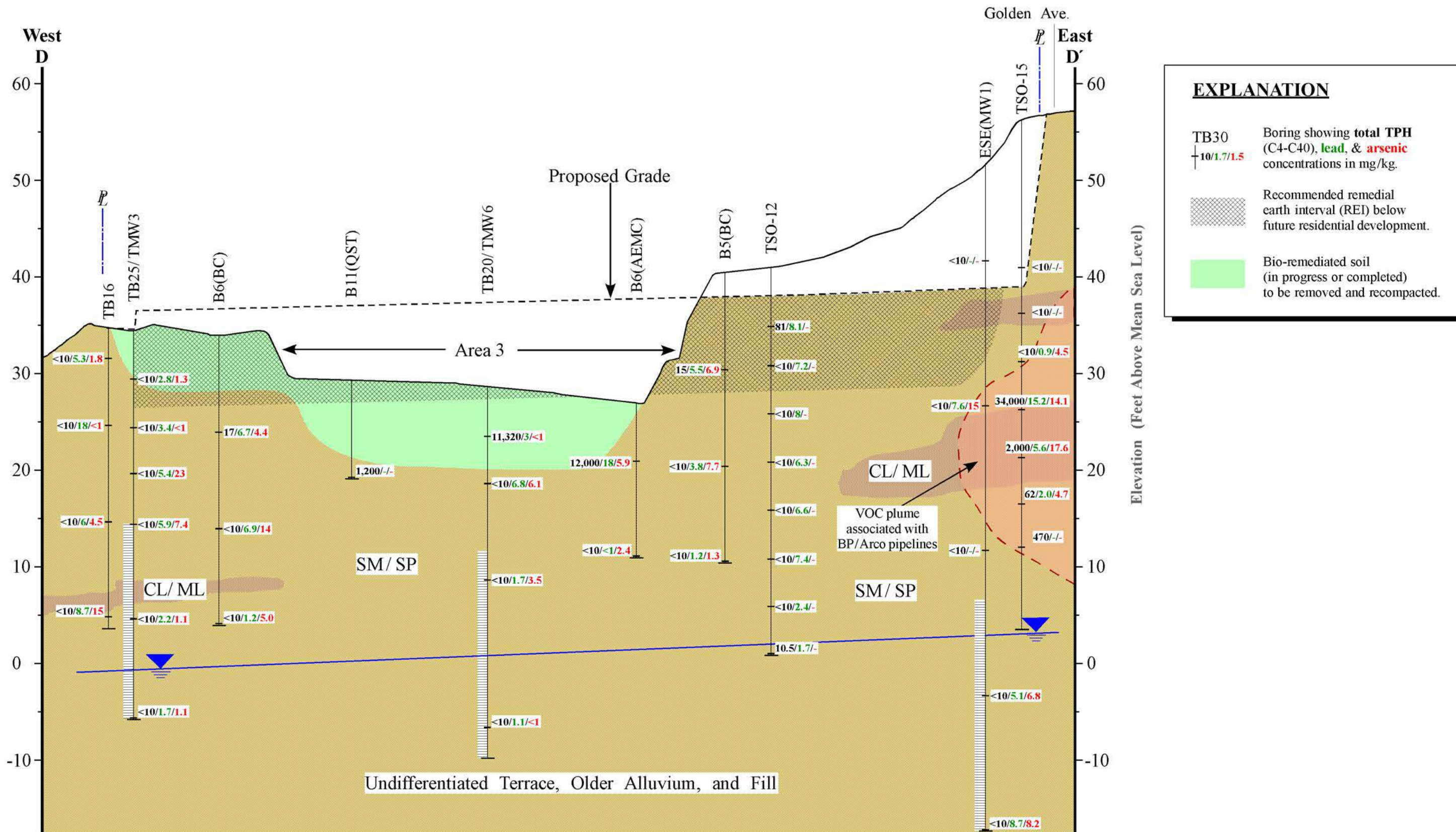
FIGURE 9 - CROSS SECTION C-C'



CALIFORNIA ENVIRONMENTAL			
Client:	INTEGRAL PARTNERS	Job #:	EP610-3029
Location:	712 W. BAKER ST., LONG BEACH, CA	By:	GHB
Date:	August 2019	Checked By:	CIB



References: Preliminary Grading Plan, KHR Associates (June 14, 2019)



EXPLANATION

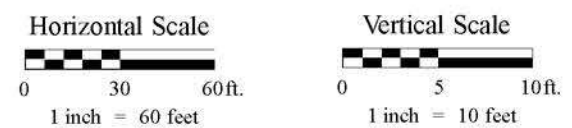
TB30
+10/1.7/1.5
Boring showing total TPH (C4-C40), lead, & arsenic concentrations in mg/kg.

Recommended remedial earth interval (REI) below future residential development.

Bio-remediated soil (in progress or completed) to be removed and recompact.

6x Vertical Exaggeration

FIGURE 10 - CROSS SECTION D-D'



CALIFORNIA ENVIRONMENTAL				
Client:	INTEGRAL PARTNERS		Job #:	EP610-3029
Location:	712 W. BAKER ST., LONG BEACH, CA		By:	GHB
Date:	August 2019		Checked By:	CIB

References: Preliminary Grading Plan, KHR Associates (June 14, 2019)

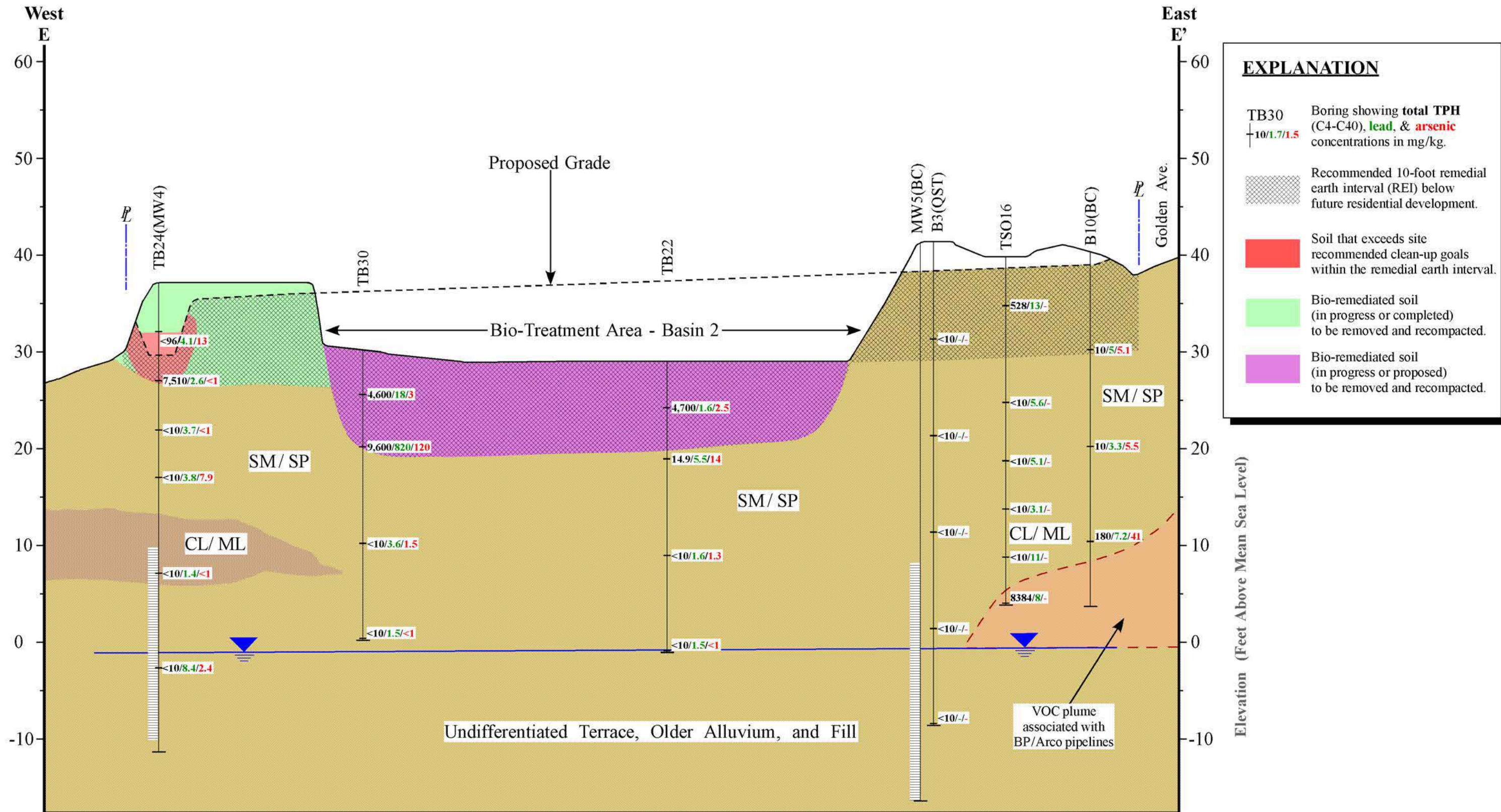
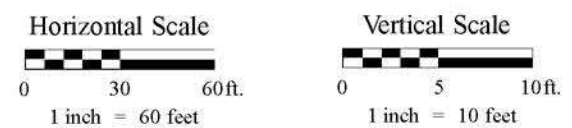


FIGURE 11 - CROSS SECTION E-E'

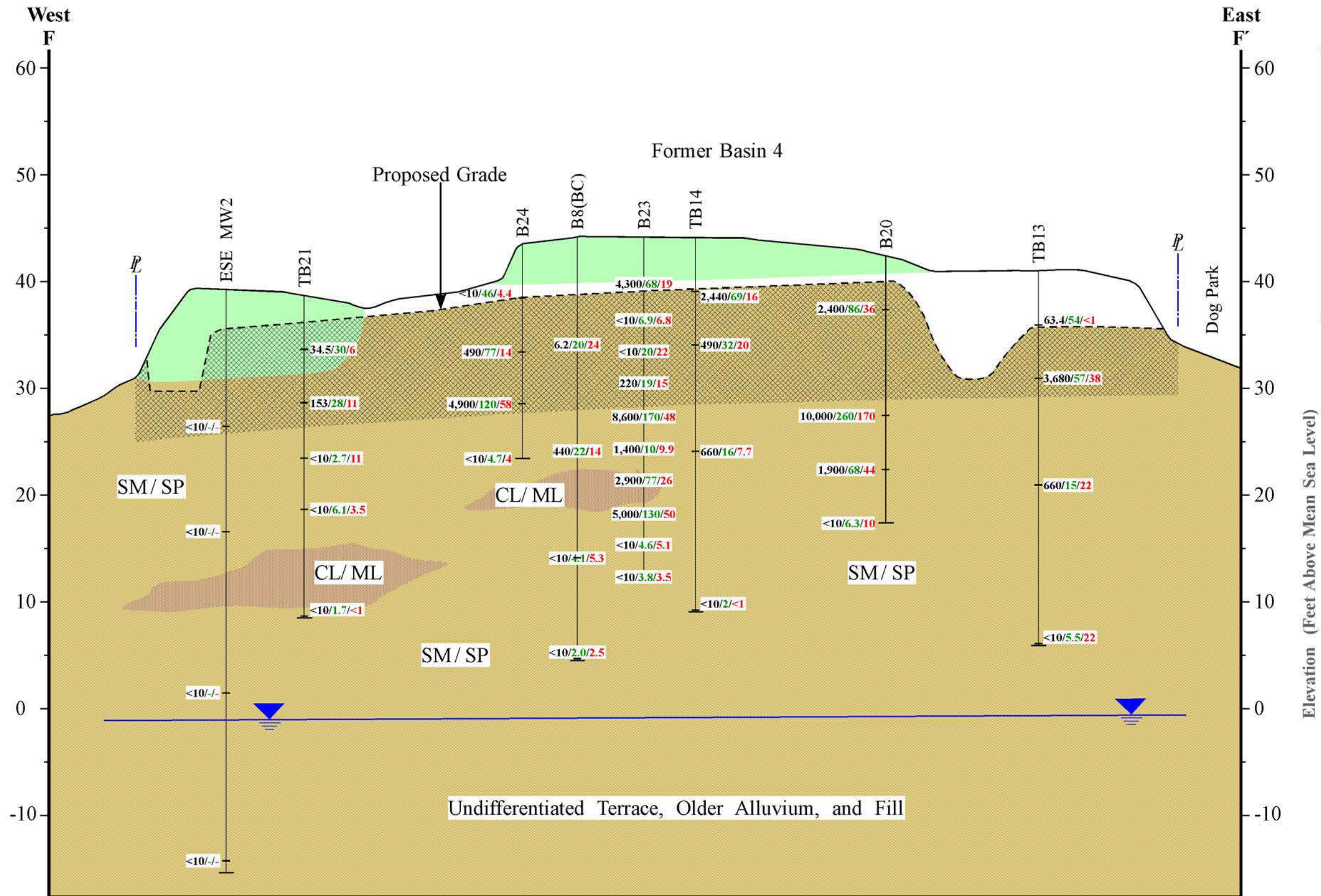
6x Vertical Exaggeration



CALIFORNIA ENVIRONMENTAL			
Client:	INTEGRAL PARTNERS	Job #:	EP610-3029
Location:	712 W. BAKER ST., LONG BEACH, CA	By:	GHB
Date:	August 2019	Checked By:	CIB



References: Preliminary Grading Plan, KHR Associates (June 14, 2019)



EXPLANATION

TB30 Boring showing total TPH (C4-C40), lead, & arsenic concentrations in mg/kg.

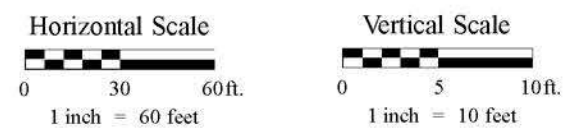
10/1.7/1.5

Recommended remedial earth interval (REI) below future residential development.

Bio-remediated soil (in progress or completed) to be removed and recompactd.

6x Vertical Exaggeration

FIGURE 12 - CROSS SECTION F-F'



CALIFORNIA ENVIRONMENTAL

Client: INTEGRAL PARTNERS	Job #: EP610-3029
Location: 712 W. BAKER ST., LONG BEACH, CA	By: GHB
Date: August 2019	Checked By: CIB

References: Preliminary Grading Plan, KHR Associates (June 14, 2019)

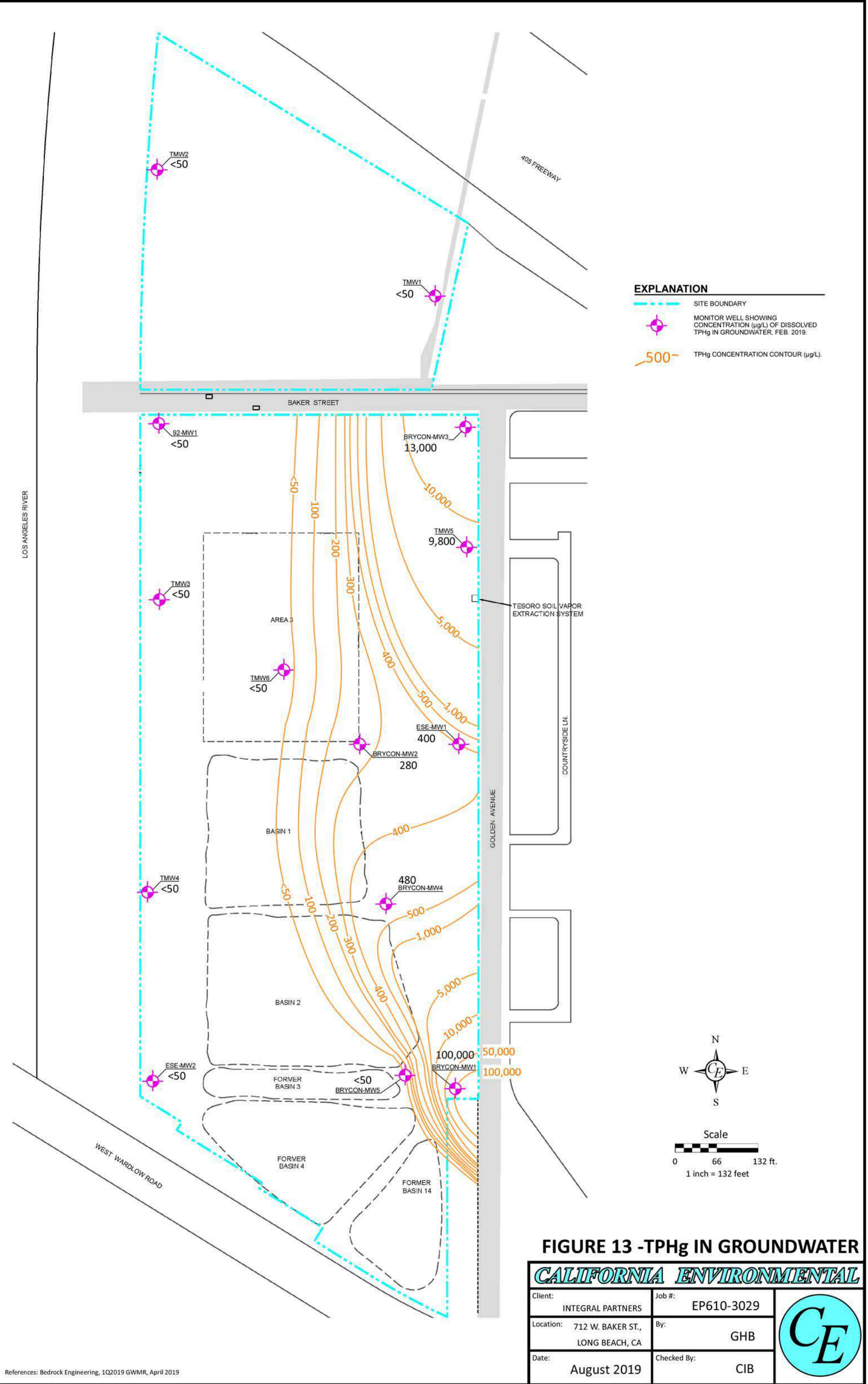
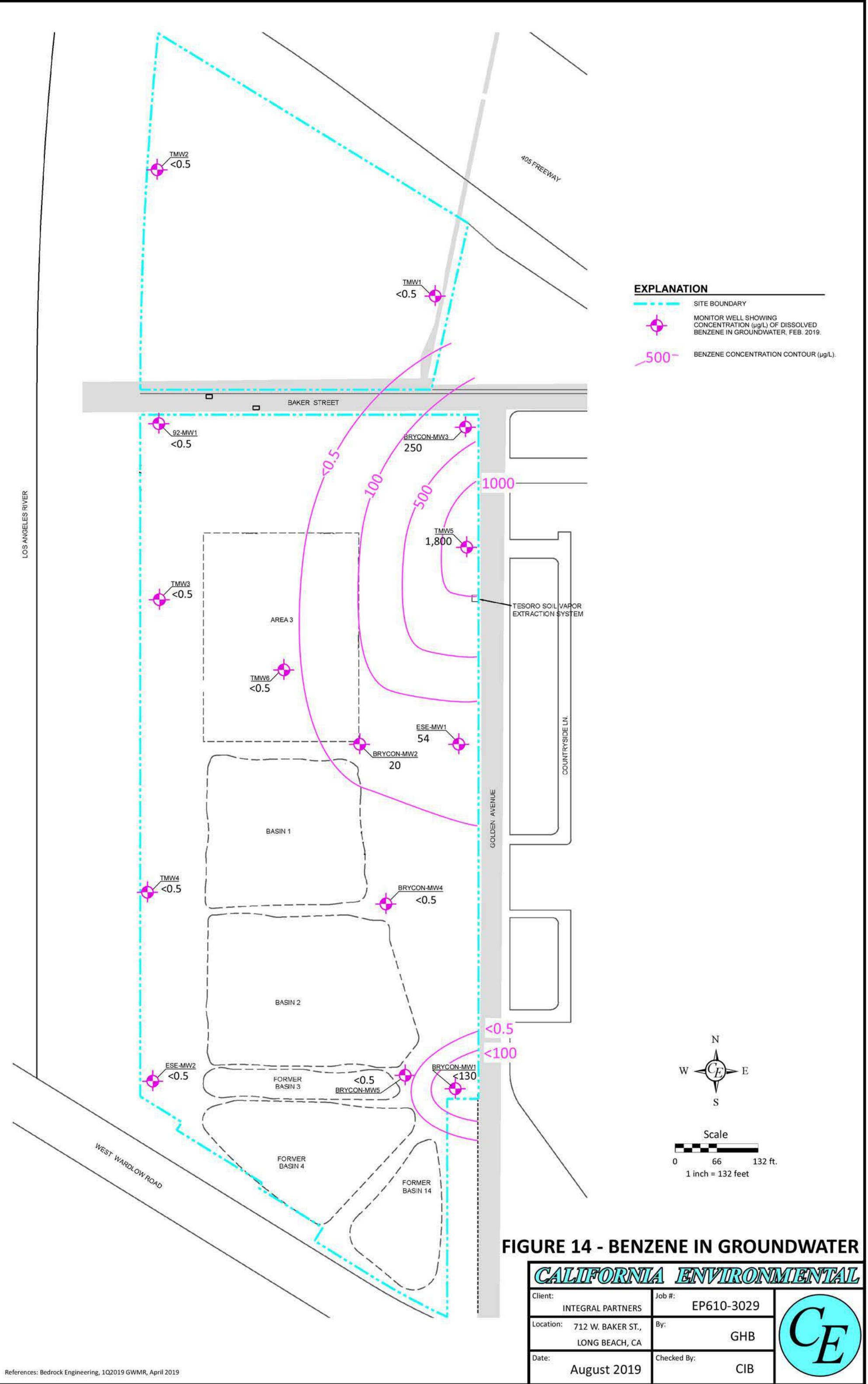


FIGURE 13 -TPHg IN GROUNDWATER

CALIFORNIA ENVIRONMENTAL				
Client:	INTEGRAL PARTNERS		Job #:	EP610-3029
Location:	712 W. BAKER ST., LONG BEACH, CA		By:	GHB
Date:	August 2019		Checked By:	CIB

References: Bedrock Engineering, 1Q2019 GWMR, April 2019



- EXPLANATION**
- - - SITE BOUNDARY
 - MONITOR WELL SHOWING CONCENTRATION (µg/L) OF DISSOLVED BENZENE IN GROUNDWATER, FEB. 2019.
 - 500 BENZENE CONCENTRATION CONTOUR (µg/L).

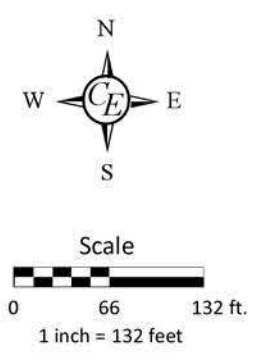
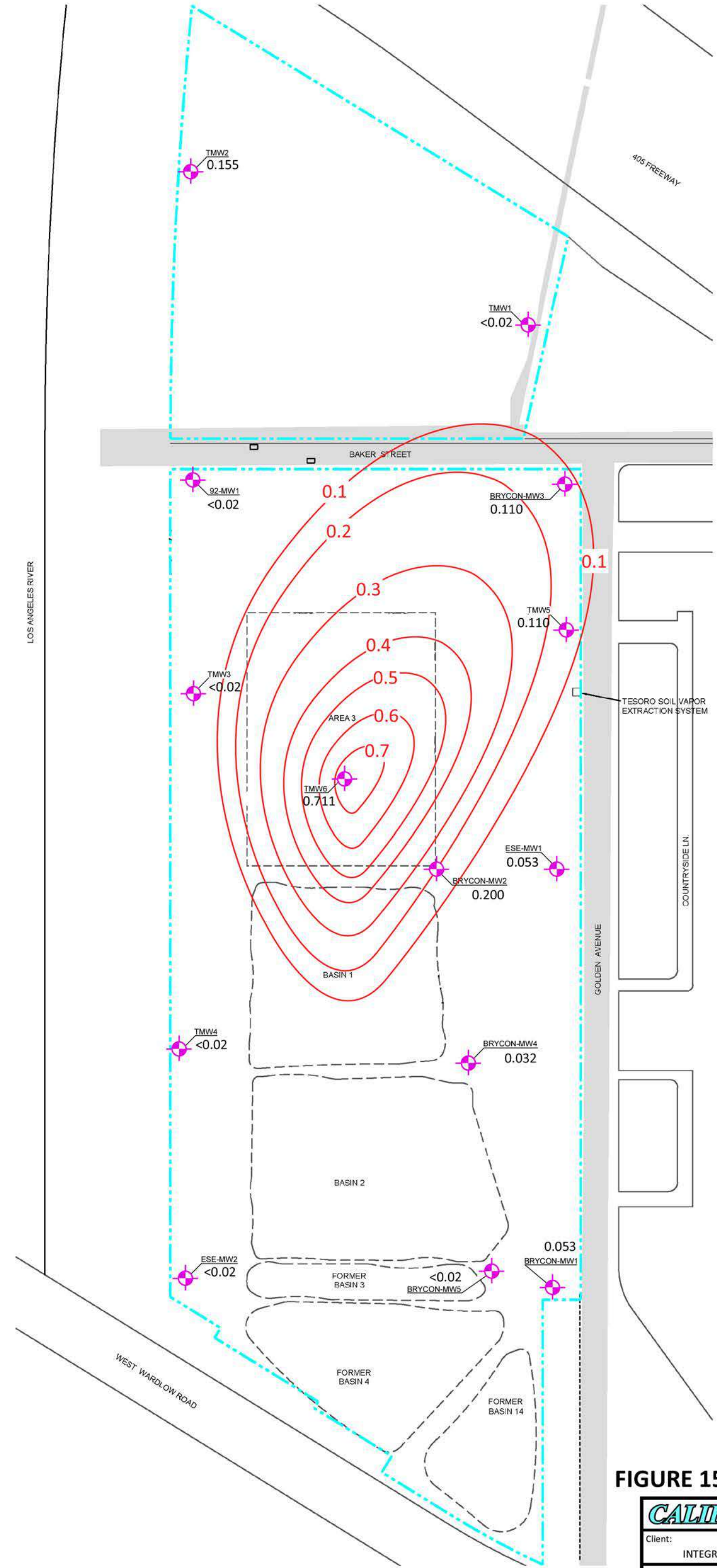


FIGURE 14 - BENZENE IN GROUNDWATER

CALIFORNIA ENVIRONMENTAL				
Client:	INTEGRAL PARTNERS		Job #:	EP610-3029
Location:	712 W. BAKER ST., LONG BEACH, CA		By:	GHB
Date:	August 2019		Checked By:	CIB

References: Bedrock Engineering, 1Q2019 GWMR, April 2019



- EXPLANATION**
- SITE BOUNDARY
 - MONITOR WELL SHOWING CONCENTRATION (mg/L) OF DISSOLVED ARSENIC IN GROUNDWATER, FEB. 2019.
 - ARSENIC CONCENTRATION CONTOUR (mg/L).

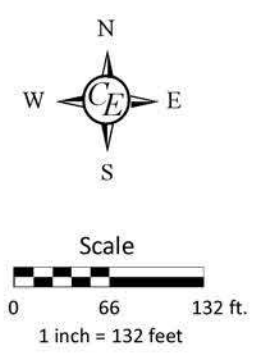
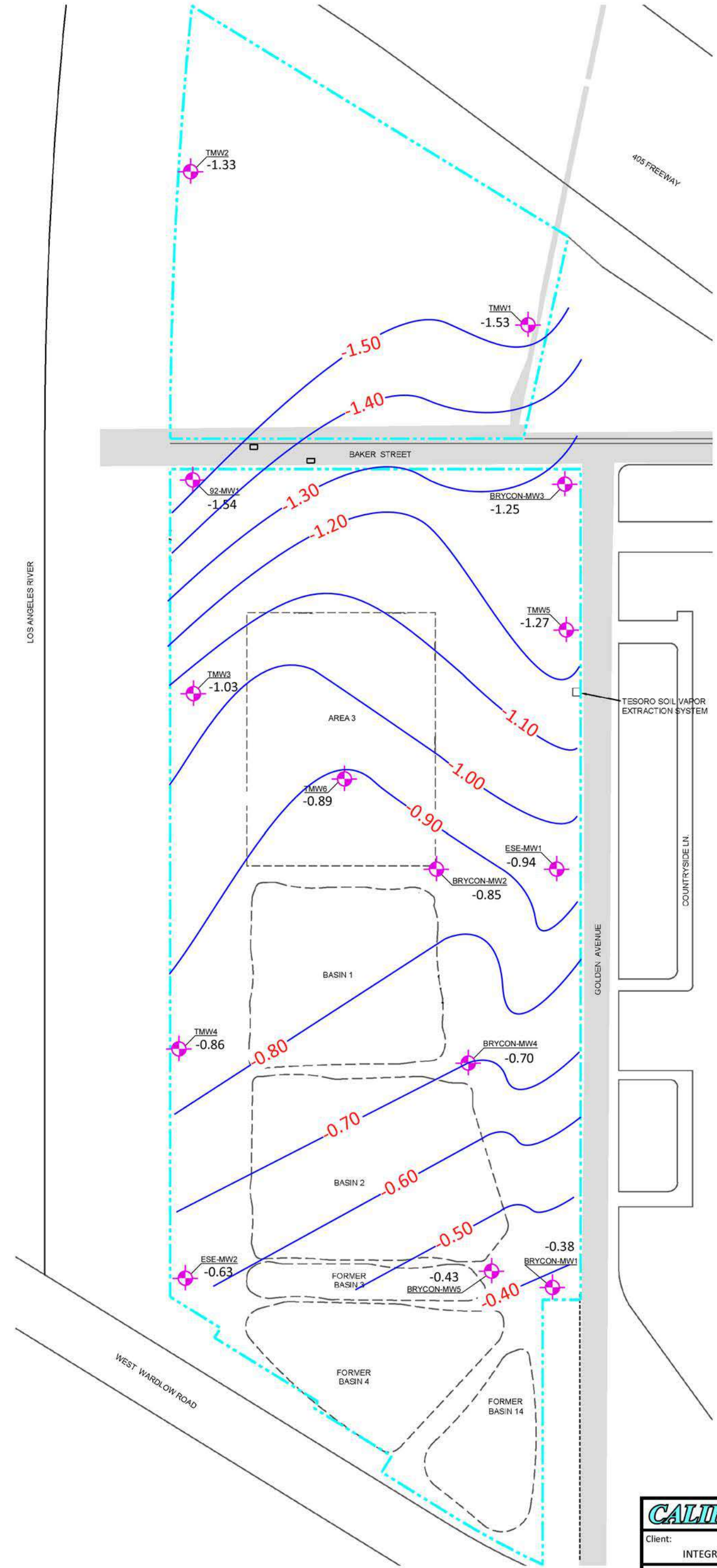


FIGURE 15 - ARSENIC IN GROUNDWATER

CALIFORNIA ENVIRONMENTAL				
Client:	INTEGRAL PARTNERS		Job #:	EP610-3029
Location:	712 W. BAKER ST., LONG BEACH, CA		By:	GHB
Date:	August 2019		Checked By:	CIB

References: Bedrock Engineering, 1Q2019 GWMR, April 2019



- EXPLANATION**
- SITE BOUNDARY
 - MONITOR WELL SHOWING GROUNDWATER ELEVATION (FEET AMSL) (FEB. 2019).
 - ELEVATION CONTOUR (FEET AMSL).

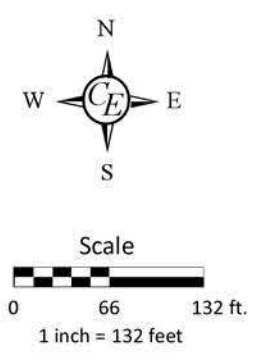
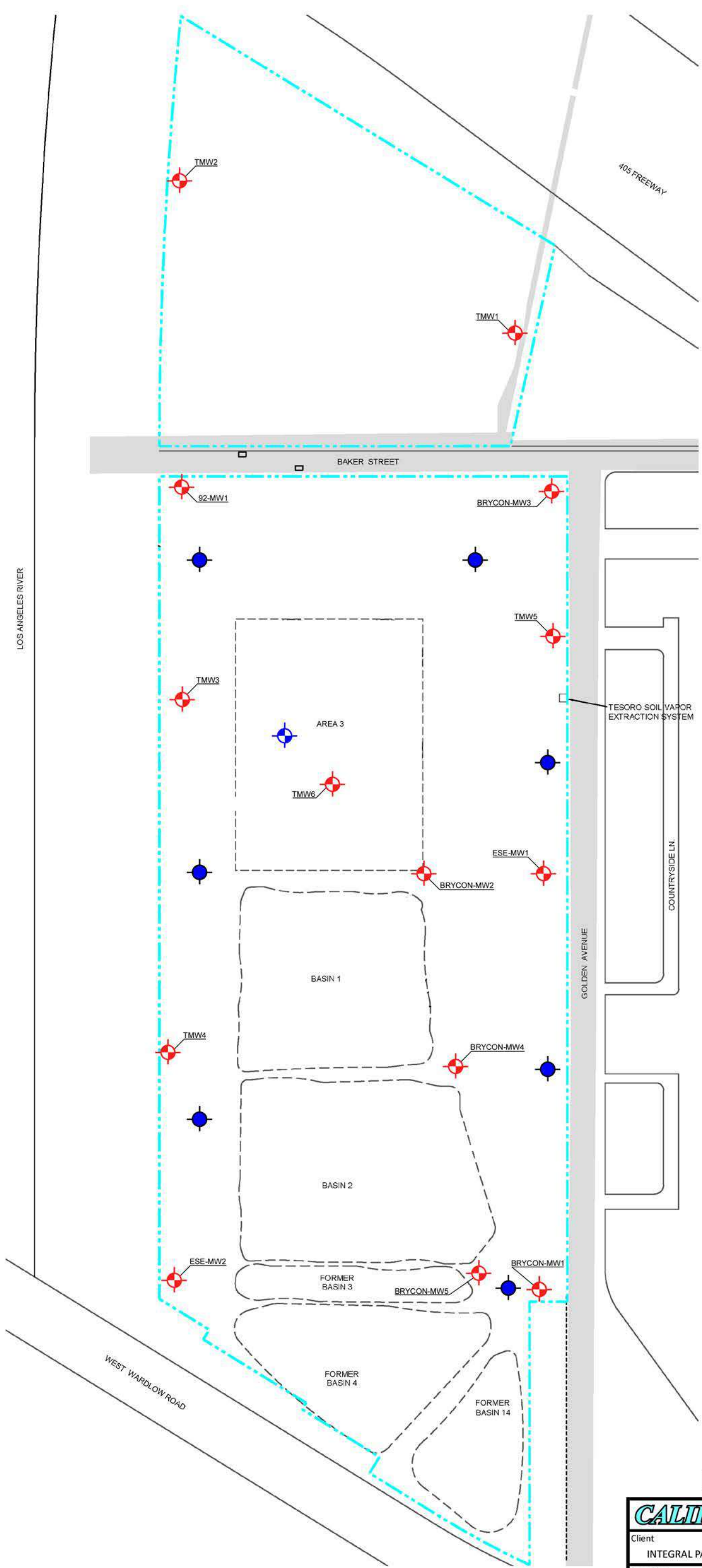






FIGURE 16 - GROUNDWATER CONTOUR MAP

CALIFORNIA ENVIRONMENTAL				
Client:	INTEGRAL PARTNERS		Job #:	EP610-3029
Location:	712 W. BAKER ST., LONG BEACH, CA		By:	GHB
Date:	August 2019		Checked By:	CIB

References: Bedrock Engineering, 1Q2019 GWMR, April 2019



- EXPLANATION**
-  SITE BOUNDARY
 -  PROPOSED GROUNDWATER MONITORING WELL NETWORK IN FUTURE STREET AREAS
 -  PROPOSED GROUNDWATER MONITORING WELL FOR ABANDONMENT
 -  PROPOSED DEEP GROUNDWATER SAMPLING LOCATION

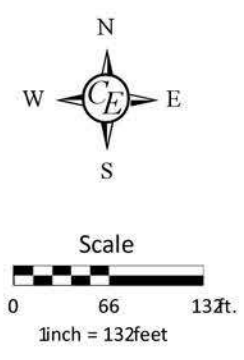



FIGURE 17 - PROPOSED MONITORING WELL NETWORK

CALIFORNIA ENVIRONMENTAL				
Client	INTEGRAL PARTNERS		Job #	EP610-3029
Location	712 W. BAKER ST., LONG BEACH, CA		By	GHB
Date:	August 2019		Checked By	CIB

References: Bedrock Engineering, 1Q2019 GWMR, April 2019

APPENDIX I

Tables of Soil Gas Data

Tetra Tech SSI: Summary of Analytical Results: Soil Gas Samples (TPH)

Sample ID	Date	Depth (ft.)	C5-C8 (aliphatic)	C9+ (aliphatic)	C5-C8 (aromatic)	C9+ (aromatic)	TPHg Total at 5 ft. bgs	TPHg Total at 15 ft. bgs
SG1-5	May-15	5	4.59	7.71	0.324	0.219	12.843	--
SG1-15	May-15	15	2,360	613	ND (<0.008)	ND (<0.008)	--	2,970
SG2-5	May-15	5	124	61.7	3.16	1.5	190.36	--
SG2-15 (10P)	May-15	15	5,190	1,140	66.1	ND (<0.008)	--	6,470
SG2-15 (1P)	May-15	15	4,770	994	43.1	ND (<0.008)	--	5,800
SG2-15 (3P)	May-15	15	5,560	1,330	71.2	ND (<0.008)	--	6,960
SG3-5	May-15	5	1,750	385	14.5	0.41	2,150	--
SG4-5	May-15	5	1,100	541	ND (<0.008)	ND (<0.008)	1,640	--
SG4-15	May-15	15	117	61.4	1.41	1.11	--	181
SG5-5	May-15	5	1,270	372	7.79	8.96	1,660	--
SG5-5 dup.	May-15	5	1,420	400	8.44	9.77	1,840	--
SG5-15	May-15	15	559	124	ND (<0.008)	ND (<0.008)	--	683
SG6-5	May-15	5	653	24.4	3.38	1.33	688	--
SG6-15	May-15	15	1,330	478	267	ND (<0.008)	--	2,080
SG7-5	May-15	5	1.96	5.74	ND (<0.008)	ND (<0.008)	7.7	--
SG7-15	May-15	15	5.56	4.99	0.37	0.15	--	11.2
SG8-5	May-15	5	662	131	1.86	0.684	795.544	--
SG8-15	May-15	15	708	101	ND (<0.008)	ND (<0.008)	--	809
SG9-5	May-15	5	414	260	0.65	ND (<0.008)	674.65	--
SG9-15	May-15	15	43,600	1,130	13	5.21	--	44,700
SG10-5	May-15	5	281	34.5	2.32	1.68	319.5	--
SG10-15	May-15	15	870	195	2.48	ND (<0.008)	--	1,070
SG11-5	May-15	5	6.09	3.25	ND (<0.008)	ND (<0.008)	9.34	--
SG11-15	May-15	15	9.81	3.51	ND (<0.008)	ND (<0.008)	--	13.32
SG12-5	May-15	5	7.38	3.63	0.234	0.128	11.372	--
SG12-15	May-15	15	5.45	0.844	ND (<0.008)	ND (<0.008)	--	6.294
SG13-5	May-15	5	84.7	65.2	ND (<0.008)	ND (<0.008)	149.9	--
SG13-5 dup.	May-15	5	83.6	71.5	ND (<0.008)	ND (<0.008)	155.1	--
SG13-15	May-15	15	373	226	7.99	5.61	--	612.6
SSL ¹			--	--	--	--	594	--

Tetra Tech SSI: Summary of Analytical Results: Soil Gas Samples (TPH)

Definitions:

ft. = feet below ground surface.

µg/L = micrograms per liter.

PQL = practical quantification limits.

ND = Not detected (below PQL shown in parentheses).

TPH = total petroleum hydrocarbons.

USEPA = United States Environmental Protection Agency.

HHRA - Human Health Risk Assessment.

DTSC = California Department of Toxic Substances Control.

PEA = Preliminary Environmental Assessment.

HERO = Office of Human and Environmental Risk.

RSL = Regional Screening Level.

SSL = Site Screening Level for soil gas for residential land use based on USEPA RSLs and DTSC

Vapor Intrusion guidance, HHRA PEA guidance, and HERO Note Number 3 (USEPA, 2015;

DTSC, 2011; 2013; 2015). SSLs are only shown for analytes that were detected.

Notes:

TPH analyzed in general accordance with USEPA Method No. 8015B. Results are in µg/L.

< = analyte not detected at or above the laboratory's PQL.

-- = Not analyzed or no SSL has been developed.

Bold = analyte detected at concentration above the laboratory's PQL.

Green color indicates the analyte was detected at a concentration above its SSL.

1. SSL in µg/L.

Tetra Tech SSI: Summary of Analytical Results: Soil Gas Samples (VOCs)

Sample ID	Date	Depth (ft.)	Methylene chloride	MTBE	Naphthalene	n-Butylbenzene	n-Propylbenzene	sec-Butylbenzene	Styrene	tert-amylmethylether	tert-Butyl alcohol (TBA)	tert-Butylbenzene	Tetrachloroethylene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene
SG1-5	May-15	5	ND (<0.008)	ND (<0.04)	0.024	ND (<0.008)	0.083	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG1-15	May-15	15	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG2-5	May-15	5	ND (<0.008)	ND (<0.04)	0.097	ND (<0.008)	0.394	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	0.063	ND (<0.008)	ND (<0.008)
SG2-15 (10P)	May-15	15	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	9.55	ND (<0.008)	ND (<0.008)
SG2-15 (1P)	May-15	15	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	16.7	ND (<0.008)	ND (<0.008)
SG2-15 (3P)	May-15	15	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	10.4	ND (<0.008)	ND (<0.008)
SG3-5	May-15	5	ND (<0.008)	ND (<0.04)	0.41	ND (<0.008)	4.2	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG4-5	May-15	5	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG4-15	May-15	15	ND (<0.008)	ND (<0.04)	0.042	ND (<0.008)	0.362	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG5-5	May-15	5	ND (<0.008)	ND (<0.04)	0.22	ND (<0.008)	2.92	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG5-5 dup.	May-15	5	ND (<0.008)	ND (<0.04)	0.304	ND (<0.008)	3.34	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG5-15	May-15	15	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG6-5	May-15	5	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	0.678	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG6-15	May-15	15	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	8.47	ND (<0.008)	ND (<0.008)
SG7-5	May-15	5	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG7-15	May-15	15	ND (<0.008)	ND (<0.04)	0.01	0.042	0.07	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG8-5	May-15	5	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG8-15	May-15	15	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG9-5	May-15	5	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG9-15	May-15	15	ND (<0.008)	ND (<0.04)	0.162	0.638	2.43	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	1.09	ND (<0.008)	ND (<0.008)
SG10-5	May-15	5	ND (<0.008)	ND (<0.04)	ND (<0.008)	0.388	0.742	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG10-15	May-15	15	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG11-5	May-15	5	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG11-15	May-15	15	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG12-5	May-15	5	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	0.068	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG12-15	May-15	15	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG13-5	May-15	5	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG13-5 dup.	May-15	5	ND (<0.008)	ND (<0.04)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG13-15	May-15	15	ND (<0.008)	ND (<0.04)	0.104	0.724	2.18	ND (<0.008)	ND (<0.008)	ND (<0.04)	ND (<0.4)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SSL ¹			--	--	0.0826	209	1,040	--	--	--	--	--	0.47	313	--	--

Tetra Tech SSI: Summary of Analytical Results: Soil Gas Samples (VOCs)

Sample ID	Date	Depth (ft.)	Trichloroethylene	Trichlorofluoromethane	Vinyl chloride	Xylenes
SG1-5	May-15	5	ND (<0.008)	ND (<0.008)	ND (<0.008)	0.207
SG1-15	May-15	15	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG2-5	May-15	5	ND (<0.008)	ND (<0.008)	ND (<0.008)	1.08
SG2-15 (10P)	May-15	15	ND (<0.008)	ND (<0.008)	ND (<0.008)	38.4
SG2-15 (1P)	May-15	15	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG2-15 (3P)	May-15	15	ND (<0.008)	ND (<0.008)	ND (<0.008)	18.4
SG3-5	May-15	5	ND (<0.008)	ND (<0.008)	ND (<0.008)	7.71
SG4-5	May-15	5	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG4-15	May-15	15	ND (<0.008)	ND (<0.008)	ND (<0.008)	0.739
SG5-5	May-15	5	ND (<0.008)	ND (<0.008)	ND (<0.008)	2.75
SG5-5 dup.	May-15	5	ND (<0.008)	ND (<0.008)	ND (<0.008)	3.04
SG5-15	May-15	15	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG6-5	May-15	5	ND (<0.008)	ND (<0.008)	ND (<0.008)	1.97
SG6-15	May-15	15	ND (<0.008)	ND (<0.008)	ND (<0.008)	51.1
SG7-5	May-15	5	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG7-15	May-15	15	ND (<0.008)	ND (<0.008)	ND (<0.008)	0.256
SG8-5	May-15	5	ND (<0.008)	ND (<0.008)	ND (<0.008)	0.564
SG8-15	May-15	15	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG9-5	May-15	5	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG9-15	May-15	15	ND (<0.008)	ND (<0.008)	ND (<0.008)	6.08
SG10-5	May-15	5	ND (<0.008)	ND (<0.008)	ND (<0.008)	1.14
SG10-15	May-15	15	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG11-5	May-15	5	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG11-15	May-15	15	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG12-5	May-15	5	ND (<0.008)	ND (<0.008)	ND (<0.008)	0.139
SG12-15	May-15	15	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG13-5	May-15	5	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG13-5 dup.	May-15	5	ND (<0.008)	ND (<0.008)	ND (<0.008)	ND (<0.008)
SG13-15	May-15	15	ND (<0.008)	ND (<0.008)	ND (<0.008)	4.15
SSL ¹			--	--	--	104

Definitions:

ft. = feet below ground surface.

µg/L = micrograms per liter.

PQL = practical quantification limits.

ND = Not detected (below PQL shown in parentheses).

VOCs = volatile organic compounds.

USEPA = United States Environmental Protection Agency.

HHRA - Human Health Risk Assessment.

DTSC = California Department of Toxic Substances Control.

PEA = Preliminary Environmental Assessment.

HERO = Office of Human and Environmental Risk.

RSL = Regional Screening Level.

SSL = Site Screening Level for soil gas for residential land use based on USEPA RSLs and DTSC Vapor Intrusion guidance, HHRA PEA guidance, and HERO Note Number 3 (USEPA, 2015; DTSC, 2011; 2013; 2015). SSLs are only shown for analytes that were detected.

Notes:

VOCs analyzed in general accordance with USEPA Method No. 8260B. Results are in µg/L.

< = analyte not detected at or above the laboratory's PQL.

-- = No SSL has been developed.

Bold = analyte detected at concentration above the laboratory's PQL.

Green color indicates the analyte was detected at a concentration above its SSL.

1. SSL in µg/L.

Tetra Tech SSI: Summary of Analytical Results: Soil Gas Samples (Methane)

Sample ID	Date	Depth (ft.)	Methane
SG1-5	May-15	5	18
SG1-15	May-15	15	34,500
SG2-5	May-15	5	61
SG2-15 (10P)	May-15	15	3,230
SG2-15 (1P)	May-15	15	201,000
SG2-15 (3P)	May-15	15	151,000
SG3-5	May-15	5	5,730
SG4-5	May-15	5	55,900
SG4-15	May-15	15	6,550
SG5-5	May-15	5	47
SG5-15	May-15	15	5,200
SG6-5	May-15	5	1,030
SG6-15	May-15	15	8,820
SG7-5	May-15	5	18
SG7-15	May-15	15	ND (<10)
SG8-5	May-15	5	4,320
SG8-5 REP.	May-15	5	3,780
SG8-15	May-15	15	4,492
SG9-5	May-15	5	47,400
SG9-15	May-15	15	68,800
SG10-5	May-15	5	374,000
SG10-15	May-15	15	56,300
SG11-5	May-15	5	104
SG11-15	May-15	15	306
SG12-5	May-15	5	498
SG12-15	May-15	15	4,090
SG13-5	May-15	5	264,000
SG13-15	May-15	15	44,400
Methane screening level. ¹			12,500

Definitions:

ft. = feet below ground surface.
 ppmv = parts per million by volume.
 PQL = practical quantification limits.
 ND = Not detected (below PQL shown in parentheses).
 USEPA = United States Environmental Protection Agency.

Notes:

Methane analyzed in general accordance with USEPA Method No. 8015M. Results are in ppmv.
 < = analyte not detected at or above the laboratory's PQL.
Bold = analyte detected at concentration above the laboratory's PQL.
 level.
 Green color indicates the analyte was detected at a concentration above its methane screening limits.
 1. The methane screening level is approximately 25% of the lower explosive limit (LEL) of methane gas.

APPENDIX II

Tables of Soil Data

TABLE IA
Laboratory Analysis of Soil - TPH, PB & As (March 2018)
712 Baker Street
Long Beach, California

Sample ID	Date	EPA Method 8015M (mg/kg) Total TPH (C6- C44)	C4-C12	C13-C22	C23-C32	C32-C40	Arsenic	Lead	Soil type
			< 370	< 5500	< 5000	< 6500	≤ 10	≤ 80	
B20@5 ft	3/1/2018	2400	11.7	788	1000	640	36	86	Fill
B20@15 ft	3/1/2018	10000	196	4010	3930	2230	170	260	Fill
B20@20 ft	3/1/2018	1900	15.6	630	780	464	44	68	Fill
B20@25 ft	3/1/2018	<10	<1.0	<1.0	<1.0	<1.0	10	6.3	Alluvium
B21@5 ft	3/1/2018	200	<1.0	7	71.5	123	38	32	Fill
B21@10 ft	3/1/2018	1100	5.9	244	442	361	50	67	Fill
B21@15 ft	3/1/2018	5500	69	2040	2130	1220	80	230	Fill
B21@20 ft	3/1/2018	<10	<1.0	<1.0	<1.0	<1.0	8.1	6.1	Alluvium
B21@25 ft	3/1/2018	<10	<1.0	<1.0	<1.0	<1.0	2.4	4.0	Alluvium
B22@5 ft	3/1/2018	41	<1.0	<1.0	15.1	25.8	5.4	6.8	Fill
B22@10 ft	3/1/2018	4000	12	1194	1990	780	50	120	Fill
B22@15 ft	3/1/2018	4000	54	1630	1710	650	49	130	Fill
B22@20 ft	3/1/2018	<10	1.1	4.4	<1.0	<1.0	3.5	<3.0	Alluvium
B22@25 ft	3/1/2018	<10	<1.0	<1.0	<1.0	<1.0	28	5.6	Alluvium
B23@5 ft	3/1/2018	4300	<10	1188	2120	1030	19	68	Fill
B23@8 ft	3/1/2018	<10	<1.0	<1.0	<1.0	<1.0	6.8	6.9	Fill
B23@11 ft	3/1/2018	<10	1	<1.0	1.4	<1.0	22	20	Fill
B23@14 ft	3/1/2018	220	1.1	12	108.4	98	15	19	Fill
B23@17 ft	3/1/2018	8600	158	3450	3200	5100	48	170	Fill
B23@20 ft	3/1/2018	1400	26.6	542	601	228	9.9	10	Fill
B23@23 ft	3/1/2018	2900	44	1050	1640	176	26	77	Fill
B23@26 ft	3/1/2018	5000	42	1800	2870	244	50	130	Fill
B23@29 ft	3/1/2018	<10	<1.0	<1.0	<1.0	<1.0	5.1	4.6	Alluvium
B23@32 ft	3/1/2018	<10	<1.0	<1.0	<1.0	<1.0	3.5	3.8	Alluvium
B24@5ft	3/1/2018	<10	<1.0	<1.0	1.1	<1.0	4.4	46	Fill
B24@10ft	3/1/2018	490	1.3	102.4	306	75	14	77	Fill
B24@15ft	3/1/2018	4900	66	1720	2480	386	58	120	Fill
B24@20ft	3/1/2018	<10	<1.0	<1.0	<1.0	<1.0	4	4.7	Alluvium
B26@5ft	3/1/2018	300	<1.0	33.6	193	70	30	36	Fill
B26@10ft	3/1/2018	920	13.6	305	526	82	24	70	Fill
B26@15ft	3/1/2018	460	2.1	124.2	285	50	12	13	Fill
B26@20ft	3/1/2018	<10	<1.0	<1.0	<1.0	<1.0	5.9	4.7	Alluvium
B27@5ft	3/1/2018	11	<1.0	<1.0	7.7	3	3.3	47	Fill
B27@10ft	3/1/2018	4200	66	1490	2350	326	61	160	Fill
B27@15ft	3/1/2018	640	7.2	248	335	44	18	26	Fill
B27@20ft	3/1/2018	1200	18.9	433	615	94	35	38	Fill
B27@25ft	3/1/2018	<10	<1.0	<1.0	<1.0	<1.0	2.7	<3.0	Alluvium

TABLE IIC
Laboratory Analysis of Soil - Metals (June 2019)
712 West Baker Street,
Long Beach, California

Sample I.D.	Date	CAM Metals - EPA 6010B/7000 (mg/kg)	
		Arsenic	Lead
CESB9-5.5'	6/25/19	5.57	1.97
CESB9-10.5'	6/25/19	8.47	3.91
CESB9-15.5'	6/25/19	1.78	2.16
CESB9-20.5'	6/25/19	2.04	3.79
CESB9-25.5'	6/25/19	3.00	1.14
CESB9-32'	6/25/19	5.32	2.54
CESB9-37'	6/25/19	11.5	3.57
CESB10-3'	6/25/19	<0.743	3.02
CESB10-10.5'	6/25/19	<0.739	2.11
CESB10-15.5'	6/25/19	2.71	1.82
CESB10-20.5'	6/25/19	3.33	1.20
CESB10-25.5'	6/25/19	0.948	0.827
CESB11-6.5'	6/26/19	9.37	1.72
CESB11-11.5'	6/26/19	14.1	2.06
CESB11-15.5'	6/26/19	17.8	1.76
CESB11-20.5'	6/26/19	3.98	<0.498
CESB11-25.5'	6/26/19	1.37	0.795
CESB11-30'	6/26/19	5.18	1.25
CESB11-35.5'	6/26/19	14.7	0.956
CESB12-6'	6/26/19	28.1	1.26
CESB12-10'	6/26/19	<0.728	<0.485
CESB12-15'	6/26/19	2.17	1.08
CESB12-20'	6/26/19	2.88	0.842
CESB12-25'	6/26/19	2.63	<0.485
CESB13-7'	6/27/19	<0.735	1.96
CESB13-11'	6/27/19	<0.718	1.01
CESB13-15'	6/27/19	<0.735	1.50
CESB13-20'	6/27/19	<0.750	1.08
CESB13-25'	6/27/19	12.7	<0.498
CESB13-30'	6/27/19	1.48	<0.498
CESB13-32'	6/27/19	<0.750	0.525
CESB13-36'	6/27/19	<0.746	0.853
CESB13-40'	6/27/19	<0.743	0.516
CESB14-11'	6/27/19	<0.743	1.03
CESB14-16'	6/27/19	2.99	3.29
CESB14-20'	6/27/19	<0.743	1.43
CESB14-26'	6/27/19	6.21	1.31
CESB14-31'	6/27/19	5.45	0.694
CESB14-36'	6/27/19	0.835	0.818
CESB15-5'	6/28/19	2.12	1.68
CESB15-10'	6/28/19	2.29	1.94
CESB15-15'	6/28/19	4.40	1.70
CESB15-20'	6/28/19	<0.765	4.23
CESB15-25'	6/28/19	3.15	0.998
CESB15-30'	6/28/19	1.32	4.61
CESB15-31.8'	6/28/19	13.3	7.11
CESB15-37'	6/28/19	4.47	1.74
CESB15-40'	6/28/19	24.2	3.8
CESB15-44'	6/28/19	3.45	2.13
CE DUP 2	6/27/19	<0.773	<0.515

* - Arsenic concentration compared to background levels - in SoCal 3-15 mg/kg

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (TPH)

Sample ID	Date	Depth (ft.)	TPH Gasoline (C4-C12)	TPH Diesel (C13-C22)	TPH Oil ²	
					TPH (C23-C32)	TPH (C33-C40)
B1@5	May-15	5	ND (<1)	84	460	670
B1@10	May-15	10	33	2,300	2,200	1,600
B1@15	May-15	15	ND (<1)	5.4	2.9	1.6
B1@20	May-15	20	ND (<1)	2	1.9	1
B1@30	May-15	30	ND (<1)	2.3	ND (<1)	ND (<1)
B2@5	May-15	5	ND (<1)	12	19	13
B2@10	May-15	10	6.1	3,200	3,100	2,500
B2@15	May-15	15	34	870	780	480
B2@20	May-15	20	160	11,000	8,200	5,200
B2@35	May-15	35	150	5,400	4,000	2,800
B3@5	May-15	5	ND (<1)	2,800	3,200	2,500
B3@10	May-15	10	ND (<1)	8.4	9.7	4.9
B3@15	May-15	15	ND (<1)	5.4	10	8.1
B3@20	May-15	20	ND (<1)	17	17	10
B3@35	May-15	35	110	3,100	2,200	1,200
B4@5	May-15	5	19	3,600	3,800	2,800
B4@10	May-15	10	42	1,500	1,200	800
B4@15	May-15	15	38	1,700	1,500	1,000
B4@20	May-15	20	25	1,100	920	580
B4@35	May-15	35	65	2,200	1,600	1,000
B5@5	May-15	5	37	5,700	5,200	3,700
B5@10	May-15	10	18	1,500	1,300	950
B5@15	May-15	15	ND (<1)	7.8	7.2	4.3
B5@20	May-15	20	ND (<1)	1.6	1.4	ND (<1)
B5@30	May-15	30	ND (<1)	1	ND (<1)	ND (<1)
B6@5	May-15	5	35	2,100	1,700	1,200
B6@10	May-15	10	3.4	940	5,000	6,500
B6@15	May-15	15	ND (<1)	3.1	6.6	5.8
B6@20	May-15	20	ND (<1)	5.5	5.6	3.9
B6@30	May-15	30	ND (<1)	4.5	3.8	ND (<1)
B7@5	May-15	5	2.4	1,200	1,100	790
B7@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B7@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B7@30	May-15	30	ND (<1)	3.3	2.9	1.2
B8-5	May-15	5	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B8-10	May-15	10	1,500	15,000	ND (<400)	ND (<400)
B8-15	May-15	15	87	430	ND (<50)	ND (<50)
B8-20	May-15	20	280	680	ND (<25)	ND (<25)
B8-30	May-15	30	800	2,000	ND (<50)	ND (<50)
B8-40	May-15	40	320	520	ND (<20)	ND (<20)
B8-50	May-15	50	570	150	ND (<10)	ND (<10)
B9@5	May-15	5	ND (<1)	ND (<1)	1.4	ND (<1)
RSL ¹			500	3,000	5,000	

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (TPH)

Sample ID	Date	Depth (ft.)	TPH Gasoline (C4-C12)	TPH Diesel (C13-C22)	TPH Oil ²	
					TPH (C23-C32)	TPH (C33-C40)
B9@10	May-15	10	ND (<1)	1.2	1.1	ND (<1)
B9@20	May-15	20	ND (<1)	1.4	1.2	ND (<1)
B12@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B12@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B12@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B12@35	May-15	35	4,100	55	ND (<20)	ND (<20)
B13@5	May-15	5	ND (<1)	4.4	25	34
B13@10	May-15	10	ND (<1)	180	1,200	2,300
B13@20	May-15	20	ND (<1)	190	270	200
B13@35	May-15	35	ND (<1)	1.5	ND (<1)	ND (<1)
B14@5	May-15	5	ND (<1)	490	1,100	850
B14@10	May-15	10	ND (<1)	60	220	210
B14@20	May-15	20	ND (<1)	170	260	230
B14@35	May-15	35	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B15@5	May-15	5	ND (<1)	ND (<1)	1.7	2.1
B15@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	1.5
B15@20	May-15	20	ND (<1)	1.6	1.4	1.7
B15@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B16@3	May-15	3	ND (<1)	ND (<10)	81	190
B16@10	May-15	10	ND (<1)	ND (<1)	1.8	1.1
B16@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B16@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B17@5	May-15	5	ND (<1)	360	940	790
B17@10	May-15	10	ND (<1)	ND (<1)	1.3	ND (<1)
B17@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B17@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B18@3	May-15	3	ND (<1)	6,400	13,000	8,900
B18@10	May-15	10	13	5,500	3,600	2,100
B18@20	May-15	20	ND (<1)	ND (<1)	1.1	ND (<1)
B18@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B19@5	May-15	5	ND (<1)	1.4	2	2.2
B19@10	May-15	10	ND (<1)	1.4	1.2	ND (<1)
B19@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B19@30	May-15	30	ND (<1)	1.6	1.1	ND (<1)
B20-5	May-15	5	20	4,900	4,000	2,400
B20-10	May-15	10	ND (<1)	1	1.2	1.1
B20-20	May-15	20	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B20-35	May-15	35	ND (<1)	2	4.8	3.7
B21@5	May-15	5	ND (<1)	1.5	13	20
B21@10	May-15	10	ND (<1)	48	66	39
B21@15	May-15	15	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B21@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	ND (<1)
RSL ¹			500	3,000	5,000	

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (TPH)

Sample ID	Date	Depth (ft.)	TPH Gasoline (C4-C12)	TPH Diesel (C13-C22)	TPH Oil ²	
					TPH (C23-C32)	TPH (C33-C40)
B21@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B22@5	May-15	5	ND (<1)	1,700	1,900	1,100
B22@10	May-15	10	ND (<1)	5.8	5.8	3.6
B22@20	May-15	20	ND (<1)	1.2	1.6	ND (<1)
B22@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B23@5	May-15	5	ND (<1)	20	27	19
B23@10	May-15	10	87	6,800	8,100	4,300
B23@20	May-15	20	ND (<1)	4	5.2	2.5
B23@30	May-15	30	ND (<1)	2.4	2.1	1.1
B24-5	May-15	5	ND (<1)	17	45	34
B24-10	May-15	10	ND (<1)	710	3,000	3,800
B24-15	May-15	15	ND (<1)	1.6	2.1	1.7
B24-20	May-15	20	ND (<1)	1.8	5.2	4.5
B24-30	May-15	30	ND (<1)	ND (<1)	ND (<1)	1.2
B24-40	May-15	40	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B25-5	May-15	5	ND (<1)	3	6.1	4.5
B25-10	May-15	10	ND (<1)	ND (<1)	1.4	1.5
B25-15	May-15	15	ND (<1)	ND (<1)	1.4	1.4
B25-20	May-15	20	ND (<1)	ND (<1)	1.3	1.1
B25-30	May-15	30	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B25-40	May-15	40	ND (<1)	1	2.3	1.9
B26-5	May-15	5	ND (<1)	190	840	920
B26-10	May-15	10	ND (<1)	2.2	3.5	2.9
B26-15	May-15	15	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B26-20	May-15	20	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B26-30	May-15	30	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B26-40	May-15	40	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B26-50	May-15	50	ND (<1)	1	ND (<1)	ND (<1)
B27-5	May-15	5	ND (<1)	3,000	4,900	3,200
B27-10	May-15	10	15	2,400	2,000	1,300
B27-15	May-15	15	ND (<1)	9.3	5.3	3.1
B27-20	May-15	20	ND (<1)	2.5	ND (<1)	ND (<1)
B27-30	May-15	30	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B27-40	May-15	40	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B28@5	May-15	5	ND (<1)	490	2,600	3,500
B28@10	May-15	10	25	51	39	25
B28@15	May-15	15	ND (<1)	1.3	ND (<1)	ND (<1)
B28@20	May-15	20	ND (<1)	1.1	ND (<1)	ND (<1)
B28@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B29@2	May-15	2	ND (<1)	110	340	370
B29@5	May-15	5	ND (<1)	ND (<1)	1.3	ND (<1)
B29@10	May-15	10	ND (<1)	1.6	1.4	1.1
RSL ¹			500	3,000	5,000	

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (TPH)

Sample ID	Date	Depth (ft.)	TPH Gasoline (C4-C12)	TPH Diesel (C13-C22)	TPH Oil ²	
					TPH (C23-C32)	TPH (C33-C40)
B29@15	May-15	15	ND (<1)	ND (<1)	1.1	ND (<1)
B29@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	ND (<1)
B30@5	May-15	5	ND (<1)	1,400	1,800	1,400
B30@10	May-15	10	1.3	3,200	4,000	2,400
B30@20	May-15	20	ND (<1)	2.3	1.8	ND (<1)
B30@30	May-15	30	ND (<1)	ND (<1)	1.3	ND (<1)
SSL ¹			500	3,000	5,000	

Definitions:

ft. = feet below ground surface.

mg/kg = milligrams per kilogram.

PQL = practical quantification limits.

ND = Not detected (below PQL shown in parentheses).

TPH = total petroleum hydrocarbons.

USEPA = United States Environmental Protection Agency.

SSL = Site Screening Level from SSI work Plan (Tetr Tech, 2015a; 2015b).

Notes:

TPH analyzed in general accordance with USEPA Method No. 8015B. Results are in mg/kg.

< = analyte not detected at or above the laboratory's PQL.

Bold = analyte detected at concentration above the laboratory's PQL.

Green color indicates the analyte was detected at a concentration above its SSL.

1. SSL in mg/kg.

2. The combination of C23-C32 and C33-C40 represents TPH oil (TPHo).

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene
B1@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B1@10	May-15	10	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)
B1@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B1@20	May-15	20	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B1@30	May-15	30	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B2@5	May-15	5	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B2@10	May-15	10	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B2@15	May-15	15	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B2@20	May-15	20	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)
B2@35	May-15	35	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B3@5	May-15	5	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B3@10	May-15	10	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B3@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B3@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B3@35	May-15	35	ND (<0.28)	ND (<0.28)	ND (<0.28)	ND (<0.28)	ND (<0.28)	ND (<0.28)	ND (<0.28)
B4@5	May-15	5	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)
B4@10	May-15	10	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B4@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B4@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B4@35	May-15	35	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B5@5	May-15	5	ND (<0.22)	ND (<0.22)	ND (<0.22)	ND (<0.22)	ND (<0.22)	ND (<0.22)	ND (<0.22)
B5@10	May-15	10	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene
B1@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0085)	ND (<0.0042)	ND (<0.0042)
B1@10	May-15	10	ND (<0.19)	ND (<0.19)	ND (<0.19)	6.3	ND (<0.39)	ND (<0.19)	ND (<0.19)
B1@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0076)	ND (<0.0038)	ND (<0.0038)
B1@20	May-15	20	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0071)	ND (<0.0036)	ND (<0.0036)
B1@30	May-15	30	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0091)	ND (<0.0046)	ND (<0.0046)
B2@5	May-15	5	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	0.0089	ND (<0.0082)	ND (<0.0041)	ND (<0.0041)
B2@10	May-15	10	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	0.28	ND (<0.0093)	ND (<0.0047)	ND (<0.0047)
B2@15	May-15	15	ND (<0.004)	ND (<0.004)	ND (<0.004)	0.025	ND (<0.008)	ND (<0.004)	ND (<0.004)
B2@20	May-15	20	ND (<0.21)	ND (<0.21)	ND (<0.21)	5.4	ND (<0.42)	ND (<0.21)	0.35
B2@35	May-15	35	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	6.6	ND (<0.0095)	ND (<0.0048)	ND (<0.0048)
B3@5	May-15	5	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0087)	ND (<0.0043)	ND (<0.0043)
B3@10	May-15	10	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.007)	ND (<0.0035)	ND (<0.0035)
B3@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0076)	ND (<0.0038)	ND (<0.0038)
B3@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0079)	ND (<0.0039)	ND (<0.0039)
B3@35	May-15	35	ND (<0.28)	ND (<0.28)	ND (<0.28)	15	ND (<0.55)	ND (<0.28)	ND (<0.28)
B4@5	May-15	5	ND (<0.19)	ND (<0.19)	ND (<0.19)	3.5	ND (<0.37)	ND (<0.19)	ND (<0.19)
B4@10	May-15	10	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	0.22	ND (<0.0076)	ND (<0.0038)	0.0064
B4@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	5.1	ND (<0.0077)	ND (<0.0038)	0.029
B4@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	0.09	ND (<0.0076)	ND (<0.0038)	0.0084
B4@35	May-15	35	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	8.2	ND (<0.01)	ND (<0.0051)	0.038
B5@5	May-15	5	ND (<0.22)	ND (<0.22)	ND (<0.22)	4.1	ND (<0.43)	ND (<0.22)	ND (<0.22)
B5@10	May-15	10	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	0.2	ND (<0.0083)	ND (<0.0042)	ND (<0.0042)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane
B1@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B1@10	May-15	10	ND (<0.19)	ND (<0.19)	0.34	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)
B1@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B1@20	May-15	20	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B1@30	May-15	30	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B2@5	May-15	5	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B2@10	May-15	10	ND (<0.0047)	ND (<0.0047)	0.033	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B2@15	May-15	15	ND (<0.004)	ND (<0.004)	0.011	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B2@20	May-15	20	ND (<0.21)	ND (<0.21)	1.6	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)
B2@35	May-15	35	ND (<0.0048)	ND (<0.0048)	0.098	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B3@5	May-15	5	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B3@10	May-15	10	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B3@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B3@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B3@35	May-15	35	ND (<0.28)	ND (<0.28)	4.5	ND (<0.28)	ND (<0.28)	ND (<0.28)	ND (<0.28)
B4@5	May-15	5	ND (<0.19)	ND (<0.19)	0.4	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)
B4@10	May-15	10	ND (<0.0038)	ND (<0.0038)	0.091	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B4@15	May-15	15	ND (<0.0038)	ND (<0.0038)	0.13	ND (<0.0038)	ND (<0.0038)	0.011	ND (<0.0038)
B4@20	May-15	20	ND (<0.0038)	ND (<0.0038)	0.027	ND (<0.0038)	ND (<0.0038)	0.0044	ND (<0.0038)
B4@35	May-15	35	ND (<0.0051)	ND (<0.0051)	0.1	ND (<0.0051)	ND (<0.0051)	0.01	ND (<0.0051)
B5@5	May-15	5	ND (<0.22)	ND (<0.22)	0.58	ND (<0.22)	ND (<0.22)	ND (<0.22)	ND (<0.22)
B5@10	May-15	10	ND (<0.0042)	ND (<0.0042)	0.057	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	2-Chlorotoluene	4-Chlorotoluene	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform
B1@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B1@10	May-15	10	ND (<0.19)	ND (<0.19)	0.45	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)
B1@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B1@20	May-15	20	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B1@30	May-15	30	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B2@5	May-15	5	ND (<0.0041)	ND (<0.0041)	0.005	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B2@10	May-15	10	ND (<0.0047)	ND (<0.0047)	0.04	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B2@15	May-15	15	ND (<0.004)	ND (<0.004)	0.17	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B2@20	May-15	20	ND (<0.21)	ND (<0.21)	2.1	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)
B2@35	May-15	35	ND (<0.0048)	ND (<0.0048)	0.089	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B3@5	May-15	5	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B3@10	May-15	10	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B3@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B3@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B3@35	May-15	35	ND (<0.28)	ND (<0.28)	1.2	ND (<0.28)	ND (<0.28)	ND (<0.28)	ND (<0.28)
B4@5	May-15	5	ND (<0.19)	ND (<0.19)	0.25	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)
B4@10	May-15	10	ND (<0.0038)	ND (<0.0038)	0.047	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B4@15	May-15	15	ND (<0.0038)	ND (<0.0038)	0.15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B4@20	May-15	20	ND (<0.0038)	ND (<0.0038)	0.22	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B4@35	May-15	35	ND (<0.0051)	ND (<0.0051)	0.11	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B5@5	May-15	5	ND (<0.22)	ND (<0.22)	0.24	ND (<0.22)	ND (<0.22)	ND (<0.22)	ND (<0.22)
B5@10	May-15	10	ND (<0.0042)	ND (<0.0042)	0.027	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
B1@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B1@10	May-15	10	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)
B1@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B1@20	May-15	20	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B1@30	May-15	30	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B2@5	May-15	5	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B2@10	May-15	10	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B2@15	May-15	15	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B2@20	May-15	20	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)
B2@35	May-15	35	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B3@5	May-15	5	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B3@10	May-15	10	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B3@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B3@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B3@35	May-15	35	ND (<0.28)	ND (<0.28)	ND (<0.28)	ND (<0.28)	ND (<0.28)	ND (<0.28)	ND (<0.28)
B4@5	May-15	5	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)
B4@10	May-15	10	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B4@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B4@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B4@35	May-15	35	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B5@5	May-15	5	ND (<0.22)	ND (<0.22)	ND (<0.22)	ND (<0.22)	ND (<0.22)	ND (<0.22)	ND (<0.22)
B5@10	May-15	10	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Diisopropyl ether (DIPE)	Ethyl Acetate
B1@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.042)
B1@10	May-15	10	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<1.9)
B1@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)
B1@20	May-15	20	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.036)
B1@30	May-15	30	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.046)
B2@5	May-15	5	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.041)
B2@10	May-15	10	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.047)
B2@15	May-15	15	0.011	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)
B2@20	May-15	20	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<2.1)
B2@35	May-15	35	0.0063	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.048)
B3@5	May-15	5	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.043)
B3@10	May-15	10	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.035)
B3@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)
B3@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.039)
B3@35	May-15	35	ND (<0.28)	ND (<0.28)	ND (<0.28)	ND (<0.28)	ND (<0.28)	ND (<0.28)	ND (<2.8)
B4@5	May-15	5	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<1.9)
B4@10	May-15	10	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)
B4@15	May-15	15	0.0079	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)
B4@20	May-15	20	0.016	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)
B4@35	May-15	35	0.0055	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.051)
B5@5	May-15	5	ND (<0.22)	ND (<0.22)	ND (<0.22)	ND (<0.22)	ND (<0.22)	ND (<0.22)	ND (<2.2)
B5@10	May-15	10	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.042)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Ethyl Ether	Ethyl tert-butyl ether (ETBE)	Ethylbenzene	Freon-113	Hexachlorobutadiene	Isopropylbenzene	m,p-Xylenes
B1@5	May-15	5	ND (<0.042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0085)
B1@10	May-15	10	ND (<1.9)	ND (<0.19)	1.7	ND (<0.19)	ND (<0.19)	1	1.3
B1@15	May-15	15	ND (<0.038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0076)
B1@20	May-15	20	ND (<0.036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0071)
B1@30	May-15	30	ND (<0.046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0091)
B2@5	May-15	5	ND (<0.041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0082)
B2@10	May-15	10	ND (<0.047)	ND (<0.0047)	0.066	ND (<0.0047)	ND (<0.0047)	0.035	0.055
B2@15	May-15	15	ND (<0.04)	ND (<0.004)	0.068	ND (<0.004)	ND (<0.004)	0.028	0.033
B2@20	May-15	20	ND (<2.1)	ND (<0.21)	1.8	ND (<0.21)	ND (<0.21)	0.71	6.5
B2@35	May-15	35	ND (<0.048)	ND (<0.0048)	0.14	ND (<0.0048)	ND (<0.0048)	0.062	0.29
B3@5	May-15	5	ND (<0.043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0087)
B3@10	May-15	10	ND (<0.035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.007)
B3@15	May-15	15	ND (<0.038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0076)
B3@20	May-15	20	ND (<0.039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0079)
B3@35	May-15	35	ND (<2.8)	ND (<0.28)	3.1	ND (<0.28)	ND (<0.28)	1.4	11
B4@5	May-15	5	ND (<1.9)	ND (<0.19)	0.76	ND (<0.19)	ND (<0.19)	0.48	0.7
B4@10	May-15	10	ND (<0.038)	ND (<0.0038)	0.06	ND (<0.0038)	ND (<0.0038)	0.031	0.043
B4@15	May-15	15	ND (<0.038)	ND (<0.0038)	0.12	ND (<0.0038)	ND (<0.0038)	0.051	0.19
B4@20	May-15	20	ND (<0.038)	ND (<0.0038)	0.061	ND (<0.0038)	ND (<0.0038)	0.015	0.12
B4@35	May-15	35	ND (<0.051)	ND (<0.0051)	0.14	ND (<0.0051)	ND (<0.0051)	0.057	0.25
B5@5	May-15	5	ND (<2.2)	ND (<0.22)	1.1	ND (<0.22)	ND (<0.22)	0.6	0.8
B5@10	May-15	10	ND (<0.042)	ND (<0.0042)	0.057	ND (<0.0042)	ND (<0.0042)	0.03	0.041

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Methylene chloride	Methyl-tert-butyl Ether (MTBE)	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene
B1@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B1@10	May-15	10	ND (<0.19)	ND (<0.19)	3.9	0.77	1.6	ND (<0.19)	1.5
B1@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B1@20	May-15	20	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B1@30	May-15	30	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B2@5	May-15	5	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B2@10	May-15	10	ND (<0.0047)	ND (<0.0047)	0.15	0.033	0.055	0.0054	0.049
B2@15	May-15	15	ND (<0.004)	ND (<0.004)	0.092	0.016	0.041	0.03	0.023
B2@20	May-15	20	ND (<0.21)	ND (<0.21)	4.3	0.83	1.2	2.8	0.85
B2@35	May-15	35	ND (<0.0048)	ND (<0.0048)	0.25	0.058	0.096	0.14	0.062
B3@5	May-15	5	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B3@10	May-15	10	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B3@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B3@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B3@35	May-15	35	ND (<0.28)	ND (<0.28)	8.8	2.7	2.6	4.9	2.2
B4@5	May-15	5	ND (<0.19)	ND (<0.19)	1.9	0.33	0.72	ND (<0.19)	0.71
B4@10	May-15	10	ND (<0.0038)	ND (<0.0038)	0.13	0.045	0.05	0.007	0.044
B4@15	May-15	15	ND (<0.0038)	ND (<0.0038)	3.3	0.064	0.083	0.13	0.061
B4@20	May-15	20	ND (<0.0038)	ND (<0.0038)	0.068	0.0048	0.02	0.056	0.0056
B4@35	May-15	35	ND (<0.0051)	ND (<0.0051)	0.26	0.06	0.088	0.089	0.053
B5@5	May-15	5	ND (<0.22)	ND (<0.22)	2.6	0.54	0.9	ND (<0.22)	0.98
B5@10	May-15	10	ND (<0.0042)	ND (<0.0042)	0.12	0.032	0.044	0.005	0.045

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	sec-Butylbenzene	Styrene	tert-Amyl methyl ether	tert-Butyl alcohol (TBA)	tert-Butylbenzene	Tetrachloroethene	Toluene
B1@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.085)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B1@10	May-15	10	0.92	ND (<0.19)	ND (<0.19)	ND (<3.9)	ND (<0.19)	ND (<0.19)	ND (<0.19)
B1@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.076)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B1@20	May-15	20	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.071)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B1@30	May-15	30	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.091)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B2@5	May-15	5	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.082)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B2@10	May-15	10	0.031	ND (<0.0047)	ND (<0.0047)	ND (<0.093)	ND (<0.0047)	ND (<0.0047)	0.0055
B2@15	May-15	15	0.019	ND (<0.004)	ND (<0.004)	ND (<0.08)	ND (<0.004)	ND (<0.004)	0.047
B2@20	May-15	20	0.57	ND (<0.21)	ND (<0.21)	ND (<4.2)	ND (<0.21)	ND (<0.21)	1.1
B2@35	May-15	35	0.044	ND (<0.0048)	ND (<0.0048)	ND (<0.095)	ND (<0.0048)	ND (<0.0048)	0.046
B3@5	May-15	5	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.087)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B3@10	May-15	10	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.07)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B3@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.076)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B3@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.079)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B3@35	May-15	35	1.5	ND (<0.28)	ND (<0.28)	ND (<5.5)	ND (<0.28)	ND (<0.28)	0.53
B4@5	May-15	5	0.47	ND (<0.19)	ND (<0.19)	ND (<3.7)	ND (<0.19)	ND (<0.19)	ND (<0.19)
B4@10	May-15	10	0.032	ND (<0.0038)	ND (<0.0038)	ND (<0.076)	ND (<0.0038)	ND (<0.0038)	0.0057
B4@15	May-15	15	0.043	ND (<0.0038)	ND (<0.0038)	ND (<0.077)	ND (<0.0038)	ND (<0.0038)	0.073
B4@20	May-15	20	0.005	ND (<0.0038)	ND (<0.0038)	ND (<0.076)	ND (<0.0038)	ND (<0.0038)	0.06
B4@35	May-15	35	0.043	ND (<0.0051)	ND (<0.0051)	ND (<0.1)	ND (<0.0051)	ND (<0.0051)	0.016
B5@5	May-15	5	0.54	ND (<0.22)	ND (<0.22)	ND (<4.3)	ND (<0.22)	ND (<0.22)	ND (<0.22)
B5@10	May-15	10	0.025	ND (<0.0042)	ND (<0.0042)	ND (<0.083)	ND (<0.0042)	ND (<0.0042)	0.0047

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
B1@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.042)	ND (<0.0042)
B1@10	May-15	10	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<1.9)	ND (<0.19)
B1@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)	ND (<0.0038)
B1@20	May-15	20	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.036)	ND (<0.0036)
B1@30	May-15	30	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.046)	ND (<0.0046)
B2@5	May-15	5	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.041)	ND (<0.0041)
B2@10	May-15	10	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.047)	ND (<0.0047)
B2@15	May-15	15	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)	ND (<0.004)
B2@20	May-15	20	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<2.1)	ND (<0.21)
B2@35	May-15	35	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.048)	ND (<0.0048)
B3@5	May-15	5	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.043)	ND (<0.0043)
B3@10	May-15	10	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.035)	ND (<0.0035)
B3@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)	ND (<0.0038)
B3@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.039)	ND (<0.0039)
B3@35	May-15	35	ND (<0.28)	ND (<0.28)	ND (<0.28)	ND (<0.28)	ND (<2.8)	ND (<0.28)
B4@5	May-15	5	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<1.9)	ND (<0.19)
B4@10	May-15	10	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)	ND (<0.0038)
B4@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)	ND (<0.0038)
B4@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)	ND (<0.0038)
B4@35	May-15	35	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.051)	ND (<0.0051)
B5@5	May-15	5	ND (<0.22)	ND (<0.22)	ND (<0.22)	ND (<0.22)	ND (<2.2)	ND (<0.22)
B5@10	May-15	10	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.042)	ND (<0.0042)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)
B1@5	May-15	5
B1@10	May-15	10
B1@15	May-15	15
B1@20	May-15	20
B1@30	May-15	30
B2@5	May-15	5
B2@10	May-15	10
B2@15	May-15	15
B2@20	May-15	20
B2@35	May-15	35
B3@5	May-15	5
B3@10	May-15	10
B3@15	May-15	15
B3@20	May-15	20
B3@35	May-15	35
B4@5	May-15	5
B4@10	May-15	10
B4@15	May-15	15
B4@20	May-15	20
B4@35	May-15	35
B5@5	May-15	5
B5@10	May-15	10

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene
B5@15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B5@20	May-15	20	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B5@30	May-15	30	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B6@5	May-15	5	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)
B6@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B6@15	May-15	15	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
B6@20	May-15	20	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)
B6@30	May-15	30	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)
B7@5	May-15	5	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B7@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B7@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
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B7@30	May-15	30	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B8-5	May-15	5	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B8-10	May-15	10	ND (<0.24)	ND (<0.24)	ND (<0.24)	ND (<0.24)	ND (<0.24)	ND (<0.24)	ND (<0.24)
B8-15	May-15	15	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B8-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B8-30	May-15	30	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B8-40	May-15	40	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B8-50	May-15	50	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B9@5	May-15	5	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B9@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene
B5@15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0088)	ND (<0.0044)	ND (<0.0044)
B5@20	May-15	20	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0095)	ND (<0.0048)	ND (<0.0048)
B5@30	May-15	30	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0078)	ND (<0.0039)	ND (<0.0039)
B6@5	May-15	5	ND (<0.26)	ND (<0.26)	ND (<0.26)	7.6	ND (<0.52)	ND (<0.26)	ND (<0.26)
B6@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0071)	ND (<0.0036)	ND (<0.0036)
B6@15	May-15	15	ND (<0.2)	ND (<0.2)	ND (<0.2)	4.8	ND (<0.4)	ND (<0.2)	ND (<0.2)
B6@20	May-15	20	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0048)	ND (<0.0024)	ND (<0.0024)
B6@30	May-15	30	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.012)	ND (<0.0059)	ND (<0.0059)
B7@5	May-15	5	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	0.012	ND (<0.0082)	ND (<0.0041)	ND (<0.0041)
B7@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.008)	ND (<0.004)	ND (<0.004)
B7@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0076)	ND (<0.0038)	ND (<0.0038)
RSL ¹			--	--	--	5.8	--	--	180
B7@30	May-15	30	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0095)	ND (<0.0047)	ND (<0.0047)
B8-5	May-15	5	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0074)	ND (<0.0037)	ND (<0.0037)
B8-10	May-15	10	ND (<0.24)	ND (<0.24)	ND (<0.24)	13	ND (<0.47)	ND (<0.24)	ND (<0.24)
B8-15	May-15	15	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	2.9	ND (<0.0096)	ND (<0.0048)	ND (<0.0048)
B8-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	4.1	ND (<0.0099)	ND (<0.005)	ND (<0.005)
B8-30	May-15	30	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	7.6	ND (<0.0083)	ND (<0.0041)	ND (<0.0041)
B8-40	May-15	40	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	8.1	ND (<0.0094)	ND (<0.0047)	ND (<0.0047)
B8-50	May-15	50	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	3.8	ND (<0.0071)	ND (<0.0036)	ND (<0.0036)
B9@5	May-15	5	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.008)	ND (<0.004)	ND (<0.004)
B9@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.0079)	ND (<0.004)	ND (<0.004)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane
B5@15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B5@20	May-15	20	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B5@30	May-15	30	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B6@5	May-15	5	ND (<0.26)	ND (<0.26)	0.29	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)
B6@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B6@15	May-15	15	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
B6@20	May-15	20	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)
B6@30	May-15	30	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)
B7@5	May-15	5	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B7@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B7@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
RSL ¹			0.46	--	78	--	--	2.6	--
B7@30	May-15	30	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B8-5	May-15	5	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B8-10	May-15	10	ND (<0.24)	ND (<0.24)	4.5	ND (<0.24)	ND (<0.24)	ND (<0.24)	ND (<0.24)
B8-15	May-15	15	ND (<0.0048)	ND (<0.0048)	0.17	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B8-20	May-15	20	ND (<0.005)	ND (<0.005)	1.5	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B8-30	May-15	30	ND (<0.0041)	ND (<0.0041)	2.8	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B8-40	May-15	40	ND (<0.0047)	ND (<0.0047)	2.6	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B8-50	May-15	50	ND (<0.0036)	ND (<0.0036)	0.18	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B9@5	May-15	5	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B9@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	2-Chlorotoluene	4-Chlorotoluene	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform
B5@15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B5@20	May-15	20	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B5@30	May-15	30	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B6@5	May-15	5	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)
B6@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B6@15	May-15	15	ND (<0.2)	ND (<0.2)	0.22	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
B6@20	May-15	20	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)
B6@30	May-15	30	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)
B7@5	May-15	5	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B7@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B7@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
RSL ¹			--	--	1.2	--	--	--	--
B7@30	May-15	30	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B8-5	May-15	5	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B8-10	May-15	10	ND (<0.24)	ND (<0.24)	3.8	ND (<0.24)	ND (<0.24)	ND (<0.24)	ND (<0.24)
B8-15	May-15	15	ND (<0.0048)	ND (<0.0048)	0.083	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B8-20	May-15	20	ND (<0.005)	ND (<0.005)	0.14	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B8-30	May-15	30	ND (<0.0041)	ND (<0.0041)	2	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B8-40	May-15	40	ND (<0.0047)	ND (<0.0047)	0.15	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B8-50	May-15	50	ND (<0.0036)	ND (<0.0036)	1.3	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B9@5	May-15	5	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B9@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
B5@15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B5@20	May-15	20	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B5@30	May-15	30	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B6@5	May-15	5	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)
B6@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B6@15	May-15	15	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)
B6@20	May-15	20	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)
B6@30	May-15	30	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)
B7@5	May-15	5	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B7@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B7@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
RSL ¹			0.68	77	--	--	--	--	--
B7@30	May-15	30	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B8-5	May-15	5	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B8-10	May-15	10	ND (<0.24)	ND (<0.24)	ND (<0.24)	ND (<0.24)	ND (<0.24)	ND (<0.24)	ND (<0.24)
B8-15	May-15	15	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B8-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B8-30	May-15	30	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B8-40	May-15	40	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B8-50	May-15	50	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B9@5	May-15	5	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B9@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Diisopropyl ether (DIPE)	Ethyl Acetate
B5@15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)
B5@20	May-15	20	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.048)
B5@30	May-15	30	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.039)
B6@5	May-15	5	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<2.6)
B6@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.036)
B6@15	May-15	15	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<2)
B6@20	May-15	20	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.024)
B6@30	May-15	30	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.059)
B7@5	May-15	5	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.041)
B7@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)
B7@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)
RSL ¹			16	--	--	--	--	--	--
B7@30	May-15	30	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.047)
B8-5	May-15	5	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.037)
B8-10	May-15	10	ND (<0.24)	ND (<0.24)	ND (<0.24)	ND (<0.24)	ND (<0.24)	ND (<0.24)	ND (<2.4)
B8-15	May-15	15	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.048)
B8-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.05)
B8-30	May-15	30	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.041)
B8-40	May-15	40	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.047)
B8-50	May-15	50	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.036)
B9@5	May-15	5	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)
B9@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Ethyl Ether	Ethyl tert-butyl ether (ETBE)	Ethylbenzene	Freon-113	Hexachlorobutadiene	Isopropylbenzene	m,p-Xylenes
B5@15	May-15	15	ND (<0.044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0088)
B5@20	May-15	20	ND (<0.048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0095)
B5@30	May-15	30	ND (<0.039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0078)
B6@5	May-15	5	ND (<2.6)	ND (<0.26)	1.5	ND (<0.26)	ND (<0.26)	1.2	0.83
B6@10	May-15	10	ND (<0.036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0071)
B6@15	May-15	15	ND (<2)	ND (<0.2)	0.82	ND (<0.2)	ND (<0.2)	0.51	0.73
B6@20	May-15	20	ND (<0.024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0048)
B6@30	May-15	30	ND (<0.059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.012)
B7@5	May-15	5	ND (<0.041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0082)
B7@10	May-15	10	ND (<0.04)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.008)
B7@20	May-15	20	ND (<0.038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0076)
RSL ¹			--	--	5.8	--	--	--	65
B7@30	May-15	30	ND (<0.047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0095)
B8-5	May-15	5	ND (<0.037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0074)
B8-10	May-15	10	ND (<2.4)	ND (<0.24)	1.5	ND (<0.24)	ND (<0.24)	0.41	2.8
B8-15	May-15	15	ND (<0.048)	ND (<0.0048)	1.7	ND (<0.0048)	ND (<0.0048)	0.046	4.2
B8-20	May-15	20	ND (<0.05)	ND (<0.005)	1.8	ND (<0.005)	ND (<0.005)	0.11	4.8
B8-30	May-15	30	ND (<0.041)	ND (<0.0041)	4.4	ND (<0.0041)	ND (<0.0041)	0.083	5.2
B8-40	May-15	40	ND (<0.047)	ND (<0.0047)	2.5	ND (<0.0047)	ND (<0.0047)	0.077	3.6
B8-50	May-15	50	ND (<0.036)	ND (<0.0036)	2.7	ND (<0.0036)	ND (<0.0036)	0.05	0.18
B9@5	May-15	5	ND (<0.04)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.008)
B9@10	May-15	10	ND (<0.04)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.0079)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Methylene chloride	Methyl-tert-butyl Ether (MTBE)	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene
B5@15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B5@20	May-15	20	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B5@30	May-15	30	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B6@5	May-15	5	ND (<0.26)	ND (<0.26)	4.7	1	1.9	ND (<0.26)	1.9
B6@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B6@15	May-15	15	ND (<0.2)	ND (<0.2)	2.5	0.43	0.76	ND (<0.2)	1.1
B6@20	May-15	20	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)
B6@30	May-15	30	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)
B7@5	May-15	5	ND (<0.0041)	ND (<0.0041)	0.037	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	0.0056
B7@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B7@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
RSL ¹			--	--	3.8	390	--	65	--
B7@30	May-15	30	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B8-5	May-15	5	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B8-10	May-15	10	ND (<0.24)	ND (<0.24)	51	3.4	0.79	0.27	2.2
B8-15	May-15	15	ND (<0.0048)	ND (<0.0048)	2.6	0.044	0.08	0.18	0.033
B8-20	May-15	20	ND (<0.005)	ND (<0.005)	2.8	0.095	0.2	0.76	0.065
B8-30	May-15	30	ND (<0.0041)	ND (<0.0041)	8.6	0.071	0.14	0.024	0.051
B8-40	May-15	40	ND (<0.0047)	ND (<0.0047)	1.4	0.13	0.17	0.18	0.072
B8-50	May-15	50	ND (<0.0036)	ND (<0.0036)	0.067	0.079	0.11	0.044	0.035
B9@5	May-15	5	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B9@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	sec-Butylbenzene	Styrene	tert-Amyl methyl ether	tert-Butyl alcohol (TBA)	tert-Butylbenzene	Tetrachloroethene	Toluene
B5@15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.088)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B5@20	May-15	20	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.095)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B5@30	May-15	30	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.078)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B6@5	May-15	5	1.2	ND (<0.26)	ND (<0.26)	ND (<5.2)	ND (<0.26)	ND (<0.26)	ND (<0.26)
B6@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.071)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B6@15	May-15	15	0.63	ND (<0.2)	ND (<0.2)	ND (<4)	ND (<0.2)	ND (<0.2)	ND (<0.2)
B6@20	May-15	20	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.048)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)
B6@30	May-15	30	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.12)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)
B7@5	May-15	5	0.0042	ND (<0.0041)	ND (<0.0041)	ND (<0.082)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B7@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.08)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B7@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.076)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
RSL ¹			780	--	--	--	--	--	490
B7@30	May-15	30	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.095)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B8-5	May-15	5	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.074)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B8-10	May-15	10	1.2	ND (<0.24)	ND (<0.24)	ND (<4.7)	ND (<0.24)	ND (<0.24)	1.6
B8-15	May-15	15	0.02	ND (<0.0048)	ND (<0.0048)	ND (<0.096)	ND (<0.0048)	ND (<0.0048)	0.062
B8-20	May-15	20	0.044	ND (<0.005)	ND (<0.005)	ND (<0.099)	ND (<0.005)	ND (<0.005)	0.061
B8-30	May-15	30	0.032	ND (<0.0041)	ND (<0.0041)	ND (<0.083)	ND (<0.0041)	ND (<0.0041)	0.16
B8-40	May-15	40	0.045	ND (<0.0047)	ND (<0.0047)	ND (<0.094)	ND (<0.0047)	ND (<0.0047)	0.18
B8-50	May-15	50	0.024	ND (<0.0036)	ND (<0.0036)	ND (<0.071)	ND (<0.0036)	ND (<0.0036)	0.067
B9@5	May-15	5	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.08)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B9@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.079)	ND (<0.004)	ND (<0.004)	ND (<0.004)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
B5@15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)	ND (<0.0044)
B5@20	May-15	20	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.048)	ND (<0.0048)
B5@30	May-15	30	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.039)	ND (<0.0039)
B6@5	May-15	5	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<0.26)	ND (<2.6)	ND (<0.26)
B6@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.036)	ND (<0.0036)
B6@15	May-15	15	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<0.2)	ND (<2)	ND (<0.2)
B6@20	May-15	20	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.0024)	ND (<0.024)	ND (<0.0024)
B6@30	May-15	30	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.0059)	ND (<0.059)	ND (<0.0059)
B7@5	May-15	5	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.041)	ND (<0.0041)
B7@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)	ND (<0.004)
B7@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)	ND (<0.0038)
RSL ¹			--	--	--	--	--	--
B7@30	May-15	30	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.047)	ND (<0.0047)
B8-5	May-15	5	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.037)	ND (<0.0037)
B8-10	May-15	10	ND (<0.24)	ND (<0.24)	ND (<0.24)	ND (<0.24)	ND (<2.4)	ND (<0.24)
B8-15	May-15	15	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.048)	ND (<0.0048)
B8-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.05)	ND (<0.005)
B8-30	May-15	30	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.041)	ND (<0.0041)
B8-40	May-15	40	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.047)	ND (<0.0047)
B8-50	May-15	50	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.036)	ND (<0.0036)
B9@5	May-15	5	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)	ND (<0.004)
B9@10	May-15	10	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)	ND (<0.004)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)
B5@15	May-15	15
B5@20	May-15	20
B5@30	May-15	30
B6@5	May-15	5
B6@10	May-15	10
B6@15	May-15	15
B6@20	May-15	20
B6@30	May-15	30
B7@5	May-15	5
B7@10	May-15	10
B7@20	May-15	20
RSL ¹		
B7@30	May-15	30
B8-5	May-15	5
B8-10	May-15	10
B8-15	May-15	15
B8-20	May-15	20
B8-30	May-15	30
B8-40	May-15	40
B8-50	May-15	50
B9@5	May-15	5
B9@10	May-15	10

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene
B9@20	May-15	20	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)
B12@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
B12@10	May-15	10	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B12@20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B12@35	May-15	35	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)
B13@5	May-15	5	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)
B13@10	May-15	10	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B13@20	May-15	20	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B13@35	May-15	35	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B14@5	May-15	5	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)
B14@10	May-15	10	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)
B14@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B14@35	May-15	35	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B15@5	May-15	5	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B15@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B15@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B15@30	May-15	30	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B16@3	May-15	3	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B16@10	May-15	10	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
B16@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B16@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B17@5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene
B9@20	May-15	20	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.011)	ND (<0.0055)	ND (<0.0055)
B12@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0089)	ND (<0.0045)	ND (<0.0045)
B12@10	May-15	10	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0093)	ND (<0.0046)	ND (<0.0046)
B12@20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0098)	ND (<0.0049)	ND (<0.0049)
B12@35	May-15	35	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<5.4)	ND (<2.7)	ND (<2.7)
B13@5	May-15	5	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.012)	ND (<0.0062)	ND (<0.0062)
B13@10	May-15	10	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0085)	ND (<0.0043)	ND (<0.0043)
B13@20	May-15	20	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0087)	ND (<0.0044)	ND (<0.0044)
B13@35	May-15	35	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0083)	ND (<0.0042)	ND (<0.0042)
B14@5	May-15	5	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.011)	ND (<0.0056)	ND (<0.0056)
B14@10	May-15	10	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0054)	ND (<0.0027)	ND (<0.0027)
B14@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0075)	ND (<0.0038)	ND (<0.0038)
B14@35	May-15	35	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0087)	ND (<0.0043)	ND (<0.0043)
B15@5	May-15	5	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0098)	ND (<0.0049)	ND (<0.0049)
B15@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0075)	ND (<0.0037)	ND (<0.0037)
B15@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0079)	ND (<0.0039)	ND (<0.0039)
B15@30	May-15	30	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0082)	ND (<0.0041)	ND (<0.0041)
B16@3	May-15	3	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0083)	ND (<0.0041)	ND (<0.0041)
B16@10	May-15	10	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.009)	ND (<0.0045)	ND (<0.0045)
B16@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.007)	ND (<0.0035)	ND (<0.0035)
B16@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.0079)	ND (<0.004)	ND (<0.004)
B17@5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0088)	ND (<0.0044)	ND (<0.0044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane
B9@20	May-15	20	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)
B12@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
B12@10	May-15	10	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B12@20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B12@35	May-15	35	ND (<2.7)	ND (<2.7)	11	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)
B13@5	May-15	5	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)
B13@10	May-15	10	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B13@20	May-15	20	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B13@35	May-15	35	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B14@5	May-15	5	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)
B14@10	May-15	10	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)
B14@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B14@35	May-15	35	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B15@5	May-15	5	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B15@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B15@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B15@30	May-15	30	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B16@3	May-15	3	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B16@10	May-15	10	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
B16@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B16@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B17@5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	2-Chlorotoluene	4-Chlorotoluene	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform
B9@20	May-15	20	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)
B12@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
B12@10	May-15	10	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B12@20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B12@35	May-15	35	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)
B13@5	May-15	5	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)
B13@10	May-15	10	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B13@20	May-15	20	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B13@35	May-15	35	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B14@5	May-15	5	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)
B14@10	May-15	10	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)
B14@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B14@35	May-15	35	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B15@5	May-15	5	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B15@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B15@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B15@30	May-15	30	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B16@3	May-15	3	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B16@10	May-15	10	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
B16@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B16@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B17@5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
B9@20	May-15	20	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)
B12@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
B12@10	May-15	10	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B12@20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B12@35	May-15	35	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)
B13@5	May-15	5	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)
B13@10	May-15	10	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B13@20	May-15	20	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B13@35	May-15	35	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B14@5	May-15	5	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)
B14@10	May-15	10	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)
B14@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B14@35	May-15	35	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B15@5	May-15	5	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B15@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B15@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B15@30	May-15	30	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B16@3	May-15	3	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B16@10	May-15	10	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
B16@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B16@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B17@5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Diisopropyl ether (DIPE)	Ethyl Acetate
B9@20	May-15	20	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.055)
B12@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.045)
B12@10	May-15	10	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.046)
B12@20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.049)
B12@35	May-15	35	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<27)
B13@5	May-15	5	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.062)
B13@10	May-15	10	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.043)
B13@20	May-15	20	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)
B13@35	May-15	35	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.042)
B14@5	May-15	5	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.056)
B14@10	May-15	10	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.027)
B14@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)
B14@35	May-15	35	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.043)
B15@5	May-15	5	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.049)
B15@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.037)
B15@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.039)
B15@30	May-15	30	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.041)
B16@3	May-15	3	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.041)
B16@10	May-15	10	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.045)
B16@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.035)
B16@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)
B17@5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Ethyl Ether	Ethyl tert-butyl ether (ETBE)	Ethylbenzene	Freon-113	Hexachlorobutadiene	Isopropylbenzene	m,p-Xylenes
B9@20	May-15	20	ND (<0.055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.011)
B12@5	May-15	5	ND (<0.045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0089)
B12@10	May-15	10	ND (<0.046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0093)
B12@20	May-15	20	ND (<0.049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0098)
B12@35	May-15	35	ND (<27)	ND (<2.7)	40	ND (<2.7)	ND (<2.7)	27	ND (<5.4)
B13@5	May-15	5	ND (<0.062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.012)
B13@10	May-15	10	ND (<0.043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0085)
B13@20	May-15	20	ND (<0.044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0087)
B13@35	May-15	35	ND (<0.042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0083)
B14@5	May-15	5	ND (<0.056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.011)
B14@10	May-15	10	ND (<0.027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0054)
B14@20	May-15	20	ND (<0.038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0075)
B14@35	May-15	35	ND (<0.043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0087)
B15@5	May-15	5	ND (<0.049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0098)
B15@10	May-15	10	ND (<0.037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0075)
B15@20	May-15	20	ND (<0.039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0079)
B15@30	May-15	30	ND (<0.041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0082)
B16@3	May-15	3	ND (<0.041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0083)
B16@10	May-15	10	ND (<0.045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.009)
B16@20	May-15	20	ND (<0.035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.007)
B16@30	May-15	30	ND (<0.04)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.0079)
B17@5	May-15	5	ND (<0.044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0088)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Methylene chloride	Methyl-tert-butyl Ether (MTBE)	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene
B9@20	May-15	20	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)
B12@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
B12@10	May-15	10	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B12@20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B12@35	May-15	35	ND (<2.7)	ND (<2.7)	54	19	42	ND (<2.7)	50
B13@5	May-15	5	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)
B13@10	May-15	10	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B13@20	May-15	20	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B13@35	May-15	35	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B14@5	May-15	5	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)
B14@10	May-15	10	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)
B14@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B14@35	May-15	35	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B15@5	May-15	5	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B15@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B15@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B15@30	May-15	30	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B16@3	May-15	3	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B16@10	May-15	10	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
B16@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B16@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B17@5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	sec-Butylbenzene	Styrene	tert-Amyl methyl ether	tert-Butyl alcohol (TBA)	tert-Butylbenzene	Tetrachloroethene	Toluene
B9@20	May-15	20	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.11)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)
B12@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.089)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
B12@10	May-15	10	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.093)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B12@20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.098)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B12@35	May-15	35	16	ND (<2.7)	ND (<2.7)	ND (<54)	ND (<2.7)	ND (<2.7)	ND (<2.7)
B13@5	May-15	5	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.12)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)
B13@10	May-15	10	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.085)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B13@20	May-15	20	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.087)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B13@35	May-15	35	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.083)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B14@5	May-15	5	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.11)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)
B14@10	May-15	10	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.054)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)
B14@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.075)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B14@35	May-15	35	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.087)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B15@5	May-15	5	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.098)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B15@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.075)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B15@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.079)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B15@30	May-15	30	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.082)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B16@3	May-15	3	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.083)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B16@10	May-15	10	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.09)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
B16@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.07)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B16@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.079)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B17@5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.088)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
B9@20	May-15	20	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.0055)	ND (<0.055)	ND (<0.0055)
B12@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.045)	ND (<0.0045)
B12@10	May-15	10	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.046)	ND (<0.0046)
B12@20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.049)	ND (<0.0049)
B12@35	May-15	35	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<2.7)	ND (<27)	ND (<2.7)
B13@5	May-15	5	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.0062)	ND (<0.062)	ND (<0.0062)
B13@10	May-15	10	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.043)	ND (<0.0043)
B13@20	May-15	20	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)	ND (<0.0044)
B13@35	May-15	35	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.042)	ND (<0.0042)
B14@5	May-15	5	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.0056)	ND (<0.056)	ND (<0.0056)
B14@10	May-15	10	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.0027)	ND (<0.027)	ND (<0.0027)
B14@20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)	ND (<0.0038)
B14@35	May-15	35	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.043)	ND (<0.0043)
B15@5	May-15	5	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.049)	ND (<0.0049)
B15@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.037)	ND (<0.0037)
B15@20	May-15	20	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.039)	ND (<0.0039)
B15@30	May-15	30	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.041)	ND (<0.0041)
B16@3	May-15	3	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.041)	ND (<0.0041)
B16@10	May-15	10	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.045)	ND (<0.0045)
B16@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.035)	ND (<0.0035)
B16@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)	ND (<0.004)
B17@5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)	ND (<0.0044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)
B9@20	May-15	20
B12@5	May-15	5
B12@10	May-15	10
B12@20	May-15	20
B12@35	May-15	35
B13@5	May-15	5
B13@10	May-15	10
B13@20	May-15	20
B13@35	May-15	35
B14@5	May-15	5
B14@10	May-15	10
B14@20	May-15	20
B14@35	May-15	35
B15@5	May-15	5
B15@10	May-15	10
B15@20	May-15	20
B15@30	May-15	30
B16@3	May-15	3
B16@10	May-15	10
B16@20	May-15	20
B16@30	May-15	30
B17@5	May-15	5

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene
B17@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
RSL ¹			--	--	--	--	--	--	--
B17@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B17@30	May-15	30	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B18@3	May-15	3	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)
B18@10	May-15	10	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B18@20	May-15	20	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B18@30	May-15	30	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B19@5	May-15	5	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)
B19@10	May-15	10	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B19@20	May-15	20	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)
B19@30	May-15	30	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B20-5	May-15	5	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B20-10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B20-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B20-35	May-15	35	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B21@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B21@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B21@15	May-15	15	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)
B21@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B21@30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B22@5	May-15	5	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene
B17@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0074)	ND (<0.0037)	ND (<0.0037)
RSL ¹			--	--	--	5.8	--	--	180
B17@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.0079)	ND (<0.004)	ND (<0.004)
B17@30	May-15	30	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0088)	ND (<0.0044)	ND (<0.0044)
B18@3	May-15	3	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.01)	ND (<0.0052)	ND (<0.0052)
B18@10	May-15	10	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0096)	ND (<0.0048)	ND (<0.0048)
B18@20	May-15	20	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0083)	ND (<0.0041)	ND (<0.0041)
B18@30	May-15	30	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0097)	ND (<0.0049)	ND (<0.0049)
B19@5	May-15	5	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.014)	ND (<0.0069)	ND (<0.0069)
B19@10	May-15	10	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0099)	ND (<0.0049)	ND (<0.0049)
B19@20	May-15	20	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.01)	ND (<0.0052)	ND (<0.0052)
B19@30	May-15	30	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0084)	ND (<0.0042)	ND (<0.0042)
B20-5	May-15	5	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0093)	ND (<0.0047)	ND (<0.0047)
B20-10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0079)	ND (<0.0039)	ND (<0.0039)
B20-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.0099)	ND (<0.005)	ND (<0.005)
B20-35	May-15	35	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0093)	ND (<0.0047)	ND (<0.0047)
B21@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0083)	ND (<0.0042)	ND (<0.0042)
B21@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0072)	ND (<0.0036)	ND (<0.0036)
B21@15	May-15	15	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.011)	ND (<0.0054)	ND (<0.0054)
B21@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.007)	ND (<0.0035)	ND (<0.0035)
B21@30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.01)	ND (<0.0051)	ND (<0.0051)
B22@5	May-15	5	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.012)	ND (<0.0058)	ND (<0.0058)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane
B17@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
RSL ¹			0.46	--	78	--	--	2.6	--
B17@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B17@30	May-15	30	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B18@3	May-15	3	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)
B18@10	May-15	10	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B18@20	May-15	20	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B18@30	May-15	30	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B19@5	May-15	5	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)
B19@10	May-15	10	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B19@20	May-15	20	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)
B19@30	May-15	30	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B20-5	May-15	5	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B20-10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B20-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B20-35	May-15	35	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B21@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B21@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B21@15	May-15	15	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)
B21@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B21@30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B22@5	May-15	5	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	2-Chlorotoluene	4-Chlorotoluene	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform
B17@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
RSL ¹			--	--	1.2	--	--	--	--
B17@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B17@30	May-15	30	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B18@3	May-15	3	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)
B18@10	May-15	10	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B18@20	May-15	20	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B18@30	May-15	30	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B19@5	May-15	5	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)
B19@10	May-15	10	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B19@20	May-15	20	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)
B19@30	May-15	30	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B20-5	May-15	5	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B20-10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B20-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B20-35	May-15	35	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B21@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B21@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B21@15	May-15	15	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)
B21@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B21@30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B22@5	May-15	5	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
B17@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
RSL ¹			0.68	77	--	--	--	--	--
B17@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B17@30	May-15	30	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B18@3	May-15	3	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)
B18@10	May-15	10	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B18@20	May-15	20	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B18@30	May-15	30	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B19@5	May-15	5	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)
B19@10	May-15	10	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B19@20	May-15	20	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)
B19@30	May-15	30	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B20-5	May-15	5	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B20-10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B20-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B20-35	May-15	35	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B21@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B21@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B21@15	May-15	15	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)
B21@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B21@30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B22@5	May-15	5	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Diisopropyl ether (DIPE)	Ethyl Acetate
B17@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.037)
RSL ¹			16	--	--	--	--	--	--
B17@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)
B17@30	May-15	30	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)
B18@3	May-15	3	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.052)
B18@10	May-15	10	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.048)
B18@20	May-15	20	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.041)
B18@30	May-15	30	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.049)
B19@5	May-15	5	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.069)
B19@10	May-15	10	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.049)
B19@20	May-15	20	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.052)
B19@30	May-15	30	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.042)
B20-5	May-15	5	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.047)
B20-10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.039)
B20-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.05)
B20-35	May-15	35	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.047)
B21@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.042)
B21@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.036)
B21@15	May-15	15	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.054)
B21@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.035)
B21@30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.051)
B22@5	May-15	5	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.058)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Ethyl Ether	Ethyl tert-butyl ether (ETBE)	Ethylbenzene	Freon-113	Hexachlorobutadiene	Isopropylbenzene	m,p-Xylenes
B17@10	May-15	10	ND (<0.037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0074)
RSL ¹			--	--	5.8	--	--	--	65
B17@20	May-15	20	ND (<0.04)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.0079)
B17@30	May-15	30	ND (<0.044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0088)
B18@3	May-15	3	ND (<0.052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.01)
B18@10	May-15	10	ND (<0.048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	0.016	ND (<0.0096)
B18@20	May-15	20	ND (<0.041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0083)
B18@30	May-15	30	ND (<0.049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0097)
B19@5	May-15	5	ND (<0.069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.014)
B19@10	May-15	10	ND (<0.049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0099)
B19@20	May-15	20	ND (<0.052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.01)
B19@30	May-15	30	ND (<0.042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0084)
B20-5	May-15	5	ND (<0.047)	ND (<0.0047)	0.025	ND (<0.0047)	ND (<0.0047)	0.025	ND (<0.0093)
B20-10	May-15	10	ND (<0.039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0079)
B20-20	May-15	20	ND (<0.05)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.0099)
B20-35	May-15	35	ND (<0.047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0093)
B21@5	May-15	5	ND (<0.042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0083)
B21@10	May-15	10	ND (<0.036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0072)
B21@15	May-15	15	ND (<0.054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.011)
B21@20	May-15	20	ND (<0.035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.007)
B21@30	May-15	30	ND (<0.051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.01)
B22@5	May-15	5	ND (<0.058)	ND (<0.0058)	0.0064	ND (<0.0058)	ND (<0.0058)	0.014	ND (<0.012)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Methylene chloride	Methyl-tert-butyl Ether (MTBE)	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene
B17@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
RSL ¹			--	--	3.8	390	--	65	--
B17@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B17@30	May-15	30	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B18@3	May-15	3	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)
B18@10	May-15	10	ND (<0.0048)	ND (<0.0048)	6.8	ND (<0.0048)	0.028	ND (<0.0048)	ND (<0.0048)
B18@20	May-15	20	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B18@30	May-15	30	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B19@5	May-15	5	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)
B19@10	May-15	10	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B19@20	May-15	20	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)
B19@30	May-15	30	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B20-5	May-15	5	ND (<0.0047)	ND (<0.0047)	0.15	0.025	0.039	ND (<0.0047)	0.017
B20-10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B20-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B20-35	May-15	35	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B21@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B21@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B21@15	May-15	15	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)
B21@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B21@30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B22@5	May-15	5	ND (<0.0058)	ND (<0.0058)	0.019	ND (<0.0058)	0.018	ND (<0.0058)	0.0091

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	sec-Butylbenzene	Styrene	tert-Amyl methyl ether	tert-Butyl alcohol (TBA)	tert-Butylbenzene	Tetrachloroethene	Toluene
B17@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.074)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
RSL ¹			780	--	--	--	--	--	490
B17@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.079)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B17@30	May-15	30	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.088)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B18@3	May-15	3	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.1)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)
B18@10	May-15	10	0.034	ND (<0.0048)	ND (<0.0048)	ND (<0.096)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B18@20	May-15	20	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.083)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B18@30	May-15	30	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.097)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B19@5	May-15	5	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.14)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)
B19@10	May-15	10	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.099)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B19@20	May-15	20	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.1)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)
B19@30	May-15	30	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.084)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B20-5	May-15	5	0.024	ND (<0.0047)	ND (<0.0047)	ND (<0.093)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B20-10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.079)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B20-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.099)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B20-35	May-15	35	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.093)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B21@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.083)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B21@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.072)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B21@15	May-15	15	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.11)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)
B21@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.07)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)
B21@30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.1)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B22@5	May-15	5	0.0089	ND (<0.0058)	ND (<0.0058)	ND (<0.12)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
B17@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.037)	ND (<0.0037)
RSL ¹			--	--	--	--	--	--
B17@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)	ND (<0.004)
B17@30	May-15	30	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)	ND (<0.0044)
B18@3	May-15	3	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.052)	ND (<0.0052)
B18@10	May-15	10	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.048)	ND (<0.0048)
B18@20	May-15	20	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.041)	ND (<0.0041)
B18@30	May-15	30	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.049)	ND (<0.0049)
B19@5	May-15	5	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.0069)	ND (<0.069)	ND (<0.0069)
B19@10	May-15	10	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.049)	ND (<0.0049)
B19@20	May-15	20	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.0052)	ND (<0.052)	ND (<0.0052)
B19@30	May-15	30	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.042)	ND (<0.0042)
B20-5	May-15	5	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.047)	ND (<0.0047)
B20-10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.039)	ND (<0.0039)
B20-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.05)	ND (<0.005)
B20-35	May-15	35	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.047)	ND (<0.0047)
B21@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.042)	ND (<0.0042)
B21@10	May-15	10	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.036)	ND (<0.0036)
B21@15	May-15	15	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.0054)	ND (<0.054)	ND (<0.0054)
B21@20	May-15	20	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.0035)	ND (<0.035)	ND (<0.0035)
B21@30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.051)	ND (<0.0051)
B22@5	May-15	5	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.0058)	ND (<0.058)	ND (<0.0058)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)
B17@10	May-15	10
RSL ¹		
B17@20	May-15	20
B17@30	May-15	30
B18@3	May-15	3
B18@10	May-15	10
B18@20	May-15	20
B18@30	May-15	30
B19@5	May-15	5
B19@10	May-15	10
B19@20	May-15	20
B19@30	May-15	30
B20-5	May-15	5
B20-10	May-15	10
B20-20	May-15	20
B20-35	May-15	35
B21@5	May-15	5
B21@10	May-15	10
B21@15	May-15	15
B21@20	May-15	20
B21@30	May-15	30
B22@5	May-15	5

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene
B22@10	May-15	10	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)
B22@20	May-15	20	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)
B22@30	May-15	30	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)
B23@5	May-15	5	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B23@10	May-15	10	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)
B23@20	May-15	20	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B23@30	May-15	30	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B24-5	May-15	5	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B24-10	May-15	10	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B24-15	May-15	15	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B24-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B24-30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B24-40	May-15	40	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
RSL ¹			--	--	--	--	--	--	--
B25-5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B25-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B25-15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B25-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B25-30	May-15	30	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B25-40	May-15	40	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B26-5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B26-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene
B22@10	May-15	10	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0068)	ND (<0.0034)	ND (<0.0034)
B22@20	May-15	20	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.011)	ND (<0.0053)	ND (<0.0053)
B22@30	May-15	30	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0066)	ND (<0.0033)	ND (<0.0033)
B23@5	May-15	5	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.0081)	ND (<0.004)	ND (<0.004)
B23@10	May-15	10	ND (<0.19)	ND (<0.19)	ND (<0.19)	18	ND (<0.38)	ND (<0.19)	0.42
B23@20	May-15	20	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0085)	ND (<0.0042)	ND (<0.0042)
B23@30	May-15	30	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0073)	ND (<0.0037)	ND (<0.0037)
B24-5	May-15	5	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0078)	ND (<0.0039)	ND (<0.0039)
B24-10	May-15	10	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.01)	ND (<0.0051)	ND (<0.0051)
B24-15	May-15	15	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0097)	ND (<0.0049)	ND (<0.0049)
B24-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0076)	ND (<0.0038)	ND (<0.0038)
B24-30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.01)	ND (<0.0051)	ND (<0.0051)
B24-40	May-15	40	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0089)	ND (<0.0045)	ND (<0.0045)
RSL ¹			--	--	--	5.8	--	--	180
B25-5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0097)	ND (<0.0048)	ND (<0.0048)
B25-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0088)	ND (<0.0044)	ND (<0.0044)
B25-15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0075)	ND (<0.0038)	ND (<0.0038)
B25-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.01)	ND (<0.005)	ND (<0.005)
B25-30	May-15	30	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.01)	ND (<0.005)	ND (<0.005)
B25-40	May-15	40	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.01)	ND (<0.005)	ND (<0.005)
B26-5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0088)	ND (<0.0044)	ND (<0.0044)
B26-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0088)	ND (<0.0044)	ND (<0.0044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane
B22@10	May-15	10	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)
B22@20	May-15	20	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)
B22@30	May-15	30	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)
B23@5	May-15	5	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B23@10	May-15	10	ND (<0.19)	ND (<0.19)	4.1	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)
B23@20	May-15	20	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B23@30	May-15	30	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B24-5	May-15	5	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B24-10	May-15	10	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B24-15	May-15	15	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B24-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B24-30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B24-40	May-15	40	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
RSL ¹			0.46	--	78	--	--	2.6	--
B25-5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B25-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B25-15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B25-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B25-30	May-15	30	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B25-40	May-15	40	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B26-5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B26-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	2-Chlorotoluene	4-Chlorotoluene	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform
B22@10	May-15	10	ND (<0.0034)	ND (<0.0034)	0.0046	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)
B22@20	May-15	20	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)
B22@30	May-15	30	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)
B23@5	May-15	5	ND (<0.004)	ND (<0.004)	0.015	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B23@10	May-15	10	ND (<0.19)	ND (<0.19)	1.3	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)
B23@20	May-15	20	ND (<0.0042)	ND (<0.0042)	0.0066	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B23@30	May-15	30	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B24-5	May-15	5	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B24-10	May-15	10	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B24-15	May-15	15	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B24-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B24-30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B24-40	May-15	40	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
RSL ¹			--	--	1.2	--	--	--	--
B25-5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B25-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B25-15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B25-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B25-30	May-15	30	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B25-40	May-15	40	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B26-5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B26-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
B22@10	May-15	10	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)
B22@20	May-15	20	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)
B22@30	May-15	30	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)
B23@5	May-15	5	ND (<0.004)	0.006	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B23@10	May-15	10	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)
B23@20	May-15	20	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B23@30	May-15	30	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B24-5	May-15	5	0.0079	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B24-10	May-15	10	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B24-15	May-15	15	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B24-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B24-30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B24-40	May-15	40	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
RSL ¹			0.68	77	--	--	--	--	--
B25-5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B25-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B25-15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B25-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B25-30	May-15	30	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B25-40	May-15	40	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B26-5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B26-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Diisopropyl ether (DIPE)	Ethyl Acetate
B22@10	May-15	10	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.034)
B22@20	May-15	20	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.053)
B22@30	May-15	30	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.033)
B23@5	May-15	5	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)
B23@10	May-15	10	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<1.9)
B23@20	May-15	20	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.042)
B23@30	May-15	30	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.037)
B24-5	May-15	5	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.039)
B24-10	May-15	10	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.051)
B24-15	May-15	15	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.049)
B24-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)
B24-30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.051)
B24-40	May-15	40	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.045)
RSL ¹			16	--	--	--	--	--	--
B25-5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.048)
B25-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)
B25-15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)
B25-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.05)
B25-30	May-15	30	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.05)
B25-40	May-15	40	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.05)
B26-5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)
B26-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Ethyl Ether	Ethyl tert-butyl ether (ETBE)	Ethylbenzene	Freon-113	Hexachlorobutadiene	Isopropylbenzene	m,p-Xylenes
B22@10	May-15	10	ND (<0.034)	ND (<0.0034)	0.0061	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0068)
B22@20	May-15	20	ND (<0.053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.011)
B22@30	May-15	30	ND (<0.033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0066)
B23@5	May-15	5	ND (<0.04)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.0081)
B23@10	May-15	10	ND (<1.9)	ND (<0.19)	3.9	ND (<0.19)	ND (<0.19)	1.4	11
B23@20	May-15	20	ND (<0.042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0085)
B23@30	May-15	30	ND (<0.037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0073)
B24-5	May-15	5	ND (<0.039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0078)
B24-10	May-15	10	ND (<0.051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.01)
B24-15	May-15	15	ND (<0.049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0097)
B24-20	May-15	20	ND (<0.038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0076)
B24-30	May-15	30	ND (<0.051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.01)
B24-40	May-15	40	ND (<0.045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0089)
RSL ¹			--	--	5.8	--	--	--	65
B25-5	May-15	5	ND (<0.048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0097)
B25-10	May-15	10	ND (<0.044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0088)
B25-15	May-15	15	ND (<0.038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0075)
B25-20	May-15	20	ND (<0.05)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.01)
B25-30	May-15	30	ND (<0.05)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.01)
B25-40	May-15	40	ND (<0.05)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.01)
B26-5	May-15	5	ND (<0.044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0088)
B26-10	May-15	10	ND (<0.044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0088)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Methylene chloride	Methyl-tert-butyl Ether (MTBE)	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene
B22@10	May-15	10	ND (<0.0034)	ND (<0.0034)	0.0062	ND (<0.0034)	0.0036	ND (<0.0034)	ND (<0.0034)
B22@20	May-15	20	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)
B22@30	May-15	30	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)
B23@5	May-15	5	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B23@10	May-15	10	ND (<0.19)	ND (<0.19)	9.3	2.5	2.6	5.1	1.9
B23@20	May-15	20	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B23@30	May-15	30	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B24-5	May-15	5	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B24-10	May-15	10	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B24-15	May-15	15	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B24-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B24-30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B24-40	May-15	40	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
RSL ¹			--	--	3.8	390	--	65	--
B25-5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B25-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B25-15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B25-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B25-30	May-15	30	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B25-40	May-15	40	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B26-5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B26-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	sec-Butylbenzene	Styrene	tert-Amyl methyl ether	tert-Butyl alcohol (TBA)	tert-Butylbenzene	Tetrachloroethene	Toluene
B22@10	May-15	10	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.068)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)
B22@20	May-15	20	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.11)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)
B22@30	May-15	30	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.066)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)
B23@5	May-15	5	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.081)	ND (<0.004)	ND (<0.004)	0.0092
B23@10	May-15	10	1.4	ND (<0.19)	ND (<0.19)	ND (<3.8)	ND (<0.19)	ND (<0.19)	2.6
B23@20	May-15	20	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.085)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B23@30	May-15	30	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.073)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B24-5	May-15	5	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.078)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B24-10	May-15	10	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.1)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B24-15	May-15	15	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.097)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B24-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.076)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B24-30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.1)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)
B24-40	May-15	40	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.089)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)
RSL ¹			780	--	--	--	--	--	490
B25-5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.097)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B25-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.088)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B25-15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.075)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B25-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.1)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B25-30	May-15	30	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.1)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B25-40	May-15	40	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.1)	ND (<0.005)	ND (<0.005)	ND (<0.005)
B26-5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.088)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B26-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.088)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
B22@10	May-15	10	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.0034)	ND (<0.034)	ND (<0.0034)
B22@20	May-15	20	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.0053)	ND (<0.053)	ND (<0.0053)
B22@30	May-15	30	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.0033)	ND (<0.033)	ND (<0.0033)
B23@5	May-15	5	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)	ND (<0.004)
B23@10	May-15	10	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<0.19)	ND (<1.9)	ND (<0.19)
B23@20	May-15	20	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.042)	ND (<0.0042)
B23@30	May-15	30	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.037)	ND (<0.0037)
B24-5	May-15	5	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.039)	ND (<0.0039)
B24-10	May-15	10	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.051)	ND (<0.0051)
B24-15	May-15	15	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.049)	ND (<0.0049)
B24-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)	ND (<0.0038)
B24-30	May-15	30	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.0051)	ND (<0.051)	ND (<0.0051)
B24-40	May-15	40	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.045)	ND (<0.0045)
RSL ¹			--	--	--	--	--	--
B25-5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.048)	ND (<0.0048)
B25-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)	ND (<0.0044)
B25-15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)	ND (<0.0038)
B25-20	May-15	20	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.05)	ND (<0.005)
B25-30	May-15	30	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.05)	ND (<0.005)
B25-40	May-15	40	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.05)	ND (<0.005)
B26-5	May-15	5	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)	ND (<0.0044)
B26-10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)	ND (<0.0044)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)
B22@10	May-15	10
B22@20	May-15	20
B22@30	May-15	30
B23@5	May-15	5
B23@10	May-15	10
B23@20	May-15	20
B23@30	May-15	30
B24-5	May-15	5
B24-10	May-15	10
B24-15	May-15	15
B24-20	May-15	20
B24-30	May-15	30
B24-40	May-15	40
RSL ¹		
B25-5	May-15	5
B25-10	May-15	10
B25-15	May-15	15
B25-20	May-15	20
B25-30	May-15	30
B25-40	May-15	40
B26-5	May-15	5
B26-10	May-15	10

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene
B26-15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B26-20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B26-30	May-15	30	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B26-40	May-15	40	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B26-50	May-15	50	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B27-5	May-15	5	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)
B27-10	May-15	10	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)
B27-15	May-15	15	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B27-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B27-30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B27-40	May-15	40	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B28@5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B28@10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B28@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B28@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B28@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B29@2	May-15	2	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B29@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B29@10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B29@15	May-15	15	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B29@20	May-15	20	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B30@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene
B26-15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0088)	ND (<0.0044)	ND (<0.0044)
B26-20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0098)	ND (<0.0049)	ND (<0.0049)
B26-30	May-15	30	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0085)	ND (<0.0043)	ND (<0.0043)
B26-40	May-15	40	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0092)	ND (<0.0046)	ND (<0.0046)
B26-50	May-15	50	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0075)	ND (<0.0038)	ND (<0.0038)
B27-5	May-15	5	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.018)	ND (<0.0088)	ND (<0.0088)
B27-10	May-15	10	ND (<0.21)	ND (<0.21)	ND (<0.21)	1	ND (<0.41)	ND (<0.21)	ND (<0.21)
B27-15	May-15	15	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0075)	ND (<0.0037)	ND (<0.0037)
B27-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0077)	ND (<0.0038)	ND (<0.0038)
B27-30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0072)	ND (<0.0036)	ND (<0.0036)
B27-40	May-15	40	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0083)	ND (<0.0041)	ND (<0.0041)
B28@5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0096)	ND (<0.0048)	ND (<0.0048)
B28@10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0089)	ND (<0.0044)	ND (<0.0044)
B28@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0075)	ND (<0.0038)	ND (<0.0038)
B28@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.008)	ND (<0.004)	ND (<0.004)
B28@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.008)	ND (<0.004)	ND (<0.004)
B29@2	May-15	2	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0075)	ND (<0.0038)	ND (<0.0038)
B29@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0083)	ND (<0.0042)	ND (<0.0042)
B29@10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0078)	ND (<0.0039)	ND (<0.0039)
B29@15	May-15	15	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0085)	ND (<0.0042)	ND (<0.0042)
B29@20	May-15	20	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0092)	ND (<0.0046)	ND (<0.0046)
B30@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.009)	ND (<0.0045)	ND (<0.0045)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane
B26-15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B26-20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B26-30	May-15	30	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B26-40	May-15	40	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B26-50	May-15	50	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B27-5	May-15	5	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)
B27-10	May-15	10	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)
B27-15	May-15	15	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B27-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B27-30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B27-40	May-15	40	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B28@5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B28@10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B28@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B28@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B28@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B29@2	May-15	2	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B29@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B29@10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B29@15	May-15	15	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B29@20	May-15	20	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B30@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	2-Chlorotoluene	4-Chlorotoluene	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform
B26-15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B26-20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B26-30	May-15	30	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B26-40	May-15	40	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B26-50	May-15	50	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B27-5	May-15	5	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)
B27-10	May-15	10	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)
B27-15	May-15	15	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B27-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B27-30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B27-40	May-15	40	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B28@5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B28@10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B28@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B28@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B28@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B29@2	May-15	2	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B29@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B29@10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B29@15	May-15	15	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B29@20	May-15	20	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B30@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
B26-15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B26-20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B26-30	May-15	30	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B26-40	May-15	40	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B26-50	May-15	50	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B27-5	May-15	5	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)
B27-10	May-15	10	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)
B27-15	May-15	15	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B27-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B27-30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B27-40	May-15	40	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B28@5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B28@10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B28@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B28@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B28@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B29@2	May-15	2	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B29@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B29@10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B29@15	May-15	15	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B29@20	May-15	20	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B30@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Diisopropyl ether (DIPE)	Ethyl Acetate
B26-15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)
B26-20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.049)
B26-30	May-15	30	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.043)
B26-40	May-15	40	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.046)
B26-50	May-15	50	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)
B27-5	May-15	5	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.088)
B27-10	May-15	10	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<2.1)
B27-15	May-15	15	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.037)
B27-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)
B27-30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.036)
B27-40	May-15	40	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.041)
B28@5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.048)
B28@10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)
B28@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)
B28@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)
B28@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)
B29@2	May-15	2	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)
B29@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.042)
B29@10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.039)
B29@15	May-15	15	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.042)
B29@20	May-15	20	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.046)
B30@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.045)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Ethyl Ether	Ethyl tert-butyl ether (ETBE)	Ethylbenzene	Freon-113	Hexachlorobutadiene	Isopropylbenzene	m,p-Xylenes
B26-15	May-15	15	ND (<0.044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0088)
B26-20	May-15	20	ND (<0.049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0098)
B26-30	May-15	30	ND (<0.043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0085)
B26-40	May-15	40	ND (<0.046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0092)
B26-50	May-15	50	ND (<0.038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0075)
B27-5	May-15	5	ND (<0.088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.018)
B27-10	May-15	10	ND (<2.1)	ND (<0.21)	0.98	ND (<0.21)	ND (<0.21)	0.59	ND (<0.41)
B27-15	May-15	15	ND (<0.037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0075)
B27-20	May-15	20	ND (<0.038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0077)
B27-30	May-15	30	ND (<0.036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0072)
B27-40	May-15	40	ND (<0.041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0083)
B28@5	May-15	5	ND (<0.048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0096)
B28@10	May-15	10	ND (<0.044)	ND (<0.0044)	0.09	ND (<0.0044)	ND (<0.0044)	0.04	ND (<0.0089)
B28@15	May-15	15	ND (<0.038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0075)
B28@20	May-15	20	ND (<0.04)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.008)
B28@30	May-15	30	ND (<0.04)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.008)
B29@2	May-15	2	ND (<0.038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0075)
B29@5	May-15	5	ND (<0.042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0083)
B29@10	May-15	10	ND (<0.039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0078)
B29@15	May-15	15	ND (<0.042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0085)
B29@20	May-15	20	ND (<0.046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0092)
B30@5	May-15	5	ND (<0.045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.009)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Methylene chloride	Methyl-tert-butyl Ether (MTBE)	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene
B26-15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B26-20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B26-30	May-15	30	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B26-40	May-15	40	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B26-50	May-15	50	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B27-5	May-15	5	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)
B27-10	May-15	10	ND (<0.21)	ND (<0.21)	3.1	0.56	1	ND (<0.21)	0.51
B27-15	May-15	15	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B27-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B27-30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B27-40	May-15	40	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B28@5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B28@10	May-15	10	ND (<0.0044)	ND (<0.0044)	0.13	0.02	0.056	ND (<0.0044)	ND (<0.0044)
B28@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B28@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B28@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B29@2	May-15	2	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B29@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B29@10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B29@15	May-15	15	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B29@20	May-15	20	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B30@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	sec-Butylbenzene	Styrene	tert-Amyl methyl ether	tert-Butyl alcohol (TBA)	tert-Butylbenzene	Tetrachloroethene	Toluene
B26-15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.088)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B26-20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.098)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)
B26-30	May-15	30	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.085)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)
B26-40	May-15	40	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.092)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B26-50	May-15	50	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.075)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B27-5	May-15	5	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.18)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)
B27-10	May-15	10	0.59	ND (<0.21)	ND (<0.21)	ND (<4.1)	ND (<0.21)	ND (<0.21)	ND (<0.21)
B27-15	May-15	15	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	0.96	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B27-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	0.19	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B27-30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.072)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
B27-40	May-15	40	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.083)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)
B28@5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.096)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)
B28@10	May-15	10	0.023	ND (<0.0044)	ND (<0.0044)	ND (<0.089)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)
B28@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.075)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B28@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.08)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B28@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.08)	ND (<0.004)	ND (<0.004)	ND (<0.004)
B29@2	May-15	2	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.075)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)
B29@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.083)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B29@10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.078)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)
B29@15	May-15	15	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.085)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)
B29@20	May-15	20	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.092)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)
B30@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.09)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
B26-15	May-15	15	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)	ND (<0.0044)
B26-20	May-15	20	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.0049)	ND (<0.049)	ND (<0.0049)
B26-30	May-15	30	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.0043)	ND (<0.043)	ND (<0.0043)
B26-40	May-15	40	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.046)	ND (<0.0046)
B26-50	May-15	50	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)	ND (<0.0038)
B27-5	May-15	5	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.0088)	ND (<0.088)	ND (<0.0088)
B27-10	May-15	10	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<0.21)	ND (<2.1)	ND (<0.21)
B27-15	May-15	15	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.037)	ND (<0.0037)
B27-20	May-15	20	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)	ND (<0.0038)
B27-30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.036)	ND (<0.0036)
B27-40	May-15	40	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.0041)	ND (<0.041)	ND (<0.0041)
B28@5	May-15	5	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.0048)	ND (<0.048)	ND (<0.0048)
B28@10	May-15	10	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.0044)	ND (<0.044)	ND (<0.0044)
B28@15	May-15	15	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)	ND (<0.0038)
B28@20	May-15	20	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)	ND (<0.004)
B28@30	May-15	30	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.004)	ND (<0.04)	ND (<0.004)
B29@2	May-15	2	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.0038)	ND (<0.038)	ND (<0.0038)
B29@5	May-15	5	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.042)	ND (<0.0042)
B29@10	May-15	10	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.0039)	ND (<0.039)	ND (<0.0039)
B29@15	May-15	15	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.0042)	ND (<0.042)	ND (<0.0042)
B29@20	May-15	20	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.0046)	ND (<0.046)	ND (<0.0046)
B30@5	May-15	5	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.0045)	ND (<0.045)	ND (<0.0045)

Definitions:

ft. = feet below ground surface
 mg/kg = milligrams per kilogram
 PQL = practical quantitation limit
 ND = Not Detected
 VOCs = volatile organic compounds
 USEPA = United States Environmental Protection Agency
 RSL = Regional Screening Level

Notes:

VOCs analyzed
 < = analyte concentration less than RSL
Bold = analyte concentration greater than RSL
 -- = No RSL
 Green color = analyte concentration greater than 1.0 RSL in mg/kg

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	
B26-15	May-15	15	
B26-20	May-15	20	
B26-30	May-15	30	
B26-40	May-15	40	ow ground surface.
B26-50	May-15	50	igrams per kilogram.
B27-5	May-15	5	ical quantification limits.
B27-10	May-15	10	ected (below PQL shown in parentheses).
B27-15	May-15	15	atile organic compounds.
B27-20	May-15	20	nited States Environmental Protection Agency.
B27-30	May-15	30	onal Screening Level for residential soil, USEPA Summary Table June 2015.
B27-40	May-15	40	
B28@5	May-15	5	
B28@10	May-15	10	zed in general accordance with USEPA Method No. 8260B. Results are in mg/kg.
B28@15	May-15	15	ot detected at or above the laboratory's PQL.
B28@20	May-15	20	te detected at concentration above the laboratory's PQL.
B28@30	May-15	30	has been developed.
B29@2	May-15	2	indicates the analyte was detected at a concentration above its RSL.
B29@5	May-15	5	g/kg.
B29@10	May-15	10	
B29@15	May-15	15	
B29@20	May-15	20	
B30@5	May-15	5	

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene
B30@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B30@20	May-15	20	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B30@30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
RSL ¹			--	--	--	--	--	--	--

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane	1,2-Dibromoethane (EDB)	1,2-Dichlorobenzene
B30@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	0.017	ND (<0.0073)	ND (<0.0037)	ND (<0.0037)
B30@20	May-15	20	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0095)	ND (<0.0047)	ND (<0.0047)
B30@30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0072)	ND (<0.0036)	ND (<0.0036)
RSL ¹			--	--	--	5.8	--	--	180

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane
B30@10	May-15	10	ND (<0.0037)	ND (<0.0037)	0.0058	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B30@20	May-15	20	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B30@30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
RSL ¹			0.46	--	78	--	--	2.6	--

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	2-Chlorotoluene	4-Chlorotoluene	Benzene	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform
B30@10	May-15	10	ND (<0.0037)	ND (<0.0037)	0.0088	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B30@20	May-15	20	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B30@30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
RSL ¹			--	--	1.2	--	--	--	--

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chloroethane	Chloroform	Chloromethane
B30@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B30@20	May-15	20	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B30@30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
RSL ¹			0.68	77	--	--	--	--	--

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane	Dichlorodifluoromethane	Diisopropyl ether (DIPE)	Ethyl Acetate
B30@10	May-15	10	0.005	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.037)
B30@20	May-15	20	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.047)
B30@30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.036)
RSL ¹			16	--	--	--	--	--	--

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Ethyl Ether	Ethyl tert-butyl ether (ETBE)	Ethylbenzene	Freon-113	Hexachlorobutadiene	Isopropylbenzene	m,p-Xylenes
B30@10	May-15	10	ND (<0.037)	ND (<0.0037)	0.0038	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	0.0097
B30@20	May-15	20	ND (<0.047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0095)
B30@30	May-15	30	ND (<0.036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0072)
RSL ¹			--	--	5.8	--	--	--	65

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	Methylene chloride	Methyl-tert-butyl Ether (MTBE)	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene
B30@10	May-15	10	ND (<0.0037)	ND (<0.0037)	0.02	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)
B30@20	May-15	20	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B30@30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
RSL ¹			--	--	3.8	390	--	65	--

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	sec-Butylbenzene	Styrene	tert-Amyl methyl ether	tert-Butyl alcohol (TBA)	tert-Butylbenzene	Tetrachloroethene	Toluene
B30@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.073)	ND (<0.0037)	ND (<0.0037)	0.0044
B30@20	May-15	20	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.095)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)
B30@30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.072)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)
RSL ¹			780	--	--	--	--	--	490

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl acetate	Vinyl chloride
B30@10	May-15	10	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.0037)	ND (<0.037)	ND (<0.0037)
B30@20	May-15	20	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.0047)	ND (<0.047)	ND (<0.0047)
B30@30	May-15	30	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.0036)	ND (<0.036)	ND (<0.0036)
RSL ¹			--	--	--	--	--	--

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (VOCs)

Sample ID	Date	Depth (ft.)
B30@10	May-15	10
B30@20	May-15	20
B30@30	May-15	30
RSL ¹		

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt
B1@5	May-15	5	ND (<2)	7.3	98	ND (<1)	ND (<1)	17	8.5
B1@10	May-15	10	ND (<2)	6.6	620	ND (<1)	ND (<1)	20	7
B1@15	May-15	15	ND (<2)	1.9	130	ND (<1)	ND (<1)	20	8.5
B1@20	May-15	20	ND (<2)	5.4	130	ND (<1)	ND (<1)	21	9.6
B1@30	May-15	30	ND (<2)	3	67	ND (<1)	ND (<1)	15	6.1
B2@5	May-15	5	ND (<2)	2.1	130	ND (<1)	ND (<1)	18	7.7
B2@10	May-15	10	ND (<2)	11	410	ND (<1)	ND (<1)	24	7.5
B2@15	May-15	15	ND (<2)	5	210	ND (<1)	ND (<1)	21	7.8
B2@20	May-15	20	ND (<2)	30	520	ND (<1)	ND (<1)	21	7.4
B2@35	May-15	35	ND (<2)	9.1	98	ND (<1)	ND (<1)	19	11
B3@5	May-15	5	ND (<2)	8.2	690	ND (<1)	1	22	7.7
B3@10	May-15	10	ND (<2)	4	84	ND (<1)	ND (<1)	18	9.2
B3@15	May-15	15	ND (<2)	6.8	140	ND (<1)	ND (<1)	20	7.8
B3@20	May-15	20	ND (<2)	5.1	130	ND (<1)	ND (<1)	19	7.8
B3@35	May-15	35	ND (<2)	4.9	99	ND (<1)	ND (<1)	11	5.7
B4@5	May-15	5	ND (<2)	11	760	ND (<1)	1	21	7.4
B4@10	May-15	10	ND (<2)	12	370	ND (<1)	ND (<1)	20	7.3
B4@15	May-15	15	ND (<2)	23	410	ND (<1)	ND (<1)	27	7.8
B4@20	May-15	20	ND (<2)	12	260	ND (<1)	ND (<1)	21	8.3
B4@35	May-15	35	ND (<2)	ND (<1)	31	ND (<1)	ND (<1)	10	3.4
B5@5	May-15	5	ND (<2)	5.9	550	ND (<1)	ND (<1)	19	7.1
B5@10	May-15	10	ND (<2)	14	350	ND (<1)	ND (<1)	20	7.7
B5@15	May-15	15	ND (<2)	6.6	120	ND (<1)	ND (<1)	19	6.6
B5@20	May-15	20	ND (<2)	1.9	43	ND (<1)	ND (<1)	11	3.8
B5@30	May-15	30	ND (<2)	1	49	ND (<1)	ND (<1)	12	4.4
B6@5	May-15	5	ND (<2)	6.7	540	ND (<1)	ND (<1)	20	6.8
B6@10	May-15	10	ND (<2)	1.2	100	ND (<1)	ND (<1)	9.9	3.4
B6@15	May-15	15	ND (<2)	5.8	99	ND (<1)	ND (<1)	19	8.2
B6@20	May-15	20	ND (<2)	8.2	94	ND (<1)	ND (<1)	21	9.7
B6@30	May-15	30	ND (<2)	ND (<1)	27	ND (<1)	ND (<1)	5.6	3.8
B7@5	May-15	5	ND (<2)	3.7	210	ND (<1)	ND (<1)	21	8.9
B7@10	May-15	10	ND (<2)	5.2	150	ND (<1)	ND (<1)	27	11
B7@20	May-15	20	ND (<2)	4.8	83	ND (<1)	ND (<1)	15	7.5
B7@30	May-15	30	ND (<2)	5.5	50	ND (<1)	ND (<1)	10	3.9
B8-5	May-15	5	ND (<2)	2.8	65	ND (<1)	ND (<1)	20	8.5
B8-10	May-15	10	ND (<2)	24	110	ND (<1)	ND (<1)	32	6.4
B8-15	May-15	15	ND (<2)	1.9	33	ND (<1)	ND (<1)	9.5	5.1

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel
B1@5	May-15	5	17	--	11	--	ND (<0.1)	ND (<1)	14
B1@10	May-15	10	37	--	200	--	0.37	ND (<1)	18
B1@15	May-15	15	29	--	5.5	--	ND (<0.1)	ND (<1)	16
B1@20	May-15	20	25	--	5.2	--	ND (<0.1)	ND (<1)	18
B1@30	May-15	30	49	--	3.4	--	0.25	ND (<1)	13
B2@5	May-15	5	26	--	12	--	ND (<0.1)	ND (<1)	15
B2@10	May-15	10	30	--	140	--	0.17	ND (<1)	18
B2@15	May-15	15	25	--	64	--	ND (<0.1)	ND (<1)	17
B2@20	May-15	20	33	--	290	--	0.25	ND (<1)	20
B2@35	May-15	35	28	--	9.1	--	ND (<0.1)	ND (<1)	18
B3@5	May-15	5	55	--	480	--	0.83	ND (<1)	21
B3@10	May-15	10	22	--	5.2	--	ND (<0.1)	ND (<1)	17
B3@15	May-15	15	20	--	5.1	--	ND (<0.1)	ND (<1)	15
B3@20	May-15	20	18	--	5.1	--	ND (<0.1)	ND (<1)	15
B3@35	May-15	35	11	--	5	--	ND (<0.1)	ND (<1)	12
B4@5	May-15	5	74	--	520	--	1.5	ND (<1)	22
B4@10	May-15	10	28	--	86	--	0.11	ND (<1)	17
B4@15	May-15	15	68	--	460	--	0.51	ND (<1)	18
B4@20	May-15	20	24	--	82	--	ND (<0.1)	ND (<1)	16
B4@35	May-15	35	6.3	--	3.8	--	ND (<0.1)	ND (<1)	7.4
B5@5	May-15	5	44	--	280	--	0.52	ND (<1)	19
B5@10	May-15	10	30	--	160	--	0.19	ND (<1)	16
B5@15	May-15	15	20	--	5.1	--	ND (<0.1)	ND (<1)	14
B5@20	May-15	20	12	--	2.4	--	ND (<0.1)	ND (<1)	8.1
B5@30	May-15	30	14	--	2.9	--	ND (<0.1)	ND (<1)	10
B6@5	May-15	5	33	--	170	--	0.31	ND (<1)	17
B6@10	May-15	10	13	--	19	--	ND (<0.1)	ND (<1)	13
B6@15	May-15	15	20	--	4.5	--	ND (<0.1)	ND (<1)	15
B6@20	May-15	20	20	--	5.6	--	0.12	ND (<1)	20
B6@30	May-15	30	17	--	1.7	--	ND (<0.1)	ND (<1)	7.9
B7@5	May-15	5	20	--	12	--	ND (<0.1)	ND (<1)	15
B7@10	May-15	10	29	--	7.5	--	ND (<0.1)	ND (<1)	20
B7@20	May-15	20	19	--	4.6	--	ND (<0.1)	ND (<1)	14
B7@30	May-15	30	9.3	--	2.5	--	ND (<0.1)	ND (<1)	6.8
B8-5	May-15	5	20	25,000	5.2	410	ND (<0.1)	ND (<1)	18
B8-10	May-15	10	50	--	11	--	ND (<0.1)	ND (<1)	14
B8-15	May-15	15	11	--	2.1	--	ND (<0.1)	ND (<1)	11

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)	Selenium	Silver	Thallium	Vanadium	Zinc
B1@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	31	53
B1@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	29	78
B1@15	May-15	15	ND (<1)	ND (<1)	ND (<1)	33	65
B1@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	38	56
B1@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	32	47
B2@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	31	71
B2@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	32	400
B2@15	May-15	15	ND (<1)	ND (<1)	ND (<1)	32	60
B2@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	30	210
B2@35	May-15	35	ND (<1)	ND (<1)	ND (<1)	37	71
B3@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	32	95
B3@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	28	39
B3@15	May-15	15	ND (<1)	ND (<1)	ND (<1)	30	37
B3@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	32	38
B3@35	May-15	35	ND (<1)	ND (<1)	ND (<1)	18	35
B4@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	30	120
B4@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	29	87
B4@15	May-15	15	ND (<1)	ND (<1)	ND (<1)	30	120
B4@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	32	79
B4@35	May-15	35	ND (<1)	ND (<1)	ND (<1)	15	110
B5@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	31	90
B5@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	29	110
B5@15	May-15	15	ND (<1)	ND (<1)	ND (<1)	33	42
B5@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	20	30
B5@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	19	40
B6@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	29	93
B6@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	19	30
B6@15	May-15	15	ND (<1)	ND (<1)	ND (<1)	28	38
B6@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	34	39
B6@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	10	16
B7@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	35	40
B7@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	46	47
B7@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	28	36
B7@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	22	23
B8-5	May-15	5	ND (<1)	ND (<1)	ND (<1)	36	36
B8-10	May-15	10	ND (<1)	ND (<1)	ND (<1)	59	44
B8-15	May-15	15	ND (<1)	ND (<1)	ND (<1)	18	27

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)
B1@5	May-15	5
B1@10	May-15	10
B1@15	May-15	15
B1@20	May-15	20
B1@30	May-15	30
B2@5	May-15	5
B2@10	May-15	10
B2@15	May-15	15
B2@20	May-15	20
B2@35	May-15	35
B3@5	May-15	5
B3@10	May-15	10
B3@15	May-15	15
B3@20	May-15	20
B3@35	May-15	35
B4@5	May-15	5
B4@10	May-15	10
B4@15	May-15	15
B4@20	May-15	20
B4@35	May-15	35
B5@5	May-15	5
B5@10	May-15	10
B5@15	May-15	15
B5@20	May-15	20
B5@30	May-15	30
B6@5	May-15	5
B6@10	May-15	10
B6@15	May-15	15
B6@20	May-15	20
B6@30	May-15	30
B7@5	May-15	5
B7@10	May-15	10
B7@20	May-15	20
B7@30	May-15	30
B8-5	May-15	5
B8-10	May-15	10
B8-15	May-15	15

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt
B8-20	May-15	20	ND (<2)	1.8	38	ND (<1)	ND (<1)	9.7	5.1
B8-30	May-15	30	ND (<2)	4.7	34	ND (<1)	ND (<1)	12	4.9
B8-40	May-15	40	ND (<2)	5.7	24	ND (<1)	ND (<1)	8	2.9
B8-50	May-15	50	ND (<2)	35	62	ND (<1)	ND (<1)	17	7.3
B9@5	May-15	5	ND (<2)	1.9	99	ND (<1)	ND (<1)	20	10
B9@10	May-15	10	ND (<2)	14	86	ND (<1)	ND (<1)	19	6.6
B9@20	May-15	20	ND (<2)	25	120	ND (<1)	ND (<1)	24	9.7
RSL ¹			--	0.68	15,000	160	71	120,000 ⁴	23
BK ²			--	12	--	--	--	--	--
SSL ³			--	--	--	--	--	--	--
B10@2	May-15	2	ND (<2)	1.4	67	ND (<1)	ND (<1)	13	5.2
B11@2	May-15	2	ND (<2)	1.7	83	ND (<1)	ND (<1)	17	5.8
B12@2	May-15	2	ND (<2)	2.1	71	ND (<1)	ND (<1)	12	4.8
B12@5	May-15	5	ND (<2)	1.9	45	ND (<1)	ND (<1)	10	3.9
B12@10	May-15	10	ND (<2)	2.4	29	ND (<1)	ND (<1)	5.7	2.4
B12@20	May-15	20	ND (<2)	1.5	32	ND (<1)	ND (<1)	9.3	4.6
B12@35	May-15	35	ND (<2)	14	130	ND (<1)	ND (<1)	20	9.2
B13@2	May-15	2	ND (<2)	12	430	ND (<1)	ND (<1)	20	6
B13@5	May-15	5	ND (<2)	ND (<1)	92	ND (<1)	ND (<1)	15	6
B13@10	May-15	10	ND (<2)	38	200	ND (<1)	ND (<1)	16	5.9
B13@20	May-15	20	ND (<2)	22	250	ND (<1)	ND (<1)	15	6
B13@35	May-15	35	ND (<2)	22	120	ND (<1)	ND (<1)	24	10
B14@5	May-15	5	ND (<2)	16	500	ND (<1)	ND (<1)	23	6.5
B14@10	May-15	10	ND (<2)	20	120	ND (<1)	ND (<1)	17	7.6
B14@20	May-15	20	ND (<2)	7.7	230	ND (<1)	ND (<1)	21	7.6
B14@35	May-15	35	ND (<2)	ND (<1)	62	ND (<1)	ND (<1)	4.8	2.5
B15@5	May-15	5	ND (<2)	ND (<1)	130	ND (<1)	ND (<1)	12	5
B15@10	May-15	10	ND (<2)	1.1	310	ND (<1)	ND (<1)	19	6.2
B15@20	May-15	20	ND (<2)	2.1	210	ND (<1)	ND (<1)	19	7.9
B15@30	May-15	30	ND (<2)	3	170	ND (<1)	ND (<1)	13	6.5
B16@3	May-15	3	ND (<2)	1.8	74	ND (<1)	ND (<1)	13	5.8
B16@10	May-15	10	ND (<2)	ND (<1)	500	ND (<1)	ND (<1)	61	4.9
B16@20	May-15	20	ND (<2)	4.5	130	ND (<1)	ND (<1)	22	9
B16@30	May-15	30	ND (<2)	15	150	ND (<1)	ND (<1)	27	12
B17@5	May-15	5	ND (<2)	4.4	64	ND (<1)	ND (<1)	11	4.1
B17@10	May-15	10	ND (<2)	1.8	84	ND (<1)	ND (<1)	15	6.6

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel
B8-20	May-15	20	11	--	2.2	--	ND (<0.1)	ND (<1)	9.1
B8-30	May-15	30	10	--	4	--	ND (<0.1)	ND (<1)	11
B8-40	May-15	40	4.8	--	1.8	--	ND (<0.1)	ND (<1)	5.6
B8-50	May-15	50	21	--	4.7	--	0.16	ND (<1)	14
B9@5	May-15	5	19	--	5.6	--	ND (<0.1)	ND (<1)	18
B9@10	May-15	10	20	--	4.7	--	ND (<0.1)	ND (<1)	16
B9@20	May-15	20	33	--	7.4	--	ND (<0.1)	ND (<1)	21
RSL ¹			3,100	55,000	--	1,800	9.40	390	840
BK ²			--	--	--	--	--	--	--
SSL ³			--	--	80	--	--	--	--
B10@2	May-15	2	15	13,000	8.9	310	ND (<0.1)	ND (<1)	11
B11@2	May-15	2	17	15,000	21	280	ND (<0.1)	ND (<1)	24
B12@2	May-15	2	12	12,000	10	230	ND (<0.1)	ND (<1)	8.9
B12@5	May-15	5	6.9	--	2.8	--	ND (<0.1)	ND (<1)	7.7
B12@10	May-15	10	5.3	--	2	--	ND (<0.1)	ND (<1)	6.5
B12@20	May-15	20	12	--	2.1	--	ND (<0.1)	ND (<1)	14
B12@35	May-15	35	29	--	6.1	--	ND (<0.1)	ND (<1)	20
B13@2	May-15	2	20	17,000	46	290	0.13	ND (<1)	17
B13@5	May-15	5	18	--	54	--	ND (<0.1)	ND (<1)	10
B13@10	May-15	10	20	--	57	--	ND (<0.1)	ND (<1)	12
B13@20	May-15	20	17	--	15	--	ND (<0.1)	ND (<1)	12
B13@35	May-15	35	37	--	5.5	--	ND (<0.1)	ND (<1)	20
B14@5	May-15	5	26	--	69	--	0.15	ND (<1)	20
B14@10	May-15	10	29	--	32	--	ND (<0.1)	ND (<1)	14
B14@20	May-15	20	21	--	16	--	ND (<0.1)	ND (<1)	15
B14@35	May-15	35	6.5	--	2	--	ND (<0.1)	ND (<1)	4.5
B15@5	May-15	5	14	--	2.5	--	ND (<0.1)	ND (<1)	15
B15@10	May-15	10	18	--	5	--	ND (<0.1)	ND (<1)	15
B15@20	May-15	20	23	--	4.7	--	0.19	ND (<1)	18
B15@30	May-15	30	19	--	2.8	--	ND (<0.1)	ND (<1)	28
B16@3	May-15	3	14	--	5.3	--	ND (<0.1)	ND (<1)	13
B16@10	May-15	10	40	--	18	--	ND (<0.1)	ND (<1)	15
B16@20	May-15	20	24	--	6	--	ND (<0.1)	ND (<1)	24
B16@30	May-15	30	41	--	8.7	--	ND (<0.1)	ND (<1)	28
B17@5	May-15	5	11	--	3.9	--	ND (<0.1)	ND (<1)	8.9
B17@10	May-15	10	18	--	3.1	--	ND (<0.1)	ND (<1)	11

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)	Selenium	Silver	Thallium	Vanadium	Zinc
B8-20	May-15	20	ND (<1)	ND (<1)	ND (<1)	18	27
B8-30	May-15	30	ND (<1)	ND (<1)	ND (<1)	25	31
B8-40	May-15	40	ND (<1)	ND (<1)	ND (<1)	14	18
B8-50	May-15	50	ND (<1)	ND (<1)	ND (<1)	27	35
B9@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	39	280
B9@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	36	65
B9@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	37	71
RSL ¹			390	390	0.78	390	23,000
BK ²			--	--	--	--	--
SSL ³			--	--	--	--	--
B10@2	May-15	2	ND (<1)	ND (<1)	ND (<1)	22	34
B11@2	May-15	2	ND (<1)	ND (<1)	ND (<1)	24	42
B12@2	May-15	2	ND (<1)	ND (<1)	ND (<1)	21	47
B12@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	19	20
B12@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	12	11
B12@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	16	22
B12@35	May-15	35	ND (<1)	ND (<1)	ND (<1)	35	46
B13@2	May-15	2	ND (<1)	ND (<1)	ND (<1)	27	54
B13@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	29	88
B13@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	27	56
B13@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	28	41
B13@35	May-15	35	ND (<1)	ND (<1)	ND (<1)	44	57
B14@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	27	67
B14@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	29	48
B14@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	33	41
B14@35	May-15	35	ND (<1)	ND (<1)	ND (<1)	9.2	14
B15@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	23	30
B15@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	27	37
B15@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	29	37
B15@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	25	35
B16@3	May-15	3	ND (<1)	ND (<1)	ND (<1)	23	32
B16@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	33	33
B16@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	35	46
B16@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	41	56
B17@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	17	26
B17@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	28	36

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)
B8-20	May-15	20
B8-30	May-15	30
B8-40	May-15	40
B8-50	May-15	50
B9@5	May-15	5
B9@10	May-15	10
B9@20	May-15	20
RSL ¹		
BK ²		
SSL ³		
B10@2	May-15	2
B11@2	May-15	2
B12@2	May-15	2
B12@5	May-15	5
B12@10	May-15	10
B12@20	May-15	20
B12@35	May-15	35
B13@2	May-15	2
B13@5	May-15	5
B13@10	May-15	10
B13@20	May-15	20
B13@35	May-15	35
B14@5	May-15	5
B14@10	May-15	10
B14@20	May-15	20
B14@35	May-15	35
B15@5	May-15	5
B15@10	May-15	10
B15@20	May-15	20
B15@30	May-15	30
B16@3	May-15	3
B16@10	May-15	10
B16@20	May-15	20
B16@30	May-15	30
B17@5	May-15	5
B17@10	May-15	10

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt
B17@20	May-15	20	ND (<2)	27	81	ND (<1)	ND (<1)	24	11
B17@30	May-15	30	ND (<2)	ND (<1)	25	ND (<1)	ND (<1)	6.6	2.8
B18@3	May-15	3	ND (<2)	2.8	250	ND (<1)	ND (<1)	14	8.1
B18@10	May-15	10	ND (<2)	2.1	140	ND (<1)	ND (<1)	16	6.9
B18@20	May-15	20	ND (<2)	9	150	ND (<1)	ND (<1)	27	11
B18@30	May-15	30	ND (<2)	1.6	56	ND (<1)	ND (<1)	11	5.2
B19@5	May-15	5	ND (<2)	1.5	190	ND (<1)	ND (<1)	18	8.5
B19@10	May-15	10	ND (<2)	2.5	120	ND (<1)	ND (<1)	21	8.2
B19@20	May-15	20	ND (<2)	3.4	370	ND (<1)	ND (<1)	31	11
B19@30	May-15	30	ND (<2)	1.7	25	ND (<1)	ND (<1)	7.3	2.7
B20-5	May-15	5	ND (<2)	ND (<1)	130	ND (<1)	ND (<1)	14	6.1
B20-10	May-15	10	ND (<2)	6.1	160	ND (<1)	ND (<1)	26	10
B20-20	May-15	20	ND (<2)	3.5	33	ND (<1)	ND (<1)	7.1	2.6
B20-35	May-15	35	ND (<2)	ND (<1)	21	ND (<1)	ND (<1)	5.3	2
B21@5	May-15	5	ND (<2)	6	100	ND (<1)	ND (<1)	18	6.8
B21@10	May-15	10	ND (<2)	11	440	ND (<1)	ND (<1)	21	7.9
B21@15	May-15	15	ND (<2)	ND (<1)	190	ND (<1)	ND (<1)	12	5.3
B21@20	May-15	20	ND (<2)	3.5	250	ND (<1)	ND (<1)	23	11
RSL ¹			--	0.68	15,000	160	71	120,000 ⁴	23
BK ²			--	12	--	--	--	--	--
SSL ³			--	--	--	--	--	--	--
B21@30	May-15	30	ND (<2)	ND (<1)	50	ND (<1)	ND (<1)	5.9	3.2
B22@5	May-15	5	ND (<2)	2.5	150	ND (<1)	ND (<1)	16	6.9
B22@10	May-15	10	ND (<2)	14	290	ND (<1)	ND (<1)	22	8.2
B22@20	May-15	20	ND (<2)	1.3	50	ND (<1)	ND (<1)	5.6	3
B22@30	May-15	30	ND (<2)	ND (<1)	47	ND (<1)	ND (<1)	4.5	2.5
B23@5	May-15	5	ND (<2)	5.2	180	ND (<1)	ND (<1)	20	11
B23@10	May-15	10	ND (<2)	26	340	ND (<1)	ND (<1)	20	7
B23@20	May-15	20	ND (<2)	26	260	ND (<1)	ND (<1)	17	9.2
B23@30	May-15	30	ND (<2)	ND (<1)	47	ND (<1)	ND (<1)	3.5	2.2
B24-5	May-15	5	ND (<2)	13	90	ND (<1)	ND (<1)	16	5.8
B24-10	May-15	10	ND (<2)	ND (<1)	170	ND (<1)	ND (<1)	12	5.7
B24-15	May-15	15	ND (<2)	ND (<1)	330	ND (<1)	ND (<1)	16	6.1
B24-20	May-15	20	ND (<2)	7.9	110	ND (<1)	ND (<1)	15	6.3
B24-30	May-15	30	ND (<2)	ND (<1)	19	ND (<1)	ND (<1)	6.7	2.9
B24-40	May-15	40	ND (<2)	2.4	120	ND (<1)	ND (<1)	24	12

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel
B17@20	May-15	20	45	--	9.2	--	ND (<0.1)	ND (<1)	22
B17@30	May-15	30	6.4	--	1.8	--	ND (<0.1)	ND (<1)	4.8
B18@3	May-15	3	28	--	610	--	0.36	ND (<1)	27
B18@10	May-15	10	21	--	4.4	--	ND (<0.1)	ND (<1)	16
B18@20	May-15	20	33	--	7.5	--	ND (<0.1)	ND (<1)	24
B18@30	May-15	30	14	--	2.4	--	ND (<0.1)	ND (<1)	14
B19@5	May-15	5	26	--	6.5	--	0.12	ND (<1)	15
B19@10	May-15	10	21	--	4.6	--	ND (<0.1)	ND (<1)	17
B19@20	May-15	20	42	--	6.5	--	ND (<0.1)	ND (<1)	22
B19@30	May-15	30	7.5	--	1.7	--	ND (<0.1)	ND (<1)	5.4
B20-5	May-15	5	15	--	3	--	ND (<0.1)	ND (<1)	12
B20-10	May-15	10	37	--	6.8	--	ND (<0.1)	ND (<1)	21
B20-20	May-15	20	7.4	--	1.7	--	ND (<0.1)	ND (<1)	5.6
B20-35	May-15	35	4.1	--	1.1	--	ND (<0.1)	ND (<1)	3.8
B21@5	May-15	5	18	--	30	--	ND (<0.1)	ND (<1)	13
B21@10	May-15	10	24	--	28	--	ND (<0.1)	ND (<1)	17
B21@15	May-15	15	13	--	2.7	--	ND (<0.1)	ND (<1)	9.4
B21@20	May-15	20	22	--	6.1	--	ND (<0.1)	ND (<1)	19
RSL ¹			3,100	55,000	--	1,800	9.40	390	840
BK ²			--	--	--	--	--	--	--
SSL ³			--	--	80	--	--	--	--
B21@30	May-15	30	8.2	--	1.7	--	ND (<0.1)	ND (<1)	6
B22@5	May-15	5	17	--	16	--	ND (<0.1)	ND (<1)	16
B22@10	May-15	10	25	--	5.5	--	ND (<0.1)	ND (<1)	18
B22@20	May-15	20	7.3	--	1.6	--	ND (<0.1)	ND (<1)	4.9
B22@30	May-15	30	6.5	--	1.5	--	ND (<0.1)	ND (<1)	4.1
B23@5	May-15	5	18	--	5.8	--	ND (<0.1)	ND (<1)	16
B23@10	May-15	10	25	--	29	--	ND (<0.1)	ND (<1)	17
B23@20	May-15	20	23	--	4.2	--	ND (<0.1)	ND (<1)	16
B23@30	May-15	30	6.2	--	1.7	--	ND (<0.1)	ND (<1)	3.5
B24-5	May-15	5	14	--	9.1	--	ND (<0.1)	ND (<1)	11
B24-10	May-15	10	14	--	2.6	--	ND (<0.1)	ND (<1)	14
B24-15	May-15	15	19	--	3.7	--	ND (<0.1)	ND (<1)	13
B24-20	May-15	20	20	--	3.8	--	ND (<0.1)	ND (<1)	12
B24-30	May-15	30	9.1	--	1.4	--	ND (<0.1)	ND (<1)	6.3
B24-40	May-15	40	34	--	8.4	--	ND (<0.1)	ND (<1)	24

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)	Selenium	Silver	Thallium	Vanadium	Zinc
B17@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	46	46
B17@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	12	15
B18@3	May-15	3	ND (<1)	ND (<1)	ND (<1)	29	210
B18@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	32	39
B18@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	43	44
B18@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	21	30
B19@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	33	47
B19@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	33	40
B19@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	31	47
B19@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	12	15
B20-5	May-15	5	ND (<1)	ND (<1)	ND (<1)	29	36
B20-10	May-15	10	ND (<1)	ND (<1)	ND (<1)	45	49
B20-20	May-15	20	ND (<1)	ND (<1)	ND (<1)	15	14
B20-35	May-15	35	ND (<1)	ND (<1)	ND (<1)	7.6	10
B21@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	31	43
B21@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	36	41
B21@15	May-15	15	ND (<1)	ND (<1)	ND (<1)	22	29
B21@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	43	44
RSL ¹			390	390	0.78	390	23,000
BK ²			--	--	--	--	--
SSL ³			--	--	--	--	--
B21@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	13	17
B22@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	31	130
B22@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	39	65
B22@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	12	95
B22@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	8.7	39
B23@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	33	78
B23@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	32	53
B23@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	33	74
B23@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	6.5	16
B24-5	May-15	5	ND (<1)	ND (<1)	ND (<1)	25	32
B24-10	May-15	10	ND (<1)	ND (<1)	ND (<1)	27	32
B24-15	May-15	15	ND (<1)	ND (<1)	ND (<1)	26	38
B24-20	May-15	20	ND (<1)	ND (<1)	ND (<1)	26	36
B24-30	May-15	30	ND (<1)	ND (<1)	ND (<1)	11	14
B24-40	May-15	40	ND (<1)	ND (<1)	ND (<1)	36	48

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)
B17@20	May-15	20
B17@30	May-15	30
B18@3	May-15	3
B18@10	May-15	10
B18@20	May-15	20
B18@30	May-15	30
B19@5	May-15	5
B19@10	May-15	10
B19@20	May-15	20
B19@30	May-15	30
B20-5	May-15	5
B20-10	May-15	10
B20-20	May-15	20
B20-35	May-15	35
B21@5	May-15	5
B21@10	May-15	10
B21@15	May-15	15
B21@20	May-15	20
RSL ¹		
BK ²		
SSL ³		
B21@30	May-15	30
B22@5	May-15	5
B22@10	May-15	10
B22@20	May-15	20
B22@30	May-15	30
B23@5	May-15	5
B23@10	May-15	10
B23@20	May-15	20
B23@30	May-15	30
B24-5	May-15	5
B24-10	May-15	10
B24-15	May-15	15
B24-20	May-15	20
B24-30	May-15	30
B24-40	May-15	40

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt
B25-5	May-15	5	ND (<2)	1.3	70	ND (<1)	ND (<1)	12	5.4
B25-10	May-15	10	ND (<2)	ND (<1)	78	ND (<1)	ND (<1)	13	6.2
B25-15	May-15	15	ND (<2)	23	260	ND (<1)	ND (<1)	26	9.1
B25-20	May-15	20	ND (<2)	7.4	87	ND (<1)	ND (<1)	23	9.3
B25-30	May-15	30	ND (<2)	1.1	36	ND (<1)	ND (<1)	7.6	3.8
B25-40	May-15	40	ND (<2)	1.1	23	ND (<1)	ND (<1)	5.3	2.9
B26-5	May-15	5	ND (<2)	9.8	350	ND (<1)	ND (<1)	21	8.2
B26-10	May-15	10	ND (<2)	4.2	170	ND (<1)	ND (<1)	21	7.2
B26-15	May-15	15	ND (<2)	2.1	47	ND (<1)	ND (<1)	13	4.8
B26-20	May-15	20	ND (<2)	1.5	46	ND (<1)	ND (<1)	9.8	3.5
B26-30	May-15	30	ND (<2)	11	80	ND (<1)	ND (<1)	21	5.6
B26-40	May-15	40	ND (<2)	1.9	21	ND (<1)	ND (<1)	6.1	1.9
B26-50	May-15	50	ND (<2)	16	80	ND (<1)	ND (<1)	22	8.5
B27-5	May-15	5	ND (<2)	4.7	160	ND (<1)	3.2	20	7.1
B27-10	May-15	10	ND (<2)	6	360	ND (<1)	ND (<1)	18	6.1
B27-15	May-15	15	ND (<2)	22	200	ND (<1)	ND (<1)	26	11
B27-20	May-15	20	ND (<2)	18	110	ND (<1)	ND (<1)	26	10
B27-30	May-15	30	ND (<2)	ND (<1)	13	ND (<1)	ND (<1)	7.5	2.8
B27-40	May-15	40	ND (<2)	ND (<1)	21	ND (<1)	ND (<1)	4.7	2.7
B28@5	May-15	5	ND (<2)	1.9	52	ND (<1)	ND (<1)	8.4	3.6
B28@10	May-15	10	ND (<2)	3.2	150	ND (<1)	ND (<1)	24	9.3
B28@15	May-15	15	ND (<2)	16	160	ND (<1)	ND (<1)	29	12
B28@20	May-15	20	ND (<2)	11	90	ND (<1)	ND (<1)	20	10
B28@30	May-15	30	ND (<2)	ND (<1)	21	ND (<1)	ND (<1)	5.6	2.7
B29@2	May-15	2	ND (<2)	2.2	140	ND (<1)	ND (<1)	14	4.7
B29@5	May-15	5	ND (<2)	2	230	ND (<1)	ND (<1)	28	11
B29@10	May-15	10	ND (<2)	2.2	240	ND (<1)	ND (<1)	26	10
B29@15	May-15	15	ND (<2)	2.1	78	ND (<1)	ND (<1)	7.8	3.9
B29@20	May-15	20	ND (<2)	1.2	37	ND (<1)	ND (<1)	7.6	2.9
RSL ¹			--	0.68	15,000	160	71	120,000 ⁴	23
BK ²			--	12	--	--	--	--	--
SSL ³			--	--	--	--	--	--	--
B30@5	May-15	5	ND (<2)	3	130	ND (<1)	ND (<1)	15	6.4
B30@10	May-15	10	ND (<2)	120	1,100	ND (<1)	1.1	50	5.5
B30@20	May-15	20	ND (<2)	1.5	120	ND (<1)	ND (<1)	9.2	4.7
B30@30	May-15	30	ND (<2)	ND (<1)	53	ND (<1)	ND (<1)	4	1.9

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel
B25-5	May-15	5	13	--	2.8	--	ND (<0.1)	ND (<1)	9.3
B25-10	May-15	10	14	--	3.4	--	ND (<0.1)	ND (<1)	11
B25-15	May-15	15	24	--	5.4	--	ND (<0.1)	1.8	18
B25-20	May-15	20	29	--	5.9	--	0.17	ND (<1)	22
B25-30	May-15	30	8.9	--	2.2	--	ND (<0.1)	ND (<1)	6.6
B25-40	May-15	40	6.1	--	1.7	--	ND (<0.1)	ND (<1)	5.6
B26-5	May-15	5	24	--	21	--	ND (<0.1)	ND (<1)	18
B26-10	May-15	10	21	--	6.2	--	ND (<0.1)	ND (<1)	20
B26-15	May-15	15	13	--	2.4	--	ND (<0.1)	ND (<1)	11
B26-20	May-15	20	8.8	--	1.7	--	ND (<0.1)	ND (<1)	7.4
B26-30	May-15	30	22	--	2.7	--	ND (<0.1)	ND (<1)	16
B26-40	May-15	40	3.1	--	1.1	--	ND (<0.1)	ND (<1)	3.4
B26-50	May-15	50	23	--	5.7	--	ND (<0.1)	ND (<1)	19
B27-5	May-15	5	230	--	65	--	0.44	ND (<1)	20
B27-10	May-15	10	24	--	28	--	0.13	ND (<1)	16
B27-15	May-15	15	23	--	6.2	--	ND (<0.1)	ND (<1)	18
B27-20	May-15	20	29	--	6.3	--	0.12	ND (<1)	22
B27-30	May-15	30	8.3	--	1.8	--	ND (<0.1)	ND (<1)	5.2
B27-40	May-15	40	5.4	--	1.4	--	ND (<0.1)	ND (<1)	4.9
B28@5	May-15	5	10	--	16	--	ND (<0.1)	ND (<1)	11
B28@10	May-15	10	28	--	7.5	--	ND (<0.1)	ND (<1)	17
B28@15	May-15	15	36	--	8.5	--	ND (<0.1)	ND (<1)	25
B28@20	May-15	20	30	--	6.7	--	ND (<0.1)	ND (<1)	20
B28@30	May-15	30	7.1	--	1.4	--	ND (<0.1)	ND (<1)	4.3
B29@2	May-15	2	16	--	11	--	0.11	ND (<1)	33
B29@5	May-15	5	35	--	6.5	--	ND (<0.1)	ND (<1)	36
B29@10	May-15	10	32	--	6	--	ND (<0.1)	ND (<1)	25
B29@15	May-15	15	8.8	--	2	--	ND (<0.1)	ND (<1)	11
B29@20	May-15	20	8.2	--	1.7	--	ND (<0.1)	ND (<1)	16
RSL ¹			3,100	55,000	--	1,800	9.40	390	840
BK ²			--	--	--	--	--	--	--
SSL ³			--	--	80	--	--	--	--
B30@5	May-15	5	16	--	18	--	0.14	ND (<1)	13
B30@10	May-15	10	33	--	820	--	0.21	ND (<1)	22
B30@20	May-15	20	11	--	3.6	--	ND (<0.1)	ND (<1)	7.2
B30@30	May-15	30	6	--	1.4	--	ND (<0.1)	ND (<1)	3.5

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)	Selenium	Silver	Thallium	Vanadium	Zinc
B25-5	May-15	5	ND (<1)	ND (<1)	ND (<1)	26	33
B25-10	May-15	10	ND (<1)	ND (<1)	ND (<1)	27	37
B25-15	May-15	15	ND (<1)	ND (<1)	ND (<1)	41	41
B25-20	May-15	20	ND (<1)	ND (<1)	ND (<1)	41	44
B25-30	May-15	30	ND (<1)	ND (<1)	ND (<1)	17	18
B25-40	May-15	40	ND (<1)	ND (<1)	ND (<1)	11	15
B26-5	May-15	5	ND (<1)	ND (<1)	ND (<1)	35	42
B26-10	May-15	10	ND (<1)	ND (<1)	ND (<1)	28	36
B26-15	May-15	15	ND (<1)	ND (<1)	ND (<1)	23	30
B26-20	May-15	20	ND (<1)	ND (<1)	ND (<1)	17	20
B26-30	May-15	30	ND (<1)	ND (<1)	ND (<1)	35	30
B26-40	May-15	40	ND (<1)	ND (<1)	ND (<1)	15	12
B26-50	May-15	50	ND (<1)	ND (<1)	ND (<1)	44	41
B27-5	May-15	5	ND (<1)	ND (<1)	ND (<1)	38	4,700
B27-10	May-15	10	ND (<1)	ND (<1)	ND (<1)	30	66
B27-15	May-15	15	ND (<1)	ND (<1)	ND (<1)	44	51
B27-20	May-15	20	ND (<1)	ND (<1)	ND (<1)	43	53
B27-30	May-15	30	ND (<1)	ND (<1)	ND (<1)	15	19
B27-40	May-15	40	ND (<1)	ND (<1)	ND (<1)	10	17
B28@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	21	22
B28@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	33	46
B28@15	May-15	15	ND (<1)	ND (<1)	ND (<1)	50	48
B28@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	37	41
B28@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	11	13
B29@2	May-15	2	ND (<1)	ND (<1)	ND (<1)	21	36
B29@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	42	46
B29@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	41	45
B29@15	May-15	15	ND (<1)	ND (<1)	ND (<1)	14	17
B29@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	17	14
RSL ¹			390	390	0.78	390	23,000
BK ²			--	--	--	--	--
SSL ³			--	--	--	--	--
B30@5	May-15	5	ND (<1)	ND (<1)	ND (<1)	33	43
B30@10	May-15	10	ND (<1)	ND (<1)	ND (<1)	27	130
B30@20	May-15	20	ND (<1)	ND (<1)	ND (<1)	15	22
B30@30	May-15	30	ND (<1)	ND (<1)	ND (<1)	8	330

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)
B25-5	May-15	5
B25-10	May-15	10
B25-15	May-15	15
B25-20	May-15	20
B25-30	May-15	30
B25-40	May-15	40
B26-5	May-15	5
B26-10	May-15	10
B26-15	May-15	15
B26-20	May-15	20
B26-30	May-15	30
B26-40	May-15	40
B26-50	May-15	50
B27-5	May-15	5
B27-10	May-15	10
B27-15	May-15	15
B27-20	May-15	20
B27-30	May-15	30
B27-40	May-15	40
B28@5	May-15	5
B28@10	May-15	10
B28@15	May-15	15
B28@20	May-15	20
B28@30	May-15	30
B29@2	May-15	2
B29@5	May-15	5
B29@10	May-15	10
B29@15	May-15	15
B29@20	May-15	20
RSL ¹		
BK ²		
SSL ³		
B30@5	May-15	5
B30@10	May-15	10
B30@20	May-15	20
B30@30	May-15	30

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt
RSL ¹			--	0.68	15,000	160	71	120,000 ⁴	23
BK ²			--	12	--	--	--	--	--
SSL ³			--	--	--	--	--	--	--

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel
RSL ¹			3,100	55,000	--	1,800	9.40	390	840
BK ²			--	--	--	--	--	--	--
SSL ³			--	--	80	--	--	--	--

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)	Selenium	Silver	Thallium	Vanadium	Zinc
RSL ¹			390	390	0.78	390	23,000
BK ²			--	--	--	--	--
SSL ³			--	--	--	--	--

Definitions:

ft. = feet below ground surface.

mg/kg = milligrams per kilogram.

PQL = practical quantification limits.

ND = Not detected (below PQL shown in parentheses).

USEPA = United States Environmental Protection Agency.

RSL = Regional Screening Level for residential soil, USEPA Summary Table June 2015.

BK = California regional background arsenic concentration in soil (Chernoff, et.al., 2008).

SSL = Site Screening Level from SSI Work Plan (Tetra Tech, 2015a; 2015b).

Notes:

Title 22 metals analyzed in general accordance with USEPA Method No. 6010B. Results are in mg/kg.

Mercury analyzed in general accordance with USEPA Method No. 7471A. Results are in mg/kg.

< = analyte not detected at or above the laboratory's PQL.

Bold = analyte detected at concentration above the laboratory's PQL.

-- = Not analyzed or no RSL has been developed.

Green color indicates the analyte was detected at a concentration above its RSL, BK (in the case of arsenic), or SSL (in the case of lead).

1. RSL in mg/kg.

2. BK in mg/kg.

3. SSL in mg/kg.

4. RSL in mg/kg for trivalent chromium (chrom III).

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Metals)

Sample ID	Date	Depth (ft.)
RSL ¹		
BK ²		
SSL ³		

ne case of lead).

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol
B1@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B2@5	May-15	5	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B2@10	May-15	10	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)	ND (<16)
B2@15	May-15	15	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<16)	ND (<3.3)
B2@20	May-15	20	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)	ND (<25)
B2@35	May-15	35	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)	ND (<16)
B4@5	May-15	5	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)	ND (<25)
B4@10	May-15	10	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)	ND (<16)
B4@15	May-15	15	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)	ND (<16)
B4@20	May-15	20	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<16)	ND (<3.3)
B4@35	May-15	35	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<33)	ND (<6.6)
B17@5	May-15	5	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<16)	ND (<3.3)
B17@10	May-15	10	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B17@20	May-15	20	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<3.3)	ND (<0.66)
B17@30	May-15	30	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<3.3)	ND (<0.66)
B22@5	May-15	5	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)	ND (<25)
B22@10	May-15	10	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B22@20	May-15	20	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B22@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B23@5	May-15	5	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B23@10	May-15	10	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)	ND (<25)
B23@20	May-15	20	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B23@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B28@5	May-15	5	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<250)	ND (<50)
B28@10	May-15	10	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<8.2)	ND (<1.6)
B28@15	May-15	15	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B28@20	May-15	20	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<3.3)	ND (<0.66)
B28@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	1,2,4-Trichlorobenzene	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2,4,5-Trichlorophenol	2,4,6-Trichlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol
RSL ¹			--	--	--	--	--	--	--	--

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline
B1@30	May-15	30	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)
B2@5	May-15	5	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)
B2@10	May-15	10	ND (<82)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)
B2@15	May-15	15	ND (<16)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	4	ND (<3.3)	ND (<16)
B2@20	May-15	20	ND (<120)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	57	ND (<25)	ND (<120)
B2@35	May-15	35	ND (<82)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	25	ND (<16)	ND (<82)
B4@5	May-15	5	ND (<120)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)
B4@10	May-15	10	ND (<82)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)
B4@15	May-15	15	ND (<82)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)
B4@20	May-15	20	ND (<16)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	6.2	ND (<3.3)	ND (<16)
B4@35	May-15	35	ND (<33)	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<6.6)	17	ND (<6.6)	ND (<33)
B17@5	May-15	5	ND (<16)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<16)
B17@10	May-15	10	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)
B17@20	May-15	20	ND (<3.3)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<3.3)
B17@30	May-15	30	ND (<3.3)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<3.3)
B22@5	May-15	5	ND (<120)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)
B22@10	May-15	10	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)
B22@20	May-15	20	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)
B22@30	May-15	30	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)
B23@5	May-15	5	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)
B23@10	May-15	10	ND (<120)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)
B23@20	May-15	20	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)
B23@30	May-15	30	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)
B28@5	May-15	5	ND (<250)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<250)
B28@10	May-15	10	ND (<8.2)	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<1.6)	2.7	ND (<1.6)	ND (<8.2)
B28@15	May-15	15	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)
B28@20	May-15	20	ND (<3.3)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<3.3)
B28@30	May-15	30	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	2,4-Dinitrophenol	2,4-Dinitrotoluene	2,6-Dinitrotoluene	2-Chloronaphthalene	2-Chlorophenol	2-Methylnaphthalene	2-Methylphenol	2-Nitroaniline
RSL ¹			--	--	--	--	--	--	--	--

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4,6-Dinitro-2-methylphenol	4-Bromophenyl-phenylether	4-Chloro-3-methylphenol	4-Chloroaniline	4-Chlorophenyl-phenylether
B1@30	May-15	30	ND (<0.33)	ND (<0.66)	ND (<1.6)	ND (<1.6)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B2@5	May-15	5	ND (<0.33)	ND (<0.66)	ND (<1.6)	ND (<1.6)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B2@10	May-15	10	ND (<16)	ND (<33)	ND (<82)	ND (<82)	ND (<16)	ND (<33)	ND (<33)	ND (<16)
B2@15	May-15	15	ND (<3.3)	ND (<6.6)	ND (<16)	ND (<16)	ND (<3.3)	ND (<6.6)	ND (<6.6)	ND (<3.3)
B2@20	May-15	20	ND (<25)	ND (<50)	ND (<120)	ND (<120)	ND (<25)	ND (<50)	ND (<50)	ND (<25)
B2@35	May-15	35	ND (<16)	ND (<33)	ND (<82)	ND (<82)	ND (<16)	ND (<33)	ND (<33)	ND (<16)
B4@5	May-15	5	ND (<25)	ND (<50)	ND (<120)	ND (<120)	ND (<25)	ND (<50)	ND (<50)	ND (<25)
B4@10	May-15	10	ND (<16)	ND (<33)	ND (<82)	ND (<82)	ND (<16)	ND (<33)	ND (<33)	ND (<16)
B4@15	May-15	15	ND (<16)	ND (<33)	ND (<82)	ND (<82)	ND (<16)	ND (<33)	ND (<33)	ND (<16)
B4@20	May-15	20	ND (<3.3)	ND (<6.6)	ND (<16)	ND (<16)	ND (<3.3)	ND (<6.6)	ND (<6.6)	ND (<3.3)
B4@35	May-15	35	ND (<6.6)	ND (<13)	ND (<33)	ND (<33)	ND (<6.6)	ND (<13)	ND (<13)	ND (<6.6)
B17@5	May-15	5	ND (<3.3)	ND (<6.6)	ND (<16)	ND (<16)	ND (<3.3)	ND (<6.6)	ND (<6.6)	ND (<3.3)
B17@10	May-15	10	ND (<0.33)	ND (<0.66)	ND (<1.6)	ND (<1.6)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B17@20	May-15	20	ND (<0.66)	ND (<1.3)	ND (<3.3)	ND (<3.3)	ND (<0.66)	ND (<1.3)	ND (<1.3)	ND (<0.66)
B17@30	May-15	30	ND (<0.66)	ND (<1.3)	ND (<3.3)	ND (<3.3)	ND (<0.66)	ND (<1.3)	ND (<1.3)	ND (<0.66)
B22@5	May-15	5	ND (<25)	ND (<50)	ND (<120)	ND (<120)	ND (<25)	ND (<50)	ND (<50)	ND (<25)
B22@10	May-15	10	ND (<0.33)	ND (<0.66)	ND (<1.6)	ND (<1.6)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B22@20	May-15	20	ND (<0.33)	ND (<0.66)	ND (<1.6)	ND (<1.6)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B22@30	May-15	30	ND (<0.33)	ND (<0.66)	ND (<1.6)	ND (<1.6)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B23@5	May-15	5	ND (<0.33)	ND (<0.66)	ND (<1.6)	ND (<1.6)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B23@10	May-15	10	ND (<25)	ND (<50)	ND (<120)	ND (<120)	ND (<25)	ND (<50)	ND (<50)	ND (<25)
B23@20	May-15	20	ND (<0.33)	ND (<0.66)	ND (<1.6)	ND (<1.6)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B23@30	May-15	30	ND (<0.33)	ND (<0.66)	ND (<1.6)	ND (<1.6)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B28@5	May-15	5	ND (<50)	ND (<99)	ND (<250)	ND (<250)	ND (<50)	ND (<99)	ND (<99)	ND (<50)
B28@10	May-15	10	ND (<1.6)	ND (<3.3)	ND (<8.2)	ND (<8.2)	ND (<1.6)	ND (<3.3)	ND (<3.3)	ND (<1.6)
B28@15	May-15	15	ND (<0.33)	ND (<0.66)	ND (<1.6)	ND (<1.6)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B28@20	May-15	20	ND (<0.66)	ND (<1.3)	ND (<3.3)	ND (<3.3)	ND (<0.66)	ND (<1.3)	ND (<1.3)	ND (<0.66)
B28@30	May-15	30	ND (<0.33)	ND (<0.66)	ND (<1.6)	ND (<1.6)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	2-Nitrophenol	3,3'-Dichlorobenzidine	3-Nitroaniline	4,6-Dinitro-2-methylphenol	4-Bromophenyl-phenylethe	4-Chloro-3-methylphenol	4-Chloroaniline	4-Chlorophenyl-phenylethe
RSL ¹			-	-	-	-	-	-	-	-

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benzidine	Benzo(a)anthracene
B1@30	May-15	30	ND (<0.33)	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B2@5	May-15	5	ND (<0.33)	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B2@10	May-15	10	ND (<16)	ND (<82)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)	ND (<16)
B2@15	May-15	15	ND (<3.3)	ND (<16)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<16)	ND (<3.3)
B2@20	May-15	20	ND (<25)	ND (<120)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)	ND (<25)
B2@35	May-15	35	ND (<16)	ND (<82)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)	ND (<16)
B4@5	May-15	5	ND (<25)	ND (<120)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)	ND (<25)
B4@10	May-15	10	ND (<16)	ND (<82)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)	ND (<16)
B4@15	May-15	15	ND (<16)	ND (<82)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)	ND (<16)
B4@20	May-15	20	ND (<3.3)	ND (<16)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<16)	ND (<3.3)
B4@35	May-15	35	ND (<6.6)	ND (<33)	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<33)	ND (<6.6)
B17@5	May-15	5	ND (<3.3)	ND (<16)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<16)	ND (<3.3)
B17@10	May-15	10	ND (<0.33)	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B17@20	May-15	20	ND (<0.66)	ND (<3.3)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<3.3)	ND (<0.66)
B17@30	May-15	30	ND (<0.66)	ND (<3.3)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<3.3)	ND (<0.66)
B22@5	May-15	5	ND (<25)	ND (<120)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)	ND (<25)
B22@10	May-15	10	ND (<0.33)	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B22@20	May-15	20	ND (<0.33)	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B22@30	May-15	30	ND (<0.33)	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B23@5	May-15	5	ND (<0.33)	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B23@10	May-15	10	ND (<25)	ND (<120)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)	ND (<25)
B23@20	May-15	20	ND (<0.33)	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B23@30	May-15	30	ND (<0.33)	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B28@5	May-15	5	ND (<50)	ND (<250)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<250)	ND (<50)
B28@10	May-15	10	ND (<1.6)	ND (<8.2)	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<8.2)	ND (<1.6)
B28@15	May-15	15	ND (<0.33)	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B28@20	May-15	20	ND (<0.66)	ND (<3.3)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<3.3)	ND (<0.66)
B28@30	May-15	30	ND (<0.33)	ND (<1.6)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	4-Methylphenol	4-Nitroaniline	4-Nitrophenol	Acenaphthene	Acenaphthylene	Anthracene	Benzidine	Benzo(a)anthracene
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Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic acid	Benzyl alcohol	bis(2-chloroethoxy)methane	bis(2-Chloroethyl)ether
B1@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.66)	ND (<0.33)	ND (<0.33)
B2@5	May-15	5	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.66)	ND (<0.33)	ND (<0.33)
B2@10	May-15	10	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)	ND (<33)	ND (<16)	ND (<16)
B2@15	May-15	15	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<16)	ND (<6.6)	ND (<3.3)	ND (<3.3)
B2@20	May-15	20	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)	ND (<50)	ND (<25)	ND (<25)
B2@35	May-15	35	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)	ND (<33)	ND (<16)	ND (<16)
B4@5	May-15	5	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)	ND (<50)	ND (<25)	ND (<25)
B4@10	May-15	10	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)	ND (<33)	ND (<16)	ND (<16)
B4@15	May-15	15	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)	ND (<33)	ND (<16)	ND (<16)
B4@20	May-15	20	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<16)	ND (<6.6)	ND (<3.3)	ND (<3.3)
B4@35	May-15	35	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<33)	ND (<13)	ND (<6.6)	ND (<6.6)
B17@5	May-15	5	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<16)	ND (<6.6)	ND (<3.3)	ND (<3.3)
B17@10	May-15	10	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.66)	ND (<0.33)	ND (<0.33)
B17@20	May-15	20	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<3.3)	ND (<1.3)	ND (<0.66)	ND (<0.66)
B17@30	May-15	30	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<3.3)	ND (<1.3)	ND (<0.66)	ND (<0.66)
B22@5	May-15	5	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)	ND (<50)	ND (<25)	ND (<25)
B22@10	May-15	10	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.66)	ND (<0.33)	ND (<0.33)
B22@20	May-15	20	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.66)	ND (<0.33)	ND (<0.33)
B22@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.66)	ND (<0.33)	ND (<0.33)
B23@5	May-15	5	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.66)	ND (<0.33)	ND (<0.33)
B23@10	May-15	10	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)	ND (<50)	ND (<25)	ND (<25)
B23@20	May-15	20	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.66)	ND (<0.33)	ND (<0.33)
B23@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.66)	ND (<0.33)	ND (<0.33)
B28@5	May-15	5	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<250)	ND (<99)	ND (<50)	ND (<50)
B28@10	May-15	10	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<8.2)	ND (<3.3)	ND (<1.6)	ND (<1.6)
B28@15	May-15	15	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.66)	ND (<0.33)	ND (<0.33)
B28@20	May-15	20	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<3.3)	ND (<1.3)	ND (<0.66)	ND (<0.66)
B28@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.66)	ND (<0.33)	ND (<0.33)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzoic acid	Benzyl alcohol	bis(2-chloroethoxy)methane	bis(2-Chloroethyl)ether
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Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	bis(2-chloroisopropyl)ether	bis(2-ethylhexyl)phthalate	Butylbenzylphthalate	Chrysene	Dibenz(a,h)anthracene	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate
B1@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)
B2@5	May-15	5	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)
B2@10	May-15	10	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)
B2@15	May-15	15	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)
B2@20	May-15	20	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)
B2@35	May-15	35	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)
B4@5	May-15	5	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)
B4@10	May-15	10	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)
B4@15	May-15	15	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)
B4@20	May-15	20	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)
B4@35	May-15	35	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<6.6)
B17@5	May-15	5	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)
B17@10	May-15	10	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)
B17@20	May-15	20	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)
B17@30	May-15	30	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)
B22@5	May-15	5	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)
B22@10	May-15	10	ND (<0.33)	0.4	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)
B22@20	May-15	20	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)
B22@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)
B23@5	May-15	5	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)
B23@10	May-15	10	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)
B23@20	May-15	20	ND (<0.33)	1.4	0.4	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)
B23@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)
B28@5	May-15	5	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)
B28@10	May-15	10	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<1.6)
B28@15	May-15	15	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)
B28@20	May-15	20	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)
B28@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	bis(2-chloroisopropyl)ether	bis(2-ethylhexyl)phthalate	Butylbenzylphthalate	Chrysene	Dibenz(a,h)anthracene	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate
RSL ¹			--	--	290	--	--	--	--	--

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	Di-n-butylphthalate	Di-n-octylphthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane
B1@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B2@5	May-15	5	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B2@10	May-15	10	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<33)	ND (<33)	ND (<16)
B2@15	May-15	15	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<6.6)	ND (<6.6)	ND (<3.3)
B2@20	May-15	20	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<50)	ND (<50)	ND (<25)
B2@35	May-15	35	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<33)	ND (<33)	ND (<16)
B4@5	May-15	5	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<50)	ND (<50)	ND (<25)
B4@10	May-15	10	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<33)	ND (<33)	ND (<16)
B4@15	May-15	15	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<33)	ND (<33)	ND (<16)
B4@20	May-15	20	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<6.6)	ND (<6.6)	ND (<3.3)
B4@35	May-15	35	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<13)	ND (<13)	ND (<6.6)
B17@5	May-15	5	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<6.6)	ND (<6.6)	ND (<3.3)
B17@10	May-15	10	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B17@20	May-15	20	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<1.3)	ND (<1.3)	ND (<0.66)
B17@30	May-15	30	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<1.3)	ND (<1.3)	ND (<0.66)
B22@5	May-15	5	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<50)	ND (<50)	ND (<25)
B22@10	May-15	10	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B22@20	May-15	20	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B22@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B23@5	May-15	5	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B23@10	May-15	10	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<50)	ND (<50)	ND (<25)
B23@20	May-15	20	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B23@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B28@5	May-15	5	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<99)	ND (<99)	ND (<50)
B28@10	May-15	10	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<3.3)	ND (<3.3)	ND (<1.6)
B28@15	May-15	15	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)
B28@20	May-15	20	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<1.3)	ND (<1.3)	ND (<0.66)
B28@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.66)	ND (<0.66)	ND (<0.33)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	Di-n-butylphthalate	Di-n-octylphthalate	Fluoranthene	Fluorene	Hexachlorobenzene	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane
RSL ¹			--	--	--	--	--	--	--	--

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	Indeno(1,2,3-cd)pyrene	Isophorone	Naphthalene	Nitrobenzene	N-Nitroso-di-n propylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene
B1@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B2@5	May-15	5	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B2@10	May-15	10	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)	ND (<16)
B2@15	May-15	15	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<16)	ND (<3.3)
B2@20	May-15	20	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)	ND (<25)
B2@35	May-15	35	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)	ND (<16)
B4@5	May-15	5	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)	ND (<25)
B4@10	May-15	10	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)	ND (<16)
B4@15	May-15	15	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<16)	ND (<82)	ND (<16)
B4@20	May-15	20	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<16)	ND (<3.3)
B4@35	May-15	35	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<6.6)	ND (<33)	ND (<6.6)
B17@5	May-15	5	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<3.3)	ND (<16)	ND (<3.3)
B17@10	May-15	10	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B17@20	May-15	20	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<3.3)	ND (<0.66)
B17@30	May-15	30	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<3.3)	ND (<0.66)
B22@5	May-15	5	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)	ND (<25)
B22@10	May-15	10	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B22@20	May-15	20	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B22@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B23@5	May-15	5	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B23@10	May-15	10	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<25)	ND (<120)	ND (<25)
B23@20	May-15	20	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B23@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B28@5	May-15	5	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<50)	ND (<250)	ND (<50)
B28@10	May-15	10	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<1.6)	ND (<8.2)	ND (<1.6)
B28@15	May-15	15	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)
B28@20	May-15	20	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<0.66)	ND (<3.3)	ND (<0.66)
B28@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<0.33)	ND (<1.6)	ND (<0.33)

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	Indeno(1,2,3-cd)pyrene	Isophorone	Naphthalene	Nitrobenzene	N-Nitroso-di-n propylamine	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene
RSL ¹			--	--	--	--	--	--	--	--

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	Phenol	Pyrene	Pyridine
B1@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<1.6)
B2@5	May-15	5	ND (<0.33)	ND (<0.33)	ND (<1.6)
B2@10	May-15	10	ND (<16)	ND (<16)	ND (<82)
B2@15	May-15	15	ND (<3.3)	ND (<3.3)	ND (<16)
B2@20	May-15	20	ND (<25)	ND (<25)	ND (<120)
B2@35	May-15	35	ND (<16)	ND (<16)	ND (<82)
B4@5	May-15	5	ND (<25)	ND (<25)	ND (<120)
B4@10	May-15	10	ND (<16)	ND (<16)	ND (<82)
B4@15	May-15	15	ND (<16)	ND (<16)	ND (<82)
B4@20	May-15	20	ND (<3.3)	ND (<3.3)	ND (<16)
B4@35	May-15	35	ND (<6.6)	ND (<6.6)	ND (<33)
B17@5	May-15	5	ND (<3.3)	ND (<3.3)	ND (<16)
B17@10	May-15	10	ND (<0.33)	ND (<0.33)	ND (<1.6)
B17@20	May-15	20	ND (<0.66)	ND (<0.66)	ND (<3.3)
B17@30	May-15	30	ND (<0.66)	ND (<0.66)	ND (<3.3)
B22@5	May-15	5	ND (<25)	ND (<25)	ND (<120)
B22@10	May-15	10	ND (<0.33)	ND (<0.33)	ND (<1.6)
B22@20	May-15	20	ND (<0.33)	ND (<0.33)	ND (<1.6)
B22@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<1.6)
B23@5	May-15	5	ND (<0.33)	ND (<0.33)	ND (<1.6)
B23@10	May-15	10	ND (<25)	ND (<25)	ND (<120)
B23@20	May-15	20	ND (<0.33)	ND (<0.33)	ND (<1.6)
B23@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<1.6)
B28@5	May-15	5	ND (<50)	ND (<50)	ND (<250)
B28@10	May-15	10	ND (<1.6)	ND (<1.6)	ND (<8.2)
B28@15	May-15	15	ND (<0.33)	ND (<0.33)	ND (<1.6)
B28@20	May-15	20	ND (<0.66)	ND (<0.66)	ND (<3.3)
B28@30	May-15	30	ND (<0.33)	ND (<0.33)	ND (<1.6)

Definitions:

ft. = feet below ground surface.
 mg/kg = milligrams per kilogram.
 PQL = practical quantification limits.
 ND = Not detected (below PQL shown in parentheses).
 SVOCs = semi-volatile organic compounds.
 USEPA = United States Environmental Protection Agency.
 RSL = Regional Screening Level for residential soil, USEPA :

Notes:

SVOCs analyzed in general accordance with USEPA Method
 < = analyte not detected at or above the laboratory's PQL.
Bold = analyte detected at concentration above the laboratory'
 -- = No RSL has been developed.
 1. RSL in mg/kg.

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)	Phenol	Pyrene	Pyridine
RSL ¹			--	--	--

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)
B1@30	May-15	30
B2@5	May-15	5
B2@10	May-15	10
B2@15	May-15	15
B2@20	May-15	20
B2@35	May-15	35
B4@5	May-15	5
B4@10	May-15	10
B4@15	May-15	15
B4@20	May-15	20
B4@35	May-15	35
B17@5	May-15	5
B17@10	May-15	10
B17@20	May-15	20
B17@30	May-15	30
B22@5	May-15	5
B22@10	May-15	10
B22@20	May-15	20
B22@30	May-15	30
B23@5	May-15	5
B23@10	May-15	10
B23@20	May-15	20
B23@30	May-15	30
B28@5	May-15	5
B28@10	May-15	10
B28@15	May-15	15
B28@20	May-15	20
B28@30	May-15	30

Summary Table June 2015.

No. 8270C. Results are in mg/kg.

s PQL.

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (SVOCs)

Sample ID	Date	Depth (ft.)
RSL ¹		

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (PCBs)

Sample ID	Date	Depth (ft.)	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262
B1@30	May-15	30	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)
B2@5	May-15	5	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	0.02	0.046	ND (<0.016)
B2@10	May-15	10	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)
B2@15	May-15	15	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)
B2@20	May-15	20	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)
B2@35	May-15	35	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)
B4@5	May-15	5	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)
B4@10	May-15	10	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)
B4@15	May-15	15	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)
B4@20	May-15	20	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)
B4@35	May-15	35	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)	ND (<0.16)
B17@5	May-15	5	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)
B17@10	May-15	10	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)
B17@20	May-15	20	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)
B17@30	May-15	30	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)
B28@5	May-15	5	ND (<0.032)	ND (<0.032)	ND (<0.032)	ND (<0.032)	ND (<0.032)	ND (<0.032)	ND (<0.032)	ND (<0.032)
B28@10	May-15	10	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)
B28@15	May-15	15	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)
B28@20	May-15	20	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)
B28@30	May-15	30	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)	ND (<0.016)
RSL ¹			--	--	--	--	--	0.12	0.24	--

Definitions:

ft. = feet below ground surface.

mg/kg = milligrams per kilogram.

PQL = practical quantification limits.

ND = Not detected (below PQL shown in parentheses).

PCBs = Polychlorinated biphenyls.

USEPA = United States Environmental Protection Agency.

RSL = Regional Screening Level for residential soil, USEPA Summary Table June 2015.

Notes:

PCBs analyzed in general accordance with U.S.EPA Method No.

Results are in mg/kg.

< = analyte not detected at or above the laboratory's PQL.

Bold = analyte detected at concentration above the laboratory's P

-- = No RSL has been developed.

1. RSL in mg/kg .

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (PCBs)

Aroclor 1268
ND (<0.016)
ND (<0.016)
ND (<0.16)
ND (<0.16)
ND (<0.16)
ND (<0.16)
ND (<0.16)
ND (<0.16)
ND (<0.16)
ND (<0.16)
ND (<0.16)
ND (<0.16)
ND (<0.016)
ND (<0.016)
ND (<0.016)
ND (<0.016)
ND (<0.032)
ND (<0.016)
ND (<0.016)
ND (<0.016)
ND (<0.016)
ND (<0.016)
--

8082.

QL.

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Pesticides)

Sample ID	Date	Depth (ft.)	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane
B8-5	May-15	5	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.0085)
B10@2	May-15	2	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.0085)
B11@2	May-15	2	ND (<0.002)	ND (<0.002)	0.0031	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.0085)
B12@2	May-15	2	ND (<0.002)	ND (<0.002)	0.0036	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.0085)
B13@2	May-15	2	ND (<0.01)	ND (<0.01)	0.011	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	0.042
RSL ¹			--	--	1.9	--	--	--	--	1.7

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Pesticides)

Sample ID	Date	Depth (ft.)	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone
B8-5	May-15	5	ND (<0.001)	ND (<0.002)	ND (<0.001)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)
B10@2	May-15	2	ND (<0.001)	ND (<0.002)	ND (<0.001)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)
B11@2	May-15	2	ND (<0.001)	ND (<0.002)	ND (<0.001)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)
B12@2	May-15	2	ND (<0.001)	ND (<0.002)	ND (<0.001)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)	ND (<0.002)
B13@2	May-15	2	ND (<0.005)	ND (<0.01)	ND (<0.005)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)
RSL ¹			--	--	--	--	--	--	--	--

Definitions:

ft. = feet below ground surface.
 mg/kg = milligrams per kilogram
 PQL = practical quantification limit
 ND = Not detected (below PQL)
 USEPA = United States Environmental Protection Agency
 RSL = Regional Screening Level

Notes:

Pesticides analyzed in general are listed in the table.
 < = analyte not detected at or above the RSL
Bold = analyte detected at concentration above the RSL
 -- = No RSL has been developed for this analyte
 1. RSL in mg/kg.

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Pesticides)

Sample ID	Date	Depth (ft.)	gamma-BHC	gamma-Chlordane	Heptachlor	Heptachlor epoxid	Methoxychlor	Toxaphene
B8-5	May-15	5	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.005)	ND (<0.05)
B10@2	May-15	2	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.005)	ND (<0.05)
B11@2	May-15	2	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.005)	ND (<0.05)
B12@2	May-15	2	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.001)	ND (<0.005)	ND (<0.05)
B13@2	May-15	2	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.005)	ND (<0.025)	ND (<0.25)
RSL ¹			--	--	--	--	--	--

m.
 limits.
 shown in parentheses).
 nmental Protection Agency.
 el for residential soil, USEPA Summary Table June 2015.

iccordance with U.S.EPA Method No. 8081. Results are in mg/kg.
 ove the laboratory's PQL.
 entration above the laboratory's PQL.
 d.

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Chlorinated Herbicides)

Sample ID	Date	Depth (ft.)	2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	2,4,5-TP	2,4-D	2,4-DB	3,5-Dichlorobenzoic acid	4-Nitrophenol	Acifluorfen	Bentazon	Chloramben	Dalapon
B10@2	5/14/2015	2	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.02)	ND (<0.01)	ND (<0.01)	ND (<0.02)
B11@2	5/14/2015	2	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.02)	ND (<0.01)	ND (<0.01)	ND (<0.02)
B12@2	5/14/2015	2	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.01)	ND (<0.02)	ND (<0.01)	ND (<0.01)	ND (<0.02)
B13@2	5/14/2015	2	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.05)	ND (<0.1)	ND (<0.05)	ND (<0.05)	ND (<0.1)
RSL ¹			--	--	--	--	--	--	--	--	--	--

Definitions:

ft. = feet below ground surface.

mg/kg = milligrams per kilogram.

PQL = practical quantification limits.

ND = Not detected (below PQL shown in parentheses).

USEPA = United States Environmental Protection Agency.

RSL = Regional Screening Level for residential soil, USEPA Summary Table June 2015.

Notes:

Herbicides analyzed in general accordance with U.S.EPA Method No. 8151A . Results are in mg/kg.

< = analyte not detected at or above the laboratory's PQL.

-- = No RSL has been developed.

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Chlorinated Herbicides)

1. RSL in mg/kg.

Tetra Tech SSI: Summary of Analytical Results: Soil Samples (Chlorinated Herbicides)

DCPA diacid	Dicamba	Dichloroprop	Dinoseb (DNBP, 2-sec-Butyl-4, 6-dinitrophenol)	MCPA	MCPP	Pentachlorophenol (PCP)	Picloram
ND (<0.02)	ND (<0.01)	ND (<0.01)	ND (<0.02)	ND (<2)	ND (<2)	ND (<0.01)	ND (<0.01)
ND (<0.02)	ND (<0.01)	ND (<0.01)	ND (<0.02)	ND (<2)	ND (<2)	ND (<0.01)	ND (<0.01)
ND (<0.02)	ND (<0.01)	ND (<0.01)	ND (<0.02)	ND (<2)	ND (<2)	ND (<0.01)	ND (<0.01)
ND (<0.1)	ND (<0.05)	ND (<0.05)	ND (<0.1)	ND (<10)	ND (<10)	ND (<0.05)	ND (<0.05)
--	--	--	--	--	--	--	--

APPENDIX III

Tables of Groundwater Data

Table IIB
Historical CoC Trends in Groundwater - OOI
712 W. Baker Street
Long Beach, California 90806

Well ID	Date	TPHg (µg/L)	TPHd (mg/L)	TPHo (mg/L)	Benzene (µg/L)	Arsenic (mg/L)	Lead (mg/L)
92-MW1	2/8/19	<50	<0.4	<0.8	<0.5	<0.02	<0.02
	3/19/18	<50	<0.4	<0.8	<0.5	<0.02	<0.02
	12/9/15	<50	<0.4	<0.8	<0.5	<0.02	<0.02
	12/12/12	<100	<0.4	<0.8	<0.5	<0.02	<0.02
	9/27/04	<400	<0.4	<0.8	<0.5	<0.02	<0.02
ESE-MW1	2/8/19	400	<0.4	<0.8	54	0.053	<0.02
	3/19/18	1200	<0.4	<0.8	75	0.135	<0.02
	12/9/15	18900	0.85	<0.8	490	0.224	<0.02
	12/12/12	7200	7.13	<0.8	580	0.364	<0.02
	9/27/04	<400	0.43	<0.8	50	<0.02	<0.02
ESE-MW2	2/8/19	<50	<0.4	<0.8	<0.5	<0.02	<0.02
	3/19/18	<50	<0.4	<0.8	<0.5	<0.02	<0.02
	12/9/15	<50	<0.4	<0.8	<0.5	<0.02	<0.02
	12/12/12	<100	<0.4	<0.8	<0.5	0.047	<0.02
	9/27/04	<400	0.67	<0.8	<0.5	0.15	<0.02
BRYCON-MW1	2/8/19	100000	<0.4	<0.8	310	0.053	<0.02
	3/19/18	50000	<0.4	<0.8	310	0.09	<0.02
	12/9/15	5400	<0.4	<0.8	46	0.056	<0.02
	12/12/12	123000	214	<0.8	460	0.054	<0.02
BRYCON-MW2	2/8/19	280	<0.4	<0.8	20	0.2	<0.02
	3/19/18	2200	<0.4	<0.8	110	0.337	<0.02
	12/9/15	4020	<0.4	<0.8	130	0.332	<0.02
	12/12/12	2900	6.42	<0.8	130	0.313	<0.02
BRYCON-MW3	2/8/19	13000	0.56	<0.8	250	0.11	<0.02
	3/19/18	10000	<0.4	<0.8	370	0.19	<0.02
	12/9/15	17600	0.75	<0.8	450	0.21	<0.02
	12/12/12	11300	3.84	<0.8	380	0.22	<0.02
BRYCON-MW4	2/8/19	480	<0.4	<0.8	<0.5	0.032	<0.02
	3/19/18	340	<0.4	<0.8	<0.5	0.028	<0.02
	12/9/15	350	<0.4	<0.8	0.55	0.298	<0.02
BRYCON-MW5	2/8/19	<50	<0.4	<0.8	<0.50	<0.20	<0.02
	3/19/18	5700	<0.4	<0.8	160	0.177	<0.02
	12/9/15	740	<0.4	<0.8	2.5	0.038	<0.02
TMW1	2/8/19	<50	<0.4	<0.8	<0.5	<0.02	<0.02
	3/20/18	<50	<0.4	<0.8	<0.5	<0.02	<0.02
	3/21/18	<50	<0.4	<0.8	<0.5	0.121	<0.02
TMW2	2/8/19	<50	<0.4	<0.8	<0.5	0.155	<0.02
	3/19/18	<50	<0.4	<0.8	<0.5	0.25	<0.02
	12/9/15	<50	<0.4	<0.8	<0.5	0.26	<0.02
TMW3	2/8/19	<50	<0.4	<0.8	<0.5	<0.02	<0.02
	3/19/18	<50	<0.4	<0.8	<0.5	<0.02	<0.02
	12/9/15	<50	<0.4	<0.8	<0.5	0.02	<0.02
TMW4	2/8/19	<50	<0.4	<0.8	<0.5	<0.02	<0.02
	3/19/18	<50	<0.4	<0.8	<0.5	<0.02	<0.02
	12/9/15	<50	<0.4	<0.8	<0.5	<0.02	<0.02
TMW5	2/8/19	9800	1.2	<0.8	1800	0.11	<0.02
	3/19/18	17000	<0.4	<0.8	3200	0.2	<0.02
	12/9/15	34800	1.7	<0.8	3000	0.325	<0.02
TMW6	2/8/19	<50	<0.4	<0.8	<0.5	0.711	<0.02
	3/19/18	18	<0.4	<0.8	0.66	0.556	<0.02
	12/9/15	320	<0.4	<0.8	<0.5	0.48	<0.02

TPHg = Total Petroleum Hydrocarbons as Gasoline

TPHd = Total Petroleum Hydrocarbons as Diesel

TPHo = Total Petroleum Hydrocarbons as Oil

Table 1. Groundwater Elevations (as measured on February 8, 2019)

Well No.	Date Measured	Time (AM)	Well Elevation* (feet, msl)	Depth to Groundwater (feet)	Well Screen Info. (Depth Below Top of Casing)	Groundwater Elevation (feet, msl)
92-MW1	2/8/19	7:20	29.21	30.75	No Info. T.D. = 76.5 ft.	- 1.54
ESE-MW1	2/8/19	11:55	50.24	51.18	Top = 48.0 ft. Btm. = 73.0 ft.	- 0.94
ESE-MW2	2/8/19	9:10	34.39	35.02	Top = 36.5 ft. Btm. = 56.5 ft.	- 0.63
Brycon-MW1	2/8/19	10:10	40.48	40.86**	Top = 38.0 ft. Btm. = 53.0 ft.	- 0.38
Brycon-MW2	2/8/19	11:30	40.72	41.57	Top = 38.0 ft. Btm. = 48.0 ft.	- 0.85
Brycon-MW3	2/8/19	1:49 pm	47.46	48.71	Top = 47.0 ft. Btm. = 62.0 ft.	- 1.25
Brycon-MW4	2/8/19	11:00	40.55	41.25	Top = 33.0 ft. Btm. = 63.0 ft.	- 0.70
Brycon-MW5	2/8/19	9:40	41.09	41.52	Top = 33.0 ft. Btm. = 63.0 ft.	- 0.43
TMW1	2/8/19	3:35 pm	41.64	43.17	Top = 39.0 ft. Btm. = 59.0 ft.	-1.53
TMW2	2/8/19	3:05 pm	33.26	34.59	Top = 28.0 ft. Btm. = 48.0 ft.	- 1.33
TMW3	2/8/19	8:10	32.41	33.44	Top = 20.0 ft. Btm. = 40.0 ft.	- 1.03
TMW4	2/8/19	8:35	35.66	36.52	Top = 27.0 ft. Btm. = 47.0 ft.	- 0.86
TMW5	2/8/19	1:40 pm	46.32	47.59	Top = 40.0 ft. Btm. = 58.0 ft.	- 1.27
TMW6	2/8/19	2:40 pm	29.66	30.55	Top = 20.0 ft. Btm. = 40.0 ft.	- 0.89

Notes:

Feet, msl: units are in feet relative to mean sea level

* Elevation is measured at top of casing as surveyed in Aug. 2011, Aug. 2013 and Sept. 2015 by Russell W. Greer, L.S.

** Calculated Water Surface Depth (Top of Product = 40.85, Top of Water = 40.87 measured with Interface Probe)

Table 2. Analytical Results of February 2019 Groundwater Monitoring

Well Number	TPH EPA Method 8015 (mg/l)	VOCs Method 8260B	EPA (ug/l)	CAM Metals EPA Methods 6010/7470A (mg/l)	PH EPA Method 9040	TOC Method SM 5310D (mg/l)	TDS EPA Method 160.1 (mg/l)	TSS EPA Method 160.2 (mg/l)	Chloride EPA Method 300.0 (mg/l)
ESE-MW1	.400 (C4-C12) ND (C13-C22) ND (C23-C40)	Benzene 1,2-DCA Isopropylbenzene n-propylbenzene Toluene All other constituents	54 3.6 5.4 5.0 0.51 ND	Arsenic 0.0530 barium 0.126 vanadium 0.131 ALL OTHERS ND	6.74	13	1,910	350	650
ESE-MW2	ND (C4-C40)	All constituents	ND	barium 0.0236 molybdenum 0.0207 silver 0.0476 vanadium 0.0237 ALL OTHERS ND	6.87	2.8	2,380	202	560
92-MW1	ND (C4-12) ND (C13-C40)	All constituents	ND	barium 0.135 vanadium 0.127 ALL OTHERS ND	6.87	15	3,350	46	1,700
Brycon-MW1	100.0 (C4-C12) ND (C13-C22) ND (C23-C40)	4-Isopropyltoluene 1,2,4-trimethylbenzene 1,3,5-trimethylbenzene All other constituents	150 540 210 ND	Arsenic 0.053 barium 0.191 vanadium 0.168 ALL OTHERS ND	6.64	11	2,760	226	1,500

mg/l: milligrams per liter
 C₉ – C₁₂: carbon chain range
 ug/l: micrograms per liter
 1,2-DCA: 1,2-dichloroethane
 TDS: total dissolved solids
 VOCs: volatile organic compounds
 TPH: total petroleum hydrocarbons
 TSS: total suspended solids
 ND: not detected (see laboratory reports for detection limits)
 TOC: total organic carbon
 DL: detection limit

Table 2 Continued - Analytical Results of February 2019 Groundwater Monitoring

Well Number	TPH EPA Method 8015 (mg/l)	VOCs EPA Method 8260B (ug/l)	CAM Metals EPA Methods 6010/7470A (mg/l)	PH EPA Method 9040	TOC Method SM 5310D (mg/l)	TDS EPA Method 160.1 (mg/l)	TSS EPA Method 160.2 (mg/l)	Chloride EPA Method 300.0 (mg/l)
Brycon-MW2	.280 (C4-C12) ND (C13-C22) ND (C23-C40)	Benzene 20 2-Chlorotoluene 18 4-Isopropyltoluene 3.3 n-propylbenzene 18 Isopropylbenzene 24 Total xylenes 5.0 All other constituents ND	arsenic 0.200 barium 0.0807 vanadium 0.0151 ALL OTHERS ND	6.73	16	1,980	124	740
Brycon – MW3	13.0 (C4-C12) 0.56 (C13-C22) ND (C23-C40)	Benzene 250 Sec-Butylbenzene 5.6 ethylbenzene 190 isopropylbenzene 50 4-Isopropyltoluene 17 Naphthalene 30 n-propylbenzene 43 Toluene 29 1,2,4-trimethylbenzene 190 1,3,5-trimethylbenzene 53 Total xylenes 471 All other constituents ND	arsenic 0.110 barium 0.165 molybdenum 0.0140 vanadium 0.184 ALL OTHERS ND	6.66	45	1,920	138	730
Brycon – MW4	0.48 (C4-C12) ND (C13-C22) ND (C23-C40)	1,2-DCA 2.1 All other constituents ND	Arsenic 0.0319 barium 0.866 molybdenum 0.0119 vanadium 0.350 ALL OTHERS ND	6.64	4.1	4,050	332	2,400
Brycon – MW5	ND (C4-C12) ND (C13-C22) ND (C23-C40)	1,2-DCA 6.3 1,2,4-trimethylbenzene 1.2 All other constituents ND	barium 0.248 molybdenum 0.0153 vanadium 0.134 ALL OTHERS ND	6.70	7.5	3,620	102	2,200

Table 2 Continued - Analytical Results of February 2019 Groundwater Monitoring

Well Number	TPH EPA Method 8015 (mg/l)	VOCs EPA Method 8260B (ug/l)	CAM Metals EPA Methods 6010/7470A (mg/l)	PH EPA Method 9040	TOC Method SM 5310D (mg/l)	TDS EPA Method 160.1 (mg/l)	TSS EPA Method 160.2 (mg/l)	Chloride EPA Method 300.0 (mg/l)
TMW1	ND (C4-C12) ND (C13-C22) ND (C23-C40)	All constituents ND	barium 0.0283 vanadium 0.315 ALL OTHERS ND	6.85	9.5	6,040	1,010	3,500
TMW2	ND (C4-C12) ND (C13-C22) ND (C23-C40)	All constituents ND	arsenic 0.155 molybdenum 0.0304 vanadium 0.235 ALL OTHERS ND	6.73	11	3,300	3,510	2,800
TMW3	ND (C4-C12) ND (C13-C22) ND (C23-C40)	All constituents ND	barium 0.0628 molybdenum 0.0788 vanadium 0.0790 ALL OTHERS ND	6.97	12	4,070	134	1,800
TMW4	ND (C4-C12) ND (C13-C22) ND (C23-C40)	All constituents ND	barium 0.0549 molybdenum 0.0254 vanadium 0.152 ALL OTHERS ND	6.85	17	6,810	260	5,600

mg/l: milligrams per liter
 C₉ – C₁₂: carbon chain range
 ug/l: micrograms per liter

1,2-DCA: 1,2-dichloroethane
 TDS: total dissolved solids
 VOCs: volatile organic compounds

TPH: total petroleum hydrocarbons
 TSS: total suspended solids
 ND: not detected (see laboratory reports for detection limits)

TOC: total organic carbon
 DL: detection limit

Table 2 Continued - Analytical Results of February 2019 Groundwater Monitoring

Well Number	TPH EPA Method 8015 (mg/l)	VOCs EPA Method 8260B (ug/l)	CAM Metals EPA Methods 6010/7470A (mg/l)	PH EPA Method 9040	TOC Method SM 5310D (mg/l)	TDS EPA Method 160.1 (mg/l)	TSS EPA Method 160.2 (mg/l)	Chloride EPA Method 300.0 (mg/l)
TMW5	9.8 (C4-C12) 1.2 (C13-C22) ND (C23-C40)	Benzene 1,800 ethylbenzene 330 Naphthalene 61 n-propylbenzene 31 Isopropylbenzene 22 Toluene 310 1,2,4-trimethylbenzene 200 1,3,5-trimethylbenzene 51 Total xylenes 930 All other constituents ND	arsenic 0.110 barium 0.161 vanadium 0.190 ALL OTHERS ND	6.78	17	1,800	870	710
TMW6	ND (C4-C12) ND (C13-C22) ND (C23-C40)	All constituents ND	arsenic 0.711 barium 0.158 molybdenum 0.0196 vanadium 0.0274 ALL OTHERS ND	7.16	5.8	2,630	3,350	1,100

mg/l: milligrams per liter
 C₉ – C₁₂: carbon chain range
 ug/l: micrograms per liter

1,2-DCA: 1,2-dichloroethane
 TDS: total dissolved solids
 VOCs: volatile organic compounds

TPH: total petroleum hydrocarbons
 TSS: total suspended solids
 ND: not detected (see laboratory reports for detection limits)

TOC: total organic carbon
 DL: detection limit

APPENDIX IV

Human Health Risk Assessment – HHRA (Mearns, 2016)

Subject: 712 Baker St
From: "Susan Mearns" <Mearns.Consulting@verizon.net>
Date: 9/7/19, 2:33 PM
To: "Charles I. Buckley" <cbuckley@calenviro.com>

Hi Charles:

Pursuant to our conversation Thursday, the risk based cleanup goals estimated for soils between 5-10 feet bgs are applicable to soils between 0-5 feet bgs.

Please do not hesitate to contact me should you have any questions.

Thank you,
Susan

Susan L Mearns PhD

Mearns Consulting Corp, 738 Ashland Avenue, Santa Monica, California 90405; email: Mearns.Consulting@verizon.net; cell: 310.403.1921; office 310.396.9606; fax: 310.396.6878

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MEARNS CONSULTING LLC

ENVIRONMENTAL CONSULTANTS

RISK ASSESSORS

738 Ashland Avenue, Santa Monica, California 90405

Cell 310.403.1921

Tel 310.396.9606 Fax 310.396.6878

Mearns@MearnsConsulting.com

www.MearnsConsulting.com

February 26, 2016

via email

Ms. Rebecca Orr
Water Resource Control Engineer
Los Angeles Regional Water Quality Control Board
320 4th Street, Suite 200
Los Angeles, California 90033

Mr. James C. Carlisle, D.V.M., M.Sc.
Staff Toxicologist
Office of Environmental Health Hazard Assessment
1001 I Street
Sacramento, California 95814

RE: **Response to Memorandum dated February 18, 2016**
Human Health Risk Assessment
712 Baker Street, Long Beach, California 90806

Dear Ms. Orr and Dr. Carlisle:

Thank you for your comments after review of the Human Health Risk Assessment prepared for the property located at 712 Baker Street, Long Beach, California 90806, dated January 14, 2016, as presented in the Memorandum dated February 18, 2016.

We have the following responses and clarifications to the comments within the Memorandum and anticipate a conversation would facilitate the best path forward.

1. We agree the 95UCL as an exposure point concentration for residential land use is not ideal. However, this project has the following constraints that we thought limited the use and usefulness of a lot-by-lot basis: (1) the data was not collected on a lot-by-lot basis and cannot be apportioned to a lot-by-lot basis easily, (2) the site will be mass graded and import brought onsite to achieve final elevations prior to development.
2. Total petroleum hydrocarbons were assessed as aliphatics as: (1) the historic use of the site was for treatment of produced water and wastewater recovered during oil production in settling basins, i.e., the source of TPH was crude, not a refined product and (2) the DTSC PEA guidance indicates “the more toxic components of TPH should be specifically analyzed for in soil and soil vapor including: BTEX compounds (i.e., benzene, ethylbenzene, toluene, and xylenes), butadiene, hexane, methyl tert-butyl ether (MTBE), 2-methylnaphthalene, PAHs, including naphthalene, Title 22 California Assessment Manual (CAM) metals, and, in some circumstances, dioxins and PCBs.”; these compounds were analyzed for in soil and in some instances soil vapor.

The RfDo's listed in Table 9 for C4-C12 should be 0.04 and for C13-C22 should be 1E-01; the calculations were performed with these RfDo's not the erroneous ones listed in Table 9.

The proposed cleanup level for arsenic, 16mg/kg, is the 95UCL and resulted in an estimated risk of 4E-05 for the residential scenario. The regulatory agency accepted Regional Southern California concentration of arsenic is 14mg/kg (*Selecting Inorganic Constituents as Chemicals of Concern for Risk Assessments at Hazardous Waste Sites and Permitted Facilities* (DTSC 1997), *Background Metals at Los Angeles Unified School Sites – Arsenic* (DTSC 2005) and *Arsenic Strategies, Determination of Arsenic Remediation, Development of Arsenic Cleanup Goals* (DTSC 2009)). Furthermore the minimum detected concentration of arsenic in onsite soils was 1.2mg/kg, the maximum detected concentration was 120mg/kg; the mean was 9mg/kg and the standard deviation was 16. Lastly, only six concentrations (out of a population of 67) of arsenic were detected at 16mg/kg or greater: (1) 38mg/kg at 10-feet bgs, (2) 16mg/kg at 5-feet and 20mg/kg at 10-feet bgs from the same boring, (3) 24mg/kg at 10-feet bgs, (4) 26mg/kg at 10-feet bgs and (5) 120mg/kg at 10-feet bgs.

The inadvertent oversight of not assessing the inhalation pathway of exposure for TPH, naphthalene and DDT is acknowledged however the methane mitigation system required subslab will mitigate these constituents in the volatile phase in addition to those constituents that were assessed.

3. The proposed cleanup goal of 80mg/kg for lead and 16mg/kg for arsenic would result in 20 “hot-spot” soil removal excavations to a maximum depth of 10-feet bgs. TPH in soils at these locations also would be removed. The greatest detected concentrations of TPH in site soils after the “hot-spot” soil removals would be: C4-C12 – 370mg/kg; C13-C22 – 5500mg/kg; C23-C32 – 5000mg/kg; and C33-C40 – 6500mg/kg. The resulting estimated hazard for ingestion and dermal contact assessing these residual maximum concentrations as the exposure point concentrations is 1.0. Therefore these concentrations are proposed as clean-up goals for TPH in site soils between 5-feet bgs and 10-feet bgs.

Should you have any questions or desire additional information, please do not hesitate to contact me at 310.403.1921.

Sincerely,

X *Susan Mearns*

Susan L. Mearns, Ph.D.

Mearns Consulting LLC

MEARNS CONSULTING LLC

ENVIRONMENTAL CONSULTANTS

RISK ASSESSORS

738 Ashland Avenue, Santa Monica, California 90405

Cell 310.403.1921

Tel 310.396.9606 Fax 310.396.6878

Mearns@MearnsConsulting.com

www.MearnsConsulting.com

**Human Health Risk Assessment
712 Baker Street
Long Beach, California 90806**

January 14, 2016

Prepared for:

**Integral Communities
888 San Clemente, Suite100
Newport Beach, California 92660**

Prepared by:

**Mearns Consulting LLC
738 Ashland Avenue
Santa Monica, California 90405**

MEARNS CONSULTING LLC

ENVIRONMENTAL CONSULTANTS

RISK ASSESSORS

738 Ashland Avenue, Santa Monica, California 90405

Cell 310.403.1921

Tel 310.396.9606 Fax 310.396.6878

Mearns@MearnsConsulting.com

www.MearnsConsulting.com

January 14, 2016

via email

Mr. Erik Weeks
Vice President – Land Acquisition
Integral Communities
888 San Clemente, Suite 100
Newport Beach, California 92660

RE: **Human Health Risk Assessment**
712 Baker Street, Long Beach, California 90806

Dear Mr. Weeks:

I am pleased to present this Human Health Risk Assessment (HRA) for the 20-acre property located at 712 Baker Street in Long Beach, California (the site) pursuant to your authorization. The site is planned for development of 275 residential units.

This HRA followed the guidance in the Department of Toxic Substances Control (DTSC) *Preliminary Endangerment Assessment (PEA) guidance manual* (DTSC 2013), U.S. Environmental Protection Agency *Risk Assessment Guidance for Superfund volume 1, Human Health Evaluation Manual (RAGs)* (USEPA 2004), the U.S. Environmental Protection Agency *Risk Assessment Guidance for Superfund volume 1, Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment)* (USEPA 2009), the Massachusetts Department of Environmental Protection (MADEP) *Characterizing Risks posed by Petroleum Contaminated Sites* manual (MADEP October 31, 2002), the DTSC LeadSpread 8.0 Model, the DTSC modified Johnson & Ettinger soil gas screen, USEPA version 2.0 model (April 2003), and the DTSC modified Johnson & Ettinger groundwater screen, USEPA version 3.0 model (April 2003), both modified by DTSC Office of Human and Ecological Risk (HERO) December 2014.

This human health risk assessment assessed the potential risk and hazard attributable to exposure to 83 constituents, including lead.

DTSC's LeadSpread 8.0 Model results indicate that lead poses an unacceptable hazard to adults and children in a residential exposure scenario; therefore removal of soil to a depth of 10-feet below ground surface (bgs) is necessary at locations that exceed lead concentrations of 80 milligrams per kilogram (mg/kg).

The Johnson & Ettinger soil gas screen and groundwater screen model results indicate that VOCs detected in soil vapor at 5-feet and 15-feet bgs and in groundwater at 47-feet bgs pose an unacceptable risk and hazard to adults and children in a residential exposure scenario. Methane was measured in the subsurface at concentrations that require a methane mitigation system be installed subslab.

The methane mitigation system subslab of all buildings (and paved parking greater than 5000square feet) will consist, at a minimum, of an impermeable barrier beneath which will be either a 4-inch or 6-inch gravel blanket within which will be slotted horizontal piping runs connected to vertical vent pipe risers. Although designed to

capture and vent methane to the atmosphere, other VOCs in the subsurface also will be captured and vented by this system.

Even though the noncarcinogenic constituents impact different target organs the estimated hazard quotients of each constituent detected in soil at 5-feet and 10-feet bgs were summed to provide a hazard index. The results of the risk assessment indicate that the estimated summed hazard index of the noncarcinogenic constituents in soil did exceed the target hazard threshold for the residential child. The estimated hazards of the metals cadmium and arsenic via the ingestion and dermal contact exposure routes contributed the greatest hazard to the residential child. The estimated hazard index of the noncarcinogenic constituents detected in soil did not exceed the target threshold for the residential adult, commercial worker and construction worker scenarios.

The estimated risk of each carcinogenic constituent detected in soil at 5-feet and 10-feet bgs were summed to provide a summed risk. The results of the risk assessment indicate the summed risk of the carcinogenic constituents in soil did exceed the target threshold 1×10^{-6} for the residential child and residential adult and the target threshold of 1×10^{-5} for the commercial worker. The estimated risks due to exposure to arsenic and hexavalent chromium via ingestion and dermal contact pathways for the residential child and due to exposure to arsenic via ingestion and dermal contact pathways for the residential adult and commercial worker contributed the risks.

Therefore removal of soil to a depth of 10-feet bgs containing concentrations of arsenic greater than 16mg/kg is necessary.

The results of the risk assessment indicate that soil removal to a depth of 10-feet bgs, the maximum depth at which residential occupants, construction workers and commercial workers potentially may be exposed to constituents in site soils, at locations with concentrations of lead greater than 80mg/kg and arsenic greater than 16mg/kg is necessary prior to development; additionally subslab methane mitigation will be required during development.

Should you have any questions or desire additional information, please do not hesitate to contact me at 310.403.1921.

Sincerely,

X Susan Mearns

Susan L. Mearns, Ph.D.

Mearns Consulting LLC

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EXECUTIVE SUMMARY

The objectives of this Human Health Risk Assessment (HRA) are: (1) to evaluate potential health risks to human receptors posed by concentrations of constituents detected at least one time in the soil matrix, soil vapor and shallow groundwater underlying the 20-acre property located at 712 Baker Street in Long Beach California 90806 (the site), and (2) to determine risk-based clean-up goals and/or mitigation measures protective of human health.

This HRA followed the guidance in the Department of Toxic Substances Control (DTSC) *Preliminary Endangerment Assessment (PEA)* guidance manual (DTSC 2013), U.S. Environmental Protection Agency *Risk Assessment Guidance for Superfund volume 1, Human Health Evaluation Manual (RAGs)* (USEPA 2004), the U.S. Environmental Protection Agency *Risk Assessment Guidance for Superfund volume 1, Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment)* (USEPA 2009), the DTSC *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* (DTSC, October 2011), the Massachusetts Department of Environmental Protection (MADEP) *Characterizing Risks posed by Petroleum Contaminated Sites* manual (MADEP October 31, 2002), the DTSC LeadSpread 8.0 Model, the DTSC modified Johnson & Ettinger soil gas screen, USEPA version 2.0 model (April 2003), and the DTSC modified Johnson & Ettinger groundwater screen, USEPA version 3.0 model (April 2003) both modified by DTSC Office of Human and Ecological Risk (HERO) December 2014.

The property is to be developed as a mixture of 275 single family residences and townhomes with two recreation centers and a homeowners' association. The maximum detected concentration or the upper confidence level, whichever was lower pursuant to the ProUCL guidance (USEPA 2004), of the constituent detected in the top 10-feet was used as the exposure point concentration for the residential, commercial worker and construction worker scenarios. Those chemicals of concern that had both reference doses or reference concentrations and slope factors or unit risk factors available, were assessed as both noncarcinogenic and carcinogenic compounds.

DTSC's LeadSpread 8.0 Model estimates the hazard due to exposure to lead in air and onsite soils/dust for adults and children within a residential scenario. Typically lead concentrations in air are not measured onsite. Therefore the model extrapolates these concentrations from the measured concentrations of lead in onsite soils. The percentile blood lead concentration is estimated by the model to provide an estimate of the percentage of a population of children and adults that would be expected to have blood lead levels that exceed the threshold value for a residential exposure scenario.

DTSC's LeadSpread 8.0 Model results indicates that lead does pose an unacceptable hazard to children or adults in a residential exposure scenario; therefore removal of soil to a depth of 10-feet below ground surface (bgs) is necessary at locations that exceed lead concentrations of 80 milligrams per kilogram (mg/kg).

The Johnson & Ettinger soil gas screen model modified by DTSC HERO (December 2014) was used to assess the potential risks and hazards due to exposure to the maximum concentrations of 1,2,4-trimethylbenzene, benzene, ethylbenzene, isopropylbenzene (cumene), naphthalene, n-butylbenzene, n-propylbenzene, toluene, xylenes and styrene detected in the vapor phase at 5-feet and/or 15-feet bgs for a residential exposure scenario. The Johnson & Ettinger model estimated a risk of 8.2×10^{-4} , greater than the threshold of 1×10^{-6} , and a hazard of 26 greater than the threshold of 1.

The Johnson & Ettinger groundwater screen model modified by DTSC HERO (December 2014) was used to assess the potential risks and hazards due to exposure to the maximum concentrations of 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,2,4-trimethylbenzene, 1,2-dibromoethane, 1,2-dichloroethane, 1,2-dichlorobenzene, 1,3,5-trimethylbenzene, 2-butanone (MEK), acetone, benzene, chlorobenzene, chloroform, cis-1,2-dichloroethene, diisopropylether, ethylbenzene, naphthalene, n-butylbenzene, n-propylbenzene, sec-butylbenzene, tert-butylbenzene, toluene, xylenes and vinyl chloride detected in the groundwater at 47-feet bgs for a residential exposure scenario. The Johnson & Ettinger model estimated a risk of 2.6×10^{-4} , greater than the threshold of 1×10^{-6} , and a hazard of 8.1 greater than the threshold of 1.

Due to the historic use of the site as a water treatment facility that treated produced water and wastewater recovered during oil well production in settling basins from 1926 to 1998 and the ongoing bioremediation (since 2004) methane is generated at concentrations that requires mitigation. The methane mitigation system subslab of all buildings (and paved parking greater than 5000square feet) will consist of an impermeable barrier beneath which will be either a 4-inch or 6-inch gravel blanket within which will be slotted horizontal piping runs connected to vertical vent pipe risers. Although designed to capture and vent methane to the atmosphere, other VOCs in the subsurface also will be captured and vented by this system.

Additionally the vapor extraction system operated by AECOM Technical Services, Inc. on behalf of Tesoro Logistic Operations, LLC remediating the volatile organic compounds (VOCs) released by Tesoro's pipelines adjacent contiguous to the site along the eastern site boundary with Golden Avenue will continue to operate.

Even though the noncarcinogenic constituents impact different target organs the estimated hazard quotients (HQ) of each constituent detected in soil at 5-feet and 10-feet bgs were summed to provide a hazard index. The results of the HRA indicate that the estimated summed hazard index (HI) of the noncarcinogenic constituents in soil did exceed the target hazard threshold for the residential child. The estimated hazards of the metals cadmium and arsenic via the ingestion and dermal contact exposure routes contributed the greatest hazard to the residential child. The estimated HI of the noncarcinogenic constituents detected in soil did not exceed the target threshold for the residential adult, commercial worker and construction worker scenarios.

The estimated risk of each carcinogenic constituent detected in soil at 5-feet and 10-feet bgs were summed to provide a summed risk. The results of the HRA indicate the summed risk of the carcinogenic constituents in soil did exceed the target threshold 1×10^{-6} for the residential child and residential adult and the target threshold of 1×10^{-5} for the commercial worker. The estimated risks due to exposure to arsenic and hexavalent chromium via ingestion and dermal contact pathways for the residential child and due to exposure to arsenic via ingestion and dermal contact pathways for the residential adult and commercial worker contributed the risks.

Therefore removal of soil to a depth of 10-feet bgs containing concentrations of arsenic greater than 16mg/kg is necessary.

The results of the HRA indicate that soil removal to a depth of 10-feet bgs at locations with concentrations of lead greater than 80mg/kg and arsenic greater than 16mg/kg is necessary prior to development; additionally subslab methane mitigation will be required during development.

1.0 INTRODUCTION

This report presents the results of a Human Health Risk Assessment (HRA) for the 20-acre property located at 712 Baker Street in Long Beach, California (the site) (Figure 1).

The purpose of this human health risk assessment is to evaluate the potential adverse health impacts due to exposure to concentrations of constituents detected in the soil matrix, soil vapor and shallow groundwater underlying the site. If a constituent was detected one time in soil sampled at 5-feet and 10-feet bgs, and/or one time in soil vapor at 5-feet or 15-feet bgs and/or groundwater at 47-feet bgs it was retained and quantitatively assessed in this human health risk assessment. The following constituents: 1,2,4-trimethylbenzene, benzene, ethylbenzene, naphthalene, n-butylbenzene, n-propylbenzene, toluene and m,p,o-xylenes were detected in all three media and assessed in the risk assessment in each medium. This human health risk assessment assessed the potential risk and hazard attributable to exposure to 13 carcinogenic constituents (including hexavalent chromium, derived by assuming 1/6th the detected concentration of total chromium was hexavalent chromium) and 37 noncarcinogenic constituents, including lead detected in soil at 5-feet and 10-feet bgs; to nine volatile organic compounds (VOCs) detected in soil vapor at 5-feet and 15-feet bgs; and to 24 VOCs detected in groundwater at 47-feet bgs.

This HRA followed the guidance in the Department of Toxic Substances Control (DTSC) *Preliminary Endangerment Assessment* (PEA) guidance manual (DTSC 2013), U.S. Environmental Protection Agency *Risk Assessment Guidance for Superfund volume 1, Human Health Evaluation Manual* (RAGs) (USEPA 2004), the U.S. Environmental Protection Agency *Risk Assessment Guidance for Superfund volume 1, Human Health Evaluation Manual* (Part F, Supplemental Guidance for Inhalation Risk Assessment) (USEPA 2009), the DTSC *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* (DTSC, October 2011), the Massachusetts Department of Environmental Protection (MADEP) *Characterizing Risks posed by Petroleum Contaminated Sites* manual (MADEP October 31, 2002), and the DTSC LeadSpread 8.0 Model, the DTSC modified Johnson & Ettinger soil gas screen, USEPA version 2.0 model (April 2003) and the DTSC modified Johnson & Ettinger groundwater screen, USEPA version 3.0 model (April 2003), both modified by DTSC Office of Human and Ecological Risk (HERO) December 2014.

As the USEPA and the State of California Office of Environmental Health Hazard Assessment (OEHHA) have not published toxicity values, i.e., Reference Doses (RfDs), for total petroleum hydrocarbons (TPH) the guidance in the Massachusetts Department of Environmental Protection approach to characterizing risks posed by petroleum contaminated sites and in DTSC's PEA Manual (DTSC 2013) were used to obtain surrogate RfDs for C4-C12, C13-C22, C23-C32 and C33-C40 (MADEP 2002, DTSC 2013). As the source of TPH in site soils is from crude oil production and as VOCs and polycyclic aromatic hydrocarbons (PAHs), such as benzene, toluene, ethylbenzene, m,p,o-xylenes (BTEX), hexane, methyl tert-butyl ether, naphthalene and methylnaphthalene were analyzed in soil, soil vapor and groundwater, and BTEX and naphthalene were detected and assessed in this risk assessment in all three media, TPH was assigned aliphatic toxicity criteria. The potential adverse health impacts due to exposure to C4-C12, C13-C22, C23-C32 and C33-C40 and in onsite soils were then assessed by following the appropriate ingestion and dermal contact equations (DTSC 2013).

2.0 SITE BACKGROUND

Background

The 20-acre site located at 712 Baker Street in Long Beach, California 90806 has had historic addresses of 701 Baker Street and 3501, 3539, 3701 and 3801 Golden Avenue. Assessor parcel numbers (APNs) for the site are 7302-002-001, 7302-002-005, 7302-002-007, 7302-002-008, 7302-002-009, and 7302-002-010.

The site is adjacent south of an on-ramp for the I-405 freeway, east of the I-710 freeway and the Los Angeles River, west of Golden Avenue and north of Wardlow Road in Los Angeles County and the City of Long Beach (Figure 1) (Tetra Tech 2015).

The site operated as a water treatment facility that treated produced water and wastewater recovered during oil well production in settling basins from 1926 to 1998. Bioremediation of onsite soils has been ongoing since 2004. A vapor extraction system operated by AECOM Technical Services, Inc. on behalf of Tesoro Logistic Operations, LLC is remediating volatile organic compounds (VOCs) released by Tesoro's pipelines adjacent contiguous to the site along the eastern site boundary with Golden Avenue. The site currently is vacant, unpaved land (Tetra Tech 2015).

The water treatment process initially took place in settling basins. It was designed to remove oil and sediment from the produced water and then discharge the treated water to the Sanitation Districts of Los Angeles County (LACSD) sewer system under a permit issued by the LACSD. Crude oil was recovered for recycling as a by-product of the treatment process. A wastewater treatment plant was constructed onsite in 1959 that consisted of five circular concrete-walled skimming basins and associated pumps, aboveground storage tanks (ASTs), pipelines and related small buildings and facilities (Figure 2). The treatment plant was located north of the two rectangular-shaped, clay-lined settling basins in the southern portion of the site, south of Baker Street. These settling basins were referred to as Basins 1 and 2 (Brycon 2010, 2011).

Basin 1 received oily residual solids that settled out of the produced water. Basin 2 received relatively clean water, after the produced water had undergone retention, skimming, flocculation, and aeration. Treated water was held in Basin 2, until it was discharged offsite. Additional smaller basins were historically present south of Basins 1 and 2. These smaller basins were closed in 1986 and 1987 (Figure 2). The Los Angeles Regional Water Quality Control Board (LARWQCB) issued a waste discharge for land treatment operation related (WDR) Order No. 86-93. This WDR Order was for land treatment by bioremediation of the oily residual solids in Basins 1 and 2 and included monitoring requirements (Brycon 2010, 2011).

The water treatment facility ceased operations in 1988. The City of Long Beach Fire Department (LBFD 2000) directed that liquid hydrocarbon products, wastewater and sludge be removed from the site under a Site Remediation Permit issued by the City of Long Beach, coordinated with the LBFD and City of Long Beach Department of Health Human Services (LBDHHS), and that impacted soil and groundwater be remediated under the oversight of the LBDHHS and LARWQCB in 2002. Buildings, ASTs and related aboveground structures (except for the concrete-walled skimming basins and small, concrete-lined vaults with control valves) were cleaned, demolished and disposed offsite in 2000 and 2001. The August 28, 2002 Consent Decree directed that remediation of Basin 1 take place in accordance with the standards specified by LBDHHS.

Full scale bioremediation commenced in the first quarter 2004 (Brycon 2008) consistent with the LBDHHS approved corrective action plan. Basins 1 and 2 were reconfigured to be used for bioremediation of oil residual solids. Bioremediation activities include periodic diking of the upper 9-inches of oily residual solids and moisture level monitoring. Bioremediated soil, i.e., oily residual solids that conform to remediation standards have been placed in the southern and western portions of the site. The concrete-walled skimming basins were removed in 2011 and bioremediated soil also has been placed at this location. The approximate thickness of the bioremediated soil in these areas is 5-feet to 10-feet. Quarterly soil monitoring reports documenting bioremediation activities have been submitted by Brycon to the LBDHHS since the first quarter 2004.

Quarterly groundwater monitoring has been performed by Brycon since 2001. Prior to 2001, intermittent groundwater monitoring was performed by several consultants. There currently are 14 groundwater monitoring wells onsite. Groundwater monitoring reports are prepared by Brycon and submitted to the LARWQCB. Figure 2 depicts the former configuration of the treatment facility in addition to the groundwater monitoring wells, vapor extraction system and soil boring locations. Figure 3 depicts the bioremediated soil areas.

Previous Environmental Investigations

The site has been investigated extensively by a number of environmental consultants including Emcon Associates (Emcon 1981), Jaykim Engineers, Inc. (JEI 1986 to 1988c), Jack K. Bryant and Associates (JKB 1992), Environmental Science & Engineering, Inc., (ESE) and Brycon, LLC (Brycon 2001 to 2015).

Brycon operated a vapor extraction system in the eastern part of the site from 2012 to 2014 to initially remediate primarily vapor phase benzene adjacent to Golden Avenue (this was performed even though it has not been demonstrated that the benzene in soil gas and groundwater along Golden Avenue at the eastern side of the Site was related to onsite activities). AECOM Technical Services, Inc. on behalf of Tesoro Logistic Operations LLC has been operating a vapor extraction system in the northeastern part of the site since April 2015, and is expected to continue to perform characterization and remediation activities related to one or more Tesoro pipelines beneath Golden Avenue. The Tesoro related activities are in response to a Cleanup and Abatement Order No. R4-2013-0064 (LARWQCB September, 18 2014) (Tetra Tech 2015).

Proposed Development

Current plans are for residential development with a final grade that is expected to be 36 feet to 38 feet above mean sea level (Tetra Tech 2015). It is anticipated that clean fill and native soil on the eastern portion of the site will be excavated to lower the existing grade, and placed in the western part of the site as engineered fill to raise the existing grade.

Site development is planned for townhome-type residences that currently are envisioned to be two- to three stories in height with patio-sized backyards. Recreation centers are planned onsite north of Baker Street and in the southern portion of the site, south of Baker Street. A homeowner's association is expected to have overall responsibility for maintenance of common areas, the recreation centers, the stormwater detention basin and approving any changes to residences through an architectural review process Tetra Tech 2015). Figure 4 depicts the proposed development.

3.0 SUMMARY OF FIELD ACTIVITIES

Soil vapor 5-feet and 15-feet bgs

Tetra Tech collected soil gas samples from soil vapor probes placed at 5-feet and 15-feet bgs in 2015 (Tetra Tech 2015).

The following VOCs were detected in soil vapor underlying the site: 1,2,4-trimethylbenzene, benzene, ethylbenzene, isopropylbenzene (cumene), naphthalene, n-butylbenzene, n-propylbenzene, toluene and m,p,o-xylenes (Tetra Tech 2015) (Table 1). The maximum concentrations of these VOCs was used at the exposure point concentration in the appropriate Johnson & Ettinger model.

Soil 10-feet bgs and shallower

Soil samples were collected in 2015 by Tetra Tech and submitted for analysis of total petroleum hydrocarbons (TPH), total threshold limit concentration metals, volatile organic compounds, semi-volatile organic compounds, chlorinated pesticides, chlorinated herbicides and polychlorinated biphenyls using the appropriate sampling, collection and analytical methods (Tetra Tech 2015).

Total petroleum hydrocarbons-gasoline range (C4-C12) were detected at concentrations up to 1,500mg/kg in the top 10-feet of soil sampled onsite (Table 2).

Total petroleum hydrocarbons-diesel range (C13-C22) were detected at concentrations up to 15,000mg/kg in the top 10-feet of soil sampled onsite (Table 2).

Total petroleum hydrocarbons-oil range (C23-C32) were detected at concentrations up to 13,000mg/kg in the top 10-feet of soil sampled onsite (Table 2).

Heavy-ends (C33-C40) were detected up to concentration of 8,900mg/kg in the top 10-feet of soil sampled onsite (Table 2).

The following VOCs were detected in the top 10-feet of soil sampled onsite: 1,1,2-trichloroethane, 1,2,4-trimethylbenzene, 1,2-dichlorobenzene, 1,3,5-trimethylbenzene, 2-butanone (MEK), acetone, benzene, cis-1,2-dichloroethene, ethylbenzene, isopropylbenzene, m,p,o-xylenes, naphthalene, n-butylbenzene, n-propylbenzene, p-isopropyltoluene, sec-butylbenzene and toluene (Table 3).

The following metals were detected in the top 10-feet of soil sampled onsite: arsenic, barium, beryllium, cadmium, chromium (although hexavalent chromium was not analyzed, it was assessed in this risk assessment by using the standard practice of assuming 1/6 the concentration of total chromium is hexavalent chromium), cobalt, copper, lead, manganese, mercury, molybdenum, nickel, vanadium and zinc (Table 4).

The following SVOCs, pesticides and polychlorinated biphenyls (PCBs) were detected in the top 10-feet of soil sampled onsite: 2-methylnaphthalene, bis(2-ethylhexyl)phthalate, 4,4'-DDT, chlordane, Aroclor 1254 and Aroclor 1260 (Tables 6, 7 and 8).

Not every soil sample had detected concentrations of the abovementioned constituents. If a constituent was detected one time in the top 10-feet of soil sampled onsite it was retained and quantitatively assessed in this risk assessment.

Tetra Tech measured concentrations of methane greater than 25% of its lower explosive limit (LEL) of 12,500 parts per million by volume (ppmv). Tetra Tech measured methane at 55,900ppmv at 5-feet bgs on the portion of the site north of Baker Street and at 374,000ppmv at 5-feet bgs underlying the former Basins 1 and 2. Based on these concentrations a methane mitigation system subslab of all buildings (and paved parking greater than 5000square feet) will be required and will, at a minimum, consist of an impermeable barrier beneath which will be either a 4-inch or 6-inch gravel blanket within which will be slotted horizontal piping runs connected to vertical vent pipe risers.

Groundwater 47-feet bgs

Total dissolved solids (TDS) ranged from 1,200 milligrams per liter (mg/L) to 4,400 mg/L based on analysis via Untied States Environmental Protection Agency (USEPA) Method No. 160.1, and from 190 mg/L to 3,200 mg/L based on analysis by USEPA Method No. 160.2 during the first quarter groundwater monitoring event in 2015 (Brycon 2015). The pH ranged from 6.7 to 7.1, and the chloride concentration ranged from 340 mg/L to 2,300 mg/L (Brycon, 2015). In general, the TDS and chloride concentrations are high and indicative of water that is not suitable for use as a source of drinking water.

Tetra Tech is not aware of any water supply wells that draw water from the semi-perched zone in the site vicinity. ESE (1999) described the closest water well as located approximately 700 feet west-southwest of the site at 32nd Street and Delta Avenue, west of the Los Angeles River, with a groundwater elevation approximately 25 feet below msl (Los Angeles County Flood Control District [LACFCD] No. 888F). This water well is described as being screened the Gaspur Aquifer. CADWR (1961) shows a water well (ID No. 4W/3S-1404) in a similar location that extends to the top of the Silverado Aquifer at a depth of approximately 650 feet below msl.

VOCs detected in groundwater 47-feet bgs include: 1,1,2,2-tetrachloroethane, 1,1,2-trichloroethane, 1,2,4-trimethylbenzene, 1,2-dibromoethane, 1,2-dichloroethane, 1,4-dichlorobenzene, 1,3,5-trimethylbenzene, 2-butanone (MEK), acetone, benzene, chlorobenzene, chloroform, cis-1,2-dichloroethene, diisopropylether, ethylbenzene, m,o-xylenes, naphthalene, n-butylbenzene, n-propylbenzene, sec-butylbenzene, tert-butylbenzene, toluene and vinyl chloride (Tetra Tech 2015) (Table 5). The maximum concentrations of these VOCs was used as the exposure point concentration in the appropriate Johnson & Ettinger model.

Site Geology and Hydrogeology

Native soil has been characterized as having subtle features such as thin layering, homogeneous coloration, and the presence of thin carbonate stringers. Native soil was encountered beneath the artificial fill north of Baker Street and the western portion of the site south of Baker Street and in the eastern portion of the site south of Baker Street (Tetra Tech 2015).

Native soil was classified as:

- Terrace Deposits: Interbedded silty sand, sand, clayey silt, and sandy silt. Terrace Deposits were encountered in the depth interval of from approximately 18-feet to 2-feet bgs to 5-feet bgs (the maximum depth investigated Tetra Tech, 2015).
- Alluvium: Interbedded sand and silty sand to sandy silt from 26-feet to 30-feet bgs in the southernmost part of the site (Tetra Tech 2015).

The site is located in the floodplain of the Los Angeles River adjacent to the southwest side of Signal Hill. Underlying the Site is the Bellflower aquitard, which American Environmental Management Corporation

(AEM) describes as extending to 65-foot bgs (AEM 1991). Within the Bellflower aquitard is a perched groundwater zone, which is the groundwater zone encountered at the site. Underlying the Bellflower aquiclude is the Gaspar aquifer, which AEM describes as extending from 65-foot bgs to 105-foot bgs. A 5-foot thick clay zone beneath the Gaspar aquifer separates it from the underlying Gage aquifer. The latter extends approximately 50 feet beneath the site (from approximately 110-foot bgs to 160-foot bgs) (Tetra Tech 2015).

The depth to groundwater on May 18, 2015 ranged from 30.28-feet to 50.71-feet bgs. The groundwater flow direction was interpreted to be variable with an overall trend to the west to northwest, with localized flow toward east. A northwest groundwater flow direction at the site was reported by Brycon from October 2007 through March 2015. Prior to 2007, the groundwater flow direction was reported to be variable, including flow directions such as east-northeast, east, east-southeast, southeast, west-southwest, west, northwest, and north (Brycon 2015, ATSI 2015).

The shallow groundwater zone beneath the Site was described in 1999 by ESE (1999) as semi-perched groundwater (the semi-perched zone). According to ESE, the Bellflower Aquiclude usually underlies the semi-perched zone. The Bellflower Aquiclude tends to limit hydraulic communication with the underlying regional groundwater zones. ESE describes the semi-perched zone as degraded by widespread salt water intrusion, industrial wastes, and/or oil field brines.

4.0 CONCEPTUAL SITE MODEL

A conceptual site model was developed to identify the potential complete exposure pathways by which constituents detected in soil could impact human health (Figure 5).

The conceptual site model identifies potential sources, environmental release mechanisms, potential migration pathways, potential exposure pathways, potential exposure routes and potential human receptors onsite.

The conceptual site model identified the following potential complete exposure pathways:

- Future onsite commercial worker
 - ingestion/dermal contact with surface soil
 - inhalation of dust from soil in outdoor air
- Future construction worker
 - ingestion/dermal contact with surface and subsurface soil
 - inhalation of dust from soil in outdoor air
- Future onsite resident
 - ingestion/dermal contact with surface and subsurface soil
 - inhalation of dust that has migrated to indoor air
 - inhalation of soil vapor that has migrated to indoor air

Consumption of fruit or vegetables grown in soil is not considered to be a complete potential exposure pathway under future site conditions because the 20-acre site will be developed as a mixture of 275 single family residences and townhomes with two recreation centers and a homeowners' association.

Potential direct exposures (ingestion and dermal contact) to groundwater are not complete pathways as drinking water is provided by a remote municipal water supply, so there is little chance of incidental exposure. Discharge of groundwater to surface water also is not considered to be a complete migration pathway since there are no surface water bodies that are recharged by artesian flow or groundwater seepage in the vicinity of the site.

The potential for chemicals in soil to leach to underlying groundwater used as a drinking water source is considered very low as several aquitards or aquicludes exist below the maximum depth of impacted soils and groundwater used as a drinking water source.

There is very limited ecological habitat at and near the site. Wetlands were not observed onsite or at adjacent sites. There are no natural or undisturbed areas onsite. Based on the lack of viable ecological habitat at and near the site, there are no complete ecological pathways onsite.

5.0 IDENTIFYING CHEMICALS OF CONCERN

All constituents detected at least one time in the soil matrix sampled in 2015 and VOCs detected in soil vapor and groundwater underlying the site were quantitatively assessed using the appropriate exposure pathway in this risk assessment.

6.0 TOXICITY ASSESSMENT

Toxicity values are combined with exposure factors to estimate noncancer adverse health effects and cancer risks. Toxicity values include reference doses (RfDs), reference concentrations (RfCs), unit risk factors (URFs) and slope factors (SFs) that are used to evaluate noncancer adverse health effects and cancer risks. USEPA (1989) has developed the following hierarchical toxicity identification protocol:

- Integrated Risk Information System (IRIS, USEPA 1999)
- Health Effects Assessment Summary Tables (HEAST, USEPA 1997)
- National Center for Environmental Assessment (NCEA)

The State of California Office of Environmental Health Hazard Assessment (OEHHA) and the State of California Department of Toxic Substances Control (DTSC) Office of Human and Ecological Risk (HERO) have developed URFs SFs, RfCs and RfDs. Pursuant to regulatory agency guidance OEHHA's and HERO's values are preferentially used instead of USEPA's when available, as OEHHA's and HERO's values are generally more conservative than USEPA's (DTSC 2013, USEPA 2004).

If a constituent had both a risk factor and a reference concentration it was assessed as a carcinogen and as a noncarcinogen. The unit risk factors and reference concentrations were obtained from DTSC HERO (DTSC 2014), ATSDR, IRIS, OEHHA, PPRTV as listed in USEPA's Regional Screening Levels (November 2015).

The exposure point concentrations, the slope factors and reference doses for the constituents detected in the soil matrix and quantitatively assessed are presented in Table 9.

6.1 Types of Toxicity Values

USEPA recognizes that fundamental differences exist between noncarcinogenic and carcinogenic effects of chemicals. As a result of these differences, the evaluation of potential human health effects associated with noncarcinogenic and carcinogenic chemicals is conducted separately. As summarized in IRIS (USEPA 1999) and HEAST (USEPA 1997), USEPA has developed reference doses to evaluate noncancer effects and slope factors to evaluate carcinogenic effects. If a chemical is considered to cause both noncancer health effects and cancer risks, both reference doses and slope factors may be listed for the chemical. Other chemicals may have only reference doses or slope factors developed, depending on the observed toxic effects.

6.1.1 Reference Doses and Reference Concentrations

Noncancer health effects are evaluated using a reference dose, which is expressed in units of milligrams per kilogram body weight per day (mg/kg-day). A reference dose represents a USEPA-developed, estimated daily exposure level (dose) to which humans may be exposed for a portion of their lifetime (in the case of subchronic reference doses) or for their entire lifetime (in the case of chronic reference doses), without expectation of adverse health effects. USEPA assumes the existence of a threshold concentration for noncancer effects. Below this concentration toxic effects are not expected to occur (USEPA 1989).

Reference doses are often based on animal laboratory studies, from which data are then extrapolated to a chemical concentration considered "safe" for humans. The threshold of observed effects in test animals is divided by uncertainty factors (UFs). Separate uncertainty factors, each of which may be up to 10, are

used to account for each of the following:

- Protection of sensitive individuals within the receptor population.
- Extrapolation of toxicity data from animals to humans.
- Extrapolation of subchronic toxicity data to chronic exposure durations.
- Extrapolation from a lowest-observed adverse effect level (LOAEL) to a no-observed adverse effect level (NOAEL) to assess toxicity.

The uncertainty factors for a given chemical are then multiplied together to provide a total uncertainty factor, which is then used to derive a chronic reference dose. In order to derive a reference dose protective of the most sensitive members of the human population, the uncertainty factor may range from one to 10,000. The higher the total uncertainty factor, the more uncertainty and degree of conservativeness there are in the resultant chronic reference dose.

The chronic reference dose is the USEPA-established dose used to evaluate health effects associated with long-term (chronic) exposures of at least seven years (USEPA 1989). The subchronic reference dose is the dose used to evaluate health effects associated with exposures less than seven years (USEPA 1989).

USEPA has developed route-specific reference doses for the oral and inhalation routes of exposure. However, USEPA has not developed reference doses to specifically evaluate possible impacts from dermal (skin) exposure. For this reason, oral reference doses are typically used to estimate possible noncancer health effects from dermal exposure consistent with USEPA (1989) guidance.

USEPA defines a reference concentration as an estimate of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be at appreciable risk of deleterious effects during a lifetime (USEPA 2009). The reference concentration is derived after a review of the health effects database for a chemical and identification of the most sensitive and relevant endpoint along with the principal study or studies demonstrating that endpoint. Uncertainty factors are used to account for uncertainties in the extrapolations from the experimental data conditions to an estimate appropriate to the exposed human scenario (USEPA 2009). The reference concentrations are derived from the following formula:

$$\text{RfC} = \text{NOAEL}_{[\text{HEC}]} / (\text{UF})^1$$

Where: RfC (mg/m³) = reference concentration
NOAEL_[HEC] (mg/m³) = The NOAEL or analogous exposure level obtained with an alternate approach, dosimetrically adjusted to an HEC
UF = uncertainty factor(s) applied to account for the extrapolations required from the characteristics of the experimental regimen

6.1.2 Cancer Slope Factors and Unit Risk Factors

USEPA has developed route-specific slope factors for chemicals that are known or potential human carcinogens. USEPA (1989) defines a slope factor and a unit risk factor as a plausible upper-bound estimate of the probability of a carcinogenic response in human populations per unit intake of a chemical (averaged over an expected lifetime of 70 years). Slope factors are used to estimate cancer risks and are expressed in units of risk per dose in mg/kg-day ([mg/kg-day]⁻¹).

Most slope factors and unit risk factors are based on a continuous exposure, linear non-threshold extrapolation model (generally the linear multistage model) which is predicated on the assumption that any level of exposure to a carcinogen will result in some degree of carcinogenic risk, however minute (i.e., no threshold is assumed to exist). The extrapolation model derives a mathematical relationship between the generally high chemical doses and resulting effects measured in laboratory animals or epidemiological (human) studies, and applies that relationship to extrapolate effects for the generally lower doses that occur in the environment.

This low-dose extrapolation is generally regarded as a very conservative (health protective) approach. The resulting slope factor typically represents at least the upper 95th percentile of the measured dose-response relationship. USEPA has developed slope factors for oral and inhalation exposure routes but not for the dermal route. Therefore, oral slope factors are typically used to evaluate potential effects from dermal exposure (USEPA 1989).

7.0 EXPOSURE ASSESSMENT

The exposure assessment provides a scientifically defensible basis for the identification of potentially exposed human receptors and the most likely ways they might be exposed to chemicals of concern at the site. As defined by USEPA (1989), the following four components are necessary for chemical exposure to occur:

- A chemical source and a mechanism of chemical release to the environment
- An environmental transport medium (e.g., soil) for the released chemical
- A point of contact between the contaminated medium and the receptor (i.e., the exposure point)
- An exposure route (e.g., ingesting chemically-impacted soil) at the exposure point

All four of these elements must be present for an exposure pathway to be considered complete and for chemical exposure to occur (USEPA 1989).

This HRA evaluated the potential for receptors to be exposed to the maximum detected concentrations or the upper confidence level (UCL), whichever value was less, pursuant to the ProUCL User's Guide (USEPA 2004) of the constituents detected in the top 10-feet of soil. The ProUCL model output is included as Appendix A.

The maximum concentrations of the VOCs detected in soil vapor at 5-feet and 15-feet bgs and from groundwater at 47-feet bgs underlying the site were used as the exposure point concentrations in the appropriate Johnson & Ettinger vapor intrusion models. Data collected from the soil matrix and soil vapor investigation in 2015 (Tetra Tech 2015) and from the groundwater investigation in 2015 (Brycon 2015) were used in the risk assessment. Exposure point concentrations are presented in Table 9.

7.1 Average and Reasonable Maximum Exposures

Typically two types of exposure scenarios are evaluated in a risk assessment; an average exposure scenario, and a reasonable maximum exposure (RME) scenario. The average exposure scenario represents a more typical exposure, believed to be most likely to occur, while the reasonable maximum exposure scenario represents a plausible worst case situation - one that is not very likely to occur. USEPA guidance (1989) recommends evaluating a reasonable maximum exposure scenario. The reasonable maximum exposure scenario estimates the exposure a receptor might receive using highly conservative intake assumptions (e.g., 90th or 95th percentile for most intake assumptions) and the upper confidence limit (UCL) on the mean of the chemical concentrations. It is assumed that by evaluating a reasonable maximum exposure scenario potential health risks to extremely sensitive individuals within a particular receptor population will be adequately addressed. As an added measure of conservatism, only a reasonable maximum exposure scenario was evaluated in this HRA.

The DTSC PEA and USEPA guidance contain formulae that incorporate default values which were selected to be health protective. Some of these default values, such as, the exposure frequency, exposure time and exposure duration, were modified when evaluating the commercial worker and construction worker scenarios (DTSC 2013, USEPA 2004).

8.0 RISK CHARACTERIZATION

The risk characterization process incorporates data from the exposure and toxicity assessments. The exposure assessment information necessary to estimate risks and hazards includes the estimated chemical intakes, exposure modeling assumptions, and the exposure pathways assumed to contribute to the majority of exposure for each receptor over a given time period (USEPA 1989a). The exposure parameters for assessing the constituents detected in the soil matrix are included as Table 10.

The method by which chemicals with carcinogenic and/or noncarcinogenic effects are evaluated to determine whether they pose a risk or an adverse impact to human health is discussed below, relative to the exposure pathways by which the receptors may be exposed to the exposure point concentrations of the chemicals of concern.

8.1 Ingestion and Dermal Contact Pathways

To provide an evaluation of chronic risk along the ingestion and dermal contact pathways the following equations for risk and hazard were used consistent with PEA guidance (DTSC 2013).

$$\begin{aligned} \text{Risk}_{\text{soil}} = & \quad \text{SF}_o \times C_s \times \frac{\text{IR}_s \times \text{EF} \times \text{ED} \times 10^{-6} \text{ kg/mg}}{\text{BW} \times \text{AT} \times \text{EF}} \\ & + \text{SF}_o \times C_s \times \frac{\text{SA} \times \text{AF} \times \text{ABS} \times \text{EF} \times \text{ED} \times 10^{-6} \text{ kg/mg}}{\text{BW} \times \text{AT} \times \text{EF}} \end{aligned}$$

$$\begin{aligned} \text{Hazard}_{\text{soil}} = & \quad (1/\text{RfD}_o) \times C_s \times \frac{\text{IR} \times \text{EF} \times \text{ED} \times 10^{-6} \text{ kg/mg}}{\text{BW} \times \text{AT} \times 250 \text{ days/year}} \\ & + (1/\text{RfD}_o) \times C_s \times \frac{\text{SA} \times \text{AF} \times \text{ABS} \times \text{EF} \times \text{ED} \times 10^{-6} \text{ kg/mg}}{\text{BW} \times \text{AT} \times \text{EF}} \end{aligned}$$

Where:

SF_o = oral cancer slope factor (mg/kg-day)⁻¹

C_s = concentration in soil (mg/kg)

RfD_o = oral reference dose (mg/kg-day)

ABS = absorption fraction (dimensionless):

Exposure Duration (ED) - years

Exposure Frequency (EF) - days/year

Body Weight (BW) - kg

Incidental Soil Ingestion Rate (IR_s) - mg/day

Exposed Skin (SA) - cm²

Soil to Skin Adherence Factor (AF) – mg/cm²

Averaging Time (AT) - years

Chemical specific values for the absorption fractions (ABS) parameter were obtained from USEPA and DTSC (USEPA June 2015; DTSC 2013). Toxicity and exposure point concentrations are found in Table

9. Exposure parameters for assessing constituents detected in the soil matrix are presented in Table 10. The maximum concentration or the upper confidence level, whichever was less, of the constituents detected in the top 10-feet of soils were evaluated in this risk assessment for the residential, commercial worker and construction worker scenarios.

The exposure factors presented in Tables 9 and 10 provide a conservative estimate of chronic risk and hazard to human health due to exposure to the chemicals of concern detected in the soil matrix via the ingestion and dermal contact routes of exposure. The calculated estimates of risk and hazard due to exposure to constituents detected in the soil matrix are provided in Tables 11-15.

8.2 Inhalation Pathway Soil Matrix

To provide an evaluation of chronic risk along the inhalation pathway the following equations (DTSC 2013, USEPA 2009) for estimating risk and hazard due to exposure to constituents of concern detected in the soil matrix were used consistent with PEA guidance (DTSC 2013, USEPA 2009).

Semi-volatile organic compounds and metals in soil are evaluated in outdoor air using particulate emission factors (PEFs) to obtain concentrations of chemicals in dust. PEFs are used to develop an estimate of the concentration of a chemical in dust based on its concentration in soil. It assumes that the dust from the site is caused by the wind and not created by mechanical means (e.g. construction activities, tilling, automobile traffic, etc.) (DTSC 2013).

A default PEF of 1.32E+09 (m³/kg) is used, because this is the same default value used by the USEPA in its Soil Screening Guidance (USEPA 2009). It assumes an infinite source of chemicals, a vegetative cover of 50%, and a mean annual wind speed of 4.69 m/s. This is equivalent to a dust concentration of 0.76 g/m³ at the receptor. The default dispersion term (Q/C) of 90.80 (g/m²-s per kg/m³) is based on a site of 0.5 acres and dispersion modeling runs of 29 sites across the United States. The default Q/C provides a conservative estimate of the long-term exposure to dust (DTSC 2013).

$$C_a = (C_s/PEF) \times 1000\mu\text{g}/\text{mg}$$

Where:

C_a = concentration in air, mg/m³

C_s = concentration in soil, mg/kg

PEF = 1.32E09 (default value)

Chronic and SubChronic Exposure

$$EC = CA \times [(ET \times EF \times ED)/AT]$$

Where:

EC = exposure concentration (mg/m³)

CA = contaminant concentration in air (mg/m³)

ET = exposure time

EF = exposure frequency

ED = exposure duration

AT = averaging time (varies by receptor and for noncarcinogens and carcinogens)

$$\text{Risk} = \text{EC} \times \text{IUR}$$

Where:

Risk = estimated risk

EC = exposure concentration ($\mu\text{g}/\text{m}^3$)

IUR = inhalation unit risk factor ($\mu\text{g}/\text{m}^3$)⁻¹

$$\text{HQ} = \text{EC}/\text{Toxicity value}$$

Where:

HQ = hazard quotient

EC = exposure concentration (mg/m^3)

Toxicity value = inhalation reference concentration (mg/m^3)

The risk and hazard for the air pathway are based on either the exposure to volatile emissions for VOCs or the exposure to fugitive dust emissions for non-VOCs. The Office of Scientific Affairs defines a VOC as a chemical with a vapor pressure of 0.001 mm mercury or higher and a Henry's Law Constant of 1×10^{-5} or higher. Exposure to a chemical via the air pathway can be adequately performed using either volatilization or fugitive dust scenarios; it is not necessary to do both (DTSC 2013).

For this risk assessment exposure to non-VOCs detected in the soil matrix via the inhalation pathway was performed using the fugitive dust scenario.

As the exposure duration was 1 year for construction workers the subchronic exposure was estimated instead of acute exposure, pursuant to USEPA guidance (USEPA 2009). The commercial worker and residential receptors were assessed for chronic exposure.

8.3 The DTSC modified Johnson and Ettinger Model - Soil gas screen, version 2.0 (April 2003; modified by DTSC HERO December 2014)

The exposure point concentrations (the maximum detected concentrations) of VOCs detected at least one time in soil vapor was assessed by the DTSC modified Johnson & Ettinger Model soil gas screen, version 2.0 (April 2003; modified by DTSC HERO December 2014).

The Johnson and Ettinger Model has the following conservative assumptions: (1) steady state conditions exist, (2) an infinite source of contamination exists, (3) the subsurface is homogenous, (4) air mixing within the building is uniform, (5) preferential pathways do not exist, (6) biodegradation of vapors does not occur, (7) contaminants are homogeneously distributed, (8) contaminant vapors enter the building primarily through cracks in the foundation and walls, (9) buildings are constructed on slabs or with basements, (10) ventilation rates and pressure differences are assumed to remain constant and (11) the receptors are exposed to these constituents for 350 days per year for 30 years (residential scenario).

The Johnson & Ettinger Model was used to calculate incremental risks and hazards by the following equations imbedded within the model:

$$\text{Risk} = \frac{\text{URF} \times \text{EF} \times \text{ED} \times \text{C}_{\text{building}}}{\text{AT}_c \times 365 \text{ days/year}}$$

Where: URF = unit risk factor $\mu\text{g}/\text{m}^3$; comparable to a SF
 EF = exposure frequency = 350 days/year
 ED = exposure duration = 30 years
 $\text{C}_{\text{building}}$ = vapor concentration in the building, milligrams per cubic meter (mg/m^3) per $\mu\text{g}/\text{kg}$ soil; calculated by the model
 AT_c = averaging time for carcinogens; default value = 70

$$\text{Hazard Quotient} = \frac{\text{EF} \times \text{ED} \times 1/\text{RfC} \times \text{C}_{\text{building}}}{\text{AT}_{\text{nc}} \times 365 \text{ days/year}}$$

Where: RfC = Reference Concentration mg/m^3 ; comparable to a RfD
 EF = exposure frequency = 350 days/year
 ED = exposure duration = 30 years
 $\text{C}_{\text{building}}$ = vapor concentration in the building, milligrams per cubic meter (mg/m^3) per $\mu\text{g}/\text{kg}$ soil; calculated by the model
 AT_{nc} = averaging time for noncarcinogens; default value = 25

Site specific variables input into the model include the following:

- The depth at which the maximum concentration of the VOC was detected varied from 152 centimeters (cm) to 457cm.
- The soil type in the top 15-feet as depicted in the cross-section prepared by Tetra-Tech was a combination of silty sand, bioremediated soil, clay and poorly graded sand therefore the soil type selected in the model was silt, SI (Appendix B).
- The temperature of groundwater was changed pursuant to the map in the Johnson & Ettinger User's Manual (page 46) to reflect Southern California temperatures of 62°F or 17°C.

The results of the Johnson & Ettinger model are presented below and in Appendix C. The summed estimated risk is 8.2×10^{-4} , greater than the threshold of 1×10^{-6} and the summed estimated hazard is 26, greater than the threshold of 1 indicating VOCs in soil vapor underlying the site pose an adverse impact to future residential occupants.

	Soil vapor concentration $\mu\text{g}/\text{m}^3$	Indoor Air Concentration $\mu\text{g}/\text{m}^3$	Estimated Risk	Estimated Hazard
1,2,4-trimethylbenzene	5.44E+03	4.5E+00	NA	6.2E-01
Benzene	1.67E+05	7.8E+01	8.0E-04	2.5E+01
Ethylbenzene	4.02E+04	1.5E+01	1.3E-05	1.4E-02
Cumene	1.13E+03	3.8E-01	NA	9.1E-04
Naphthalene	4.10E+02	3.4E-01	4.1E-06	1.1E-01
n-butylbenzene	7.24E+02	2.2E-01	NA	1.2E-03
n-propylbenzene	4.2E+03	3.5E+00	NA	3.3E-03
Toluene	1.67E+04	6.9E+00	NA	2.2E-02
Xylenes	5.11E+04	1.9E+01	NA	1.8E-01
SUM			8.2E-04	26

8.4 The DTSC modified Johnson and Ettinger Model – Groundwater screen, version 3.0 (April 2003; modified by DTSC HERO December 2014)

The maximum detected concentrations of VOCs detected at least one time in groundwater 47-feet bgs was assessed by the DTSC modified Johnson & Ettinger Model groundwater screen, version 3.0 (April 2003; modified by DTSC HERO December 2014) for the residential scenario.

The Johnson and Ettinger Model has the following conservative assumptions: (1) steady state conditions exist, (2) an infinite source of contamination exists, (3) the subsurface is homogenous, (4) air mixing within the building is uniform, (5) preferential pathways do not exist, (6) biodegradation of vapors does not occur, (7) contaminants are homogeneously distributed, (8) contaminant vapors enter the building primarily through cracks in the foundation and walls, (9) buildings are constructed on slabs or with basements, (10) ventilation rates and pressure differences are assumed to remain constant and (11) the receptors are exposed to these constituents for 350 days per year for 30 years (residential scenario).

The Johnson & Ettinger Model was used to calculate incremental risks and hazards by the following equations imbedded within the model:

$$\text{Risk} = \frac{\text{URF} \times \text{EF} \times \text{ED} \times C_{\text{building}}}{\text{AT}_c \times 365 \text{ days/year}}$$

Where: URF = unit risk factor $\mu\text{g}/\text{m}^3$; comparable to a SF
EF = exposure frequency = 350 days/year
ED = exposure duration = 30 years
 C_{building} = vapor concentration in the building, milligrams per cubic meter (mg/m^3) per $\mu\text{g}/\text{kg}$ soil; calculated by the model
 AT_c = averaging time for carcinogens; default value = 70

$$\text{Hazard Quotient} = \frac{\text{EF} \times \text{ED} \times 1/\text{RfC} \times C_{\text{building}}}{\text{AT}_{\text{nc}} \times 365 \text{ days/year}}$$

Where: RfC = Reference Concentration mg/m^3 ; comparable to a RfD
EF = exposure frequency = 350 days/year
ED = exposure duration = 30 years
 C_{building} = vapor concentration in the building, milligrams per cubic meter (mg/m^3) per $\mu\text{g}/\text{kg}$ soil; calculated by the model
 AT_{nc} = averaging time for noncarcinogens; default value = 25

Site specific variables input into the model include the following:

- The depth of groundwater was changed to 1433cm.
- The soil type was changed to reflect silt, SI.
- The temperature of groundwater was changed pursuant to the map in the Johnson & Ettinger User's Manual (page 46) to reflect Southern California temperatures of 62°F or 17°C.

The results of the Johnson & Ettinger model for the residential scenario are presented below and in Appendix D. The estimated risk 2.5×10^{-4} is greater than the threshold 1×10^{-6} . The estimated hazard 8.1 is greater than the threshold of 1; indicating the VOCs detected in groundwater underlying the site do pose an adverse impact to future residents.

RESIDENTIAL SCENARIO

	Groundwater concentration µg/L	Indoor Air Concentration µg/m³	Estimated Risk	Estimated Hazard
1,1,2,2-tetrachloroethan	4.4E-01	1.5E-04	3.0E-09	2.0E-06
1,1,2-trichloroethane	2.6E+00	1.9E-03	1.1E-08	9.3E-03
1,2,4-trimethylbenzene	1.0E+03	3.6E+00	NA	4.9E-01
1,2-dibromoethane	2.45E+02	1.1E-01	2.4E-05	1.4E-01
1,2-dichloroethane	4.3E+02	5.5E-01	5.1E-06	7.5E-02
1,4-dichlorobenzene	4.0E-01	5.6E-04	2.2E-09	6.7E-07
1,3,5-trimethylbenzene	3.4E+02	1.7E+00	NA	4.6E-02
2-butanone (MEK)	1.3E+02	2.2E-02	NA	4.3E-06
Acetone	4.2E+02	6.1E-02	NA	1.9E-06
Benzene	3.9E+03	2.1E+01	2.2E-04	6.9E+00
Chlorobenzene	8.4E-01	2.0E-03	NA	3.9E-05
Chloroform	1.2E+00	4.3E-03	3.3E-08	3.9E-05
Cis-1,2-dichloroethene	1.8E+00	7.5E-03	NA	1.0E-03
Diisopropylether	2.5E+00	4.9E-03	NA	6.8E-06
Ethylbenzene	1.7E+03	9.2E+00	8.2E-06	8.8E-03
m-xylene	5.9E+03	2.9E+01	NA	2.8E-01
Naphthalene	2.6E+02	9.9E-02	1.2E-06	3.1E-02
n-butylbenzene	5.5E+01	4.2E-01	NA	2.3E-03
n-propylbenzene	1.5E+02	9.0E-01	NA	8.6E-04
o-xylene	3.0E+03	1.1E+01	NA	1.0E_01
sec-butylbenzene	2.8E+01	6.0E-03	NA	1.4E-05
Tert-butylbenzene	2.0E+00	1.4E-02	NA	3.4E-05
Toluene	3.6E+03	2.0E+01	NA	6.3E-02
Vinyl chloride	6.9E-01	2.5E-02	7.1E-07	2.4E-04
SUM			2.6E-04	8.1

8.5 DTSC’s LeadSpread 8.0 Model

DTSC's LeadSpread 8.0 Model estimates the hazard due to exposure to lead in air and onsite soils/dust for adults and children within a residential exposure scenario. Typically, lead concentrations in air are not measured onsite. Therefore the model extrapolates these concentrations from the measured concentrations of lead in onsite soils.

DTSC's LeadSpread 8.0 Model results indicate that lead does pose an unacceptable hazard to adults or children exposed to the maximum concentration of lead in site soils, 820mg/kg, used in the model as the exposure point concentration. These results are provided in Table 16.

8.6 Noncancer Adverse Health Effects

Noncarcinogenic effects or hazards are typically evaluated by comparing an exposure level over a specified time period (e.g., a lifetime or 25 years), with a reference dose based on a similar time period.

Hazard quotient values less than 1 indicate that potential exposures to noncarcinogenic COCs are not expected to result in toxicity (USEPA 1989). Summing the hazard quotient values to derive a hazard index (HI) provides an estimation of the total potential hazard due to a simultaneous exposure to all the noncarcinogenic COCs. However, summing hazard quotient values is not necessary when the chemicals of concern target different organs within the body (USEPA 1989, DTSC 2013). Although the noncarcinogenic chemicals of concern quantitatively assessed in this risk assessment target different organs within the body, the estimated hazard quotients were summed to derive a HI.

8.7 Lifetime Excess Cancer Risk

Slope factors are used to estimate the potential risk associated with exposure to individual COCs. The slope factor is multiplied by the chronic daily intake averaged over 70 years to estimate lifetime excess cancer risk. "excess" or "incremental" cancer risk represents the probability of an individual developing cancer over a lifetime as a result of chemical exposure, over and above the baseline or "background" cancer risk in the general population. Cancer risks and noncancer health hazards estimated in the HRA are regarded as estimated or theoretical results developed on the basis of the toxicity factors, chemical fate and transport, exposure assumption, and other inputs previously described. Cancer risks do not represent actual cancer cases in actual people. Rather, risks are calculated on the basis of an entirely hypothetical set of conditions. This assumed "exposure scenario" is developed to protect human health, and is based on standard USEPA and Cal-EPA methods and assumptions.

USEPA characterizes theoretical excess lifetime cancer risks below one in one million (10^{-6}) as not of concern and has stated that risks between 10^{-6} and one in 10,000 (10^{-4}) are "safe and protective of public health" (Federal Register 56(20):3535, 1991). Remedial action is not generally required by USEPA for sites with a theoretical lifetime excess risk of less than 10^{-4} ; whereas the State of California uses a risk-management approach (DTSC 2011).

The more stringent target risk of 10^{-6} is typically applied to residential receptors. To provide perspective, a total theoretical lifetime excess cancer risk of one in 100,000 (10^{-5}) is frequently accepted by Cal-EPA for worker receptors at California sites, and the target risk for chemicals evaluated under State Proposition 65 regulations is 10^{-5} (22CCR 12703).

8.8 Multipathway Cancer Risk

Based on regulatory guidelines, it is appropriate to combine risk estimates across exposure pathways for a given receptor. At the same time, exposure to multiple carcinogenic COCs is also typically considered to be additive. For exposures to multiple pathways and chemicals, the following equation was used to estimate total theoretical lifetime excess carcinogenic risks:

$$\text{Total Risk} = \sum_{p=1}^m \sum_{i=1}^n \text{CR}_{i,p}$$

Where:

- Total Risk = Excess cancer risk from exposure to n chemicals via m pathways
- m = Number of exposure pathways
- n = Number of chemicals
- $\text{CR}_{i,p}$ = Potential cancer risk from exposure to chemical i via pathway p

This equation was used to estimate the total potential cancer risks due to exposure to the carcinogenic COCs via the ingestion, dermal contact and inhalation routes of exposure. The estimated risks, total risk, estimated hazards and hazard index are presented in Tables 11 - 15.

8.9 Estimation of Risks and Hazards

A total of 83 constituents of concern were quantitatively assessed in the risk assessment.

Residential Scenario Child – Soil Matrix

Estimated Risk Ingestion and Dermal Contact - The estimated risk due to exposure to constituents detected in the soil matrix via the ingestion and dermal contact exposure routes 3.17×10^{-5} greater than the target threshold 1×10^{-6} .

Estimated Risk Inhalation - The estimated risk due to exposure to constituents detected in the soil matrix via the inhalation exposure route is 2.09×10^{-7} less than the target threshold 1×10^{-6} .

Hazard Quotients Ingestion and Dermal Contact - The estimated hazard quotients due to exposure to constituents detected in the soil matrix via the ingestion and dermal contact exposure routes is 3.3, which is greater than 1, the target hazard value.

Hazard Quotients Inhalation - The estimated hazard quotients due to exposure to constituents detected in the soil matrix via the inhalation exposure route is 0.008, which is less than 1, the target hazard value.

Summed Risk - The total risk, summed across all exposure pathways for all carcinogenic chemicals of concern in the soil matrix, is 3.18×10^{-5} , greater than the target risk.

Hazard Index – The total hazard, summed across all exposure pathways for all noncarcinogenic chemicals of concern in the soil matrix is 3.3, greater than the target hazard value. These estimated risk and hazards values are presented in Table 11.

Residential Scenario Adult – Soil Matrix

Estimated Risk Ingestion and Dermal Contact - The estimated risk due to exposure to constituents detected in the soil matrix via the ingestion and dermal contact exposure routes 1.39×10^{-5} greater than the target threshold 1×10^{-6} .

Estimated Risk Inhalation - The estimated risk due to exposure to constituents detected in the soil matrix via the inhalation exposure route is 2.09×10^{-7} less than the target threshold 1×10^{-6} .

Hazard Quotients Ingestion and Dermal Contact - The estimated hazard quotients due to exposure to constituents detected in the soil matrix via the ingestion and dermal contact exposure routes is 0.3, which is less than 1, the target hazard value.

Hazard Quotients Inhalation - The estimated hazard quotients due to exposure to constituents detected in the soil matrix via the inhalation exposure route is 0.008, which is less than 1, the target hazard value.

Summed Risk - The total risk, summed across all exposure pathways for all carcinogenic chemicals of concern in the soil matrix, is 1.4×10^{-5} , greater than the target threshold 1×10^{-6} .

Hazard Index – The total hazard, summed across all exposure pathways for all noncarcinogenic chemicals

of concern in the soil matrix is 0.3, less than the target hazard value. These estimated risk and hazards values are presented in Table 12.

Construction Worker Scenario – Soil Matrix

Estimated Risk Ingestion and Dermal Contact - The estimated risk due to exposure to constituents detected in the soil matrix via the ingestion and dermal contact exposure routes 1.90×10^{-6} less than the target threshold 1×10^{-5} .

Estimated Risk Inhalation - The estimated risk due to exposure to constituents detected in the soil matrix via the inhalation exposure route is 2.42×10^{-9} less than the target threshold 1×10^{-5} .

Hazard Quotients Ingestion and Dermal Contact - The estimated hazard quotients due to exposure to constituents detected in the soil matrix via the ingestion and dermal contact exposure routes is 0.04, which is less than 1, the target hazard value.

Hazard Quotients Inhalation - The estimated hazard quotients due to exposure to constituents detected in the soil matrix via the inhalation exposure route is 0.00009, which is less than 1, the target hazard value.

Summed Risk - The total risk, summed across all exposure pathways for all carcinogenic chemicals of concern in the soil matrix, is 1.9×10^{-6} , less than the target threshold 1×10^{-5} .

Hazard Index – The total hazard, summed across all exposure pathways for all noncarcinogenic chemicals of concern in the soil matrix is 0.04, less than the target hazard value. These estimated risk and hazards values are presented in Table 13.

Commercial Worker Scenario – Soil Matrix

Estimated Risk Ingestion and Dermal Contact - The estimated risk due to exposure to constituents detected in the soil matrix via the ingestion and dermal contact exposure routes 1.61×10^{-5} slightly greater than the target threshold 1×10^{-5} .

Estimated Risk Inhalation - The estimated risk due to exposure to constituents detected in the soil matrix via the inhalation exposure route is 4.14×10^{-8} less than the target threshold 1×10^{-5} .

Hazard Quotients Ingestion and Dermal Contact - The estimated hazard quotients due to exposure to constituents detected in the soil matrix via the ingestion and dermal contact exposure routes is 0.2, which is less than 1, the target hazard value.

Hazard Quotients Inhalation - The estimated hazard quotients due to exposure to constituents detected in the soil matrix via the inhalation exposure route is 0.002, which is less than 1, the target hazard value.

Summed Risk - The total risk, summed across all exposure pathways for all carcinogenic chemicals of concern in the soil matrix, is 1.61×10^{-5} , slightly greater than the target threshold 1×10^{-5} .

Hazard Index – The total hazard, summed across all exposure pathways for all noncarcinogenic chemicals of concern in the soil matrix is 0.23, less than the target hazard value. These estimated risk and hazards values are presented in Table 14.

9.0 UNCERTAINTY ANALYSIS

The uncertainty analysis characterizes the propagated uncertainty in health risk assessments. These uncertainties are driven by variability in:

- The chemical data selection and assumptions used in the models with which concentrations at receptor locations were estimated.
- The variability of receptor intake parameters.
- The accuracy of toxicity values used to characterize exposure, hazards and cancer risks.

Additionally, uncertainties are introduced in the risk assessment when exposures to several substances across multiple pathways are summed.

Quantifying uncertainty is an essential element of the risk assessment process. According to USEPA's Guidance on Risk Characterization for Risk Managers and Risk Assessors, point estimates of risk "do not fully convey the range of information considered and used in developing the assessment" (USEPA 1992). The following components of the risk assessment process can introduce uncertainties:

- Data Collection and Evaluation
- Exposure Assessment
- Toxicity Assessment
- Risk Characterization

9.1 Data Collection and Evaluation

The techniques used for data sampling and analysis and the methods used for identifying chemicals for evaluation in this risk assessment, may result in a number of uncertainties. These uncertainties are itemized below in the form of assumptions.

- It was assumed that the nature and extent of chemical impacts on and near the site have been adequately characterized. If this assumption is not valid, then potential health impacts may be over- or underestimated.
- Systematic or random errors in the chemical analyses may yield erroneous data. These types of errors may result in a slight over- or underestimation of risk.

9.2 Exposure Assessment

A number of uncertainties are associated with the exposure assessment, including estimation of exposure point concentrations and assumptions used to estimate chemical intakes. Key uncertainties associated with these components of the HRA are summarized below.

9.2.1 Exposure Pathways

The exposure pathways evaluated in this HRA are expected to represent the primary pathways of exposure, based on the results of the chemical analyses, and the expected fate and transport of these chemicals in the environment. Minor or secondary pathways may also exist, but often cannot be identified or evaluated using the available data. The contribution of secondary pathways to the overall risk from the site is not

likely to be significant. In addition, intake assumptions are reflective of trends (usually for the most sensitive individual within an entire population), and as such are subject to intrinsic variability. In both cases, their presence introduces a level of uncertainty to this risk assessment process.

9.3 Toxicity Assessment

Toxicity information for many chemicals is often limited. Consequently, there are varying degrees of uncertainty with the calculated toxicity values. Sources of uncertainty associated with toxicity values include:

- Using dose-response information from effects observed at high doses to predict the adverse health effects that may occur following exposure to the low levels expected from human contact with the agent in the environment.
- Using dose-response information from short-term exposures to predict the effects of long-term exposures.
- Using dose-response information from animal studies to predict effects in humans.
- Using dose-response information from homogeneous animal populations or human populations to predict the effects likely to be observed in the general population consisting of individuals with a wide range of sensitivities.

To compensate for these uncertainties, USEPA typically applies a margin of safety when promulgating human toxicity values. Therefore, use of USEPA toxicity values likely results in an overestimation of potential hazard and risk.

9.4 Risk Characterization

The reasonable maximum exposure scenario risk characterization represents an over-estimation of risk. Site-specific information regarding depth below ground at which the constituents of concern were detected was not used in the equations. The reasonable maximum exposure scenario estimated the risk to the receptors based on the maximum detected concentrations or the UCLs for the constituents quantitatively assessed in this risk assessment.

9.5 Summary of Risk Assessment Uncertainties

The analysis of the uncertainties associated with this risk assessment indicates that the estimated risks and hazards derived from the equations in the PEA Manual (DTSC 2013), the RAGs Manual (USEPA 2009), the LeadSpread Model (DTSC) and the J&E Models for the reasonable maximum exposure scenario represent an over-estimation of risk. Although as outlined in the sections above, many factors can contribute to the over- or underestimation of risk, in general, a mixture of conservative and upper-bound input values were identified to estimate potential exposures. Compounding conservative and upper-bound input values in the risk assessment process are intended to lead to reasonable, maximum, health-conservative estimates. The actual impacts to human health are most likely less than those estimated in this HRA for the evaluated receptors and pathways.

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TABLES

Table 1 Soil Vapor Data

Sample ID	Depth ft	1,2,4-Trimethylbenzene	Benzene	Ethylbenzene	Isopropylbenzene	Naphthalene	n-Butylbenzene	n-Propylbenzene	Toluene	Xylenes
SG1-5	5	0.112	<0.008	0.117	<0.008	0.024	<0.008	0.083	<0.008	0.207
SG1-15	15	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
SG2-5	5	0.855	2.02	<0.008	0.149	0.097	<0.008	0.394	0.063	1.08
SG2-15 (10P)	15	<0.008	12.3	5.87	<0.008	<0.008	<0.008	<0.008	9.55	38.4
SG2-15 (1P)	15	<0.008	26.4	<0.008	<0.008	<0.008	<0.008	<0.008	16.7	<0.008
SG2-15 (3P)	15	<0.008	33.7	8.67	<0.008	<0.008	<0.008	<0.008	10.4	18.4
SG3-5	5	5.44	<0.008	6.56	<0.008	0.41	<0.008	4.2	<0.008	7.71
SG4-5	5	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
SG4-15	15	0.539	<0.008	0.674	0.17	0.042	<0.008	0.362	<0.008	0.739
SG5-5	5	4.97	<0.008	5.04	0.85	0.22	<0.008	2.92	<0.008	2.75
SG5-5 dup.	5	5	<0.008	5.4	1.13	0.304	<0.008	3.34	<0.008	3.04
SG5-15	15	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
SG6-5	5	0.652	<0.008	1.41	<0.008	<0.008	<0.008	0.678	<0.008	1.97
SG6-15	15	<0.008	167	40.2	<0.008	<0.008	<0.008	<0.008	8.47	51.1
SG7-5	5	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
SG7-15	15	0.07	<0.008	0.114	<0.008	0.01	0.042	0.07	<0.008	0.256
SG8-5	5	0.684	<0.008	1.3	<0.008	<0.008	<0.008	<0.008	<0.008	0.564
SG8-15	15	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
SG9-5	5	<0.008	<0.008	0.65	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
SG9-15	15	1.68	<0.008	5.78	0.298	0.162	0.638	2.43	1.09	6.08
SG10-5	5	0.546	<0.008	1.18	<0.008	<0.008	0.388	0.742	<0.008	1.14
SG10-15	15	<0.008	1.85	0.632	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
SG11-5	5	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
SG11-15	15	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
SG12-5	5	0.06	<0.008	0.095	<0.008	<0.008	<0.008	0.068	<0.008	0.139
SG12-15	15	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
SG13-5	5	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
SG13-5 dup.	5	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008	<0.008
SG13-15	15	2.58	<0.008	3.84	0.02	0.104	0.724	2.18	<0.008	4.15

Notes: Concentrations are in micrograms per liter (ug/L)

Table 2 Total Petroleum Hydrocarbons (TPH) in Soil 5-feet and 10-feet bgs

Sample ID	Depth (ft.)	TPH Gasoline (C4-C12)	TPH Diesel (C13-C22)	TPH Oil	
				TPH (C23-C32)	TPH (C33-C40)
B1@5	5	<1	84	460	670
B1@10	10	33	2,300	2,200	1,600
B2@5	5	<1	12	19	13
B3@5	5	<1	2,800	3,200	2,500
B3@10	10	<1	8.4	9.7	4.9
B4@5	5	19	3,600	3,800	2,800
B4@10	10	42	1,500	1,200	800
B5@5	5	37	5,700	5,200	3,700
B5@10	10	18	1,500	1,300	950
B6@5	5	35	2,100	1,700	1,200
B6@10	10	3.4	940	5,000	6,500
B7@5	5	2.4	1,200	1,100	790
B7@10	10	<1	<1	<1	<1
B8-5	5	<1	<1	<1	<1
B8-10	10	1,500	15,000	<400	<400
B9@5	5	<1	<1	1.4	<1
B9@10	10	<1	1.2	1.1	<1
B12@5	5	<1	<1	<1	<1
B12@10	10	<1	<1	<1	<1
B13@5	5	<1	4.4	25	34
B13@10	10	<1	180	1,200	2,300
B14@5	5	<1	490	1,100	850
B14@10	10	<1	60	220	210
B15@5	5	<1	<1	1.7	2.1
B15@10	10	<1	<1	<1	1.5
B16@3	3	<1	<10	81	190
B16@10	10	<1	<1	1.8	1.1
B17@5	5	<1	360	940	790
B17@10	10	<1	<1	1.3	<1
B18@3	3	<1	6,400	13,000	8,900
B18@10	10	13	5,500	3,600	2,100
B19@5	5	<1	1.4	2	2.2
B19@10	10	<1	1.4	1.2	<1
B20-5	5	20	4,900	4,000	2,400
B20-10	10	<1	1	1.2	1.1
B21@5	5	<1	1.5	13	20
B21@10	10	<1	48	66	39
B22@5	5	<1	1,700	1,900	1,100
B22@10	10	<1	5.8	5.8	3.6
B23@5	5	<1	20	27	19
B23@10	10	87	6,800	8,100	4,300
B24-5	5	<1	17	45	34
B24-10	10	<1	710	3,000	3,800

Table 2 Total Petroleum Hydrocarbons (TPH) in Soil 5-foot and 10-foot bgs

Sample ID	Depth (ft.)	TPH Gasoline (C4-C12)	TPH Diesel (C13-C22)	TPH Oil	
				TPH (C23-C32)	TPH (C33-C40)
B25-5	5	<1	3	6.1	4.5
B25-10	10	<1	<1	1.4	1.5
B26-5	5	<1	190	840	920
B26-10	10	<1	2.2	3.5	2.9
B27-5	5	<1	3,000	4,900	3,200
B27-10	10	15	2,400	2,000	1,300
B28@5	5	<1	490	2,600	3,500
B28@10	10	25	51	39	25
B29@2	2	<1	110	340	370
B29@5	5	<1	<1	1.3	<1
B29@10	10	<1	1.6	1.4	1.1
B30@5	5	<1	1,400	1,800	1,400
B30@10	10	1.3	3,200	4,000	2,400
TSO-7-5	5	<0.2	10	180	
TSO-8-5	5	2.02	3,310	1,300	
TSO-8-10	10	17.3	3,800	820	
TSO-9-10	10	16.9	250	54	
TSO-20-5	5	<0.2	<10	<20	
TSO-20-10	10	<0.2	<10	<20	
GB-SOIL-TSO-7-3-041415	3	0.28 J	5,300	7,600	4,500
GB-SOIL-TSO-7-5-041415	5	0.33	71	150	110
GB-SOIL-TSO-7-10-0414	10	<0.27	4.5 J	6.3	2.9 J
GB-SOIL-TSO-8-3-041315	3	150	8,600	9,400	4,400
GB-SOIL-TSO-8-5-041315	5	57	3,700	6,000	3,500
GB-SOIL-TSO-8-10-041315	10	420	1,100	1,000	500
GB-SOIL-TSO-8-10D-041315	10	470	4,100	3,300	1,700
GB-SOIL-TSO-9-5-041415	5	<0.24	<5	3 J	<5
GB-SOIL-TSO-9-10-041415	10	370	99	4.5 J	<5
GB-SOIL-TSO-10-5-041315	5	<0.29	<5	<5	<5
GB-SOIL-TSO-10-10-041415	10	<0.34	<5	<5	<5
GB-SOIL-TSO-10-10D-041415	10	<0.36	<5	<5	<5
GB-SOIL-TSO-11-5-041515	5	<0.3	<5	<5	<5
GB-SOIL-TSO-11-5D-041515	5	<0.29	<5	<5	<5
GB-SOIL-TSO-11-10-041515	10	<0.31	<5	<5	<5
GB-SOIL-TSO-12-7-041515	7	<0.31	<5	19	20
GB-SOIL-TSO-12-10-041615	10	<0.32	<4.9	<4.9	<4.9
GB-SOIL-TSO-13-5-041515	5	<0.32	<14	<14	<14
GB-SOIL-TSO-13-10-041515	10	<0.34	<5	<5	<5
GB-SOIL-TSO-16-5-041615	5	<0.31	44	83	59
GB-SOIL-TSO-16-5D-041615	5	<0.31	78	170	93
GB-SOIL-TSO-20-5-042115	5	0.2 J	10	10	6.3
GB-SOIL-TSO-20-10-042115	10	<0.28	11	17	10

Notes: Concentrations are in milligrams per kilogram (mg/kg)

Table 3 Volatile Organic Compounds (VOCs) Concentrations in Soil 5-feet and 10-feet bgs

Sample ID	Depth ft.	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	2-Butanone (MEK)	Acetone	Benzene	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	m,p-Xylenes	Naphthalene	n-Butylbenzene
B1@5	5	<0.0042	<0.0042	<0.0042	<0.0042			<0.0042	<0.0042	<0.0042	<0.0042	<0.0085	<0.0042	<0.0042
B1@10	10	<0.19	6.3	<0.19	0.34			0.45	<0.19	1.7	1	1.3	3.9	0.77
B2@5	5	<0.0041	0.0089	<0.0041	<0.0041			0.005	<0.0041	<0.0041	<0.0041	<0.0082	<0.0041	<0.0041
B2@10	10	<0.0047	0.28	<0.0047	0.033			0.04	<0.0047	0.066	0.035	0.055	0.15	0.033
B3@5	5	<0.0043	<0.0043	<0.0043	<0.0043			<0.0043	<0.0043	<0.0043	<0.0043	<0.0087	<0.0043	<0.0043
B3@10	10	<0.0035	<0.0035	<0.0035	<0.0035			<0.0035	<0.0035	<0.0035	<0.0035	<0.007	<0.0035	<0.0035
B4@5	5	<0.19	3.5	<0.19	0.4			0.25	<0.19	0.76	0.48	0.7	1.9	0.33
B4@10	10	<0.0038	0.22	0.0064	0.091			0.047	<0.0038	0.06	0.031	0.043	0.13	0.045
B5@5	5	<0.22	4.1	<0.22	0.58			0.24	<0.22	1.1	0.6	0.8	2.6	0.54
B5@10	10	<0.0042	0.2	<0.0042	0.057			0.027	<0.0042	0.057	0.03	0.041	0.12	0.032
B6@5	5	<0.26	7.6	<0.26	0.29			<0.26	<0.26	1.5	1.2	0.83	4.7	1
B6@10	10	<0.0036	<0.0036	<0.0036	<0.0036			<0.0036	<0.0036	<0.0036	<0.0036	<0.0071	<0.0036	<0.0036
B7@5	5	<0.0041	0.012	<0.0041	<0.0041			<0.0041	<0.0041	<0.0041	<0.0041	<0.0082	0.037	<0.0041
B7@10	10	<0.004	<0.004	<0.004	<0.004			<0.004	<0.004	<0.004	<0.004	<0.008	<0.004	<0.004
B8-5	5	<0.0037	<0.0037	<0.0037	<0.0037			<0.0037	<0.0037	<0.0037	<0.0037	<0.0074	<0.0037	<0.0037
B8-10	10	<0.24	13	<0.24	4.5			3.8	<0.24	1.5	0.41	2.8	51	3.4
B9@5	5	<0.004	<0.004	<0.004	<0.004			<0.004	<0.004	<0.004	<0.004	<0.008	<0.004	<0.004
B9@10	10	<0.004	<0.004	<0.004	<0.004			<0.004	<0.004	<0.004	<0.004	<0.0079	<0.004	<0.004
B12@5	5	<0.0045	<0.0045	<0.0045	<0.0045			<0.0045	<0.0045	<0.0045	<0.0045	<0.0089	<0.0045	<0.0045
B12@10	10	<0.0046	<0.0046	<0.0046	<0.0046			<0.0046	<0.0046	<0.0046	<0.0046	<0.0093	<0.0046	<0.0046
B13@5	5	<0.0062	<0.0062	<0.0062	<0.0062			<0.0062	<0.0062	<0.0062	<0.0062	<0.012	<0.0062	<0.0062
B13@10	10	<0.0043	<0.0043	<0.0043	<0.0043			<0.0043	<0.0043	<0.0043	<0.0043	<0.0085	<0.0043	<0.0043
B14@5	5	<0.0056	<0.0056	<0.0056	<0.0056			<0.0056	<0.0056	<0.0056	<0.0056	<0.011	<0.0056	<0.0056
B14@10	10	<0.0027	<0.0027	<0.0027	<0.0027			<0.0027	<0.0027	<0.0027	<0.0027	<0.0054	<0.0027	<0.0027
B15@5	5	<0.0049	<0.0049	<0.0049	<0.0049			<0.0049	<0.0049	<0.0049	<0.0049	<0.0098	<0.0049	<0.0049
B15@10	10	<0.0037	<0.0037	<0.0037	<0.0037			<0.0037	<0.0037	<0.0037	<0.0037	<0.0075	<0.0037	<0.0037
B16@3	3	<0.0041	<0.0041	<0.0041	<0.0041			<0.0041	<0.0041	<0.0041	<0.0041	<0.0083	<0.0041	<0.0041
B16@10	10	<0.0045	<0.0045	<0.0045	<0.0045			<0.0045	<0.0045	<0.0045	<0.0045	<0.009	<0.0045	<0.0045
B17@5	5	<0.0044	<0.0044	<0.0044	<0.0044			<0.0044	<0.0044	<0.0044	<0.0044	<0.0088	<0.0044	<0.0044
B17@10	10	<0.0037	<0.0037	<0.0037	<0.0037			<0.0037	<0.0037	<0.0037	<0.0037	<0.0074	<0.0037	<0.0037
B18@3	3	<0.0052	<0.0052	<0.0052	<0.0052			<0.0052	<0.0052	<0.0052	<0.0052	<0.01	<0.0052	<0.0052
B18@10	10	<0.0048	<0.0048	<0.0048	<0.0048			<0.0048	<0.0048	<0.0048	0.016	<0.0096	6.8	<0.0048
B19@5	5	<0.0069	<0.0069	<0.0069	<0.0069			<0.0069	<0.0069	<0.0069	<0.0069	<0.014	<0.0069	<0.0069
B19@10	10	<0.0049	<0.0049	<0.0049	<0.0049			<0.0049	<0.0049	<0.0049	<0.0049	<0.0099	<0.0049	<0.0049

Table 3 Volatile Organic Compounds (VOcs) in Soil 5-foot and 10-foot bgs

Sample ID	Depth ft.	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	sec-Butylbenzene	Toluene
B1@5	5	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042
B1@10	10	1.6	<0.19	1.5	0.92	<0.19
B2@5	5	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041
B2@10	10	0.055	0.0054	0.049	0.031	0.0055
B3@5	5	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043
B3@10	10	<0.0035	<0.0035	<0.0035	<0.0035	<0.0035
B4@5	5	0.72	<0.19	0.71	0.47	<0.19
B4@10	10	0.05	0.007	0.044	0.032	0.0057
B5@5	5	0.9	<0.22	0.98	0.54	<0.22
B5@10	10	0.044	0.005	0.045	0.025	0.0047
B6@5	5	1.9	<0.26	1.9	1.2	<0.26
B6@10	10	<0.0036	<0.0036	<0.0036	<0.0036	<0.0036
B7@5	5	<0.0041	<0.0041	0.0056	0.0042	<0.0041
B7@10	10	<0.004	<0.004	<0.004	<0.004	<0.004
B8-5	5	<0.0037	<0.0037	<0.0037	<0.0037	<0.0037
B8-10	10	0.79	0.27	2.2	1.2	1.6
B9@5	5	<0.004	<0.004	<0.004	<0.004	<0.004
B9@10	10	<0.004	<0.004	<0.004	<0.004	<0.004
B12@5	5	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045
B12@10	10	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046
B13@5	5	<0.0062	<0.0062	<0.0062	<0.0062	<0.0062
B13@10	10	<0.0043	<0.0043	<0.0043	<0.0043	<0.0043
B14@5	5	<0.0056	<0.0056	<0.0056	<0.0056	<0.0056
B14@10	10	<0.0027	<0.0027	<0.0027	<0.0027	<0.0027
B15@5	5	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
B15@10	10	<0.0037	<0.0037	<0.0037	<0.0037	<0.0037
B16@3	3	<0.0041	<0.0041	<0.0041	<0.0041	<0.0041
B16@10	10	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045
B17@5	5	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044
B17@10	10	<0.0037	<0.0037	<0.0037	<0.0037	<0.0037
B18@3	3	<0.0052	<0.0052	<0.0052	<0.0052	<0.0052
B18@10	10	0.028	<0.0048	<0.0048	0.034	<0.0048
B19@5	5	<0.0069	<0.0069	<0.0069	<0.0069	<0.0069
B19@10	10	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049

Table 3 Volatile Organic Compounds (VOCs) in Soil 5-foot and 10-foot bgs

Sample ID	Depth ft.	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	2-Butanone (MEK)	Acetone	Benzene	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	m,p-Xylenes	Naphthalene	n-Butylbenzene
B20-5	5	<0.0047	<0.0047	<0.0047	<0.0047			<0.0047	<0.0047	0.025	0.025	<0.0093	0.15	0.025
B20-10	10	<0.0039	<0.0039	<0.0039	<0.0039			<0.0039	<0.0039	<0.0039	<0.0039	<0.0079	<0.0039	<0.0039
B21@5	5	<0.0042	<0.0042	<0.0042	<0.0042			<0.0042	<0.0042	<0.0042	<0.0042	<0.0083	<0.0042	<0.0042
B21@10	10	<0.0036	<0.0036	<0.0036	<0.0036			<0.0036	<0.0036	<0.0036	<0.0036	<0.0072	<0.0036	<0.0036
B22@5	5	<0.0058	<0.0058	<0.0058	<0.0058			<0.0058	<0.0058	0.0064	0.014	<0.012	0.019	<0.0058
B22@10	10	<0.0034	<0.0034	<0.0034	<0.0034			0.0046	<0.0034	0.0061	<0.0034	<0.0068	0.0062	<0.0034
B23@5	5	<0.004	<0.004	<0.004	<0.004			0.015	<0.004	<0.004	<0.004	<0.0081	<0.004	<0.004
B23@10	10	<0.19	18	0.42	4.1			1.3	<0.19	3.9	1.4	11	9.3	2.5
B24-5	5	<0.0039	<0.0039	<0.0039	<0.0039			<0.0039	<0.0039	<0.0039	<0.0039	<0.0078	<0.0039	<0.0039
B24-10	10	<0.0051	<0.0051	<0.0051	<0.0051			<0.0051	<0.0051	<0.0051	<0.0051	<0.01	<0.0051	<0.0051
B25-5	5	<0.0048	<0.0048	<0.0048	<0.0048			<0.0048	<0.0048	<0.0048	<0.0048	<0.0097	<0.0048	<0.0048
B25-10	10	<0.0044	<0.0044	<0.0044	<0.0044			<0.0044	<0.0044	<0.0044	<0.0044	<0.0088	<0.0044	<0.0044
B26-5	5	<0.0044	<0.0044	<0.0044	<0.0044			<0.0044	<0.0044	<0.0044	<0.0044	<0.0088	<0.0044	<0.0044
B26-10	10	<0.0044	<0.0044	<0.0044	<0.0044			<0.0044	<0.0044	<0.0044	<0.0044	<0.0088	<0.0044	<0.0044
B27-5	5	<0.0088	<0.0088	<0.0088	<0.0088			<0.0088	<0.0088	<0.0088	<0.0088	<0.018	<0.0088	<0.0088
B27-10	10	<0.21	1	<0.21	<0.21			<0.21	<0.21	0.98	0.59	<0.41	3.1	0.56
B28@5	5	<0.0048	<0.0048	<0.0048	<0.0048			<0.0048	<0.0048	<0.0048	<0.0048	<0.0096	<0.0048	<0.0048
B28@10	10	<0.0044	<0.0044	<0.0044	<0.0044			<0.0044	<0.0044	0.09	0.04	<0.0089	0.13	0.02
B29@2	2	<0.0038	<0.0038	<0.0038	<0.0038			<0.0038	<0.0038	<0.0038	<0.0038	<0.0075	<0.0038	<0.0038
B29@5	5	<0.0042	<0.0042	<0.0042	<0.0042			<0.0042	<0.0042	<0.0042	<0.0042	<0.0083	<0.0042	<0.0042
B29@10	10	<0.0039	<0.0039	<0.0039	<0.0039			<0.0039	<0.0039	<0.0039	<0.0039	<0.0078	<0.0039	<0.0039
B30@5	5	<0.0045	<0.0045	<0.0045	<0.0045			<0.0045	<0.0045	<0.0045	<0.0045	<0.009	<0.0045	<0.0045
B30@10	10	<0.0037	0.017	<0.0037	0.0058	<0.01	<0.1	0.0088	0.005	0.0038	<0.0037	0.0097	0.02	<0.0037
TSO-7-5	5	<0.003	0.0024	<0.001	0.0056	<0.01	<0.1	<0.001	<0.002	<0.001	<0.001	<0.002	0.0056	<0.002
TSO-8-5	5	<0.003	0.064	<0.001	0.007	<0.01	<0.1	0.003	<0.002	0.017	0.008	0.014	0.035	0.004
TSO-8-10	10	<0.003	0.118	<0.001	0.011	<0.01	<0.1	0.015	<0.002	0.056	0.024	0.023	0.228	0.017
TSO-9-10	10	<0.003	0.6	<0.001	0.16	<0.01	<0.1	<0.001	<0.002	0.023	0.007	0.069	1.11	0.074
TSO-20-5	5	<0.003	<0.001	<0.001	<0.001	<0.01	<0.1	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002
TSO-20-10	10	<0.003	<0.001	<0.001	<0.001	<0.01	<0.1	<0.001	<0.002	<0.001	<0.001	<0.002	<0.002	<0.002
GB-SOIL-TSO-7-3-041415	3	<0.0017	<0.0017	<0.0017	<0.0017	<0.0083	<0.017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0033	<0.0041	<0.0041
GB-SOIL-TSO-7-5-041415	5	<0.0015	0.014	<0.0015	0.002	<0.0077	<0.015	<0.0015	<0.0015	<0.0015	<0.0015	<0.0031	0.006	0.0011 J
GB-SOIL-TSO-7-10-0414	10	<0.0016	<0.0016	<0.0016	<0.0016	<0.008	<0.016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0032	<0.004	<0.004
GB-SOIL-TSO-7-15-041515	15	<0.002	<0.002	<0.002	<0.002	<0.01	<0.02	<0.002	<0.002	<0.002	<0.002	<0.0041	<0.0051	<0.0051
GB-SOIL-TSO-8-3-041315	3	<0.078	2.3	0.11	0.46	<0.78	<1.6	0.053 J	<0.078	0.4	0.24	0.3	3.1	0.58

Table 3 Volatile Organic Compounds (VOCs) in Soil 5-feet and 10-feet bgs

Sample ID	Depth ft.	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	sec-Butylbenzene	Toluene
B20-5	5	0.039	<0.0047	0.017	0.024	<0.0047
B20-10	10	<0.0039	<0.0039	<0.0039	<0.0039	<0.0039
B21@5	5	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042
B21@10	10	<0.0036	<0.0036	<0.0036	<0.0036	<0.0036
B22@5	5	0.018	<0.0058	0.0091	0.0089	<0.0058
B22@10	10	0.0036	<0.0034	<0.0034	<0.0034	<0.0034
B23@5	5	<0.004	<0.004	<0.004	<0.004	0.0092
B23@10	10	2.6	5.1	1.9	1.4	2.6
B24-5	5	<0.0039	<0.0039	<0.0039	<0.0039	<0.0039
B24-10	10	<0.0051	<0.0051	<0.0051	<0.0051	<0.0051
B25-5	5	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
B25-10	10	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044
B26-5	5	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044
B26-10	10	<0.0044	<0.0044	<0.0044	<0.0044	<0.0044
B27-5	5	<0.0088	<0.0088	<0.0088	<0.0088	<0.0088
B27-10	10	1	<0.21	0.51	0.59	<0.21
B28@5	5	<0.0048	<0.0048	<0.0048	<0.0048	<0.0048
B28@10	10	0.056	<0.0044	<0.0044	0.023	<0.0044
B29@2	2	<0.0038	<0.0038	<0.0038	<0.0038	<0.0038
B29@5	5	<0.0042	<0.0042	<0.0042	<0.0042	<0.0042
B29@10	10	<0.0039	<0.0039	<0.0039	<0.0039	<0.0039
B30@5	5	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045
B30@10	10	<0.0037	<0.0037	<0.0037	<0.0037	0.0044
TSO-7-5	5	<0.001	<0.001	<0.002	<0.002	<0.001
TSO-8-5	5	0.013	0.006	0.01	0.006	<0.001
TSO-8-10	10	0.036	<0.001	0.026	0.016	<0.001
TSO-9-10	10	0.02	0.017	0.026	0.009	0.002
TSO-20-5	5	<0.001	<0.001	<0.002	<0.002	<0.001
TSO-20-10	10	<0.001	<0.001	<0.002	<0.002	<0.001
GB-SOIL-TSO-7-3-041415	3	<0.0017	<0.0017	<0.0017	<0.0041	<0.0017
GB-SOIL-TSO-7-5-041415	5	<0.0015	<0.0015	0.0027	0.0011 J	<0.0015
GB-SOIL-TSO-7-10-0414	10	<0.0016	<0.0016	<0.0016	<0.004	<0.0016
GB-SOIL-TSO-7-15-041515	15	<0.002	<0.002	<0.002	<0.0051	<0.002
GB-SOIL-TSO-8-3-041315	3	0.46	0.048 J	0.47	0.34	<0.078

Table 3 Volatile Organic Compounds (VOCs) in Soil 5-feet and 10-feet bgs

Sample ID	Depth ft.	1,1,2-Trichloroethane	1,2,4-Trimethylbenzene	1,2-Dichlorobenzene	1,3,5-Trimethylbenzene	2-Butanone (MEK)	Acetone	Benzene	cis-1,2-Dichloroethene	Ethylbenzene	Isopropylbenzene	m,p-Xylenes	Naphthalene	n-Butylbenzene
GB-SOIL-TSO-8-5-041315	5	<0.088	0.89	<0.088	0.11	<0.88	<1.8	0.047 J	<0.088	0.23	0.12	0.2	0.49	0.14 J
GB-SOIL-TSO-8-10-041315	10	<0.071	2.8	<0.071	0.35	<0.71	<1.4	0.13	<0.071	0.92	0.53	0.49	1.7	0.6
GB-SOIL-TSO-8-10D-041315	10	0.3	2.3	<0.074	0.31	<0.74	<1.5	0.11	<0.074	0.77	0.46	0.4	1.4	0.53
GB-SOIL-TSO-9-5-041415	5	<0.0016	<0.0016	<0.0016	<0.0016	<0.0081	<0.016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0032	<0.004	<0.004
GB-SOIL-TSO-9-10-041415	10	<0.19	6.7	<0.19	2.5	<1.9	<3.8	<0.19	<0.19	0.15 J	<0.19	1.1	2.8	<0.48
GB-SOIL-TSO-10-5-041315	5	<0.0016	<0.0016	<0.0016	<0.0016	<0.0079	<0.016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0032	<0.004	<0.004
GB-SOIL-TSO-10-10-041415	10	<0.0018	<0.0018	<0.0018	<0.0018	<0.0089	<0.018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0036	<0.0045	<0.0045
GB-SOIL-TSO-10-10D-041415	10	<0.0019	<0.0019	<0.0019	<0.0019	<0.0093	<0.019	<0.0019	<0.0019	<0.0019	<0.0019	<0.0037	<0.0046	<0.0046
GB-SOIL-TSO-11-5-041515	5	<0.0016	<0.0016	<0.0016	<0.0016	<0.0081	<0.016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0032	<0.004	<0.004
GB-SOIL-TSO-11-5D-041515	5	<0.0015	<0.0015	<0.0015	<0.0015	<0.0075	<0.015	<0.0015	<0.0015	<0.0015	<0.0015	<0.003	<0.0037	<0.0037
GB-SOIL-TSO-11-10-041515	10	<0.0016	<0.0016	<0.0016	<0.0016	<0.0081	<0.016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0032	<0.004	<0.004
GB-SOIL-TSO-12-7-041515	7	<0.0018	<0.0018	<0.0018	<0.0018	<0.0089	<0.018	<0.0018	<0.0018	<0.0018	<0.0018	<0.0035	<0.0044	<0.0044
GB-SOIL-TSO-12-10-041615	10	<0.0017	<0.0017	<0.0017	<0.0017	<0.0087	<0.017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0035	<0.0044	<0.0044
GB-SOIL-TSO-13-5-041515	5	<0.0034	<0.0034	<0.0034	<0.0034	<0.017	<0.034	<0.0034	<0.0034	<0.0034	<0.0034	<0.0068	<0.0084	<0.0084
GB-SOIL-TSO-13-10-041515	10	<0.0017	<0.0017	<0.0017	<0.0017	<0.0083	<0.017	<0.0017	<0.0017	<0.0017	<0.0017	<0.0033	<0.0042	<0.0042
GB-SOIL-TSO-16-5-041615	5	<0.0015	<0.0015	<0.0015	<0.0015	<0.0076	<0.015	<0.0015	<0.0015	<0.0015	<0.0015	<0.003	<0.0038	<0.0038
GB-SOIL-TSO-16-5D-041615	5	<0.0016	<0.0016	<0.0016	<0.0016	<0.008	<0.016	<0.0016	<0.0016	<0.0016	<0.0016	<0.0032	<0.004	<0.004
GB-SOIL-TSO-20-5-042115	5	<0.0014	<0.0014	<0.0014	<0.0014	0.0079	0.036	<0.0014	<0.0014	<0.0014	<0.0014	<0.0028	<0.0035	<0.0035
GB-SOIL-TSO-20-10-042115	10	<0.0014	<0.0014	<0.0014	<0.0014	<0.0071	0.014	<0.0014	<0.0014	<0.0014	<0.0014	<0.0029	<0.0036	<0.0036

Table 3 Volatile Organic Compounds (VOCs) in Soil 5-foot and 10-foot bgs

Sample ID	Depth ft.	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	sec-Butylbenzene	Toluene
GB-SOIL-TSO-8-5-041315	5	0.21	0.089	0.16	0.12 J	<0.088
GB-SOIL-TSO-8-10-041315	10	0.87	<0.071	0.89	0.56	<0.071
GB-SOIL-TSO-8-10D-041315	10	0.76	<0.074	0.75	0.51	<0.074
GB-SOIL-TSO-9-5-041415	5	<0.0016	<0.0016	<0.0016	<0.004	<0.0016
GB-SOIL-TSO-9-10-041415	10	<0.19	0.24	0.41	<0.48	0.1 J
GB-SOIL-TSO-10-5-041315	5	<0.0016	<0.0016	<0.0016	<0.004	<0.0016
GB-SOIL-TSO-10-10-041415	10	<0.0018	<0.0018	<0.0018	<0.0045	<0.0018
GB-SOIL-TSO-10-10D-041415	10	<0.0019	<0.0019	<0.0019	<0.0046	<0.0019
GB-SOIL-TSO-11-5-041515	5	<0.0016	<0.0016	<0.0016	<0.004	<0.0016
GB-SOIL-TSO-11-5D-041515	5	<0.0015	<0.0015	<0.0015	<0.0037	<0.0015
GB-SOIL-TSO-11-10-041515	10	<0.0016	<0.0016	<0.0016	<0.004	<0.0016
GB-SOIL-TSO-12-7-041515	7	<0.0018	<0.0018	<0.0018	<0.0044	<0.0018
GB-SOIL-TSO-12-10-041615	10	<0.0017	<0.0017	<0.0017	<0.0044	<0.0017
GB-SOIL-TSO-13-5-041515	5	<0.0034	<0.0034	<0.0034	<0.0084	<0.0034
GB-SOIL-TSO-13-10-041515	10	<0.0017	<0.0017	<0.0017	<0.0042	<0.0017
GB-SOIL-TSO-16-5-041615	5	<0.0015	<0.0015	<0.0015	<0.0038	<0.0015
GB-SOIL-TSO-16-5D-041615	5	<0.0016	<0.0016	<0.0016	<0.004	<0.0016
GB-SOIL-TSO-20-5-042115	5	<0.0014	<0.0014	<0.0014	<0.0035	<0.0014
GB-SOIL-TSO-20-10-042115	10	<0.0014	<0.0014	<0.0014	<0.0036	<0.0014

Notes: Concentrations are in milligrams per kilogram (mg/kg)
 Only detected concentrations of VOCs in soil 5-foot and 10-foot bgs are presented

Table 4 Metal Concentrations in Soil 5-foot and 10-foot bgs

Sample ID	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Manganese	Mercury	Molybdenum	Nickel	Vanadium	Zinc
B1@5	7.3	98	<1	<1	17	8.5	17	11		<0.1	<1	14	31	53
B1@10	6.6	620	<1	<1	20	7	37	200		0.37	<1	18	29	78
B2@5	2.1	130	<1	<1	18	7.7	26	12		<0.1	<1	15	31	71
B2@10	11	410	<1	<1	24	7.5	30	140		0.17	<1	18	32	400
B3@5	8.2	690	<1	1	22	7.7	55	480		0.83	<1	21	32	95
B3@10	4	84	<1	<1	18	9.2	22	5.2		<0.1	<1	17	28	39
B4@5	11	760	<1	1	21	7.4	74	520		1.5	<1	22	30	120
B4@10	12	370	<1	<1	20	7.3	28	86		0.11	<1	17	29	87
B5@5	5.9	550	<1	<1	19	7.1	44	280		0.52	<1	19	31	90
B5@10	14	350	<1	<1	20	7.7	30	160		0.19	<1	16	29	110
B6@5	6.7	540	<1	<1	20	6.8	33	170		0.31	<1	17	29	93
B6@10	1.2	100	<1	<1	9.9	3.4	13	19		<0.1	<1	13	19	30
B7@5	3.7	210	<1	<1	21	8.9	20	12		<0.1	<1	15	35	40
B7@10	5.2	150	<1	<1	27	11	29	7.5		<0.1	<1	20	46	47
B8-5	2.8	65	<1	<1	20	8.5	20	5.2	410	<0.1	<1	18	36	36
B8-10	24	110	<1	<1	32	6.4	50	11		<0.1	<1	14	59	44
B9@5	1.9	99	<1	<1	20	10	19	5.6		<0.1	<1	18	39	280
B9@10	14	86	<1	<1	19	6.6	20	4.7		<0.1	<1	16	36	65
B10@2	1.4	67	<1	<1	13	5.2	15	8.9	310	<0.1	<1	11	22	34
B11@2	1.7	83	<1	<1	17	5.8	17	21	280	<0.1	<1	24	24	42
B12@2	2.1	71	<1	<1	12	4.8	12	10	230	<0.1	<1	8.9	21	47
B12@5	1.9	45	<1	<1	10	3.9	6.9	2.8		<0.1	<1	7.7	19	20
B12@10	2.4	29	<1	<1	5.7	2.4	5.3	2		<0.1	<1	6.5	12	11
B13@2	12	430	<1	<1	20	6	20	46	290	0.13	<1	17	27	54
B13@5	<1	92	<1	<1	15	6	18	54		<0.1	<1	10	29	88
B13@10	38	200	<1	<1	16	5.9	20	57		<0.1	<1	12	27	56
B14@5	16	500	<1	<1	23	6.5	26	69		0.15	<1	20	27	67
B14@10	20	120	<1	<1	17	7.6	29	32		<0.1	<1	14	29	48
B15@5	<1	130	<1	<1	12	5	14	2.5		<0.1	<1	15	23	30
B15@10	1.1	310	<1	<1	19	6.2	18	5		<0.1	<1	15	27	37
B16@3	1.8	74	<1	<1	13	5.8	14	5.3		<0.1	<1	13	23	32
B16@10	<1	500	<1	<1	61	4.9	40	18		<0.1	<1	15	33	33
B17@5	4.4	64	<1	<1	11	4.1	11	3.9		<0.1	<1	8.9	17	26
B17@10	1.8	84	<1	<1	15	6.6	18	3.1		<0.1	<1	11	28	36
B18@3	2.8	250	<1	<1	14	8.1	28	610		0.36	<1	27	29	210
B18@10	2.1	140	<1	<1	16	6.9	21	4.4		<0.1	<1	16	32	39
B19@5	1.5	190	<1	<1	18	8.5	26	6.5		0.12	<1	15	33	47
B19@10	2.5	120	<1	<1	21	8.2	21	4.6		<0.1	<1	17	33	40
B20-5	<1	130	<1	<1	14	6.1	15	3		<0.1	<1	12	29	36
B20-10	6.1	160	<1	<1	26	10	37	6.8		<0.1	<1	21	45	49
B21@5	6	100	<1	<1	18	6.8	18	30		<0.1	<1	13	31	43
B21@10	11	440	<1	<1	21	7.9	24	28		<0.1	<1	17	36	41
B22@5	2.5	150	<1	<1	16	6.9	17	16		<0.1	<1	16	31	130
B22@10	14	290	<1	<1	22	8.2	25	5.5		<0.1	<1	18	39	65
B23@5	5.2	180	<1	<1	20	11	18	5.8		<0.1	<1	16	33	78
B23@10	26	340	<1	<1	20	7	25	29		<0.1	<1	17	32	53
B24-5	13	90	<1	<1	16	5.8	14	9.1		<0.1	<1	11	25	32
B24-10	<1	170	<1	<1	12	5.7	14	2.6		<0.1	<1	14	27	32

Table 4 Metal Concentrations in Soil 5-feet and 10-feet bgs

Sample ID	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Manganese	Mercury	Molybdenum	Nickel	Vanadium	Zinc
B25-5	1.3	70	<1	<1	12	5.4	13	2.8		<0.1	<1	9.3	26	33
B25-10	<1	78	<1	<1	13	6.2	14	3.4		<0.1	<1	11	27	37
B26-5	9.8	350	<1	<1	21	8.2	24	21		<0.1	<1	18	35	42
B26-10	4.2	170	<1	<1	21	7.2	21	6.2		<0.1	<1	20	28	36
B27-5	4.7	160	<1	3.2	20	7.1	230	65		0.44	<1	20	38	4,700
B27-10	6	360	<1	<1	18	6.1	24	28		0.13	<1	16	30	66
B28@5	1.9	52	<1	<1	8.4	3.6	10	16		<0.1	<1	11	21	22
B28@10	3.2	150	<1	<1	24	9.3	28	7.5		<0.1	<1	17	33	46
B29@2	2.2	140	<1	<1	14	4.7	16	11		0.11	<1	33	21	36
B29@5	2	230	<1	<1	28	11	35	6.5		<0.1	<1	36	42	46
B29@10	2.2	240	<1	<1	26	10	32	6		<0.1	<1	25	41	45
B30@5	3	130	<1	<1	15	6.4	16	18		0.14	<1	13	33	43
B30@10	120	1,100	<1	1.1	50	5.5	33	820		0.21	<1	22	27	130
TSO-7-5	4.92	124	<0.5	<0.5	21.1	8.3	17.2	25.2		<0.2	0.5	14.5	29	38.3
TSO-8-5	12.2	724	<0.5	<0.5	23.3	9.18	48	352		0.3	0.5	18.3	31.6	98.4
TSO-8-10	9.53	346	<0.5	<0.5	18.4	8.89	27.8	72.4		0.2	0.5	15.4	29.8	61.2
TSO-9-10	7.34	70.8	<0.5	<0.5	15.9	6.63	23.1	8.1		<0.2	0.803	11.9	28.2	38.1
TSO-20-5	5.65	170	<0.5	<0.5	17.5	7.76	17.4	2.88		<0.2	0.5	12.2	29.5	32.1
TSO-20-10	8.51	196	0.52	<0.5	23.8	12.9	29.9	5.97		<0.2	0.5	19.1	45.4	45
GB-SOIL-TSO-7-3-041415								500						
GB-SOIL-TSO-7-5-041415								11						
GB-SOIL-TSO-7-10-0414								4.7						
GB-SOIL-TSO-8-3-041315								550						
GB-SOIL-TSO-8-5-041315								340						
GB-SOIL-TSO-8-10-041315								120						
GB-SOIL-TSO-8-10D-041315								110						
GB-SOIL-TSO-9-5-041415								5.7						
GB-SOIL-TSO-9-10-041415								15						
GB-SOIL-TSO-10-5-041315								4.5						
GB-SOIL-TSO-10-10-041415								10						
GB-SOIL-TSO-10-10D-041415								10						
GB-SOIL-TSO-11-5-041515								6.3						
GB-SOIL-TSO-11-5D-041515								6.1						
GB-SOIL-TSO-11-10-041515								4.8						
GB-SOIL-TSO-12-7-041515								8.1						
GB-SOIL-TSO-12-10-041615								7.2						
GB-SOIL-TSO-13-5-041515								4.6						
GB-SOIL-TSO-13-10-041515								9.8						
GB-SOIL-TSO-16-5-041615								13						
GB-SOIL-TSO-16-5D-041615								12						
GB-SOIL-TSO-20-5-042115								4.1						
GB-SOIL-TSO-20-10-042115								10						

Notes: Only detected concentrations of metals in soil samples from 5-feet and 10-feet below ground surface are presented.
 Concentrations are in milligrams per kilogram (mg/kg)
 Blank cell denotes metal was not analyzed

Table 5 Volatile Organic Compounds (VOCs) Concentrations in Groundwater

Sample ID	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,2,3-Trichloropropane	1,2,4-Trimethylbenzene	1,2-Dibromoethane (EDB)	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,4-Dichlorobenzene	2-Butanone (MEK)	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Diisopropyl ether (DIPE)
92-MW1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Brycon-MW1	<0.5	<0.5	<1	760	<1	18	<0.5	34	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	360	<0.5	<0.5	<0.5	<1
Brycon-MW2	<0.5	<0.5	<0.5	1.7	<0.5	<0.5	<0.5	6.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	180	<0.5	<0.5	<0.5	1.5
Brycon-MW3	<0.5	<0.5	<0.5	900	<0.5	<0.5	<0.5	160	<0.5	<0.5	<0.5	<0.5	0.69	<0.5	<0.5	400	<0.5	<0.5	<0.5	<0.5
Brycon-MW4	<0.5	<0.5	1	0.53	<0.5	6.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	<0.5	<0.5	<0.5	<0.5
Brycon-MW5	<0.5	<0.5	<0.5	2.8	<0.5	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	26	<0.5	<0.5	<0.5	<0.5
ESE-MW2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
ESE-MW1	<0.5	<0.5	<2	1,000	<2	2.1	<0.5	240	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	1,000	<0.5	<0.5	<0.5	<2
TMW1	<0.5	<0.5	<0.5	<0.5	<0.5	5.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TMW1-D1	<0.5	<0.5	<0.5	<0.5	<0.5	5.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TMW2	<0.5	<0.5	<0.5	0.76	<0.5	<0.5	<0.5	0.52	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TMW3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TMW4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TMW5	<0.5	<0.5	<0.5	750	72	430	<0.5	340	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3,900	<0.5	<0.5	<0.5	<0.5
TMW6	<0.5	<0.5	<0.5	3.4	<0.5	<0.5	<0.5	1.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.68	<0.5	<0.5	<0.5	<0.5
EB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TB	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TSO-8-GW	<0.5	<0.5	<0.5	3.68	<0.5	<0.5	<0.5	4.39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	15.7	<0.5	<0.5	1.72	<0.5
TSO-9-GW	<0.5	<0.5	<0.5	85.1	245	<0.5	<0.5	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	810	<0.5	<0.5	<0.5	<0.5
TSO-10-GW	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	688	<0.5	<0.5	<0.5	<0.5
TSO-11-GW	<0.5	<0.5	<0.5	4.68	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	116	<0.5	<0.5	<0.5	<0.5
TSO-12-GW	<0.5	<0.5	<0.5	61.1	<0.5	<0.5	<0.5	50.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1,320	<0.5	<0.5	<0.5	<0.5
TSO-13-GW	<0.5	<0.5	<0.5	1.2	58	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	39.7	<0.5	<0.5	<0.5	<0.5
TSO-15-GW	<0.5	<0.5	<0.5	661	18.9	<0.5	<0.5	192	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1,770	<0.5	<0.5	<0.5	<0.5
TSO-16-GW	<0.5	<0.5	<0.5	383	63.1	<0.5	<0.5	133	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	145	<0.5	<0.5	<0.5	<0.5
TSO-20-GW	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
GB-GW-TSO-08-38.5-041415	<1	<1	<1	20	<1	<0.5	<1	4.2	0.4 J	<10	<1	<10	<1	<10	<10	21	0.84 J	<1	1.8	<1
GB-GW-TSO-09-44-042115	<2	<2	<2	55	<2	180	0.5 J	19	<2	<20	<2	6.1 J	<2	<20	<20	510	<2	<2	<2	<2
GB-GW-TSO-DUP-042115	<2	<2	<2	62	<2	180	<2	22	<2	<20	<2	5.4 J	<2	<20	<20	520	<2	<2	<2	<2
GB-GW-TSO-10-41.5-041615	<5	<5	<5	<5	<5	<2.5	<5	<5	<5	<50	<5	<50	<5	<50	<50	990	<5	<5	<5	<5
GB-GW-TSO-11-43.5-042015	<1	<1	<1	4.4	<1	1.8	<1	0.52 J	<1	9.8 J	<1	<10	<1	<10	180	150	<1	<1	<1	2.5
GB-GW-TSO-12-38.5-041715	<5	<5	<5	100	<5	<2.5	<5	82	<5	<50	<5	<50	<5	<50	47 J	2,400	<5	<5	<5	1.3 J
GB-GW-TSO-13-43-042215	<1	<1	<1	1.2	<1	53	<1	0.63 J	<1	<10	<1	<10	<1	<10	<10	41	<1	<1	<1	<1
GB-GW-TSO-14-45-042315	0.44 J	2.6	<1	4.3	<1	15	0.78 J	<1	<1	<10	<1	<10	<1	<10	7.8 J	0.67	<1	<1	<1	<1
GB-GW-TSO-15-46-042215	<10	<10	<10	680	<10	89	<10	230	<10	130	<10	<100	<10	38 J	420	1,700	<10	<10	<10	<10
GB-GW-TSO-16-40.5-042315	<4	<4	<4	670	<4	72	18	230	<4	<40	49	<40	40	<40	<40	170	<4	1.2 J	<4	<4
GB-GW-TSO-2028.5-042415	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	7.8 J	<0.5	<1	<1	<1	<1
EB-041315	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1

Table 5 Volatile Organic Compounds (VOCs) Concentrations in Groundwater

Sample ID	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,2,3-Trichloropropane	1,2,4-Trimethylbenzene	1,2-Dibromoethane (EDB)	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,4-Dichlorobenzene	2-Butanone (MEK)	2-Chlorotoluene	2-Hexanone	4-Chlorotoluene	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Chlorobenzene	Chloroform	cis-1,2-Dichloroethene	Diisopropyl ether (DIPE)
EB-041415	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
EB-041515	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
EB-041615	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
EB-041715	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
EB-042115	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
EB-042215	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
EB-042315	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
EB-042415	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
FB-041415	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
FB-041515	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
FB-041615	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
FB-041715	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
FB-042115	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
FB-042215	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
FB-042315	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
FB-042415	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
TB-041315	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
TB-041415	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
TB-041515	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
TB-041615	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
TB-041715	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
TB-042115	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
TB-042215	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
TB-042315	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1
TB-042415	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<10	<1	<10	<10	<0.5	<1	<1	<1	<1

Table 5 Volatile Organic Compounds (VOCs) Concentrations in Groundwater)

Sample ID	Ethylbenzene	Isopropylbenzene	m,p-Xylenes	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	sec-Butylbenzene	Styrene	tert-Butyl alcohol (TBA)	tert-Butylbenzene	Toluene	Vinyl chloride
92-MW1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
Brycon-MW1	360	72	340	160	20	65	440	39	15	<1	42	<1	26	<0.5
Brycon-MW2	14	63	85	38	8.8	76	4.9	7.5	8.7	<0.5	200	1	7.2	<0.5
Brycon-MW3	850	140	1,100	170	19	150	440	44	18	5	<10	<0.5	62	<0.5
Brycon-MW4	1.2	0.72	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	11	0.95	<0.5	<0.5
Brycon-MW5	1.9	18	3.4	2.5	6.8	1.6	2.3	<0.5	14	<0.5	<10	1.4	4.4	<0.5
ESE-MW2	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
ESE-MW1	1,500	87	3,800	210	22	110	870	19	8.4	2.2	<40	<2	99	<0.5
TMW1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	16	<0.5	<0.5	<0.5
TMW1-D1	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	15	<0.5	<0.5	<0.5
TMW2	<0.5	<0.5	<1	0.92	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
TMW3	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
TMW4	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
TMW5	930	58	2,100	260	27	99	1,300	15	9.1	4.4	16	<0.5	3,600	<0.5
TMW6	2	0.89	3.8	3.5	0.68	1.4	1.8	0.71	<0.5	<0.5	41	<0.5	2.2	<0.5
EB	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
TB	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5
TSO-8-GW	9	2.94	9.6	19.8	1.65	4.39	5.1	1.98	1.34	<0.5	<0.5	<0.5	1.74	<0.5
TSO-9-GW	94	10.6	280	57.6	<1	11.8	141	1.4	2	<0.5	<0.5	<0.5	414	<0.5
TSO-10-GW	2.55	9.76	4.41	<0.5	<1	12.3	<0.5	<0.5	1.35	<0.5	<0.5	<0.5	10.6	<0.5
TSO-11-GW	22.6	6.83	4.78	7.59	1.75	5.8	<0.5	2.26	6.13	<0.5	<0.5	<0.5	2	<0.5
TSO-12-GW	170	29.5	470	102	1.77	34.2	270	5.7	1.82	<0.5	<0.5	<0.5	77.5	<0.5
TSO-13-GW	0.6	1.3	3	<0.5	<1	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	1.6	<0.5
TSO-15-GW	1,180	67.5	3,940	106	16	93.3	2,010	6	2.6	<0.5	<0.5	<0.5	900	<0.5
TSO-16-GW	306	78.4	370	179	19.8	82.2	265	<0.5	15.9	<0.5	<0.5	<0.5	50.9	<0.5
TSO-20-GW	<0.5	<0.5	<1	<0.5	<1	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5
GB-GW-TSO-08-38.5-041415	13	4.3	15	17	1.7	5.6	7.7	1.9	1.6	<1	<10	<1	2.5	0.69
GB-GW-TSO-09-44-042115	66	7.5	210	22	1.6 J	8.4	110	1 J	1.1 J	<2	<20	<2	250	<1
GB-GW-TSO-DUP-042115	71	8.2	220	24	<2	9.1	120	1.1 J	1.2 J	<2	<20	<2	270	<1
GB-GW-TSO-10-41.5-041615	5.6	15	6.1	<5	<5	18	1.6 J	<5	1.9 J	<5	<50	<5	15	<2.5
GB-GW-TSO-11-43.5-042015	24	4.8	5.6	8.4	2.1	4.1	0.46 J	1	3.4	<1	14	0.41 J	2.6	<0.5
GB-GW-TSO-12-38.5-041715	290	51	870	120	4.9 J	58	500	5.4	2.6 J	<5	36 J	<5	150	<2.5
GB-GW-TSO-13-43-042215	0.72	1.6	5	<1	<1	0.67 J	<0.5	<1	0.26 J	<1	<10	<1	2.3	<0.5
GB-GW-TSO-14-45-042315	0.43 J	2	<1	0.4 J	<1	0.8 J	<0.5	1.5	5.6	<1	89	1.1	<1	<0.5
GB-GW-TSO-15-46-042215	1,700	93	5,900	160	15	110	3,000	12	5.9 J	3.7 J	<100	<10	1,700	<5
GB-GW-TSO-16-40.5-042315	600	140	840	160	55	140	590	64	28	1.3 J	71	2 J	71	<2
GB-GW-TSO-2028.5-042415	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
EB-041315	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5

Table 5 Volatile Organic Compounds (VOCs) Concentrations in Groundwater)

Sample ID	Ethylbenzene	Isopropylbenzene	m,p-Xylenes	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	sec-Butylbenzene	Styrene	tert-Butyl alcohol (TBA)	tert-Butylbenzene	Toluene	Vinyl chloride
EB-041415	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
EB-041515	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
EB-041615	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
EB-041715	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
EB-042115	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
EB-042215	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
EB-042315	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
EB-042415	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
FB-041415	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
FB-041515	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
FB-041615	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
FB-041715	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
FB-042115	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
FB-042215	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
FB-042315	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
FB-042415	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
TB-041315	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
TB-041415	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
TB-041515	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
TB-041615	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
TB-041715	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
TB-042115	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
TB-042215	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
TB-042315	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5
TB-042415	<0.5	<1	<1	<1	<1	<1	<0.5	<1	<1	<1	<10	<1	<1	<0.5

Notes: Concentrations are in micrograms per liter (ug/L)
 Only Detected concentrations of VOCs are presented

Table 6 Semi-volatile organic compounds (SVOCs) Concentration in Soil 5-feet and 10-feet bgs

Sample ID	Depth ft.	2-Methylnaphthalene	bis(2-ethylhexyl)phthalate
B2@5	5	<0.33	<0.33
B2@10	10	<16	<16
B4@5	5	<25	<25
B4@10	10	<16	<16
B17@5	5	<3.3	<3.3
B17@10	10	<0.33	<0.33
B22@5	5	<25	<25
B22@10	10	<0.33	0.4
B23@5	5	<0.33	<0.33
B23@10	10	<25	<25
B28@5	5	<50	<50
B28@10	10	2.7	<1.6

Notes: Concentrations are in milligrams per kilogram (mg/kg)
 Only detected concentrations of SVOCs in soil 5-ft and 10-ft
 bgs are presented

Table 7 Pesticide Concentrations in Soil 5-feet and 10-feet bgs

Sample ID	Depth ft.	4,4'-DDT	Chlordane
B8-5	5	<0.002	<0.0085
B10@2	2	<0.002	<0.0085
B11@2	2	0.0031	<0.0085
B12@2	2	0.0036	<0.0085
B13@2	2	0.011	0.042

Notes: Concentrations are in milligrams per kilogram (mg/kg)
Only detected concentrations of Pesticides in soil 5-feet and 10-feet bgs are presented

Table 8 Polychlorinated biPhenyls (PCBs) Concentrations in Soil 5-foot and 10-foot bgs

Sample ID	Depth ft.	Aroclor 1254	Aroclor 1260
B2@5	5	0.02	0.046
B2@10	10	<0.16	<0.16
B4@5	5	<0.16	<0.16
B4@10	10	<0.16	<0.16
B17@5	5	<0.016	<0.016
B17@10	10	<0.016	<0.016
B28@5	5	<0.032	<0.032
B28@10	10	<0.016	<0.016

Notes: Concentrations are in milligrams per kilograms (mg/kg)
Only detected concentrations in soil 5-foot and 10-foot bgs are presented

Table 9 Exposure Point Concentrations, Slope Factors and Reference Doses

		95UCL				
ANALYTE	Max	EPC	SFo	IUR	RfDo	RfCi
C4-C12	1500	162.6			2.00E+00	
C13-C22	15000	1824			2.00E+00	
C23-C32	13000	2875			2.00E+00	
C33-C40	8,900	2,130			2.00E+00	
1,1,2-trichloroethane	0.3	0.3	5.70E-02	1.60E-05	4.00E-03	2.00E-04
1,2,4-trimethylbenzene	18	6.482				7.00E-03
1,2-dichlorobenzene	0.42	0.42			9.00E-02	2.00E-01
1,3,5-trimethylbenzene	5	1.124			1.00E-02	3.50E-02
2-butanone (MEK)	0.0079	0.0079			6.00E-01	5.00E+00
acetone	0.036	0.036			9.00E-01	3.10E+01
benzene	3.8	1.122	5.50E-02	2.90E-05	4.00E-03	3.00E-02
cis-1,2-dichloroethene	0.005	0.005			2.00E-03	
ethylbenzene	3.9	1.285	1.10E-02	2.50E-06	1.00E-01	1.00E+00
isopropylbenzene	1.4	0.408			1.00E-01	4.00E-01
m,p-xylenes	11	1.022			2.00E-01	1.00E-01
naphthalene	51	6.376		3.40E-05	2.00E-02	3.00E-03
n-butylbenzene	3.4	0.886				1.75E-01
n-propylbenzene	2.6	0.737			1.00E-01	4.00E-01
o-xylene	5.1	3.23			2.00E-01	1.00E-01
p-isopropyltoluene	2.2	1.141				
sec-butylbenzene	1.4	0.935				4.00E-01
toluene	2.6	2.6			8.00E-02	5.00E+00
arsenic	120	16.49	1.50E+00	4.30E-03	3.00E-04	1.50E-05
barium	1100	287.7			2.00E-01	5.00E-04
beryllium	0.52	0.52		2.40E-03	2.00E-04	7.00E-06
cadmium	3.2	0.645		4.20E-03	6.30E-06	1.00E-05
chromium	61	20.93			1.50E+00	
hexavalent chromium	10.2	3.49	5.00E-01	1.50E-01	3.00E-03	1.00E-04
cobalt	12.9	7.516		9.00E-03	3.00E-04	6.00E-06
copper	230	41.85			4.00E-02	
lead	820	143				
manganese	410	367.1			2.40E-02	5.00E-05
mercury	1.5	0.216				3.00E-04
molybdenum	0.803	0.635			5.00E-03	
nickel	27	17.34		2.60E-04	2.00E-02	9.00E-05
vanadium	59	31.94			5.00E-03	1.00E-04
zinc	4,700	436.50			3.00E-01	
2-methylnaphthalene	2.7	2.7			4.00E-03	1.40E-02
bis(2-ethylhexyl)phthalate	0.4	0.4	1.40E-02	2.40E-06	2.00E-02	
4,4'-DDT	0.011	0.0083				
chlordanes	0.042	0.042	3.50E-01	1.00E-04	5.00E-04	7.00E-04
Aroclor 1254	0.02	0.02	2.00E+00	5.70E-04	2.00E-05	
Aroclor 1260	0.046	0.046	2.00E+00	5.70E-04		

Notes:

EPC = Exposure Point Concentration; either the maximum detected concentration or the 95UCL of the analyte in the soil matrix, whichever is less (ProUCL 2004).

UCL calculated using ProUCL version 5.0. Units are expressed in mg/kg

Lead was assessed with DTSC's LeadSpread 8.0 Model using the maximum concentration as the EPC

Table 9 Exposure Point Concentrations, Slope Factors and Reference Doses

SFo = Slope Factor, oral route of exposure (mg/kg-day)⁻¹

IUR = inhalation unit risk factor, inhalation route of exposure (μg/m³)⁻¹

USEPA RSLs November 2015

RfDo = Reference Dose, oral route of exposure (mg/kg-day)

RfCi = Reference Concentration, inhalation route of exposure (mg/m³)

Blank cell indicates a SF or RfD are not available for the analyte

Table 10 - Exposure Parameters

Exposure Parameter	Notation	Receptor Populations				Units	Reference
		Commercial Worker	Construction Worker	Residential User			
				Adult	Child		
General Parameters							
Body Weight	BW	70	70	70	15	kg	DTSC
Exposure Duration	ED	25	1	24	6	years	DTSC
Site Visit Duration	SVD	8	8	24	24	hours/day	
Soil Ingestion Pathway							
Exposure Frequency	EF	250	365	350	350	days/year	
Averaging Time c 70yrs x 365days	ATc	25,550	25,550	25,550	25,550	days	DTSC
Averaging Time nc 6yrs x 365days child, 30yrs	ATnc	10,950	10,950	10,950	2,190	days	DTSC
Soil Ingestion Rate	IR	100	330	100	200	mg/day	DTSC
Dermal Contact with Soil							
Averaging Time c 70yrs x 365days	ATc	25,550	25,550	25,550	25,550	days	DTSC
Averaging Time nc 6yrs x 365days child, 30yrs	ATnc	10,950	10,950	10,950	2,190	days	DTSC
Skin Surface Area	SA	3,300	3,300	5,700	2,900	cm ² /event	OEHHA
Soil-to-Skin Adherence factor	AF	0.2	0.2	0.07	0.21	mg/cm ²	OEHHA
Fraction of Chemical Dermally Absorbed	ABS	chem specific	chem specific	ch sp	ch sp	unitless	DTSC
Inhalation of Outdoor Air							
Exposure Frequency	EF	250	365	350	350	days/year	
Averaging Time 365 d/yr x 70 yr x 24 hr/d	ATc	613,200	613,200	613,200	613,200	hours	DTSC
Averaging Time 365 d/yr x 6 yr x 24 hr/d child	ATnc	613,200	613,200	613,200	52,560	hours	DTSC

Notes:

ABS = 0.1 for VOCs, 0.13 for naphthalene, 0.01 for most metals (DTSC 2013; USEPA RSL November 2015)

Table 11
Estimated Risks and Hazards SOIL - Residential Child Scenario

ANALYTE	RISK_o	RISK_i	HAZARD_o	HAZARD_i
C4-C12			6.78E-02	
C13-C22			3.04E-01	
C23-C32			2.40E-02	
C33-C40			1.78E-02	
1,1,2-trichloroethane	2.44E-08		1.25E-03	
1,2-dichlorobenzene			1.19E-03	
1,3,5-trimethylbenzene			1.87E-03	
2-butanone (MEK)			1.32E-07	
acetone			6.00E-07	
benzene	8.82E-08		4.68E-03	
cis-1,2-dichloroethene			4.17E-05	
ethylbenzene	2.02E-08		2.14E-04	
isopropylbenzene			6.80E-05	
m,p-xylenes			8.52E-05	
naphthalene			5.94E-03	
n-propylbenzene			0.0002694	
o-xylene			0.0002694	
toluene			0.0005204	
arsenic	2.958E-05	2.20757E-08	0.7668915	0.0007906
barium			0.0189518	0.000418
beryllium		3.88543E-10	0.0342542	5.364E-05
cadmium		8.49938E-10	1.3129647	4.722E-05
chromium			0.000182	
hexavalent chromium	1.912E-06	1.62983E-07	0.0148588	2.535E-05
cobalt		2.1071E-08	0.3293346	0.0009068
copper			0.013784	
manganese			0.1982938	0.0053335
mercury				4.707E-07
molybdenum			0.0016732	
nickel		1.40361E-09	0.0114225	0.0001386
vanadium			0.08416	0.000232
zinc			0.0172523	
2-methylnaphthalene			0.012572	
bis(2-ethylhexyl)phthalate	8.006E-09		0.0003336	
chlordan	2.347E-08	1.3076E-12	0.0003092	3.051E-08
Aroclor 1254	6.386E-08	3.54919E-12	0.0186247	
Aroclor 1260	1.469E-07	8.16314E-12		
SUM RISK	3.17E-05	2.09E-07		
SUM HAZARD			3.27E+00	7.95E-03
HAZARD INDEX = 3.3				
SUM RISK = 3.18E-05				

Table 12
Estimated Risks and Hazards SOIL - Residential Adult Scenario

ANALYTE	RISK_o	RISK_i	HAZARD_o	HAZARD_i
C4-C12			6.23E-03	
C13-C22			2.80E-02	
C23-C32			2.20E-03	
C33-C40			1.63E-03	
1,1,2-trichloroethane	1.12E-08		1.15E-04	
1,2-dichlorobenzene			1.09E-04	
1,3,5-trimethylbenzene			1.72E-04	
2-butanone (MEK)			1.21E-08	
acetone			5.52E-08	
benzene	4.055E-08		4.30E-04	
cis-1,2-dichloroethene			3.83E-06	
ethylbenzene	9.29E-09		1.97E-05	
isopropylbenzene			6.26E-06	
m,p-xylenes			7.83E-06	
naphthalene			5.58E-04	
n-propylbenzene			1.13E-05	
o-xylene			2.476E-05	
toluene			4.783E-05	
arsenic	1.301E-05	2.20757E-08	0.0674411	0.0007906
barium			0.0016393	0.000418
beryllium		3.88543E-10	0.002963	5.364E-05
cadmium		8.49938E-10	0.1126459	4.722E-05
chromium			1.574E-05	
hexavalent chromium	8.196E-07	1.62983E-07	0.0012736	2.535E-05
cobalt		2.1071E-08	0.0284876	0.0009068
copper			0.0011923	
manganese			0.0171525	0.0053335
mercury				4.707E-07
molybdenum			0.0001447	
nickel		1.40361E-09	0.000988	0.0001386
vanadium			0.0072799	0.000232
zinc			0.0014923	
2-methylnaphthalene			0.0011825	
bis(2-ethylhexyl)phthalate	3.68E-09		3.066E-05	
chlordan	1.104E-08	1.3076E-12	2.908E-05	3.051E-08
Aroclor 1254	3.003E-08	3.54919E-12	0.0017517	
Aroclor 1260	6.907E-08	8.16314E-12		
SUM RISK	1.39E-05	2.09E-07		
SUM HAZARD			2.85E-01	7.95E-03
HAZARD INDEX = 0.3				
SUM RISK = 1.4E-05				

Table 13
Estimated Risks and Hazards SOIL - Construction Worker Scenario

ANALYTE	RISK_o	RISK_i	HAZARD_o	HAZARD_i
C4-C12			7.67E-04	
C13-C22			3.44E-03	
C23-C32			2.71E-04	
C33-C40			2.01E-04	
1,1,2-trichloroethane	1.38E-09		1.41E-05	
1,2-dichlorobenzene			1.34E-05	
1,3,5-trimethylbenzene			2.12E-05	
2-butanone (MEK)			1.49E-09	
acetone			6.79E-09	
benzene	4.987E-09		5.29E-05	
cis-1,2-dichloroethene			4.71E-07	
ethylbenzene	1.14E-09		2.42E-06	
isopropylbenzene			7.69E-07	
m,p-xylenes			9.64E-07	
naphthalene			6.51E-05	
n-propylbenzene			1.39E-06	
o-xylene			3.05E-06	
toluene			5.883E-06	
arsenic	1.766E-06	2.55797E-10	0.009155	9.161E-06
barium			0.0002306	4.843E-06
beryllium		4.50216E-12	0.0004167	6.215E-07
cadmium		9.84849E-12	0.0161206	5.471E-07
chromium			2.214E-06	
hexavalent chromium	1.175E-07	1.88853E-09	0.0001826	2.938E-07
cobalt		2.44156E-10	0.0040067	1.051E-05
copper			0.0001677	
manganese			0.0024125	6.18E-05
mercury				5.455E-09
molybdenum			2.036E-05	
nickel		1.62641E-11	0.000139	1.606E-06
vanadium			0.0010239	2.689E-06
zinc			0.0002099	
2-methylnaphthalene			0.0001379	
bis(2-ethylhexyl)phthalate	4.526E-10		3.771E-06	
chlordanes	1.287E-09	1.51515E-14	3.391E-06	3.535E-10
Aroclor 1254	3.502E-09	4.11255E-14	0.0002043	
Aroclor 1260	8.055E-09	9.45887E-14		
SUM RISK	1.90E-06	2.42E-09		
SUM HAZARD			3.93E-02	9.21E-05
HAZARD INDEX = 0.04				
SUM RISK = 1.9E-06				

Table 14
Estimated Risks and Hazards SOIL - Commercial Worker Scenario

ANALYTE	RISK_o	RISK_i	HAZARD_o	HAZARD_i
C4-C12			5.50E-03	
C13-C22			2.47E-02	
C23-C32			1.95E-03	
C33-C40			1.44E-03	
1,1,2-trichloroethane	1.45E-08		1.02E-04	
1,2-dichlorobenzene			9.65E-05	
1,3,5-trimethylbenzene			1.52E-04	
2-butanone (MEK)			1.07E-08	
acetone			4.87E-08	
benzene	5.226E-08		3.80E-04	
cis-1,2-dichloroethene			3.38E-06	
ethylbenzene	1.20E-08		1.74E-05	
isopropylbenzene			5.52E-06	
m,p-xylenes			6.92E-06	
naphthalene			5.17E-04	
n-propylbenzene			9.98E-06	
o-xylene			2.19E-05	
toluene			4.223E-05	
arsenic	1.512E-05	4.38009E-09	0.0536884	0.0001569
barium			0.0012504	8.294E-05
beryllium		7.70919E-11	0.0022599	1.064E-05
cadmium		1.68638E-10	0.0840318	9.369E-06
chromium			1.201E-05	
hexavalent chromium	8.903E-07	3.23378E-08	0.0009476	5.03E-06
cobalt		4.18075E-09	0.0217281	0.0001799
copper			0.0009094	
manganese			0.0130826	0.0010582
mercury				9.34E-08
molybdenum			0.0001104	
nickel		2.78494E-10	0.0007536	2.749E-05
vanadium			0.0055525	4.604E-05
zinc			0.0011382	
2-methylnaphthalene			0.0010953	
bis(2-ethylhexyl)phthalate	4.743E-09		2.707E-05	
chlordan	1.492E-08	2.59444E-13	2.694E-05	6.054E-09
Aroclor 1254	4.061E-08	7.04204E-13	0.0016226	
Aroclor 1260	9.341E-08	1.61967E-12		
SUM RISK	1.61E-05	4.14E-08		
SUM HAZARD			2.23E-01	1.58E-03
HAZARD INDEX = 0.23				
SUM RISK = 1.61E-05				

Table 15 - Summary of Risks and Hazards

	Receptor Populations			
	Commercial Worker	Construction Worker	Residential	
			Adult	Child
Hazard Index	0.23	0.04	34.4	37.4
Σ Risk	1.61E-05	1.90E-06	1.10E-03	1.11E-03

Notes:

Hazard Index Residential = J&E model results + estimated hazards due to inhalation of constituents in soil

Σ Risk Residential = J&E model results + estimated risks due to inhalation of constituents in soil

LEAD RISK ASSESSMENT SPREADSHEET 8
CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

[Click here for ABBREVIATED INSTRUCTIONS FOR LEADSPREAD 8](#)

INPUT	
MEDIUM	LEVEL
Lead in Soil/Dust (ug/g)	820.0
Respirable Dust (ug/m ³)	1.5

OUTPUT						
Percentile Estimate of Blood Pb (ug/dl)						PRG-90
	50th	90th	95th	98th	99th	(ug/g)
BLOOD Pb, CHILD	5.8	10.6	12.6	15.3	17.4	77
BLOOD Pb, PICA CHILD	11.6	21.2	25.1	30.5	34.7	39

EXPOSURE PARAMETERS		
	units	children
Days per week	days/wk	7
Geometric Standard Deviation		1.6
Blood lead level of concern (ug/dl)		1
Skin area, residential	cm ²	2900
Soil adherence	ug/cm ²	200
Dermal uptake constant	(ug/dl)/(ug/day)	0.0001
Soil ingestion	mg/day	100
Soil ingestion, pica	mg/day	200
Ingestion constant	(ug/dl)/(ug/day)	0.16
Bioavailability	unitless	0.44
Breathing rate	m ³ /day	6.8
Inhalation constant	(ug/dl)/(ug/day)	0.192

PATHWAYS						
CHILDREN	typical			with pica		
	Pathway contribution			Pathway contribution		
	PEF	ug/dl	percent	PEF	ug/dl	percent
Soil Contact	5.8E-5	0.05	1%		0.05	0%
Soil Ingestion	7.0E-3	5.77	99%	1.4E-2	####	100%
Inhalation	2.0E-6	0.00	0%		0.00	0%

[Click here for REFERENCES](#)

MODIFIED VERSION OF USEPA ADULT LEAD MODEL

CALCULATIONS OF BLOOD LEAD CONCENTRATIONS (PbBs) AND PRELIMINARY REMEDIATION GOAL (PRG)

EDIT RED CELL

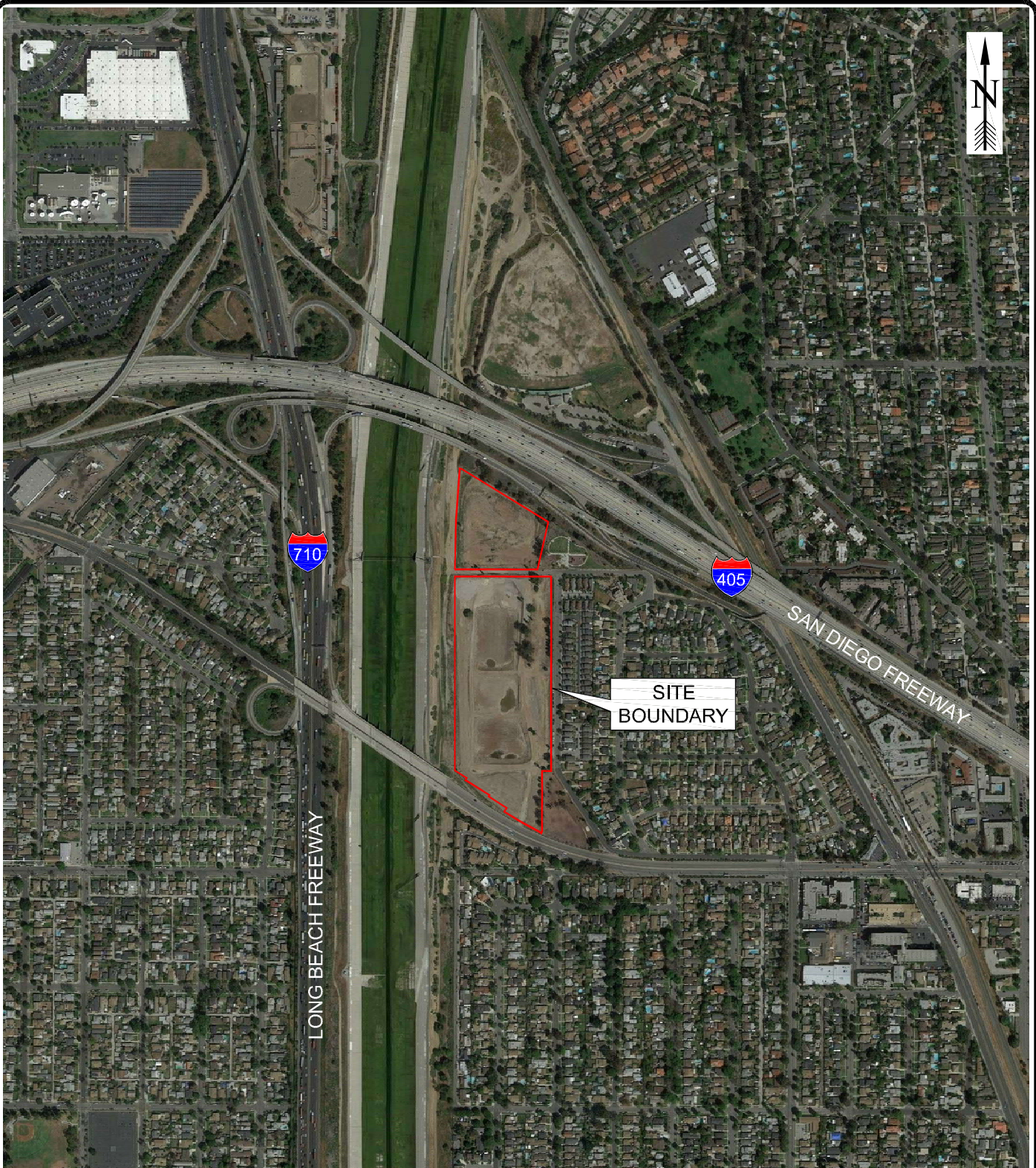
Variable	Description of Variable	Units	
PbS	Soil lead concentration	ug/g or ppm	820
$R_{\text{fetal/maternal}}$	Fetal/maternal PbB ratio	--	0.9
BKSF	Biokinetic Slope Factor	ug/dL per ug/day	0.4
GSD_i	Geometric standard deviation PbB	--	1.8
PbB_0	Baseline PbB	ug/dL	0.0
IR_s	Soil ingestion rate (including soil-derived indoor dust)	g/day	0.050
$AF_{s,d}$	Absorption fraction (same for soil and dust)	--	0.12
$EF_{s,d}$	Exposure frequency (same for soil and dust)	days/yr	250
$AT_{s,d}$	Averaging time (same for soil and dust)	days/yr	365
PbB_{adult}	PbB of adult worker, geometric mean	ug/dL	1.3
$PbB_{\text{fetal}, 0.90}$	90th percentile PbB among fetuses of adult workers	ug/dL	2.6
PbB_t	Target PbB level of concern (e.g., 10 ug/dL)	ug/dL	1.0
$P(PbB_{\text{fetal}} > PbB_t)$	Probability that fetal PbB > PbB_t, assuming lognormal distributio	%	62.9%

PRG90

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[Click here for REFERENCES](#)

FIGURES



P:\ACAD\100-PPG-T33843\T33843-FIGURE 1 SITE LOCATION (2015-07-17).DWG

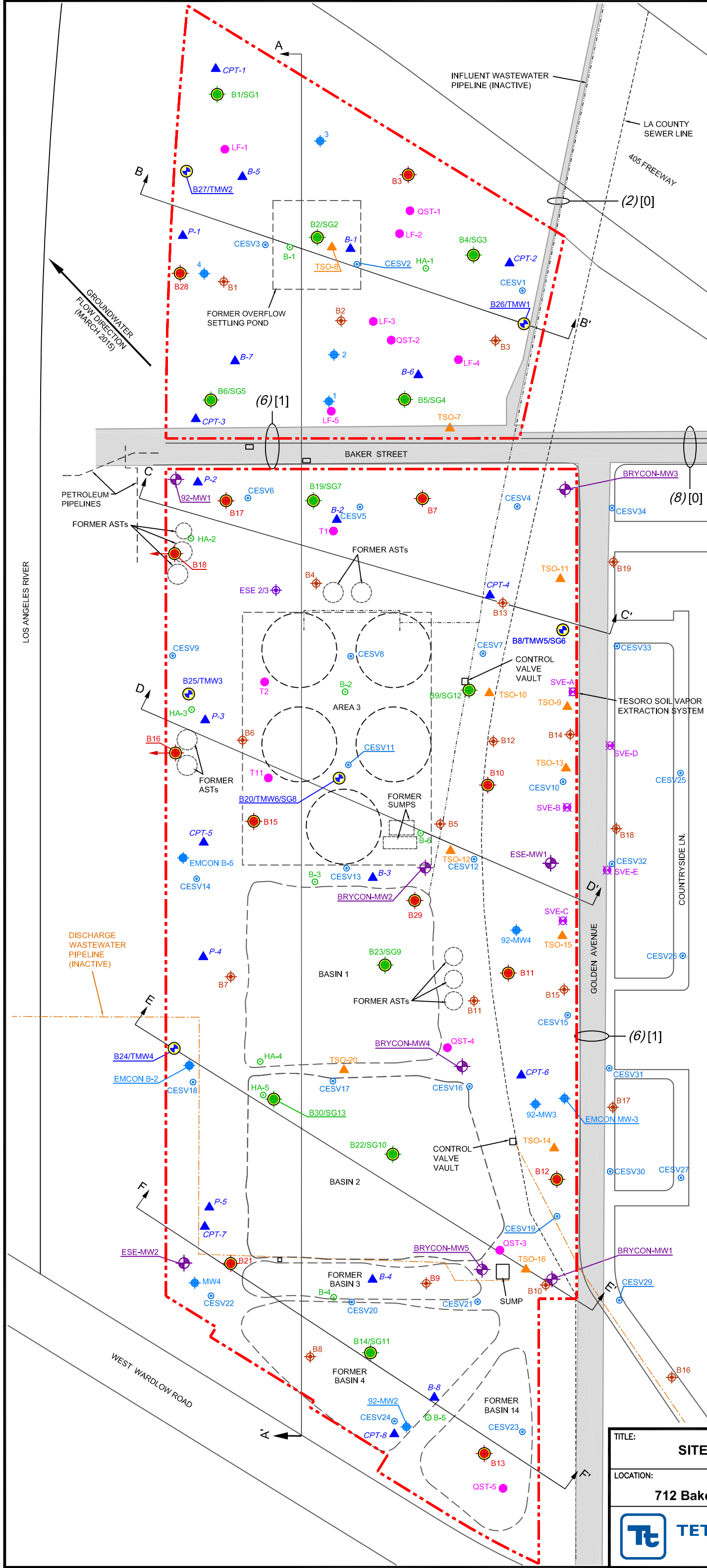


California

SITE



TITLE:		SITE LOCATION	
LOCATION:		Oil Operators, Inc. Property 712 Baker Street, Long Beach, California	
	APPROVED	JL	FIGURE 1
	DRAFTED	CP	
	PROJECT#	T33843.01	
	DATE	9-4-15	

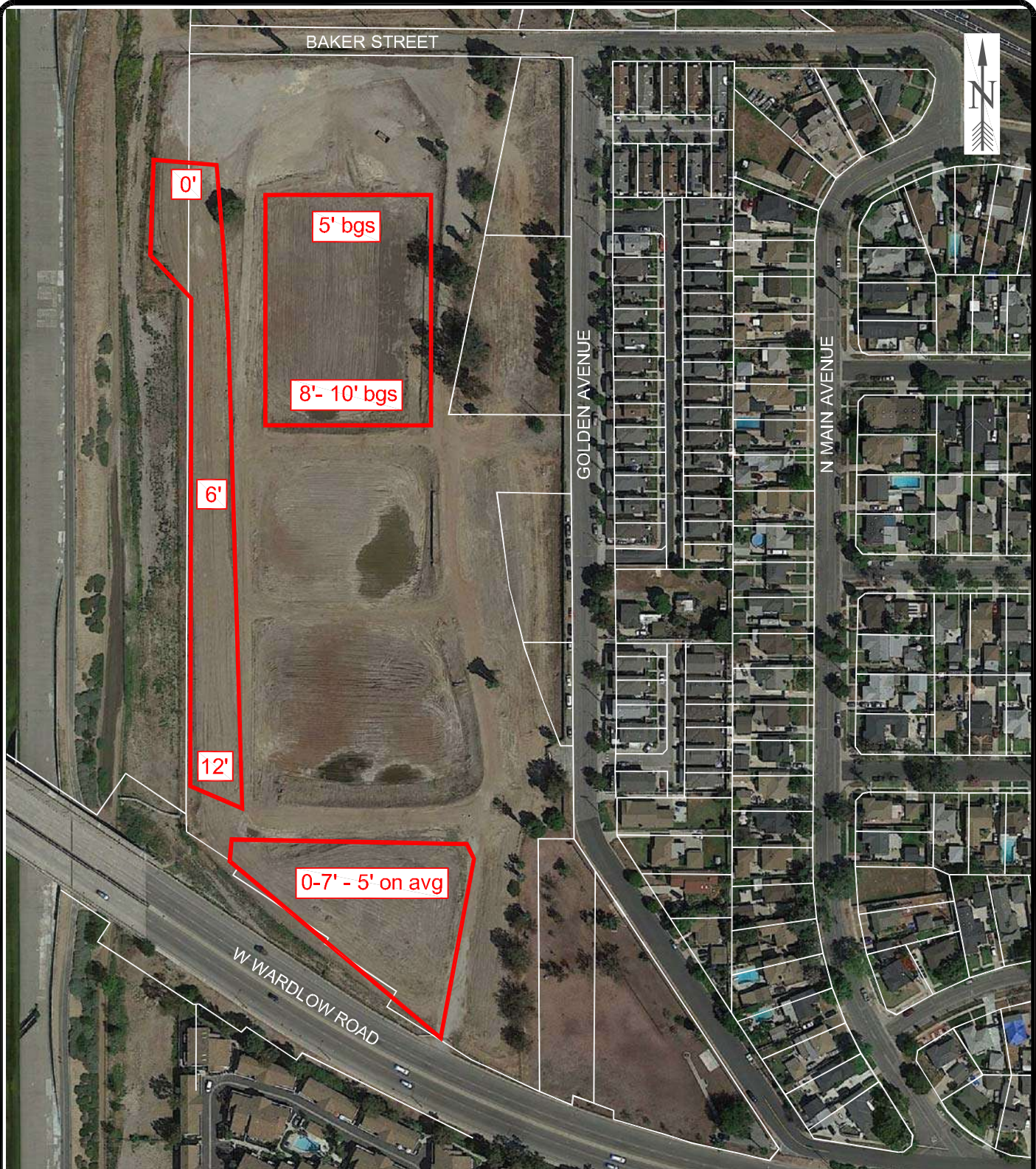


- ### LEGEND
- SITE BOUNDARY
 - ▲ 3 ABOVEGROUND STORAGE TANK
 - 3 HISTORIC GROUNDWATER MONITORING WELL LOCATION (JKB, 1992)
 - 92-MW1 EXISTING GROUNDWATER MONITORING WELL LOCATION
 - LF-1 SOIL BORINGS (QST ENVIRONMENTAL, INC 1998b)
 - B1 SOIL BORINGS (BRYCON 2010g; 2011e)
 - CESV1 SOIL VAPOR PROBE (CEGE, 2011)
 - ESE 2/3 BORING (ESE, 1999)
 - SVE-A VAPOR EXTRACTION SYSTEM WELL (CEGE, 2012b)
 - B-1 SOIL BORING (AEMC, 1991b)
 - B25/TMW1 TETRA TECH TEMPORARY DUE DILIGENCE GROUNDWATER MONITORING WELL LOCATION (MAY 2015)
 - B3 TETRA TECH SOIL BORING LOCATION (MAY 2015)
 - B18 TETRA TECH ANGLE (22° FROM VERTICAL) SOIL BORING LOCATION (MAY 2015)
 - B2/SG2 TETRA TECH SOIL BORING / SOIL GAS LOCATION (MAY 2015)
 - ▲ TSO-16 TESORO BORING LOCATION (APRIL 2015)
 - ▲ CPT-7 B-1 P-1 PETRA GEOTECHNICAL BORING LOCATION (MARCH AND MAY 2015)
 - ▲ A A' SECTION LOCATION
 - FORMER CONCRETE-WALLED SKIMMING BASIN
 - (6) [1] REPORTED PIPELINE CORRIDOR WITH NUMBER OF PETROLEUM PIPELINES (6) AND WATERLINE [1]

- ### NOTES
1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
 2. BASE MAP AND SITE BOUNDARIES DERIVED FROM LOS ANGELES COUNTY ASSESSOR'S PARCEL MAP.
 3. SELECTED SITE FEATURES OBTAINED DURING A SITE RECONNAISSANCE BY PERSONNEL FROM TETRA TECH.
 4. HISTORICAL SITE FEATURES OBTAINED FROM BRYCON (2011e), ESE (1999) AND ATSI (2014a).
 5. GROUNDWATER FLOW DIRECTION FROM BRYCON (2015c) MEASUREMENTS ON 18 MARCH 2015.
 6. INFLUENT AND DISCHARGE WASTEWATER PIPELINES AND LOS ANGELES COUNTY SEWER LINE OBTAINED FROM ATSI (2014b) AND FIELD OBSERVATIONS.
 7. FORMER BASIN NUMBERS 3, 4, AND 14 LOCATION AND DESIGNATION OBTAINED FROM ESE (1999).
 8. PIPELINES BENEATH BAKER STREET AND GOLDEN AVENUE OBTAINED FROM ASTI (2014a).

TITLE:										
SITE FIGURE WITH ALL DATA POINTS										
LOCATION:										
Oil Operators, Inc. Property 712 Baker Street, Long Beach, California 90806										
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: small;">APPROVED</td> <td style="font-size: small;">JL</td> </tr> <tr> <td style="font-size: small;">DRAFTED</td> <td style="font-size: small;">CP</td> </tr> <tr> <td style="font-size: small;">PROJECT#</td> <td style="font-size: small;">T33843.01</td> </tr> <tr> <td style="font-size: small;">DATE</td> <td style="font-size: small;">9-4-15</td> </tr> </table>	APPROVED	JL	DRAFTED	CP	PROJECT#	T33843.01	DATE	9-4-15	FIGURE 2
APPROVED	JL									
DRAFTED	CP									
PROJECT#	T33843.01									
DATE	9-4-15									

P:\ACAD\100-PPG-T33843\T33843-FIGURE 3-REMIATED SOIL STOCKPILE AREAS (2015-07-01).DWG

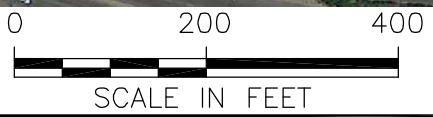


LEGEND

— APPROXIMATE LIMIT OF BIOREMEDIATED SOIL

NOTES:

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. NUMBERS IN RED INDICATED THICKNESS OF REMEDIATED SOIL IN FEET IN MARCH 2015 (BRYCON, 2015b).
3. IMAGE FROM GOOGLE EARTH PRO, DATED MARCH 2015.



TITLE: REMIATED SOIL STOCKPILE AREAS		
LOCATION: Oil Operators, Inc. Property 712 Baker Street, Long Beach, California		
	APPROVED	JL
	DRAFTED	CP
	PROJECT#	T33843.01
	DATE	9-4-15
		FIGURE 3



PLAN SUMMARY:

TOWNHOMES PRODUCT:	144 units
CLUSTER PRODUCT:	71 units
S.F.D. (43'x68' lot) PRODUCT:	60 units
GRAND TOTAL:	275 units

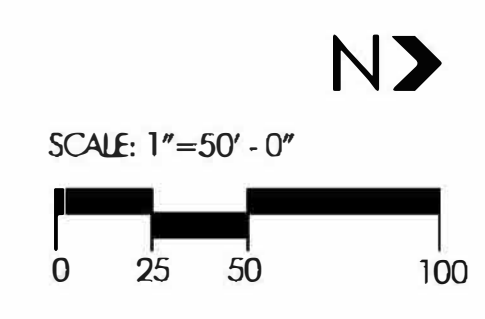
PARKING SUMMARY:

PARKING REQUIRED:	
2.5 spaces / unit = (275 x 2.5) =	687.5 spaces Req'd
PARKING PROVIDED:	
2-car garage unit = (275 x 2) =	550 spaces
Open guest parking space =	109 spaces
Driveway space (TH) =	15 spaces
Driveway space (SFD) =	120 spaces
TOTAL PARKING PROVIDED:	794 spaces Prov'd

RIVER PARK
LONG BEACH, CA

DATE: 06.15.15 | UA JOB # 15-028

Figure 4 SP-1
CONCEPTUAL ARCHITECTURAL
SITE PLAN 275 UNITS



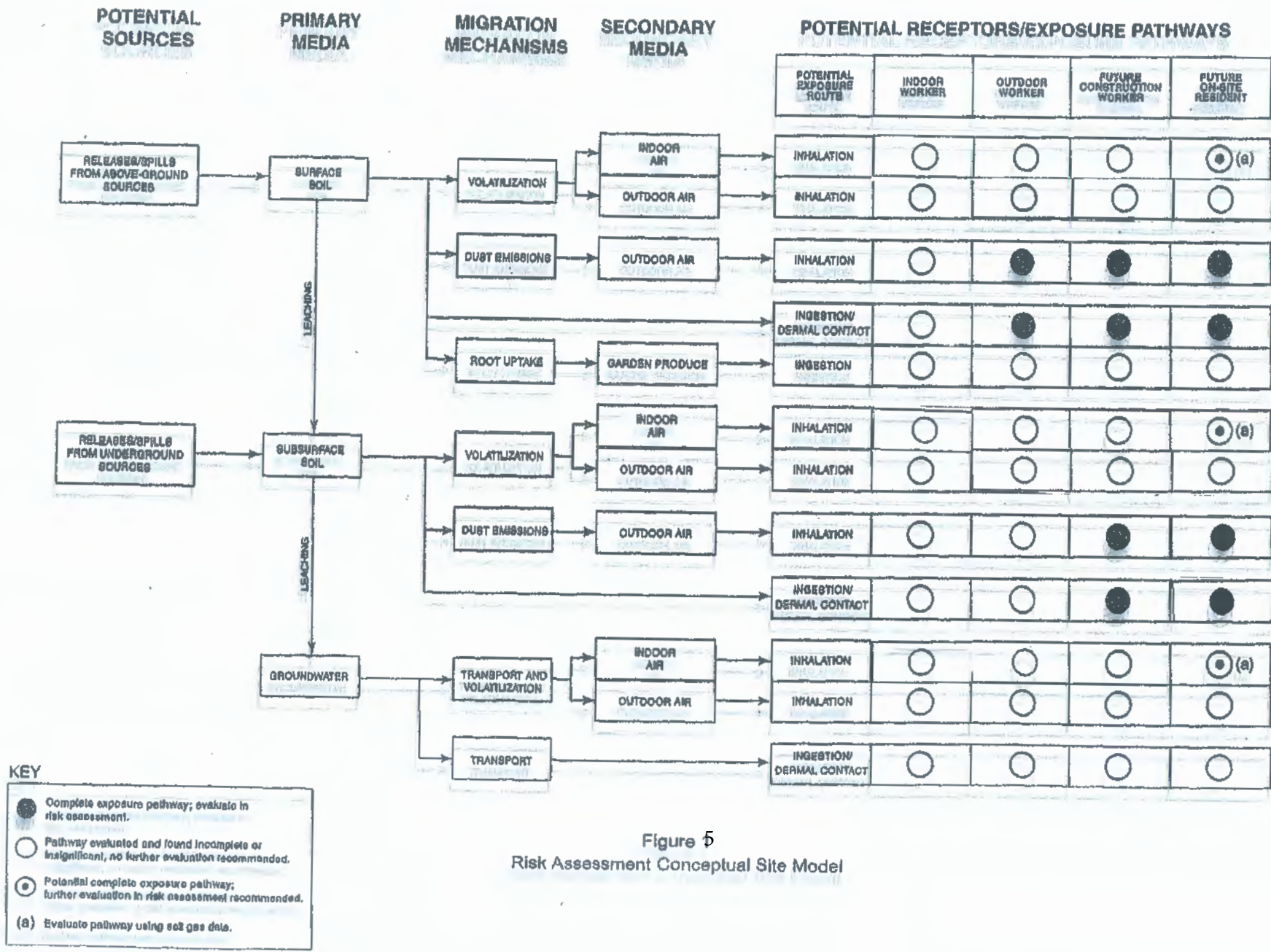


Figure 5
Risk Assessment Conceptual Site Model

APPENDIX A
ProUCL Statistics
Soil Matrix

	A	B	C	D	E	F	G	H	I	J	K	L	
1	UCL Statistics for Data Sets with Non-Detects												
2													
3	User Selected Options												
4	Date/Time of Computation		1/9/2016 2:24:59 PM										
5	From File		TPH Soil.xls										
6	Full Precision		OFF										
7	Confidence Coefficient		95%										
8	Number of Bootstrap Operations		2000										
9													
10	TPH Gasoline (C4-C12)												
11													
12	General Statistics												
13	Total Number of Observations				85		Number of Distinct Observations				35		
14									Number of Missing Observations				1
15	Number of Detects				26		Number of Non-Detects				59		
16	Number of Distinct Detects				26		Number of Distinct Non-Detects				11		
17	Minimum Detect				0.2		Minimum Non-Detect				0.2		
18	Maximum Detect				1500		Maximum Non-Detect				1		
19	Variance Detects				95709		Percent Non-Detects				69.41%		
20	Mean Detects				129		SD Detects				309.4		
21	Median Detects				19.5		CV Detects				2.397		
22	Skewness Detects				3.843		Kurtosis Detects				16.37		
23	Mean of Logged Detects				2.901		SD of Logged Detects				2.298		
24													
25	Normal GOF Test on Detects Only												
26	Shapiro Wilk Test Statistic				0.456		Shapiro Wilk GOF Test						
27	5% Shapiro Wilk Critical Value				0.92		Detected Data Not Normal at 5% Significance Level						
28	Lilliefors Test Statistic				0.362		Lilliefors GOF Test						
29	5% Lilliefors Critical Value				0.174		Detected Data Not Normal at 5% Significance Level						
30	Detected Data Not Normal at 5% Significance Level												
31													
32	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs												
33	Mean		39.62		Standard Error of Mean				19.69				
34	SD		178		95% KM (BCA) UCL				77.89				
35	95% KM (t) UCL		72.36		95% KM (Percentile Bootstrap) UCL				74.13				
36	95% KM (z) UCL		72		95% KM Bootstrap t UCL				131.9				
37	90% KM Chebyshev UCL		98.68		95% KM Chebyshev UCL				125.4				
38	97.5% KM Chebyshev UCL		162.6		99% KM Chebyshev UCL				235.5				
39													
40	Gamma GOF Tests on Detected Observations Only												
41	A-D Test Statistic		1.123		Anderson-Darling GOF Test								
42	5% A-D Critical Value		0.842		Detected Data Not Gamma Distributed at 5% Significance Level								
43	K-S Test Statistic		0.218		Kolmogrov-Smirnoff GOF								
44	5% K-S Critical Value		0.185		Detected Data Not Gamma Distributed at 5% Significance Level								
45	Detected Data Not Gamma Distributed at 5% Significance Level												
46													
47	Gamma Statistics on Detected Data Only												
48	k hat (MLE)		0.344		k star (bias corrected MLE)				0.33				
49	Theta hat (MLE)		375		Theta star (bias corrected MLE)				391				
50	nu hat (MLE)		17.89		nu star (bias corrected)				17.16				

	A	B	C	D	E	F	G	H	I	J	K	L
51	MLE Mean (bias corrected)					129	MLE Sd (bias corrected)					224.6
52												
53	Gamma Kaplan-Meier (KM) Statistics											
54	k hat (KM)					0.0496	nu hat (KM)					8.425
55	Approximate Chi Square Value (8.43, α)					2.984	Adjusted Chi Square Value (8.43, β)					2.928
56	95% Gamma Approximate KM-UCL (use when $n \geq 50$)					111.9	95% Gamma Adjusted KM-UCL (use when $n < 50$)					114
57	Gamma (KM) may not be used when k hat (KM) is < 0.1											
58												
59	Gamma ROS Statistics using Imputed Non-Detects											
60	GROS may not be used when data set has $> 50\%$ NDs with many tied observations at multiple DLs											
61	GROS may not be used when kstar of detected data is small such as < 0.1											
62	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
63	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
64	Minimum					0.01	Mean					39.48
65	Maximum					1500	Median					0.01
66	SD					179.1	CV					4.536
67	k hat (MLE)					0.131	k star (bias corrected MLE)					0.134
68	Theta hat (MLE)					301.5	Theta star (bias corrected MLE)					294.3
69	nu hat (MLE)					22.26	nu star (bias corrected)					22.81
70	MLE Mean (bias corrected)					39.48	MLE Sd (bias corrected)					107.8
71							Adjusted Level of Significance (β)					0.0472
72	Approximate Chi Square Value (22.81, α)					12.94	Adjusted Chi Square Value (22.81, β)					12.82
73	95% Gamma Approximate UCL (use when $n \geq 50$)					69.56	95% Gamma Adjusted UCL (use when $n < 50$)					70.25
74												
75	Lognormal GOF Test on Detected Observations Only											
76	Shapiro Wilk Test Statistic					0.957	Shapiro Wilk GOF Test					
77	5% Shapiro Wilk Critical Value					0.92	Detected Data appear Lognormal at 5% Significance Level					
78	Lilliefors Test Statistic					0.173	Lilliefors GOF Test					
79	5% Lilliefors Critical Value					0.174	Detected Data appear Lognormal at 5% Significance Level					
80	Detected Data appear Lognormal at 5% Significance Level											
81												
82	Lognormal ROS Statistics Using Imputed Non-Detects											
83	Mean in Original Scale					39.59	Mean in Log Scale					-1.771
84	SD in Original Scale					179	SD in Log Scale					3.987
85	95% t UCL (assumes normality of ROS data)					71.89	95% Percentile Bootstrap UCL					73.45
86	95% BCA Bootstrap UCL					93.51	95% Bootstrap t UCL					128.4
87	95% H-UCL (Log ROS)					6714						
88												
89	UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed											
90	KM Mean (logged)					-0.191	95% H-UCL (KM -Log)					41.19
91	KM SD (logged)					2.403	95% Critical H Value (KM-Log)					3.891
92	KM Standard Error of Mean (logged)					0.268						
93												
94	DL/2 Statistics											
95	DL/2 Normal						DL/2 Log-Transformed					
96	Mean in Original Scale					39.74	Mean in Log Scale					0.14
97	SD in Original Scale					179	SD in Log Scale					2.283
98	95% t UCL (Assumes normality)					72.04	95% H-Stat UCL					39.51
99	DL/2 is not a recommended method, provided for comparisons and historical reasons											
100												

	A	B	C	D	E	F	G	H	I	J	K	L
101	Nonparametric Distribution Free UCL Statistics											
102	Detected Data appear Lognormal Distributed at 5% Significance Level											
103												
104	Suggested UCL to Use											
105	97.5% KM (Chebyshev) UCL					162.6						
106												
107	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
108	Recommendations are based upon data size, data distribution, and skewness.											
109	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
110	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
111												

	A	B	C	D	E	F	G	H	I	J	K	L		
1	UCL Statistics for Data Sets with Non-Detects													
2														
3	User Selected Options													
4	Date/Time of Computation		1/9/2016 2:28:19 PM											
5	From File		TPH Soil.xls											
6	Full Precision		OFF											
7	Confidence Coefficient		95%											
8	Number of Bootstrap Operations		2000											
9														
10	TPH Diesel (C13-C22)													
11														
12	General Statistics													
13	Total Number of Observations				85		Number of Distinct Observations				59			
14									Number of Missing Observations				1	
15	Number of Detects				60		Number of Non-Detects				25			
16	Number of Distinct Detects				56		Number of Distinct Non-Detects				5			
17	Minimum Detect				1		Minimum Non-Detect				1			
18	Maximum Detect				15000		Maximum Non-Detect				14			
19	Variance Detects				7488817		Percent Non-Detects				29.41%			
20	Mean Detects				1755		SD Detects				2737			
21	Median Detects				305		CV Detects				1.56			
22	Skewness Detects				2.523		Kurtosis Detects				8.598			
23	Mean of Logged Detects				5.229		SD of Logged Detects				2.934			
24														
25	Normal GOF Test on Detects Only													
26	Shapiro Wilk Test Statistic				0.696		Normal GOF Test on Detected Observations Only							
27	5% Shapiro Wilk P Value				5.551E-16		Detected Data Not Normal at 5% Significance Level							
28	Lilliefors Test Statistic				0.261		Lilliefors GOF Test							
29	5% Lilliefors Critical Value				0.114		Detected Data Not Normal at 5% Significance Level							
30	Detected Data Not Normal at 5% Significance Level													
31														
32	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs													
33	Mean		1239		Standard Error of Mean				264.2					
34	SD		2416		95% KM (BCA) UCL				1698					
35	95% KM (t) UCL		1679		95% KM (Percentile Bootstrap) UCL				1704					
36	95% KM (z) UCL		1674		95% KM Bootstrap t UCL				1811					
37	90% KM Chebyshev UCL		2032		95% KM Chebyshev UCL				2391					
38	97.5% KM Chebyshev UCL		2889		99% KM Chebyshev UCL				3868					
39														
40	Gamma GOF Tests on Detected Observations Only													
41	A-D Test Statistic		1.18		Anderson-Darling GOF Test									
42	5% A-D Critical Value		0.862		Detected Data Not Gamma Distributed at 5% Significance Level									
43	K-S Test Statistic		0.119		Kolmogrov-Smirnoff GOF									
44	5% K-S Critical Value		0.124		Detected data appear Gamma Distributed at 5% Significance Level									
45	Detected data follow Appr. Gamma Distribution at 5% Significance Level													
46														
47	Gamma Statistics on Detected Data Only													
48	k hat (MLE)		0.307		k star (bias corrected MLE)				0.302					
49	Theta hat (MLE)		5723		Theta star (bias corrected MLE)				5803					
50	nu hat (MLE)		36.79		nu star (bias corrected)				36.29					

	A	B	C	D	E	F	G	H	I	J	K	L
51	MLE Mean (bias corrected)					1755	MLE Sd (bias corrected)					3191
52												
53	Gamma Kaplan-Meier (KM) Statistics											
54	k hat (KM)					0.263	nu hat (KM)					44.72
55	Approximate Chi Square Value (44.72, α)					30.38	Adjusted Chi Square Value (44.72, β)					30.17
56	95% Gamma Approximate KM-UCL (use when $n \geq 50$)					1824	95% Gamma Adjusted KM-UCL (use when $n < 50$)					1836
57												
58	Gamma ROS Statistics using Imputed Non-Detects											
59	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
60	GROS may not be used when kstar of detected data is small such as < 0.1											
61	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
62	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
63	Minimum					0.01	Mean					1239
64	Maximum					15000	Median					20
65	SD					2430	CV					1.962
66	k hat (MLE)					0.159	k star (bias corrected MLE)					0.161
67	Theta hat (MLE)					7779	Theta star (bias corrected MLE)					7672
68	nu hat (MLE)					27.07	nu star (bias corrected)					27.45
69	MLE Mean (bias corrected)					1239	MLE Sd (bias corrected)					3083
70							Adjusted Level of Significance (β)					0.0472
71	Approximate Chi Square Value (27.45, α)					16.5	Adjusted Chi Square Value (27.45, β)					16.35
72	95% Gamma Approximate UCL (use when $n \geq 50$)					2061	95% Gamma Adjusted UCL (use when $n < 50$)					2079
73												
74	Lognormal GOF Test on Detected Observations Only											
75	Lilliefors Test Statistic					0.144	Lilliefors GOF Test					
76	5% Lilliefors Critical Value					0.114	Detected Data Not Lognormal at 5% Significance Level					
77	Detected Data Not Lognormal at 5% Significance Level											
78												
79	Lognormal ROS Statistics Using Imputed Non-Detects											
80	Mean in Original Scale					1239	Mean in Log Scale					3.466
81	SD in Original Scale					2430	SD in Log Scale					3.807
82	95% t UCL (assumes normality of ROS data)					1677	95% Percentile Bootstrap UCL					1694
83	95% BCA Bootstrap UCL					1749	95% Bootstrap t UCL					1869
84	95% H-UCL (Log ROS)					499967						
85												
86	DL/2 Statistics											
87	DL/2 Normal					DL/2 Log-Transformed						
88	Mean in Original Scale					1239	Mean in Log Scale					3.789
89	SD in Original Scale					2430	SD in Log Scale					3.37
90	95% t UCL (Assumes normality)					1678	95% H-Stat UCL					87257
91	DL/2 is not a recommended method, provided for comparisons and historical reasons											
92												
93	Nonparametric Distribution Free UCL Statistics											
94	Detected Data appear Approximate Gamma Distributed at 5% Significance Level											
95												
96	Suggested UCL to Use											
97	95% KM (Chebyshev) UCL					2391	95% GROS Approximate Gamma UCL					2061
98	95% Approximate Gamma KM-UCL					1824						
99												
100	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											

	A	B	C	D	E	F	G	H	I	J	K	L
101	Recommendations are based upon data size, data distribution, and skewness.											
102	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
103	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
104												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 2:53:36 PM									
5	From File		TPH Soil 1.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10	TPH (C23-C32)											
11												
12	General Statistics											
13	Total Number of Observations				86		Number of Distinct Observations				66	
14	Number of Detects				68		Number of Non-Detects				18	
15	Number of Distinct Detects				59		Number of Distinct Non-Detects				7	
16	Minimum Detect				1.1		Minimum Non-Detect				0.28	
17	Maximum Detect				13000		Maximum Non-Detect				400	
18	Variance Detects				6638858		Percent Non-Detects				20.93%	
19	Mean Detects				1605		SD Detects				2577	
20	Median Detects				200		CV Detects				1.605	
21	Skewness Detects				2.307		Kurtosis Detects				6.029	
22	Mean of Logged Detects				4.941		SD of Logged Detects				3.062	
23												
24	Normal GOF Test on Detects Only											
25	Shapiro Wilk Test Statistic				0.685		Normal GOF Test on Detected Observations Only					
26	5% Shapiro Wilk P Value				0		Detected Data Not Normal at 5% Significance Level					
27	Lilliefors Test Statistic				0.267		Lilliefors GOF Test					
28	5% Lilliefors Critical Value				0.107		Detected Data Not Normal at 5% Significance Level					
29	Detected Data Not Normal at 5% Significance Level											
30												
31	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs											
32	Mean		1270		Standard Error of Mean				257			
33	SD		2366		95% KM (BCA) UCL				1713			
34	95% KM (t) UCL		1697		95% KM (Percentile Bootstrap) UCL				1723			
35	95% KM (z) UCL		1693		95% KM Bootstrap t UCL				1815			
36	90% KM Chebyshev UCL		2041		95% KM Chebyshev UCL				2390			
37	97.5% KM Chebyshev UCL		2875		99% KM Chebyshev UCL				3827			
38												
39	Gamma GOF Tests on Detected Observations Only											
40	A-D Test Statistic		1.583		Anderson-Darling GOF Test							
41	5% A-D Critical Value		0.873		Detected Data Not Gamma Distributed at 5% Significance Level							
42	K-S Test Statistic		0.125		Kolmogrov-Smirnoff GOF							
43	5% K-S Critical Value		0.118		Detected Data Not Gamma Distributed at 5% Significance Level							
44	Detected Data Not Gamma Distributed at 5% Significance Level											
45												
46	Gamma Statistics on Detected Data Only											
47	k hat (MLE)		0.285		k star (bias corrected MLE)				0.282			
48	Theta hat (MLE)		5634		Theta star (bias corrected MLE)				5689			
49	nu hat (MLE)		38.76		nu star (bias corrected)				38.38			
50	MLE Mean (bias corrected)		1605		MLE Sd (bias corrected)				3022			

	A	B	C	D	E	F	G	H	I	J	K	L
51												
52	Gamma Kaplan-Meier (KM) Statistics											
53	k hat (KM)				0.288		nu hat (KM)				49.57	
54	Approximate Chi Square Value (49.57, α)				34.41		Adjusted Chi Square Value (49.57, β)				34.19	
55	95% Gamma Approximate KM-UCL (use when $n \geq 50$)				1830		95% Gamma Adjusted KM-UCL (use when $n < 50$)				1841	
56												
57	Gamma ROS Statistics using Imputed Non-Detects											
58	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
59	GROS may not be used when kstar of detected data is small such as < 0.1											
60	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
61	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
62	Minimum				0.01		Mean				1269	
63	Maximum				13000		Median				33	
64	SD				2380		CV				1.875	
65	k hat (MLE)				0.178		k star (bias corrected MLE)				0.18	
66	Theta hat (MLE)				7123		Theta star (bias corrected MLE)				7062	
67	nu hat (MLE)				30.65		nu star (bias corrected)				30.92	
68	MLE Mean (bias corrected)				1269		MLE Sd (bias corrected)				2994	
69					Adjusted Level of Significance (β)				0.0472			
70	Approximate Chi Square Value (30.92, α)				19.22		Adjusted Chi Square Value (30.92, β)				19.06	
71	95% Gamma Approximate UCL (use when $n \geq 50$)				2043		95% Gamma Adjusted UCL (use when $n < 50$)				2059	
72												
73	Lognormal GOF Test on Detected Observations Only											
74	Lilliefors Test Statistic				0.174		Lilliefors GOF Test					
75	5% Lilliefors Critical Value				0.107		Detected Data Not Lognormal at 5% Significance Level					
76	Detected Data Not Lognormal at 5% Significance Level											
77												
78	Lognormal ROS Statistics Using Imputed Non-Detects											
79	Mean in Original Scale				1270		Mean in Log Scale				3.821	
80	SD in Original Scale				2380		SD in Log Scale				3.587	
81	95% t UCL (assumes normality of ROS data)				1697		95% Percentile Bootstrap UCL				1711	
82	95% BCA Bootstrap UCL				1786		95% Bootstrap t UCL				1795	
83	95% H-UCL (Log ROS)				242330							
84												
85	DL/2 Statistics											
86	DL/2 Normal						DL/2 Log-Transformed					
87	Mean in Original Scale				1272		Mean in Log Scale				4.067	
88	SD in Original Scale				2379		SD in Log Scale				3.293	
89	95% t UCL (Assumes normality)				1699		95% H-Stat UCL				81597	
90	DL/2 is not a recommended method, provided for comparisons and historical reasons											
91												
92	Nonparametric Distribution Free UCL Statistics											
93	Data do not follow a Discernible Distribution at 5% Significance Level											
94												
95	Suggested UCL to Use											
96	97.5% KM (Chebyshev) UCL				2875							
97												
98	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
99	Recommendations are based upon data size, data distribution, and skewness.											
100	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											

	A	B	C	D	E	F	G	H	I	J	K	L
101	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
102												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 2:54:26 PM									
5	From File		TPH Soil 1.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10	TPH (C33-C40)											
11												
12	General Statistics											
13	Total Number of Observations				80		Number of Distinct Observations				54	
14	Number of Detects				59		Number of Non-Detects				21	
15	Number of Distinct Detects				50		Number of Distinct Non-Detects				5	
16	Minimum Detect				1.1		Minimum Non-Detect				1	
17	Maximum Detect				8900		Maximum Non-Detect				400	
18	Variance Detects				3365223		Percent Non-Detects				26.25%	
19	Mean Detects				1299		SD Detects				1834	
20	Median Detects				500		CV Detects				1.412	
21	Skewness Detects				1.957		Kurtosis Detects				4.547	
22	Mean of Logged Detects				5.051		SD of Logged Detects				2.896	
23												
24	Normal GOF Test on Detects Only											
25	Shapiro Wilk Test Statistic				0.744		Normal GOF Test on Detected Observations Only					
26	5% Shapiro Wilk P Value				2.641E-13		Detected Data Not Normal at 5% Significance Level					
27	Lilliefors Test Statistic				0.24		Lilliefors GOF Test					
28	5% Lilliefors Critical Value				0.115		Detected Data Not Normal at 5% Significance Level					
29	Detected Data Not Normal at 5% Significance Level											
30												
31	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs											
32	Mean		959		Standard Error of Mean				187.5			
33	SD		1663		95% KM (BCA) UCL				1266			
34	95% KM (t) UCL		1271		95% KM (Percentile Bootstrap) UCL				1260			
35	95% KM (z) UCL		1267		95% KM Bootstrap t UCL				1349			
36	90% KM Chebyshev UCL		1522		95% KM Chebyshev UCL				1776			
37	97.5% KM Chebyshev UCL		2130		99% KM Chebyshev UCL				2825			
38												
39	Gamma GOF Tests on Detected Observations Only											
40	A-D Test Statistic		1.455		Anderson-Darling GOF Test							
41	5% A-D Critical Value		0.858		Detected Data Not Gamma Distributed at 5% Significance Level							
42	K-S Test Statistic		0.139		Kolmogrov-Smirnoff GOF							
43	5% K-S Critical Value		0.125		Detected Data Not Gamma Distributed at 5% Significance Level							
44	Detected Data Not Gamma Distributed at 5% Significance Level											
45												
46	Gamma Statistics on Detected Data Only											
47	k hat (MLE)		0.322		k star (bias corrected MLE)				0.317			
48	Theta hat (MLE)		4037		Theta star (bias corrected MLE)				4102			
49	nu hat (MLE)		37.98		nu star (bias corrected)				37.38			
50	MLE Mean (bias corrected)		1299		MLE Sd (bias corrected)				2309			

	A	B	C	D	E	F	G	H	I	J	K	L
51												
52	Gamma Kaplan-Meier (KM) Statistics											
53	k hat (KM)				0.333		nu hat (KM)				53.21	
54	Approximate Chi Square Value (53.21, α)				37.45		Adjusted Chi Square Value (53.21, β)				37.21	
55	95% Gamma Approximate KM-UCL (use when $n \geq 50$)				1362		95% Gamma Adjusted KM-UCL (use when $n < 50$)				1371	
56												
57	Gamma ROS Statistics using Imputed Non-Detects											
58	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
59	GROS may not be used when kstar of detected data is small such as < 0.1											
60	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
61	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
62	Minimum				0.01		Mean				958.4	
63	Maximum				8900		Median				22.5	
64	SD				1674		CV				1.746	
65	k hat (MLE)				0.176		k star (bias corrected MLE)				0.178	
66	Theta hat (MLE)				5446		Theta star (bias corrected MLE)				5393	
67	nu hat (MLE)				28.16		nu star (bias corrected)				28.43	
68	MLE Mean (bias corrected)				958.4		MLE Sd (bias corrected)				2273	
69					Adjusted Level of Significance (β)				0.047			
70	Approximate Chi Square Value (28.43, α)				17.27		Adjusted Chi Square Value (28.43, β)				17.11	
71	95% Gamma Approximate UCL (use when $n \geq 50$)				1578		95% Gamma Adjusted UCL (use when $n < 50$)				1593	
72												
73	Lognormal GOF Test on Detected Observations Only											
74	Lilliefors Test Statistic				0.187		Lilliefors GOF Test					
75	5% Lilliefors Critical Value				0.115		Detected Data Not Lognormal at 5% Significance Level					
76	Detected Data Not Lognormal at 5% Significance Level											
77												
78	Lognormal ROS Statistics Using Imputed Non-Detects											
79	Mean in Original Scale				958.8		Mean in Log Scale				3.597	
80	SD in Original Scale				1674		SD in Log Scale				3.602	
81	95% t UCL (assumes normality of ROS data)				1270		95% Percentile Bootstrap UCL				1280	
82	95% BCA Bootstrap UCL				1317		95% Bootstrap t UCL				1332	
83	95% H-UCL (Log ROS)				237206							
84												
85	DL/2 Statistics											
86	DL/2 Normal						DL/2 Log-Transformed					
87	Mean in Original Scale				961.2		Mean in Log Scale				3.852	
88	SD in Original Scale				1672		SD in Log Scale				3.279	
89	95% t UCL (Assumes normality)				1272		95% H-Stat UCL				69194	
90	DL/2 is not a recommended method, provided for comparisons and historical reasons											
91												
92	Nonparametric Distribution Free UCL Statistics											
93	Data do not follow a Discernible Distribution at 5% Significance Level											
94												
95	Suggested UCL to Use											
96	97.5% KM (Chebyshev) UCL				2130							
97												
98	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
99	Recommendations are based upon data size, data distribution, and skewness.											
100	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											

	A	B	C	D	E	F	G	H	I	J	K	L
101	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
102												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation			1/9/2016 2:29:59 PM								
5	From File			VOCs Soil.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	1,1,2-Trichloroethane											
12												
13	General Statistics											
14	Total Number of Observations				1		Number of Distinct Observations				1	
15					Number of Missing Observations				86			
16	Minimum				0.3		Mean				0.3	
17	Maximum				0.3		Median				0.3	
18												
19	Warning: This data set only has 1 observations!											
20	Data set is too small to compute reliable and meaningful statistics and estimates!											
21	The data set for variable 1,1,2-Trichloroethane was not processed!											
22												
23	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
24	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
25												
26												

	A	B	C	D	E	F	G	H	I	J	K	L		
1	UCL Statistics for Data Sets with Non-Detects													
2														
3	User Selected Options													
4	Date/Time of Computation		1/9/2016 2:31:25 PM											
5	From File		VOCs Soil.xls											
6	Full Precision		OFF											
7	Confidence Coefficient		95%											
8	Number of Bootstrap Operations		2000											
9														
10														
11	1,2,4-Trimethylbenzene													
12														
13	General Statistics													
14	Total Number of Observations				23		Number of Distinct Observations				22			
15									Number of Missing Observations				64	
16	Minimum				0.0024		Mean				3.045			
17	Maximum				18		Median				0.89			
18	SD				4.632		Std. Error of Mean				0.966			
19	Coefficient of Variation				1.521		Skewness				2.114			
20														
21	Normal GOF Test													
22	Shapiro Wilk Test Statistic				0.704		Shapiro Wilk GOF Test							
23	5% Shapiro Wilk Critical Value				0.914		Data Not Normal at 5% Significance Level							
24	Lilliefors Test Statistic				0.256		Lilliefors GOF Test							
25	5% Lilliefors Critical Value				0.185		Data Not Normal at 5% Significance Level							
26	Data Not Normal at 5% Significance Level													
27														
28	Assuming Normal Distribution													
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)							
30	95% Student's-t UCL				4.703		95% Adjusted-CLT UCL (Chen-1995)				5.088			
31							95% Modified-t UCL (Johnson-1978)				4.774			
32														
33	Gamma GOF Test													
34	A-D Test Statistic				0.294		Anderson-Darling Gamma GOF Test							
35	5% A-D Critical Value				0.835		Detected data appear Gamma Distributed at 5% Significance Level							
36	K-S Test Statistic				0.11		Kolmogrov-Smirnoff Gamma GOF Test							
37	5% K-S Critical Value				0.195		Detected data appear Gamma Distributed at 5% Significance Level							
38	Detected data appear Gamma Distributed at 5% Significance Level													
39														
40	Gamma Statistics													
41	k hat (MLE)				0.362		k star (bias corrected MLE)				0.344			
42	Theta hat (MLE)				8.404		Theta star (bias corrected MLE)				8.85			
43	nu hat (MLE)				16.66		nu star (bias corrected)				15.82			
44	MLE Mean (bias corrected)				3.045		MLE Sd (bias corrected)				5.191			
45							Approximate Chi Square Value (0.05)				7.838			
46	Adjusted Level of Significance				0.0389		Adjusted Chi Square Value				7.433			
47														
48	Assuming Gamma Distribution													
49	95% Approximate Gamma UCL (use when n>=50)				6.147		95% Adjusted Gamma UCL (use when n<50)				6.482			
50														

	A	B	C	D	E	F	G	H	I	J	K	L
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic				0.934		Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk Critical Value				0.914		Data appear Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic				0.159		Lilliefors Lognormal GOF Test					
55	5% Lilliefors Critical Value				0.185		Data appear Lognormal at 5% Significance Level					
56	Data appear Lognormal at 5% Significance Level											
57												
58	Lognormal Statistics											
59	Minimum of Logged Data				-6.032		Mean of logged Data				-0.732	
60	Maximum of Logged Data				2.89		SD of logged Data				2.626	
61												
62	Assuming Lognormal Distribution											
63	95% H-UCL			264.7			90% Chebyshev (MVUE) UCL			28.45		
64	95% Chebyshev (MVUE) UCL			37.17			97.5% Chebyshev (MVUE) UCL			49.27		
65	99% Chebyshev (MVUE) UCL			73.03								
66												
67	Nonparametric Distribution Free UCL Statistics											
68	Data appear to follow a Discernible Distribution at 5% Significance Level											
69												
70	Nonparametric Distribution Free UCLs											
71	95% CLT UCL			4.633			95% Jackknife UCL			4.703		
72	95% Standard Bootstrap UCL			4.543			95% Bootstrap-t UCL			5.825		
73	95% Hall's Bootstrap UCL			6.081			95% Percentile Bootstrap UCL			4.714		
74	95% BCA Bootstrap UCL			4.93								
75	90% Chebyshev(Mean, Sd) UCL			5.942			95% Chebyshev(Mean, Sd) UCL			7.254		
76	97.5% Chebyshev(Mean, Sd) UCL			9.076			99% Chebyshev(Mean, Sd) UCL			12.65		
77												
78	Suggested UCL to Use											
79	95% Adjusted Gamma UCL			6.482								
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
83	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.											
84	For additional insight the user may want to consult a statistician.											
85												

	A	B	C	D	E	F	G	H	I	J	K	L		
1	UCL Statistics for Data Sets with Non-Detects													
2														
3	User Selected Options													
4	Date/Time of Computation		1/9/2016 2:32:17 PM											
5	From File		VOCs Soil.xls											
6	Full Precision		OFF											
7	Confidence Coefficient		95%											
8	Number of Bootstrap Operations		2000											
9														
10														
11	1,2-Dichlorobenzene													
12														
13	General Statistics													
14	Total Number of Observations				3		Number of Distinct Observations				3			
15									Number of Missing Observations				84	
16	Minimum				0.0064		Mean				0.179			
17	Maximum				0.42		Median				0.11			
18	SD				0.215		Std. Error of Mean				0.124			
19	Coefficient of Variation				1.204		Skewness				1.292			
20														
21	Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use													
22	guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.													
23	For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).													
24	Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0													
25														
26	Normal GOF Test													
27	Shapiro Wilk Test Statistic				0.923		Shapiro Wilk GOF Test							
28	5% Shapiro Wilk Critical Value				0.767		Data appear Normal at 5% Significance Level							
29	Lilliefors Test Statistic				0.292		Lilliefors GOF Test							
30	5% Lilliefors Critical Value				0.512		Data appear Normal at 5% Significance Level							
31	Data appear Normal at 5% Significance Level													
32														
33	Assuming Normal Distribution													
34	95% Normal UCL						95% UCLs (Adjusted for Skewness)							
35	95% Student's-t UCL				0.542		95% Adjusted-CLT UCL (Chen-1995)				0.482			
36							95% Modified-t UCL (Johnson-1978)				0.557			
37														
38	Gamma GOF Test													
39	Not Enough Data to Perform GOF Test													
40														
41	Gamma Statistics													
42	k hat (MLE)				0.622		k star (bias corrected MLE)				N/A			
43	Theta hat (MLE)				0.287		Theta star (bias corrected MLE)				N/A			
44	nu hat (MLE)				3.735		nu star (bias corrected)				N/A			
45	MLE Mean (bias corrected)				N/A		MLE Sd (bias corrected)				N/A			
46							Approximate Chi Square Value (0.05)				N/A			
47	Adjusted Level of Significance				N/A		Adjusted Chi Square Value				N/A			
48														
49	Assuming Gamma Distribution													
50	95% Approximate Gamma UCL (use when n>=50))				N/A		95% Adjusted Gamma UCL (use when n<50)				N/A			

	A	B	C	D	E	F	G	H	I	J	K	L		
51														
52	Lognormal GOF Test													
53	Shapiro Wilk Test Statistic				0.959		Shapiro Wilk Lognormal GOF Test							
54	5% Shapiro Wilk Critical Value				0.767		Data appear Lognormal at 5% Significance Level							
55	Lilliefors Test Statistic				0.259		Lilliefors Lognormal GOF Test							
56	5% Lilliefors Critical Value				0.512		Data appear Lognormal at 5% Significance Level							
57	Data appear Lognormal at 5% Significance Level													
58														
59	Lognormal Statistics													
60	Minimum of Logged Data				-5.051		Mean of logged Data				-2.709			
61	Maximum of Logged Data				-0.868		SD of logged Data				2.137			
62														
63	Assuming Lognormal Distribution													
64	95% H-UCL		1.378E+18		90% Chebyshev (MVUE) UCL				0.746					
65	95% Chebyshev (MVUE) UCL		0.987		97.5% Chebyshev (MVUE) UCL				1.321					
66	99% Chebyshev (MVUE) UCL		1.978											
67														
68	Nonparametric Distribution Free UCL Statistics													
69	Data appear to follow a Discernible Distribution at 5% Significance Level													
70														
71	Nonparametric Distribution Free UCLs													
72	95% CLT UCL		0.383		95% Jackknife UCL				0.542					
73	95% Standard Bootstrap UCL		N/A		95% Bootstrap-t UCL				N/A					
74	95% Hall's Bootstrap UCL		N/A		95% Percentile Bootstrap UCL				N/A					
75	95% BCA Bootstrap UCL		N/A											
76	90% Chebyshev(Mean, Sd) UCL		0.552		95% Chebyshev(Mean, Sd) UCL				0.72					
77	97.5% Chebyshev(Mean, Sd) UCL		0.955		99% Chebyshev(Mean, Sd) UCL				1.415					
78														
79	Suggested UCL to Use													
80	95% Student's-t UCL		0.542											
81														
82	Recommended UCL exceeds the maximum observation													
83														
84	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.													
85	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)													
86	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.													
87	For additional insight the user may want to consult a statistician.													
88														

	A	B	C	D	E	F	G	H	I	J	K	L		
1	UCL Statistics for Data Sets with Non-Detects													
2														
3	User Selected Options													
4	Date/Time of Computation		1/9/2016 2:33:10 PM											
5	From File		VOCs Soil.xls											
6	Full Precision		OFF											
7	Confidence Coefficient		95%											
8	Number of Bootstrap Operations		2000											
9														
10	1,3,5-Trimethylbenzene													
11														
12	General Statistics													
13	Total Number of Observations				20		Number of Distinct Observations				20			
14									Number of Missing Observations				67	
15	Number of Detects				19		Number of Non-Detects				1			
16	Number of Distinct Detects				19		Number of Distinct Non-Detects				1			
17	Minimum Detect				0.002		Minimum Non-Detect				4.1			
18	Maximum Detect				4.5		Maximum Non-Detect				4.1			
19	Variance Detects				1.233		Percent Non-Detects				5%			
20	Mean Detects				0.537		SD Detects				1.11			
21	Median Detects				0.16		CV Detects				2.066			
22	Skewness Detects				3.109		Kurtosis Detects				9.809			
23	Mean of Logged Detects				-2.268		SD of Logged Detects				2.149			
24														
25	Normal GOF Test on Detects Only													
26	Shapiro Wilk Test Statistic				0.508		Shapiro Wilk GOF Test							
27	5% Shapiro Wilk Critical Value				0.901		Detected Data Not Normal at 5% Significance Level							
28	Lilliefors Test Statistic				0.379		Lilliefors GOF Test							
29	5% Lilliefors Critical Value				0.203		Detected Data Not Normal at 5% Significance Level							
30	Detected Data Not Normal at 5% Significance Level													
31														
32	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs													
33	Mean		0.526		Standard Error of Mean				0.246					
34	SD		1.062		95% KM (BCA) UCL				1.01					
35	95% KM (t) UCL		0.951		95% KM (Percentile Bootstrap) UCL				0.962					
36	95% KM (z) UCL		0.931		95% KM Bootstrap t UCL				2.591					
37	90% KM Chebyshev UCL		1.264		95% KM Chebyshev UCL				1.597					
38	97.5% KM Chebyshev UCL		2.061		99% KM Chebyshev UCL				2.971					
39														
40	Gamma GOF Tests on Detected Observations Only													
41	A-D Test Statistic		0.631		Anderson-Darling GOF Test									
42	5% A-D Critical Value		0.823		Detected data appear Gamma Distributed at 5% Significance Level									
43	K-S Test Statistic		0.177		Kolmogrov-Smirnoff GOF									
44	5% K-S Critical Value		0.213		Detected data appear Gamma Distributed at 5% Significance Level									
45	Detected data appear Gamma Distributed at 5% Significance Level													
46														
47	Gamma Statistics on Detected Data Only													
48	k hat (MLE)		0.4		k star (bias corrected MLE)				0.372					
49	Theta hat (MLE)		1.345		Theta star (bias corrected MLE)				1.446					
50	nu hat (MLE)		15.18		nu star (bias corrected)				14.12					

	A	B	C	D	E	F	G	H	I	J	K	L
51	MLE Mean (bias corrected)					0.537	MLE Sd (bias corrected)					0.882
52												
53	Gamma Kaplan-Meier (KM) Statistics											
54	k hat (KM)					0.246	nu hat (KM)					9.836
55	Approximate Chi Square Value (9.84, α)					3.839	Adjusted Chi Square Value (9.84, β)					3.548
56	95% Gamma Approximate KM-UCL (use when $n \geq 50$)					1.349	95% Gamma Adjusted KM-UCL (use when $n < 50$)					1.46
57												
58	Gamma ROS Statistics using Imputed Non-Detects											
59	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
60	GROS may not be used when kstar of detected data is small such as < 0.1											
61	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
62	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
63	Minimum					0.002	Mean					0.514
64	Maximum					4.5	Median					0.135
65	SD					1.086	CV					2.111
66	k hat (MLE)					0.405	k star (bias corrected MLE)					0.378
67	Theta hat (MLE)					1.269	Theta star (bias corrected MLE)					1.361
68	nu hat (MLE)					16.21	nu star (bias corrected)					15.12
69	MLE Mean (bias corrected)					0.514	MLE Sd (bias corrected)					0.837
70							Adjusted Level of Significance (β)					0.038
71	Approximate Chi Square Value (15.12, α)					7.342	Adjusted Chi Square Value (15.12, β)					6.916
72	95% Gamma Approximate UCL (use when $n \geq 50$)					1.059	95% Gamma Adjusted UCL (use when $n < 50$)					1.124
73												
74	Lognormal GOF Test on Detected Observations Only											
75	Shapiro Wilk Test Statistic					0.95	Shapiro Wilk GOF Test					
76	5% Shapiro Wilk Critical Value					0.901	Detected Data appear Lognormal at 5% Significance Level					
77	Lilliefors Test Statistic					0.158	Lilliefors GOF Test					
78	5% Lilliefors Critical Value					0.203	Detected Data appear Lognormal at 5% Significance Level					
79	Detected Data appear Lognormal at 5% Significance Level											
80												
81	Lognormal ROS Statistics Using Imputed Non-Detects											
82	Mean in Original Scale					0.515	Mean in Log Scale					-2.277
83	SD in Original Scale					1.085	SD in Log Scale					2.092
84	95% t UCL (assumes normality of ROS data)					0.935	95% Percentile Bootstrap UCL					0.936
85	95% BCA Bootstrap UCL					1.127	95% Bootstrap t UCL					2.655
86	95% H-UCL (Log ROS)					7.82						
87												
88	UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed											
89	KM Mean (logged)					-2.278	95% H-UCL (KM -Log)					7.595
90	KM SD (logged)					2.085	95% Critical H Value (KM-Log)					4.459
91	KM Standard Error of Mean (logged)					0.49						
92												
93	DL/2 Statistics											
94	DL/2 Normal						DL/2 Log-Transformed					
95	Mean in Original Scale					0.613	Mean in Log Scale					-2.119
96	SD in Original Scale					1.132	SD in Log Scale					2.195
97	95% t UCL (Assumes normality)					1.051	95% H-Stat UCL					13.99
98	DL/2 is not a recommended method, provided for comparisons and historical reasons											
99												
100	Nonparametric Distribution Free UCL Statistics											

	A	B	C	D	E	F	G	H	I	J	K	L
101	Detected Data appear Gamma Distributed at 5% Significance Level											
102												
103	Suggested UCL to Use											
104	95% KM (Chebyshev) UCL				1.597		95% GROS Adjusted Gamma UCL				1.124	
105	95% Adjusted Gamma KM-UCL				1.46							
106												
107	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
108	Recommendations are based upon data size, data distribution, and skewness.											
109	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
110	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
111												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation			1/9/2016 2:34:05 PM								
5	From File			VOCs Soil.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	2-Butanone (MEK											
12												
13	General Statistics											
14	Total Number of Observations				1		Number of Distinct Observations				1	
15					Number of Missing Observations				86			
16	Minimum				0.0079		Mean				0.0079	
17	Maximum				0.0079		Median				0.0079	
18												
19	Warning: This data set only has 1 observations!											
20	Data set is too small to compute reliable and meaningful statistics and estimates!											
21	The data set for variable 2-Butanone (MEK was not processed!											
22												
23	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
24	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
25												
26												

	A	B	C	D	E	F	G	H	I	J	K	L				
1	UCL Statistics for Data Sets with Non-Detects															
2																
3	User Selected Options															
4	Date/Time of Computation			1/9/2016 2:34:51 PM												
5	From File			VOCs Soil.xls												
6	Full Precision			OFF												
7	Confidence Coefficient			95%												
8	Number of Bootstrap Operations			2000												
9																
10																
11	Acetone															
12																
13	General Statistics															
14	Total Number of Observations				2		Number of Distinct Observations				2					
15									Number of Missing Observations				85			
16					Minimum		0.014						Mean		0.025	
17					Maximum		0.036						Median		0.025	
18																
19	Warning: This data set only has 2 observations!															
20	Data set is too small to compute reliable and meaningful statistics and estimates!															
21	The data set for variable Acetone was not processed!															
22																
23	It is suggested to collect at least 8 to 10 observations before using these statistical methods!															
24	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.															
25																
26																

	A	B	C	D	E	F	G	H	I	J	K	L				
1	UCL Statistics for Data Sets with Non-Detects															
2																
3	User Selected Options															
4	Date/Time of Computation			1/9/2016 2:35:32 PM												
5	From File			VOCs Soil.xls												
6	Full Precision			OFF												
7	Confidence Coefficient			95%												
8	Number of Bootstrap Operations			2000												
9																
10																
11	Benzene															
12																
13	General Statistics															
14	Total Number of Observations				16				Number of Distinct Observations				15			
15									Number of Missing Observations				71			
16	Minimum				0.003				Mean				0.403			
17	Maximum				3.8				Median				0.0435			
18	SD				0.962				Std. Error of Mean				0.241			
19	Coefficient of Variation				2.389				Skewness				3.365			
20																
21	Normal GOF Test															
22	Shapiro Wilk Test Statistic				0.47				Shapiro Wilk GOF Test							
23	5% Shapiro Wilk Critical Value				0.887				Data Not Normal at 5% Significance Level							
24	Lilliefors Test Statistic				0.376				Lilliefors GOF Test							
25	5% Lilliefors Critical Value				0.222				Data Not Normal at 5% Significance Level							
26	Data Not Normal at 5% Significance Level															
27																
28	Assuming Normal Distribution															
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)									
30	95% Student's-t UCL				0.825		95% Adjusted-CLT UCL (Chen-1995)				1.015					
31							95% Modified-t UCL (Johnson-1978)				0.858					
32																
33	Gamma GOF Test															
34	A-D Test Statistic				0.929				Anderson-Darling Gamma GOF Test							
35	5% A-D Critical Value				0.828				Data Not Gamma Distributed at 5% Significance Level							
36	K-S Test Statistic				0.196				Kolmogrov-Smirnoff Gamma GOF Test							
37	5% K-S Critical Value				0.232				Detected data appear Gamma Distributed at 5% Significance Level							
38	Detected data follow Appr. Gamma Distribution at 5% Significance Level															
39																
40	Gamma Statistics															
41	k hat (MLE)				0.345				k star (bias corrected MLE)				0.322			
42	Theta hat (MLE)				1.167				Theta star (bias corrected MLE)				1.25			
43	nu hat (MLE)				11.05				nu star (bias corrected)				10.31			
44	MLE Mean (bias corrected)				0.403				MLE Sd (bias corrected)				0.71			
45									Approximate Chi Square Value (0.05)				4.138			
46	Adjusted Level of Significance				0.0335				Adjusted Chi Square Value				3.702			
47																
48	Assuming Gamma Distribution															
49	95% Approximate Gamma UCL (use when n>=50)				1.004				95% Adjusted Gamma UCL (use when n<50)				1.122			
50																

	A	B	C	D	E	F	G	H	I	J	K	L
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic				0.963		Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk Critical Value				0.887		Data appear Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic				0.114		Lilliefors Lognormal GOF Test					
55	5% Lilliefors Critical Value				0.222		Data appear Lognormal at 5% Significance Level					
56	Data appear Lognormal at 5% Significance Level											
57												
58	Lognormal Statistics											
59	Minimum of Logged Data				-5.809		Mean of logged Data				-2.861	
60	Maximum of Logged Data				1.335		SD of logged Data				2.094	
61												
62	Assuming Lognormal Distribution											
63	95% H-UCL				6.321		90% Chebyshev (MVUE) UCL				1.04	
64	95% Chebyshev (MVUE) UCL				1.345		97.5% Chebyshev (MVUE) UCL				1.768	
65	99% Chebyshev (MVUE) UCL				2.6							
66												
67	Nonparametric Distribution Free UCL Statistics											
68	Data appear to follow a Discernible Distribution at 5% Significance Level											
69												
70	Nonparametric Distribution Free UCLs											
71	95% CLT UCL				0.799		95% Jackknife UCL				0.825	
72	95% Standard Bootstrap UCL				0.786		95% Bootstrap-t UCL				2.913	
73	95% Hall's Bootstrap UCL				2.387		95% Percentile Bootstrap UCL				0.815	
74	95% BCA Bootstrap UCL				1.105							
75	90% Chebyshev(Mean, Sd) UCL				1.125		95% Chebyshev(Mean, Sd) UCL				1.451	
76	97.5% Chebyshev(Mean, Sd) UCL				1.905		99% Chebyshev(Mean, Sd) UCL				2.797	
77												
78	Suggested UCL to Use											
79	95% Adjusted Gamma UCL				1.122							
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
83	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.											
84	For additional insight the user may want to consult a statistician.											
85												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation			1/9/2016 2:36:17 PM								
5	From File			VOCs Soil.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	cis-1,2-Dichloroethene											
12												
13	General Statistics											
14	Total Number of Observations				1		Number of Distinct Observations				1	
15					Number of Missing Observations				86			
16	Minimum				0.005		Mean				0.005	
17	Maximum				0.005		Median				0.005	
18												
19	Warning: This data set only has 1 observations!											
20	Data set is too small to compute reliable and meaningful statistics and estimates!											
21	The data set for variable cis-1,2-Dichloroethene was not processed!											
22												
23	It is suggested to collect at least 8 to 10 observations before using these statistical methods!											
24	If possible, compute and collect Data Quality Objectives (DQO) based sample size and analytical results.											
25												
26												

	A	B	C	D	E	F	G	H	I	J	K	L		
1	UCL Statistics for Data Sets with Non-Detects													
2														
3	User Selected Options													
4	Date/Time of Computation		1/9/2016 2:37:16 PM											
5	From File		VOCs Soil.xls											
6	Full Precision		OFF											
7	Confidence Coefficient		95%											
8	Number of Bootstrap Operations		2000											
9														
10														
11	Ethylbenzene													
12														
13	General Statistics													
14	Total Number of Observations				22		Number of Distinct Observations				21			
15									Number of Missing Observations				65	
16	Minimum				0.0038		Mean				0.644			
17	Maximum				3.9		Median				0.16			
18	SD				0.923		Std. Error of Mean				0.197			
19	Coefficient of Variation				1.433		Skewness				2.3			
20														
21	Normal GOF Test													
22	Shapiro Wilk Test Statistic				0.712		Shapiro Wilk GOF Test							
23	5% Shapiro Wilk Critical Value				0.911		Data Not Normal at 5% Significance Level							
24	Lilliefors Test Statistic				0.244		Lilliefors GOF Test							
25	5% Lilliefors Critical Value				0.189		Data Not Normal at 5% Significance Level							
26	Data Not Normal at 5% Significance Level													
27														
28	Assuming Normal Distribution													
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)							
30	95% Student's-t UCL				0.983		95% Adjusted-CLT UCL (Chen-1995)				1.071			
31									95% Modified-t UCL (Johnson-1978)				0.999	
32														
33	Gamma GOF Test													
34	A-D Test Statistic				0.63		Anderson-Darling Gamma GOF Test							
35	5% A-D Critical Value				0.815		Detected data appear Gamma Distributed at 5% Significance Level							
36	K-S Test Statistic				0.182		Kolmogrov-Smirnoff Gamma GOF Test							
37	5% K-S Critical Value				0.197		Detected data appear Gamma Distributed at 5% Significance Level							
38	Detected data appear Gamma Distributed at 5% Significance Level													
39														
40	Gamma Statistics													
41	k hat (MLE)				0.451		k star (bias corrected MLE)				0.42			
42	Theta hat (MLE)				1.428		Theta star (bias corrected MLE)				1.535			
43	nu hat (MLE)				19.84		nu star (bias corrected)				18.47			
44	MLE Mean (bias corrected)				0.644		MLE Sd (bias corrected)				0.994			
45									Approximate Chi Square Value (0.05)				9.73	
46	Adjusted Level of Significance				0.0386		Adjusted Chi Square Value				9.258			
47														
48	Assuming Gamma Distribution													
49	95% Approximate Gamma UCL (use when n>=50)				1.223		95% Adjusted Gamma UCL (use when n<50)				1.285			
50														

	A	B	C	D	E	F	G	H	I	J	K	L		
51	Lognormal GOF Test													
52	Shapiro Wilk Test Statistic				0.931		Shapiro Wilk Lognormal GOF Test							
53	5% Shapiro Wilk Critical Value				0.911		Data appear Lognormal at 5% Significance Level							
54	Lilliefors Test Statistic				0.185		Lilliefors Lognormal GOF Test							
55	5% Lilliefors Critical Value				0.189		Data appear Lognormal at 5% Significance Level							
56	Data appear Lognormal at 5% Significance Level													
57														
58	Lognormal Statistics													
59	Minimum of Logged Data				-5.573		Mean of logged Data				-1.872			
60	Maximum of Logged Data				1.361		SD of logged Data				2.107			
61														
62	Assuming Lognormal Distribution													
63	95% H-UCL				10.56		90% Chebyshev (MVUE) UCL				2.946			
64	95% Chebyshev (MVUE) UCL				3.788		97.5% Chebyshev (MVUE) UCL				4.955			
65	99% Chebyshev (MVUE) UCL				7.248									
66														
67	Nonparametric Distribution Free UCL Statistics													
68	Data appear to follow a Discernible Distribution at 5% Significance Level													
69														
70	Nonparametric Distribution Free UCLs													
71	95% CLT UCL				0.968		95% Jackknife UCL				0.983			
72	95% Standard Bootstrap UCL				0.956		95% Bootstrap-t UCL				1.155			
73	95% Hall's Bootstrap UCL				1.594		95% Percentile Bootstrap UCL				0.97			
74	95% BCA Bootstrap UCL				1.083									
75	90% Chebyshev(Mean, Sd) UCL				1.235		95% Chebyshev(Mean, Sd) UCL				1.502			
76	97.5% Chebyshev(Mean, Sd) UCL				1.873		99% Chebyshev(Mean, Sd) UCL				2.602			
77														
78	Suggested UCL to Use													
79	95% Adjusted Gamma UCL				1.285									
80														
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.													
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)													
83	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.													
84	For additional insight the user may want to consult a statistician.													
85														

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 2:38:07 PM									
5	From File		VOCs Soil.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10	Isopropylbenzene											
11												
12	General Statistics											
13	Total Number of Observations			21		Number of Distinct Observations			21			
14							Number of Missing Observations			66		
15	Number of Detects			16		Number of Non-Detects			5			
16	Number of Distinct Detects			16		Number of Distinct Non-Detects			5			
17	Minimum Detect			0.007		Minimum Non-Detect			0.014			
18	Maximum Detect			1.2		Maximum Non-Detect			1.4			
19	Variance Detects			0.138		Percent Non-Detects			23.81%			
20	Mean Detects			0.326		SD Detects			0.371			
21	Median Detects			0.18		CV Detects			1.139			
22	Skewness Detects			1.203		Kurtosis Detects			0.787			
23	Mean of Logged Detects			-2.124		SD of Logged Detects			1.728			
24												
25	Normal GOF Test on Detects Only											
26	Shapiro Wilk Test Statistic			0.822		Shapiro Wilk GOF Test						
27	5% Shapiro Wilk Critical Value			0.887		Detected Data Not Normal at 5% Significance Level						
28	Lilliefors Test Statistic			0.217		Lilliefors GOF Test						
29	5% Lilliefors Critical Value			0.222		Detected Data appear Normal at 5% Significance Level						
30	Detected Data appear Approximate Normal at 5% Significance Level											
31												
32	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs											
33	Mean		0.27		Standard Error of Mean			0.0802				
34	SD		0.345		95% KM (BCA) UCL			0.399				
35	95% KM (t) UCL		0.408		95% KM (Percentile Bootstrap) UCL			0.411				
36	95% KM (z) UCL		0.402		95% KM Bootstrap t UCL			0.458				
37	90% KM Chebyshev UCL		0.51		95% KM Chebyshev UCL			0.619				
38	97.5% KM Chebyshev UCL		0.771		99% KM Chebyshev UCL			1.068				
39												
40	Gamma GOF Tests on Detected Observations Only											
41	A-D Test Statistic		0.615		Anderson-Darling GOF Test							
42	5% A-D Critical Value		0.786		Detected data appear Gamma Distributed at 5% Significance Level							
43	K-S Test Statistic		0.216		Kolmogrov-Smirnoff GOF							
44	5% K-S Critical Value		0.225		Detected data appear Gamma Distributed at 5% Significance Level							
45	Detected data appear Gamma Distributed at 5% Significance Level											
46												
47	Gamma Statistics on Detected Data Only											
48	k hat (MLE)		0.614		k star (bias corrected MLE)			0.541				
49	Theta hat (MLE)		0.531		Theta star (bias corrected MLE)			0.603				
50	nu hat (MLE)		19.65		nu star (bias corrected)			17.3				

	A	B	C	D	E	F	G	H	I	J	K	L
51	MLE Mean (bias corrected)					0.326	MLE Sd (bias corrected)					0.443
52												
53	Gamma Kaplan-Meier (KM) Statistics											
54	k hat (KM)					0.612	nu hat (KM)					25.72
55	Approximate Chi Square Value (25.72, α)					15.17	Adjusted Chi Square Value (25.72, β)					14.54
56	95% Gamma Approximate KM-UCL (use when $n \geq 50$)					0.457	95% Gamma Adjusted KM-UCL (use when $n < 50$)					0.477
57												
58	Gamma ROS Statistics using Imputed Non-Detects											
59	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
60	GROS may not be used when kstar of detected data is small such as < 0.1											
61	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
62	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
63	Minimum					0.007	Mean					0.261
64	Maximum					1.2	Median					0.0898
65	SD					0.344	CV					1.321
66	k hat (MLE)					0.549	k star (bias corrected MLE)					0.502
67	Theta hat (MLE)					0.475	Theta star (bias corrected MLE)					0.519
68	nu hat (MLE)					23.05	nu star (bias corrected)					21.09
69	MLE Mean (bias corrected)					0.261	MLE Sd (bias corrected)					0.368
70							Adjusted Level of Significance (β)					0.0383
71	Approximate Chi Square Value (21.09, α)					11.66	Adjusted Chi Square Value (21.09, β)					11.12
72	95% Gamma Approximate UCL (use when $n \geq 50$)					0.471	95% Gamma Adjusted UCL (use when $n < 50$)					0.494
73												
74	Lognormal GOF Test on Detected Observations Only											
75	Shapiro Wilk Test Statistic					0.904	Shapiro Wilk GOF Test					
76	5% Shapiro Wilk Critical Value					0.887	Detected Data appear Lognormal at 5% Significance Level					
77	Lilliefors Test Statistic					0.2	Lilliefors GOF Test					
78	5% Lilliefors Critical Value					0.222	Detected Data appear Lognormal at 5% Significance Level					
79	Detected Data appear Lognormal at 5% Significance Level											
80												
81	Lognormal ROS Statistics Using Imputed Non-Detects											
82	Mean in Original Scale					0.256	Mean in Log Scale					-2.554
83	SD in Original Scale					0.347	SD in Log Scale					1.758
84	95% t UCL (assumes normality of ROS data)					0.386	95% Percentile Bootstrap UCL					0.384
85	95% BCA Bootstrap UCL					0.393	95% Bootstrap t UCL					0.443
86	95% H-UCL (Log ROS)					1.582						
87												
88	UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed											
89	KM Mean (logged)					-2.572	95% H-UCL (KM -Log)					1.902
90	KM SD (logged)					1.819	95% Critical H Value (KM-Log)					3.835
91	KM Standard Error of Mean (logged)					0.43						
92												
93	DL/2 Statistics											
94	DL/2 Normal					DL/2 Log-Transformed						
95	Mean in Original Scale					0.297	Mean in Log Scale					-2.368
96	SD in Original Scale					0.353	SD in Log Scale					1.843
97	95% t UCL (Assumes normality)					0.43	95% H-Stat UCL					2.527
98	DL/2 is not a recommended method, provided for comparisons and historical reasons											
99												
100	Nonparametric Distribution Free UCL Statistics											

	A	B	C	D	E	F	G	H	I	J	K	L
101	Detected Data appear Approximate Normal Distributed at 5% Significance Level											
102												
103	Suggested UCL to Use											
104	95% KM (t) UCL				0.408		95% KM (Percentile Bootstrap) UCL				0.411	
105												
106	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
107	Recommendations are based upon data size, data distribution, and skewness.											
108	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
109	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
110												

	A	B	C	D	E	F	G	H	I	J	K	L		
1	UCL Statistics for Data Sets with Non-Detects													
2														
3	User Selected Options													
4	Date/Time of Computation		1/9/2016 2:38:52 PM											
5	From File		VOCs Soil.xls											
6	Full Precision		OFF											
7	Confidence Coefficient		95%											
8	Number of Bootstrap Operations		2000											
9														
10	m,p-Xylenes													
11														
12	General Statistics													
13	Total Number of Observations				18		Number of Distinct Observations				18			
14									Number of Missing Observations				69	
15	Number of Detects				17		Number of Non-Detects				1			
16	Number of Distinct Detects				17		Number of Distinct Non-Detects				1			
17	Minimum Detect				0.0097		Minimum Non-Detect				11			
18	Maximum Detect				2.8		Maximum Non-Detect				11			
19	Variance Detects				0.509		Percent Non-Detects				5.556%			
20	Mean Detects				0.54		SD Detects				0.714			
21	Median Detects				0.3		CV Detects				1.322			
22	Skewness Detects				2.193		Kurtosis Detects				5.827			
23	Mean of Logged Detects				-1.671		SD of Logged Detects				1.747			
24														
25	Normal GOF Test on Detects Only													
26	Shapiro Wilk Test Statistic				0.744		Shapiro Wilk GOF Test							
27	5% Shapiro Wilk Critical Value				0.892		Detected Data Not Normal at 5% Significance Level							
28	Lilliefors Test Statistic				0.229		Lilliefors GOF Test							
29	5% Lilliefors Critical Value				0.215		Detected Data Not Normal at 5% Significance Level							
30	Detected Data Not Normal at 5% Significance Level													
31														
32	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs													
33	Mean		0.54		Standard Error of Mean				0.173					
34	SD		0.692		95% KM (BCA) UCL				0.847					
35	95% KM (t) UCL		0.841		95% KM (Percentile Bootstrap) UCL				0.857					
36	95% KM (z) UCL		0.824		95% KM Bootstrap t UCL				1.057					
37	90% KM Chebyshev UCL		1.059		95% KM Chebyshev UCL				1.294					
38	97.5% KM Chebyshev UCL		1.621		99% KM Chebyshev UCL				2.262					
39														
40	Gamma GOF Tests on Detected Observations Only													
41	A-D Test Statistic		0.367		Anderson-Darling GOF Test									
42	5% A-D Critical Value		0.79		Detected data appear Gamma Distributed at 5% Significance Level									
43	K-S Test Statistic		0.174		Kolmogrov-Smirnoff GOF									
44	5% K-S Critical Value		0.22		Detected data appear Gamma Distributed at 5% Significance Level									
45	Detected data appear Gamma Distributed at 5% Significance Level													
46														
47	Gamma Statistics on Detected Data Only													
48	k hat (MLE)		0.588		k star (bias corrected MLE)				0.523					
49	Theta hat (MLE)		0.918		Theta star (bias corrected MLE)				1.032					
50	nu hat (MLE)		19.98		nu star (bias corrected)				17.79					

	A	B	C	D	E	F	G	H	I	J	K	L
51	MLE Mean (bias corrected)					0.54	MLE Sd (bias corrected)					0.746
52												
53	Gamma Kaplan-Meier (KM) Statistics											
54	k hat (KM)					0.608	nu hat (KM)					21.87
55	Approximate Chi Square Value (21.87, α)					12.24	Adjusted Chi Square Value (21.87, β)					11.55
56	95% Gamma Approximate KM-UCL (use when $n \geq 50$)					0.964	95% Gamma Adjusted KM-UCL (use when $n < 50$)					1.022
57												
58	Gamma ROS Statistics using Imputed Non-Detects											
59	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
60	GROS may not be used when kstar of detected data is small such as < 0.1											
61	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
62	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
63	Minimum					0.0097	Mean					0.526
64	Maximum					2.8	Median					0.292
65	SD					0.695	CV					1.322
66	k hat (MLE)					0.613	k star (bias corrected MLE)					0.548
67	Theta hat (MLE)					0.857	Theta star (bias corrected MLE)					0.959
68	nu hat (MLE)					22.07	nu star (bias corrected)					19.72
69	MLE Mean (bias corrected)					0.526	MLE Sd (bias corrected)					0.71
70							Adjusted Level of Significance (β)					0.0357
71	Approximate Chi Square Value (19.72, α)					10.65	Adjusted Chi Square Value (19.72, β)					10.01
72	95% Gamma Approximate UCL (use when $n \geq 50$)					0.974	95% Gamma Adjusted UCL (use when $n < 50$)					1.035
73												
74	Lognormal GOF Test on Detected Observations Only											
75	Shapiro Wilk Test Statistic					0.939	Shapiro Wilk GOF Test					
76	5% Shapiro Wilk Critical Value					0.892	Detected Data appear Lognormal at 5% Significance Level					
77	Lilliefors Test Statistic					0.138	Lilliefors GOF Test					
78	5% Lilliefors Critical Value					0.215	Detected Data appear Lognormal at 5% Significance Level					
79	Detected Data appear Lognormal at 5% Significance Level											
80												
81	Lognormal ROS Statistics Using Imputed Non-Detects											
82	Mean in Original Scale					0.52	Mean in Log Scale					-1.671
83	SD in Original Scale					0.697	SD in Log Scale					1.695
84	95% t UCL (assumes normality of ROS data)					0.806	95% Percentile Bootstrap UCL					0.814
85	95% BCA Bootstrap UCL					0.899	95% Bootstrap t UCL					0.966
86	95% H-UCL (Log ROS)					3.727						
87												
88	UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed											
89	KM Mean (logged)					-1.671	95% H-UCL (KM -Log)					3.727
90	KM SD (logged)					1.695	95% Critical H Value (KM-Log)					3.77
91	KM Standard Error of Mean (logged)					0.424						
92												
93	DL/2 Statistics											
94	DL/2 Normal						DL/2 Log-Transformed					
95	Mean in Original Scale					0.815	Mean in Log Scale					-1.484
96	SD in Original Scale					1.359	SD in Log Scale					1.873
97	95% t UCL (Assumes normality)					1.372	95% H-Stat UCL					8.372
98	DL/2 is not a recommended method, provided for comparisons and historical reasons											
99												
100	Nonparametric Distribution Free UCL Statistics											

	A	B	C	D	E	F	G	H	I	J	K	L
101	Detected Data appear Gamma Distributed at 5% Significance Level											
102												
103	Suggested UCL to Use											
104	95% KM (Chebyshev) UCL				1.294		95% GROS Adjusted Gamma UCL				1.035	
105	95% Adjusted Gamma KM-UCL				1.022							
106												
107	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
108	Recommendations are based upon data size, data distribution, and skewness.											
109	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
110	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
111												

	A	B	C	D	E	F	G	H	I	J	K	L		
1	UCL Statistics for Data Sets with Non-Detects													
2														
3	User Selected Options													
4	Date/Time of Computation		1/9/2016 2:39:46 PM											
5	From File		VOCs Soil.xls											
6	Full Precision		OFF											
7	Confidence Coefficient		95%											
8	Number of Bootstrap Operations		2000											
9														
10	Naphthalene													
11														
12	General Statistics													
13	Total Number of Observations				27		Number of Distinct Observations				24			
14									Number of Missing Observations				60	
15	Number of Detects				21		Number of Non-Detects				6			
16	Number of Distinct Detects				20		Number of Distinct Non-Detects				6			
17	Minimum Detect				0.0056		Minimum Non-Detect				0.0062			
18	Maximum Detect				51		Maximum Non-Detect				9.3			
19	Variance Detects				120		Percent Non-Detects				22.22%			
20	Mean Detects				3.598		SD Detects				10.96			
21	Median Detects				0.49		CV Detects				3.045			
22	Skewness Detects				4.455		Kurtosis Detects				20.17			
23	Mean of Logged Detects				-0.932		SD of Logged Detects				2.399			
24														
25	Normal GOF Test on Detects Only													
26	Shapiro Wilk Test Statistic				0.328		Shapiro Wilk GOF Test							
27	5% Shapiro Wilk Critical Value				0.908		Detected Data Not Normal at 5% Significance Level							
28	Lilliefors Test Statistic				0.412		Lilliefors GOF Test							
29	5% Lilliefors Critical Value				0.193		Detected Data Not Normal at 5% Significance Level							
30	Detected Data Not Normal at 5% Significance Level													
31														
32	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs													
33	Mean		2.903		Standard Error of Mean				1.881					
34	SD		9.53		95% KM (BCA) UCL				6.925					
35	95% KM (t) UCL		6.112		95% KM (Percentile Bootstrap) UCL				6.599					
36	95% KM (z) UCL		5.997		95% KM Bootstrap t UCL				20.63					
37	90% KM Chebyshev UCL		8.547		95% KM Chebyshev UCL				11.1					
38	97.5% KM Chebyshev UCL		14.65		99% KM Chebyshev UCL				21.62					
39														
40	Gamma GOF Tests on Detected Observations Only													
41	A-D Test Statistic		0.979		Anderson-Darling GOF Test									
42	5% A-D Critical Value		0.844		Detected Data Not Gamma Distributed at 5% Significance Level									
43	K-S Test Statistic		0.181		Kolmogrov-Smirnoff GOF									
44	5% K-S Critical Value		0.205		Detected data appear Gamma Distributed at 5% Significance Level									
45	Detected data follow Appr. Gamma Distribution at 5% Significance Level													
46														
47	Gamma Statistics on Detected Data Only													
48	k hat (MLE)		0.31		k star (bias corrected MLE)				0.297					
49	Theta hat (MLE)		11.61		Theta star (bias corrected MLE)				12.1					
50	nu hat (MLE)		13.02		nu star (bias corrected)				12.49					

	A	B	C	D	E	F	G	H	I	J	K	L
51	MLE Mean (bias corrected)					3.598	MLE Sd (bias corrected)					6.598
52												
53	Gamma Kaplan-Meier (KM) Statistics											
54	k hat (KM)					0.0928	nu hat (KM)					5.01
55	Approximate Chi Square Value (5.01, α)					1.157	Adjusted Chi Square Value (5.01, β)					1.045
56	95% Gamma Approximate KM-UCL (use when $n \geq 50$)					12.57	95% Gamma Adjusted KM-UCL (use when $n < 50$)					13.92
57	Gamma (KM) may not be used when k hat (KM) is < 0.1											
58												
59	Gamma ROS Statistics using Imputed Non-Detects											
60	GROS may not be used when data set has $> 50\%$ NDs with many tied observations at multiple DLs											
61	GROS may not be used when kstar of detected data is small such as < 0.1											
62	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
63	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
64	Minimum					0.0056	Mean					2.801
65	Maximum					51	Median					0.13
66	SD					9.729	CV					3.473
67	k hat (MLE)					0.255	k star (bias corrected MLE)					0.251
68	Theta hat (MLE)					10.99	Theta star (bias corrected MLE)					11.15
69	nu hat (MLE)					13.76	nu star (bias corrected)					13.57
70	MLE Mean (bias corrected)					2.801	MLE Sd (bias corrected)					5.588
71							Adjusted Level of Significance (β)					0.0401
72	Approximate Chi Square Value (13.57, α)					6.275	Adjusted Chi Square Value (13.57, β)					5.959
73	95% Gamma Approximate UCL (use when $n \geq 50$)					6.055	95% Gamma Adjusted UCL (use when $n < 50$)					6.376
74												
75	Lognormal GOF Test on Detected Observations Only											
76	Shapiro Wilk Test Statistic					0.959	Shapiro Wilk GOF Test					
77	5% Shapiro Wilk Critical Value					0.908	Detected Data appear Lognormal at 5% Significance Level					
78	Lilliefors Test Statistic					0.143	Lilliefors GOF Test					
79	5% Lilliefors Critical Value					0.193	Detected Data appear Lognormal at 5% Significance Level					
80	Detected Data appear Lognormal at 5% Significance Level											
81												
82	Lognormal ROS Statistics Using Imputed Non-Detects											
83	Mean in Original Scale					2.821	Mean in Log Scale					-1.404
84	SD in Original Scale					9.723	SD in Log Scale					2.391
85	95% t UCL (assumes normality of ROS data)					6.012	95% Percentile Bootstrap UCL					6.501
86	95% BCA Bootstrap UCL					8.514	95% Bootstrap t UCL					21.4
87	95% H-UCL (Log ROS)					38.74						
88												
89	UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed											
90	KM Mean (logged)					-1.444	95% H-UCL (KM -Log)					63.29
91	KM SD (logged)					2.517	95% Critical H Value (KM-Log)					4.911
92	KM Standard Error of Mean (logged)					0.525						
93												
94	DL/2 Statistics											
95	DL/2 Normal						DL/2 Log-Transformed					
96	Mean in Original Scale					3.157	Mean in Log Scale					-1.089
97	SD in Original Scale					9.685	SD in Log Scale					2.535
98	95% t UCL (Assumes normality)					6.337	95% H-Stat UCL					97.77
99	DL/2 is not a recommended method, provided for comparisons and historical reasons											
100												

	A	B	C	D	E	F	G	H	I	J	K	L
101	Nonparametric Distribution Free UCL Statistics											
102	Detected Data appear Approximate Gamma Distributed at 5% Significance Level											
103												
104	Suggested UCL to Use											
105	95% KM (Chebyshev) UCL				11.1		95% GROS Adjusted Gamma UCL				6.376	
106	95% Adjusted Gamma KM-UCL				13.92							
107												
108	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
109	Recommendations are based upon data size, data distribution, and skewness.											
110	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
111	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
112												

	A	B	C	D	E	F	G	H	I	J	K	L	
1	UCL Statistics for Data Sets with Non-Detects												
2													
3	User Selected Options												
4	Date/Time of Computation		1/9/2016 2:40:32 PM										
5	From File		VOCs Soil.xls										
6	Full Precision		OFF										
7	Confidence Coefficient		95%										
8	Number of Bootstrap Operations		2000										
9													
10	n-Butylbenzene												
11													
12	General Statistics												
13	Total Number of Observations				20		Number of Distinct Observations				20		
14									Number of Missing Observations				67
15	Number of Detects				17		Number of Non-Detects				3		
16	Number of Distinct Detects				17		Number of Distinct Non-Detects				3		
17	Minimum Detect				0.0011		Minimum Non-Detect				0.025		
18	Maximum Detect				3.4		Maximum Non-Detect				2.5		
19	Variance Detects				0.668		Percent Non-Detects				15%		
20	Mean Detects				0.477		SD Detects				0.817		
21	Median Detects				0.14		CV Detects				1.712		
22	Skewness Detects				3.162		Kurtosis Detects				11.33		
23	Mean of Logged Detects				-2.194		SD of Logged Detects				2.163		
24													
25	Normal GOF Test on Detects Only												
26	Shapiro Wilk Test Statistic				0.587		Shapiro Wilk GOF Test						
27	5% Shapiro Wilk Critical Value				0.892		Detected Data Not Normal at 5% Significance Level						
28	Lilliefors Test Statistic				0.28		Lilliefors GOF Test						
29	5% Lilliefors Critical Value				0.215		Detected Data Not Normal at 5% Significance Level						
30	Detected Data Not Normal at 5% Significance Level												
31													
32	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs												
33	Mean		0.427		Standard Error of Mean				0.173				
34	SD		0.746		95% KM (BCA) UCL				0.776				
35	95% KM (t) UCL		0.726		95% KM (Percentile Bootstrap) UCL				0.756				
36	95% KM (z) UCL		0.712		95% KM Bootstrap t UCL				1.085				
37	90% KM Chebyshev UCL		0.946		95% KM Chebyshev UCL				1.182				
38	97.5% KM Chebyshev UCL		1.508		99% KM Chebyshev UCL				2.15				
39													
40	Gamma GOF Tests on Detected Observations Only												
41	A-D Test Statistic		0.393		Anderson-Darling GOF Test								
42	5% A-D Critical Value		0.81		Detected data appear Gamma Distributed at 5% Significance Level								
43	K-S Test Statistic		0.14		Kolmogrov-Smirnoff GOF								
44	5% K-S Critical Value		0.223		Detected data appear Gamma Distributed at 5% Significance Level								
45	Detected data appear Gamma Distributed at 5% Significance Level												
46													
47	Gamma Statistics on Detected Data Only												
48	k hat (MLE)		0.445		k star (bias corrected MLE)				0.405				
49	Theta hat (MLE)		1.073		Theta star (bias corrected MLE)				1.177				
50	nu hat (MLE)		15.12		nu star (bias corrected)				13.79				

	A	B	C	D	E	F	G	H	I	J	K	L
51	MLE Mean (bias corrected)					0.477	MLE Sd (bias corrected)					0.75
52												
53	Gamma Kaplan-Meier (KM) Statistics											
54	k hat (KM)					0.327	nu hat (KM)					13.07
55	Approximate Chi Square Value (13.07, α)					5.939	Adjusted Chi Square Value (13.07, β)					5.562
56	95% Gamma Approximate KM-UCL (use when $n \geq 50$)					0.939	95% Gamma Adjusted KM-UCL (use when $n < 50$)					1.003
57												
58	Gamma ROS Statistics using Imputed Non-Detects											
59	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
60	GROS may not be used when kstar of detected data is small such as < 0.1											
61	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
62	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
63	Minimum					0.0011	Mean					0.411
64	Maximum					3.4	Median					0.0824
65	SD					0.767	CV					1.865
66	k hat (MLE)					0.419	k star (bias corrected MLE)					0.39
67	Theta hat (MLE)					0.981	Theta star (bias corrected MLE)					1.055
68	nu hat (MLE)					16.78	nu star (bias corrected)					15.59
69	MLE Mean (bias corrected)					0.411	MLE Sd (bias corrected)					0.659
70							Adjusted Level of Significance (β)					0.038
71	Approximate Chi Square Value (15.59, α)					7.676	Adjusted Chi Square Value (15.59, β)					7.239
72	95% Gamma Approximate UCL (use when $n \geq 50$)					0.836	95% Gamma Adjusted UCL (use when $n < 50$)					0.886
73												
74	Lognormal GOF Test on Detected Observations Only											
75	Shapiro Wilk Test Statistic					0.949	Shapiro Wilk GOF Test					
76	5% Shapiro Wilk Critical Value					0.892	Detected Data appear Lognormal at 5% Significance Level					
77	Lilliefors Test Statistic					0.176	Lilliefors GOF Test					
78	5% Lilliefors Critical Value					0.215	Detected Data appear Lognormal at 5% Significance Level					
79	Detected Data appear Lognormal at 5% Significance Level											
80												
81	Lognormal ROS Statistics Using Imputed Non-Detects											
82	Mean in Original Scale					0.412	Mean in Log Scale					-2.393
83	SD in Original Scale					0.767	SD in Log Scale					2.078
84	95% t UCL (assumes normality of ROS data)					0.709	95% Percentile Bootstrap UCL					0.719
85	95% BCA Bootstrap UCL					0.909	95% Bootstrap t UCL					1.108
86	95% H-UCL (Log ROS)					6.592						
87												
88	UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed											
89	KM Mean (logged)					-2.412	95% H-UCL (KM -Log)					8.652
90	KM SD (logged)					2.15	95% Critical H Value (KM-Log)					4.578
91	KM Standard Error of Mean (logged)					0.523						
92												
93	DL/2 Statistics											
94	DL/2 Normal					DL/2 Log-Transformed						
95	Mean in Original Scale					0.483	Mean in Log Scale					-2.136
96	SD in Original Scale					0.779	SD in Log Scale					2.131
97	95% t UCL (Assumes normality)					0.784	95% H-Stat UCL					10.53
98	DL/2 is not a recommended method, provided for comparisons and historical reasons											
99												
100	Nonparametric Distribution Free UCL Statistics											

	A	B	C	D	E	F	G	H	I	J	K	L
101	Detected Data appear Gamma Distributed at 5% Significance Level											
102												
103	Suggested UCL to Use											
104	95% KM (Chebyshev) UCL				1.182		95% GROS Adjusted Gamma UCL				0.886	
105	95% Adjusted Gamma KM-UCL				1.003							
106												
107	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
108	Recommendations are based upon data size, data distribution, and skewness.											
109	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
110	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
111												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 2:41:20 PM									
5	From File		VOCs Soil.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10	n-Propylbenzene											
11												
12	General Statistics											
13	Total Number of Observations			22		Number of Distinct Observations			22			
14							Number of Missing Observations			65		
15	Number of Detects			16		Number of Non-Detects			6			
16	Number of Distinct Detects			16		Number of Distinct Non-Detects			6			
17	Minimum Detect			0.013		Minimum Non-Detect			0.0036			
18	Maximum Detect			1.9		Maximum Non-Detect			2.6			
19	Variance Detects			0.348		Percent Non-Detects			27.27%			
20	Mean Detects			0.53		SD Detects			0.59			
21	Median Detects			0.335		CV Detects			1.113			
22	Skewness Detects			1.132		Kurtosis Detects			0.633			
23	Mean of Logged Detects			-1.612		SD of Logged Detects			1.694			
24												
25	Normal GOF Test on Detects Only											
26	Shapiro Wilk Test Statistic			0.823		Shapiro Wilk GOF Test						
27	5% Shapiro Wilk Critical Value			0.887		Detected Data Not Normal at 5% Significance Level						
28	Lilliefors Test Statistic			0.227		Lilliefors GOF Test						
29	5% Lilliefors Critical Value			0.222		Detected Data Not Normal at 5% Significance Level						
30	Detected Data Not Normal at 5% Significance Level											
31												
32	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs											
33	Mean		0.419		Standard Error of Mean			0.124				
34	SD		0.545		95% KM (BCA) UCL			0.633				
35	95% KM (t) UCL		0.633		95% KM (Percentile Bootstrap) UCL			0.621				
36	95% KM (z) UCL		0.623		95% KM Bootstrap t UCL			0.697				
37	90% KM Chebyshev UCL		0.791		95% KM Chebyshev UCL			0.96				
38	97.5% KM Chebyshev UCL		1.194		99% KM Chebyshev UCL			1.653				
39												
40	Gamma GOF Tests on Detected Observations Only											
41	A-D Test Statistic		0.775		Anderson-Darling GOF Test							
42	5% A-D Critical Value		0.785		Detected data appear Gamma Distributed at 5% Significance Level							
43	K-S Test Statistic		0.24		Kolmogrov-Smirnoff GOF							
44	5% K-S Critical Value		0.225		Detected Data Not Gamma Distributed at 5% Significance Level							
45	Detected data follow Appr. Gamma Distribution at 5% Significance Level											
46												
47	Gamma Statistics on Detected Data Only											
48	k hat (MLE)		0.628		k star (bias corrected MLE)			0.552				
49	Theta hat (MLE)		0.844		Theta star (bias corrected MLE)			0.961				
50	nu hat (MLE)		20.09		nu star (bias corrected)			17.66				

	A	B	C	D	E	F	G	H	I	J	K	L	
51	MLE Mean (bias corrected)				0.53	MLE Sd (bias corrected)				0.714			
52													
53	Gamma Kaplan-Meier (KM) Statistics												
54	k hat (KM)				0.592	nu hat (KM)				26.03			
55	Approximate Chi Square Value (26.03, α)				15.41	Adjusted Chi Square Value (26.03, β)				14.8			
56	95% Gamma Approximate KM-UCL (use when $n \geq 50$)				0.708	95% Gamma Adjusted KM-UCL (use when $n < 50$)				0.737			
57													
58	Gamma ROS Statistics using Imputed Non-Detects												
59	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs												
60	GROS may not be used when kstar of detected data is small such as < 0.1												
61	For such situations, GROS method tends to yield inflated values of UCLs and BTVs												
62	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates												
63	Minimum				0.01	Mean				0.404			
64	Maximum				1.9	Median				0.108			
65	SD				0.543	CV				1.344			
66	k hat (MLE)				0.504	k star (bias corrected MLE)				0.466			
67	Theta hat (MLE)				0.802	Theta star (bias corrected MLE)				0.868			
68	nu hat (MLE)				22.18	nu star (bias corrected)				20.49			
69	MLE Mean (bias corrected)				0.404	MLE Sd (bias corrected)				0.592			
70						Adjusted Level of Significance (β)				0.0386			
71	Approximate Chi Square Value (20.49, α)				11.21	Adjusted Chi Square Value (20.49, β)				10.7			
72	95% Gamma Approximate UCL (use when $n \geq 50$)				0.739	95% Gamma Adjusted UCL (use when $n < 50$)				0.774			
73													
74	Lognormal GOF Test on Detected Observations Only												
75	Shapiro Wilk Test Statistic				0.888	Shapiro Wilk GOF Test							
76	5% Shapiro Wilk Critical Value				0.887	Detected Data appear Lognormal at 5% Significance Level							
77	Lilliefors Test Statistic				0.213	Lilliefors GOF Test							
78	5% Lilliefors Critical Value				0.222	Detected Data appear Lognormal at 5% Significance Level							
79	Detected Data appear Lognormal at 5% Significance Level												
80													
81	Lognormal ROS Statistics Using Imputed Non-Detects												
82	Mean in Original Scale				0.396	Mean in Log Scale				-2.257			
83	SD in Original Scale				0.548	SD in Log Scale				1.902			
84	95% t UCL (assumes normality of ROS data)				0.597	95% Percentile Bootstrap UCL				0.594			
85	95% BCA Bootstrap UCL				0.629	95% Bootstrap t UCL				0.685			
86	95% H-UCL (Log ROS)				3.378								
87													
88	UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed												
89	KM Mean (logged)				-2.295	95% H-UCL (KM -Log)				4.779			
90	KM SD (logged)				2.009	95% Critical H Value (KM-Log)				4.201			
91	KM Standard Error of Mean (logged)				0.471								
92													
93	DL/2 Statistics												
94	DL/2 Normal						DL/2 Log-Transformed						
95	Mean in Original Scale				0.469	Mean in Log Scale				-2.066			
96	SD in Original Scale				0.57	SD in Log Scale				2.036			
97	95% t UCL (Assumes normality)				0.678	95% H-Stat UCL				6.655			
98	DL/2 is not a recommended method, provided for comparisons and historical reasons												
99													
100	Nonparametric Distribution Free UCL Statistics												

	A	B	C	D	E	F	G	H	I	J	K	L
101	Detected Data appear Approximate Gamma Distributed at 5% Significance Level											
102												
103	Suggested UCL to Use											
104	95% KM (Chebyshev) UCL				0.96		95% GROS Adjusted Gamma UCL				0.774	
105	95% Adjusted Gamma KM-UCL				0.737							
106												
107	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
108	Recommendations are based upon data size, data distribution, and skewness.											
109	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
110	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
111												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 2:42:08 PM									
5	From File		VOCs Soil.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10												
11	o-Xylene											
12												
13	General Statistics											
14	Total Number of Observations			10			Number of Distinct Observations			10		
15							Number of Missing Observations			77		
16	Minimum			0.005			Mean			0.579		
17	Maximum			5.1			Median			0.0325		
18	SD			1.592			Std. Error of Mean			0.503		
19	Coefficient of Variation			2.75			Skewness			3.14		
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic			0.414			Shapiro Wilk GOF Test					
23	5% Shapiro Wilk Critical Value			0.842			Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic			0.477			Lilliefors GOF Test					
25	5% Lilliefors Critical Value			0.28			Data Not Normal at 5% Significance Level					
26	Data Not Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
30	95% Student's-t UCL			1.501			95% Adjusted-CLT UCL (Chen-1995)			1.941		
31							95% Modified-t UCL (Johnson-1978)			1.585		
32												
33	Gamma GOF Test											
34	A-D Test Statistic			1.174			Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value			0.825			Data Not Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic			0.284			Kolmogrov-Smirnoff Gamma GOF Test					
37	5% K-S Critical Value			0.29			Detected data appear Gamma Distributed at 5% Significance Level					
38	Detected data follow Appr. Gamma Distribution at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)			0.272			k star (bias corrected MLE)			0.257		
42	Theta hat (MLE)			2.128			Theta star (bias corrected MLE)			2.252		
43	nu hat (MLE)			5.439			nu star (bias corrected)			5.141		
44	MLE Mean (bias corrected)			0.579			MLE Sd (bias corrected)			1.142		
45							Approximate Chi Square Value (0.05)			1.218		
46	Adjusted Level of Significance			0.0267			Adjusted Chi Square Value			0.921		
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL (use when n>=50)			2.443			95% Adjusted Gamma UCL (use when n<50)			3.23		
50												

	A	B	C	D	E	F	G	H	I	J	K	L
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic				0.88		Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk Critical Value				0.842		Data appear Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic				0.19		Lilliefors Lognormal GOF Test					
55	5% Lilliefors Critical Value				0.28		Data appear Lognormal at 5% Significance Level					
56	Data appear Lognormal at 5% Significance Level											
57												
58	Lognormal Statistics											
59	Minimum of Logged Data				-5.298		Mean of logged Data				-3.123	
60	Maximum of Logged Data				1.629		SD of logged Data				2.277	
61												
62	Assuming Lognormal Distribution											
63	95% H-UCL			58.8			90% Chebyshev (MVUE) UCL				1.014	
64	95% Chebyshev (MVUE) UCL			1.328			97.5% Chebyshev (MVUE) UCL				1.764	
65	99% Chebyshev (MVUE) UCL			2.62								
66												
67	Nonparametric Distribution Free UCL Statistics											
68	Data appear to follow a Discernible Distribution at 5% Significance Level											
69												
70	Nonparametric Distribution Free UCLs											
71	95% CLT UCL			1.407			95% Jackknife UCL				1.501	
72	95% Standard Bootstrap UCL			1.382			95% Bootstrap-t UCL				12.04	
73	95% Hall's Bootstrap UCL			10.27			95% Percentile Bootstrap UCL				1.566	
74	95% BCA Bootstrap UCL			2.102								
75	90% Chebyshev(Mean, Sd) UCL			2.089			95% Chebyshev(Mean, Sd) UCL				2.773	
76	97.5% Chebyshev(Mean, Sd) UCL			3.722			99% Chebyshev(Mean, Sd) UCL				5.587	
77												
78	Suggested UCL to Use											
79	95% Adjusted Gamma UCL			3.23								
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
83	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.											
84	For additional insight the user may want to consult a statistician.											
85												

	A	B	C	D	E	F	G	H	I	J	K	L		
1	UCL Statistics for Data Sets with Non-Detects													
2														
3	User Selected Options													
4	Date/Time of Computation		1/9/2016 2:42:51 PM											
5	From File		VOCs Soil.xls											
6	Full Precision		OFF											
7	Confidence Coefficient		95%											
8	Number of Bootstrap Operations		2000											
9														
10														
11	p-Isopropyltoluene													
12														
13	General Statistics													
14	Total Number of Observations				22		Number of Distinct Observations				20			
15									Number of Missing Observations				65	
16	Minimum				0.0027		Mean				0.573			
17	Maximum				2.2		Median				0.285			
18	SD				0.71		Std. Error of Mean				0.151			
19	Coefficient of Variation				1.238		Skewness				1.191			
20														
21	Normal GOF Test													
22	Shapiro Wilk Test Statistic				0.791		Shapiro Wilk GOF Test							
23	5% Shapiro Wilk Critical Value				0.911		Data Not Normal at 5% Significance Level							
24	Lilliefors Test Statistic				0.225		Lilliefors GOF Test							
25	5% Lilliefors Critical Value				0.189		Data Not Normal at 5% Significance Level							
26	Data Not Normal at 5% Significance Level													
27														
28	Assuming Normal Distribution													
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)							
30	95% Student's-t UCL				0.834		95% Adjusted-CLT UCL (Chen-1995)				0.863			
31							95% Modified-t UCL (Johnson-1978)				0.84			
32														
33	Gamma GOF Test													
34	A-D Test Statistic				0.698		Anderson-Darling Gamma GOF Test							
35	5% A-D Critical Value				0.814		Detected data appear Gamma Distributed at 5% Significance Level							
36	K-S Test Statistic				0.2		Kolmogrov-Smirnoff Gamma GOF Test							
37	5% K-S Critical Value				0.197		Data Not Gamma Distributed at 5% Significance Level							
38	Detected data follow Appr. Gamma Distribution at 5% Significance Level													
39														
40	Gamma Statistics													
41	k hat (MLE)				0.454		k star (bias corrected MLE)				0.423			
42	Theta hat (MLE)				1.262		Theta star (bias corrected MLE)				1.357			
43	nu hat (MLE)				19.99		nu star (bias corrected)				18.6			
44	MLE Mean (bias corrected)				0.573		MLE Sd (bias corrected)				0.882			
45							Approximate Chi Square Value (0.05)				9.824			
46	Adjusted Level of Significance				0.0386		Adjusted Chi Square Value				9.349			
47														
48	Assuming Gamma Distribution													
49	95% Approximate Gamma UCL (use when n>=50)				1.085		95% Adjusted Gamma UCL (use when n<50)				1.141			
50														

	A	B	C	D	E	F	G	H	I	J	K	L
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic				0.912		Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk Critical Value				0.911		Data appear Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic				0.192		Lilliefors Lognormal GOF Test					
55	5% Lilliefors Critical Value				0.189		Data Not Lognormal at 5% Significance Level					
56	Data appear Approximate Lognormal at 5% Significance Level											
57												
58	Lognormal Statistics											
59	Minimum of Logged Data				-5.915		Mean of logged Data				-1.975	
60	Maximum of Logged Data				0.788		SD of logged Data				2.16	
61												
62	Assuming Lognormal Distribution											
63	95% H-UCL				11.74		90% Chebyshev (MVUE) UCL				2.966	
64	95% Chebyshev (MVUE) UCL				3.821		97.5% Chebyshev (MVUE) UCL				5.007	
65	99% Chebyshev (MVUE) UCL				7.338							
66												
67	Nonparametric Distribution Free UCL Statistics											
68	Data appear to follow a Discernible Distribution at 5% Significance Level											
69												
70	Nonparametric Distribution Free UCLs											
71	95% CLT UCL				0.822		95% Jackknife UCL				0.834	
72	95% Standard Bootstrap UCL				0.817		95% Bootstrap-t UCL				0.898	
73	95% Hall's Bootstrap UCL				0.843		95% Percentile Bootstrap UCL				0.835	
74	95% BCA Bootstrap UCL				0.854							
75	90% Chebyshev(Mean, Sd) UCL				1.027		95% Chebyshev(Mean, Sd) UCL				1.233	
76	97.5% Chebyshev(Mean, Sd) UCL				1.518		99% Chebyshev(Mean, Sd) UCL				2.079	
77												
78	Suggested UCL to Use											
79	95% Adjusted Gamma UCL				1.141							
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
83	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.											
84	For additional insight the user may want to consult a statistician.											
85												

	A	B	C	D	E	F	G	H	I	J	K	L		
1	UCL Statistics for Data Sets with Non-Detects													
2														
3	User Selected Options													
4	Date/Time of Computation		1/9/2016 2:43:38 PM											
5	From File		VOCs Soil.xls											
6	Full Precision		OFF											
7	Confidence Coefficient		95%											
8	Number of Bootstrap Operations		2000											
9														
10														
11	sec-Butylbenzene													
12														
13	General Statistics													
14	Total Number of Observations				23		Number of Distinct Observations				22			
15									Number of Missing Observations				64	
16	Minimum				0.0011		Mean				0.351			
17	Maximum				1.4		Median				0.034			
18	SD				0.449		Std. Error of Mean				0.0936			
19	Coefficient of Variation				1.28		Skewness				1.182			
20														
21	Normal GOF Test													
22	Shapiro Wilk Test Statistic				0.772		Shapiro Wilk GOF Test							
23	5% Shapiro Wilk Critical Value				0.914		Data Not Normal at 5% Significance Level							
24	Lilliefors Test Statistic				0.282		Lilliefors GOF Test							
25	5% Lilliefors Critical Value				0.185		Data Not Normal at 5% Significance Level							
26	Data Not Normal at 5% Significance Level													
27														
28	Assuming Normal Distribution													
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)							
30	95% Student's-t UCL				0.511		95% Adjusted-CLT UCL (Chen-1995)				0.529			
31							95% Modified-t UCL (Johnson-1978)				0.515			
32														
33	Gamma GOF Test													
34	A-D Test Statistic				1.016		Anderson-Darling Gamma GOF Test							
35	5% A-D Critical Value				0.819		Data Not Gamma Distributed at 5% Significance Level							
36	K-S Test Statistic				0.242		Kolmogrov-Smirnoff Gamma GOF Test							
37	5% K-S Critical Value				0.193		Data Not Gamma Distributed at 5% Significance Level							
38	Data Not Gamma Distributed at 5% Significance Level													
39														
40	Gamma Statistics													
41	k hat (MLE)				0.438		k star (bias corrected MLE)				0.41			
42	Theta hat (MLE)				0.801		Theta star (bias corrected MLE)				0.856			
43	nu hat (MLE)				20.13		nu star (bias corrected)				18.84			
44	MLE Mean (bias corrected)				0.351		MLE Sd (bias corrected)				0.548			
45									Approximate Chi Square Value (0.05)				10	
46	Adjusted Level of Significance				0.0389		Adjusted Chi Square Value				9.535			
47														
48	Assuming Gamma Distribution													
49	95% Approximate Gamma UCL (use when n>=50))				0.661		95% Adjusted Gamma UCL (use when n<50)				0.693			
50														

	A	B	C	D	E	F	G	H	I	J	K	L
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic				0.914		Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk Critical Value				0.914		Data appear Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic				0.187		Lilliefors Lognormal GOF Test					
55	5% Lilliefors Critical Value				0.185		Data Not Lognormal at 5% Significance Level					
56	Data appear Approximate Lognormal at 5% Significance Level											
57												
58	Lognormal Statistics											
59	Minimum of Logged Data				-6.812		Mean of logged Data				-2.53	
60	Maximum of Logged Data				0.336		SD of logged Data				2.152	
61												
62	Assuming Lognormal Distribution											
63	95% H-UCL				5.811		90% Chebyshev (MVUE) UCL				1.678	
64	95% Chebyshev (MVUE) UCL				2.159		97.5% Chebyshev (MVUE) UCL				2.826	
65	99% Chebyshev (MVUE) UCL				4.137							
66												
67	Nonparametric Distribution Free UCL Statistics											
68	Data appear to follow a Discernible Distribution at 5% Significance Level											
69												
70	Nonparametric Distribution Free UCLs											
71	95% CLT UCL				0.504		95% Jackknife UCL				0.511	
72	95% Standard Bootstrap UCL				0.495		95% Bootstrap-t UCL				0.541	
73	95% Hall's Bootstrap UCL				0.526		95% Percentile Bootstrap UCL				0.503	
74	95% BCA Bootstrap UCL				0.521							
75	90% Chebyshev(Mean, Sd) UCL				0.631		95% Chebyshev(Mean, Sd) UCL				0.758	
76	97.5% Chebyshev(Mean, Sd) UCL				0.935		99% Chebyshev(Mean, Sd) UCL				1.281	
77												
78	Suggested UCL to Use											
79	97.5% Chebyshev (Mean, Sd) UCL				0.935							
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
83	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.											
84	For additional insight the user may want to consult a statistician.											
85												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 2:44:36 PM									
5	From File		VOCs Soil.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10												
11	Toluene											
12												
13	General Statistics											
14	Total Number of Observations			8		Number of Distinct Observations			8			
15							Number of Missing Observations			79		
16	Minimum			0.002		Mean			0.529			
17	Maximum			2.6		Median			0.0056			
18	SD			1.006		Std. Error of Mean			0.356			
19	Coefficient of Variation			1.902		Skewness			1.731			
20												
21	Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use											
22	guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.											
23	For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).											
24	Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0											
25												
26	Normal GOF Test											
27	Shapiro Wilk Test Statistic			0.61		Shapiro Wilk GOF Test						
28	5% Shapiro Wilk Critical Value			0.818		Data Not Normal at 5% Significance Level						
29	Lilliefors Test Statistic			0.447		Lilliefors GOF Test						
30	5% Lilliefors Critical Value			0.313		Data Not Normal at 5% Significance Level						
31	Data Not Normal at 5% Significance Level											
32												
33	Assuming Normal Distribution											
34	95% Normal UCL					95% UCLs (Adjusted for Skewness)						
35	95% Student's-t UCL			1.203		95% Adjusted-CLT UCL (Chen-1995)			1.346			
36							95% Modified-t UCL (Johnson-1978)			1.239		
37												
38	Gamma GOF Test											
39	A-D Test Statistic			1.446		Anderson-Darling Gamma GOF Test						
40	5% A-D Critical Value			0.826		Data Not Gamma Distributed at 5% Significance Level						
41	K-S Test Statistic			0.437		Kolmogrov-Smirnoff Gamma GOF Test						
42	5% K-S Critical Value			0.321		Data Not Gamma Distributed at 5% Significance Level						
43	Data Not Gamma Distributed at 5% Significance Level											
44												
45	Gamma Statistics											
46	k hat (MLE)			0.226		k star (bias corrected MLE)			0.225			
47	Theta hat (MLE)			2.339		Theta star (bias corrected MLE)			2.355			
48	nu hat (MLE)			3.618		nu star (bias corrected)			3.594			
49	MLE Mean (bias corrected)			0.529		MLE Sd (bias corrected)			1.116			
50							Approximate Chi Square Value (0.05)			0.568		

	A	B	C	D	E	F	G	H	I	J	K	L
51	Adjusted Level of Significance					0.0195	Adjusted Chi Square Value					0.338
52												
53	Assuming Gamma Distribution											
54	95% Approximate Gamma UCL (use when n>=50))					3.345	95% Adjusted Gamma UCL (use when n<50)					5.629
55												
56	Lognormal GOF Test											
57	Shapiro Wilk Test Statistic					0.709	Shapiro Wilk Lognormal GOF Test					
58	5% Shapiro Wilk Critical Value					0.818	Data Not Lognormal at 5% Significance Level					
59	Lilliefors Test Statistic					0.369	Lilliefors Lognormal GOF Test					
60	5% Lilliefors Critical Value					0.313	Data Not Lognormal at 5% Significance Level					
61	Data Not Lognormal at 5% Significance Level											
62												
63	Lognormal Statistics											
64	Minimum of Logged Data					-6.215	Mean of logged Data					-3.829
65	Maximum of Logged Data					0.956	SD of logged Data					2.838
66												
67	Assuming Lognormal Distribution											
68	95% H-UCL					11550	90% Chebyshev (MVUE) UCL					1.184
69	95% Chebyshev (MVUE) UCL					1.568	97.5% Chebyshev (MVUE) UCL					2.102
70	99% Chebyshev (MVUE) UCL					3.151						
71												
72	Nonparametric Distribution Free UCL Statistics											
73	Data do not follow a Discernible Distribution (0.05)											
74												
75	Nonparametric Distribution Free UCLs											
76	95% CLT UCL					1.114	95% Jackknife UCL					1.203
77	95% Standard Bootstrap UCL					1.078	95% Bootstrap-t UCL					266.1
78	95% Hall's Bootstrap UCL					128.5	95% Percentile Bootstrap UCL					1.126
79	95% BCA Bootstrap UCL					1.303						
80	90% Chebyshev(Mean, Sd) UCL					1.596	95% Chebyshev(Mean, Sd) UCL					2.079
81	97.5% Chebyshev(Mean, Sd) UCL					2.75	99% Chebyshev(Mean, Sd) UCL					4.067
82												
83	Suggested UCL to Use											
84	95% Hall's Bootstrap UCL					128.5						
85												
86	Recommended UCL exceeds the maximum observation											
87												
88	In Case Bootstrap t and/or Hall's Bootstrap yields an unreasonably large UCL value, use 97.5% or 99% Chebyshev (Mean, Sd) UCL											
89												
90	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
91	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
92	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.											
93	For additional insight the user may want to consult a statistician.											
94												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 3:41:51 PM									
5	From File		Metals Soil.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10	Arsenic											
11												
12	General Statistics											
13	Total Number of Observations				67		Number of Distinct Observations				47	
14	Number of Detects				61		Number of Non-Detects				6	
15	Number of Distinct Detects				46		Number of Distinct Non-Detects				1	
16	Minimum Detect				1.1		Minimum Non-Detect				1	
17	Maximum Detect				120		Maximum Non-Detect				1	
18	Variance Detects				256.1		Percent Non-Detects				8.955%	
19	Mean Detects				8.976		SD Detects				16	
20	Median Detects				5.2		CV Detects				1.783	
21	Skewness Detects				5.862		Kurtosis Detects				39.76	
22	Mean of Logged Detects				1.635		SD of Logged Detects				0.961	
23												
24	Normal GOF Test on Detects Only											
25	Shapiro Wilk Test Statistic				0.437		Normal GOF Test on Detected Observations Only					
26	5% Shapiro Wilk P Value				0		Detected Data Not Normal at 5% Significance Level					
27	Lilliefors Test Statistic				0.311		Lilliefors GOF Test					
28	5% Lilliefors Critical Value				0.113		Detected Data Not Normal at 5% Significance Level					
29	Detected Data Not Normal at 5% Significance Level											
30												
31	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs											
32	Mean		8.262		Standard Error of Mean				1.887			
33	SD		15.32		95% KM (BCA) UCL				11.72			
34	95% KM (t) UCL		11.41		95% KM (Percentile Bootstrap) UCL				11.62			
35	95% KM (z) UCL		11.37		95% KM Bootstrap t UCL				15.51			
36	90% KM Chebyshev UCL		13.92		95% KM Chebyshev UCL				16.49			
37	97.5% KM Chebyshev UCL		20.04		99% KM Chebyshev UCL				27.03			
38												
39	Gamma GOF Tests on Detected Observations Only											
40	A-D Test Statistic		2.035		Anderson-Darling GOF Test							
41	5% A-D Critical Value		0.779		Detected Data Not Gamma Distributed at 5% Significance Level							
42	K-S Test Statistic		0.117		Kolmogrov-Smirnoff GOF							
43	5% K-S Critical Value		0.117		Detected Data Not Gamma Distributed at 5% Significance Level							
44	Detected Data Not Gamma Distributed at 5% Significance Level											
45												
46	Gamma Statistics on Detected Data Only											
47	k hat (MLE)		1.028		k star (bias corrected MLE)				0.988			
48	Theta hat (MLE)		8.735		Theta star (bias corrected MLE)				9.085			
49	nu hat (MLE)		125.4		nu star (bias corrected)				120.5			
50	MLE Mean (bias corrected)		8.976		MLE Sd (bias corrected)				9.03			

	A	B	C	D	E	F	G	H	I	J	K	L
51												
52	Gamma Kaplan-Meier (KM) Statistics											
53	k hat (KM)				0.291		nu hat (KM)				39	
54	Approximate Chi Square Value (39.00, α)				25.69		Adjusted Chi Square Value (39.00, β)				25.45	
55	95% Gamma Approximate KM-UCL (use when $n \geq 50$)				12.54		95% Gamma Adjusted KM-UCL (use when $n < 50$)				12.66	
56												
57	Gamma ROS Statistics using Imputed Non-Detects											
58	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
59	GROS may not be used when kstar of detected data is small such as < 0.1											
60	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
61	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
62	Minimum				0.01		Mean				8.173	
63	Maximum				120		Median				4.4	
64	SD				15.48		CV				1.893	
65	k hat (MLE)				0.602		k star (bias corrected MLE)				0.585	
66	Theta hat (MLE)				13.57		Theta star (bias corrected MLE)				13.96	
67	nu hat (MLE)				80.73		nu star (bias corrected)				78.45	
68	MLE Mean (bias corrected)				8.173		MLE Sd (bias corrected)				10.68	
69					Adjusted Level of Significance (β)				0.0464			
70	Approximate Chi Square Value (78.45, α)				59.04		Adjusted Chi Square Value (78.45, β)				58.67	
71	95% Gamma Approximate UCL (use when $n \geq 50$)				10.86		95% Gamma Adjusted UCL (use when $n < 50$)				10.93	
72												
73	Lognormal GOF Test on Detected Observations Only											
74	Lilliefors Test Statistic				0.1		Lilliefors GOF Test					
75	5% Lilliefors Critical Value				0.113		Detected Data appear Lognormal at 5% Significance Level					
76	Detected Data appear Approximate Lognormal at 5% Significance Level											
77												
78	Lognormal ROS Statistics Using Imputed Non-Detects											
79	Mean in Original Scale				8.224		Mean in Log Scale				1.436	
80	SD in Original Scale				15.45		SD in Log Scale				1.122	
81	95% t UCL (assumes normality of ROS data)				11.37		95% Percentile Bootstrap UCL				11.95	
82	95% BCA Bootstrap UCL				13.66		95% Bootstrap t UCL				15.32	
83	95% H-UCL (Log ROS)				10.75							
84												
85	UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed											
86	KM Mean (logged)				1.488		95% H-UCL (KM -Log)				9.927	
87	KM SD (logged)				1.023		95% Critical H Value (KM-Log)				2.258	
88	KM Standard Error of Mean (logged)				0.126							
89												
90	DL/2 Statistics											
91	DL/2 Normal						DL/2 Log-Transformed					
92	Mean in Original Scale				8.217		Mean in Log Scale				1.426	
93	SD in Original Scale				15.45		SD in Log Scale				1.135	
94	95% t UCL (Assumes normality)				11.37		95% H-Stat UCL				10.84	
95	DL/2 is not a recommended method, provided for comparisons and historical reasons											
96												
97	Nonparametric Distribution Free UCL Statistics											
98	Detected Data appear Approximate Lognormal Distributed at 5% Significance Level											
99												
100	Suggested UCL to Use											

	A	B	C	D	E	F	G	H	I	J	K	L
101	95% KM (Chebyshev) UCL					16.49						
102												
103	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
104	Recommendations are based upon data size, data distribution, and skewness.											
105	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
106	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
107												

	A	B	C	D	E	F	G	H	I	J	K	L		
1	UCL Statistics for Data Sets with Non-Detects													
2														
3	User Selected Options													
4	Date/Time of Computation		1/9/2016 3:43:24 PM											
5	From File		Metals Soil.xls											
6	Full Precision		OFF											
7	Confidence Coefficient		95%											
8	Number of Bootstrap Operations		2000											
9														
10														
11	Barium													
12														
13	General Statistics													
14	Total Number of Observations				67		Number of Distinct Observations				53			
15									Number of Missing Observations				0	
16	Minimum				29		Mean				236.3			
17	Maximum				1100		Median				150			
18	SD				208.2		Std. Error of Mean				25.43			
19	Coefficient of Variation				0.881		Skewness				1.858			
20														
21	Normal GOF Test													
22	Shapiro Wilk Test Statistic				0.796		Shapiro Wilk GOF Test							
23	5% Shapiro Wilk P Value				1.610E-12		Data Not Normal at 5% Significance Level							
24	Lilliefors Test Statistic				0.211		Lilliefors GOF Test							
25	5% Lilliefors Critical Value				0.108		Data Not Normal at 5% Significance Level							
26	Data Not Normal at 5% Significance Level													
27														
28	Assuming Normal Distribution													
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)							
30	95% Student's-t UCL				278.7		95% Adjusted-CLT UCL (Chen-1995)				284.3			
31							95% Modified-t UCL (Johnson-1978)				279.7			
32														
33	Gamma GOF Test													
34	A-D Test Statistic				1.49		Anderson-Darling Gamma GOF Test							
35	5% A-D Critical Value				0.766		Data Not Gamma Distributed at 5% Significance Level							
36	K-S Test Statistic				0.142		Kolmogrov-Smirnoff Gamma GOF Test							
37	5% K-S Critical Value				0.111		Data Not Gamma Distributed at 5% Significance Level							
38	Data Not Gamma Distributed at 5% Significance Level													
39														
40	Gamma Statistics													
41	k hat (MLE)				1.736		k star (bias corrected MLE)				1.668			
42	Theta hat (MLE)				136.1		Theta star (bias corrected MLE)				141.6			
43	nu hat (MLE)				232.6		nu star (bias corrected)				223.6			
44	MLE Mean (bias corrected)				236.3		MLE Sd (bias corrected)				182.9			
45							Approximate Chi Square Value (0.05)				190			
46	Adjusted Level of Significance				0.0464		Adjusted Chi Square Value				189.3			
47														
48	Assuming Gamma Distribution													
49	95% Approximate Gamma UCL (use when n>=50))				278.1		95% Adjusted Gamma UCL (use when n<50)				279.1			
50														

	A	B	C	D	E	F	G	H	I	J	K	L
51	Lognormal GOF Test											
52	Shapiro Wilk Test Statistic				0.971		Shapiro Wilk Lognormal GOF Test					
53	5% Shapiro Wilk P Value				0.28		Data appear Lognormal at 5% Significance Level					
54	Lilliefors Test Statistic				0.0894		Lilliefors Lognormal GOF Test					
55	5% Lilliefors Critical Value				0.108		Data appear Lognormal at 5% Significance Level					
56	Data appear Lognormal at 5% Significance Level											
57												
58	Lognormal Statistics											
59	Minimum of Logged Data				3.367		Mean of logged Data				5.15	
60	Maximum of Logged Data				7.003		SD of logged Data				0.787	
61												
62	Assuming Lognormal Distribution											
63	95% H-UCL				287.7		90% Chebyshev (MVUE) UCL				309.3	
64	95% Chebyshev (MVUE) UCL				343.6		97.5% Chebyshev (MVUE) UCL				391.2	
65	99% Chebyshev (MVUE) UCL				484.7							
66												
67	Nonparametric Distribution Free UCL Statistics											
68	Data appear to follow a Discernible Distribution at 5% Significance Level											
69												
70	Nonparametric Distribution Free UCLs											
71	95% CLT UCL				278.1		95% Jackknife UCL				278.7	
72	95% Standard Bootstrap UCL				278.4		95% Bootstrap-t UCL				286.8	
73	95% Hall's Bootstrap UCL				284.5		95% Percentile Bootstrap UCL				275.2	
74	95% BCA Bootstrap UCL				282.8							
75	90% Chebyshev(Mean, Sd) UCL				312.6		95% Chebyshev(Mean, Sd) UCL				347.2	
76	97.5% Chebyshev(Mean, Sd) UCL				395.1		99% Chebyshev(Mean, Sd) UCL				489.4	
77												
78	Suggested UCL to Use											
79	95% H-UCL				287.7							
80												
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
83	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.											
84	For additional insight the user may want to consult a statistician.											
85												
86	ProUCL computes and outputs H-statistic based UCLs for historical reasons only.											
87	H-statistic often results in unstable (both high and low) values of UCL95 as shown in examples in the Technical Guide.											
88	It is therefore recommended to avoid the use of H-statistic based 95% UCLs.											
89	Use of nonparametric methods are preferred to compute UCL95 for skewed data sets which do not follow a gamma distribution.											
90												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 3:44:05 PM									
5	From File		Metals Soil.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10	Beryllium											
11												
12	General Statistics											
13	Total Number of Observations				67		Number of Distinct Observations				3	
14	Number of Detects				1		Number of Non-Detects				66	
15	Number of Distinct Detects				1		Number of Distinct Non-Detects				2	
16												
17	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
18	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
19												
20	The data set for variable Beryllium was not processed!											
21												
22												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 3:44:49 PM									
5	From File		Metals Soil.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10	Cadmium											
11												
12	General Statistics											
13	Total Number of Observations			67		Number of Distinct Observations			4			
14	Number of Detects			4		Number of Non-Detects			63			
15	Number of Distinct Detects			3		Number of Distinct Non-Detects			2			
16	Minimum Detect			1		Minimum Non-Detect			0.5			
17	Maximum Detect			3.2		Maximum Non-Detect			1			
18	Variance Detects			1.176		Percent Non-Detects			94.03%			
19	Mean Detects			1.575		SD Detects			1.084			
20	Median Detects			1.05		CV Detects			0.688			
21	Skewness Detects			1.989		Kurtosis Detects			3.961			
22	Mean of Logged Detects			0.315		SD of Logged Detects			0.567			
23												
24	Normal GOF Test on Detects Only											
25	Shapiro Wilk Test Statistic			0.662		Shapiro Wilk GOF Test						
26	5% Shapiro Wilk Critical Value			0.748		Detected Data Not Normal at 5% Significance Level						
27	Lilliefors Test Statistic			0.419		Lilliefors GOF Test						
28	5% Lilliefors Critical Value			0.443		Detected Data appear Normal at 5% Significance Level						
29	Detected Data appear Approximate Normal at 5% Significance Level											
30												
31	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs											
32	Mean		0.564		Standard Error of Mean			0.0484				
33	SD		0.343		95% KM (BCA) UCL			N/A				
34	95% KM (t) UCL		0.645		95% KM (Percentile Bootstrap) UCL			N/A				
35	95% KM (z) UCL		0.644		95% KM Bootstrap t UCL			N/A				
36	90% KM Chebyshev UCL		0.709		95% KM Chebyshev UCL			0.775				
37	97.5% KM Chebyshev UCL		0.866		99% KM Chebyshev UCL			1.045				
38												
39	Gamma GOF Tests on Detected Observations Only											
40	A-D Test Statistic		0.837		Anderson-Darling GOF Test							
41	5% A-D Critical Value		0.659		Detected Data Not Gamma Distributed at 5% Significance Level							
42	K-S Test Statistic		0.433		Kolmogrov-Smirnoff GOF							
43	5% K-S Critical Value		0.396		Detected Data Not Gamma Distributed at 5% Significance Level							
44	Detected Data Not Gamma Distributed at 5% Significance Level											
45												
46	Gamma Statistics on Detected Data Only											
47	k hat (MLE)		3.739		k star (bias corrected MLE)			1.101				
48	Theta hat (MLE)		0.421		Theta star (bias corrected MLE)			1.43				
49	nu hat (MLE)		29.91		nu star (bias corrected)			8.812				
50	MLE Mean (bias corrected)		1.575		MLE Sd (bias corrected)			1.501				

	A	B	C	D	E	F	G	H	I	J	K	L		
51														
52	Gamma Kaplan-Meier (KM) Statistics													
53	k hat (KM)				2.708		nu hat (KM)				362.9			
54	Approximate Chi Square Value (362.92, α)				319.8		Adjusted Chi Square Value (362.92, β)				318.9			
55	95% Gamma Approximate KM-UCL (use when $n \geq 50$)				0.64		95% Gamma Adjusted KM-UCL (use when $n < 50$)				0.642			
56														
57	Gamma ROS Statistics using Imputed Non-Detects													
58	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs													
59	GROS may not be used when kstar of detected data is small such as < 0.1													
60	For such situations, GROS method tends to yield inflated values of UCLs and BTVs													
61	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates													
62	Minimum				0.01		Mean				0.103			
63	Maximum				3.2		Median				0.01			
64	SD				0.439		CV				4.248			
65	k hat (MLE)				0.332		k star (bias corrected MLE)				0.327			
66	Theta hat (MLE)				0.312		Theta star (bias corrected MLE)				0.316			
67	nu hat (MLE)				44.49		nu star (bias corrected)				43.83			
68	MLE Mean (bias corrected)				0.103		MLE Sd (bias corrected)				0.181			
69									Adjusted Level of Significance (β)				0.0464	
70	Approximate Chi Square Value (43.83, α)				29.65		Adjusted Chi Square Value (43.83, β)				29.39			
71	95% Gamma Approximate UCL (use when $n \geq 50$)				0.153		95% Gamma Adjusted UCL (use when $n < 50$)				N/A			
72														
73	Lognormal GOF Test on Detected Observations Only													
74	Shapiro Wilk Test Statistic				0.688		Shapiro Wilk GOF Test							
75	5% Shapiro Wilk Critical Value				0.748		Detected Data Not Lognormal at 5% Significance Level							
76	Lilliefors Test Statistic				0.4		Lilliefors GOF Test							
77	5% Lilliefors Critical Value				0.443		Detected Data appear Lognormal at 5% Significance Level							
78	Detected Data appear Approximate Lognormal at 5% Significance Level													
79														
80	Lognormal ROS Statistics Using Imputed Non-Detects													
81	Mean in Original Scale				0.159		Mean in Log Scale				-3.513			
82	SD in Original Scale				0.439		SD in Log Scale				1.888			
83	95% t UCL (assumes normality of ROS data)				0.249		95% Percentile Bootstrap UCL				0.26			
84	95% BCA Bootstrap UCL				0.304		95% Bootstrap t UCL				0.367			
85	95% H-UCL (Log ROS)				0.343									
86														
87	UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed													
88	KM Mean (logged)				-0.633		95% H-UCL (KM -Log)				0.583			
89	KM SD (logged)				0.267		95% Critical H Value (KM-Log)				1.741			
90	KM Standard Error of Mean (logged)				0.0377									
91														
92	DL/2 Statistics													
93	DL/2 Normal						DL/2 Log-Transformed							
94	Mean in Original Scale				0.542		Mean in Log Scale				-0.695			
95	SD in Original Scale				0.357		SD in Log Scale				0.346			
96	95% t UCL (Assumes normality)				0.615		95% H-Stat UCL				0.572			
97	DL/2 is not a recommended method, provided for comparisons and historical reasons													
98														
99	Nonparametric Distribution Free UCL Statistics													
100	Detected Data appear Approximate Normal Distributed at 5% Significance Level													

	A	B	C	D	E	F	G	H	I	J	K	L
101												
102	Suggested UCL to Use											
103	95% KM (t) UCL				0.645		95% KM (Percentile Bootstrap) UCL				N/A	
104	Warning: One or more Recommended UCL(s) not available!											
105												
106	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
107	Recommendations are based upon data size, data distribution, and skewness.											
108	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
109	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
110												

	A	B	C	D	E	F	G	H	I	J	K	L	
1	UCL Statistics for Data Sets with Non-Detects												
2													
3	User Selected Options												
4	Date/Time of Computation			1/9/2016 3:45:37 PM									
5	From File			Metals Soil.xls									
6	Full Precision			OFF									
7	Confidence Coefficient			95%									
8	Number of Bootstrap Operations			2000									
9													
10													
11	Chromium												
12													
13	General Statistics												
14	Total Number of Observations				67		Number of Distinct Observations				30		
15									Number of Missing Observations				0
16	Minimum				5.7		Mean				19.28		
17	Maximum				61		Median				19		
18	SD				8.076		Std. Error of Mean				0.987		
19	Coefficient of Variation				0.419		Skewness				2.866		
20													
21	Normal GOF Test												
22	Shapiro Wilk Test Statistic				0.766		Shapiro Wilk GOF Test						
23	5% Shapiro Wilk P Value				2.465E-14		Data Not Normal at 5% Significance Level						
24	Lilliefors Test Statistic				0.202		Lilliefors GOF Test						
25	5% Lilliefors Critical Value				0.108		Data Not Normal at 5% Significance Level						
26	Data Not Normal at 5% Significance Level												
27													
28	Assuming Normal Distribution												
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)						
30	95% Student's-t UCL				20.93		95% Adjusted-CLT UCL (Chen-1995)				21.28		
31							95% Modified-t UCL (Johnson-1978)				20.99		
32													
33	Gamma GOF Test												
34	A-D Test Statistic				1.551		Anderson-Darling Gamma GOF Test						
35	5% A-D Critical Value				0.752		Data Not Gamma Distributed at 5% Significance Level						
36	K-S Test Statistic				0.145		Kolmogrov-Smirnoff Gamma GOF Test						
37	5% K-S Critical Value				0.109		Data Not Gamma Distributed at 5% Significance Level						
38	Data Not Gamma Distributed at 5% Significance Level												
39													
40	Gamma Statistics												
41	k hat (MLE)				7.745		k star (bias corrected MLE)				7.409		
42	Theta hat (MLE)				2.49		Theta star (bias corrected MLE)				2.603		
43	nu hat (MLE)				1038		nu star (bias corrected)				992.7		
44	MLE Mean (bias corrected)				19.28		MLE Sd (bias corrected)				7.085		
45									Approximate Chi Square Value (0.05)				920.6
46	Adjusted Level of Significance				0.0464		Adjusted Chi Square Value				919.1		
47													
48	Assuming Gamma Distribution												
49	95% Approximate Gamma UCL (use when n>=50))				20.79		95% Adjusted Gamma UCL (use when n<50)				20.83		
50													

	A	B	C	D	E	F	G	H	I	J	K	L		
51	Lognormal GOF Test													
52	Shapiro Wilk Test Statistic				0.949		Shapiro Wilk Lognormal GOF Test							
53	5% Shapiro Wilk P Value				0.0188		Data Not Lognormal at 5% Significance Level							
54	Lilliefors Test Statistic				0.122		Lilliefors Lognormal GOF Test							
55	5% Lilliefors Critical Value				0.108		Data Not Lognormal at 5% Significance Level							
56	Data Not Lognormal at 5% Significance Level													
57														
58	Lognormal Statistics													
59	Minimum of Logged Data				1.74		Mean of logged Data				2.893			
60	Maximum of Logged Data				4.111		SD of logged Data				0.357			
61														
62	Assuming Lognormal Distribution													
63	95% H-UCL				20.81		90% Chebyshev (MVUE) UCL				21.81			
64	95% Chebyshev (MVUE) UCL				22.98		97.5% Chebyshev (MVUE) UCL				24.61			
65	99% Chebyshev (MVUE) UCL				27.8									
66														
67	Nonparametric Distribution Free UCL Statistics													
68	Data do not follow a Discernible Distribution (0.05)													
69														
70	Nonparametric Distribution Free UCLs													
71	95% CLT UCL				20.91		95% Jackknife UCL				20.93			
72	95% Standard Bootstrap UCL				20.93		95% Bootstrap-t UCL				21.5			
73	95% Hall's Bootstrap UCL				23.19		95% Percentile Bootstrap UCL				20.97			
74	95% BCA Bootstrap UCL				21.26									
75	90% Chebyshev(Mean, Sd) UCL				22.24		95% Chebyshev(Mean, Sd) UCL				23.58			
76	97.5% Chebyshev(Mean, Sd) UCL				25.45		99% Chebyshev(Mean, Sd) UCL				29.1			
77														
78	Suggested UCL to Use													
79	95% Student's-t UCL				20.93		or 95% Modified-t UCL				20.99			
80														
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.													
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)													
83	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.													
84	For additional insight the user may want to consult a statistician.													
85														

	A	B	C	D	E	F	G	H	I	J	K	L	
1	UCL Statistics for Data Sets with Non-Detects												
2													
3	User Selected Options												
4	Date/Time of Computation		1/9/2016 3:46:21 PM										
5	From File		Metals Soil.xls										
6	Full Precision		OFF										
7	Confidence Coefficient		95%										
8	Number of Bootstrap Operations		2000										
9													
10													
11	Cobalt												
12													
13	General Statistics												
14	Total Number of Observations				67		Number of Distinct Observations				46		
15									Number of Missing Observations				0
16	Minimum				2.4		Mean				7.117		
17	Maximum				12.9		Median				7		
18	SD				1.956		Std. Error of Mean				0.239		
19	Coefficient of Variation				0.275		Skewness				0.319		
20													
21	Normal GOF Test												
22	Shapiro Wilk Test Statistic				0.987		Shapiro Wilk GOF Test						
23	5% Shapiro Wilk P Value				0.919		Data appear Normal at 5% Significance Level						
24	Lilliefors Test Statistic				0.0608		Lilliefors GOF Test						
25	5% Lilliefors Critical Value				0.108		Data appear Normal at 5% Significance Level						
26	Data appear Normal at 5% Significance Level												
27													
28	Assuming Normal Distribution												
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)						
30	95% Student's-t UCL				7.516		95% Adjusted-CLT UCL (Chen-1995)				7.52		
31									95% Modified-t UCL (Johnson-1978)				7.518
32													
33	Gamma GOF Test												
34	A-D Test Statistic				0.335		Anderson-Darling Gamma GOF Test						
35	5% A-D Critical Value				0.75		Detected data appear Gamma Distributed at 5% Significance Level						
36	K-S Test Statistic				0.0783		Kolmogrov-Smirnoff Gamma GOF Test						
37	5% K-S Critical Value				0.109		Detected data appear Gamma Distributed at 5% Significance Level						
38	Detected data appear Gamma Distributed at 5% Significance Level												
39													
40	Gamma Statistics												
41	k hat (MLE)				12.56		k star (bias corrected MLE)				12.01		
42	Theta hat (MLE)				0.567		Theta star (bias corrected MLE)				0.593		
43	nu hat (MLE)				1683		nu star (bias corrected)				1609		
44	MLE Mean (bias corrected)				7.117		MLE Sd (bias corrected)				2.054		
45									Approximate Chi Square Value (0.05)				1517
46	Adjusted Level of Significance				0.0464		Adjusted Chi Square Value				1515		
47													
48	Assuming Gamma Distribution												
49	95% Approximate Gamma UCL (use when n>=50))				7.55		95% Adjusted Gamma UCL (use when n<50)				7.559		
50													

	A	B	C	D	E	F	G	H	I	J	K	L		
51	Lognormal GOF Test													
52	Shapiro Wilk Test Statistic				0.965		Shapiro Wilk Lognormal GOF Test							
53	5% Shapiro Wilk P Value				0.15		Data appear Lognormal at 5% Significance Level							
54	Lilliefors Test Statistic				0.0957		Lilliefors Lognormal GOF Test							
55	5% Lilliefors Critical Value				0.108		Data appear Lognormal at 5% Significance Level							
56	Data appear Lognormal at 5% Significance Level													
57														
58	Lognormal Statistics													
59	Minimum of Logged Data				0.875		Mean of logged Data				1.922			
60	Maximum of Logged Data				2.557		SD of logged Data				0.296			
61														
62	Assuming Lognormal Distribution													
63	95% H-UCL				7.615		90% Chebyshev (MVUE) UCL				7.929			
64	95% Chebyshev (MVUE) UCL				8.287		97.5% Chebyshev (MVUE) UCL				8.784			
65	99% Chebyshev (MVUE) UCL				9.76									
66														
67	Nonparametric Distribution Free UCL Statistics													
68	Data appear to follow a Discernible Distribution at 5% Significance Level													
69														
70	Nonparametric Distribution Free UCLs													
71	95% CLT UCL				7.51		95% Jackknife UCL				7.516			
72	95% Standard Bootstrap UCL				7.503		95% Bootstrap-t UCL				7.527			
73	95% Hall's Bootstrap UCL				7.525		95% Percentile Bootstrap UCL				7.514			
74	95% BCA Bootstrap UCL				7.511									
75	90% Chebyshev(Mean, Sd) UCL				7.834		95% Chebyshev(Mean, Sd) UCL				8.159			
76	97.5% Chebyshev(Mean, Sd) UCL				8.61		99% Chebyshev(Mean, Sd) UCL				9.496			
77														
78	Suggested UCL to Use													
79	95% Student's-t UCL				7.516									
80														
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.													
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)													
83	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.													
84	For additional insight the user may want to consult a statistician.													
85														

	A	B	C	D	E	F	G	H	I	J	K	L		
1	UCL Statistics for Data Sets with Non-Detects													
2														
3	User Selected Options													
4	Date/Time of Computation			1/9/2016 3:47:07 PM										
5	From File			Metals Soil.xls										
6	Full Precision			OFF										
7	Confidence Coefficient			95%										
8	Number of Bootstrap Operations			2000										
9														
10														
11	Copper													
12														
13	General Statistics													
14	Total Number of Observations				67		Number of Distinct Observations				37			
15									Number of Missing Observations				0	
16	Minimum				5.3		Mean				27.07			
17	Maximum				230		Median				21			
18	SD				27.75		Std. Error of Mean				3.39			
19	Coefficient of Variation				1.025		Skewness				6.173			
20														
21	Normal GOF Test													
22	Shapiro Wilk Test Statistic				0.458		Shapiro Wilk GOF Test							
23	5% Shapiro Wilk P Value				0		Data Not Normal at 5% Significance Level							
24	Lilliefors Test Statistic				0.266		Lilliefors GOF Test							
25	5% Lilliefors Critical Value				0.108		Data Not Normal at 5% Significance Level							
26	Data Not Normal at 5% Significance Level													
27														
28	Assuming Normal Distribution													
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)							
30	95% Student's-t UCL				32.72		95% Adjusted-CLT UCL (Chen-1995)				35.38			
31									95% Modified-t UCL (Johnson-1978)				33.15	
32														
33	Gamma GOF Test													
34	A-D Test Statistic				2.613		Anderson-Darling Gamma GOF Test							
35	5% A-D Critical Value				0.759		Data Not Gamma Distributed at 5% Significance Level							
36	K-S Test Statistic				0.16		Kolmogrov-Smirnoff Gamma GOF Test							
37	5% K-S Critical Value				0.11		Data Not Gamma Distributed at 5% Significance Level							
38	Data Not Gamma Distributed at 5% Significance Level													
39														
40	Gamma Statistics													
41	k hat (MLE)				2.786		k star (bias corrected MLE)				2.671			
42	Theta hat (MLE)				9.716		Theta star (bias corrected MLE)				10.13			
43	nu hat (MLE)				373.3		nu star (bias corrected)				357.9			
44	MLE Mean (bias corrected)				27.07		MLE Sd (bias corrected)				16.56			
45									Approximate Chi Square Value (0.05)				315.1	
46	Adjusted Level of Significance				0.0464		Adjusted Chi Square Value				314.2			
47														
48	Assuming Gamma Distribution													
49	95% Approximate Gamma UCL (use when n>=50))				30.75		95% Adjusted Gamma UCL (use when n<50)				30.84			
50														

	A	B	C	D	E	F	G	H	I	J	K	L		
51	Lognormal GOF Test													
52	Shapiro Wilk Test Statistic				0.944		Shapiro Wilk Lognormal GOF Test							
53	5% Shapiro Wilk P Value				0.00907		Data Not Lognormal at 5% Significance Level							
54	Lilliefors Test Statistic				0.101		Lilliefors Lognormal GOF Test							
55	5% Lilliefors Critical Value				0.108		Data appear Lognormal at 5% Significance Level							
56	Data appear Approximate Lognormal at 5% Significance Level													
57														
58	Lognormal Statistics													
59	Minimum of Logged Data				1.668		Mean of logged Data				3.108			
60	Maximum of Logged Data				5.438		SD of logged Data				0.543			
61														
62	Assuming Lognormal Distribution													
63	95% H-UCL				29.44		90% Chebyshev (MVUE) UCL				31.34			
64	95% Chebyshev (MVUE) UCL				33.82		97.5% Chebyshev (MVUE) UCL				37.25			
65	99% Chebyshev (MVUE) UCL				44									
66														
67	Nonparametric Distribution Free UCL Statistics													
68	Data appear to follow a Discernible Distribution at 5% Significance Level													
69														
70	Nonparametric Distribution Free UCLs													
71	95% CLT UCL				32.65		95% Jackknife UCL				32.72			
72	95% Standard Bootstrap UCL				32.75		95% Bootstrap-t UCL				39.8			
73	95% Hall's Bootstrap UCL				55.69		95% Percentile Bootstrap UCL				33.18			
74	95% BCA Bootstrap UCL				35.31									
75	90% Chebyshev(Mean, Sd) UCL				37.24		95% Chebyshev(Mean, Sd) UCL				41.85			
76	97.5% Chebyshev(Mean, Sd) UCL				48.24		99% Chebyshev(Mean, Sd) UCL				60.8			
77														
78	Suggested UCL to Use													
79	95% Chebyshev (Mean, Sd) UCL				41.85									
80														
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.													
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)													
83	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.													
84	For additional insight the user may want to consult a statistician.													
85														

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 3:47:47 PM									
5	From File		Metals Soil.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10												
11	Lead											
12												
13	General Statistics											
14	Total Number of Observations			90			Number of Distinct Observations			71		
15							Number of Missing Observations			0		
16	Minimum			2			Mean			71.95		
17	Maximum			820			Median			10		
18	SD			154.7			Std. Error of Mean			16.31		
19	Coefficient of Variation			2.15			Skewness			2.97		
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic			0.508			Shapiro Wilk GOF Test					
23	5% Shapiro Wilk P Value			0			Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic			0.357			Lilliefors GOF Test					
25	5% Lilliefors Critical Value			0.0934			Data Not Normal at 5% Significance Level					
26	Data Not Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
30	95% Student's-t UCL			99.06			95% Adjusted-CLT UCL (Chen-1995)			104.2		
31							95% Modified-t UCL (Johnson-1978)			99.91		
32												
33	Gamma GOF Test											
34	A-D Test Statistic			8.897			Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value			0.832			Data Not Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic			0.251			Kolmogrov-Smirnoff Gamma GOF Test					
37	5% K-S Critical Value			0.1			Data Not Gamma Distributed at 5% Significance Level					
38	Data Not Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)			0.445			k star (bias corrected MLE)			0.438		
42	Theta hat (MLE)			161.7			Theta star (bias corrected MLE)			164.4		
43	nu hat (MLE)			80.12			nu star (bias corrected)			78.78		
44	MLE Mean (bias corrected)			71.95			MLE Sd (bias corrected)			108.8		
45							Approximate Chi Square Value (0.05)			59.33		
46	Adjusted Level of Significance			0.0473			Adjusted Chi Square Value			59.06		
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL (use when n>=50))			95.54			95% Adjusted Gamma UCL (use when n<50)			95.98		
50												

	A	B	C	D	E	F	G	H	I	J	K	L		
51	Lognormal GOF Test													
52	Shapiro Wilk Test Statistic				0.87		Shapiro Wilk Lognormal GOF Test							
53	5% Shapiro Wilk P Value				7.087E-11		Data Not Lognormal at 5% Significance Level							
54	Lilliefors Test Statistic				0.175		Lilliefors Lognormal GOF Test							
55	5% Lilliefors Critical Value				0.0934		Data Not Lognormal at 5% Significance Level							
56	Data Not Lognormal at 5% Significance Level													
57														
58	Lognormal Statistics													
59	Minimum of Logged Data				0.693		Mean of logged Data				2.823			
60	Maximum of Logged Data				6.709		SD of logged Data				1.549			
61														
62	Assuming Lognormal Distribution													
63	95% H-UCL				88.94		90% Chebyshev (MVUE) UCL				91.44			
64	95% Chebyshev (MVUE) UCL				108.3		97.5% Chebyshev (MVUE) UCL				131.6			
65	99% Chebyshev (MVUE) UCL				177.5									
66														
67	Nonparametric Distribution Free UCL Statistics													
68	Data do not follow a Discernible Distribution (0.05)													
69														
70	Nonparametric Distribution Free UCLs													
71	95% CLT UCL				98.78		95% Jackknife UCL				99.06			
72	95% Standard Bootstrap UCL				98.28		95% Bootstrap-t UCL				107.7			
73	95% Hall's Bootstrap UCL				102.1		95% Percentile Bootstrap UCL				100.3			
74	95% BCA Bootstrap UCL				105									
75	90% Chebyshev(Mean, Sd) UCL				120.9		95% Chebyshev(Mean, Sd) UCL				143			
76	97.5% Chebyshev(Mean, Sd) UCL				173.8		99% Chebyshev(Mean, Sd) UCL				234.2			
77														
78	Suggested UCL to Use													
79	95% Chebyshev (Mean, Sd) UCL				143									
80														
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.													
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)													
83	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.													
84	For additional insight the user may want to consult a statistician.													
85														

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 3:48:26 PM									
5	From File		Metals Soil.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10												
11	Manganese											
12												
13	General Statistics											
14	Total Number of Observations			5			Number of Distinct Observations			5		
15							Number of Missing Observations			0		
16	Minimum			230			Mean			304		
17	Maximum			410			Median			290		
18	SD			66.18			Std. Error of Mean			29.6		
19	Coefficient of Variation			0.218			Skewness			1.106		
20												
21	Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use											
22	guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.											
23	For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).											
24	Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0											
25												
26	Normal GOF Test											
27	Shapiro Wilk Test Statistic			0.919			Shapiro Wilk GOF Test					
28	5% Shapiro Wilk Critical Value			0.762			Data appear Normal at 5% Significance Level					
29	Lilliefors Test Statistic			0.264			Lilliefors GOF Test					
30	5% Lilliefors Critical Value			0.396			Data appear Normal at 5% Significance Level					
31	Data appear Normal at 5% Significance Level											
32												
33	Assuming Normal Distribution											
34	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
35	95% Student's-t UCL			367.1			95% Adjusted-CLT UCL (Chen-1995)			368.3		
36							95% Modified-t UCL (Johnson-1978)			369.5		
37												
38	Gamma GOF Test											
39	A-D Test Statistic			0.305			Anderson-Darling Gamma GOF Test					
40	5% A-D Critical Value			0.679			Detected data appear Gamma Distributed at 5% Significance Level					
41	K-S Test Statistic			0.234			Kolmogrov-Smirnoff Gamma GOF Test					
42	5% K-S Critical Value			0.357			Detected data appear Gamma Distributed at 5% Significance Level					
43	Detected data appear Gamma Distributed at 5% Significance Level											
44												
45	Gamma Statistics											
46	k hat (MLE)			28.05			k star (bias corrected MLE)			11.35		
47	Theta hat (MLE)			10.84			Theta star (bias corrected MLE)			26.78		
48	nu hat (MLE)			280.5			nu star (bias corrected)			113.5		
49	MLE Mean (bias corrected)			304			MLE Sd (bias corrected)			90.22		
50							Approximate Chi Square Value (0.05)			89.93		

	A	B	C	D	E	F	G	H	I	J	K	L
51	Adjusted Level of Significance					0.0086	Adjusted Chi Square Value					80.77
52												
53	Assuming Gamma Distribution											
54	95% Approximate Gamma UCL (use when n>=50))					383.8	95% Adjusted Gamma UCL (use when n<50)					427.3
55												
56	Lognormal GOF Test											
57	Shapiro Wilk Test Statistic					0.954	Shapiro Wilk Lognormal GOF Test					
58	5% Shapiro Wilk Critical Value					0.762	Data appear Lognormal at 5% Significance Level					
59	Lilliefors Test Statistic					0.229	Lilliefors Lognormal GOF Test					
60	5% Lilliefors Critical Value					0.396	Data appear Lognormal at 5% Significance Level					
61	Data appear Lognormal at 5% Significance Level											
62												
63	Lognormal Statistics											
64	Minimum of Logged Data					5.438	Mean of logged Data					5.699
65	Maximum of Logged Data					6.016	SD of logged Data					0.209
66												
67	Assuming Lognormal Distribution											
68	95% H-UCL					384.8	90% Chebyshev (MVUE) UCL					389
69	95% Chebyshev (MVUE) UCL					427.6	97.5% Chebyshev (MVUE) UCL					481.1
70	99% Chebyshev (MVUE) UCL					586.3						
71												
72	Nonparametric Distribution Free UCL Statistics											
73	Data appear to follow a Discernible Distribution at 5% Significance Level											
74												
75	Nonparametric Distribution Free UCLs											
76	95% CLT UCL					352.7	95% Jackknife UCL					367.1
77	95% Standard Bootstrap UCL					347.4	95% Bootstrap-t UCL					392.7
78	95% Hall's Bootstrap UCL					651.5	95% Percentile Bootstrap UCL					346
79	95% BCA Bootstrap UCL					358						
80	90% Chebyshev(Mean, Sd) UCL					392.8	95% Chebyshev(Mean, Sd) UCL					433
81	97.5% Chebyshev(Mean, Sd) UCL					488.8	99% Chebyshev(Mean, Sd) UCL					598.5
82												
83	Suggested UCL to Use											
84	95% Student's-t UCL					367.1						
85												
86	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
87	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
88	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.											
89	For additional insight the user may want to consult a statistician.											
90												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 3:49:06 PM									
5	From File		Metals Soil.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10	Mercury											
11												
12	General Statistics											
13	Total Number of Observations				67		Number of Distinct Observations				18	
14	Number of Detects				19		Number of Non-Detects				48	
15	Number of Distinct Detects				17		Number of Distinct Non-Detects				2	
16	Minimum Detect				0.11		Minimum Non-Detect				0.1	
17	Maximum Detect				1.5		Maximum Non-Detect				0.2	
18	Variance Detects				0.113		Percent Non-Detects				71.64%	
19	Mean Detects				0.331		SD Detects				0.336	
20	Median Detects				0.2		CV Detects				1.016	
21	Skewness Detects				2.705		Kurtosis Detects				8.214	
22	Mean of Logged Detects				-1.407		SD of Logged Detects				0.727	
23												
24	Normal GOF Test on Detects Only											
25	Shapiro Wilk Test Statistic				0.658		Shapiro Wilk GOF Test					
26	5% Shapiro Wilk Critical Value				0.901		Detected Data Not Normal at 5% Significance Level					
27	Lilliefors Test Statistic				0.256		Lilliefors GOF Test					
28	5% Lilliefors Critical Value				0.203		Detected Data Not Normal at 5% Significance Level					
29	Detected Data Not Normal at 5% Significance Level											
30												
31	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs											
32	Mean		0.166		Standard Error of Mean				0.0255			
33	SD		0.203		95% KM (BCA) UCL				0.21			
34	95% KM (t) UCL		0.208		95% KM (Percentile Bootstrap) UCL				0.211			
35	95% KM (z) UCL		0.208		95% KM Bootstrap t UCL				0.261			
36	90% KM Chebyshev UCL		0.242		95% KM Chebyshev UCL				0.277			
37	97.5% KM Chebyshev UCL		0.325		99% KM Chebyshev UCL				0.42			
38												
39	Gamma GOF Tests on Detected Observations Only											
40	A-D Test Statistic		0.998		Anderson-Darling GOF Test							
41	5% A-D Critical Value		0.754		Detected Data Not Gamma Distributed at 5% Significance Level							
42	K-S Test Statistic		0.201		Kolmogrov-Smirnoff GOF							
43	5% K-S Critical Value		0.201		Detected data appear Gamma Distributed at 5% Significance Level							
44	Detected data follow Appr. Gamma Distribution at 5% Significance Level											
45												
46	Gamma Statistics on Detected Data Only											
47	k hat (MLE)		1.808		k star (bias corrected MLE)				1.558			
48	Theta hat (MLE)		0.183		Theta star (bias corrected MLE)				0.212			
49	nu hat (MLE)		68.72		nu star (bias corrected)				59.2			
50	MLE Mean (bias corrected)		0.331		MLE Sd (bias corrected)				0.265			

	A	B	C	D	E	F	G	H	I	J	K	L			
51															
52	Gamma Kaplan-Meier (KM) Statistics														
53					k hat (KM)	0.668					nu hat (KM)	89.5			
54					Approximate Chi Square Value (89.50, α)			68.69				Adjusted Chi Square Value (89.50, β)		68.29	
55					95% Gamma Approximate KM-UCL (use when $n \geq 50$)			0.216					95% Gamma Adjusted KM-UCL (use when $n < 50$)		0.217
56															
57	Gamma ROS Statistics using Imputed Non-Detects														
58	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs														
59	GROS may not be used when kstar of detected data is small such as < 0.1														
60	For such situations, GROS method tends to yield inflated values of UCLs and BTVs														
61	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates														
62					Minimum	0.01					Mean	0.101			
63					Maximum	1.5					Median	0.01			
64					SD	0.228					CV	2.259			
65					k hat (MLE)	0.458					k star (bias corrected MLE)	0.447			
66					Theta hat (MLE)	0.221					Theta star (bias corrected MLE)	0.226			
67					nu hat (MLE)	61.37					nu star (bias corrected)	59.96			
68					MLE Mean (bias corrected)		0.101					MLE Sd (bias corrected)		0.151	
69									Adjusted Level of Significance (β)				0.0464		
70					Approximate Chi Square Value (59.96, α)			43.15				Adjusted Chi Square Value (59.96, β)		42.84	
71					95% Gamma Approximate UCL (use when $n \geq 50$)			0.14					95% Gamma Adjusted UCL (use when $n < 50$)		0.141
72															
73	Lognormal GOF Test on Detected Observations Only														
74					Shapiro Wilk Test Statistic		0.905							Shapiro Wilk GOF Test	
75					5% Shapiro Wilk Critical Value		0.901							Detected Data appear Lognormal at 5% Significance Level	
76					Lilliefors Test Statistic		0.163							Lilliefors GOF Test	
77					5% Lilliefors Critical Value		0.203							Detected Data appear Lognormal at 5% Significance Level	
78	Detected Data appear Lognormal at 5% Significance Level														
79															
80	Lognormal ROS Statistics Using Imputed Non-Detects														
81					Mean in Original Scale		0.116					Mean in Log Scale		-3.199	
82					SD in Original Scale		0.223					SD in Log Scale		1.477	
83					95% t UCL (assumes normality of ROS data)			0.161					95% Percentile Bootstrap UCL		0.163
84					95% BCA Bootstrap UCL			0.176					95% Bootstrap t UCL		0.194
85					95% H-UCL (Log ROS)			0.186							
86															
87	UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed														
88					KM Mean (logged)		-2.045					95% H-UCL (KM -Log)		0.171	
89					KM SD (logged)		0.552					95% Critical H Value (KM-Log)		1.902	
90					KM Standard Error of Mean (logged)			0.0694							
91															
92	DL/2 Statistics														
93	DL/2 Normal						DL/2 Log-Transformed								
94					Mean in Original Scale		0.133					Mean in Log Scale		-2.504	
95					SD in Original Scale		0.216					SD in Log Scale		0.809	
96					95% t UCL (Assumes normality)			0.177					95% H-Stat UCL		0.14
97	DL/2 is not a recommended method, provided for comparisons and historical reasons														
98															
99	Nonparametric Distribution Free UCL Statistics														
100	Detected Data appear Approximate Gamma Distributed at 5% Significance Level														

	A	B	C	D	E	F	G	H	I	J	K	L
101												
102	Suggested UCL to Use											
103	95% KM (t) UCL					0.208	95% GROS Approximate Gamma UCL					0.14
104	95% Approximate Gamma KM-UCL					0.216						
105												
106	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
107	Recommendations are based upon data size, data distribution, and skewness.											
108	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
109	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
110												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 4:21:34 PM									
5	From File		Metals Soil.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10	Molybdenum											
11												
12	General Statistics											
13	Total Number of Observations			67			Number of Distinct Observations			3		
14	Number of Detects			6			Number of Non-Detects			61		
15	Number of Distinct Detects			2			Number of Distinct Non-Detects			1		
16	Minimum Detect			0.5			Minimum Non-Detect			1		
17	Maximum Detect			0.803			Maximum Non-Detect			1		
18	Variance Detects			0.0153			Percent Non-Detects			91.04%		
19	Mean Detects			0.551			SD Detects			0.124		
20	Median Detects			0.5			CV Detects			0.225		
21	Skewness Detects			2.449			Kurtosis Detects			6		
22	Mean of Logged Detects			-0.614			SD of Logged Detects			0.193		
23												
24	Normal GOF Test on Detects Only											
25	Shapiro Wilk Test Statistic			0.496			Shapiro Wilk GOF Test					
26	5% Shapiro Wilk Critical Value			0.788			Detected Data Not Normal at 5% Significance Level					
27	Lilliefors Test Statistic			0.492			Lilliefors GOF Test					
28	5% Lilliefors Critical Value			0.362			Detected Data Not Normal at 5% Significance Level					
29	Detected Data Not Normal at 5% Significance Level											
30												
31	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs											
32	Mean		0.551		Standard Error of Mean		0.0505					
33	SD		0.113		95% KM (BCA) UCL		N/A					
34	95% KM (t) UCL		0.635		95% KM (Percentile Bootstrap) UCL		N/A					
35	95% KM (z) UCL		0.634		95% KM Bootstrap t UCL		N/A					
36	90% KM Chebyshev UCL		0.702		95% KM Chebyshev UCL		0.771					
37	97.5% KM Chebyshev UCL		0.866		99% KM Chebyshev UCL		1.053					
38												
39	Gamma GOF Tests on Detected Observations Only											
40	A-D Test Statistic		1.719		Anderson-Darling GOF Test							
41	5% A-D Critical Value		0.697		Detected Data Not Gamma Distributed at 5% Significance Level							
42	K-S Test Statistic		0.507		Kolmogrov-Smirnoff GOF							
43	5% K-S Critical Value		0.332		Detected Data Not Gamma Distributed at 5% Significance Level							
44	Detected Data Not Gamma Distributed at 5% Significance Level											
45												
46	Gamma Statistics on Detected Data Only											
47	k hat (MLE)		29.13		k star (bias corrected MLE)		14.68					
48	Theta hat (MLE)		0.0189		Theta star (bias corrected MLE)		0.0375					
49	nu hat (MLE)		349.6		nu star (bias corrected)		176.1					
50	MLE Mean (bias corrected)		0.551		MLE Sd (bias corrected)		0.144					

	A	B	C	D	E	F	G	H	I	J	K	L
51												
52	Gamma Kaplan-Meier (KM) Statistics											
53	k hat (KM)				23.77		nu hat (KM)				3185	
54	Approximate Chi Square Value (N/A, α)				3055		Adjusted Chi Square Value (N/A, β)				3052	
55	95% Gamma Approximate KM-UCL (use when $n \geq 50$)				0.574		95% Gamma Adjusted KM-UCL (use when $n < 50$)				0.574	
56												
57	Gamma ROS Statistics using Imputed Non-Detects											
58	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
59	GROS may not be used when kstar of detected data is small such as < 0.1											
60	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
61	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
62	Minimum				0.338		Mean				0.553	
63	Maximum				0.82		Median				0.538	
64	SD				0.108		CV				0.195	
65	k hat (MLE)				27.15		k star (bias corrected MLE)				25.94	
66	Theta hat (MLE)				0.0204		Theta star (bias corrected MLE)				0.0213	
67	nu hat (MLE)				3638		nu star (bias corrected)				3477	
68	MLE Mean (bias corrected)				0.553		MLE Sd (bias corrected)				0.109	
69					Adjusted Level of Significance (β)				0.0464			
70	Approximate Chi Square Value (N/A, α)				3341		Adjusted Chi Square Value (N/A, β)				3338	
71	95% Gamma Approximate UCL (use when $n \geq 50$)				0.575		95% Gamma Adjusted UCL (use when $n < 50$)				0.576	
72												
73	Lognormal GOF Test on Detected Observations Only											
74	Shapiro Wilk Test Statistic				0.496		Shapiro Wilk GOF Test					
75	5% Shapiro Wilk Critical Value				0.788		Detected Data Not Lognormal at 5% Significance Level					
76	Lilliefors Test Statistic				0.492		Lilliefors GOF Test					
77	5% Lilliefors Critical Value				0.362		Detected Data Not Lognormal at 5% Significance Level					
78	Detected Data Not Lognormal at 5% Significance Level											
79												
80	Lognormal ROS Statistics Using Imputed Non-Detects											
81	Mean in Original Scale				0.548		Mean in Log Scale				-0.614	
82	SD in Original Scale				0.091		SD in Log Scale				0.162	
83	95% t UCL (assumes normality of ROS data)				0.567		95% Percentile Bootstrap UCL				0.566	
84	95% BCA Bootstrap UCL				0.567		95% Bootstrap t UCL				0.567	
85	95% H-UCL (Log ROS)				0.567							
86												
87	DL/2 Statistics											
88	DL/2 Normal						DL/2 Log-Transformed					
89	Mean in Original Scale				0.505		Mean in Log Scale				-0.686	
90	SD in Original Scale				0.037		SD in Log Scale				0.0579	
91	95% t UCL (Assumes normality)				0.512		95% H-Stat UCL				N/A	
92	DL/2 is not a recommended method, provided for comparisons and historical reasons											
93												
94	Nonparametric Distribution Free UCL Statistics											
95	Data do not follow a Discernible Distribution at 5% Significance Level											
96												
97	Suggested UCL to Use											
98	95% KM (t) UCL				0.635		95% KM (% Bootstrap) UCL				N/A	
99	Warning: One or more Recommended UCL(s) not available!											
100												

	A	B	C	D	E	F	G	H	I	J	K	L
101	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
102	Recommendations are based upon data size, data distribution, and skewness.											
103	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
104	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
105												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 3:50:29 PM									
5	From File		Metals Soil.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10												
11	Nickel											
12												
13	General Statistics											
14	Total Number of Observations				67		Number of Distinct Observations				28	
15							Number of Missing Observations				0	
16	Minimum				6.5		Mean				16.26	
17	Maximum				36		Median				16	
18	SD				5.196		Std. Error of Mean				0.635	
19	Coefficient of Variation				0.319		Skewness				1.274	
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic				0.922		Shapiro Wilk GOF Test					
23	5% Shapiro Wilk P Value				3.0663E-4		Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic				0.13		Lilliefors GOF Test					
25	5% Lilliefors Critical Value				0.108		Data Not Normal at 5% Significance Level					
26	Data Not Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
30	95% Student's-t UCL				17.32		95% Adjusted-CLT UCL (Chen-1995)				17.41	
31							95% Modified-t UCL (Johnson-1978)				17.34	
32												
33	Gamma GOF Test											
34	A-D Test Statistic				0.553		Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value				0.751		Detected data appear Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic				0.0914		Kolmogrov-Smirnoff Gamma GOF Test					
37	5% K-S Critical Value				0.109		Detected data appear Gamma Distributed at 5% Significance Level					
38	Detected data appear Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)				10.76		k star (bias corrected MLE)				10.29	
42	Theta hat (MLE)				1.511		Theta star (bias corrected MLE)				1.581	
43	nu hat (MLE)				1442		nu star (bias corrected)				1379	
44	MLE Mean (bias corrected)				16.26		MLE Sd (bias corrected)				5.071	
45							Approximate Chi Square Value (0.05)				1293	
46	Adjusted Level of Significance				0.0464		Adjusted Chi Square Value				1292	
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL (use when n>=50)				17.34		95% Adjusted Gamma UCL (use when n<50)				17.36	
50												

	A	B	C	D	E	F	G	H	I	J	K	L		
51	Lognormal GOF Test													
52	Shapiro Wilk Test Statistic				0.981		Shapiro Wilk Lognormal GOF Test							
53	5% Shapiro Wilk P Value				0.667		Data appear Lognormal at 5% Significance Level							
54	Lilliefors Test Statistic				0.0985		Lilliefors Lognormal GOF Test							
55	5% Lilliefors Critical Value				0.108		Data appear Lognormal at 5% Significance Level							
56	Data appear Lognormal at 5% Significance Level													
57														
58	Lognormal Statistics													
59	Minimum of Logged Data				1.872		Mean of logged Data				2.742			
60	Maximum of Logged Data				3.584		SD of logged Data				0.31			
61														
62	Assuming Lognormal Distribution													
63	95% H-UCL				17.41		90% Chebyshev (MVUE) UCL				18.16			
64	95% Chebyshev (MVUE) UCL				19.01		97.5% Chebyshev (MVUE) UCL				20.2			
65	99% Chebyshev (MVUE) UCL				22.53									
66														
67	Nonparametric Distribution Free UCL Statistics													
68	Data appear to follow a Discernible Distribution at 5% Significance Level													
69														
70	Nonparametric Distribution Free UCLs													
71	95% CLT UCL				17.31		95% Jackknife UCL				17.32			
72	95% Standard Bootstrap UCL				17.3		95% Bootstrap-t UCL				17.49			
73	95% Hall's Bootstrap UCL				17.51		95% Percentile Bootstrap UCL				17.35			
74	95% BCA Bootstrap UCL				17.48									
75	90% Chebyshev(Mean, Sd) UCL				18.17		95% Chebyshev(Mean, Sd) UCL				19.03			
76	97.5% Chebyshev(Mean, Sd) UCL				20.23		99% Chebyshev(Mean, Sd) UCL				22.58			
77														
78	Suggested UCL to Use													
79	95% Approximate Gamma UCL				17.34									
80														
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.													
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)													
83	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.													
84	For additional insight the user may want to consult a statistician.													
85														

	A	B	C	D	E	F	G	H	I	J	K	L	
1	UCL Statistics for Data Sets with Non-Detects												
2													
3	User Selected Options												
4	Date/Time of Computation			1/9/2016 3:51:16 PM									
5	From File			Metals Soil.xls									
6	Full Precision			OFF									
7	Confidence Coefficient			95%									
8	Number of Bootstrap Operations			2000									
9													
10													
11	Vanadium												
12													
13	General Statistics												
14	Total Number of Observations				67		Number of Distinct Observations				30		
15									Number of Missing Observations				0
16	Minimum				12		Mean				30.44		
17	Maximum				59		Median				29.5		
18	SD				7.362		Std. Error of Mean				0.899		
19	Coefficient of Variation				0.242		Skewness				0.869		
20													
21	Normal GOF Test												
22	Shapiro Wilk Test Statistic				0.949		Shapiro Wilk GOF Test						
23	5% Shapiro Wilk P Value				0.017		Data Not Normal at 5% Significance Level						
24	Lilliefors Test Statistic				0.155		Lilliefors GOF Test						
25	5% Lilliefors Critical Value				0.108		Data Not Normal at 5% Significance Level						
26	Data Not Normal at 5% Significance Level												
27													
28	Assuming Normal Distribution												
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)						
30	95% Student's-t UCL				31.94		95% Adjusted-CLT UCL (Chen-1995)				32.02		
31							95% Modified-t UCL (Johnson-1978)				31.96		
32													
33	Gamma GOF Test												
34	A-D Test Statistic				1.1		Anderson-Darling Gamma GOF Test						
35	5% A-D Critical Value				0.75		Data Not Gamma Distributed at 5% Significance Level						
36	K-S Test Statistic				0.146		Kolmogrov-Smirnoff Gamma GOF Test						
37	5% K-S Critical Value				0.109		Data Not Gamma Distributed at 5% Significance Level						
38	Data Not Gamma Distributed at 5% Significance Level												
39													
40	Gamma Statistics												
41	k hat (MLE)				17.48		k star (bias corrected MLE)				16.71		
42	Theta hat (MLE)				1.741		Theta star (bias corrected MLE)				1.822		
43	nu hat (MLE)				2343		nu star (bias corrected)				2239		
44	MLE Mean (bias corrected)				30.44		MLE Sd (bias corrected)				7.447		
45									Approximate Chi Square Value (0.05)				2130
46	Adjusted Level of Significance				0.0464		Adjusted Chi Square Value				2128		
47													
48	Assuming Gamma Distribution												
49	95% Approximate Gamma UCL (use when n>=50))				32		95% Adjusted Gamma UCL (use when n<50)				32.03		
50													

	A	B	C	D	E	F	G	H	I	J	K	L		
51	Lognormal GOF Test													
52	Shapiro Wilk Test Statistic				0.96		Shapiro Wilk Lognormal GOF Test							
53	5% Shapiro Wilk P Value				0.0779		Data appear Lognormal at 5% Significance Level							
54	Lilliefors Test Statistic				0.162		Lilliefors Lognormal GOF Test							
55	5% Lilliefors Critical Value				0.108		Data Not Lognormal at 5% Significance Level							
56	Data appear Approximate Lognormal at 5% Significance Level													
57														
58	Lognormal Statistics													
59	Minimum of Logged Data				2.485		Mean of logged Data				3.387			
60	Maximum of Logged Data				4.078		SD of logged Data				0.246			
61														
62	Assuming Lognormal Distribution													
63	95% H-UCL				32.13		90% Chebyshev (MVUE) UCL				33.26			
64	95% Chebyshev (MVUE) UCL				34.52		97.5% Chebyshev (MVUE) UCL				36.27			
65	99% Chebyshev (MVUE) UCL				39.71									
66														
67	Nonparametric Distribution Free UCL Statistics													
68	Data appear to follow a Discernible Distribution at 5% Significance Level													
69														
70	Nonparametric Distribution Free UCLs													
71	95% CLT UCL				31.92		95% Jackknife UCL				31.94			
72	95% Standard Bootstrap UCL				31.95		95% Bootstrap-t UCL				32.06			
73	95% Hall's Bootstrap UCL				32.16		95% Percentile Bootstrap UCL				31.96			
74	95% BCA Bootstrap UCL				32.03									
75	90% Chebyshev(Mean, Sd) UCL				33.14		95% Chebyshev(Mean, Sd) UCL				34.36			
76	97.5% Chebyshev(Mean, Sd) UCL				36.06		99% Chebyshev(Mean, Sd) UCL				39.39			
77														
78	Suggested UCL to Use													
79	95% Student's-t UCL				31.94		or 95% Modified-t UCL				31.96			
80														
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.													
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)													
83	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.													
84	For additional insight the user may want to consult a statistician.													
85														

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 3:51:54 PM									
5	From File		Metals Soil.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10												
11	Zinc											
12												
13	General Statistics											
14	Total Number of Observations				67		Number of Distinct Observations				46	
15							Number of Missing Observations				0	
16	Minimum				11		Mean				133.3	
17	Maximum				4700		Median				45	
18	SD				569.5		Std. Error of Mean				69.57	
19	Coefficient of Variation				4.273		Skewness				8.053	
20												
21	Normal GOF Test											
22	Shapiro Wilk Test Statistic				0.176		Shapiro Wilk GOF Test					
23	5% Shapiro Wilk P Value				0		Data Not Normal at 5% Significance Level					
24	Lilliefors Test Statistic				0.443		Lilliefors GOF Test					
25	5% Lilliefors Critical Value				0.108		Data Not Normal at 5% Significance Level					
26	Data Not Normal at 5% Significance Level											
27												
28	Assuming Normal Distribution											
29	95% Normal UCL						95% UCLs (Adjusted for Skewness)					
30	95% Student's-t UCL				249.3		95% Adjusted-CLT UCL (Chen-1995)				320.8	
31							95% Modified-t UCL (Johnson-1978)				260.7	
32												
33	Gamma GOF Test											
34	A-D Test Statistic				11.99		Anderson-Darling Gamma GOF Test					
35	5% A-D Critical Value				0.798		Data Not Gamma Distributed at 5% Significance Level					
36	K-S Test Statistic				0.311		Kolmogrov-Smirnoff Gamma GOF Test					
37	5% K-S Critical Value				0.114		Data Not Gamma Distributed at 5% Significance Level					
38	Data Not Gamma Distributed at 5% Significance Level											
39												
40	Gamma Statistics											
41	k hat (MLE)				0.687		k star (bias corrected MLE)				0.666	
42	Theta hat (MLE)				194		Theta star (bias corrected MLE)				200	
43	nu hat (MLE)				92.06		nu star (bias corrected)				89.27	
44	MLE Mean (bias corrected)				133.3		MLE Sd (bias corrected)				163.3	
45							Approximate Chi Square Value (0.05)				68.49	
46	Adjusted Level of Significance				0.0464		Adjusted Chi Square Value				68.09	
47												
48	Assuming Gamma Distribution											
49	95% Approximate Gamma UCL (use when n>=50))				173.7		95% Adjusted Gamma UCL (use when n<50)				174.7	
50												

	A	B	C	D	E	F	G	H	I	J	K	L	
51	Lognormal GOF Test												
52	Shapiro Wilk Test Statistic				0.784		Shapiro Wilk Lognormal GOF Test						
53	5% Shapiro Wilk P Value				2.847E-13		Data Not Lognormal at 5% Significance Level						
54	Lilliefors Test Statistic				0.17		Lilliefors Lognormal GOF Test						
55	5% Lilliefors Critical Value				0.108		Data Not Lognormal at 5% Significance Level						
56	Data Not Lognormal at 5% Significance Level												
57													
58	Lognormal Statistics												
59	Minimum of Logged Data				2.398		Mean of logged Data				4.01		
60	Maximum of Logged Data				8.455		SD of logged Data				0.807		
61													
62	Assuming Lognormal Distribution												
63	95% H-UCL			94.21			90% Chebyshev (MVUE) UCL				101.3		
64	95% Chebyshev (MVUE) UCL			112.8			97.5% Chebyshev (MVUE) UCL				128.7		
65	99% Chebyshev (MVUE) UCL			160.1									
66													
67	Nonparametric Distribution Free UCL Statistics												
68	Data do not follow a Discernible Distribution (0.05)												
69													
70	Nonparametric Distribution Free UCLs												
71	95% CLT UCL			247.7			95% Jackknife UCL				249.3		
72	95% Standard Bootstrap UCL			245.3			95% Bootstrap-t UCL				1249		
73	95% Hall's Bootstrap UCL			714.9			95% Percentile Bootstrap UCL				268.8		
74	95% BCA Bootstrap UCL			347.7									
75	90% Chebyshev(Mean, Sd) UCL			342			95% Chebyshev(Mean, Sd) UCL				436.5		
76	97.5% Chebyshev(Mean, Sd) UCL			567.7			99% Chebyshev(Mean, Sd) UCL				825.5		
77													
78	Suggested UCL to Use												
79	95% Chebyshev (Mean, Sd) UCL			436.5									
80													
81	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.												
82	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)												
83	and Singh and Singh (2003). However, simulation results will not cover all Real World data sets.												
84	For additional insight the user may want to consult a statistician.												
85													

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation			1/9/2016 4:31:40 PM								
5	From File			SVOCs Soil.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	2-Methylnaphthalene											
11												
12	General Statistics											
13	Total Number of Observations				12		Number of Distinct Observations				6	
14	Number of Detects				1		Number of Non-Detects				11	
15	Number of Distinct Detects				1		Number of Distinct Non-Detects				5	
16												
17	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
18	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
19												
20	The data set for variable 2-Methylnaphthalene was not processed!											
21												
22												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation			1/9/2016 4:32:41 PM								
5	From File			SVOCs Soil.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	bis(2-ethylhexylphthalate)											
11												
12	General Statistics											
13	Total Number of Observations				12		Number of Distinct Observations				7	
14	Number of Detects				1		Number of Non-Detects				11	
15	Number of Distinct Detects				1		Number of Distinct Non-Detects				6	
16												
17	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
18	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
19												
20	The data set for variable bis(2-ethylhexylphthalate) was not processed!											
21												
22												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 3:39:59 PM									
5	From File		Pesticides Soil.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10	4,4'-DDT											
11												
12	General Statistics											
13	Total Number of Observations				5		Number of Distinct Observations				4	
14	Number of Detects				3		Number of Non-Detects				2	
15	Number of Distinct Detects				3		Number of Distinct Non-Detects				1	
16	Minimum Detect				0.0031		Minimum Non-Detect				0.002	
17	Maximum Detect				0.011		Maximum Non-Detect				0.002	
18	Variance Detects				1.9570E-5		Percent Non-Detects				40%	
19	Mean Detects				0.0059		SD Detects				0.00442	
20	Median Detects				0.0036		CV Detects				0.75	
21	Skewness Detects				1.707		Kurtosis Detects				N/A	
22	Mean of Logged Detects				-5.304		SD of Logged Detects				0.692	
23												
24	Warning: Data set has only 3 Detected Values.											
25	This is not enough to compute meaningful or reliable statistics and estimates.											
26												
27												
28	Note: Sample size is small (e.g., <10), if data are collected using ISM approach, you should use											
29	guidance provided in ITRC Tech Reg Guide on ISM (ITRC, 2012) to compute statistics of interest.											
30	For example, you may want to use Chebyshev UCL to estimate EPC (ITRC, 2012).											
31	Chebyshev UCL can be computed using the Nonparametric and All UCL Options of ProUCL 5.0											
32												
33	Normal GOF Test on Detects Only											
34	Shapiro Wilk Test Statistic				0.797		Shapiro Wilk GOF Test					
35	5% Shapiro Wilk Critical Value				0.767		Detected Data appear Normal at 5% Significance Level					
36	Lilliefors Test Statistic				0.365		Lilliefors GOF Test					
37	5% Lilliefors Critical Value				0.512		Detected Data appear Normal at 5% Significance Level					
38	Detected Data appear Normal at 5% Significance Level											
39												
40	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs											
41	Mean				0.00434		Standard Error of Mean				0.00186	
42	SD				0.00339		95% KM (BCA) UCL				N/A	
43	95% KM (t) UCL				0.0083		95% KM (Percentile Bootstrap) UCL				N/A	
44	95% KM (z) UCL				0.00739		95% KM Bootstrap t UCL				N/A	
45	90% KM Chebyshev UCL				0.00991		95% KM Chebyshev UCL				0.0124	
46	97.5% KM Chebyshev UCL				0.0159		99% KM Chebyshev UCL				0.0228	
47												
48	Gamma GOF Tests on Detected Observations Only											
49	Not Enough Data to Perform GOF Test											
50												

	A	B	C	D	E	F	G	H	I	J	K	L	
51	Gamma Statistics on Detected Data Only												
52					k hat (MLE)	3.071					k star (bias corrected MLE)	N/A	
53					Theta hat (MLE)	0.00192					Theta star (bias corrected MLE)	N/A	
54					nu hat (MLE)	18.43					nu star (bias corrected)	N/A	
55					MLE Mean (bias corrected)	N/A					MLE Sd (bias corrected)	N/A	
56													
57	Gamma Kaplan-Meier (KM) Statistics												
58					k hat (KM)	1.641					nu hat (KM)	16.41	
59											Adjusted Level of Significance (β)	0.0086	
60					Approximate Chi Square Value (16.41, α)	8.252					Adjusted Chi Square Value (16.41, β)	5.897	
61					95% Gamma Approximate KM-UCL (use when $n \geq 50$)	0.00863					95% Gamma Adjusted KM-UCL (use when $n < 50$)	0.0121	
62													
63	Lognormal GOF Test on Detected Observations Only												
64					Shapiro Wilk Test Statistic	0.837							Shapiro Wilk GOF Test
65					5% Shapiro Wilk Critical Value	0.767							Detected Data appear Lognormal at 5% Significance Level
66					Lilliefors Test Statistic	0.346							Lilliefors GOF Test
67					5% Lilliefors Critical Value	0.512							Detected Data appear Lognormal at 5% Significance Level
68	Detected Data appear Lognormal at 5% Significance Level												
69													
70	Lognormal ROS Statistics Using Imputed Non-Detects												
71					Mean in Original Scale	0.00381					Mean in Log Scale	-6.12	
72					SD in Original Scale	0.00424					SD in Log Scale	1.244	
73					95% t UCL (assumes normality of ROS data)	0.00786					95% Percentile Bootstrap UCL	0.00687	
74					95% BCA Bootstrap UCL	0.00741					95% Bootstrap t UCL	0.012	
75					95% H-UCL (Log ROS)	0.196							
76													
77	UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed												
78					KM Mean (logged)	-5.668					95% H-UCL (KM -Log)	0.0121	
79					KM SD (logged)	0.625					95% Critical H Value (KM-Log)	3.377	
80					KM Standard Error of Mean (logged)	0.342							
81													
82	DL/2 Statistics												
83	DL/2 Normal						DL/2 Log-Transformed						
84					Mean in Original Scale	0.00394					Mean in Log Scale	-5.946	
85					SD in Original Scale	0.00412					SD in Log Scale	1.005	
86					95% t UCL (Assumes normality)	0.00787					95% H-Stat UCL	0.0517	
87	DL/2 is not a recommended method, provided for comparisons and historical reasons												
88													
89	Nonparametric Distribution Free UCL Statistics												
90	Detected Data appear Normal Distributed at 5% Significance Level												
91													
92	Suggested UCL to Use												
93					95% KM (t) UCL	0.0083					95% KM (Percentile Bootstrap) UCL	N/A	
94	Warning: One or more Recommended UCL(s) not available!												
95													
96	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.												
97	Recommendations are based upon data size, data distribution, and skewness.												
98	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).												
99	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.												
100													

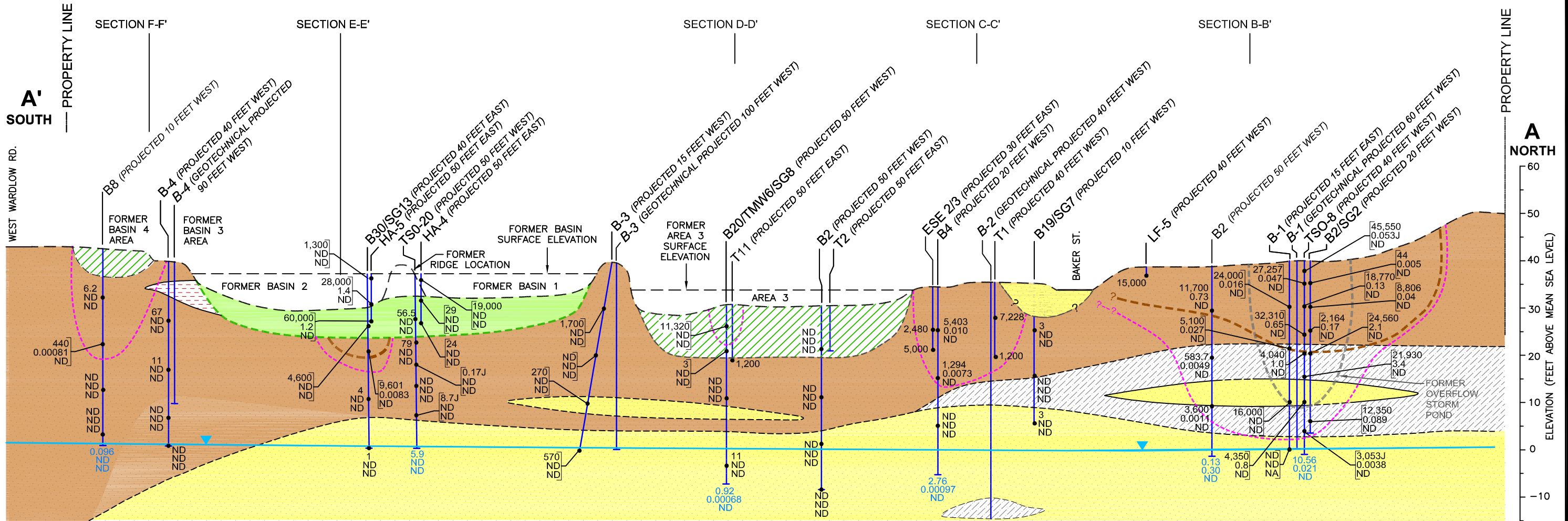
	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation			1/9/2016 3:40:50 PM								
5	From File			Pesticides Soil.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	Chlordane											
11												
12	General Statistics											
13	Total Number of Observations				5		Number of Distinct Observations				2	
14	Number of Detects				1		Number of Non-Detects				4	
15	Number of Distinct Detects				1		Number of Distinct Non-Detects				1	
16												
17	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
18	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
19												
20	The data set for variable Chlordane was not processed!											
21												
22												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 3:37:48 PM									
5	From File		PCBs Soil.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10	Aroclor 1254											
11												
12	General Statistics											
13	Total Number of Observations				8		Number of Distinct Observations				4	
14	Number of Detects				1		Number of Non-Detects				7	
15	Number of Distinct Detects				1		Number of Distinct Non-Detects				3	
16												
17	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
18	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
19												
20	The data set for variable Aroclor 1254 was not processed!											
21												
22												

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation		1/9/2016 3:38:50 PM									
5	From File		PCBs Soil.xls									
6	Full Precision		OFF									
7	Confidence Coefficient		95%									
8	Number of Bootstrap Operations		2000									
9												
10	Aroclor 1260											
11												
12	General Statistics											
13	Total Number of Observations				8		Number of Distinct Observations				4	
14	Number of Detects				1		Number of Non-Detects				7	
15	Number of Distinct Detects				1		Number of Distinct Non-Detects				3	
16												
17	Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!											
18	It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).											
19												
20	The data set for variable Aroclor 1260 was not processed!											
21												
22												

APPENDIX B

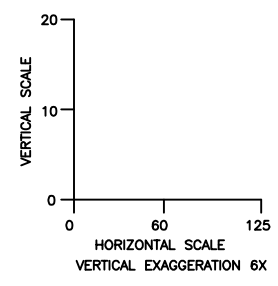
Tetra Tech Geologic Cross Sections



LEGEND

- BORING (B20) / GROUNDWATER MONITORING WELL (TMW6) LOCATION AND DESIGNATION
- GROUND SURFACE
- TRPH AND/OR TPH CONCENTRATION IN SOIL (mg/kg)
ND BENZENE CONCENTRATION IN SOIL (mg/kg)
ND 1,2-DICHLOROETHANE (1,2-DCA) CONCENTRATION IN SOIL (mg/kg)
- LITHOLOGIC CONTACT
- INTERPRETED TPH AND/OR TRPH 8,500 mg/kg EXTENT LINE
- INTERPRETED TOTAL LEAD EXTENT LINE
- GROUNDWATER ON MAY 18, 2015
- 0.92 TRPH AND/OR TPH CONCENTRATION IN GROUNDWATER (mg/L)
0.00068 BENZENE CONCENTRATION IN GROUNDWATER (mg/L)
ND 1,2-DCA CONCENTRATION IN GROUNDWATER (mg/L)
- B-1 AND HA-4** SOIL BORING AEMC (1991b)
- B2** SOIL BORING BRYCON (2010g; 2011e)
- T1 & LF-5** TRENCH AND SOIL BORING QST ENVIRONMENTAL, INC. (1998b)
- TSO-8** ATSI BORING LOCATION (APRIL 2015)
- B-2** GEOTECHNICAL BORING PGI (2015a)

- BIOREMEDIATED SOIL
- SOIL BEING BIOREMEDIATED
- CLAY - CL
- SILT - ML
- SILTY SAND - SM
- POORLY GRADED SAND - SP

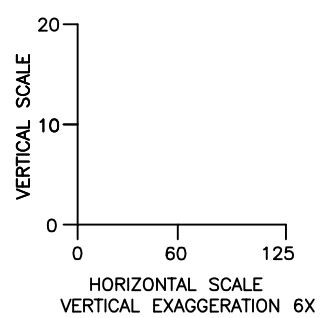
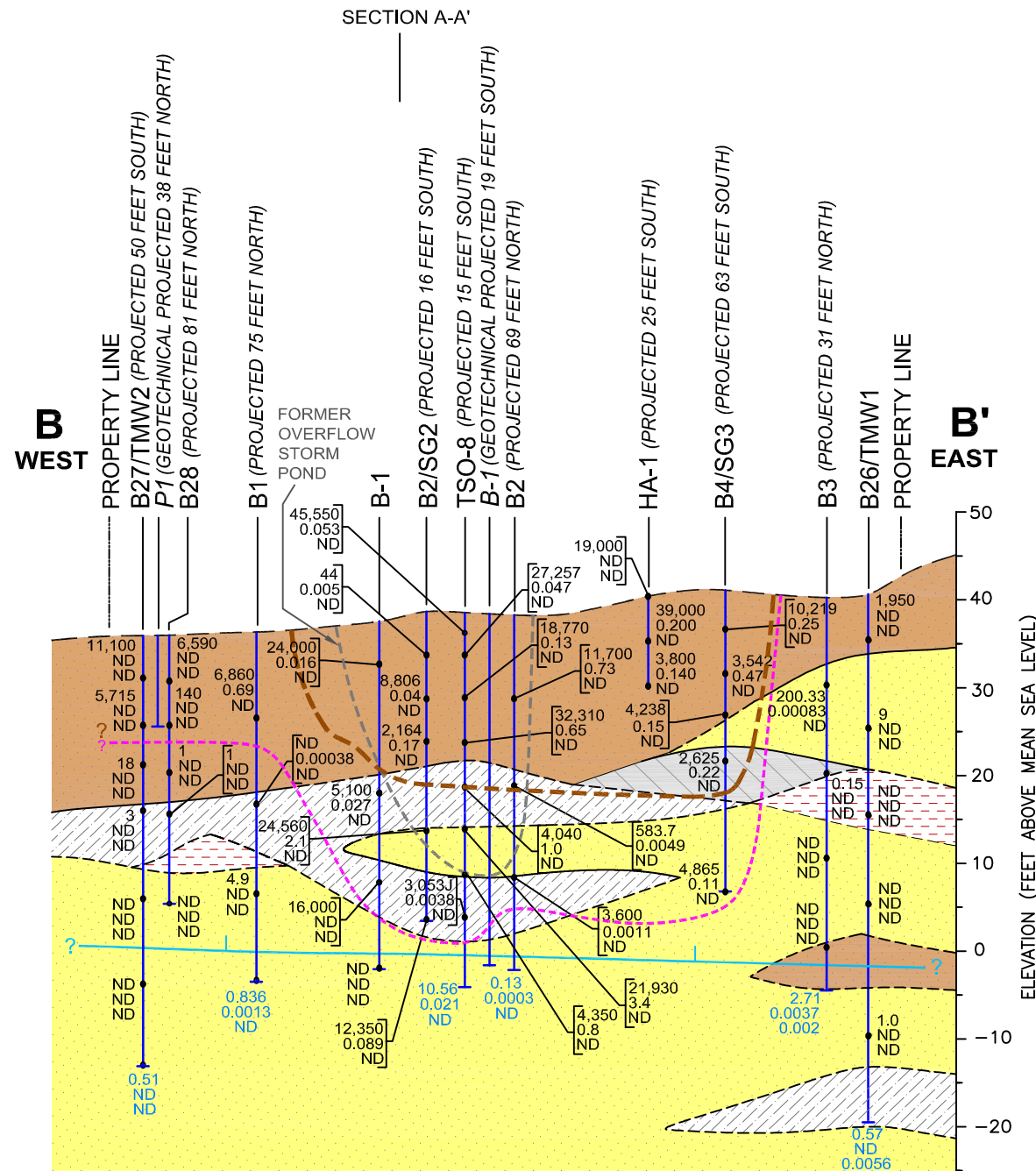


- mg/kg MILLIGRAMS PER KILOGRAM
- mg/L MILLIGRAMS PER LITER
- J ESTIMATED VALUE BY THE LABORATORY

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. SCHEMATIC SECTION LOCATION SHOWN ON FIGURE 2.
3. DEPTH TO GROUNDWATER OBTAINED ON MAY 18, 2015 FROM GROUNDWATER MONITORING WELLS BRYCON-MW1 TO BRYCON-MW5, ESE-MW1, ESE-MW2, 92-MW1, AND TMW1 TO TMW6.
4. THIS FIGURE SHOWS ONE INTERPRETATION OF THE DATA, OTHER INTERPRETATIONS ARE POSSIBLE.
5. CURRENT GROUND SURFACE ELEVATION MAY NOT BE THE SAME AS WHEN THE FORMER BORINGS WERE DRILLED.
6. BIOREMEDIATED SOILS LOCATION AND THICKNESS OBTAINED FROM FIGURE 3.
7. TPH CONCENTRATIONS IN GROUNDWATER FROM GRAB GROUNDWATER SAMPLE SPLIT COLLECTED IN APRIL 2015, AND GROUNDWATER MONITORING WELLS IN MAY 2015.
8. FORMER BASIN NUMBERS 3 AND 4 LOCATION AND DESIGNATION OBTAINED FROM ESE (1999).
9. THE LEAD CONCENTRATIONS ARE SHOWN ON FIGURE 6C, ALSO IN APPENDIX E.
10. TPH = TOTAL PETROLEUM HYDROCARBONS.
11. TRPH = TOTAL RECOVERABLE PETROLEUM HYDROCARBONS.
12. ND = NOT DETECTED ABOVE LABORATORY PRACTICAL QUANTITATION LIMIT.
13. INTERPRETED TPH AND/OR TRPH EXTENT LINES ARE BASED ON CONCENTRATIONS EXCEEDING 8,500 mg/kg, AND/OR TPH CONCENTRATIONS EXCEEDING THE SITE-SPECIFIC CLEANUP GOALS (SSCGs).
14. INTERPRETED TOTAL LEAD EXTENT LINES ARE BASED ON SSCG OF 80 mg/kg.
15. THE LEAD CONCENTRATIONS ARE SHOWN ON FIGURE 5.

TITLE: SCHEMATIC SECTION A-A'			
LOCATION: Oil Operators, Inc. Property 712 Baker Street, Long Beach, California 90806			
	APPROVED	JL	FIGURE 6A
	DRAFTED	CP	
	PROJECT#	T33843.01	
	DATE	9-4-15	



LEGEND

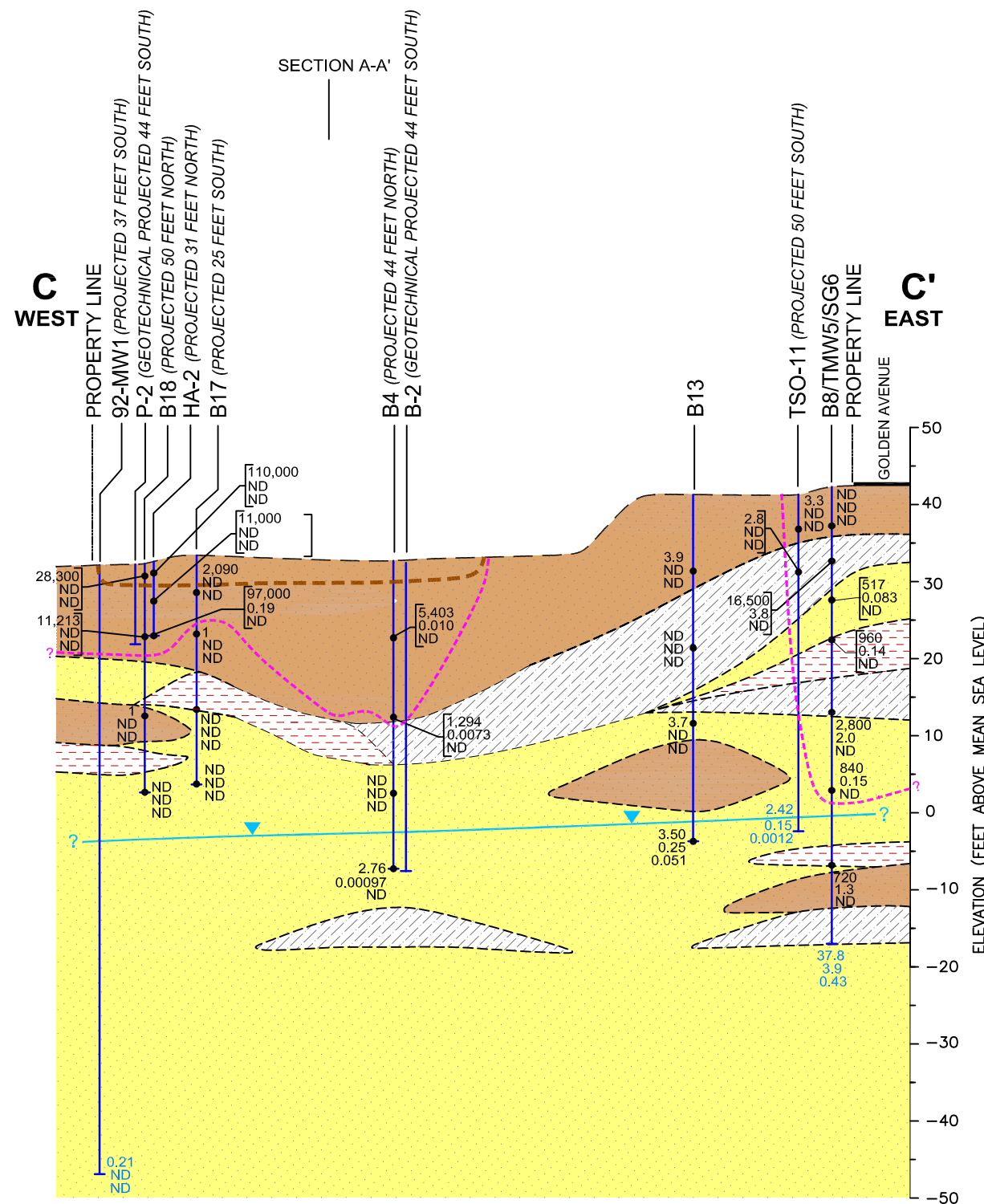
- BORING (B27) / GROUNDWATER MONITORING WELL (TMW2) LOCATION AND DESIGNATION
- GROUND SURFACE
- 11,100 — TRPH AND/OR TPH CONCENTRATION IN SOIL (mg/kg)
- ND — BENZENE CONCENTRATION IN SOIL (mg/kg)
- ND — 1,2-DCA CONCENTRATION IN SOIL (mg/kg)
- LITHOLOGIC CONTACT
- - - - INTERPRETED TPH AND/OR TRPH 8,500 mg/kg EXTENT LINE
- - - - INTERPRETED TOTAL LEAD EXTENT LINE
- GROUNDWATER ON MAY 18, 2015
- 0.51 — TRPH AND/OR TPH CONCENTRATION IN GROUNDWATER (mg/L)
- ND — BENZENE CONCENTRATION IN GROUNDWATER (mg/L)
- ND — 1,2-DCA CONCENTRATION IN GROUNDWATER (mg/L)
- B-1 AND HA-4 — SOIL BORING AEMC (1991b)
- B2 — SOIL BORING BRYCON (2010g; 2011e)
- T1 & LF-5 — TRENCH AND SOIL BORING QST ENVIRONMENTAL, INC. (1998b)
- TSO-8 — ATSI BORING LOCATION (APRIL 2015)
- B-2 — GEOTECHNICAL BORING PGI (2015a)
- CLAY - CL
- SILT - ML
- SILTY SAND - SM
- POORLY GRADED SAND - SP
- CLAYEY SAND - SC
- mg/kg — MILLIGRAMS PER KILOGRAM
- mg/L — MILLIGRAMS PER LITER

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. SCHEMATIC SECTION LOCATION SHOWN ON FIGURE 2.
3. DEPTH TO GROUNDWATER OBTAINED ON MAY 18, 2015 FROM GROUNDWATER MONITORING WELLS BRYCON-MW1 TO BRYCON-MW5, ESE-MW1, ESE-MW2, 92-MW1, AND TMW1 TO TMW6.
4. THIS FIGURE SHOWS ONE INTERPRETATION OF THE DATA, OTHER INTERPRETATIONS ARE POSSIBLE.
5. CURRENT GROUND SURFACE ELEVATION MAY NOT BE THE SAME AS WHEN THE FORMER BORINGS WERE DRILLED.
6. TPH CONCENTRATIONS IN GROUNDWATER FROM GRAB GROUNDWATER SAMPLE SPLIT COLLECTED IN APRIL 2015, AND GROUNDWATER MONITORING WELLS IN MAY 2015.
7. TPH = TOTAL PETROLEUM HYDROCARBONS.
8. TRPH = TOTAL RECOVERABLE PETROLEUM HYDROCARBONS.
9. ND = NOT DETECTED ABOVE LABORATORY PRACTICAL QUANTITATION LIMIT.
10. INTERPRETED TPH AND/OR TRPH EXTENT LINES ARE BASED ON CONCENTRATIONS EXCEEDING 8,500 mg/kg, AND/OR TPH CONCENTRATIONS EXCEEDING THE SITE-SPECIFIC CLEANUP GOALS (SSCGs).
11. INTERPRETED TOTAL LEAD EXTENT LINES ARE BASED ON SSCG OF 80 mg/kg.
12. THE LEAD CONCENTRATIONS ARE SHOWN ON FIGURE 5.

TITLE: SCHEMATIC SECTION B-B'			
LOCATION: Oil Operators, Inc. Property 712 Baker Street, Long Beach, California 90806			
APPROVED	JL	FIGURE	6B
DRAFTED	CP		
PROJECT#	T33843.01		
DATE	9-4-15		



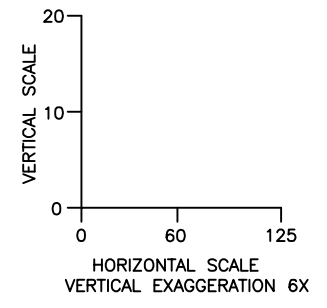


LEGEND

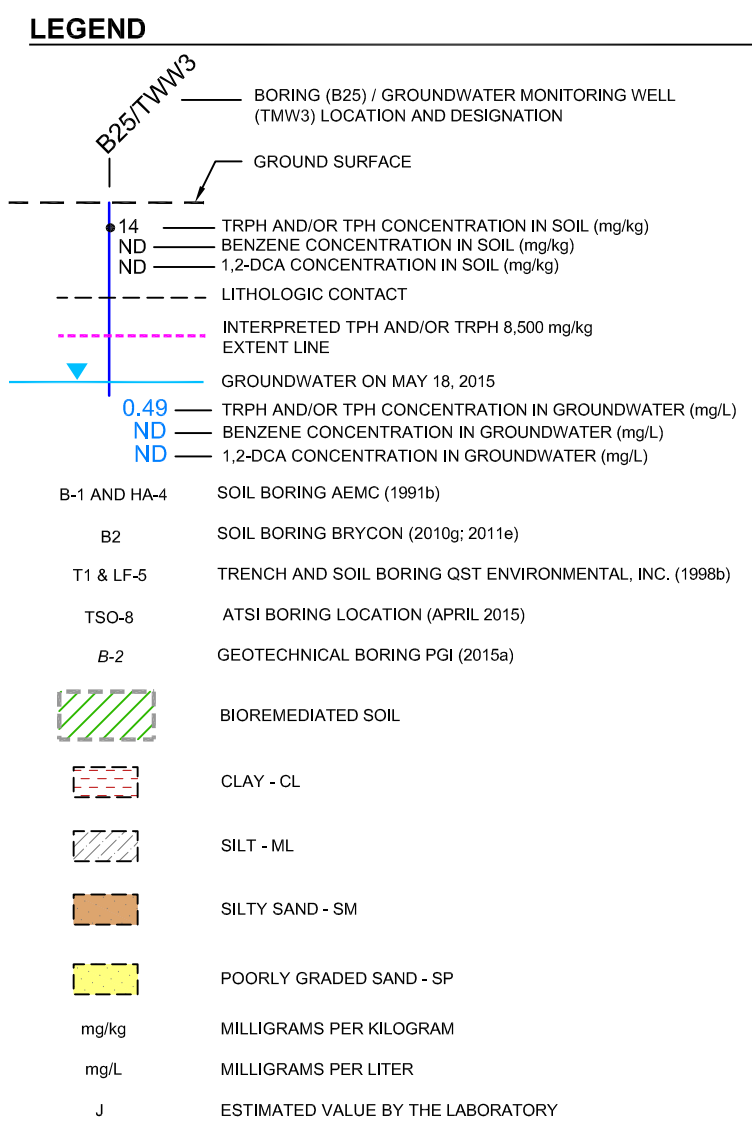
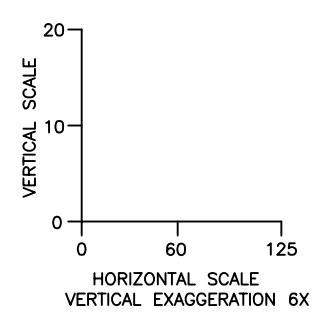
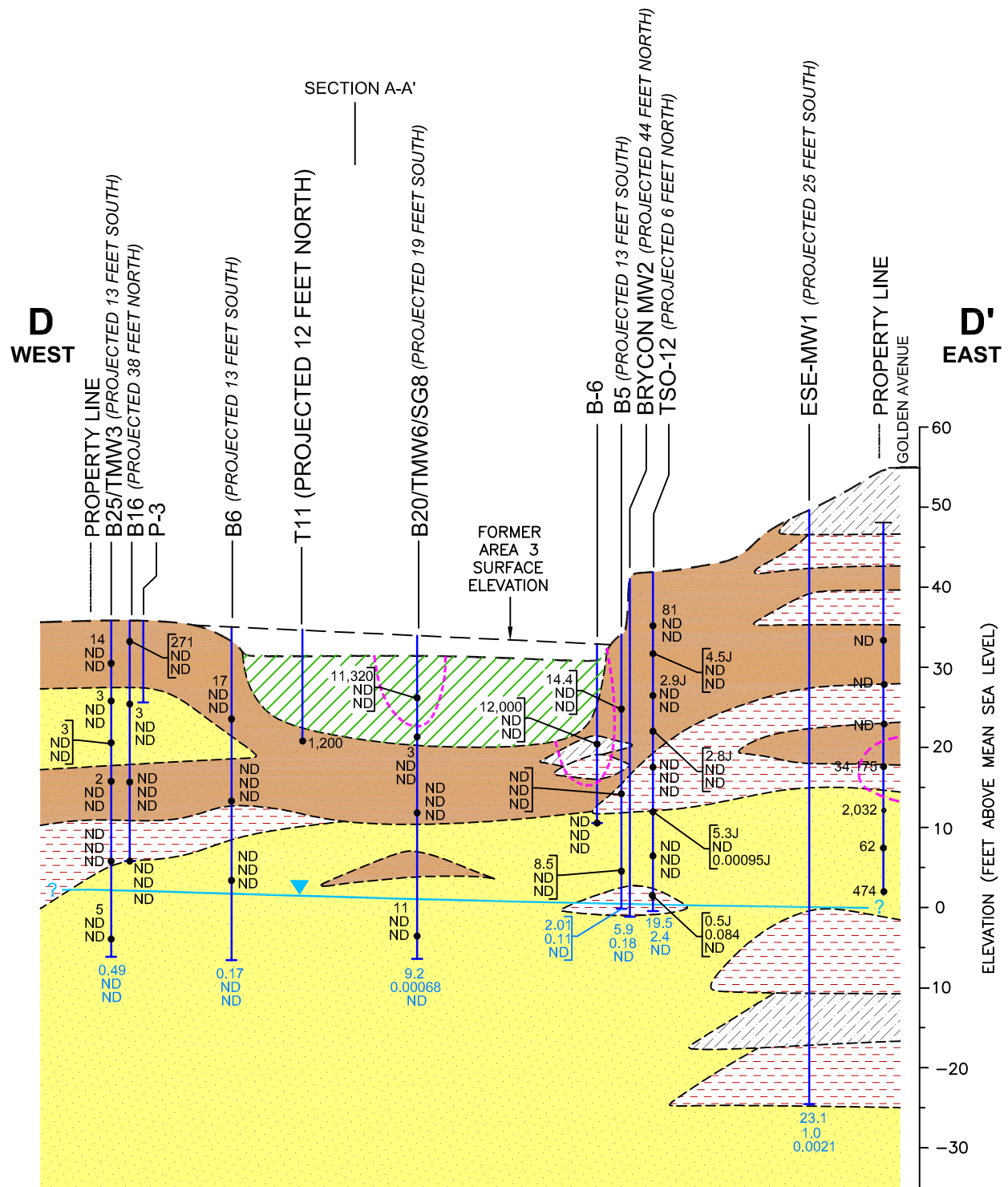
- B8/TMW5/SG6 — BORING (B8) / GROUNDWATER MONITORING WELL (TMW5) SOIL GAS (SG6) LOCATION AND DESIGNATION
- GROUND SURFACE
- 2,800 — TRPH AND/OR TPH CONCENTRATION IN SOIL (mg/kg)
- 2.0 — BENZENE CONCENTRATION IN SOIL (mg/kg)
- ND — 1,2-DCA CONCENTRATION IN SOIL (mg/kg)
- - - LITHOLOGIC CONTACT
- - - INTERPRETED TPH AND/OR TRPH 8,500 mg/kg EXTENT LINE
- - - INTERPRETED TOTAL LEAD EXTENT LINE
- GROUNDWATER ON MAY 18, 2015
- 37.8 — TRPH AND/OR TPH CONCENTRATION IN GROUNDWATER (mg/L)
- 3.9 — BENZENE CONCENTRATION IN GROUNDWATER (mg/L)
- 0.43 — 1,2-DCA CONCENTRATION IN GROUNDWATER (mg/L)
- B-1 AND HA-4 — SOIL BORING AEMC (1991b)
- B2 — SOIL BORING BRYCON (2010g; 2011e)
- T1 & LF-5 — TRENCH AND SOIL BORING QST ENVIRONMENTAL, INC. (1998b)
- TSO-8 — ATSI BORING LOCATION (APRIL 2015)
- B-2 — GEOTECHNICAL BORING PGI (2015a)
- CLAY - CL
- SILT - ML
- SILTY SAND - SM
- POORLY GRADED SAND - SP
- mg/kg — MILLIGRAMS PER KILOGRAM
- mg/L — MILLIGRAMS PER LITER

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. SCHEMATIC SECTION LOCATION SHOWN ON FIGURE 2.
3. DEPTH TO GROUNDWATER OBTAINED ON MAY 18, 2015 FROM GROUNDWATER MONITORING WELLS BRYCON-MW1 TO BRYCON-MW5, ESE-MW1, ESE-MW2, 92-MW1, AND TMW1 TO TMW6.
4. THIS FIGURE SHOWS ONE INTERPRETATION OF THE DATA, OTHER INTERPRETATIONS ARE POSSIBLE.
5. CURRENT GROUND SURFACE ELEVATION MAY NOT BE THE SAME AS WHEN THE FORMER BORINGS WERE DRILLED.
6. TPH CONCENTRATIONS IN GROUNDWATER FROM GRAB GROUNDWATER SAMPLE SPLIT COLLECTED IN APRIL 2015, AND GROUNDWATER MONITORING WELLS IN MAY 2015.
7. TPH = TOTAL PETROLEUM HYDROCARBONS.
8. TRPH = TOTAL RECOVERABLE PETROLEUM HYDROCARBONS.
9. ND = NOT DETECTED ABOVE LABORATORY PRACTICAL QUANTITATION LIMIT.
10. INTERPRETED TPH AND/OR TRPH EXTENT LINES ARE BASED ON CONCENTRATIONS EXCEEDING 8,500 mg/kg, AND/OR TPH CONCENTRATIONS EXCEEDING THE SITE-SPECIFIC CLEANUP GOALS (SSCGs).
11. THE LEAD CONCENTRATIONS ARE SHOWN ON FIGURE 5.



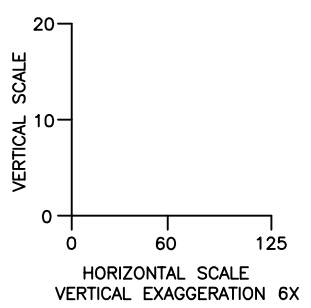
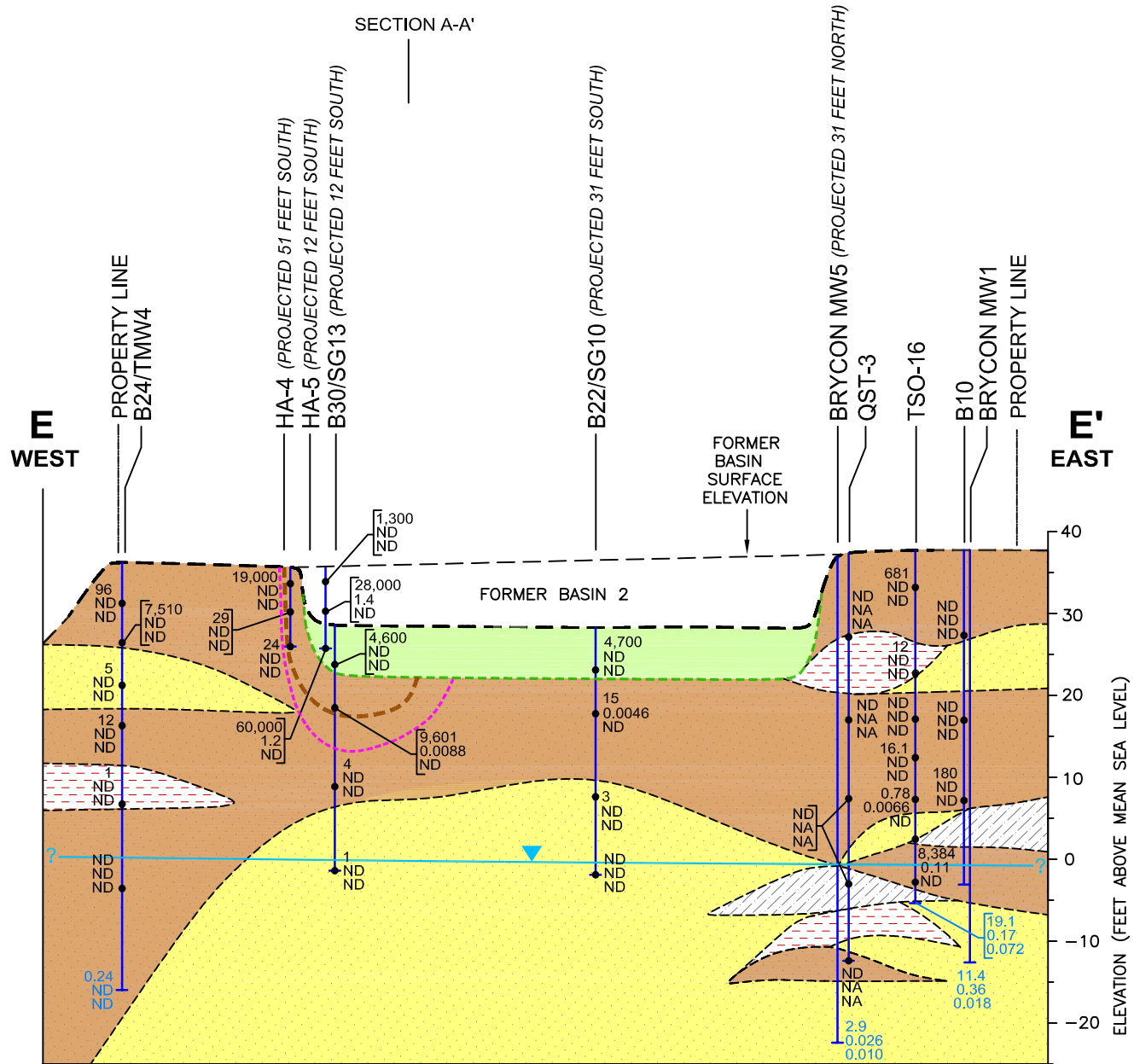
TITLE: SCHEMATIC SECTION C-C'			
LOCATION: Oil Operators, Inc. Property 712 Baker Street, Long Beach, California 90806			
	APPROVED	JL	FIGURE 6C
	DRAFTED	CP	
	PROJECT#	T33843.01	
	DATE	9-4-15	



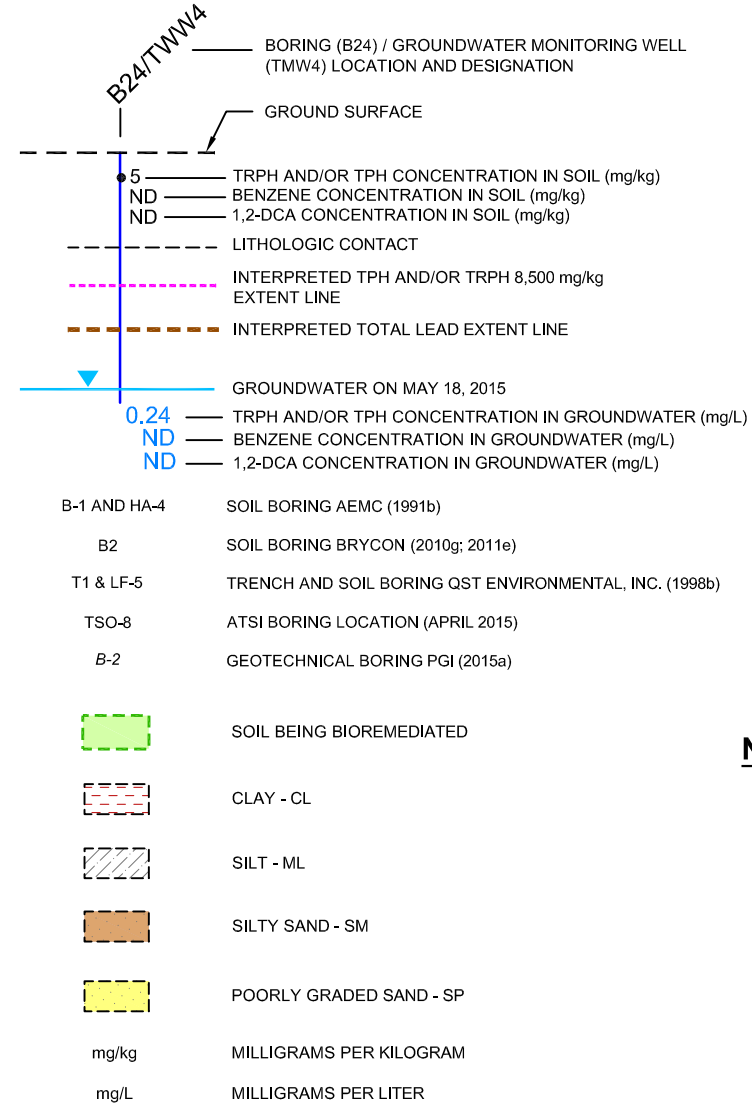
- ### NOTES
1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
 2. SCHEMATIC SECTION LOCATION SHOWN ON FIGURE 2.
 3. DEPTH TO GROUNDWATER OBTAINED ON MAY 18, 2015 FROM GROUNDWATER MONITORING WELLS BRYCON-MW1 TO BRYCON-MW5, ESE-MW1, ESE-MW2, 92-MW1, AND TMW1 TO TMW6.
 4. THIS FIGURE SHOWS ONE INTERPRETATION OF THE DATA, OTHER INTERPRETATIONS ARE POSSIBLE.
 5. CURRENT GROUND SURFACE ELEVATION MAY NOT BE THE SAME AS WHEN THE FORMER BORINGS WERE DRILLED.
 6. TPH CONCENTRATIONS IN GROUNDWATER FROM GRAB GROUNDWATER SAMPLE SPLIT COLLECTED IN APRIL 2015, AND GROUNDWATER MONITORING WELLS IN MAY 2015.
 7. TPH = TOTAL PETROLEUM HYDROCARBONS.
 8. TRPH = TOTAL RECOVERABLE PETROLEUM HYDROCARBONS.
 9. ND = NOT DETECTED ABOVE LABORATORY PRACTICAL QUANTITATION LIMIT.
 10. INTERPRETED TPH AND/OR TRPH EXTENT LINES ARE BASED ON CONCENTRATIONS EXCEEDING 8,500 mg/kg, AND/OR TPH CONCENTRATIONS EXCEEDING THE SITE-SPECIFIC CLEANUP GOALS (SCGs).
 11. THE LEAD CONCENTRATIONS ARE SHOWN ON FIGURE 5.

TITLE: SCHEMATIC SECTION D-D'			
LOCATION: Oil Operators, Inc. Property 712 Baker Street, Long Beach, California 90806			
APPROVED	JL	FIGURE	6D
DRAFTED	CP		
PROJECT#	T33843.01		
DATE	9-4-15		





LEGEND

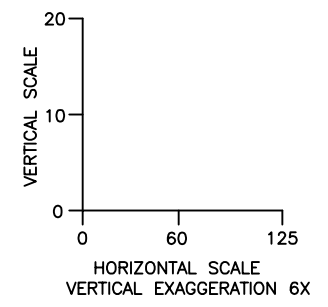
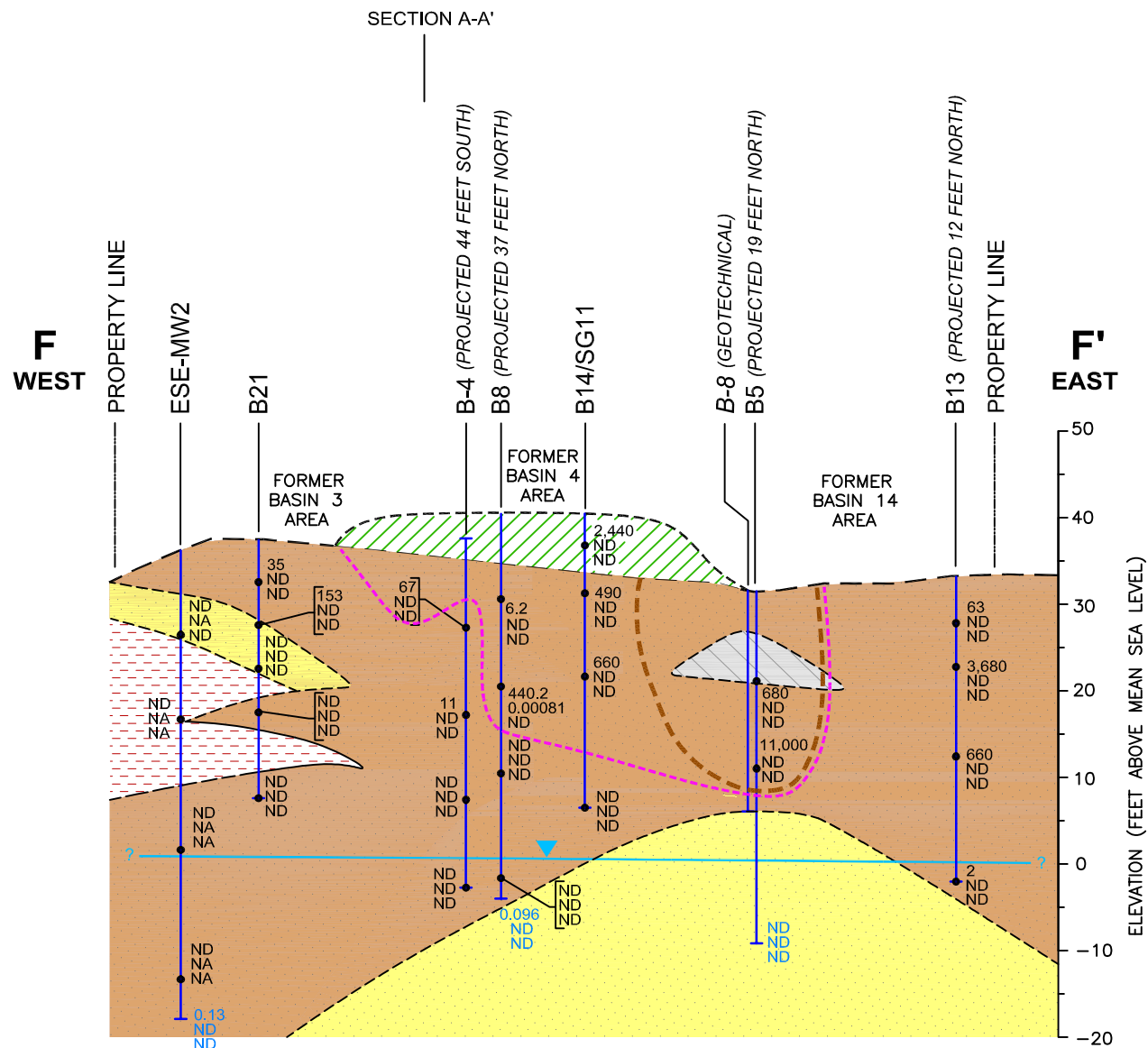


NOTES

- ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
- SCHEMATIC SECTION LOCATION SHOWN ON FIGURE 2.
- DEPTH TO GROUNDWATER OBTAINED ON MAY 18, 2015 FROM GROUNDWATER MONITORING WELLS BRYCON-MW1 TO BRYCON-MW5, ESE-MW1, ESE-MW2, 92-MW1, AND TMW1 TO TMW6.
- THIS FIGURE SHOWS ONE INTERPRETATION OF THE DATA, OTHER INTERPRETATIONS ARE POSSIBLE.
- CURRENT GROUND SURFACE ELEVATION MAY NOT BE THE SAME AS WHEN THE FORMER BORINGS WERE DRILLED.
- TPH CONCENTRATIONS IN GROUNDWATER FROM GRAB GROUNDWATER SAMPLE SPLIT COLLECTED IN APRIL 2015, AND GROUNDWATER MONITORING WELLS IN MAY 2015.
- TPH = TOTAL PETROLEUM HYDROCARBONS.
- TRPH = TOTAL RECOVERABLE PETROLEUM HYDROCARBONS.
- NA = NOT DETECTED ABOVE LABORATORY PRACTICAL QUANTITATION LIMIT.
- ND = NOT DETECTED ABOVE LABORATORY PRACTICAL QUANTITATION LIMIT.
- INTERPRETED TPH AND/OR TRPH EXTENT LINES ARE BASED ON CONCENTRATIONS EXCEEDING 8,500 mg/kg, AND/OR TPH CONCENTRATIONS EXCEEDING THE SITE-SPECIFIC CLEANUP GOALS (SSCGs).
- INTERPRETED TOTAL LEAD EXTENT LINES ARE BASED ON SSCG OF 80 mg/kg.
- THE LEAD CONCENTRATIONS ARE SHOWN ON FIGURE 5.

TITLE:			SCHEMATIC SECTION E-E'
LOCATION:			Oil Operators, Inc. Property 712 Baker Street, Long Beach, California 90806
APPROVED	JL	FIGURE	6E
DRAFTED	CP		
PROJECT#	T33843.01		
DATE	9-4-15		





LEGEND

- BORING (ESE) / GROUNDWATER MONITORING WELL (MW2) LOCATION AND DESIGNATION
- GROUND SURFACE
- TRPH AND/OR TPH CONCENTRATION IN SOIL (mg/kg)
- BENZENE CONCENTRATION IN SOIL (mg/kg)
- 1,2-DCA CONCENTRATION IN SOIL (mg/kg)
- LITHOLOGIC CONTACT
- INTERPRETED TPH AND/OR TRPH 8,500 mg/kg EXTENT LINE
- INTERPRETED TOTAL LEAD EXTENT LINE
- GROUNDWATER ON MAY 18, 2015
- TRPH AND/OR TPH CONCENTRATION IN GROUNDWATER (mg/L)
- BENZENE CONCENTRATION IN GROUNDWATER (mg/L)
- 1,2-DCA CONCENTRATION IN GROUNDWATER (mg/L)

B-1 AND HA-4	SOIL BORING AEMC (1991b)
B2	SOIL BORING BRYCON (2010g; 2011e)
T1 & LF-5	TRENCH AND SOIL BORING QST ENVIRONMENTAL, INC. (1998b)
TSO-8	ATSI BORING LOCATION (APRIL 2015)
B-2	GEOTECHNICAL BORING PGI (2015a)

- BIOREMEDIATED SOIL
- CLAY - CL
- SILTY SAND - SM
- POORLY GRADED SAND - SP
- CLAYEY SAND - SC

mg/kg MILLIGRAMS PER KILOGRAM
mg/L MILLIGRAMS PER LITER

- ### NOTES
1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
 2. SCHEMATIC SECTION LOCATION SHOWN ON FIGURE 2.
 3. DEPTH TO GROUNDWATER OBTAINED ON MAY 18, 2015 FROM GROUNDWATER MONITORING WELLS BRYCON-MW1 TO BRYCON-MW5, ESE-MW1, ESE-MW2, 92-MW1, AND TMW1 TO TMW6.
 4. THIS FIGURE SHOWS ONE INTERPRETATION OF THE DATA, OTHER INTERPRETATIONS ARE POSSIBLE.
 5. CURRENT GROUND SURFACE ELEVATION MAY NOT BE THE SAME AS WHEN THE FORMER BORINGS WERE DRILLED.
 6. BIOREMEDIATED SOILS LOCATION AND THICKNESS OBTAINED FROM FIGURE 3.
 7. TPH CONCENTRATIONS IN GROUNDWATER FROM GRAB GROUNDWATER SAMPLE SPLIT COLLECTED IN APRIL 2015, AND GROUNDWATER MONITORING WELLS IN MAY 2015.
 8. FORMER BASIN NUMBERS 3, 4 AND 14 LOCATION AND DESIGNATION OBTAINED FROM ESE (1999).
 9. TPH = TOTAL PETROLEUM HYDROCARBONS.
 10. TRPH = TOTAL RECOVERABLE PETROLEUM HYDROCARBONS.
 11. NA = SAMPLE NOT ANALYZED.
 12. ND = NOT DETECTED ABOVE LABORATORY PRACTICAL QUANTITATION LIMIT.
 13. INTERPRETED TPH AND/OR TRPH EXTENT LINES ARE BASED ON CONCENTRATIONS EXCEEDING 8,500 mg/kg, AND/OR TPH CONCENTRATIONS EXCEEDING THE SITE-SPECIFIC CLEANUP GOALS (SSCGs).
 14. INTERPRETED TOTAL LEAD EXTENT LINES ARE BASED ON SSCG OF 80 mg/kg.
 15. THE LEAD CONCENTRATIONS ARE SHOWN ON FIGURE 5.

TITLE: SCHEMATIC SECTION F-F'			
LOCATION: Oil Operators, Inc. Property 712 Baker Street, Long Beach, California 90806			
	APPROVED	JL	FIGURE 6F
	DRAFTED	CP	
	PROJECT#	T33843.01	
	DATE	9-4-15	

APPENDIX C

Johnson & Ettinger Model Results Soil Vapor

Department of Toxic Substances Control Vapor Intrusion Screening Model - Soil Gas

Scenario: Residential
Chemical: 1,2,4-Trimethylbenzene

DATA ENTRY SHEET

Reset to Defaults

Results Summary				
Soil Gas Conc. ($\mu\text{g}/\text{m}^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu\text{g}/\text{m}^3$)	Cancer Risk	Noncancer Hazard
5.44E+03	8.3E-04	4.5E+00	NA	6.2E-01

Soil Gas Concentration Data				
ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
95636	5.44E+03			1,2,4-Trimethylbenzene

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_s ($^{\circ}\text{C}$)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	17	SI		

MORE
↓

ENTER Vadose zone SCS soil type Lookup Soil	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SI	1.35	0.489	0.167	5

MORE
↓

Lookup Receptor Parameters

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour^{-1})
70	26	26	350	24 (NEW)	0.5 (NEW)

NEW=> Residential

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Soil Gas

Scenario: Residential
Chemical: Benzene

DATA ENTRY SHEET

Reset to Defaults

Results Summary				
Soil Gas Conc. ($\mu\text{g}/\text{m}^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu\text{g}/\text{m}^3$)	Cancer Risk	Noncancer Hazard
1.67E+05	4.7E-04	7.8E+01	8.0E-04	2.5E+01

Soil Gas Concentration Data				
ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
71432	1.67E+05			Benzene

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_s ($^{\circ}\text{C}$)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	457	17	SI		

MORE
↓

ENTER Vadose zone SCS soil type Lookup Soil	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SI	1.35	0.489	0.167	5

MORE
↓

Lookup Receptor Parameters

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour^{-1})
70	26	26	350	24	0.5

NEW=> Residential

(NEW) (NEW)

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Soil Gas

Scenario: Residential
Chemical: Ethylbenzene

DATA ENTRY SHEET

Reset to Defaults

Results Summary				
Soil Gas Conc. ($\mu\text{g}/\text{m}^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu\text{g}/\text{m}^3$)	Cancer Risk	Noncancer Hazard
4.02E+04	3.7E-04	1.5E+01	1.3E-05	1.4E-02

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
100414	4.02E+04			Ethylbenzene

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_s ($^{\circ}\text{C}$)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	457	17	SI		

MORE
↓

ENTER Vadose zone SCS soil type Lookup Soil	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SI	1.35	0.489	0.167	5

MORE
↓

Lookup Receptor Parameters

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour^{-1})
70	26	26	350	24 (NEW)	0.5 (NEW)

NEW=> Residential

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Soil Gas

Scenario: Residential
Chemical: Cumene

DATA ENTRY SHEET

Reset to Defaults

Results Summary				
Soil Gas Conc. ($\mu\text{g}/\text{m}^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu\text{g}/\text{m}^3$)	Cancer Risk	Noncancer Hazard
1.13E+03	3.3E-04	3.8E-01	NA	9.1E-04

Soil Gas Concentration Data				
ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
98828	1.13E+03			Cumene

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_s ($^{\circ}\text{C}$)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	457	17	SI		

MORE
↓

ENTER Vadose zone SCS soil type Lookup Soil	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SI	1.35	0.489	0.167	5

MORE
↓

Lookup Receptor Parameters

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour^{-1})
70	26	26	350	24 (NEW)	0.5 (NEW)

NEW=> Residential

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Soil Gas

Scenario: Residential
Chemical: Naphthalene

DATA ENTRY SHEET

Reset to Defaults

Results Summary				
Soil Gas Conc. ($\mu\text{g}/\text{m}^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu\text{g}/\text{m}^3$)	Cancer Risk	Noncancer Hazard
4.10E+02	8.3E-04	3.4E-01	4.1E-06	1.1E-01

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
91203	4.10E+02			Naphthalene

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_s ($^{\circ}\text{C}$)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	17	SI		

MORE
↓

ENTER Vadose zone SCS soil type Lookup Soil	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SI	1.35	0.489	0.167	5

MORE
↓

Lookup Receptor Parameters

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour^{-1})
70	26	26	350	24 (NEW)	0.5 (NEW)

NEW=> Residential

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Soil Gas

Scenario: Residential
Chemical: n-Butylbenzene

DATA ENTRY SHEET

Reset to Defaults

Soil Gas Concentration Data				
ENTER	ENTER	OR	ENTER	Chemical
Chemical CAS No. (numbers only, no dashes)	Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)		Soil gas conc., C_g (ppmv)	
104518	7.24E+02			n-Butylbenzene

Results Summary				
Soil Gas Conc. ($\mu\text{g}/\text{m}^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu\text{g}/\text{m}^3$)	Cancer Risk	Noncancer Hazard
7.24E+02	3.0E-04	2.2E-01	NA	1.2E-03

MESSAGE: Risk and/or hazard quotient is based on route-to-route extrapolation.

MORE
↓

ENTER	ENTER	ENTER	ENTER	OR	ENTER
Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	Soil gas sampling depth below grade, L_s (cm)	Average soil temperature, T_s ($^{\circ}\text{C}$)	Vadose zone SCS soil type (used to estimate soil vapor permeability)		User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	457	17	SI		

MORE
↓

ENTER	ENTER	ENTER	ENTER	ENTER
Vadose zone SCS soil type Lookup Soil	Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	Vadose zone soil total porosity, n^V (unitless)	Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SI	1.35	0.489	0.167	5

MORE
↓

Lookup Receptor Parameters

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Averaging time for carcinogens, AT_C (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)	Exposure Time ET (hrs/day)	Air Exchange Rate ACH (hour) ⁻¹
70	26	26	350	24 (NEW)	0.5 (NEW)

NEW=> Residential

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Soil Gas

Scenario: Residential
Chemical: n-Propylbenzene

DATA ENTRY SHEET

Reset to Defaults

Results Summary				
Soil Gas Conc. ($\mu\text{g}/\text{m}^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu\text{g}/\text{m}^3$)	Cancer Risk	Noncancer Hazard
4.20E+03	8.3E-04	3.5E+00	NA	3.3E-03

Soil Gas Concentration Data				
ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
103651	4.20E+03			n-Propylbenzene

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_s ($^{\circ}\text{C}$)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	152	17	SI		

MORE
↓

ENTER Vadose zone SCS soil type Lookup Soil	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SI	1.35	0.489	0.167	5

MORE
↓

Lookup Receptor Parameters

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour^{-1})
70	26	26	350	24 (NEW)	0.5 (NEW)

NEW=> Residential

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Soil Gas

Scenario: Residential
Chemical: Toluene

DATA ENTRY SHEET

Reset to Defaults

Results Summary				
Soil Gas Conc. ($\mu\text{g}/\text{m}^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu\text{g}/\text{m}^3$)	Cancer Risk	Noncancer Hazard
1.67E+04	4.1E-04	6.9E+00	NA	2.2E-02

ENTER	Soil Gas Concentration Data		ENTER	
Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
108883	1.67E+04			Toluene

MORE
↓

ENTER	ENTER	ENTER	ENTER	OR	ENTER
Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	Soil gas sampling depth below grade, L_s (cm)	Average soil temperature, T_s ($^{\circ}\text{C}$)	Vadose zone SCS soil type (used to estimate soil vapor permeability)		User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	457	17	SI		

MORE
↓

ENTER	ENTER	ENTER	ENTER	ENTER
Vadose zone SCS soil type Lookup Soil	Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	Vadose zone soil total porosity, n^v (unitless)	Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)	Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SI	1.35	0.489	0.167	5

MORE
↓

Lookup Receptor Parameters

ENTER	ENTER	ENTER	ENTER	ENTER	ENTER
Averaging time for carcinogens, AT_C (yrs)	Averaging time for noncarcinogens, AT_{NC} (yrs)	Exposure duration, ED (yrs)	Exposure frequency, EF (days/yr)	Exposure Time ET (hrs/day)	Air Exchange Rate ACH (hour^{-1})
70	26	26	350	24 (NEW)	0.5 (NEW)

NEW=> Residential

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Soil Gas

Scenario: Residential
Chemical: o-Xylene

DATA ENTRY SHEET

Results Summary				
Soil Gas Conc. ($\mu\text{g}/\text{m}^3$)	Attenuation Factor (unitless)	Indoor Air Conc. ($\mu\text{g}/\text{m}^3$)	Cancer Risk	Noncancer Hazard
5.11E+04	3.7E-04	1.9E+01	NA	1.8E-01

Reset to Defaults

Soil Gas Concentration Data				
ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu\text{g}/\text{m}^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
95476	5.11E+04			o-Xylene

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_s ($^{\circ}\text{C}$)	ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)
15	457	17	SI		

MORE
↓

ENTER Vadose zone SCS soil type Lookup Soil	ENTER Vadose zone soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
SI	1.35	0.489	0.167	5

MORE
↓

Lookup Receptor
Parameters

ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour^{-1})
70	26	26	350	24 (NEW)	0.5 (NEW)

NEW=> Residential

END

APPENDIX D

Johnson & Ettinger Model Results Groundwater

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **1,1,2,2-Tetrachloroethane**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)	ENTER Chemical
79345	4.40E-01	1,1,2,2-Tetrachloroethane

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
4.17E+00	3.5E-05	1.5E-04	3.0E-09	2.0E-06	NA	NA

MESSAGE: Risk and/or HQ (or risk-based groundwater concentration) is based on route-to-route extrapolation.
MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T_s ($^{\circ}\text{C}$)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	1433	SI	17	5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time, ET (hrs/day)	ENTER Air Exchange Rate, ACH (hour^{-1})
1.0E-06	1	70	26	26	350	24	0.5
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

NEW=> Residential

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **1,1,2-Trichloroethane**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C _{source}) (µg/m ³)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C _{building}) (µg/m ³)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10 ⁻⁶ (µg/L)	Noncancer HQ = 1 (µg/L)
5.78E+01	3.3E-05	1.9E-03	1.1E-08	9.3E-03	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C _w (µg/L)	Chemical
79005	2.60E+00	1,1,2-Trichloroethane

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L _F (15 or 200 cm)	ENTER Depth below grade to water table, L _{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T _s (°C)
15	1433	SI	17

ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q _{soil} (L/m)
5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k _v (cm ²)	ENTER Vadose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ _b ^v (g/cm ³)	ENTER Vadose zone soil total porosity, n ^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ _w ^v (cm ³ /cm ³)
SI			SI	1.35	0.489	0.167

MORE ↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT _C (yrs)	ENTER Averaging time for noncarcinogens, AT _{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time (hrs/day)	ENTER Air Exchange Rate ACH (hour) ⁻¹
1.0E-06	1	70	26	26	350	24 (NEW)	0.5 (NEW)
Used to calculate risk-based groundwater concentration.							

NEW=> Residential

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **1,2,4-Trimethylbenzene**

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES

Reset to Defaults

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g}/\text{m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) ($\mu\text{g}/\text{m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g}/\text{L}$)	Noncancer HQ = 1 ($\mu\text{g}/\text{L}$)
1.51E+05	2.4E-05	3.6E+00	NA	4.9E-01	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W ($\mu\text{g}/\text{L}$)	Chemical
95636	1.00E+03	1,2,4-Trimethylbenzene

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S ($^{\circ}\text{C}$)
15	1433	SI	17

ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour^{-1})
1.0E-06	1	70	26	26	350	24 (NEW)	0.5 (NEW)
Used to calculate risk-based groundwater concentration.							

END

NEW=> Residential

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES

Scenario: **Residential**
Chemical: **1,2-Dibromoethane (ethylene dibromide)**

Reset to Defaults

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C _w (µg/L)	Chemical
106934	2.45E+02	1,2-Dibromoethane (ethylene dibromide)

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C _{source}) (µg/m ³)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C _{building}) (µg/m ³)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10 ⁻⁶ (µg/L)	Noncancer HQ = 1 (µg/L)
4.18E+03	2.7E-05	1.1E-01	2.4E-05	1.4E-01	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L _F (15 or 200 cm)	ENTER Depth below grade to water table, L _{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T _S (°C)
15	1433	SI	17

ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q _{soil} (L/m)
5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k _v (cm ²)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ _b ^v (g/cm ³)	ENTER Vadose zone soil total porosity, n ^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ _w ^v (cm ³ /cm ³)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT _C (yrs)	ENTER Averaging time for noncarcinogens, AT _{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour) ⁻¹
1.0E-06	1	70	26	26	350	24	0.5
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

NEW=> Residential

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **1,2-Dichloroethane**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W ($\mu\text{g/L}$)	ENTER Chemical
107062	4.30E+02	1,2-Dichloroethane

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
1.44E+04	3.8E-05	5.5E-01	5.1E-06	7.5E-02	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T_S ($^{\circ}\text{C}$)
15	1433	SI	17

ENTER
Average vapor flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time, ET (hrs/day)	ENTER Air Exchange Rate, ACH (hour^{-1})
1.0E-06	1	70	26	26	350	24 (NEW)	0.5 (NEW)
Used to calculate risk-based groundwater concentration.							

END

NEW=> Residential

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **1,3,5-Trimethylbenzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C _{source}) (µg/m ³)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C _{building}) (µg/m ³)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10 ⁻⁶ (µg/L)	Noncancer HQ = 1 (µg/L)
7.30E+04	2.3E-05	1.7E+00	NA	4.6E-02	NA	NA

MESSAGE: Risk and/or HQ (or risk-based groundwater concentration) is based on route-to-route extrapolation.
MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C _w (µg/L)	Chemical
108678	3.40E+02	1,3,5-Trimethylbenzene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L _F (15 or 200 cm)	ENTER Depth below grade to water table, L _{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T _S (°C)
15	1433	SI	17

ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q _{soil} (L/m)
5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k _v (cm ²)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ _b ^v (g/cm ³)	ENTER Vadose zone soil total porosity, n ^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ _w ^v (cm ³ /cm ³)
SI			SI	1.35	0.489	0.167

MORE ↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT _C (yrs)	ENTER Averaging time for noncarcinogens, AT _{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time, ET (hrs/day)	ENTER Air Exchange Rate, ACH (hour) ⁻¹
1.0E-06	1	70	26	26	350	24 (NEW)	0.5 (NEW)
Used to calculate risk-based groundwater concentration.							

NEW=> Residential

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **1,4-Dichlorobenzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)	ENTER Chemical
106467	4.00E-01	1,4-Dichlorobenzene

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
2.41E+01	2.3E-05	5.6E-04	2.2E-09	6.7E-07	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_f (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_s ($^{\circ}\text{C}$)
15	1433	SI	17

ENTER
Average vapor
flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour^{-1})
1.0E-06	1	70	26	26	350	24	0.5
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

NEW=> Residential

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **Methylethylketone (2-butanone)**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C _{source}) (µg/m ³)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C _{building}) (µg/m ³)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10 ⁻⁶ (µg/L)	Noncancer HQ = 1 (µg/L)
2.11E+02	1.1E-04	2.2E-02	NA	4.3E-06	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C _w (µg/L)	Chemical
78933	1.30E+02	Methylethylketone (2-butanone)

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L _F (15 or 200 cm)	ENTER Depth below grade to water table, L _{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T _S (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q _{soil} (L/m)
15	1433	SI	17	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k _v (cm ²)	ENTER Vadose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ _b ^v (g/cm ³)	ENTER Vadose zone soil total porosity, n ^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ _w ^v (cm ³ /cm ³)
SI			SI	1.35	0.489	0.167

MORE ↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT _C (yrs)	ENTER Averaging time for noncarcinogens, AT _{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time, ET (hrs/day)	ENTER Air Exchange Rate, ACH (hour) ⁻¹
1.0E-06	1	70	26	26	350	24 (NEW)	0.5 (NEW)
Used to calculate risk-based groundwater concentration.							

END

NEW=> Residential

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **Acetone**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C _{source}) (µg/m ³)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C _{building}) (µg/m ³)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10 ⁻⁶ (µg/L)	Noncancer HQ = 1 (µg/L)
4.36E+02	1.4E-04	6.1E-02	NA	1.9E-06	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C _w (µg/L)	Chemical
67641	4.20E+02	Acetone

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L _F (15 or 200 cm)	ENTER Depth below grade to water table, L _{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T _s (°C)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q _{soil} (L/m)
15	1433	SI	17	5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k _v (cm ²)	ENTER Vadose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ _b ^v (g/cm ³)	ENTER Vadose zone soil total porosity, n ^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ _w ^v (cm ³ /cm ³)
SI			SI	1.35	0.489	0.167

MORE ↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT _C (yrs)	ENTER Averaging time for noncarcinogens, AT _{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time, ET (hrs/day)	ENTER Air Exchange Rate, ACH (hour) ⁻¹
1.0E-06	1	70	26	26	350	24 (NEW)	0.5 (NEW)
Used to calculate risk-based groundwater concentration.							

END

NEW=> Residential

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **Benzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C _{source}) (µg/m ³)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C _{building}) (µg/m ³)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10 ⁻⁶ (µg/L)	Noncancer HQ = 1 (µg/L)
6.25E+05	3.4E-05	2.1E+01	2.2E-04	6.9E+00	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C _w (µg/L)	Chemical
71432	3.90E+03	Benzene

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MESSAGE: See VLOOKUP table comments on chemical properties and/or toxicity criteria for this chemical.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L _F (15 or 200 cm)	ENTER Depth below grade to water table, L _{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T _S (°C)
15	1433	SI	17

ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q _{soil} (L/m)
5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k _v (cm ²)	ENTER Vadose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ _b ^v (g/cm ³)	ENTER Vadose zone soil total porosity, n ^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ _w ^v (cm ³ /cm ³)
SI			SI	1.35	0.489	0.167

MORE ↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT _C (yrs)	ENTER Averaging time for noncarcinogens, AT _{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time (hrs/day)	ENTER Air Exchange Rate ACH (hour) ⁻¹
1.0E-06	1	70	26	26	350	24 (NEW)	0.5 (NEW)
Used to calculate risk-based groundwater concentration.							

NEW=> Residential

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **Chlorobenzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)	ENTER Chemical
108907	8.40E-01	Chlorobenzene

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
6.98E+01	2.9E-05	2.0E-03	NA	3.9E-05	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T_S ($^{\circ}\text{C}$)
15	1433	SI	17

ENTER
Average vapor flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time, ET (hrs/day)	ENTER Air Exchange Rate, ACH (hour^{-1})
1.0E-06	1	70	26	26	350	24 (NEW)	0.5 (NEW)
Used to calculate risk-based groundwater concentration.							

END

NEW=> Residential

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **Chloroform**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)	ENTER Chemical
67663	1.20E+00	Chloroform

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
1.31E+02	3.0E-05	4.0E-03	3.3E-08	3.9E-05	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_f (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_s ($^{\circ}\text{C}$)
15	1433	SI	17

ENTER
Average vapor
flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour^{-1})
1.0E-06	1	70	26	26	350	24 (NEW)	0.5 (NEW)
Used to calculate risk-based groundwater concentration.							

NEW=> Residential

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **cis-1,2-Dichloroethylene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)	ENTER Chemical
156592	1.80E+00	cis-1,2-Dichloroethylene

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
2.16E+02	3.5E-05	7.5E-03	NA	1.0E-03	NA	NA

MESSAGE: Risk and/or HQ (or risk-based groundwater concentration) is based on route-to-route extrapolation.
MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T_S ($^{\circ}\text{C}$)	ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
15	1433	SI	17	5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time, ET (hrs/day)	ENTER Air Exchange Rate, ACH (hour^{-1})
1.0E-06	1	70	26	26	350	24	0.5
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

NEW=> Residential

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES

Scenario: **Residential**
Chemical: **Diisopropyl ether (DIPE)**

Reset to Defaults

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)	ENTER Chemical
108203	2.50E+00	Diisopropyl ether (DIPE)

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
1.87E+02	2.6E-05	4.9E-03	NA	6.8E-06	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_f (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_s ($^{\circ}\text{C}$)
15	1433	SI	17

ENTER
Average vapor
flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour^{-1})
1.0E-06	1	70	26	26	350	24	0.5
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

NEW=> Residential

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **Ethylbenzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W ($\mu\text{g/L}$)	ENTER Chemical
100414	1.70E+03	Ethylbenzene

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
3.52E+05	2.6E-05	9.2E+00	8.2E-06	8.8E-03	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T_S ($^{\circ}\text{C}$)
15	1433	SI	17

ENTER
Average vapor flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time, ET (hrs/day)	ENTER Air Exchange Rate, ACH (hour^{-1})
1.0E-06	1	70	26	26	350	24	0.5
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

NEW=> Residential

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **m-Xylene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C _{source}) (µg/m ³)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C _{building}) (µg/m ³)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10 ⁻⁶ (µg/L)	Noncancer HQ = 1 (µg/L)
1.11E+06	2.6E-05	2.9E+01	NA	2.8E-01	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C _w (µg/L)	Chemical
108383	5.90E+03	m-Xylene

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L _F (15 or 200 cm)	ENTER Depth below grade to water table, L _{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T _S (°C)
15	1433	SI	17

ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q _{soil} (L/m)
5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k _v (cm ²)	ENTER Vadose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ _b ^v (g/cm ³)	ENTER Vadose zone soil total porosity, n ^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ _w ^v (cm ³ /cm ³)
SI			SI	1.35	0.489	0.167

MORE ↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT _C (yrs)	ENTER Averaging time for noncarcinogens, AT _{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time, ET (hrs/day)	ENTER Air Exchange Rate, ACH (hour) ⁻¹
1.0E-06	1	70	26	26	350	24 (NEW)	0.5 (NEW)
Used to calculate risk-based groundwater concentration.							

END

NEW=> Residential

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **Naphthalene**

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES

Reset to Defaults

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g}/\text{m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. ($C_{building}$) ($\mu\text{g}/\text{m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g}/\text{L}$)	Noncancer HQ = 1 ($\mu\text{g}/\text{L}$)
2.64E+03	3.7E-05	9.9E-02	1.2E-06	3.1E-02	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W ($\mu\text{g}/\text{L}$)	Chemical
91203	2.60E+02	Naphthalene

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S ($^{\circ}\text{C}$)
15	1433	SI	17

ENTER
Average vapor
flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor
Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour^{-1})
1.0E-06	1	70	26	26	350	24 (NEW)	0.5 (NEW)
Used to calculate risk-based groundwater concentration.							

END

NEW=> Residential

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **n-Butylbenzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W ($\mu\text{g/L}$)	ENTER Chemical
104518	5.50E+01	n-Butylbenzene

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
2.12E+04	2.0E-05	4.2E-01	NA	2.3E-03	NA	NA

MESSAGE: Risk and/or HQ (or risk-based groundwater concentration) is based on route-to-route extrapolation.
MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T_S ($^{\circ}\text{C}$)
15	1433	SI	17

ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ_b^V (g/cm^3)	ENTER Vadose zone soil total porosity, n^V (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^V (cm^3/cm^3)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time, ET (hrs/day)	ENTER Air Exchange Rate, ACH (hour^{-1})
1.0E-06	1	70	26	26	350	24	0.5
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

NEW=> Residential

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **n-Propylbenzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C _{source}) (µg/m ³)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C _{building}) (µg/m ³)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10 ⁻⁶ (µg/L)	Noncancer HQ = 1 (µg/L)
3.91E+04	2.3E-05	9.0E-01	NA	8.6E-04	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C _w (µg/L)	Chemical
103651	1.50E+02	n-Propylbenzene

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L _F (15 or 200 cm)	ENTER Depth below grade to water table, L _{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T _S (°C)
15	1433	SI	17

ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q _{soil} (L/m)
5

MORE ↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k _v (cm ²)	ENTER Vadose zone SCS soil type (Lookup Soil)	ENTER Vadose zone soil dry bulk density, ρ _b ^v (g/cm ³)	ENTER Vadose zone soil total porosity, n ^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ _w ^v (cm ³ /cm ³)
SI			SI	1.35	0.489	0.167

MORE ↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT _C (yrs)	ENTER Averaging time for noncarcinogens, AT _{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time, ET (hrs/day)	ENTER Air Exchange Rate, ACH (hour) ⁻¹
1.0E-06	1	70	26	26	350	24 (NEW)	0.5 (NEW)
Used to calculate risk-based groundwater concentration.							

NEW=> Residential

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **o-Xylene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)	ENTER Chemical
95476	3.00E+03	o-Xylene

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
4.04E+05	2.7E-05	1.1E+01	NA	1.0E-01	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T_s ($^{\circ}\text{C}$)
15	1433	SI	17

ENTER
Average vapor flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time, ET (hrs/day)	ENTER Air Exchange Rate, ACH (hour^{-1})
1.0E-06	1	70	26	26	350	24	0.5
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

NEW=> Residential

END

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **sec-Butylbenzene**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W ($\mu\text{g/L}$)	ENTER Chemical
135988	2.80E+01	sec-Butylbenzene

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
1.40E+02	4.3E-05	6.0E-03	NA	1.4E-05	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_S ($^{\circ}\text{C}$)
15	1433	SI	17

ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour^{-1})
1.0E-06	1	70	26	26	350	24	0.5
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

NEW=> Residential

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES

Scenario: **Residential**
Chemical: **tert-Butylbenzene**

Reset to Defaults

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)	ENTER Chemical
98066	2.00E+00	tert-Butylbenzene

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
7.13E+02	2.0E-05	1.4E-02	NA	3.4E-05	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_f (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_s ($^{\circ}\text{C}$)
15	1433	SI	17

ENTER
Average vapor
flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour^{-1})
1.0E-06	1	70	26	26	350	24	0.5
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

NEW=> Residential

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **Toluene**

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION
(enter "X" in "YES" box and initial groundwater conc. below)

YES

Reset to Defaults

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g}/\text{m}^3$)	Attenuation Factor (α) (unitless)	Indoor Air Conc. ($C_{building}$) ($\mu\text{g}/\text{m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g}/\text{L}$)	Noncancer HQ = 1 ($\mu\text{g}/\text{L}$)
6.58E+05	3.0E-05	2.0E+01	NA	6.3E-02	NA	NA

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_w ($\mu\text{g}/\text{L}$)	Chemical
108883	3.60E+03	Toluene

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_f (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/ groundwater temperature, T_s ($^{\circ}\text{C}$)
15	1433	SI	17

ENTER Average vapor flow rate into bldg. (Leave blank to calculate) Q_{soil} (L/m)
5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time ET (hrs/day)	ENTER Air Exchange Rate ACH (hour^{-1})
1.0E-06	1	70	26	26	350	24	0.5
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

NEW=> Residential

Department of Toxic Substances Control Vapor Intrusion Screening Model - Groundwater

DATA ENTRY SHEET

Scenario: **Residential**
Chemical: **Vinyl chloride (chloroethene)**

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box)

YES **OR**

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_w ($\mu\text{g/L}$)	ENTER Chemical
75014	6.90E-01	Vinyl chloride (chloroethene)

Results Summary					Risk-Based Groundwater Concentration	
Soil Gas Conc. (C_{source}) ($\mu\text{g/m}^3$)	Attenuation Factor (alpha) (unitless)	Indoor Air Conc. (C_{building}) ($\mu\text{g/m}^3$)	Cancer Risk	Noncancer Hazard	Cancer Risk = 10^{-6} ($\mu\text{g/L}$)	Noncancer HQ = 1 ($\mu\text{g/L}$)
6.41E+02	4.0E-05	2.5E-02	7.1E-07	2.4E-04	NA	NA

MESSAGE: Attenuation factor < 6E-05 is unreasonably low.

MORE
↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (15 or 200 cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER SCS soil type directly above water table	ENTER Average soil/groundwater temperature, T_s ($^{\circ}\text{C}$)
15	1433	SI	17

ENTER
Average vapor flow rate into bldg.
(Leave blank to calculate)
 Q_{soil}
(L/m)

5

MORE
↓

ENTER Vadose zone SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined vadose zone soil vapor permeability, k_v (cm^2)	ENTER Vadose zone SCS soil type <small>Lookup Soil</small>	ENTER Vadose zone soil dry bulk density, ρ_b^v (g/cm^3)	ENTER Vadose zone soil total porosity, n^v (unitless)	ENTER Vadose zone soil water-filled porosity, θ_w^v (cm^3/cm^3)
SI			SI	1.35	0.489	0.167

MORE
↓

Lookup Receptor Parameters

ENTER Target risk for carcinogens, TR (unitless)	ENTER Target hazard quotient for noncarcinogens, THQ (unitless)	ENTER Averaging time for carcinogens, AT_C (yrs)	ENTER Averaging time for noncarcinogens, AT_{NC} (yrs)	ENTER Exposure duration, ED (yrs)	ENTER Exposure frequency, EF (days/yr)	ENTER Exposure Time, ET (hrs/day)	ENTER Air Exchange Rate, ACH (hour^{-1})
1.0E-06	1	70	26	26	350	24	0.5
Used to calculate risk-based groundwater concentration.						(NEW)	(NEW)

END

NEW=> Residential

APPENDIX V

Lab Test Report – TPH/Pb/As Data March 2018



9765 Eton Avenue
Chatsworth
California 91311
Tel: (818) 998-5547
Fax: (818) 998-7258

March 09, 2018

Charles Buckley
Cal Environmental
30423 Canwood Street, Suite 208
Agoura Hills, CA 91301

Re : OOI-SOB / 3029
A243897 / 8C02001

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received on 03/01/18 15:40 and analyzed in accordance with the attached chain-of-custody.

Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Assurance Program Manual, applicable standard operating procedures, and other related documentation. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report or require additional information please call me at American Analytics.

Sincerely,

A handwritten signature in black ink, appearing to read 'Allen A.'.

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
<u>Arsenic Total EPA 6010B</u>					
B20@5FT	8C02001-01	Soil	5	03/01/18 07:30	03/01/18 15:40
B20@15FT	8C02001-02	Soil	5	03/01/18 08:05	03/01/18 15:40
B20@20FT	8C02001-03	Soil	5	03/01/18 08:12	03/01/18 15:40
B20@25FT	8C02001-04	Soil	5	03/01/18 08:20	03/01/18 15:40
B21@5FT	8C02001-05	Soil	5	03/01/18 08:40	03/01/18 15:40
B21@10FT	8C02001-06	Soil	5	03/01/18 08:55	03/01/18 15:40
B21@15FT	8C02001-07	Soil	5	03/01/18 09:01	03/01/18 15:40
B21@20FT	8C02001-08	Soil	5	03/01/18 09:07	03/01/18 15:40
B21@25FT	8C02001-09	Soil	5	03/01/18 09:15	03/01/18 15:40
B22@5FT	8C02001-10	Soil	5	03/01/18 09:35	03/01/18 15:40
B22@10FT	8C02001-11	Soil	5	03/01/18 09:45	03/01/18 15:40
B22@15FT	8C02001-12	Soil	5	03/01/18 09:50	03/01/18 15:40
B22@20FT	8C02001-13	Soil	5	03/01/18 09:58	03/01/18 15:40
B22@25FT	8C02001-14	Soil	5	03/01/18 10:05	03/01/18 15:40
B23@5FT	8C02001-15	Soil	5	03/01/18 10:20	03/01/18 15:40
B23@8FT	8C02001-16	Soil	5	03/01/18 10:25	03/01/18 15:40
B23@11FT	8C02001-17	Soil	5	03/01/18 10:33	03/01/18 15:40
B23@14FT	8C02001-18	Soil	5	03/01/18 10:43	03/01/18 15:40
B23@17FT	8C02001-19	Soil	5	03/01/18 10:52	03/01/18 15:40

Allen Aminian
QA/QC Manager

**LABORATORY ANALYSIS RESULTS**

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
B23@20FT	8C02001-20	Soil	5	03/01/18 10:58	03/01/18 15:40
B23@23FT	8C02001-21	Soil	5	03/01/18 11:03	03/01/18 15:40
B23@26FT	8C02001-22	Soil	5	03/01/18 11:11	03/01/18 15:40
B23@29FT	8C02001-23	Soil	5	03/01/18 11:15	03/01/18 15:40
B23@32FT	8C02001-24	Soil	5	03/01/18 11:20	03/01/18 15:40
B24@5FT	8C02001-25	Soil	5	03/01/18 11:45	03/01/18 15:40
B24@10FT	8C02001-26	Soil	5	03/01/18 11:52	03/01/18 15:40
B24@15FT	8C02001-27	Soil	5	03/01/18 11:56	03/01/18 15:40
B24@20FT	8C02001-28	Soil	5	03/01/18 12:00	03/01/18 15:40
B26@5FT	8C02001-29	Soil	5	03/01/18 12:50	03/01/18 15:40
B26@10FT	8C02001-30	Soil	5	03/01/18 13:00	03/01/18 15:40
B26@15FT	8C02001-31	Soil	5	03/01/18 13:05	03/01/18 15:40
B26@20FT	8C02001-32	Soil	5	03/01/18 13:10	03/01/18 15:40
B27@5FT	8C02001-33	Soil	5	03/01/18 13:20	03/01/18 15:40
B27@10FT	8C02001-34	Soil	5	03/01/18 13:28	03/01/18 15:40
B27@15FT	8C02001-35	Soil	5	03/01/18 13:33	03/01/18 15:40
B27@20FT	8C02001-36	Soil	5	03/01/18 13:42	03/01/18 15:40
B27@25FT	8C02001-37	Soil	5	03/01/18 13:45	03/01/18 15:40

Carbon Chain Characterization 8015M

B20@5FT	8C02001-01	Soil	5	03/01/18 07:30	03/01/18 15:40
---------	------------	------	---	----------------	----------------

Allen Aminian
QA/QC Manager

**LABORATORY ANALYSIS RESULTS**

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
B20@15FT	8C02001-02	Soil	5	03/01/18 08:05	03/01/18 15:40
B20@20FT	8C02001-03	Soil	5	03/01/18 08:12	03/01/18 15:40
B20@25FT	8C02001-04	Soil	5	03/01/18 08:20	03/01/18 15:40
B21@5FT	8C02001-05	Soil	5	03/01/18 08:40	03/01/18 15:40
B21@10FT	8C02001-06	Soil	5	03/01/18 08:55	03/01/18 15:40
B21@15FT	8C02001-07	Soil	5	03/01/18 09:01	03/01/18 15:40
B21@20FT	8C02001-08	Soil	5	03/01/18 09:07	03/01/18 15:40
B21@25FT	8C02001-09	Soil	5	03/01/18 09:15	03/01/18 15:40
B22@5FT	8C02001-10	Soil	5	03/01/18 09:35	03/01/18 15:40
B22@10FT	8C02001-11	Soil	5	03/01/18 09:45	03/01/18 15:40
B22@15FT	8C02001-12	Soil	5	03/01/18 09:50	03/01/18 15:40
B22@20FT	8C02001-13	Soil	5	03/01/18 09:58	03/01/18 15:40
B22@25FT	8C02001-14	Soil	5	03/01/18 10:05	03/01/18 15:40
B23@5FT	8C02001-15	Soil	5	03/01/18 10:20	03/01/18 15:40
B23@8FT	8C02001-16	Soil	5	03/01/18 10:25	03/01/18 15:40
B23@11FT	8C02001-17	Soil	5	03/01/18 10:33	03/01/18 15:40
B23@14FT	8C02001-18	Soil	5	03/01/18 10:43	03/01/18 15:40
B23@17FT	8C02001-19	Soil	5	03/01/18 10:52	03/01/18 15:40
B23@20FT	8C02001-20	Soil	5	03/01/18 10:58	03/01/18 15:40
B23@23FT	8C02001-21	Soil	5	03/01/18 11:03	03/01/18 15:40

Allen Aminian
QA/QC Manager

**LABORATORY ANALYSIS RESULTS**

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
B23@26FT	8C02001-22	Soil	5	03/01/18 11:11	03/01/18 15:40
B23@29FT	8C02001-23	Soil	5	03/01/18 11:15	03/01/18 15:40
B23@32FT	8C02001-24	Soil	5	03/01/18 11:20	03/01/18 15:40
B24@5FT	8C02001-25	Soil	5	03/01/18 11:45	03/01/18 15:40
B24@10FT	8C02001-26	Soil	5	03/01/18 11:52	03/01/18 15:40
B24@15FT	8C02001-27	Soil	5	03/01/18 11:56	03/01/18 15:40
B24@20FT	8C02001-28	Soil	5	03/01/18 12:00	03/01/18 15:40
B26@5FT	8C02001-29	Soil	5	03/01/18 12:50	03/01/18 15:40
B26@10FT	8C02001-30	Soil	5	03/01/18 13:00	03/01/18 15:40
B26@15FT	8C02001-31	Soil	5	03/01/18 13:05	03/01/18 15:40
B26@20FT	8C02001-32	Soil	5	03/01/18 13:10	03/01/18 15:40
B27@5FT	8C02001-33	Soil	5	03/01/18 13:20	03/01/18 15:40
B27@10FT	8C02001-34	Soil	5	03/01/18 13:28	03/01/18 15:40
B27@15FT	8C02001-35	Soil	5	03/01/18 13:33	03/01/18 15:40
B27@20FT	8C02001-36	Soil	5	03/01/18 13:42	03/01/18 15:40
B27@25FT	8C02001-37	Soil	5	03/01/18 13:45	03/01/18 15:40

Lead Total EPA 6010B

B20@5FT	8C02001-01	Soil	5	03/01/18 07:30	03/01/18 15:40
B20@15FT	8C02001-02	Soil	5	03/01/18 08:05	03/01/18 15:40
B20@20FT	8C02001-03	Soil	5	03/01/18 08:12	03/01/18 15:40

Allen Aminian
QA/QC Manager

**LABORATORY ANALYSIS RESULTS**

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
B20@25FT	8C02001-04	Soil	5	03/01/18 08:20	03/01/18 15:40
B21@5FT	8C02001-05	Soil	5	03/01/18 08:40	03/01/18 15:40
B21@10FT	8C02001-06	Soil	5	03/01/18 08:55	03/01/18 15:40
B21@15FT	8C02001-07	Soil	5	03/01/18 09:01	03/01/18 15:40
B21@20FT	8C02001-08	Soil	5	03/01/18 09:07	03/01/18 15:40
B21@25FT	8C02001-09	Soil	5	03/01/18 09:15	03/01/18 15:40
B22@5FT	8C02001-10	Soil	5	03/01/18 09:35	03/01/18 15:40
B22@10FT	8C02001-11	Soil	5	03/01/18 09:45	03/01/18 15:40
B22@15FT	8C02001-12	Soil	5	03/01/18 09:50	03/01/18 15:40
B22@20FT	8C02001-13	Soil	5	03/01/18 09:58	03/01/18 15:40
B22@25FT	8C02001-14	Soil	5	03/01/18 10:05	03/01/18 15:40
B23@5FT	8C02001-15	Soil	5	03/01/18 10:20	03/01/18 15:40
B23@8FT	8C02001-16	Soil	5	03/01/18 10:25	03/01/18 15:40
B23@11FT	8C02001-17	Soil	5	03/01/18 10:33	03/01/18 15:40
B23@14FT	8C02001-18	Soil	5	03/01/18 10:43	03/01/18 15:40
B23@17FT	8C02001-19	Soil	5	03/01/18 10:52	03/01/18 15:40
B23@20FT	8C02001-20	Soil	5	03/01/18 10:58	03/01/18 15:40
B23@23FT	8C02001-21	Soil	5	03/01/18 11:03	03/01/18 15:40
B23@26FT	8C02001-22	Soil	5	03/01/18 11:11	03/01/18 15:40
B23@29FT	8C02001-23	Soil	5	03/01/18 11:15	03/01/18 15:40

Allen Aminian
QA/QC Manager

**LABORATORY ANALYSIS RESULTS**

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

Sample ID	Laboratory ID	Matrix	TAT	Date Sampled	Date Received
B23@32FT	8C02001-24	Soil	5	03/01/18 11:20	03/01/18 15:40
B24@5FT	8C02001-25	Soil	5	03/01/18 11:45	03/01/18 15:40
B24@10FT	8C02001-26	Soil	5	03/01/18 11:52	03/01/18 15:40
B24@15FT	8C02001-27	Soil	5	03/01/18 11:56	03/01/18 15:40
B24@20FT	8C02001-28	Soil	5	03/01/18 12:00	03/01/18 15:40
B26@5FT	8C02001-29	Soil	5	03/01/18 12:50	03/01/18 15:40
B26@10FT	8C02001-30	Soil	5	03/01/18 13:00	03/01/18 15:40
B26@15FT	8C02001-31	Soil	5	03/01/18 13:05	03/01/18 15:40
B26@20FT	8C02001-32	Soil	5	03/01/18 13:10	03/01/18 15:40
B27@5FT	8C02001-33	Soil	5	03/01/18 13:20	03/01/18 15:40
B27@10FT	8C02001-34	Soil	5	03/01/18 13:28	03/01/18 15:40
B27@15FT	8C02001-35	Soil	5	03/01/18 13:33	03/01/18 15:40
B27@20FT	8C02001-36	Soil	5	03/01/18 13:42	03/01/18 15:40
B27@25FT	8C02001-37	Soil	5	03/01/18 13:45	03/01/18 15:40

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

ANALYTICAL DATA SUMMARY

Analyte	Sample Name	Result	MRL	Units	Dilution	Prepared	Analyzed	Method
Carbon Chain by GC/FID								
C8-C10	B20@5FT	2.4	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C10-C12	B20@5FT	9.3	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C12-C14	B20@5FT	38	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C14-C16	B20@5FT	110	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C16-C18	B20@5FT	150	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C18-C20	B20@5FT	310	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C20-C22	B20@5FT	180	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C22-C24	B20@5FT	180	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C24-C26	B20@5FT	160	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C26-C28	B20@5FT	250	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C28-C32	B20@5FT	410	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C32-C34	B20@5FT	140	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C34-C36	B20@5FT	150	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C36-C40	B20@5FT	230	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C40-C44	B20@5FT	120	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
TPH (C6-C44)	B20@5FT	2400	10	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C8-C10	B20@15FT	56	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C10-C12	B20@15FT	140	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C12-C14	B20@15FT	370	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C14-C16	B20@15FT	610	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C16-C18	B20@15FT	740	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C18-C20	B20@15FT	1500	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C20-C22	B20@15FT	790	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C22-C24	B20@15FT	760	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C24-C26	B20@15FT	790	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C26-C28	B20@15FT	880	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C28-C32	B20@15FT	1500	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C32-C34	B20@15FT	620	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C34-C36	B20@15FT	370	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M

Allen Aminian
QA/QC Manager

**LABORATORY ANALYSIS RESULTS**

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

ANALYTICAL DATA SUMMARY

Analyte	Sample Name	Result	MRL	Units	Dilution	Prepared	Analyzed	Method
C36-C40	B20@15FT	780	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C40-C44	B20@15FT	460	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
TPH (C6-C44)	B20@15FT	10000	100	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C8-C10	B20@20FT	4.6	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C10-C12	B20@20FT	11	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C12-C14	B20@20FT	35	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C14-C16	B20@20FT	75	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C16-C18	B20@20FT	130	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C18-C20	B20@20FT	240	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C20-C22	B20@20FT	150	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C22-C24	B20@20FT	130	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C24-C26	B20@20FT	140	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C26-C28	B20@20FT	200	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C28-C32	B20@20FT	310	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C32-C34	B20@20FT	120	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C34-C36	B20@20FT	85	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C36-C40	B20@20FT	160	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C40-C44	B20@20FT	99	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
TPH (C6-C44)	B20@20FT	1900	10	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C18-C20	B21@5FT	3.8	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C20-C22	B21@5FT	3.2	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C22-C24	B21@5FT	5.2	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C24-C26	B21@5FT	7.3	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C26-C28	B21@5FT	16	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C28-C32	B21@5FT	43	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C32-C34	B21@5FT	21	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C34-C36	B21@5FT	20	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C36-C40	B21@5FT	46	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C40-C44	B21@5FT	36	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
TPH (C6-C44)	B21@5FT	200	10	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C8-C10	B21@10FT	1.9	1.0	mg/kg	1	03/06/18	03/07/18	EPA 8015M

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

ANALYTICAL DATA SUMMARY

Analyte	Sample Name	Result	MRL	Units	Dilution	Prepared	Analyzed	Method
C10-C12	B21@10FT	4.0	1.0	mg/kg	1	03/06/18	03/07/18	EPA 8015M
C12-C14	B21@10FT	15	1.0	mg/kg	1	03/06/18	03/07/18	EPA 8015M
C14-C16	B21@10FT	26	1.0	mg/kg	1	03/06/18	03/07/18	EPA 8015M
C16-C18	B21@10FT	41	1.0	mg/kg	1	03/06/18	03/07/18	EPA 8015M
C18-C20	B21@10FT	99	1.0	mg/kg	1	03/06/18	03/07/18	EPA 8015M
C20-C22	B21@10FT	63	1.0	mg/kg	1	03/06/18	03/07/18	EPA 8015M
C22-C24	B21@10FT	60	1.0	mg/kg	1	03/06/18	03/07/18	EPA 8015M
C24-C26	B21@10FT	72	1.0	mg/kg	1	03/06/18	03/07/18	EPA 8015M
C26-C28	B21@10FT	110	1.0	mg/kg	1	03/06/18	03/07/18	EPA 8015M
C28-C32	B21@10FT	200	1.0	mg/kg	1	03/06/18	03/07/18	EPA 8015M
C32-C34	B21@10FT	84	1.0	mg/kg	1	03/06/18	03/07/18	EPA 8015M
C34-C36	B21@10FT	66	1.0	mg/kg	1	03/06/18	03/07/18	EPA 8015M
C36-C40	B21@10FT	130	1.0	mg/kg	1	03/06/18	03/07/18	EPA 8015M
C40-C44	B21@10FT	81	1.0	mg/kg	1	03/06/18	03/07/18	EPA 8015M
TPH (C6-C44)	B21@10FT	1100	10	mg/kg	1	03/06/18	03/07/18	EPA 8015M
C8-C10	B21@15FT	20	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C10-C12	B21@15FT	49	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C12-C14	B21@15FT	150	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C14-C16	B21@15FT	290	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C16-C18	B21@15FT	390	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C18-C20	B21@15FT	780	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C20-C22	B21@15FT	430	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C22-C24	B21@15FT	420	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C24-C26	B21@15FT	360	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C26-C28	B21@15FT	530	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C28-C32	B21@15FT	820	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C32-C34	B21@15FT	310	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C34-C36	B21@15FT	260	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C36-C40	B21@15FT	380	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C40-C44	B21@15FT	270	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
TPH (C6-C44)	B21@15FT	5500	100	mg/kg	10	03/06/18	03/06/18	EPA 8015M

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
 Project No: 3029
 Project Name: OOI-SOB

AA Project No: A243897
 Date Received: 03/01/18
 Date Reported: 03/09/18

ANALYTICAL DATA SUMMARY

Analyte	Sample Name	Result	MRL	Units	Dilution	Prepared	Analyzed	Method
C26-C28	B22@5FT	2.2	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C28-C32	B22@5FT	8.1	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C32-C34	B22@5FT	4.8	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C34-C36	B22@5FT	4.9	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C36-C40	B22@5FT	11	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C40-C44	B22@5FT	9.9	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
TPH (C6-C44)	B22@5FT	41	10	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C8-C10	B22@10FT	12	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C12-C14	B22@10FT	34	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C14-C16	B22@10FT	120	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C16-C18	B22@10FT	220	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C18-C20	B22@10FT	510	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C20-C22	B22@10FT	310	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C22-C24	B22@10FT	290	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C24-C26	B22@10FT	270	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C26-C28	B22@10FT	440	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C28-C32	B22@10FT	720	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C32-C34	B22@10FT	270	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C34-C36	B22@10FT	210	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C36-C40	B22@10FT	380	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C40-C44	B22@10FT	190	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
TPH (C6-C44)	B22@10FT	4000	100	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C8-C10	B22@15FT	16	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C10-C12	B22@15FT	38	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C12-C14	B22@15FT	150	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C14-C16	B22@15FT	280	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C16-C18	B22@15FT	300	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C18-C20	B22@15FT	580	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C20-C22	B22@15FT	320	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C22-C24	B22@15FT	290	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C24-C26	B22@15FT	290	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
 Project No: 3029
 Project Name: OOI-SOB

AA Project No: A243897
 Date Received: 03/01/18
 Date Reported: 03/09/18

ANALYTICAL DATA SUMMARY

Analyte	Sample Name	Result	MRL	Units	Dilution	Prepared	Analyzed	Method
C26-C28	B22@15FT	330	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C28-C32	B22@15FT	580	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C32-C34	B22@15FT	220	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C34-C36	B22@15FT	190	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C36-C40	B22@15FT	270	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C40-C44	B22@15FT	190	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
TPH (C6-C44)	B22@15FT	4000	100	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C8-C10	B22@20FT	1.1	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C12-C14	B22@20FT	4.4	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C12-C14	B23@5FT	18	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C14-C16	B23@5FT	100	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C16-C18	B23@5FT	190	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C18-C20	B23@5FT	550	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C20-C22	B23@5FT	330	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C22-C24	B23@5FT	300	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C24-C26	B23@5FT	280	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C26-C28	B23@5FT	450	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C28-C32	B23@5FT	770	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C32-C34	B23@5FT	320	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C34-C36	B23@5FT	200	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C36-C40	B23@5FT	490	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C40-C44	B23@5FT	340	10	mg/kg	10	03/06/18	03/06/18	EPA 8015M
TPH (C6-C44)	B23@5FT	4300	100	mg/kg	10	03/06/18	03/06/18	EPA 8015M
C8-C10	B23@11FT	1.0	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C28-C32	B23@11FT	1.4	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C8-C10	B23@14FT	1.1	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C18-C20	B23@14FT	6.0	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C20-C22	B23@14FT	6.0	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C22-C24	B23@14FT	7.9	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C24-C26	B23@14FT	9.5	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C26-C28	B23@14FT	20	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M

Allen Aminian

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
 Project No: 3029
 Project Name: OOI-SOB

AA Project No: A243897
 Date Received: 03/01/18
 Date Reported: 03/09/18

ANALYTICAL DATA SUMMARY

Analyte	Sample Name	Result	MRL	Units	Dilution	Prepared	Analyzed	Method
C28-C32	B23@14FT	49	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C32-C34	B23@14FT	22	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C34-C36	B23@14FT	21	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C36-C40	B23@14FT	42	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C40-C44	B23@14FT	35	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
TPH (C6-C44)	B23@14FT	220	10	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C8-C10	B23@17FT	38	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C10-C12	B23@17FT	120	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C12-C14	B23@17FT	340	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C14-C16	B23@17FT	520	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C16-C18	B23@17FT	600	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C18-C20	B23@17FT	1300	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C20-C22	B23@17FT	690	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C22-C24	B23@17FT	630	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C24-C26	B23@17FT	600	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C26-C28	B23@17FT	730	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C28-C32	B23@17FT	1300	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C32-C34	B23@17FT	480	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C34-C36	B23@17FT	360	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C36-C40	B23@17FT	640	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C40-C44	B23@17FT	360	10	mg/kg	10	03/06/18	03/07/18	EPA 8015M
TPH (C6-C44)	B23@17FT	8600	100	mg/kg	10	03/06/18	03/07/18	EPA 8015M
C8-C10	B23@20FT	5.6	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C10-C12	B23@20FT	21	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C12-C14	B23@20FT	58	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C14-C16	B23@20FT	84	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C16-C18	B23@20FT	100	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C18-C20	B23@20FT	190	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C20-C22	B23@20FT	110	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C22-C24	B23@20FT	100	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C24-C26	B23@20FT	110	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

ANALYTICAL DATA SUMMARY

Analyte	Sample Name	Result	MRL	Units	Dilution	Prepared	Analyzed	Method
C26-C28	B23@20FT	110	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C28-C32	B23@20FT	200	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C32-C34	B23@20FT	81	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C34-C36	B23@20FT	50	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C36-C40	B23@20FT	110	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C40-C44	B23@20FT	68	1.0	mg/kg	1	03/06/18	03/06/18	EPA 8015M
TPH (C6-C44)	B23@20FT	1400	10	mg/kg	1	03/06/18	03/06/18	EPA 8015M
C8-C10	B23@23FT	12	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C10-C12	B23@23FT	32	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C12-C14	B23@23FT	120	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C14-C16	B23@23FT	180	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C16-C18	B23@23FT	250	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C18-C20	B23@23FT	240	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C20-C22	B23@23FT	260	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C22-C24	B23@23FT	320	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C24-C26	B23@23FT	270	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C26-C28	B23@23FT	280	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C28-C32	B23@23FT	600	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C32-C34	B23@23FT	170	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C34-C36	B23@23FT	80	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C36-C40	B23@23FT	96	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
TPH (C6-C44)	B23@23FT	2900	100	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C8-C10	B23@26FT	18	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C10-C12	B23@26FT	24	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C12-C14	B23@26FT	140	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C14-C16	B23@26FT	270	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C16-C18	B23@26FT	430	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C18-C20	B23@26FT	480	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C20-C22	B23@26FT	480	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C22-C24	B23@26FT	590	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C24-C26	B23@26FT	510	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

ANALYTICAL DATA SUMMARY

Analyte	Sample Name	Result	MRL	Units	Dilution	Prepared	Analyzed	Method
C26-C28	B23@26FT	520	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C28-C32	B23@26FT	1000	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C32-C34	B23@26FT	250	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C34-C36	B23@26FT	120	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C36-C40	B23@26FT	110	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C40-C44	B23@26FT	14	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
TPH (C6-C44)	B23@26FT	5000	100	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C28-C32	B24@5FT	1.1	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C10-C12	B24@10FT	1.3	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C12-C14	B24@10FT	3.9	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C14-C16	B24@10FT	9.5	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C16-C18	B24@10FT	16	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C18-C20	B24@10FT	33	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C20-C22	B24@10FT	40	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C22-C24	B24@10FT	51	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C24-C26	B24@10FT	49	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C26-C28	B24@10FT	54	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C28-C32	B24@10FT	120	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C32-C34	B24@10FT	32	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C34-C36	B24@10FT	15	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C36-C40	B24@10FT	34	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C40-C44	B24@10FT	26	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
TPH (C6-C44)	B24@10FT	490	10	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C8-C10	B24@15FT	17	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C10-C12	B24@15FT	49	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C12-C14	B24@15FT	160	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C14-C16	B24@15FT	250	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C16-C18	B24@15FT	400	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C18-C20	B24@15FT	460	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C20-C22	B24@15FT	450	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C22-C24	B24@15FT	610	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
 Project No: 3029
 Project Name: OOI-SOB

AA Project No: A243897
 Date Received: 03/01/18
 Date Reported: 03/09/18

ANALYTICAL DATA SUMMARY

Analyte	Sample Name	Result	MRL	Units	Dilution	Prepared	Analyzed	Method
C24-C26	B24@15FT	420	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C26-C28	B24@15FT	470	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C28-C32	B24@15FT	980	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C32-C34	B24@15FT	260	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C34-C36	B24@15FT	130	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C36-C40	B24@15FT	160	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C40-C44	B24@15FT	96	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
TPH (C6-C44)	B24@15FT	4900	100	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C14-C16	B26@5FT	1.4	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C16-C18	B26@5FT	4.2	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C18-C20	B26@5FT	10	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C20-C22	B26@5FT	18	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C22-C24	B26@5FT	25	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C24-C26	B26@5FT	26	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C26-C28	B26@5FT	31	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C28-C32	B26@5FT	91	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C32-C34	B26@5FT	20	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C34-C36	B26@5FT	20	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C36-C40	B26@5FT	23	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C40-C44	B26@5FT	27	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
TPH (C6-C44)	B26@5FT	300	10	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C8-C10	B26@10FT	2.6	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C10-C12	B26@10FT	11	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C12-C14	B26@10FT	30	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C14-C16	B26@10FT	45	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C16-C18	B26@10FT	66	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C18-C20	B26@10FT	71	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C20-C22	B26@10FT	93	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C22-C24	B26@10FT	110	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C24-C26	B26@10FT	96	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C26-C28	B26@10FT	99	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
 Project No: 3029
 Project Name: OOI-SOB

AA Project No: A243897
 Date Received: 03/01/18
 Date Reported: 03/09/18

ANALYTICAL DATA SUMMARY

Analyte	Sample Name	Result	MRL	Units	Dilution	Prepared	Analyzed	Method
C28-C32	B26@10FT	190	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C32-C34	B26@10FT	31	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C34-C36	B26@10FT	20	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C36-C40	B26@10FT	40	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C40-C44	B26@10FT	22	1.0	mg/kg	1	03/08/18	03/09/18	EPA 8015M
TPH (C6-C44)	B26@10FT	920	10	mg/kg	1	03/08/18	03/09/18	EPA 8015M
C10-C12	B26@15FT	2.1	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C12-C14	B26@15FT	8.2	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C14-C16	B26@15FT	14	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C16-C18	B26@15FT	25	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C18-C20	B26@15FT	35	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C20-C22	B26@15FT	42	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C22-C24	B26@15FT	51	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C24-C26	B26@15FT	49	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C26-C28	B26@15FT	48	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C28-C32	B26@15FT	110	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C32-C34	B26@15FT	27	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C34-C36	B26@15FT	15	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C36-C40	B26@15FT	22	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C40-C44	B26@15FT	13	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
TPH (C6-C44)	B26@15FT	460	10	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C26-C28	B27@5FT	1.2	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C28-C32	B27@5FT	5.2	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C32-C34	B27@5FT	1.3	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C34-C36	B27@5FT	1.4	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C36-C40	B27@5FT	1.6	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
TPH (C6-C44)	B27@5FT	11	10	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C8-C10	B27@10FT	17	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C10-C12	B27@10FT	49	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C12-C14	B27@10FT	160	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C14-C16	B27@10FT	240	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M

Allen A

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
 Project No: 3029
 Project Name: OOI-SOB

AA Project No: A243897
 Date Received: 03/01/18
 Date Reported: 03/09/18

ANALYTICAL DATA SUMMARY

Analyte	Sample Name	Result	MRL	Units	Dilution	Prepared	Analyzed	Method
C16-C18	B27@10FT	280	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C18-C20	B27@10FT	400	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C20-C22	B27@10FT	410	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C22-C24	B27@10FT	460	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C24-C26	B27@10FT	400	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C26-C28	B27@10FT	390	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C28-C32	B27@10FT	860	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C32-C34	B27@10FT	240	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C34-C36	B27@10FT	110	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C36-C40	B27@10FT	180	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C40-C44	B27@10FT	36	10	mg/kg	10	03/08/18	03/08/18	EPA 8015M
TPH (C6-C44)	B27@10FT	4200	100	mg/kg	10	03/08/18	03/08/18	EPA 8015M
C8-C10	B27@15FT	1.0	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C10-C12	B27@15FT	6.2	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C12-C14	B27@15FT	23	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C14-C16	B27@15FT	36	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C16-C18	B27@15FT	51	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C18-C20	B27@15FT	73	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C20-C22	B27@15FT	65	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C22-C24	B27@15FT	60	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C24-C26	B27@15FT	64	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C26-C28	B27@15FT	60	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C28-C32	B27@15FT	120	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C32-C34	B27@15FT	31	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C34-C36	B27@15FT	14	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C36-C40	B27@15FT	18	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C40-C44	B27@15FT	12	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
TPH (C6-C44)	B27@15FT	640	10	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C8-C10	B27@20FT	2.9	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C10-C12	B27@20FT	16	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C12-C14	B27@20FT	46	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M

Allen Aminian

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

ANALYTICAL DATA SUMMARY

Analyte	Sample Name	Result	MRL	Units	Dilution	Prepared	Analyzed	Method
C14-C16	B27@20FT	69	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C16-C18	B27@20FT	88	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C18-C20	B27@20FT	110	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C20-C22	B27@20FT	120	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C22-C24	B27@20FT	140	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C24-C26	B27@20FT	100	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C26-C28	B27@20FT	120	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C28-C32	B27@20FT	210	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C32-C34	B27@20FT	45	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C34-C36	B27@20FT	25	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C36-C40	B27@20FT	47	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
C40-C44	B27@20FT	22	1.0	mg/kg	1	03/08/18	03/08/18	EPA 8015M
TPH (C6-C44)	B27@20FT	1200	10	mg/kg	1	03/08/18	03/08/18	EPA 8015M

Total Metals by ICP Atomic Emission Spectroscopy

Lead	B20@5FT	86	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B20@5FT	36	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B20@15FT	260	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B20@15FT	170	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B20@20FT	68	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B20@20FT	44	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B20@25FT	6.3	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B20@25FT	10	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B21@5FT	32	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B21@5FT	38	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B21@10FT	50	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B21@10FT	67	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B21@15FT	230	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B21@15FT	80	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B21@20FT	8.1	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B21@20FT	6.1	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B

Allen A

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

ANALYTICAL DATA SUMMARY

Analyte	Sample Name	Result	MRL	Units	Dilution	Prepared	Analyzed	Method
Lead	B21@25FT	4.0	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B21@25FT	2.4	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B22@5FT	6.8	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B22@5FT	5.4	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B22@10FT	120	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B22@10FT	50	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B22@15FT	49	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B22@15FT	130	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B22@20FT	3.5	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B22@25FT	5.6	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B22@25FT	28	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B23@5FT	68	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B23@5FT	19	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B23@8FT	6.8	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B23@8FT	6.9	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B23@11FT	22	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B23@11FT	20	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B23@14FT	15	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B23@14FT	19	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B23@17FT	48	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B23@17FT	170	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Lead	B23@20FT	10	3.0	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B23@20FT	9.9	0.50	mg/kg	1	03/05/18	03/06/18	EPA 6010B
Arsenic	B23@23FT	26	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Lead	B23@23FT	77	3.0	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Arsenic	B23@26FT	50	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Lead	B23@26FT	130	3.0	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Lead	B23@29FT	4.6	3.0	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Arsenic	B23@29FT	5.1	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Arsenic	B23@32FT	3.5	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Lead	B23@32FT	3.8	3.0	mg/kg	1	03/05/18	03/07/18	EPA 6010B

Allen A

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

ANALYTICAL DATA SUMMARY

Analyte	Sample Name	Result	MRL	Units	Dilution	Prepared	Analyzed	Method
Lead	B24@5FT	46	3.0	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Arsenic	B24@5FT	4.4	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Arsenic	B24@10FT	14	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Lead	B24@10FT	77	3.0	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Lead	B24@15FT	120	3.0	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Arsenic	B24@15FT	58	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Lead	B24@20FT	4.7	3.0	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Arsenic	B24@20FT	4.0	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Lead	B26@5FT	36	3.0	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Arsenic	B26@5FT	30	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Lead	B26@10FT	70	3.0	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Arsenic	B26@10FT	24	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Arsenic	B26@15FT	12	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Lead	B26@15FT	13	3.0	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Lead	B26@20FT	4.7	3.0	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Arsenic	B26@20FT	5.9	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Arsenic	B27@5FT	3.3	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Lead	B27@5FT	47	3.0	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Lead	B27@10FT	160	3.0	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Arsenic	B27@10FT	61	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Lead	B27@15FT	26	3.0	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Arsenic	B27@15FT	18	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Lead	B27@20FT	38	3.0	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Arsenic	B27@20FT	35	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B
Arsenic	B27@25FT	2.7	0.50	mg/kg	1	03/05/18	03/07/18	EPA 6010B

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB
Method: Carbon Chain by GC/FID

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18
Units: mg/kg

Date Sampled:	03/01/18	03/01/18	03/01/18	03/01/18
Date Prepared:	03/06/18	03/06/18	03/06/18	03/06/18
Date Analyzed:	03/06/18	03/06/18	03/06/18	03/06/18
AA ID No:	8C02001-01	8C02001-02	8C02001-03	8C02001-04
Client ID No:	B20@5FT	B20@15FT	B20@20FT	B20@25FT
Matrix:	Soil	Soil	Soil	Soil
Dilution Factor:	1	10	1	1
				MRL

Carbon Chain Characterization 8015M (EPA 8015M)

C6-C8	<1.0	<10	<1.0	<1.0	1.0
C8-C10	2.4	56	4.6	<1.0	1.0
C10-C12	9.3	140	11	<1.0	1.0
C12-C14	38	370	35	<1.0	1.0
C14-C16	110	610	75	<1.0	1.0
C16-C18	150	740	130	<1.0	1.0
C18-C20	310	1500	240	<1.0	1.0
C20-C22	180	790	150	<1.0	1.0
C22-C24	180	760	130	<1.0	1.0
C24-C26	160	790	140	<1.0	1.0
C26-C28	250	880	200	<1.0	1.0
C28-C32	410	1500	310	<1.0	1.0
C32-C34	140	620	120	<1.0	1.0
C34-C36	150	370	85	<1.0	1.0
C36-C40	230	780	160	<1.0	1.0
C40-C44	120	460	99	<1.0	1.0
TPH (C6-C44)	2400	10000	1900	<10	10

<u>Surrogates</u>					<u>%REC Limits</u>
o-Terphenyl	56%	91%	60%	83%	50-150

Allen A

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB
Method: Carbon Chain by GC/FID

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18
Units: mg/kg

Date Sampled:	03/01/18	03/01/18	03/01/18	03/01/18
Date Prepared:	03/06/18	03/06/18	03/06/18	03/06/18
Date Analyzed:	03/06/18	03/07/18	03/06/18	03/06/18
AA ID No:	8C02001-05	8C02001-06	8C02001-07	8C02001-08
Client ID No:	B21@5FT	B21@10FT	B21@15FT	B21@20FT
Matrix:	Soil	Soil	Soil	Soil
Dilution Factor:	1	1	10	1

MRL

Carbon Chain Characterization 8015M (EPA 8015M)

C6-C8	<1.0	<1.0	<10	<1.0	1.0
C8-C10	<1.0	1.9	20	<1.0	1.0
C10-C12	<1.0	4.0	49	<1.0	1.0
C12-C14	<1.0	15	150	<1.0	1.0
C14-C16	<1.0	26	290	<1.0	1.0
C16-C18	<1.0	41	390	<1.0	1.0
C18-C20	3.8	99	780	<1.0	1.0
C20-C22	3.2	63	430	<1.0	1.0
C22-C24	5.2	60	420	<1.0	1.0
C24-C26	7.3	72	360	<1.0	1.0
C26-C28	16	110	530	<1.0	1.0
C28-C32	43	200	820	<1.0	1.0
C32-C34	21	84	310	<1.0	1.0
C34-C36	20	66	260	<1.0	1.0
C36-C40	46	130	380	<1.0	1.0
C40-C44	36	81	270	<1.0	1.0
TPH (C6-C44)	200	1100	5500	<10	10

Surrogates

o-Terphenyl	83%	66%	85%	82%	%REC Limits 50-150
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Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB
Method: Carbon Chain by GC/FID

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18
Units: mg/kg

Date Sampled:	03/01/18	03/01/18	03/01/18	03/01/18
Date Prepared:	03/06/18	03/06/18	03/06/18	03/06/18
Date Analyzed:	03/06/18	03/06/18	03/07/18	03/07/18
AA ID No:	8C02001-09	8C02001-10	8C02001-11	8C02001-12
Client ID No:	B21@25FT	B22@5FT	B22@10FT	B22@15FT
Matrix:	Soil	Soil	Soil	Soil
Dilution Factor:	1	1	10	10

MRL

Carbon Chain Characterization 8015M (EPA 8015M)

C6-C8	<1.0	<1.0	<10	<10	1.0
C8-C10	<1.0	<1.0	12	16	1.0
C10-C12	<1.0	<1.0	<10	38	1.0
C12-C14	<1.0	<1.0	34	150	1.0
C14-C16	<1.0	<1.0	120	280	1.0
C16-C18	<1.0	<1.0	220	300	1.0
C18-C20	<1.0	<1.0	510	580	1.0
C20-C22	<1.0	<1.0	310	320	1.0
C22-C24	<1.0	<1.0	290	290	1.0
C24-C26	<1.0	<1.0	270	290	1.0
C26-C28	<1.0	2.2	440	330	1.0
C28-C32	<1.0	8.1	720	580	1.0
C32-C34	<1.0	4.8	270	220	1.0
C34-C36	<1.0	4.9	210	190	1.0
C36-C40	<1.0	11	380	270	1.0
C40-C44	<1.0	9.9	190	190	1.0
TPH (C6-C44)	<10	41	4000	4000	10

Surrogates

o-Terphenyl	85%	90%	98%	86%	%REC Limits 50-150
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Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB
Method: Carbon Chain by GC/FID

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18
Units: mg/kg

	03/01/18	03/01/18	03/01/18	03/01/18	
Date Sampled:	03/01/18	03/01/18	03/01/18	03/01/18	
Date Prepared:	03/06/18	03/06/18	03/06/18	03/06/18	
Date Analyzed:	03/06/18	03/06/18	03/06/18	03/06/18	
AA ID No:	8C02001-13	8C02001-14	8C02001-15	8C02001-16	
Client ID No:	B22@20FT	B22@25FT	B23@5FT	B23@8FT	
Matrix:	Soil	Soil	Soil	Soil	
Dilution Factor:	1	1	10	1	MRL

Carbon Chain Characterization 8015M (EPA 8015M)

C6-C8	<1.0	<1.0	<10	<1.0	1.0
C8-C10	1.1	<1.0	<10	<1.0	1.0
C10-C12	<1.0	<1.0	<10	<1.0	1.0
C12-C14	4.4	<1.0	18	<1.0	1.0
C14-C16	<1.0	<1.0	100	<1.0	1.0
C16-C18	<1.0	<1.0	190	<1.0	1.0
C18-C20	<1.0	<1.0	550	<1.0	1.0
C20-C22	<1.0	<1.0	330	<1.0	1.0
C22-C24	<1.0	<1.0	300	<1.0	1.0
C24-C26	<1.0	<1.0	280	<1.0	1.0
C26-C28	<1.0	<1.0	450	<1.0	1.0
C28-C32	<1.0	<1.0	770	<1.0	1.0
C32-C34	<1.0	<1.0	320	<1.0	1.0
C34-C36	<1.0	<1.0	200	<1.0	1.0
C36-C40	<1.0	<1.0	490	<1.0	1.0
C40-C44	<1.0	<1.0	340	<1.0	1.0
TPH (C6-C44)	<10	<10	4300	<10	10

<u>Surrogates</u>					<u>%REC Limits</u>
o-Terphenyl	87%	84%	85%	84%	50-150

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client:	Cal Environmental	AA Project No:	A243897
Project No:	3029	Date Received:	03/01/18
Project Name:	OOI-SOB	Date Reported:	03/09/18
Method:	Carbon Chain by GC/FID	Units:	mg/kg

Date Sampled:	03/01/2018	03/01/2018	03/01/2018	03/01/2018	
Date Prepared:	03/06/18	03/06/18	03/06/18	03/06/18	
Date Analyzed:	03/06/18	03/06/18	03/07/18	03/06/18	
AA ID No:	8C02001-17	8C02001-18	8C02001-19	8C02001-20	
Client ID No:	B23@11FT	B23@14FT	B23@17FT	B23@20FT	
Matrix:	Soil	Soil	Soil	Soil	
Dilution Factor:	1	1	10	1	MRL

Carbon Chain Characterization 8015M (EPA 8015M)

C6-C8	<1.0	<1.0	<10	<1.0	1.0
C8-C10	1.0	1.1	38	5.6	1.0
C10-C12	<1.0	<1.0	120	21	1.0
C12-C14	<1.0	<1.0	340	58	1.0
C14-C16	<1.0	<1.0	520	84	1.0
C16-C18	<1.0	<1.0	600	100	1.0
C18-C20	<1.0	6.0	1300	190	1.0
C20-C22	<1.0	6.0	690	110	1.0
C22-C24	<1.0	7.9	630	100	1.0
C24-C26	<1.0	9.5	600	110	1.0
C26-C28	<1.0	20	730	110	1.0
C28-C32	1.4	49	1300	200	1.0
C32-C34	<1.0	22	480	81	1.0
C34-C36	<1.0	21	360	50	1.0
C36-C40	<1.0	42	640	110	1.0
C40-C44	<1.0	35	360	68	1.0
TPH (C6-C44)	<10	220	8600	1400	10

<u>Surrogates</u>					<u>%REC Limits</u>
o-Terphenyl	85%	96%	100%	60%	50-150

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB
Method: Carbon Chain by GC/FID

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18
Units: mg/kg

Date Sampled:	03/01/18	03/01/18	03/01/18	03/01/18	
Date Prepared:	03/08/18	03/08/18	03/08/18	03/08/18	
Date Analyzed:	03/08/18	03/08/18	03/08/18	03/08/18	
AA ID No:	8C02001-21	8C02001-22	8C02001-23	8C02001-24	
Client ID No:	B23@23FT	B23@26FT	B23@29FT	B23@32FT	
Matrix:	Soil	Soil	Soil	Soil	
Dilution Factor:	10	10	1	1	MRL

Carbon Chain Characterization 8015M (EPA 8015M)

C6-C8	<10	<10	<1.0	<1.0	1.0
C8-C10	12	18	<1.0	<1.0	1.0
C10-C12	32	24	<1.0	<1.0	1.0
C12-C14	120	140	<1.0	<1.0	1.0
C14-C16	180	270	<1.0	<1.0	1.0
C16-C18	250	430	<1.0	<1.0	1.0
C18-C20	240	480	<1.0	<1.0	1.0
C20-C22	260	480	<1.0	<1.0	1.0
C22-C24	320	590	<1.0	<1.0	1.0
C24-C26	270	510	<1.0	<1.0	1.0
C26-C28	280	520	<1.0	<1.0	1.0
C28-C32	600	1000	<1.0	<1.0	1.0
C32-C34	170	250	<1.0	<1.0	1.0
C34-C36	80	120	<1.0	<1.0	1.0
C36-C40	96	110	<1.0	<1.0	1.0
C40-C44	<10	14	<1.0	<1.0	1.0
TPH (C6-C44)	2900	5000	<10	<10	10

<u>Surrogates</u>					<u>%REC Limits</u>
o-Terphenyl	74%	80%	76%	86%	50-150

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB
Method: Carbon Chain by GC/FID

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18
Units: mg/kg

Date Sampled:	03/01/18	03/01/18	03/01/18	03/01/18
Date Prepared:	03/08/18	03/08/18	03/08/18	03/08/18
Date Analyzed:	03/08/18	03/09/18	03/08/18	03/08/18
AA ID No:	8C02001-25	8C02001-26	8C02001-27	8C02001-28
Client ID No:	B24@5FT	B24@10FT	B24@15FT	B24@20FT
Matrix:	Soil	Soil	Soil	Soil
Dilution Factor:	1	1	10	1

MRL

Carbon Chain Characterization 8015M (EPA 8015M)

C6-C8	<1.0	<1.0	<10	<1.0	1.0
C8-C10	<1.0	<1.0	17	<1.0	1.0
C10-C12	<1.0	1.3	49	<1.0	1.0
C12-C14	<1.0	3.9	160	<1.0	1.0
C14-C16	<1.0	9.5	250	<1.0	1.0
C16-C18	<1.0	16	400	<1.0	1.0
C18-C20	<1.0	33	460	<1.0	1.0
C20-C22	<1.0	40	450	<1.0	1.0
C22-C24	<1.0	51	610	<1.0	1.0
C24-C26	<1.0	49	420	<1.0	1.0
C26-C28	<1.0	54	470	<1.0	1.0
C28-C32	1.1	120	980	<1.0	1.0
C32-C34	<1.0	32	260	<1.0	1.0
C34-C36	<1.0	15	130	<1.0	1.0
C36-C40	<1.0	34	160	<1.0	1.0
C40-C44	<1.0	26	96	<1.0	1.0
TPH (C6-C44)	<10	490	4900	<10	10

Surrogates

o-Terphenyl	73%	108%	84%	80%	%REC Limits 50-150
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 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB
Method: Carbon Chain by GC/FID

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18
Units: mg/kg

Date Sampled:	03/01/18	03/01/18	03/01/18	03/01/18
Date Prepared:	03/08/18	03/08/18	03/08/18	03/08/18
Date Analyzed:	03/09/18	03/09/18	03/08/18	03/08/18
AA ID No:	8C02001-29	8C02001-30	8C02001-31	8C02001-32
Client ID No:	B26@5FT	B26@10FT	B26@15FT	B26@20FT
Matrix:	Soil	Soil	Soil	Soil
Dilution Factor:	1	1	1	1

MRL

Carbon Chain Characterization 8015M (EPA 8015M)

C6-C8	<1.0	<1.0	<1.0	<1.0	1.0
C8-C10	<1.0	2.6	<1.0	<1.0	1.0
C10-C12	<1.0	11	2.1	<1.0	1.0
C12-C14	<1.0	30	8.2	<1.0	1.0
C14-C16	1.4	45	14	<1.0	1.0
C16-C18	4.2	66	25	<1.0	1.0
C18-C20	10	71	35	<1.0	1.0
C20-C22	18	93	42	<1.0	1.0
C22-C24	25	110	51	<1.0	1.0
C24-C26	26	96	49	<1.0	1.0
C26-C28	31	99	48	<1.0	1.0
C28-C32	91	190	110	<1.0	1.0
C32-C34	20	31	27	<1.0	1.0
C34-C36	20	20	15	<1.0	1.0
C36-C40	23	40	22	<1.0	1.0
C40-C44	27	22	13	<1.0	1.0
TPH (C6-C44)	300	920	460	<10	10

Surrogates

o-Terphenyl	88%	78%	114%	86%	%REC Limits 50-150
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Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB
Method: Carbon Chain by GC/FID

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18
Units: mg/kg

Date Sampled:	03/01/18	03/01/18	03/01/18	03/01/18
Date Prepared:	03/08/18	03/08/18	03/08/18	03/08/18
Date Analyzed:	03/08/18	03/08/18	03/08/18	03/08/18
AA ID No:	8C02001-33	8C02001-34	8C02001-35	8C02001-36
Client ID No:	B27@5FT	B27@10FT	B27@15FT	B27@20FT
Matrix:	Soil	Soil	Soil	Soil
Dilution Factor:	1	10	1	1

MRL

Carbon Chain Characterization 8015M (EPA 8015M)

C6-C8	<1.0	<10	<1.0	<1.0	1.0
C8-C10	<1.0	17	1.0	2.9	1.0
C10-C12	<1.0	49	6.2	16	1.0
C12-C14	<1.0	160	23	46	1.0
C14-C16	<1.0	240	36	69	1.0
C16-C18	<1.0	280	51	88	1.0
C18-C20	<1.0	400	73	110	1.0
C20-C22	<1.0	410	65	120	1.0
C22-C24	<1.0	460	60	140	1.0
C24-C26	<1.0	400	64	100	1.0
C26-C28	1.2	390	60	120	1.0
C28-C32	5.2	860	120	210	1.0
C32-C34	1.3	240	31	45	1.0
C34-C36	1.4	110	14	25	1.0
C36-C40	1.6	180	18	47	1.0
C40-C44	<1.0	36	12	22	1.0
TPH (C6-C44)	11	4200	640	1200	10

Surrogates

o-Terphenyl	85%	81%	73%	77%	%REC Limits 50-150
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QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB
Method: Carbon Chain by GC/FID

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18
Units: mg/kg

Date Sampled:	03/01/18	
Date Prepared:	03/08/18	
Date Analyzed:	03/08/18	
AA ID No:	8C02001-37	
Client ID No:	B27@25FT	
Matrix:	Soil	
Dilution Factor:	1	MRL

Carbon Chain Characterization 8015M (EPA 8015M)

C6-C8	<1.0	1.0
C8-C10	<1.0	1.0
C10-C12	<1.0	1.0
C12-C14	<1.0	1.0
C14-C16	<1.0	1.0
C16-C18	<1.0	1.0
C18-C20	<1.0	1.0
C20-C22	<1.0	1.0
C22-C24	<1.0	1.0
C24-C26	<1.0	1.0
C26-C28	<1.0	1.0
C28-C32	<1.0	1.0
C32-C34	<1.0	1.0
C34-C36	<1.0	1.0
C36-C40	<1.0	1.0
C40-C44	<1.0	1.0
TPH (C6-C44)	<10	10

<u>Surrogates</u>		<u>%REC Limits</u>
o-Terphenyl	82%	50-150

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 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB
Method: Total Metals by ICP Atomic Emission Spectroscopy

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MRL
<u>Arsenic Total EPA 6010B (EPA 6010B)</u>								
8C02001-01	B20@5FT	03/01/18	03/05/18	03/06/18	1	36	mg/kg	0.5
8C02001-02	B20@15FT	03/01/18	03/05/18	03/06/18	1	170	mg/kg	0.5
8C02001-03	B20@20FT	03/01/18	03/05/18	03/06/18	1	44	mg/kg	0.5
8C02001-04	B20@25FT	03/01/18	03/05/18	03/06/18	1	10	mg/kg	0.5
8C02001-05	B21@5FT	03/01/18	03/05/18	03/06/18	1	38	mg/kg	0.5
8C02001-06	B21@10FT	03/01/18	03/05/18	03/06/18	1	50	mg/kg	0.5
8C02001-07	B21@15FT	03/01/18	03/05/18	03/06/18	1	80	mg/kg	0.5
8C02001-08	B21@20FT	03/01/18	03/05/18	03/06/18	1	8.1	mg/kg	0.5
8C02001-09	B21@25FT	03/01/18	03/05/18	03/06/18	1	2.4	mg/kg	0.5
8C02001-10	B22@5FT	03/01/18	03/05/18	03/06/18	1	5.4	mg/kg	0.5
8C02001-11	B22@10FT	03/01/18	03/05/18	03/06/18	1	50	mg/kg	0.5
8C02001-12	B22@15FT	03/01/18	03/05/18	03/06/18	1	49	mg/kg	0.5
8C02001-13	B22@20FT	03/01/18	03/05/18	03/06/18	1	3.5	mg/kg	0.5
8C02001-14	B22@25FT	03/01/18	03/05/18	03/06/18	1	28	mg/kg	0.5
8C02001-15	B23@5FT	03/01/18	03/05/18	03/06/18	1	19	mg/kg	0.5
8C02001-16	B23@8FT	03/01/18	03/05/18	03/06/18	1	6.8	mg/kg	0.5
8C02001-17	B23@11FT	03/01/18	03/05/18	03/06/18	1	22	mg/kg	0.5
8C02001-18	B23@14FT	03/01/18	03/05/18	03/06/18	1	15	mg/kg	0.5
8C02001-19	B23@17FT	03/01/18	03/05/18	03/06/18	1	48	mg/kg	0.5
8C02001-20	B23@20FT	03/01/18	03/05/18	03/06/18	1	9.9	mg/kg	0.5
8C02001-21	B23@23FT	03/01/18	03/05/18	03/07/18	1	26	mg/kg	0.5
8C02001-22	B23@26FT	03/01/18	03/05/18	03/07/18	1	50	mg/kg	0.5
8C02001-23	B23@29FT	03/01/18	03/05/18	03/07/18	1	5.1	mg/kg	0.5
8C02001-24	B23@32FT	03/01/18	03/05/18	03/07/18	1	3.5	mg/kg	0.5

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB
Method: Total Metals by ICP Atomic Emission Spectroscopy

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MRL
<u>Arsenic Total EPA 6010B (EPA 6010B)</u>								
8C02001-25	B24@5FT	03/01/18	03/05/18	03/07/18	1	4.4	mg/kg	0.5
8C02001-26	B24@10FT	03/01/18	03/05/18	03/07/18	1	14	mg/kg	0.5
8C02001-27	B24@15FT	03/01/18	03/05/18	03/07/18	1	58	mg/kg	0.5
8C02001-28	B24@20FT	03/01/18	03/05/18	03/07/18	1	4.0	mg/kg	0.5
8C02001-29	B26@5FT	03/01/18	03/05/18	03/07/18	1	30	mg/kg	0.5
8C02001-30	B26@10FT	03/01/18	03/05/18	03/07/18	1	24	mg/kg	0.5
8C02001-31	B26@15FT	03/01/18	03/05/18	03/07/18	1	12	mg/kg	0.5
8C02001-32	B26@20FT	03/01/18	03/05/18	03/07/18	1	5.9	mg/kg	0.5
8C02001-33	B27@5FT	03/01/18	03/05/18	03/07/18	1	3.3	mg/kg	0.5
8C02001-34	B27@10FT	03/01/18	03/05/18	03/07/18	1	61	mg/kg	0.5
8C02001-35	B27@15FT	03/01/18	03/05/18	03/07/18	1	18	mg/kg	0.5
8C02001-36	B27@20FT	03/01/18	03/05/18	03/07/18	1	35	mg/kg	0.5
8C02001-37	B27@25FT	03/01/18	03/05/18	03/07/18	1	2.7	mg/kg	0.5
<u>Lead Total EPA 6010B (EPA 6010B)</u>								
8C02001-01	B20@5FT	03/01/18	03/05/18	03/06/18	1	86	mg/kg	3
8C02001-02	B20@15FT	03/01/18	03/05/18	03/06/18	1	260	mg/kg	3
8C02001-03	B20@20FT	03/01/18	03/05/18	03/06/18	1	68	mg/kg	3
8C02001-04	B20@25FT	03/01/18	03/05/18	03/06/18	1	6.3	mg/kg	3
8C02001-05	B21@5FT	03/01/18	03/05/18	03/06/18	1	32	mg/kg	3
8C02001-06	B21@10FT	03/01/18	03/05/18	03/06/18	1	67	mg/kg	3
8C02001-07	B21@15FT	03/01/18	03/05/18	03/06/18	1	230	mg/kg	3
8C02001-08	B21@20FT	03/01/18	03/05/18	03/06/18	1	6.1	mg/kg	3
8C02001-09	B21@25FT	03/01/18	03/05/18	03/06/18	1	4.0	mg/kg	3

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB
Method: Total Metals by ICP Atomic Emission Spectroscopy

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MRL
<u>Lead Total EPA 6010B (EPA 6010B)</u>								
8C02001-10	B22@5FT	03/01/18	03/05/18	03/06/18	1	6.8	mg/kg	3
8C02001-11	B22@10FT	03/01/18	03/05/18	03/06/18	1	120	mg/kg	3
8C02001-12	B22@15FT	03/01/18	03/05/18	03/06/18	1	130	mg/kg	3
8C02001-13	B22@20FT	03/01/18	03/05/18	03/06/18	1	<3.0	mg/kg	3
8C02001-14	B22@25FT	03/01/18	03/05/18	03/06/18	1	5.6	mg/kg	3
8C02001-15	B23@5FT	03/01/18	03/05/18	03/06/18	1	68	mg/kg	3
8C02001-16	B23@8FT	03/01/18	03/05/18	03/06/18	1	6.9	mg/kg	3
8C02001-17	B23@11FT	03/01/18	03/05/18	03/06/18	1	20	mg/kg	3
8C02001-18	B23@14FT	03/01/18	03/05/18	03/06/18	1	19	mg/kg	3
8C02001-19	B23@17FT	03/01/18	03/05/18	03/06/18	1	170	mg/kg	3
8C02001-20	B23@20FT	03/01/18	03/05/18	03/06/18	1	10	mg/kg	3
8C02001-21	B23@23FT	03/01/18	03/05/18	03/07/18	1	77	mg/kg	3
8C02001-22	B23@26FT	03/01/18	03/05/18	03/07/18	1	130	mg/kg	3
8C02001-23	B23@29FT	03/01/18	03/05/18	03/07/18	1	4.6	mg/kg	3
8C02001-24	B23@32FT	03/01/18	03/05/18	03/07/18	1	3.8	mg/kg	3
8C02001-25	B24@5FT	03/01/18	03/05/18	03/07/18	1	46	mg/kg	3
8C02001-26	B24@10FT	03/01/18	03/05/18	03/07/18	1	77	mg/kg	3
8C02001-27	B24@15FT	03/01/18	03/05/18	03/07/18	1	120	mg/kg	3
8C02001-28	B24@20FT	03/01/18	03/05/18	03/07/18	1	4.7	mg/kg	3
8C02001-29	B26@5FT	03/01/18	03/05/18	03/07/18	1	36	mg/kg	3
8C02001-30	B26@10FT	03/01/18	03/05/18	03/07/18	1	70	mg/kg	3
8C02001-31	B26@15FT	03/01/18	03/05/18	03/07/18	1	13	mg/kg	3
8C02001-32	B26@20FT	03/01/18	03/05/18	03/07/18	1	4.7	mg/kg	3
8C02001-33	B27@5FT	03/01/18	03/05/18	03/07/18	1	47	mg/kg	3

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental

Project No: 3029

Project Name: OOI-SOB

Method: Total Metals by ICP Atomic Emission Spectroscopy

AA Project No: A243897

Date Received: 03/01/18

Date Reported: 03/09/18

AA I.D. No.	Client I.D. No.	Sampled	Prepared	Analyzed	Dilution	Result	Units	MRL
<u>Lead Total EPA 6010B (EPA 6010B)</u>								
8C02001-34	B27@10FT	03/01/18	03/05/18	03/07/18	1	160	mg/kg	3
8C02001-35	B27@15FT	03/01/18	03/05/18	03/07/18	1	26	mg/kg	3
8C02001-36	B27@20FT	03/01/18	03/05/18	03/07/18	1	38	mg/kg	3
8C02001-37	B27@25FT	03/01/18	03/05/18	03/07/18	1	<3.0	mg/kg	3

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
 Project No: 3029
 Project Name: OOI-SOB

AA Project No: A243897
 Date Received: 03/01/18
 Date Reported: 03/09/18

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Notes
Carbon Chain by GC/FID - Quality Control										
Batch B8C0626 - EPA 3550B										
Blank (B8C0626-BLK1)										
Prepared & Analyzed: 03/06/18										
C6-C8	<1.0	1.0	mg/kg							
C8-C10	<1.0	1.0	mg/kg							
C10-C12	<1.0	1.0	mg/kg							
C12-C14	<1.0	1.0	mg/kg							
C14-C16	<1.0	1.0	mg/kg							
C16-C18	<1.0	1.0	mg/kg							
C18-C20	<1.0	1.0	mg/kg							
C20-C22	<1.0	1.0	mg/kg							
C22-C24	<1.0	1.0	mg/kg							
C24-C26	<1.0	1.0	mg/kg							
C26-C28	<1.0	1.0	mg/kg							
C28-C32	<1.0	1.0	mg/kg							
C32-C34	<1.0	1.0	mg/kg							
C34-C36	<1.0	1.0	mg/kg							
C36-C40	<1.0	1.0	mg/kg							
C40-C44	<1.0	1.0	mg/kg							
TPH (C6-C44)	<10	10	mg/kg							
Surrogate: o-Terphenyl	9.29		mg/kg	10		92.9	50-150			
LCS (B8C0626-BS1)										
Prepared & Analyzed: 03/06/18										
Diesel Range Organics as Diesel	176	10	mg/kg	200		88.0	75-125			
Surrogate: o-Terphenyl	13.1		mg/kg	10		131	50-150			
LCS Dup (B8C0626-BSD1)										
Prepared & Analyzed: 03/06/18										
Diesel Range Organics as Diesel	183	10	mg/kg	200		91.7	75-125	4.17	40	
Surrogate: o-Terphenyl	11.9		mg/kg	10		119	50-150			
Matrix Spike (B8C0626-MS1)										
Source: 8C02001-09 Prepared & Analyzed: 03/06/18										
Diesel Range Organics as Diesel	183	10	mg/kg	200		91.3	70-130			
Surrogate: o-Terphenyl	12.4		mg/kg	10		124	50-150			
Matrix Spike Dup (B8C0626-MSD1)										
Source: 8C02001-09 Prepared & Analyzed: 03/06/18										
Diesel Range Organics as Diesel	194	10	mg/kg	200		96.8	70-130	5.83	40	

Allen Aminian

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Carbon Chain by GC/FID - Quality Control										
<i>Batch B8C0626 - EPA 3550B</i>										
Matrix Spike Dup (B8C0626-MSD1) Source: 8C02001-09 Prepared & Analyzed: 03/06/18										
Continued										
<i>Surrogate: o-Terphenyl</i>	12.2		mg/kg	10		122	50-150			
<i>Batch B8C0809 - EPA 3550B</i>										
Blank (B8C0809-BLK1) Prepared & Analyzed: 03/08/18										
C6-C8	<1.0	1.0	mg/kg							
C8-C10	<1.0	1.0	mg/kg							
C10-C12	<1.0	1.0	mg/kg							
C12-C14	<1.0	1.0	mg/kg							
C14-C16	<1.0	1.0	mg/kg							
C16-C18	<1.0	1.0	mg/kg							
C18-C20	<1.0	1.0	mg/kg							
C20-C22	<1.0	1.0	mg/kg							
C22-C24	<1.0	1.0	mg/kg							
C24-C26	<1.0	1.0	mg/kg							
C26-C28	<1.0	1.0	mg/kg							
C28-C32	<1.0	1.0	mg/kg							
C32-C34	<1.0	1.0	mg/kg							
C34-C36	<1.0	1.0	mg/kg							
C36-C40	<1.0	1.0	mg/kg							
C40-C44	<1.0	1.0	mg/kg							
TPH (C6-C44)	<10	10	mg/kg							
<i>Surrogate: o-Terphenyl</i>	6.97		mg/kg	10		69.7	50-150			
LCS (B8C0809-BS1) Prepared & Analyzed: 03/08/18										
Diesel Range Organics as Diesel	192	10	mg/kg	200		96.1	75-125			
<i>Surrogate: o-Terphenyl</i>	10.1		mg/kg	10		101	50-150			
LCS Dup (B8C0809-BSD1) Prepared & Analyzed: 03/08/18										
Diesel Range Organics as Diesel	206	10	mg/kg	200		103	75-125	7.16	40	
<i>Surrogate: o-Terphenyl</i>	10.5		mg/kg	10		105	50-150			
Matrix Spike (B8C0809-MS1) Source: 8C02001-32 Prepared & Analyzed: 03/08/18										
Diesel Range Organics as Diesel	203	10	mg/kg	200		101	70-130			

Allen Aminian

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

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

Carbon Chain by GC/FID - Quality Control

Batch B8C0809 - EPA 3550B

Matrix Spike (B8C0809-MS1) Continued Source: 8C02001-32 Prepared & Analyzed: 03/08/18

Surrogate: o-Terphenyl 10.2 mg/kg 10 102 50-150

Matrix Spike Dup (B8C0809-MSD1) Source: 8C02001-32 Prepared & Analyzed: 03/08/18

Diesel Range Organics as Diesel **200** 10 mg/kg 200 100 70-130 1.21 40

Surrogate: o-Terphenyl 10.1 mg/kg 10 101 50-150

Total Metals by ICP Atomic Emission Spectroscopy - Quality Control

Batch B8C0534 - EPA 3050B

Blank (B8C0534-BLK1) Prepared: 03/05/18 Analyzed: 03/06/18

Lead <3.0 3.0 mg/kg

Arsenic <0.50 0.50 mg/kg

LCS (B8C0534-BS1) Prepared: 03/05/18 Analyzed: 03/06/18

Arsenic **53.2** 0.50 mg/kg 50 106 80-120 20

Lead **54.4** 3.0 mg/kg 50 109 80-120 20

LCS Dup (B8C0534-BSD1) Prepared: 03/05/18 Analyzed: 03/06/18

Lead **50.7** 3.0 mg/kg 50 101 80-120 7.02 20

Arsenic **50.6** 0.50 mg/kg 50 101 80-120 5.09 20

Duplicate (B8C0534-DUP1) Source: 8C02001-13 Prepared: 03/05/18 Analyzed: 03/06/18

Arsenic **2.89** 0.50 mg/kg 3.49 18.8 40

Lead **<3.0** 3.0 mg/kg <3.0 40

Matrix Spike (B8C0534-MS1) Source: 8C02001-04 Prepared: 03/05/18 Analyzed: 03/06/18

Lead **51.5** 3.0 mg/kg 50 6.31 90.3 75-125 40

Arsenic **53.9** 0.50 mg/kg 50 9.95 88.0 75-125 40

Matrix Spike Dup (B8C0534-MSD1) Source: 8C02001-04 Prepared: 03/05/18 Analyzed: 03/06/18

Lead **47.9** 3.0 mg/kg 50 6.31 83.1 75-125 7.23 40

Arsenic **51.8** 0.50 mg/kg 50 9.95 83.7 75-125 4.07 40

Batch B8C0535 - EPA 3050B

Blank (B8C0535-BLK1) Prepared: 03/05/18 Analyzed: 03/07/18

Arsenic <0.50 0.50 mg/kg

Lead <3.0 3.0 mg/kg

LCS (B8C0535-BS1) Prepared: 03/05/18 Analyzed: 03/07/18

Allen Aminian
 QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Total Metals by ICP Atomic Emission Spectroscopy - Quality Control										
<i>Batch B8C0535 - EPA 3050B</i>										
LCS (B8C0535-BS1) Continued Prepared: 03/05/18 Analyzed: 03/07/18										
Lead	50.2	3.0	mg/kg	50		100	80-120		20	
Arsenic	51.8	0.50	mg/kg	50		104	80-120		20	
LCS Dup (B8C0535-BSD1) Prepared: 03/05/18 Analyzed: 03/07/18										
Lead	51.4	3.0	mg/kg	50		103	80-120	2.30	20	
Arsenic	52.4	0.50	mg/kg	50		105	80-120	1.25	20	
Duplicate (B8C0535-DUP1) Source: 8C02002-03 Prepared: 03/05/18 Analyzed: 03/07/18										
Arsenic	10.7	0.50	mg/kg		9.75			9.38	40	
Lead	48.9	3.0	mg/kg		41.5			16.4	40	
Matrix Spike (B8C0535-MS1) Source: 8C02001-24 Prepared: 03/05/18 Analyzed: 03/07/18										
Lead	50.8	3.0	mg/kg	50	3.82	94.0	75-125		40	
Arsenic	50.8	0.50	mg/kg	50	3.53	94.6	75-125		40	
Matrix Spike Dup (B8C0535-MSD1) Source: 8C02001-24 Prepared: 03/05/18 Analyzed: 03/07/18										
Arsenic	58.2	0.50	mg/kg	50	3.53	109	75-125	13.6	40	
Lead	56.3	3.0	mg/kg	50	3.82	105	75-125	10.3	40	

Allen Aminian
QA/QC Manager



LABORATORY ANALYSIS RESULTS

Client: Cal Environmental
Project No: 3029
Project Name: OOI-SOB

AA Project No: A243897
Date Received: 03/01/18
Date Reported: 03/09/18

Special Notes

A handwritten signature in cursive script, appearing to read 'Allen A.', written in black ink.

Allen Aminian
QA/QC Manager



AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311
Tel: 818-998-5547 FAX: 818-998-7258

AA COC No: 6999
70050822
Page 1 of 3

Client: Integrat Project Name / No.: OOI-50B Sampler's Name: C. Buckley

Project Manager: C. Buckley Site Address: 712 Baker St. Sampler's Signature: [Signature]

Phone: _____ City: Long Beach, CA P.O. No.: 3029

Fax: _____ State & Zip: _____ Quote No.: _____

- TAT Turnaround Codes **
- ① = Same Day Rush
 - ② = 24 Hour Rush
 - ③ = 48 Hour Rush
 - ④ = 72 Hour Rush
 - ⑤ = 5 Day Rush
 - X = 10 Working Days (Standard TAT)

Client I.D.	AA I.D.	Date	Time	Sample Matrix	No. of Cont	Relinquished by	Date	Time	Received by
B200584	BC02001-1	3/1/8	7:24	SOIL	1	[Signature]	3/1/8	15:40	[Signature]
B200154	-2		8:05A		X				
B200284	-3		8:12		X				
B200254	-4		8:20		X				
B210584	-5		8:40		X				
B210184	-6		9:05		X				
B210154	-7		9:01		X				
B210284	-8		9:07		X				
B210254	-9		9:15		X				
B22054	-10		9:35		X				
B220184	-11		9:45		X				
B220154	-12		9:50		X				
B220284	-13		9:58		X				
B220254	-14		10:05		X				
B2305	-15		10:20		X				

ANALYSIS REQUESTED (Test Name)

Special Instructions

Please enter the TAT Turnaround Codes ** below

AA Project No: A243877/8C02001

Date: 3/1/8 Time: 15:40

TAT: 5 Days Sign: [Signature]

Relinquished by: [Signature] Date: 3/1/8 Time: 15:40

Received by: [Signature] Date: 3/1/8 Time: 15:40

Note: By relinquishing samples to American Analytix, client agrees to pay for the services requested on this chain of custody form and any additional client-requested analyses performed on the product



AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9785 ETON AVE., CHATSWORTH, CA 91311
Tel: 818-998-5647 FAX: 818-998-7258

AA-COC No.: 14800
70050827
Page 2 of 3

Client: INTERVAL Project Name / No.: 001-508 Sampler's Name: L. Buckley

Project Manager: L. Buckley Site Address: 712 Baker St Sampler's Signature: [Signature]

Phone: _____ City: Los Angeles, CA P.O. No.: 5024

Fax: _____ State & Zip: _____ Quote No.: _____

- TAT Turnaround Codes **
- ① = Same Day Rush
 - ② = 24 Hour Rush
 - ③ = 48 Hour Rush
 - ④ = 72 Hour Rush
 - ⑤ = 5 Day Rush
 - X = 10 Working Days (Standard TAT)

ANALYSIS REQUESTED (Test Name)

Special Instructions

As + Pb
TPH₂₆

Client ID.	AA ID	Date	Time	Sample of Matrix	No. of Cont	Relinquished by	Date	Time	Received by
B232BA	BC02001-16	3/1/18	10:25	Soil	1	[Signature]	3/1/18	15:40	[Signature]
B23011A			10:33		1	[Signature]			
B23014A			10:43		1	[Signature]			
B23017A			10:52		1	[Signature]			
B23020A			10:58		1	[Signature]			
B23023A			11:03		1	[Signature]			
B23026A			11:11		1	[Signature]			
B23029A			11:15		1	[Signature]			
B23032A			11:20		1	[Signature]			
B24051A			11:45		1	[Signature]			
B24010A			11:52		1	[Signature]			
B24015A			11:56		1	[Signature]			
B24020A			12:00		1	[Signature]			
B24051A			12:55		1	[Signature]			
B26010A			1:00		1	[Signature]			

REVIEWED

Date: 3/1/18 Time: 15:40

TAT 5 Days Sign: [Signature]

AA Project No.: 19243897/86020081

Note: By relinquishing samples to American Analyticals, client agrees to pay for the services requested on this chain of custody form and any additional client-requested analyses performed on this product



AMERICAN ANALYTICS CHAIN-OF-CUSTODY RECORD

9765 ETON AVE., CHATSWORTH, CA 91311

Tel: 818-998-5547 FAX: 818-998-7258

AA.COC No: 14801

70050823
Page 3 of 3

Client: INTEGRAL

Project Name / No.: DEL-508

Sampler's Name: C. Buckley

Project Manager: C. Buckley

Site Address: 712 BAKER ST

Sampler's Signature: [Signature]

Phone: City: Long Beach CA

P. O. No.:

Fax: State & Zip:

Quote No.:

TAT Turnaround Codes **

ANALYSIS REQUESTED (Test Name)

- ① = Same Day Rush
- ② = 24 Hour Rush
- ③ = 48 Hour Rush
- ④ = 72 Hour Rush
- ⑤ = 5 Day Rush
- X = 10 Working Days (Standard TAT)

Client ID	AA ID	Date	Time	Sample Matrix	No. of Cont	Please enter the TAT Turnaround Codes ** below		Special Instructions
B26 @ 15kt	BCD000-31	3/1/18	1:05	SOIL	1	X	X	A5+B TPH
B26 @ 20kt			1:10			X	X	
B27 @ 5kt			1:20			X	X	
B27 @ 15kt			1:28			X	X	
B27 @ 15kt			1:39			X	X	
B27 @ 25kt			1:42			X	X	
B27 @ 25kt			1:45			X	X	

Relinquished by	Date	Time	Received by
<u>[Signature]</u>	3/1/18	15:40	<u>[Signature]</u>
Relinquished by	Date	Time	Received by

AA Project No: AA045891718C022001

Date: 3/1/18 Time: 15:40

TAT: 5 Days Sign: [Signature]

Note: By relinquishing samples to American Analyticals, client agrees to pay for the services requested on this chain of custody form and any additional client-requested analyses performed on this project.

APPENDIX VI

LNAPL Assessment Report

California



Environmental

**SUPPLEMENTAL ASSESSMENT
FOR ORIGIN OF LNAPL IMPACTS NEAR BRYCON MW1**

Oil Operators, Inc. (OOI) Property
712 Baker Street
Long Beach, California 90806

SUBMITTED TO

**REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION (LARWQCB)**

320 W. Fourth Street, Suite 200
Los Angeles, California 90013
Attention: Ms. Rebecca Orr
SCP Case No. 0093; SCP ID No. 2044M00

FOR

OIL OPERATORS, INC.

2852 Gundry Ave.
Signal Hill, CA 90755
Attention: Mr. Kevin Laney

CE Job No. EP610-3029
July 2019

3029.LNAPL.WP.OOI.2019

30423 Canwood Street, Suite 208, Agoura Hills, CA 91301 • P: (818) 991-1542 • F: (818) 991-1542 • E: ceworks@calenviro.com

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Figure 2 – Site Plan
Figure 3 – LNAPL Assessment Plan
Figure 4 – Section A-A’
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APPENDICES

- I. Data Tables
 - Table I – Soil VOCs/TPH
 - Table II – Soil Arsenic/Lead
 - Table III – Groundwater VOCs/TPH
- II. Geophysical Report
- III. CPT/UVOST Report
- IV. Laboratory Test Reports
- V. Long Beach City – Boring Permit

1.0 INTRODUCTION

A soil/groundwater assessment was implemented as outlined in the February 2019 workplan prepared by California Environmental (CE) and approved by the Los Angeles Regional Water Quality Control Board (LARWQCB). This assessment work provides further delineation of the extent and likely source of the LNAPL (light non-aqueous phase liquid, gasoline) accumulation periodically detected in onsite well Brycon–MW1.

Three (3) subsurface petroleum pipelines (as shown on City of Long Beach Substructure Map-Pipeline Atlas G23) that historically contained petroleum products, including crude oil and gasoline, border the subject site to the east (abutting the eastern property line). These pipelines were (are) owned and operated by independent oil companies including Tesoro, the successor to BP, a previous pipeline operator. The LARWQCB in a letter dated November 6, 2012 named BP Pipelines (successor Tesoro) responsible for the contamination associated with leaks of gasoline (Area of Concern - AOC A) from BP Line 34. The LARWQCB letter also mentions the results of product (LNAPL) characterization from Brycon-MW1 as containing evidence of BP pipeline leaks. The chemical testing confirmed the LNAPL sampled from Brycon-MW1 had the chemical composition typically associated with gasoline. OOI never operated or owned crude oil or refined product pipelines within their wastewater treatment facility boundary. OOI has no record of underground fuel or product tanks being installed at the 712 N. Baker Street property. The supplemental assessment data provided herein suggests that the gasoline product detected in soil and groundwater in the vicinity of Brycon-MW1 likely originated from leaks associated with the gasoline pipelines beneath Golden Avenue, adjacent to the east side of the OOI parcel.

Tesoro prepared an *Addendum to January 25, 2019 Pipeline Update Report* dated April 11, 2019. The report includes Figure 1 – Map of Line Repairs (1945-1964 and 2018) that shows nine areas of historical pipeline leaks along Golden Avenue, three (3) leaks along Baker Street to the north and one (1) leak located north of Wardlow Road. Three (3) of the leak/repair locations, shown on the Tesoro Figure 1, correspond to areas where gasoline was identified in sediment and groundwater samples on the adjacent OOI property and beneath the pipelines in Golden Avenue, including near Brycon-MW1. The

Tesoro Pipeline Leak Map confirms that historical leaks from the offsite gasoline pipelines are the likely source for the product found in Brycon – MW1. The approximate locations of the historical pipeline leaks as identified by Tesoro are shown on the attached **FIGURE 2 – SITE PLAN**.

Monitor well Brycon-MW1 was installed during 2011 within three feet of Brycon boring B10, near the southeast corner of the subject property. Boring B10 was part of the nineteen (19) supplemental assessment borings drilled and sampled on and offsite of the OOI property by Brycon during 2010. Soil and groundwater samples were obtained from B10. The soil samples from depths of 10 and 20 feet were not-detect for VOCs and TPH gasoline. Detectable (OVA) vapor readings, gasoline in soil and gasoline odors were found in the 30-foot (capillary fringe/smear zone) soil sample (Brycon B10 at 30 feet, TPHg = 180 mg/kg). Groundwater was encountered in B10 at a depth of 37 feet and a groundwater sample obtained during September 2010 was found to contain LNAPL. Gasoline (LNAPL) was found periodically in Brycon–MW1 from 2013 through 2018. The monitor well thickness of the LNAPL ranged from 0.03 feet (9/2013) to 1.72 feet (12/2017). A product layer (LNAPL) was not detected in Brycon-MW1 during free product evaluations conducted by CE on April 4 and 5, 2019 and on June 25 and 26, 2019.

An AECOM geologist (Mr. Clark Murphy) was onsite during the soil/groundwater sampling activities that occurred from June 25-28, 2019. Split soil and groundwater samples were obtained by AECOM and were reportedly sent to a state certified lab for analysis. AECOM also screened the sediment cores for VOCs using a hand-held RAE Systems PID. Sediment that exhibited high PID readings along with strong gasoline odors were subjected to a qualitative field screening test procedure by AECOM using a colorimetric indicator manufactured by Oil-In-Soil, LLC. The sensitivity range for the Oil-In-Soil field test kit reportedly ranges from approximately 500-2,500+ ppm.

The supplemental assessment to determine the origin and distribution of the LNAPL included the following: 1) Conducting a geophysical survey on April 8, 2019 in the area near Brycon-MW1 to assess for unknown buried sub-structures 2) excavation of eight (8) CPT/UVOST borings to depths of 18.26 to 59.8 feet on April 8/9, 2019 to obtain a qualitative assessment of the LNAPL distribution in the

subsurface, 3) excavation and sampling of seven (7) hydraulic push borings to depths of 42-53 feet and sub-sampling of the continuous sediment cores, 3) installing seven (7) temporary 3/4-inch PVC casings in the borings and sampling of the groundwater, 4) conduct laboratory testing of soil and groundwater for the presence of lead/arsenic, TPH, and VOCs and 5) prepare this report of findings and data interpretation providing an opinion regarding the origin and distribution of the LNAPL present in the vicinity of Brycon-MW1.

The site stratigraphy developed during this supplemental investigation identified an upper and lower saturated sand separated by a middle clayey aquitard. This sedimentary package extends from approximately 30 to 50+ feet below the ground surface. The gasoline-impacted soil zone is mostly restricted to the upper sand and locally extends a few feet into the aquitard. The discontinuous LNAPL zone is entirely within the upper sand and is characterized by high PID readings, strong gasoline odors, and high concentrations of TPHg in soil. As observed in the soil cores the LNAPL zone is typically several to six inches thick and locally (CESB10 and CESB12) up to several feet thick. The LNAPL zone does not penetrate the aquitard where sampled. The lower saturated sand was apparently not significantly impacted by the gasoline release. Monitor wells (Brycon-MW1 & Brycon-MW5) previously installed at the site have continuous screens that extend across all three lithologic units, from the upper impacted sand through the middle aquitard and into the lower sand. This makes the determination of impacted groundwater versus non-impacted groundwater between the upper and lower zones impractical due to the cross-contamination from the upper saturated zone into the lower saturated zone. The data provided herein indicate the historical leaks from the existing petroleum pipelines located beneath Golden Ave. adjacent to the east OOI property are the source of the LNAPL found in the subsurface near Brycon-MW1.

2.0 SITE DESCRIPTION

2.1 DESCRIPTION OF THE PROPERTY

The subject property consists of a 20.12-acre industrial parcel located west of Golden Avenue, south of the San Diego Freeway, north of Wardlow Road, and east of the Los Angeles River, in the city of Long Beach, California, see **FIGURE 1 – VICINITY MAP**. The property is owned by Oil Operators Inc. (OOI) and has been utilized since the 1920s for treatment of oil field production brines and other fluid by-products of oil production. OOI is currently processing low concentration petroleum hydrocarbon impacted soil on the property (bioremediation) under the auspices of the Long Beach Environmental Health Department. The study area for this LNAPL assessment work includes approximately 1 acre near the southeast corner of the property, see **FIGURE 2 – SITE PLAN**. The County of Los Angeles Tax Assessor’s Parcel Numbers (APNs) for the subject property addresses is as follows:

APNs	Address	Acreage
7203-002-001	701 W. Baker Street	4.78
7203-002-005	712 W. Baker Street	13.28
7203-002-007	3801 Golden Avenue	0.58
7203-002-008	3701 Golden Avenue	0.87
7203-002-009	3539 Golden Avenue	0.46
7203-002-010	3501 Golden Avenue	0.15

3.0 PREVIOUS WORK

The OOI property was the subject of extensive environmental testing and investigations from the early 1980s through 2018. The previous investigators include Emcon Associates (1981), Jaykim Engineers, Inc. (JEI, 1986 to 1988c), Jack K. Bryant and Associates (JKB; 1992), Environmental Science & Engineering, Inc., (ESE), California Environmental (2011), AECOM (2015/2016), Tetra Tech (2015) and Brycon, LLC (Brycon, 2001a to 2015c). The Tetra Tech and AECOM reports include comprehensive assessment of the impacts at the OOI property and present summaries of the historical environmental investigations conducted at the OOI property. The previous reports are listed in the references section of this report.

Brycon (and Bedrock Engineering beginning in December 2016) was the environmental consultant since 2001 assisting OOI with characterization and remediation activities at the Site. Ongoing soil remediation (bioremediation of TPH impacted soil) activities were undertaken in response to the Consent Decree issued in 2002, under the oversight of the City of Long Beach Department of Health and Human Services, Division of Hazardous Materials (LBDHHS). The groundwater monitoring (GWM) activities are being performed under the oversight of the California Regional Water Quality Control Board-Los Angeles Region (LARWQCB).

Brycon operated a vapor extraction system (VES) in the eastern part of the Site from 2012 to 2014 to remove vapor phase VOCs associated with the petroleum pipeline releases adjacent to Golden Avenue. AECOM Technical Services, Inc. (ATSI), on behalf of Tesoro Logistic Operations, LLC (TLO) has operated a VES unit in the northeastern part of the Site since April 2015. The ATSI-operated VES unit is expected to continue to remediate the TLO pipeline releases beneath Golden Avenue. The TLO-related activities are in response to a Cleanup and Abatement Order No. R4-2013-0064 dated September 18, 2014 (CAO) that was issued by the LARWQCB (2014a) to BP Pipelines (North America), Inc. Atlantic Richfield Company, and ARCO Terminal Services Corporation (ATSC). TLO in a letter dated July 24, 2013 assumed responsibility for responding to the CAO.

Monitoring of the groundwater quality beneath the site is ongoing and has occurred intermittently from 1989 and continuously from 1999 through 2019. There are fourteen (14) monitor wells currently

part of the monitoring program at the Site. The wells are identified as ESE-MW1, ESE-MW2, 92-MW1, Brycon MW1, MW2, MW3, MW4, MW5, and Tetra Tech-installed wells TMW1, TMW2, TMW3, TMW4, TMW5 and TMW6. Monitor well Brycon MW1 was installed in 2011 to assess the high concentrations of TPHg found in 2010 during the drilling of Brycon assessment boring B10. Subsequently, gasoline (LNAPL) was found in Brycon–MW1 during quarterly groundwater monitoring events from 2013-2019. The monitor well thickness of the LNAPL has historically ranged from 0.01 feet (2/2019) to 1.72 feet (12/2017). CE did not detect LNAPL in Brycon MW1 during observations made in April and June of 2019.

Groundwater samples are currently tested for total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), dissolved CAM metals, total dissolved solids (TDS), total suspended solids (TSS), total organic carbon (TOC), chlorides and pH. The depth to water varies from approximately 32 to 53 feet bgs, corresponding to elevations of -2.81 to -3.95 feet above mean sea level (amsl). The groundwater gradient is very shallow with a variable flow direction, predominately towards the northwest beneath the area south of Baker Street and southwesterly towards the area north of Baker Street. Petroleum hydrocarbons (primarily C₅-C₁₂) and VOC (primarily BTEX compounds) impacts dissolved in groundwater are present beneath the central-eastern third of the property and are likely associated with historical releases from the petroleum pipelines located adjacent to the eastern property line. Quarterly GWM reports are currently prepared by Bedrock Engineering and submitted to the LARWQCB.

4.0 GEOLOGY - HYDROGEOLOGY

The subject property is located within the southeast portion of the Los Angeles Basin near the western terminus of Signal Hill adjacent to the eastern bank of the Los Angeles River. The property is within the south portion of the Los Angeles Coastal Plain and is underlain by made-made fill (up to 30+ft) and undifferentiated alluvial deposits including Pleistocene-age terrace (Palos Verdes Sand) and alluvium associated with deposition from the Los Angeles River. These deposits range from clayey-silts to poorly graded sands with granule gravels.

The Site is located within the eastern portion of the West Coast Groundwater Basin within the Newport-Inglewood Structural Zone. The groundwater regime within this portion of the West Coast Basin is generally characterized as containing an upper and lower aquifer system. The upper system includes Holocene sediments that typically contain unconfined groundwater of poor quality. The lower portion of the upper aquifer system includes upper Pleistocene deposits of the Gage aquifer, also known as the “200 foot sand”. Beneath the upper aquifer is the lower aquifer system consisting of the Jefferson, Lynwood and Silverado aquifers. The lower aquifer system is under pressure or confined conditions that likely extend to depths of 1,000 feet beneath the Site.

Historical topographic maps indicate that the western portion of the subject property was at the elevation of the adjacent Los Angeles River bank or about 25 feet amsl. The eastern portion of the property is a concealed (obscured by grading/artificial fill) erosional escarpment associated with the Los Angeles River. Subsequent grading at the property has raised the elevation of most of the site to an elevation of approximately 40 feet amsl. Groundwater level data indicate the groundwater elevation beneath the property is approximately at or several feet below mean sea level. The depth to groundwater across the Site ranges from about 30.55 to 50.24 (February 2019) feet below the ground surface. Groundwater level data indicate a variable but predominately northwesterly groundwater flow direction.

The monitor well network is sampled on a quarterly basis since 2017. The wells are tested for TPH, VOCs, CAM metals, pH, Total Organic Carbon, TDS, TSS and Chloride. Bedrock Engineering (previously Brycon) sampled fourteen (14) onsite monitoring wells during February 2019, as part of the required groundwater monitoring work. The groundwater monitoring data from February 2019 (presented in the report, *February 2019 - Quarterly Groundwater Monitoring at the Oil Operators Property, 712 West Baker Street, Long Beach, California*, dated April 15, 2019 and prepared by Bedrock Engineering) show that TPHg (C₄-C₁₂) was detected in six (6) of the fourteen wells. The six (6) wells with TPHg are located within the eastern half of the property and contain the following TPH concentrations; ESE-MW1 0.4 mg/l, Brycon-MW1 100.0 mg/l, Brycon – MW2 0.28 mg/l, Brycon – MW3 13.0 mg/l, Brycon –MW4 0.48

mg/l, and TMW5 9.8 mg/l. Brycon-MW1 was observed to have a 0.01 foot thick Light Non-Aqueous Phase Liquid (LNAPL) on the groundwater surface. TPH-g and VOC impacts to the underlying groundwater resource from onsite releases were not identified.

The detailed hydrogeology developed during this supplemental investigation identified two (2) distinct saturated zones beneath the LNAPL study area. They include an upper and lower saturated sand separated by a middle clayey aquitard. This sedimentary package extends from approximately 30 to 50+ feet below the ground surface. Monitor wells (Brycon-MW1 & Brycon-MW5) previously installed at the site have continuous screens that extend across all three (3) lithologic units, from the upper fuel-impacted sand through the middle aquitard and into the lower sand. This makes the zonal determination of impacted groundwater versus non-impacted groundwater impractical due to the cross-contamination effect from the upper impacted saturated zone into the lower saturated zone. Soundings made during June 2019 within the upper sand from temporary small diameter casings screened in the upper zone and placed within the CE hydraulic push borings typically contained groundwater levels three-five feet higher than the water level in nearby well Brycon MW1. This indicates that the upper sand and lower sand are probably hydraulically distinct water bearing zones and need to be assessed as such. Recommendations are provided for abandoning the existing wells (Brycon-MW1 & 5) and installation of future groundwater monitoring wells that isolate the upper sand and lower sand zones, when present, so these zones can be sampled and assessed separately.

5.0 LNAPL ASSESSMENT

The LNAPL assessment work was carried out in three (3) phases from April through June 2019, following LARWQCB approval of the February CE workplan. A geophysical survey was implemented to clear utilities and to assess for unknown buried sub-structures. Eight (CPT-1 to CPT-8) CPT/UVOST soundings were made beneath the study area to evaluate the site stratigraphy and to tentatively identify LNAPL zones. Finally, seven (7) continuously cored hydraulic push borings were logged and sampled to assess the location and distribution of the suspect LNAPL zone. Seven (7) temporary casings were placed in the boreholes and groundwater samples were obtained. The assessment work and the data developed are discussed below. The locations of the CE borings are shown on **FIGURE 3 – LNAPL ASSESSMENT PLAN**. The sediment interpretations and laboratory test data are depicted on **FIGURE 4 - CROSS SECTION A-A'** and **FIGURE 5 – CROSS SECTION B-B'**.

5.1 GEOPHYSICAL SURVEY

A geophysical survey (magnetics-EM, ground penetrating radar, E-induction) was conducted onsite by Southwest Geophysics on April 8, 2019. An approximately 31,500 sf area bordered by the property line to the east, the north boundary of the dog park to the south, along the east boundary of Basin 2 and then along an east/west line in the vicinity of well 92-MW3; see **FIGURE 3**. The geophysical survey was used to assess for substructures in the boring locations and to assess for unknown substructures.

The geophysical evaluation included the use of a Geonics Electromagnetics (EM) model M61 MK2, GSSI SIR 3000 Ground Penetrating Radar, Schonstedt Model GA-52C magnetic gradiometer, Fisher M-Scope TW-6 pipe and cable locator and RD8000 line tracer. The instruments provided real-time results to facilitate the delineation of subsurface features. The complete Southwest Geophysical Evaluation Report is attached in **APPENDIX II**.

Numerous geophysical anomalies were identified during the survey. Most were determined to be areas of shallow concrete, metal debris, or abandoned piping. Several of the anomaly areas (A, C, D, E and F) were identified as areas that required additional investigation to determine the origin of the EM and

magnetic responses. These anomaly areas were preliminarily investigated by hand augering through the identified zones. In all locations the hand auger was unable to penetrate beyond several feet due to the presence of concrete and metal debris. Future test trenches/pits through the anomaly areas are planned to further delineate these features.

5.2 CPT/UVOST BORINGS

Gregg Drilling and CE mobilized to the site on April 8, 2019 to advance the CPT borings in conjunction with the UVOST (Ultra-Violet Optical Screening Tool) system. The UVOST process uses a down-hole tool that emits a laser source through a sapphire window stimulating fluorescence (laser induced fluorescence – LIF) of the PAHs present in refined petroleum products. The spectral wavelength response is captured, recorded, and resolved into a percent concentration, relative to the reference compound, for a particular hydrocarbon type. The response spectra are typically calibrated with a reference emitter standard that includes the hydrocarbon profile expected at the site. It was anticipated, based on the previous sampling of Brycon-MW1, that a product sample could be obtained and used as the reference emitter standard (weathered gasoline). However, product was not found in Brycon-MW1 during testing conducted on April 8 and 9, 2019. Therefore, the instrument manufacturer (Dakota Technologies) standard reference emitter (light oil) was utilized to calibrate the UVOST system. The UVOST logging was run in conjunction with the standard CPT lithology log, providing a simultaneous soil type in conjunction with the qualitative hydrocarbon concentration. The complete CPT/UVOST report from Gregg Drilling is attached in **APPENDIX III**.

The eight (8) CPT/UVOST borings ranged in depth from 21.33 to 62.99 feet below ground surface. CPT-7 was terminated on a hard layer at a depth of 21.33 feet. The remaining seven CPT/UVOST borings extended to depths of 52.82 to 62.99 feet below the ground surface. No response signatures indicative of LNAPL zones were recorded by the UVOST system. The lithology identified by the CPT logs included an upper silty sand to a depth of 25 + feet, a middle zone (depth 25-40 feet) of silts and clays with occasional sandy layers and a lower sand/silty zone from 40 to 63 feet bgs. Pore water pressure tests were conducted at a depth of approximately 55 feet in CPT-1 and CPT-2. The calculated depth of potentiometric surface in the lower sand unit based on the pore water dissipation test is 20-25 feet

below grade, or approximately 15-20 feet amsl. This value seems high and would need to be confirmed by placing a piezometer isolated within the lower sand unit.

5.3 SOIL BORINGS

On June 25, 2019 a GeoProbe® Model 8040DT track-mounted hydraulic push rig was mobilized to the site by Cascade Drilling. Seven (7) hydraulic push borings were continuously cored to depths of 42-53 feet with drilling activities terminating on June 28, 2019. All borings were abandoned by pressure grouting via tremie pipe using a neat cement mix with the decommissioning activities completed on June 29, 2019. A permit for the borings was obtained from the City of Long Beach Dept. of Health and Human Services; attached in **APPENDIX V**.

The five-foot long by 1-inch wide sediment cores were sub-sampled per the EPA field preservation Method 5035, at approximately 1-5 foot depth intervals, depending on the field screening results. Typically the upper 25 feet of each boring was sub-sampled as intact six-inch long cores. The 5-foot long cores in the lower section of each boring were split open to allow for more detailed logging. The sediment was screened visually and with the use of a field PID for the presence of gasoline and associated VOCs. A temporary ¾-inch diameter PVC casing (new casing for each location) was placed in all borings and allowed to equilibrate for a one to several days to assess for product layers and to obtain a groundwater/product sample for analysis. Groundwater samples were obtained using a new disposal sampler for each sampling event with the groundwater placed in laboratory supplied preserved 40ml VOAs.

The undersigned hydrogeologist was onsite and conducted all the sampling and boring log preparation. The **CE BORING LOGS** are attached as **Plates 1-7**. Mr. Clark Murphy AECOM geologist was onsite during the soil/groundwater sampling activities that occurred on June 25-28, 2019. Split soil and groundwater samples were obtained by AECOM for analysis. Sediment that exhibited high PID readings along with strong gasoline odors were subjected to a qualitative field screening test procedure by AECOM using a colorimetric indicator manufactured by Oil-In-Soil, LLC. The sensitivity range for the Oil-In-Soil field test kit reportedly ranges from approximately 500-2,500+ ppm.

6.0 ANALYTICAL TESTING

Seventy-one (71) individual soil samples (including duplicate samples) were obtained from the borings and tested for total purgeable hydrocarbons, gasoline range hydrocarbons, and VOCs per EPA Method 8260B/5035. Fifty (50) of the seventy-one (71) samples were tested for total petroleum hydrocarbons, gasoline-oil range, per EPA Method 8015 and for lead and arsenic per EPA Method 6010B/7000. Eight (8) grab groundwater samples were obtained and tested for total purgeable hydrocarbons, gasoline range hydrocarbons and VOCs per EPA Method 8260B.

Soil and groundwater samples were couriered daily from the site to a fixed-base State of California certified laboratory, operated by Eurofins in Garden Grove, California. The laboratory tests on soil and groundwater samples are contained on **TABLES I-III in APPENDIX I**, and are summarized below. The complete laboratory test reports are attached in **APPENDIX IV**.

6.1 ANALYTICAL TESTS ON SOIL

TPHg was detected in all seven (7) borings CESB9-CESB15. Detectable and/or elevated concentrations (>100 mg/kg) of TPHg and detectable VOCs were typically not found in soil in the upper 25 feet of the sediment sampled. Elevated concentrations of TPHg were consistently detected within the Upper Sand lithosome (depths 33-38 feet) at concentrations up to 16,000 mg/kg (CESB10-33 feet). The maximum concentration of benzene found in the Upper Sand was 1,900 µg/kg in CESB12-38 feet. Other gasoline related VOCs detected in the Upper Sand zone include toluene, ethylbenzene, xylene, butylbenzene, isopropylbenzene, isopropyltoluene, propylbenzene and trimethylbenzene. MTBE and other oxygenated compounds were not detected in soil, and this is consistent with previous findings. Much lower to non-detect concentrations of TPHg (0.07-2.7 mg/kg) and VOCs (benzene <1.0 ug/kg) were found in the Lower Sand. All concentrations of lead found in soil during this assessment are less than 10 mg/kg, much lower than the site remediation goal of 80 mg/kg. Arsenic concentrations in soil

ranged from <0.7 to 28.1 mg/kg. Native sediment samples from borings CESB15-40 feet and CESB12-6 feet contained arsenic at 24.2 and 28.1 mg/kg, respectively.

6.2 ANALYTICAL TESTS ON GROUNDWATER

All eight (8) groundwater samples contained elevated concentrations of TPHg that ranged from 6,500-79,000 µg/l, as found in CESB14 and CESB10, respectively. Benzene was detected in all groundwater samples at concentrations that ranged from 7.2 to 390 µg/l. Other gasoline related VOCs detected in groundwater include toluene, ethylbenzene, xylene, butylbenzene, isopropylbenzene, isopropyltoluene, propylbenzene and trimethylbenzene. MTBE and other oxygenated compounds were not detected in groundwater, which is consistent with previous findings. A 5-millimeter thick product layer was initially detected in CESB10 on June 26, 2019. Subsequently, on June 27 a product sheen was observed during groundwater sampling of CESB10. The product layer was of insufficient volume to isolate for characterization.

7.0 CONCLUSIONS

The detailed hydrogeology developed during this supplemental investigation identified an upper and lower saturated sand separated by a middle clayey aquitard in all CE borings, CESB9-CESB15. This sedimentary package extends from approximately 30 to 50+ feet below the ground surface. Gasoline impacted soil was identified (above mobile NAPL concentrations) beneath the study area through continuous coring and direct soil sample analysis. The UVOST methodology was not effective in identifying LNAPL in the subsurface. The data presented below indicates that the historical releases from the product pipelines are the source for the LNAPL found beneath the study area.

The gasoline in soil was initially encountered below a depth of 25 feet. The high concentration gasoline impacted zone is primarily restricted to the lower portion of the Upper Sand unit as shown on **Sections**

A & B, and extends to a depth of about 40 feet corresponding to the top of the Middle Aquitard. The LNAPL zone is entirely within the Upper Sand and is correlated with high PID readings (465 ppmv CESB10 at 35.5 feet, 780 ppmv in CESB12 at 35 feet and 903 ppmv CESB15 at 34 feet), strong gasoline odors and high concentrations of TPHg in soil. As observed in the sediment cores the LNAPL zone is typically several to six inches thick and locally (CESB10 and CESB12) up to several feet thick. It appears the LNAPL zone occurs in pockets or sedimentary traps located within the basal portion of the Upper Sand in the vicinity of Brycon-MW1, CESB9, CESB10 and CESB12. The mobile LNAPL zone is probably not continuous through the study area, but rather occurs in pockets.

A distinction needs to be made between residual LNAPL in soil that is not moving and areas where the LNAPL may be subject to movement. Migration of LNAPL in the vadose zone is a complex fluid mechanics process that engages saturated and unsaturated flow, capillary pressure gradients, soil saturation levels and product depletion. Brost (2000) has proposed the use of screening threshold soil concentrations for various types of hydrocarbon products above which LNAPL movement is likely. The Residual Saturation Screening Value for gasoline in a sandy soil as proposed by Brost is 3,000 mg/kg. Using the Brost criteria the extent of the mobile product layer at the study site would include the areas beneath CESB10, CESB12, CESB15 and Brycon MW1. As mentioned previously, the mobile LNAPL zone is not continuous but occurs in sedimentary traps.

The following facts support the conclusion that the LNAPL found beneath the study area originated from pipeline leaks beneath Golden Ave.

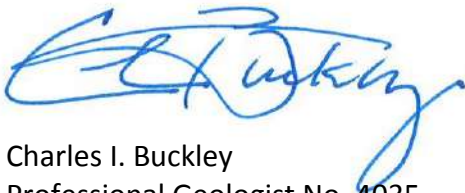
- The pipeline operator (Tesoro) prepared a figure that shows nine (9) areas of historical (1945-1964 and 2018) pipeline leaks (including gasoline) along Golden Avenue, three (3) leaks along Baker Street to the north and one (1) leak located north of Wardlow Road. Three (3) of the leak/repair locations, shown on the Tesoro Figure 1, correspond to areas where gasoline was identified in sediment and groundwater samples on the adjacent OOI property and beneath the pipelines in Golden Avenue, including near Brycon-MW1.
- Characterization (fingerprinting) of the product found in Brycon MW1 by Zymax Forensics in 2012 concluded the sample was gasoline.
- The sampling and observations by CE in 2019 identified a LNAPL migratory pathway from the pipeline area (CESB15) to the vicinity of in CESB10, which is adjacent to Brycon MW1. Gasoline was released from the pipeline beneath Golden Ave., migrated vertically until the saturated Upper Sand was encountered then moved laterally periodically becoming entrained in sedimentary traps as shown on CE Section A-A' (note that CESB15 is close to the reported

location of a historical pipeline leak). Elevated concentrations of gasoline hydrocarbons were not detected in the upper vadose zone (ground surface – 25 feet deep) suggesting no gasoline release points on the OOI property.

- The concentrations of TPHg detected in the Upper Sand were lower towards the west away from the pipeline source area.
- An LNAPL accumulation was detected in CESB10 during groundwater sampling, which is along the LNAPL migratory pathway.
- TPHg dissolved in groundwater is only found in groundwater on the east portion of the OOI property adjacent to the reported leaky pipelines.
- Gasoline was not detected within the upper vadose zone of the study area eliminating the OOI property as the source of the LNAPL.

It is recommended that future groundwater monitoring wells, especially within and near the LNAPL study area, be installed to isolate the Upper and Lower Sand Units. These units need to be assessed and monitored as individual and separate saturated zones to better assess if the pipeline leaks have impacted the aquifer present beneath the Middle Aquitard. The small zone of saturation in the basal portion of the Upper Sand does not meet the accepted definition of an aquifer (will not provide sufficient volume of water for a sustained yield). The Lower Sand probably meets the definition of a useful aquifer. These factors should be considered when developing a plan to mitigate the gasoline releases. It is noted that many of the existing monitor wells will require abandonment during future grading activities. Replacement wells should be sited and installed in light of the hydrogeologic conditions present beneath the area.

Respectfully submitted,



Charles I. Buckley
Professional Geologist No. 4035
Certified Engineering Geologist No. 1250
Certified Hydrogeologist No. 55



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42. *Tetra Tech's SSI report – Appendix A, dated 17 July 2015.*
43. *Poland, Joseph Fairfield, Hydrology of the Long Beach-Santa Ana Area, California, with Special Reference to the Water tightness of the Newport-Inglewood Structural Zone. With a Section on Withdrawal of Ground Water, 1932-41, by Allen Sinnot and J. F. Poland. Washington, U.S. Govt. Print. Off. dated 1959.*
44. *QST Environmental, Inc. (QST), 1998b, Site Assessment Summary and Remedial Action Plan for the Oil Operators, Inc. Property – Long Beach, California: prepared for GreenPark Ventures, LLC, dated December 2, 1998.*

45. *State of California Department of Water Resources, Southern District, Bulletin No. 104, Planned Utilization of the Groundwater Basins of the Coastal Plain of Los Angeles County, Appendix A, Ground Water Geology, Reprinted April 1988.*
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47. *Tesoro Refining & Marketing Company LLC (compiler) (TLO), Site Assessment and Human Health Risk Assessment Report, for Golden Ave Site, between Baker St and West Wardlow Road, Long Beach, California conducted by AECOM Technical Services (AECOM) prepared for the LARWQCB, dated November 13, 2015.*
48. *Tesoro, Addendum to January 25, 2019 Pipeline Update, Golden Ave between Baker Street and Wardlow Road, Long Beach, CA., April 11, 2019.*
49. *Tetra Tech, Inc. (Tetra Tech), 2015a, Supplemental Site Investigation (SSI) Work Plan for Oil Operators, Inc. Property – 712 Baker Street, Long Beach, California 90806: Unpublished professional report prepared for the California Regional Water Quality Control Board – Los Angeles Region, dated 3 April 2015.*
50. *Tetra Tech, 2015b, Supplemental Site Investigation Work Plan Amendment No. 1 - Oil Operators, Inc. Property at 712 Baker Street, Long Beach, California 90806, addressed to the California Regional Water Quality Control Board – Los Angeles Region, dated 24 April 2015.*
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ILLUSTRATIONS

- Plates 1-7 – Logs of Borings**
- Figure 1 – Vicinity Map**
- Figure 2 – Site Plan**
- Figure 3 – LNAPL Assessment Plan**
- Figure 4 – Cross Section A-A'**
- Figure 5 – Cross Section B-B'**


CALIFORNIA ENVIRONMENTAL - LOG OF BORING CESB9

JOB NUMBER: 3029	DATE: 6/25/2019	
CLIENT NAME: Oil Operators Inc.	DRILL RIG: GeoProbe 8040DT	
SITE ADDRESS: 712 N Baker St. Long Beach, CA	SAMPLING METHOD: 1-inch wide x 5 ft long plastic liner	
LOGGED BY: Charles I. Buckley, CHG No. 55	BORING DIAMETER: 2.75- inches	
REVIEWED BY: Greg Buensuceso	SURFACE CONDITIONS: Unpaved	

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Graphic Log	Well Diagram
0	SD	Start drilling at 8:30am - initial 5-foot long core partial recovery 3 to 5 ft				
3	SD	at 3 feet - Silty Sand , reddish brown(5YR4/3), slightly moist, medium dense, no odor, no staining. Contains sub-angular granule gravel <5%.	SM	0.0		
10	SD	at 10 feet Sandy Silt (7.5YR6/4), light brown, moist, firm.	ML	0.0		
12	SD		ML			
14	SD		ML			
16	SD	at 15.5 feet Silty Sand , light gray to pale brown (10YR7/2), moist , dense. medium to fine sand, fine sand at 26 feet.	SM	0.0		
18	SD		SM			
20	SD		SM			
22	SD		SM			
24	SD		SM	0.0		
26	SD	at 27 feet Silty Clay/Clayey Silt , mottled gray brown, moist, firm. Grades to olive (5Y4/3) at 29.5 feet. Intercalated clayey silt/silty clay with fine sand to 32 feet.	CL			
28	SD		ML/CL	0.0		
30	SD		ML/CL			
32	SD	at 32 feet Sand and Silt , Dark Olive Gray (5Y4/2), very moist-wet, medium dense, with strong hydrocarbon odor at 33 feet. Sampler malfunction during the 33-38 foot interval. Drove second liner becomes sandy silt at 38 feet.	ML	25 at 32 feet		
34	SD		ML/SM	535 at 34.5 feet		
36	SD		ML	430 at 35.5 feet		
38		Drove to depth of 42 feet, set 3/4-inch diameter, 0.010-inch slotted pvc casing 10:45am. Blank casing to ground surface. Sampled groundwater. No product observed during well sampling.	ML/SM	<25 at 38 feet		
40			ML			
42						
44		END AT 42 FEET- SET TEMPORARY CASING, SCREEN INTERVAL 32-42 FEET, SAMPLED WELL, THEN ABANDONED BY REMOVING CASING AND FILLING WITH NEAT CEMENT VIA TREMIE. DEPTH TO STATIC WATER LEVELS; 35.0 FEET ON JUNE 25, 2019 AT 2:19 PM, 36.9 FEET ON JUNE 27, 2019 AT 3:20 PM.				
46						
48						
50						

† Sample Type: S=Soil W=Water V=Vapor
D=Drive G=Grab N=No Recovery


CALIFORNIA ENVIRONMENTAL - LOG OF BORING CESB10

JOB NUMBER: 3029	DATE: 6/25/2019	
CLIENT NAME: Oil Operators Inc.	DRILL RIG: GeoProbe 8040DT	
SITE ADDRESS: 712 N Baker St. Long Beach, CA	SAMPLING METHOD: 1-inch wide x 5 ft long plastic liner	
LOGGED BY: Charles I. Buckley, CHG No. 55	BORING DIAMETER: 2.75- inches	
REVIEWED BY: Greg Buensuceso	SURFACE CONDITIONS: Unpaved	

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Graphic Log	Well Diagram	
0	SD	Start drilling at 11:05am -encountered concrete debris - moved boring					
3	SD	at 5 feet - Silty Sand/Sandy Silt , mottled brown-reddish brown (5YR4/3), slightly moist, medium dense, no odor, no staining.					
10	SD		SM	0.0			
12	SD		SM				
14	SD		SM				
16	SD		SM	0.0			
18	SD		SM				
20	SD		at 20 feet Silty Sand , light gray to pale brown (10YR7/2), moist , dense.	SP			
22	SD			SM			
24	SD			SM	0.0		
26	SD		at 27 feet Silt with fine Sand , mottled gray brown, moist, firm. Interbedded Clayey/Sandy Silt , 28 to 35 feet. Contains fine sand lenses, at 31.5 grades to dark olive gray (5Y4/2) with hydrocarbon odor,	ML			
28	SD	ML/CL		0.0			
30	SD	ML/CL		210 at 30 feet			
32	SD	ML		150 at 32 feet			
34	SD	ML/SM		334 at 35 feet			
36	SD	at 35 feet Silt w/ fine Sand , dark gray (5Y3/1), wet , strong hydrocarbon odor		ML	465 at 35.5 feet		
38	SD	36-38 Silty Clay , mottled brn/gray, moist, very firm. No hydrocarbon odor		CL	0.0		
40	SD	at 41-43 grades to Silt w/sand , mottled brown/gray, moist, very firm no hydrocarbon odor		CL/ML	400 (?) at 40.5		
42	SD			ML	0.0		
44	SD	at 43.5 to 46 Sand , fine-medium sand, gray, wet , dense, no HC odor		SM	2.0		
46	SD	at 47 feet Clayey Silt w/ Sand , mottled brown to light olive gray (5Y6/3), moist, firm with abundant shell fragments. No HC odor	SM	0.0			
48			ML	0.0			
50		END AT 48 FEET, SET TEMPORARY 3/4-INCH PVC CASING SCREEN FROM 33-48 FEET AT 3 PM, SAMPLED WELL THEN ABANDONED BY REMOVING CASING AND FILLING WITH NEAT CEMENT GROUT VIA TREMIE. DEPTH TO STATIC WATER LEVEL 35.6 FEET AT 3PM ON JUNE 27, 2019. APPROXIMATELY A 5 mm PRODUCT LAYER DETECTED ON JUNE 26, 2019 8AM.					

†Sample Type: S=Soil W=Water V=Vapor
D=Drive G=Grab N=No Recovery


CALIFORNIA ENVIRONMENTAL - LOG OF BORING CESB11

JOB NUMBER: 3029	DATE: 6/26/2019	
CLIENT NAME: Oil Operators Inc.	DRILL RIG: GeoProbe 8040DT	
SITE ADDRESS: 712 N Baker St. Long Beach, CA	SAMPLING METHOD: 1-inch wide x 5 ft long plastic liner	
LOGGED BY: Charles I. Buckley, CHG No. 55	BORING DIAMETER: 2.75- inches	
REVIEWED BY: Greg Buensuceso	SURFACE CONDITIONS: Unpaved	

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Graphic Log	Well Diagram
0	SD	Start drilling at 8.00am - unpaved				
3	SD	at 3 feet Silty Sand, mottled brown/dark brown, moist, medium dense at 5 feet -				
10	SD	Silty Sand/Sandy Silt, mottled brown-reddish brown (5YR4/3), slightly moist, medium dense, no odor, no staining.	SM	0.0		
12	SD	at 10 feet, Silt, light gray, slightly moist, firm with concrete fragments	ML			
14	SD	at 14.5 feet, Sand, fine grained, light brown, moist, dense.	SM			
16	SD		SM	0.0		
18	SD	at 18 feet becomes silty	SM/ML			
20	SD	at 20 feet Silty Sand, light gray to pale brown (10YR7/2), moist, dense.	SM	0.0		
22	SD		SM			
24	SD	At 25 feet, Sand, fine grained, light brown, moist, dense.	SM	0.0		
26	SD	Interbedded Clayey/Sandy Silt, 28 to 35 feet. Contains fine sand lenses, at 31.5 feet grades to dark olive gray (5Y4/2) with hydrocarbon odor,	SM			
28	SD		ML/CL	0.0		
30	SD		ML/CL	30 at 30 feet		
32	SD		ML	125 at 32.5 feet		
34	SD		SM	>300 at 35.5 feet		
36	SD	at 35.5 feet Sand, fine sand with silt, dark gray (5Y3/1), wet, strong hydrocarbon odor.	ML			
38	SD	36-37 feet Silt, mottled light gray (5Y7/1), moist, very firm. No HC odor.	ML	<1.0		
40	SD	38-42.5 feet grades to Clay with Clayey Silt, mottled light brown/light gray, moist, firm, no hydrocarbon odor	CL/ML	<1.0		
42	SD		ML			
44	SD	at 42.5 feet Silty Sand, fine-medium sand, gray, wet, dense, no HC odor	SM	0.0		
46	SD	at 43-46.5 feet grades to Silty with sand mottled light-medium brown. At 47.5 to 53 feet Silty Sand, light gray, wet, dense.	SM			
48	SD		SM	0.0		
50	SD		SM			
52	SD		SM	0.0		
54		END AT 53 FEET, SET TEMPORARY 3/4-INCH PVC CASING SCREEN FROM 27-42 FEET DUE TO HOLE COLLAPSE, SAMPLED WELL THEN ABANDONED BY REMOVING CASING AND FILLING WITH NEAT CEMENT GROUT VIA TREMIE. DEPTH TO STATIC WATER LEVEL 35.8 FEET AT 3 PM ON JUNE 26, 2019. NO PRODUCT OBSERVED.				

† Sample Type: S=Soil W=Water V=Vapor
D=Drive G=Grab N=No Recovery


CALIFORNIA ENVIRONMENTAL - LOG OF BORING CESB12

JOB NUMBER: 3029 CLIENT NAME: Oil Operators Inc. SITE ADDRESS: 712 N Baker St. Long Beach, CA LOGGED BY: Charles I. Buckley, CHG No. 55 REVIEWED BY: Greg Buensuceso	DATE: 6/26/2019 DRILL RIG: GeoProbe 8040DT SAMPLING METHOD: 1-inch wide x 5 ft long plastic liner 2.75- inches Unpaved BORING DIAMETER: SURFACE CONDITIONS:	
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Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Graphic Log	Well Diagram
0	SD	Start drilling at 11:30 am - unpaved				
3	SD	at 3 feet Silty Sand , brown, moist, medium dense. with concrete fragments, native at 5 feet, becomes silty at 7-9 feet. Silty sand, red brown (5YR4/3) at 10 feet.				
10	SD		SM	0.0		
12	SD		ML			
14	SD		SM			
16	SD		SM	0.0		
18	SD	at 18 feet grades to silty light olive (5Y6/2)	SM/ML			
20	SD	at 23-34 feet Silty Sand , light olive gray (5Y6/2), moist, dense. Slight hydrocarbon odor at 23 feet.	SM	0.0		
22	SD		SM	10 at 23 feet		
24	SD		SM	0.0		
26	SD		SM			
28	SD		SM	0.0		
30	SD		SM			
32	SD		SM	25 at 32/35 feet		
34	SD	at 35-38 feet Silt, with fine sand , olive gray (5Y5/2), very moist, strong hydrocarbon odor.	ML	780 at 35 feet		
36	SD		ML/SM			
38	SD		ML	434 at 38 feet		
40	SD	38-42.5 feet grades to Clay with Clayey Silt , mottled light brown/light gray, moist, firm, finely disseminated organic debris, no hydrocarbon odor.	CL/ML	<1.0		
42	SD		ML			
44	SD	at 42.5 feet Silty Sand , fine-medium sand, gray, wet , dense, no HC odor	SM	0.0		
46	SD	at 43-48 feet grades to Silty Sand light gray (5Y7/2) wet, dense. No hydrocarbon odor.	SM			
48	SD		SM	0.0		
		END AT 48 FEET, SET TEMPORARY 3/4-INCH PVC CASING SCREEN FROM 37-42 FEET; HOLE COLLAPSED TO 34 FEET THEN RE-OPENED TO 43 FEET. SAMPLED WELL THEN ABANDONED BY REMOVING CASING AND FILLING WITH NEAT CEMENT GROUT VIA TREMIE. DEPTH TO STATIC WATER LEVEL 35.98 FEET AT NOON ON JUNE 28, 2019. NO PRODUCT OBSERVED.				

† Sample Type: S=Soil W=Water V=Vapor
 D=Drive G=Grab N=No Recovery


CALIFORNIA ENVIRONMENTAL - LOG OF BORING CESB13

JOB NUMBER: 3029	DATE: 6/27/2019	
CLIENT NAME: Oil Operators Inc.	DRILL RIG: GeoProbe 8040DT	
SITE ADDRESS: 712 N Baker St. Long Beach, CA	SAMPLING METHOD: 1-inch wide x 5 ft long plastic liner	
LOGGED BY: Charles I. Buckley, CHG No. 55	BORING DIAMETER: 2.75- inches	
REVIEWED BY: Greg Buensuceso	SURFACE CONDITIONS: Unpaved	

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Graphic Log	Well Diagram
0	SD	Start drilling at 7:30 am - unpaved - gravel path of travel				
3	SD	at 3 to 6 feet Silty Sand , brown, slightly moist, medium dense. with concrete fragments/debris at 3 feet. At 6.5-8 feet Silt with fine sand, mottled red brown-brown, moist firm. No odor				
10	SD		SM/ML	0.0		
12	SD	8-13 feet Silt , brown to dark gray, moist firm, slight petroleum odor at 9.5 feet	ML			
14	SD	at 13-18 feet Silt with sand, no odor at 13 feet.	ML	0.0		
16	SD		ML	0.0		
18	SD	at 18-23 feet Silt with sand	SM/ML			
20	SD	at 23-28 feet Silt with sand, light olive gray (5Y6/2), moist, dense. Slight hydrocarbon odor at 23 feet. Fine sand 24-26 feet. Occasional sub-angular granule gravels at 26.5 feet.	SM	0.0		
22	SD		ML	5.0 at 23 feet		
24	SD		ML	0.0		
26	SD		SM			
28	SD	28-31 feet, Silt	ML	0.0		
30	SD		ML			
32	SD	32-33 feet Silty Sand , light olive gray (5Y6/2), moist, dense. Fine sand	SM	25 at 32 feet		
34	SD	33-38.5 feet, Sandy Silt , light gray (5Y7/1), moist, firm.	ML	107 at 34 feet		
36	SD		ML	34 at 36 feet		
38	SD	wet at 38.5 feet, Sandy	ML	115 at 39 feet		
40	SD	40.5 to 44 Silt and Clayey Silt , light olive gray (5Y6/2)- brown, moist, very firm, becomes clayey at 43 feet.	CL/ML	<1 at 41 feet		
42	SD		ML			
44	SD		ML	0.0		
46	SD	at 44-48 feet grades to Silty Sand , mottled brown to light gray (5Y7/2) wet, dense. No hydrocarbon odor.	SM			
48	SD		SM	0.0		
		END AT 48 FEET, SET TEMPORARY 3/4-INCH PVC CASING SCREEN FROM 33-48 FEET; SAMPLED WELL THEN ABANDONED BY REMOVING CASING AND FILLING WITH NEAT CEMENT GROUT VIA TREMIE. DEPTH TO STATIC WATER LEVEL 38.75 FEET AT 12:17 PM ON JUNE 28, 2019. NO PRODUCT OBSERVED.				

†Sample Type: S=Soil W=Water V=Vapor
D=Drive G=Grab N=No Recovery


CALIFORNIA ENVIRONMENTAL - LOG OF BORING CESB14

JOB NUMBER: 3029	DATE: 6/27/2019	
CLIENT NAME: Oil Operators Inc.	DRILL RIG: GeoProbe 8040DT	
SITE ADDRESS: 712 N Baker St. Long Beach, CA	SAMPLING METHOD: 1-inch wide x 5 ft long plastic liner	
LOGGED BY: Charles I. Buckley, CHG No. 55	BORING DIAMETER: 2.75- inches	
REVIEWED BY: Greg Buensuceso	SURFACE CONDITIONS: Unpaved	

Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Graphic Log	Well Diagram
0	SD	Start drilling at 11:15 am - unpaved				
3	SD	2 to 13 feet Silty Sand , mottled brown/light brown, slightly moist, medium dense, with asphalt fragments at 2 feet. No odor	SM			
10	SD		SM	0.0		
12	SD		8-13 feet Silt , grades to gray/brown (2.5Y5/2), moist, dense.	ML		
14	SD		ML	0.0		
16	SD		ML	0.0		
18	SD	at 18-23 feet Silty Sand , light brown (2.5Y6/4), moist, dense	SM			
20	SD		SM	0.0		
22	SD		SM	0.0 at 23 feet		
24	SD	at 23 feet Silt , brown, moist, firm	ML/SM	0.0		
26	SD		ML			
28	SD	at 27 feet grades to sandy , at 28 to 34 feet zone of interbedded sands and silts, mottled brown to light olive (5Y6/2), moist, firm/dense. No odor.	SM/ML	2.8		
30	SD		ML	<10 at 31 feet		
32	SD		ML			
34	SD	at 34 to 38 Sandy , very moist to wet at 36-38 feet, strong hydrocarbon odor	SM	148 at 33 feet		
36	SD		SM	252 at 34.5		
38	SD	wet at 38-39 feet, Sandy , strong odor	SM	340 at 36		
40	SD		ML	125 at 38 feet		
42	SD	41 to 48 feet Silt and Clayey Silt , mottled light brown (2.5Y6/4) to light olive gray (5Y6/2), moist, very firm; no odor, 6-inch sandy zone 47.5 to 48.	ML			
44	SD		ML/CL	0.0		
46	SD		ML			
48	SD	48.5 to 50 feet Silty Sand , mottled light brown (2.5Y6/4) wet, dense. No hydrocarbon odor.	SM	0.0		
50		END AT 50 FEET, SET TEMPORARY 3/4-INCH PVC CASING SCREEN FROM 40-45 FEET; HOLE SLOUGHED TO 45 FEET. SAMPLED WELL THEN ABANDONED BY REMOVING CASING AND FILLING WITH NEAT CEMENT GROUT VIA TREMIE. DEPTH TO STATIC WATER LEVEL 37.40 FEET AT 1 PM ON JUNE 28, 2019. NO PRODUCT OBSERVED.				

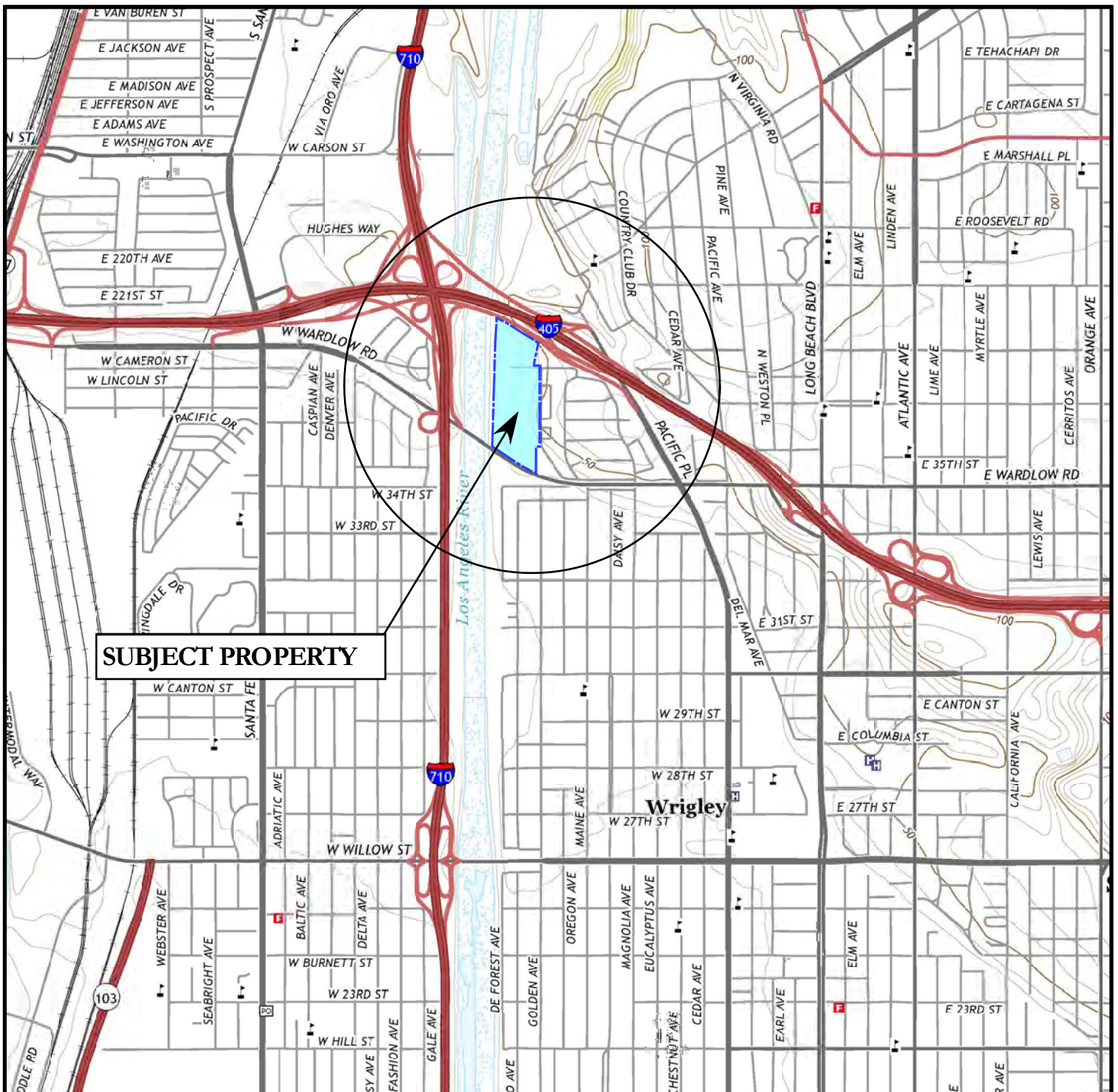
†Sample Type: S=Soil W=Water V=Vapor
D=Drive G=Grab N=No Recovery

CALIFORNIA ENVIRONMENTAL - LOG OF BORING CESB15

JOB NUMBER: 3029	DATE: 6/28/2019	
CLIENT NAME: Oil Operators Inc.	DRILL RIG: GeoProbe 8040DT	
SITE ADDRESS: 712 N Baker St. Long Beach, CA	SAMPLING METHOD: 1-inch wide x 5 ft long plastic liner	
LOGGED BY: Charles I. Buckley, CHG No. 55	BORING DIAMETER: 2.75- inches	
REVIEWED BY: Greg Buensuceso	SURFACE CONDITIONS: Unpaved	

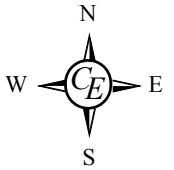
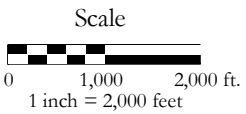
Depth in Feet	Sample Type†	LITHOLOGIC DESCRIPTION	USCS Code	PID Reading (ppmv)	Graphic Log	Well Diagram
0	SD	Start drilling at 7:27 am - unpaved				
3	SD	2 to 8 feet Silty Sand , brown/red brown, (5YR4/3) slightly moist, medium dense. No odor. Grades to light brown at 7.5 feet. No odor	SM			
10	SD		SM	0.0		
12	SD	8-12 feet Fine Sand , to gray/brown (2.5Y5/2), moist, dense. 12-13 feet Silt light gray slightly moist, soft.	SP			
14	SD	13-18 feet, Silty Sand/with Silt layers, light brown/pale yellow (2.5Y8/4), slightly moist, medium dense. No odor.	ML	0.0		
16	SD		ML	0.0		
18	SD		SM			
20	SD		SM	0.0		
22	SD	18-31 feet Fine Sand , light brown (2.5Y6/4), moist, dense, no odor.	SM	0.0 at 23 feet		
24	SD		SM	0.0		
26	SD		SM			
28	SD		SM	2.8		
30	SD		SM	<10 at 31 feet		
32	SD	at 31.5 feet Clayey Silt , dark gray (2.5Y4), very moist, firm, strong HC odor.	ML	<10 at 33 feet		
34	SD	at 34 to 38.5 Sandy , olive gray (5Y5/2) very moist to wet at 36-38 feet, strong hydrocarbon odor.	SM	903 at 34 feet		
36	SD		ML	584 at 36 feet		
38	SD		ML	784 at 38 feet		
40	SD	38.5-45 feet, Clayey Silt/Silty Clay , mottled light gray/brown, moist, very firm/stiff. No odor.	ML			
42	SD		ML/CL			
44	SD			0.0		
46	SD	45-46 feet Silty Sand , mottled light brown (2.5Y6/4) wet, dense. No hydrocarbon odor.	SM	<10		
		END AT 46 FEET, SET TEMPORARY 3/4-INCH PVC CASING SCREEN FROM 38-43 FEET; HOLE SLOUGHED TO 43 FEET. SAMPLED WELL THEN ABANDONED BY REMOVING CASING AND FILLING WITH NEAT CEMENT GROUT VIA TREMIE. DEPTH TO STATIC WATER LEVEL 41.33 FEET AT 1:45 PM ON JUNE 28, 2019. NO PRODUCT OBSERVED.				

†Sample Type: S=Soil W=Water V=Vapor
D=Drive G=Grab N=No Recovery



SUBJECT PROPERTY

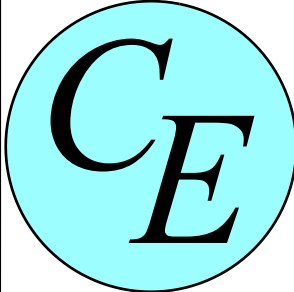
Wrigley



References: USGS 7.5' Long Beach Topographic Quadrangle, 2015.

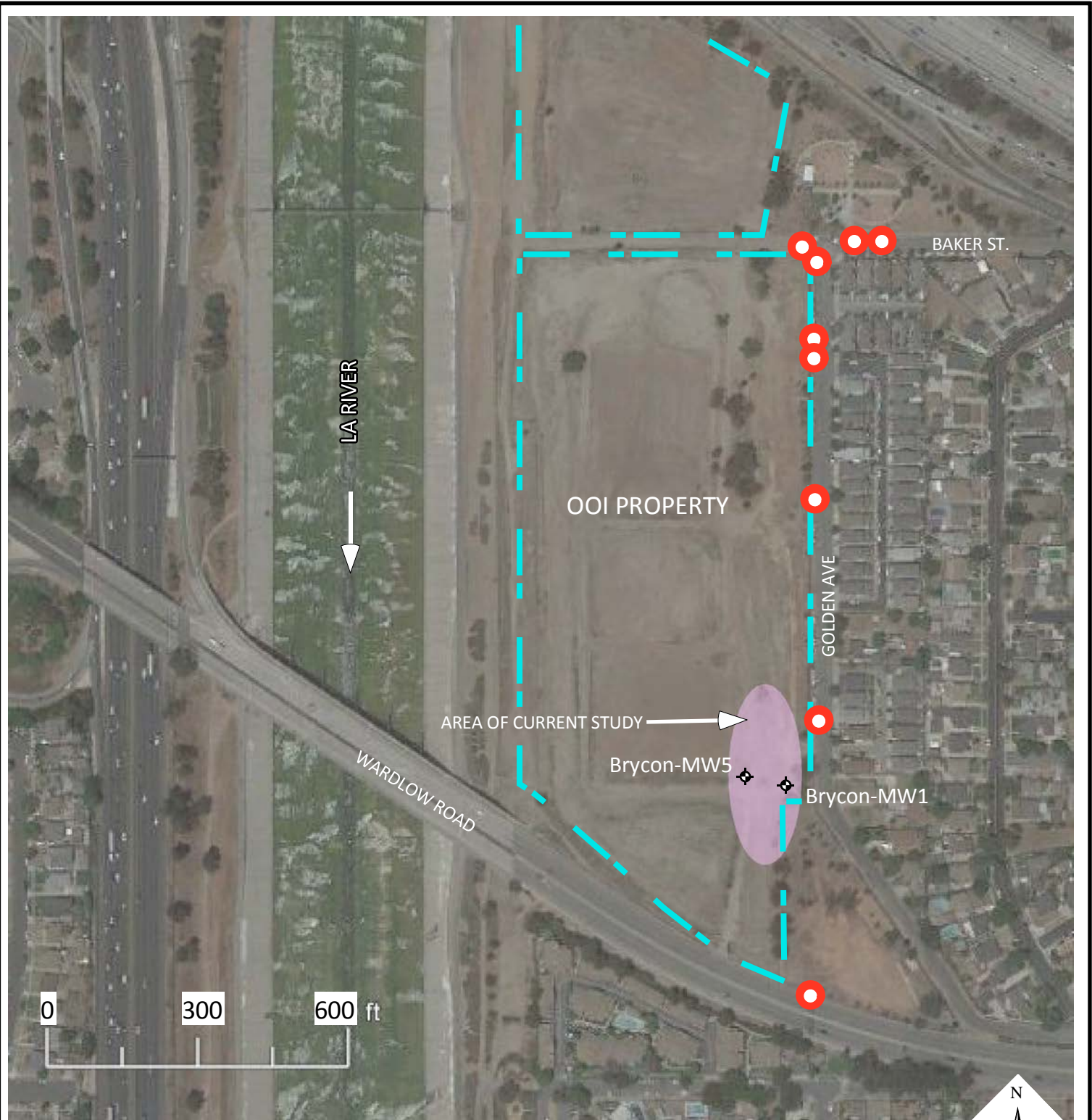
FIGURE 1 - VICINITY MAP

712 W. Baker Street
Long Beach, California



Drawn By:	GHB	Job #	EV610-3029
Checked By:	CIB	Date:	July 2019

*California
Environmental*



● Approximate Locations of Pipeline Leaks/Repairs 1945 - 2018 - Per AECOM Figure 1, Addendum to January 25, 2019 Pipeline Update Report, dated April 11, 2019.

Reference: Google Earth Image

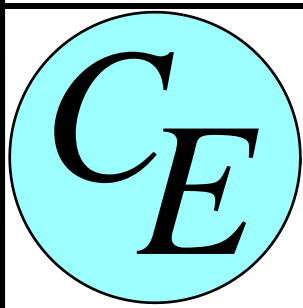
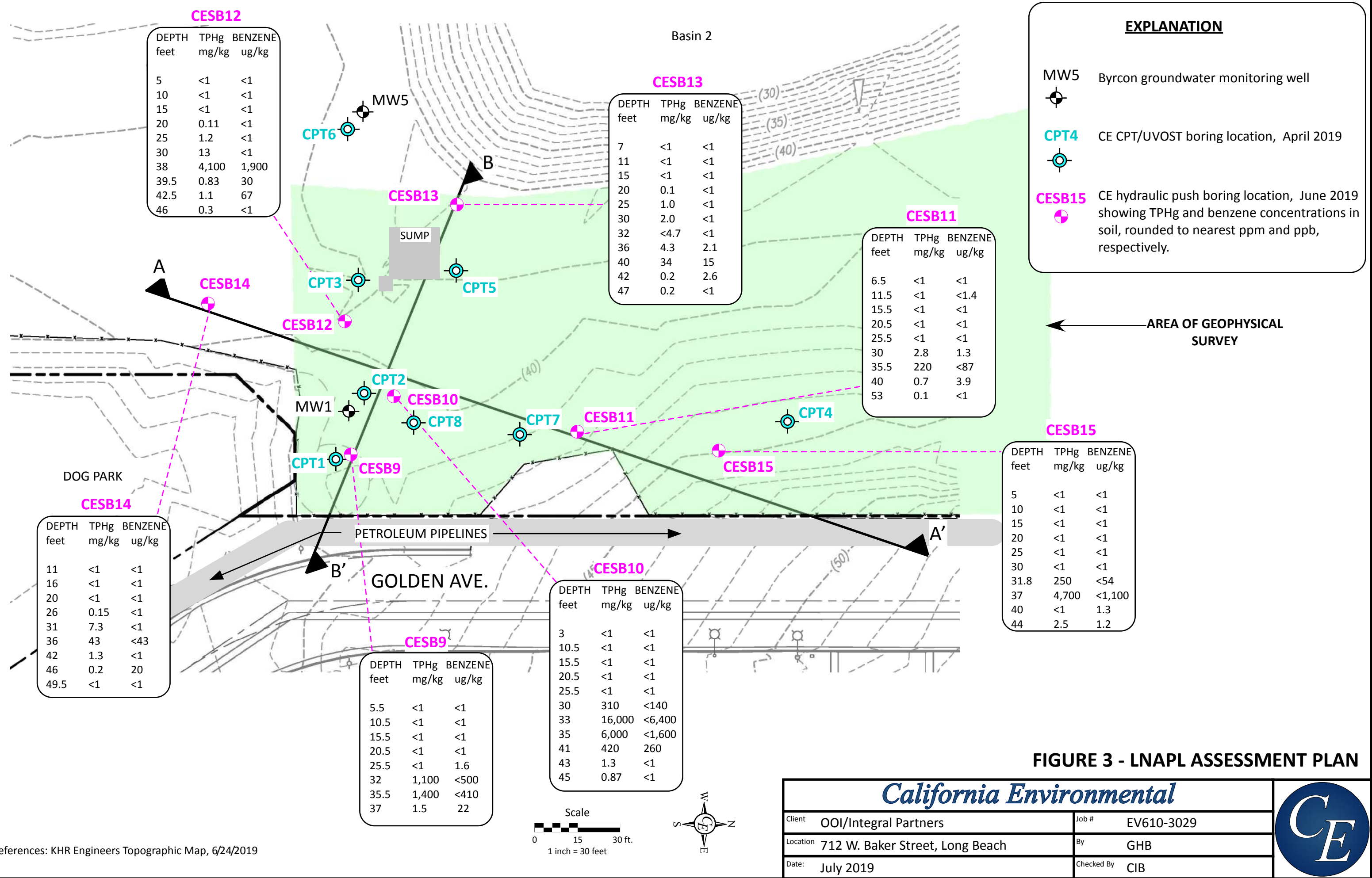


FIGURE 2 - SITE PLAN 712 W. Baker Street Long Beach, California	
Drawn By: RTB	Job # EV610-3029
Checked By: CIB	Date: July 2019

*California
 Environmental*



CESB12

DEPTH feet	TPHg mg/kg	BENZENE ug/kg
5	<1	<1
10	<1	<1
15	<1	<1
20	0.11	<1
25	1.2	<1
30	13	<1
38	4,100	1,900
39.5	0.83	30
42.5	1.1	67
46	0.3	<1

CESB13

DEPTH feet	TPHg mg/kg	BENZENE ug/kg
7	<1	<1
11	<1	<1
15	<1	<1
20	0.1	<1
25	1.0	<1
30	2.0	<1
32	<4.7	<1
36	4.3	2.1
40	34	15
42	0.2	2.6
47	0.2	<1

CESB11

DEPTH feet	TPHg mg/kg	BENZENE ug/kg
6.5	<1	<1
11.5	<1	<1.4
15.5	<1	<1
20.5	<1	<1
25.5	<1	<1
30	2.8	1.3
35.5	220	<87
40	0.7	3.9
53	0.1	<1

CESB15

DEPTH feet	TPHg mg/kg	BENZENE ug/kg
5	<1	<1
10	<1	<1
15	<1	<1
20	<1	<1
25	<1	<1
30	<1	<1
31.8	250	<54
37	4,700	<1,100
40	<1	1.3
44	2.5	1.2

CESB14

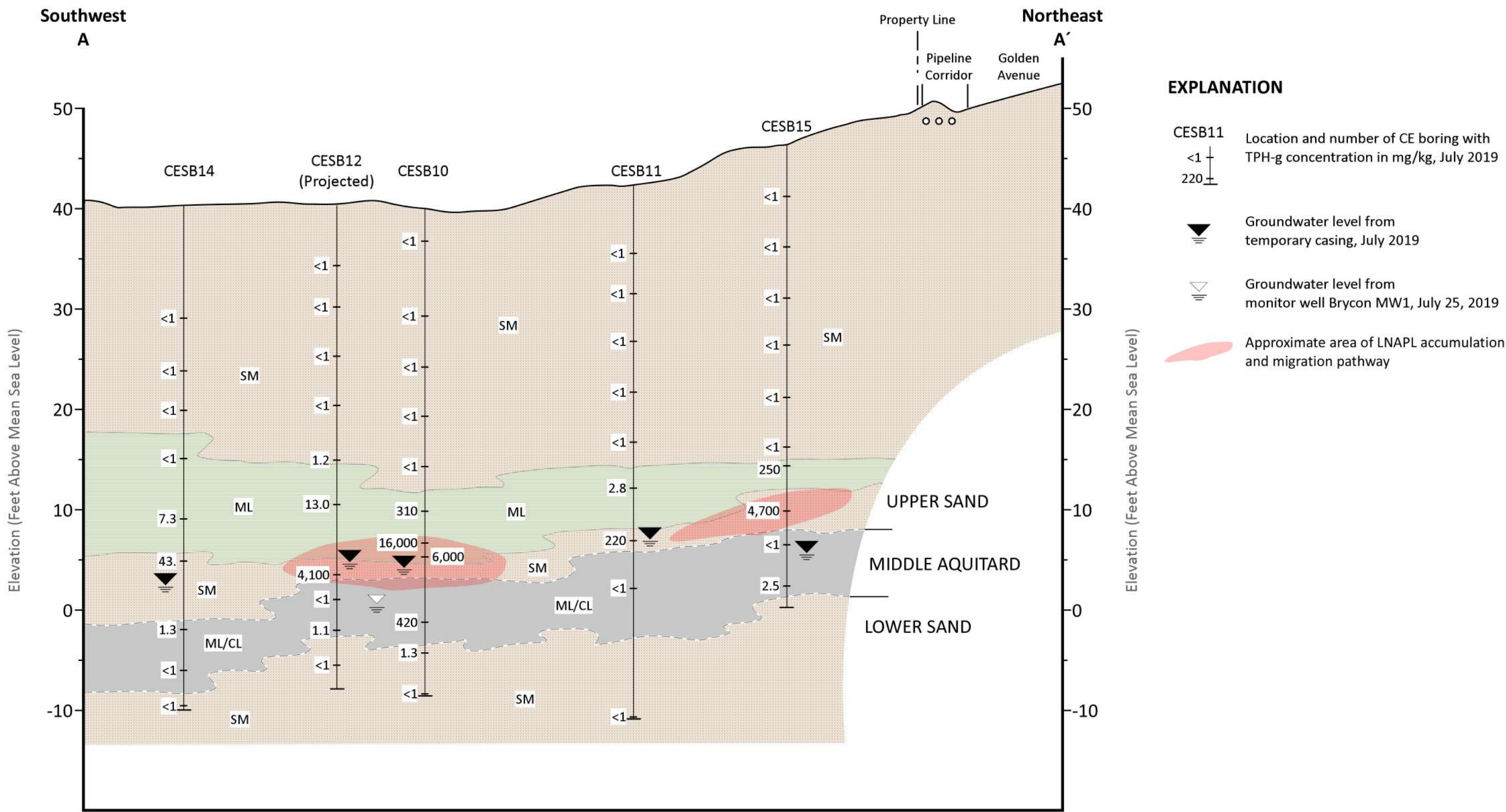
DEPTH feet	TPHg mg/kg	BENZENE ug/kg
11	<1	<1
16	<1	<1
20	<1	<1
26	0.15	<1
31	7.3	<1
36	43	<43
42	1.3	<1
46	0.2	20
49.5	<1	<1

CESB9

DEPTH feet	TPHg mg/kg	BENZENE ug/kg
5.5	<1	<1
10.5	<1	<1
15.5	<1	<1
20.5	<1	<1
25.5	<1	1.6
32	1,100	<500
35.5	1,400	<410
37	1.5	22

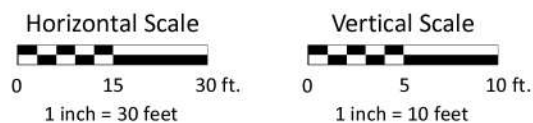
CESB10

DEPTH feet	TPHg mg/kg	BENZENE ug/kg
3	<1	<1
10.5	<1	<1
15.5	<1	<1
20.5	<1	<1
25.5	<1	<1
30	310	<140
33	16,000	<6,400
35	6,000	<1,600
41	420	260
43	1.3	<1
45	0.87	<1



Cross Section A - A' (3x Vertical Exaggeration)

FIGURE 4 - CROSS SECTION A - A'



California Environmental	
Client: Oil Operators / Integral	Job #: EP610-3029
Location: 712 Baker Street, Long Beach	By: GHB
Date: July 2019	Checked By: CIB



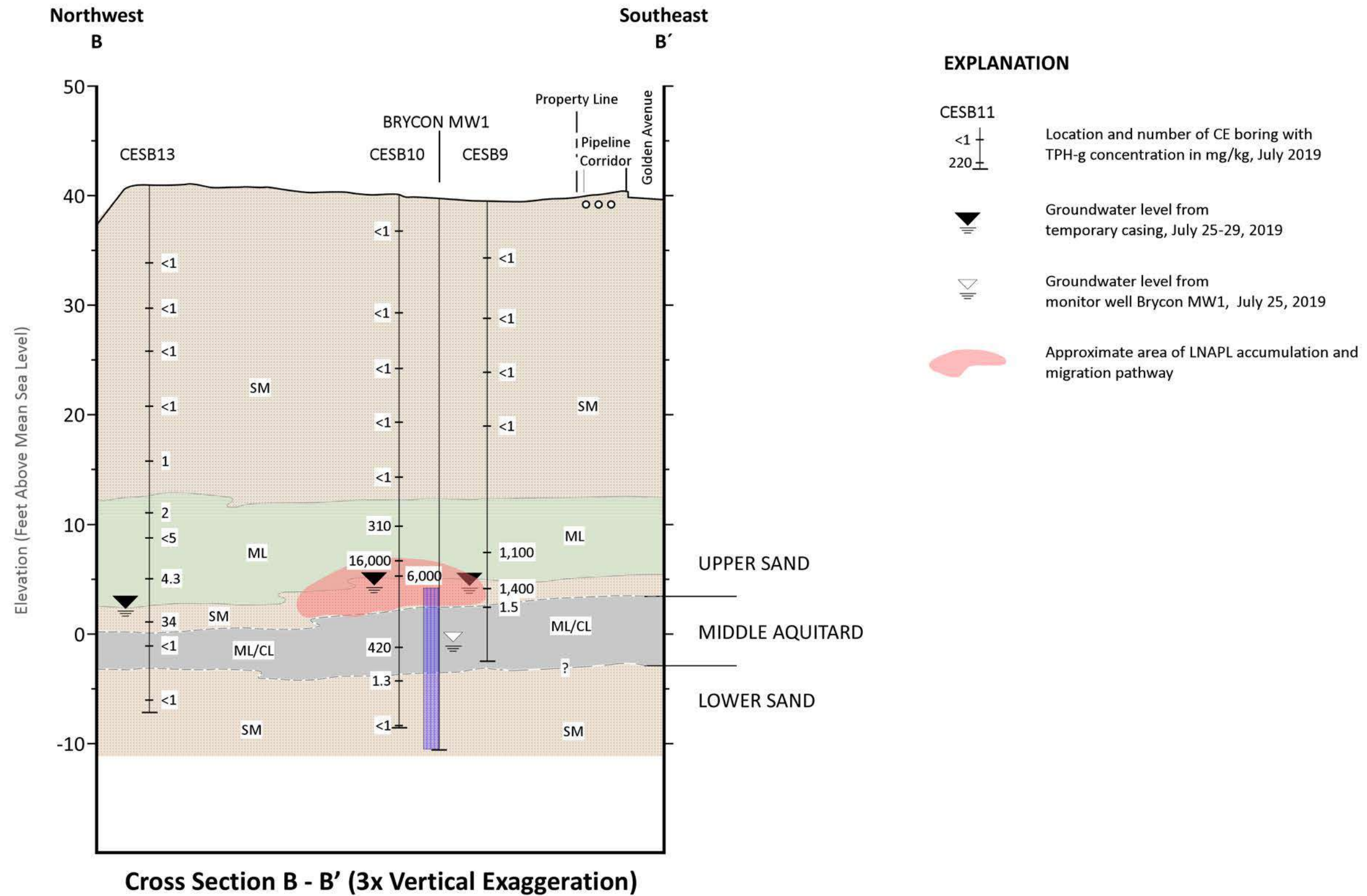
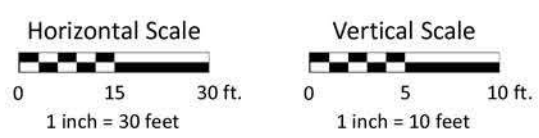


FIGURE 5 - CROSS SECTION B - B'



California Environmental				
Client	Oil Operators / Integral		Job #	EP610-3029
Location	712 Baker Street, Long Beach		By	GHB
Date:	July 2019		Checked By	CIB

APPENDIX I

Data Tables

Table I – Soil VOCs/TPH

Table II – Soil Arsenic/Lead

Table III – Groundwater VOCs/TPH

TABLE I
Laboratory Analysis of Soil - TPH & VOCs
712 West Baker Street,
Long Beach California

Sample ID	Date	EPA Method 8015M (mg/kg)				EPA Method 8260B/5035 (µg/kg)																																						
		TPH (C6-C12)	TPH (C13-C24)	TPH (C25-C44)	TPPH	GRO	B	T	E	X	MTBE	Naphthalene	Butylbenzene	Isopropylbenzene	Isopropyltoluene	Propylbenzene	Dichloroethane	Trimethylbenzene	All Other Analytes																									
CESB9-5.5'	6/25/2019	<4.8	<4.8	<4.8	<40	<40	<0.81	<0.81	<0.81	<1.6	<1.6	<8.1	<0.81	<0.81	<0.81	<1.6	<0.81	<1.6	<0.81	<1.6	<0.81	<1.6	<0.81	<1.6	<0.81	<1.6	<0.81	<1.6	<0.81	<1.6	<0.81	<1.6	<0.81	<1.6	ND									
CESB9-10.5'	6/25/2019	<5.1	<5.1	38.9	<40	<40	<0.79	<0.79	<0.79	<1.6	<1.6	<7.9	<0.79	<0.79	<0.79	<1.6	<0.79	<0.79	<0.79	<1.6	<0.79	<0.79	<1.6	<0.79	<0.79	<1.6	<0.79	<0.79	<1.6	<0.79	<0.79	<1.6	<0.79	<0.79	<1.6	ND								
CESB9-15.5'	6/25/2019	<5.2	<5.2	<5.2	<43	<43	<0.86	<0.86	<0.86	<1.7	<1.7	<8.6	<0.86	<0.86	<0.86	<1.7	<0.86	<0.86	<0.86	<1.7	<0.86	<0.86	<1.7	<0.86	<0.86	<1.7	<0.86	<0.86	<1.7	<0.86	<0.86	<1.7	<0.86	<0.86	<1.7	ND								
CESB9-20.5'	6/25/2019	<4.8	<4.8	<4.8	<47	<47	<0.95	<0.95	<0.95	<1.9	<1.9	<9.5	<0.95	<0.95	<0.95	<1.9	<0.95	<0.95	<0.95	<1.9	<0.95	<0.95	<1.9	<0.95	<0.95	<1.9	<0.95	<0.95	<1.9	<0.95	<0.95	<1.9	<0.95	<0.95	<1.9	ND								
CESB9-25.5'	6/25/2019	<5.1	<5.1	<5.1	<51	<51	1.6	<1.0	<1.0	<2.0	<2.0	<10	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	ND								
CESB9-32'	6/25/2019	704	10.1	<4.8	1300000	1,100,000	<500	<500	3,000	2,500	<1000	<5000	3,020	2,000	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	2,600	ND							
CESB9-35.5'	6/25/2019	--	--	--	1,600,000	1,400,000	<410	<410	5,900	3,420	<820	<4100	3,700	3,500	3,400	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	4,100	ND						
CESB9-37'	6/25/2019	<5.0	<5.0	<5.0	1700	1,500	22	<0.74	52	43.5	<1.5	11	3.6	13	3.5	12	<0.74	41	<0.74	41	<0.74	41	<0.74	41	<0.74	41	<0.74	41	<0.74	41	<0.74	41	<0.74	41	<0.74	41	ND							
CESB10-3'	6/25/2019	<5.2	<5.2	<5.2	<49	<49	<0.98	<0.98	<0.98	<2.0	<2.0	<9.8	<0.98	<0.98	<0.98	<2.0	<0.98	<0.98	<0.98	<2.0	<0.98	<0.98	<2.0	<0.98	<0.98	<2.0	<0.98	<0.98	<2.0	<0.98	<0.98	<2.0	<0.98	<0.98	<2.0	<0.98	<0.98	<2.0	ND					
CESB10-10.5'	6/25/2019	<4.9	<4.9	152	<41	<41	<0.82	<0.82	<0.82	<1.6	<1.6	<8.2	<0.82	<0.82	<0.82	<1.6	<0.82	<0.82	<0.82	<1.6	<0.82	<0.82	<1.6	<0.82	<0.82	<1.6	<0.82	<0.82	<1.6	<0.82	<0.82	<1.6	<0.82	<0.82	<1.6	<0.82	<0.82	<1.6	**					
CESB10-15.5'	6/25/2019	<5.0	14.8	264	<39	<39	<0.78	<0.78	<0.78	<1.6	<1.6	<7.8	<0.78	<0.78	<0.78	<1.6	<0.78	<0.78	<0.78	<1.6	<0.78	<0.78	<1.6	<0.78	<0.78	<1.6	<0.78	<0.78	<1.6	<0.78	<0.78	<1.6	<0.78	<0.78	<1.6	<0.78	<0.78	<1.6	*					
CESB10-20.5'	6/25/2019	<5.0	<5.0	<5.0	<50	<50	<1.0	<1.0	<1.0	<2.0	<2.0	<10	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	ND					
CESB10-25.5'	6/25/2019	<4.8	<4.8	<4.8	<46	<46	<0.93	<0.93	<0.93	<1.9	<1.9	<9.3	<0.93	<0.93	<0.93	<1.9	<0.93	<0.93	<0.93	<1.9	<0.93	<0.93	<1.9	<0.93	<0.93	<1.9	<0.93	<0.93	<1.9	<0.93	<0.93	<1.9	<0.93	<0.93	<1.9	<0.93	<0.93	<1.9	ND					
CESB10-30'	6/25/2019	--	--	--	360,000	310,000	<140	<140	1,400	4,500	<270	<1400	1,260	750	860	1,000	<140	<140	860	1,000	<140	<140	860	1,000	<140	<140	860	1,000	<140	<140	860	1,000	<140	<140	860	1,000	<140	<140	860	1,000	ND			
CESB10-33'	6/25/2019	--	--	--	19,000,000	16,000,000	<6400	<6400	54,000	198,000	<13000	<64000	48,000	28,000	32,000	40,000	<6400	<6400	32,000	40,000	<6400	<6400	32,000	40,000	<6400	<6400	32,000	40,000	<6400	<6400	32,000	40,000	<6400	<6400	32,000	40,000	<6400	<6400	32,000	40,000	ND			
CESB10-35'	6/25/2019	--	--	--	7,300,000	6,000,000	<1600	<1600	33,000	99,000	<3200	16,000	15,500	13,000	12,000	18,000	<1600	<1600	12,000	18,000	<1600	<1600	12,000	18,000	<1600	<1600	12,000	18,000	<1600	<1600	12,000	18,000	<1600	<1600	12,000	18,000	<1600	<1600	12,000	18,000	ND			
CESB10-41'	6/25/2019	--	--	--	500,000	420,000	260	<150	1,100	<290	<290	<1500	1,100	870	990	<150	<150	870	990	<150	<150	870	990	<150	<150	870	990	<150	<150	870	990	<150	<150	870	990	<150	<150	870	990	ND				
CESB10-43'	6/25/2019	--	--	--	1,600	1,300	<0.75	<0.75	<0.75	<1.5	<1.5	<7.5	<0.75	<0.75	<0.75	<1.5	<0.75	<0.75	<0.75	<1.5	<0.75	<0.75	<1.5	<0.75	<0.75	<1.5	<0.75	<0.75	<1.5	<0.75	<0.75	<1.5	<0.75	<0.75	<1.5	<0.75	<0.75	<1.5	<0.75	<0.75	<1.5	ND		
CESB10-45'	6/25/2019	--	--	--	930	870	<0.78	<0.78	<0.78	<1.6	<1.6	<7.8	<0.78	<0.78	<0.78	<1.6	<0.78	<0.78	<0.78	<1.6	<0.78	<0.78	<1.6	<0.78	<0.78	<1.6	<0.78	<0.78	<1.6	<0.78	<0.78	<1.6	<0.78	<0.78	<1.6	<0.78	<0.78	<1.6	<0.78	<0.78	<1.6	ND		
CESB11-6.5'	6/26/2019	<4.9	<4.9	<4.9	<46	<46	<0.91	<0.91	<0.91	<1.8	<1.8	<9.1	<0.91	<0.91	<0.91	<1.8	<0.91	<0.91	<0.91	<1.8	<0.91	<0.91	<1.8	<0.91	<0.91	<1.8	<0.91	<0.91	<1.8	<0.91	<0.91	<1.8	<0.91	<0.91	<1.8	<0.91	<0.91	<1.8	<0.91	<0.91	<1.8	ND		
CESB11-11.5'	6/26/2019	<4.9	<4.9	<4.9	<68	<68	<1.4	<1.4	<1.4	<2.7	<2.7	<14	<1.4	<1.4	<1.4	<2.7	<1.4	<1.4	<1.4	<2.7	<1.4	<1.4	<2.7	<1.4	<1.4	<2.7	<1.4	<1.4	<2.7	<1.4	<1.4	<2.7	<1.4	<1.4	<2.7	<1.4	<1.4	<2.7	<1.4	<1.4	<2.7	ND		
CESB11-15.5'	6/26/2019	<5.0	<5.0	<5.0	<42	<42	<0.84	<0.84	<0.84	<1.7	<1.7	<8.4	<0.84	<0.84	<0.84	<1.7	<0.84	<0.84	<0.84	<1.7	<0.84	<0.84	<1.7	<0.84	<0.84	<1.7	<0.84	<0.84	<1.7	<0.84	<0.84	<1.7	<0.84	<0.84	<1.7	<0.84	<0.84	<1.7	<0.84	<0.84	<1.7	ND		
CESB11-20.5'	6/26/2019	<5.1	<5.1	<5.1	<48	<48	<0.97	<0.97	<0.97	<1.9	<1.9	<9.7	<0.97	<0.97	<0.97	<1.9	<0.97	<0.97	<0.97	<1.9	<0.97	<0.97	<1.9	<0.97	<0.97	<1.9	<0.97	<0.97	<1.9	<0.97	<0.97	<1.9	<0.97	<0.97	<1.9	<0.97	<0.97	<1.9	<0.97	<0.97	<1.9	ND		
CESB11-25.5'	6/26/2019	<4.9	<4.9	<4.9	<48	<48	<0.96	<0.96	<0.96	<1.9	<1.9	<9.6	<0.96	<0.96	<0.96	<1.9	<0.96	<0.96	<0.96	<1.9	<0.96	<0.96	<1.9	<0.96	<0.96	<1.9	<0.96	<0.96	<1.9	<0.96	<0.96	<1.9	<0.96	<0.96	<1.9	<0.96	<0.96	<1.9	<0.96	<0.96	<1.9	ND		
CESB11-30'	6/26/2019	123	<5.0	<5.0	3,200	2,800	1.3	<0.88	17	19	<1.8	<8.8	1.9	5.3	4.8	6	<0.88	54	<0.88	54	<0.88	54	<0.88	54	<0.88	54	<0.88	54	<0.88	54	<0.88	54	<0.88	54	<0.88	54	<0.88	54	<0.88	54	ND			
CESB11-35.5'	6/26/2019	46	<5.1	<5.1	270,000	220,000	<87	<87	950	770	<170	<870	470	450	360	520	<87	<87	2,010	<87	<87	2,010	<87	<87	2,010	<87	<87	2,010	<87	<87	2,010	<87	<87	2,010	<87	<87	2,010	<87	<87	2,010	<87	<87	2,010	ND
CESB11-40'	6/26/2019	--	--	--	720	690	3.9	<0.81	<0.81	<1.6	<1.6	<8.1	<0.81	<0.81	<1.6	<0.81	<0.81	<1.6	<0.81	<0.81	<1.6	<0.81	<0.81	<1.6	<0.81	<0.81	<1.6	<0.81	<0.81	<1.6	<0.81	<0.81	<1.6	<0.81	<0.81	<1.6	<0.81	<0.81	<1.6	<0.81	<0.81	<1.6	ND	
CESB11-53'	6/26/2019	--	--	--	110	100	<0.79	<0.79	<0.79	<1.6	<1.6	<7.9	<0.79	<0.79	<0.79	<1.6	<0.79	<0.79	<0.79	<1.6	<0.79	<0.79	<1.6	<0.79	<0.79	<1.6	<0.79	<0.79	<1.6	<0.79	<0.79	<1.6	<0.79	<0.79	<1.6	<0.79	<0.79	<1.6	<0.79	<0.79	<1.6	ND		
CESB12-6'	6/26/2019	<5.0	<5.0	<5.0	<37	<37	<0.74	<0.74	<0.74	<1.5	<1.5	<7.4	<0.74	<0.74	<0.74	<1.5	<0.74	<0.74	<0.74	<1.5	<0.74	<0.74	<1.5	<0.74	<0.74	<1.5	<0.74	<0.74	<1.5	<0.74	<0													

TABLE II
Laboratory Analysis of Soil - Metals
712 West Baker Street,
Long Beach, California

Sample I.D.	Date	CAM Metals - EPA 6010B/7000 (mg/kg)	
		Arsenic	Lead
CESB9-5.5'	6/25/2019	5.57	1.97
CESB9-10.5'	6/25/2019	8.47	3.91
CESB9-15.5'	6/25/2019	1.78	2.16
CESB9-20.5'	6/25/2019	2.04	3.79
CESB9-25.5'	6/25/2019	3.00	1.14
CESB9-32'	6/25/2019	5.32	2.54
CESB9-37'	6/25/2019	11.5	3.57
CESB10-3'	6/25/2019	<0.743	3.02
CESB10-10.5'	6/25/2019	<0.739	2.11
CESB10-15.5'	6/25/2019	2.71	1.82
CESB10-20.5'	6/25/2019	3.33	1.20
CESB10-25.5'	6/25/2019	0.948	0.827
CESB11-6.5'	6/26/2019	9.37	1.72
CESB11-11.5'	6/26/2019	14.1	2.06
CESB11-15.5'	6/26/2019	17.8	1.76
CESB11-20.5'	6/26/2019	3.98	<0.498
CESB11-25.5'	6/26/2019	1.37	0.795
CESB11-30'	6/26/2019	5.18	1.25
CESB11-35.5'	6/26/2019	14.7	0.956
CESB12-6'	6/26/2019	28.1	1.26
CESB12-10'	6/26/2019	<0.728	<0.485
CESB12-15'	6/26/2019	2.17	1.08
CESB12-20'	6/26/2019	2.88	0.842
CESB12-25'	6/26/2019	2.63	<0.485
CESB13-7'	6/27/2019	<0.735	1.96
CESB13-11'	6/27/2019	<0.718	1.01
CESB13-15'	6/27/2019	<0.735	1.50
CESB13-20'	6/27/2019	<0.750	1.08
CESB13-25'	6/27/2019	12.7	<0.498
CESB13-30'	6/27/2019	1.48	<0.498
CESB13-32'	6/27/2019	<0.750	0.525
CESB13-36'	6/27/2019	<0.746	0.853
CESB13-40'	6/27/2019	<0.743	0.516
CESB14-11'	6/27/2019	<0.743	1.03
CESB14-16'	6/27/2019	2.99	3.29
CESB14-20'	6/27/2019	<0.743	1.43
CESB14-26'	6/27/2019	6.21	1.31
CESB14-31'	6/27/2019	5.45	0.694
CESB14-36'	6/27/2019	0.835	0.818
CESB15-5'	6/28/2019	2.12	1.68
CESB15-10'	6/28/2019	2.29	1.94
CESB15-15'	6/28/2019	4.40	1.70
CESB15-20'	6/28/2019	<0.765	4.23
CESB15-25'	6/28/2019	3.15	0.998
CESB15-30'	6/28/2019	1.32	4.61
CESB15-31.8'	6/28/2019	13.3	7.11
CESB15-37'	6/28/2019	4.47	1.74
CESB15-40'	6/28/2019	24.2	3.8
CESB15-44'	6/28/2019	3.45	2.13
CE DUP 2	6/27/2019	<0.773	<0.515

* - Arsenic concentration compared to background levels - in SoCal 3-15 mg/kg

TABLE III
Laboratory Analysis of Groundwater - TPH & VOCs
712 West Baker Street,
Long Beach California

Sample ID	Date	EPA Method 8260B/5030C (µg/L)													
		TPPH	GRO	B	T	E	X	MTBE	Naphthalene	Butylbenzene	Isopropylbenzene	Isopropyltoluene	Propylbenzene	Trimethylbenzene	All Other Analytes
CESB9-GW	6/25/2019	16,000	15,000	200	13	720	450	<5.0	84	40	150	45	140	402	ND
	6/27/2019	15,000	14,000	190	13	610	361	<5.0	60	37	130	42	130	357	*
CESB10-GW	6/27/2019	92,000	79,000	390	120	1,500	5,000	<50	830	81	290	220	370	3,480	ND
CESB11-GW	6/27/2019	8,900	8,600	93	17	520	468	<1.0	91	16.6	77	17	71	358	ND
CESB12-GW	6/28/2019	38,000	36,000	520	430	1,200	4,200	<10	260	36	220	97	240	1,770	ND
CESB13-GW	6/28/2019	11,000	10,000	220	26	530	199	<5.0	130	8.7	86	21	73	520	ND
CESB14-GW	6/28/2019	7,200	6,500	94	6.5	240	49	<2.0	91	29	94	19	84	5.9	**
CESB15-GW	6/28/2019	44,000	41,000	7.2	<10	610	592	<10	430	124	300	110	300	1,380	ND

TPPH - Total Petroleum Hydrocarbons; GRO - Total Gas Range Organics; ND = Not Detected
B – Benzene; T – Toluene; E – Ethylbenzene; X – Xylene; MTBE - Methyl tert-Butyl Ether
* - (Tert-Butyl Alcohol (TBA) - 54 µg/L)
** - (1,2-Dichloroethane - 12 µg/L)

APPENDIX II

Geophysical Report

**GEOPHYSICAL EVALUATION
OOI
LONG BEACH, CALIFORNIA**

PREPARED FOR:

California Environmental - Engineering
30423 Canwood Street, Suite 208
Agoura Hills, CA 91301

PREPARED BY:

Southwest Geophysics, LLC
6280 Riverdale Street, Suite 200
San Diego, CA 92120

April 24, 2019
Project No. 119191

April 24, 2019
Project No. 119191

Mr. Charles I. Buckley
California Environmental - Engineering
30423 Canwood Street, Suite 208
Agoura Hills, CA 91301

Subject: Geophysical Evaluation
OOI
Long Beach, California

Dear Mr. Buckley:

In accordance with your authorization, we are pleased to submit this report pertaining to our geophysical evaluation for the OOI project in Long Beach, California. The purpose of our evaluation was to assess the presence of buried underground storage tanks (USTs) and/or back-filled excavations associated with UST removal. In addition, the presence of detectable underground utilities was evaluated in the study area. Our services were conducted on April 8, 2019. This report presents the survey methodology, equipment used, analysis, and results from our study.

We appreciate the opportunity to be of service on this project. Should you have any questions please contact the undersigned at your convenience.

Sincerely,
SOUTHWEST GEOPHYSICS, LLC



Eric Carlson
Project Geologist/Geophysicist

ECA/ERC/HV/hv

Distribution: Addressee (electronic)



Hans van de Vrugt, C.E.G., P.Gp.
Principal Geologist/Geophysicist



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1. INTRODUCTION

In accordance with your authorization, we are pleased to submit this report pertaining to our geophysical evaluation for the OOI project in Long Beach, California (Figure 1). The purpose of our evaluation was to assess the presence of buried underground storage tanks (USTs) and/or backfilled excavations associated with UST removal. In addition, the presence of detectable underground utilities was evaluated in the study area. Our services were conducted on April 8, 2019. This report presents the survey methodology, equipment used, analysis, and results from our study.

2. SCOPE OF SERVICES

Our scope of services included:

- Performance of a geophysical survey at the subject site. Our survey included the use of a Geonics model EM61 MK2 time domain instrument, GSSI SIR 3000 Ground Penetrating Radar (GPR) unit using a 400 MHz transducer, Schonstedt GA-52 magnetic gradiometer, Fisher M-Scope TW-6 pipe and cable locator, and RD8000 line tracer.
- Site reconnaissance including field mapping of surface structures at and near the survey area.
- Compilation and analysis of the data collected.
- Preparation of this report presenting our findings, conclusions and recommendations.

3. SITE DESCRIPTION

The project site is located at 712 Baker Street in Long Beach, California (Figure 1). The study area, which was defined by you, lies within a vacant lot, east of the Los Angeles River and west of Golden Avenue in Long Beach, California. An old draining pit lies to the west and an old concrete wall and slab are in the southwest corner of the study area. Based on our discussions with you, it is our understanding that USTs may have been utilized onsite. Details regarding their location and possible removal were reportedly not available.

4. GEOPHYSICAL INSTRUMENTATION AND APPLICATIONS

Our evaluation included the use of a Geonics model EM61 MK2, GSSI SIR 3000 GPR, Schonstedt, model GA-52C magnetic gradiometer, Fisher M-Scope TW-6 pipe and cable locator,

and RD8000 line tracer. These instruments provide real-time results and facilitate the delineation of subsurface features.

The EM61 instrument is a high resolution, electromagnetic (EM) time-domain device for detecting buried conductive objects. It consists of a powerful transmitter that generates a pulsed primary magnetic field when its coils are energized, which induces eddy currents in nearby conductive objects. The decay of the eddy currents, following the input pulse, is measured by the coils, which in turn serve as receiver coils. The decay rate is measured for two coils, mounted concentrically, one above the other. By making the measurements at a relatively long time interval (measured in milliseconds) after termination of the primary pulse, the response is nearly independent of the electrical conductivity of the ground. Thus, the instrument is a super-sensitive metal detector. Due to its unique coil arrangement, the response curve is a single well-defined positive peak directly over a buried conductive object. This facilitates quick and accurate location of targets. Conductive objects to a depth of approximately 11 feet generally can be detected.

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 boundaries in the subsurface across which there are an electrical contrast. The recorder continuously makes a record of the reflected energy as the antenna is moved across the ground surface. The greater the electrical contrast, the higher the amplitude of the returned energy. The EM wave travels at a velocity unique to the material properties of the ground being studied, and when these velocities are known, or closely estimated from ground conductivity values and other information, two-way travel times can be converted to depth. Penetration into the ground and resolution of the GPR images produced are a function of ground electrical conductivity and dielectric constant. Images tend to be graphic, even at considerable depth, in sandy soils, but penetration and resolution may be limited in more conductive clayey moist ground.

The magnetic gradiometer has two fluxgate magnetic fixed sensors that are passed closely to and over the ground. When not in close proximity to a magnetic object, that is, only in the earth's field, the instrument emits an audible signal at a low frequency. When the instrument passes over

buried iron or steel objects (so that the field is significantly different at the two sensors) the frequency of the emitted sound increases. Frequency is a function of the gradient between the two sensors.

The M-Scope TW-6 device energizes the ground by producing an alternating primary magnetic field with alternating current (AC) in the transmitting coil. If conducting materials (including soils) 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 an audio response. The strength of the secondary field is a function of the conductivity of the object, its size, and its depth and position relative to the instrument's two coils. Conductive objects to a depth of approximately 10 feet are sensed. Also, the device is somewhat focused, that is, it is more sensitive to conductors below (and above) the instrument, than to conductors off to the side.

Where risers are present, the RD8000 utility locator transmitter can be connected to the object, and a current is impressed on the conductor pipe or cable. The receiver unit is tuned to this same frequency, and it is used to trace the pipe's surface projection away from the riser. The transmitter and receiver can also be used in a non-connect (induction) mode, whereby the transmitter is positioned on the ground and an electromagnetic signal is emitted. In the presence of buried metal pipes and wires, a discrete signal will be induced on the conductor which can be sensed by the receiver. In addition, the instrument may be used in the passive mode, whereby radio and 60 Hz electromagnetic signals produced by communication and live electric lines are detected.

5. SURVEY METHODOLOGY

In order to facilitate the collection of EM61 data a Trimble Pro XRS Global Positioning System (GPS) was used for spatial control. Measurements were made at 0.5-second intervals along traverses spaced roughly 3 to 5 feet apart across accessible portions of the study area. GPR traverses were conducted along roughly north-south and east-west profiles spaced approximately 5 feet apart. GPR traverses were also performed along random profiles across and near detected features. Traverses with the M-Scope and gradiometer were conducted along traverses spaced

approximately 5 feet apart. The line tracer was used in both passive, direct connect and inductive modes to delineate the presence of underground utilities. The recorded EM61 data were downloaded to a portable computer in the field for preliminary analysis and significant anomalies as well as detectable underground utilities were marked on the ground surface with paint, mapped, and reported to you.

6. RESULTS, CONCLUSIONS AND RECOMMENDATIONS

As previously discussed, the purpose of our evaluation was to assess the presence of buried underground storage tanks (USTs) and/or backfilled excavations associated with UST removal in the study area. The results of our study revealed the presence of six relatively significant anomalies, which are labelled A through F on Figure 2. In addition, a buried reinforce concrete pad extending outside the block wall in the southwestern portion of the study area was observed, and several unidentified lines and a sewer line were detected. Some of the unidentified lines could represent buried foundations/footings. The following is a description of Anomalies A through F:

Anomaly A: This feature is located to the north of the concrete pad. It produced a relatively high EM and magnetic response. Traverses with GPR across this feature were inconclusive. The specific nature of this feature is unknown; however, it should be considered a possible candidate UST due to its size and EM/magnetic response.

Anomaly B: Anomaly B is located to the west of the concrete pad. It produced a relatively small EM and magnetic response. GPR traverses conducted across the feature revealed areas of soil disturbance and, therefore, could be a possible backfilled excavation containing small or deteriorated metal debris.

Anomalies C, D: Anomalies C and D are located adjacent to the concrete pad. Both anomalies produced relatively high EM and magnetic responses separate from that of the reinforced concrete. GPR traverses conducted across these features were inconclusive. Due to the size and instrument response of these features, they could potentially be related to USTs.

Anomaly E: This feature is located south of the sewer manhole that is in the northern portion of the study area. It produced a relatively high EM and magnetic response. GPR traverses conducted across this feature were inconclusive. The specific cause of this feature is unknown, but it may be related to a small UST.

Anomaly F: This feature is located in the southeastern portion of the study area just south of two intersecting unidentified lines. It produced a relatively high EM and magnetic re-

sponse. GPR traverses conducted across this feature were inconclusive. The specific cause of this feature is unknown. It should be noted that the adjacent unidentified lines could be buried foundations and Anomaly F may be related to a former foundation. However, it could also be related to a UST.

Several additional relatively small EM anomalies were detected but based on their size and response they are likely related to small pieces of buried metal debris. Other high EM responses encountered appear to be related to building elements, posts, underground lines and metal fencing.

In order to further assess the features described above, we recommend that more direct methods be used. Such methods may include the excavation of exploratory trenches/test pits or borings.

Our survey utilized industry standard equipment (i.e., GPR, electromagnetic, and magnetic instruments) and was conducted in general accordance with current practice. It should be noted, however, that the presence of existing structures and surface objects (i.e., metal fencing, posts, reinforced concrete, etc.) potentially limited the survey. Where obstructions were present subsurface data could not be collected. Moreover, EM/magnetic responses produced by metal surface objects and underground lines can potentially obscure subsurface features. Figures 2 and 3 present the general site conditions and some of the obstructions encountered. Radar penetration at the site was on the order of 2 to 3 feet below the ground surface; therefore, objects below this depth would not have been detected with GPR.

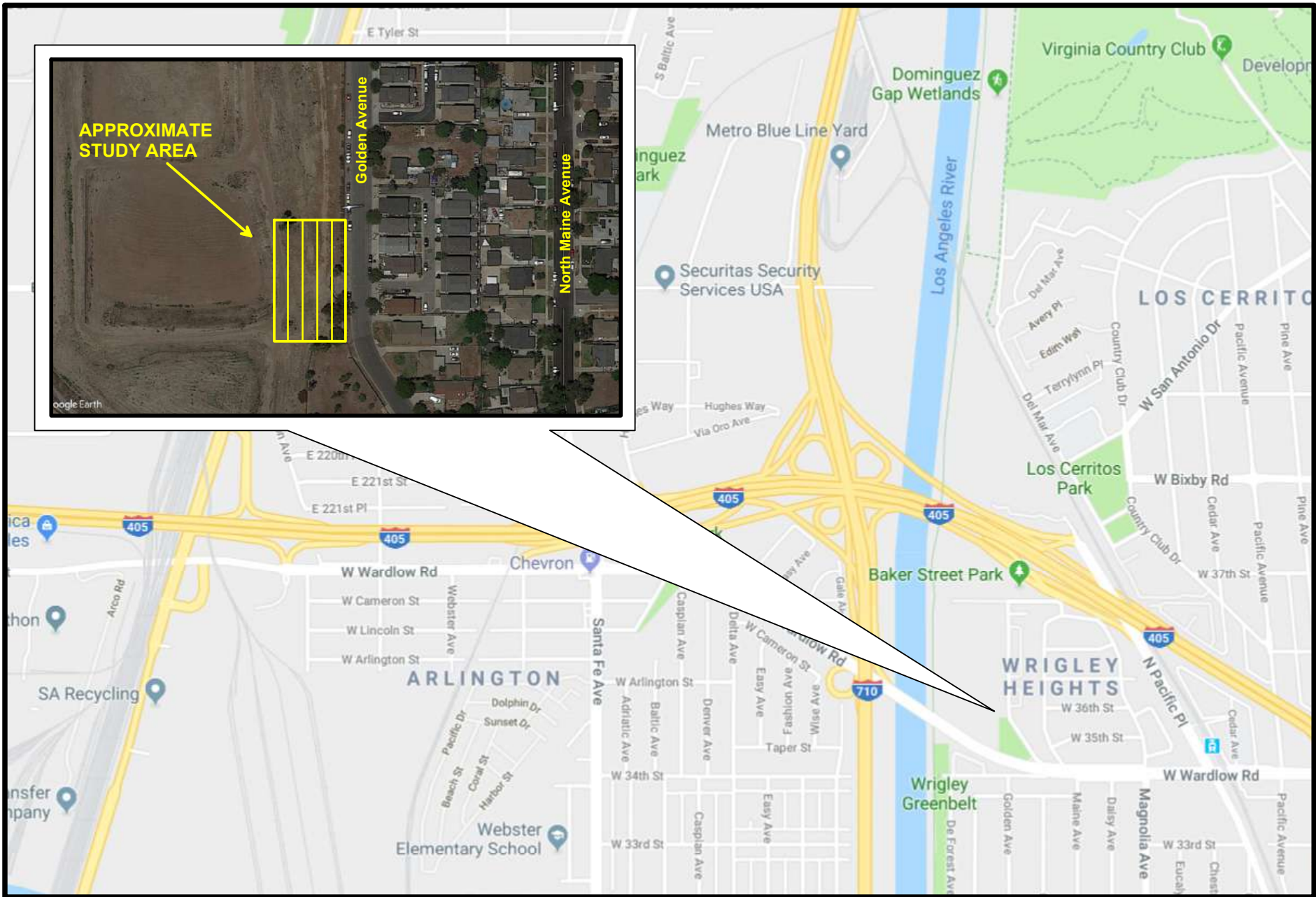
7. LIMITATIONS

The field evaluation and geophysical analyses presented in this report have been conducted in general accordance with current practice and the standard of care exercised by consultants performing similar tasks in the project area. No warranty, express or implied, is made regarding the conclusions and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist and conditions not observed or described in this report may be present. Uncertainties relative to subsurface conditions can be reduced

through additional subsurface surveying and/or exploration. Additional subsurface surveying can be performed upon request.

Please also note that our evaluation was limited to the detection of USTs and/or backfilled tank excavations. "USA" or "Dig Alert" should also be contacted prior to conducting subsurface exploration activities. In addition, we recommend that available utility plans/drawings of the project site be reviewed as appropriate.

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. Southwest Geophysics, LLC should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document. This report is intended exclusively for use by the client. Any use or reuse of this report by parties other than the client is undertaken at said parties' sole risk.



SITE LOCATION MAP




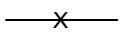


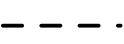

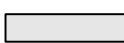









OOI
Long Beach, California

Project No.: 119191

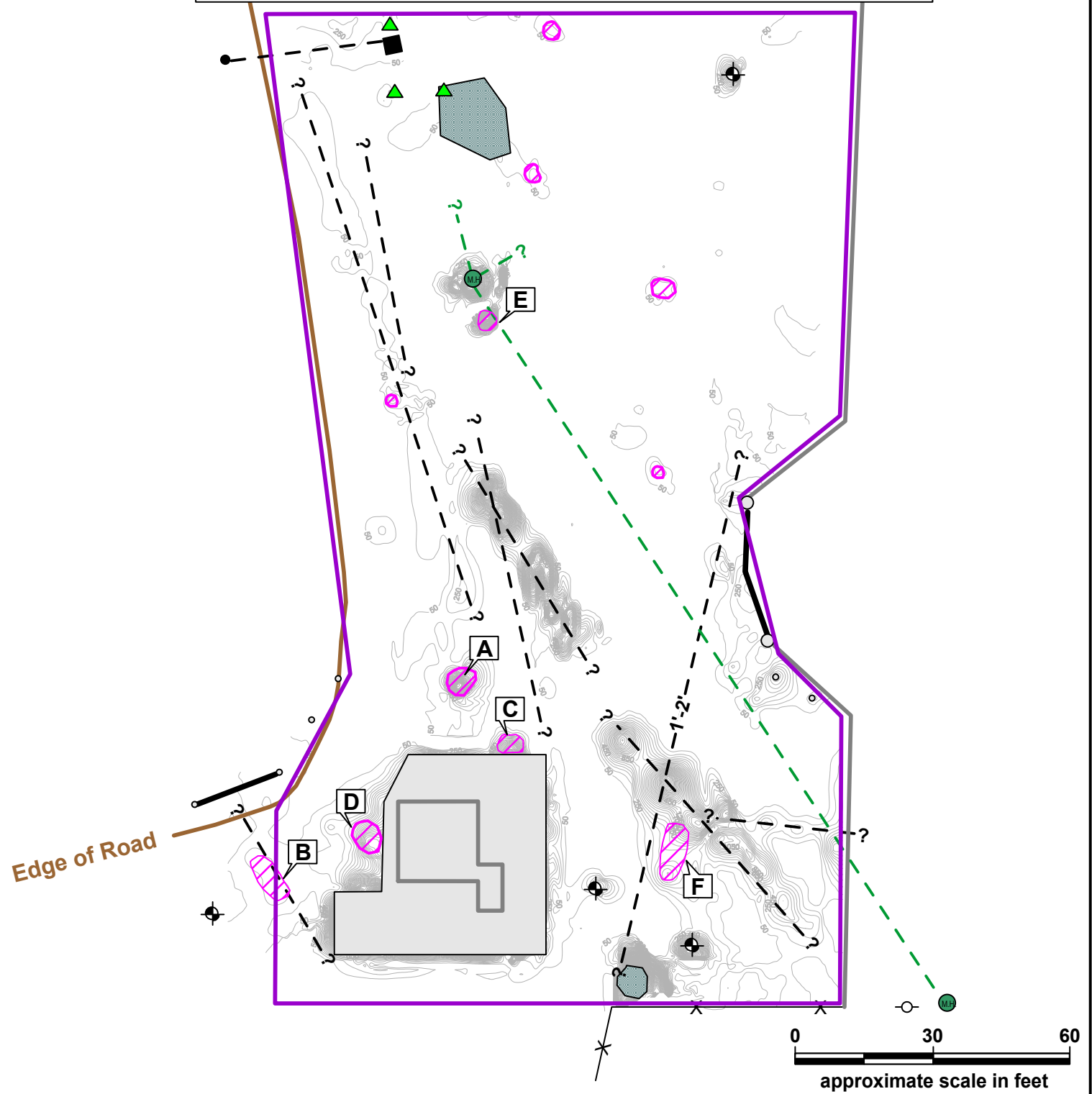
Date: 04/19

SOUTHWEST
GEOPHYSICS
Figure 1

LEGEND

- | | | | | | |
|---|---------------------|---|-------------------|---|--------------------|
|  | EM Anomaly |  | Chainlink Fence |  | Unidentified Riser |
|  | Surface Obstruction |  | Unidentified Line |  | Utility Pole |
|  | Reinforced Concrete |  | Sewer Line |  | Monitoring Well |
|  | Block Wall |  | Sewer Manhole |  | Tree |
|  | Iron Fence |  | Unknown Vault | | |
|  | Survey Limit |  | Metal Post | | |

* All dimensions are approximate.
 * Line depths reported where measured.
 * Lines queried where termination uncertain.



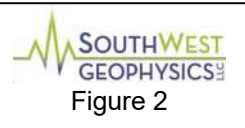
SITE DATA MAP
 EM61 Data CI= 100 mVolts

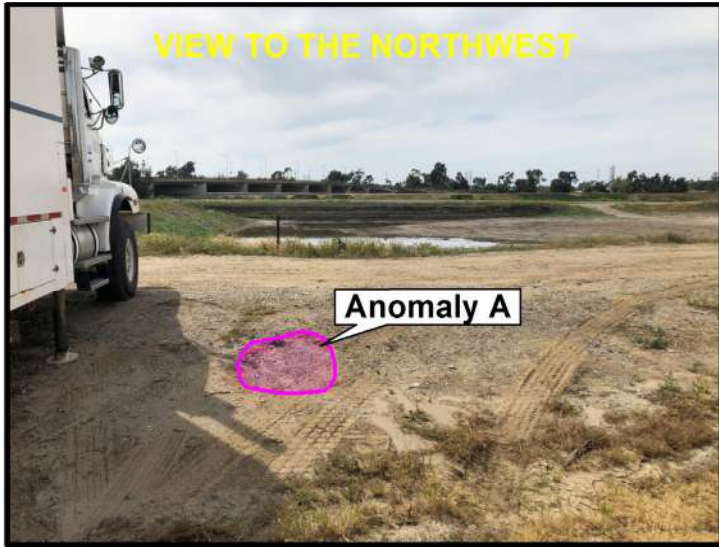


OOI
 Long Beach, California

Project No.: 119191

Date: 04/19





SITE PHOTOGRAPHS

OOI
Long Beach, California

Project No.: 119191

Date: 04/19

APPENDIX III

CPT/UVOST Report



GREGG DRILLING & TESTING, LLC.
 GEOTECHNICAL AND ENVIRONMENTAL INVESTIGATION SERVICES

4/11/19

California Environmental
 Attn: Charles Buckley

Subject: CPT Site Investigation
 712 North Baker Street
 Long Beach, California
 GREGG Project Number: D1190544SH

Dear Mr. Buckley:

The following report presents the results of GREGG Drilling Cone Penetration Test investigation for the above referenced site. The following testing services were performed:

1	Cone Penetration Tests	(CPTU)	<input checked="" type="checkbox"/>
2	Pore Pressure Dissipation Tests	(PPD)	<input checked="" type="checkbox"/>
3	Seismic Cone Penetration Tests	(SCPTU)	<input type="checkbox"/>
4	UVOST Laser Induced Fluorescence	(UVOST)	<input checked="" type="checkbox"/>
5	Groundwater Sampling	(GWS)	<input type="checkbox"/>
6	Soil Sampling	(SS)	<input type="checkbox"/>
7	Vapor Sampling	(VS)	<input type="checkbox"/>
8	Pressuremeter Testing	(PMT)	<input type="checkbox"/>
9	Vane Shear Testing	(VST)	<input type="checkbox"/>
10	Dilatometer Testing	(DMT)	<input type="checkbox"/>

A list of reference papers providing additional background on the specific tests conducted is provided in the bibliography following the text of the report. If you would like a copy of any of these publications or should you have any questions or comments regarding the contents of this report, please do not hesitate to contact our office at (925) 313-5800.

Sincerely,
 GREGG Drilling & Testing, LLC.

Frank Stolfi
 HRSC Division Manager, Gregg Drilling & Testing, LLC.



Cone Penetration Test Sounding Summary

-Table 1-

CPT Sounding Identification	Date	Termination Depth (feet)	Depth of Groundwater Samples (feet)	Depth of Soil Samples (feet)	Depth of Pore Pressure Dissipation Tests (feet)
CPT-01	4/8/2019	55.12	-	-	55.1
CPT-02	4/8/2019	55.12	-	-	54.2
CPT-03	4/8/2019	57.74	-	-	-
CPT-04	4/8/2019	62.99	-	-	-
CPT-05	4/8/2019	55.28	-	-	-
CPT-06	4/9/2019	52.82	-	-	-
CPT-07	4/9/2019	21.33	-	-	-
CPT-08	4/9/2019	52.82	-	-	-



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Campanella, R.G. and I. Weemeees, "Development and Use of An Electrical Resistivity Cone for Groundwater
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DeGroot, D.J. and A.J. Lutenegeger, "Reliability of Soil Gas Sampling and Characterization Techniques", International
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Woeller, D.J., P.K. Robertson, T.J. Boyd and Dave Thomas, "Detection of Polyaromatic Hydrocarbon Contaminants
Using the UVIF-CPT", 53rd Canadian Geotechnical Conference Montreal, QC October pp. 733-739, 2000.

Zemo, D.A., T.A. Delfino, J.D. Gallinatti, V.A. Baker and L.R. Hilpert, "Field Comparison of Analytical Results from
Discrete-Depth Groundwater Samplers" BAT EnviroProbe and QED HydroPunch, Sixth national Outdoor Action
Conference, Las Vegas, Nevada Proceedings, 1992, pp 299-312.

Copies of ASTM Standards are available through www.astm.org

Cone Penetration Testing Procedure (CPT)

Gregg Drilling carries out all Cone Penetration Tests (CPT) using an integrated electronic cone system, *Figure CPT*.

The cone takes measurements of tip resistance (q_c), sleeve resistance (f_s), and penetration pore water pressure (u_2). Measurements are taken at either 2.5 or 5 cm intervals during penetration to provide a nearly continuous profile. CPT data reduction and basic interpretation is performed in real time facilitating on-site decision making. The CPT parameters are stored electronically for further analysis and reference. All CPT soundings are performed in accordance with revised ASTM standards (D 5778-12).

The 5mm thick porous plastic filter element is located directly behind the cone tip in the u_2 location. A new saturated filter element is used on each sounding to measure both penetration pore pressures as well as measurements during a dissipation test (PPDT). Prior to each test, the filter element is fully saturated with oil under vacuum pressure to improve accuracy.

When the sounding is completed, the test hole is backfilled according to client specifications. If grouting is used, the procedure generally consists of pushing a hollow tremie pipe with a “knock out” plug to the termination depth of the CPT hole. Grout is then pumped under pressure as the tremie pipe is pulled from the hole. Disruption or further contamination to the site is therefore minimized.

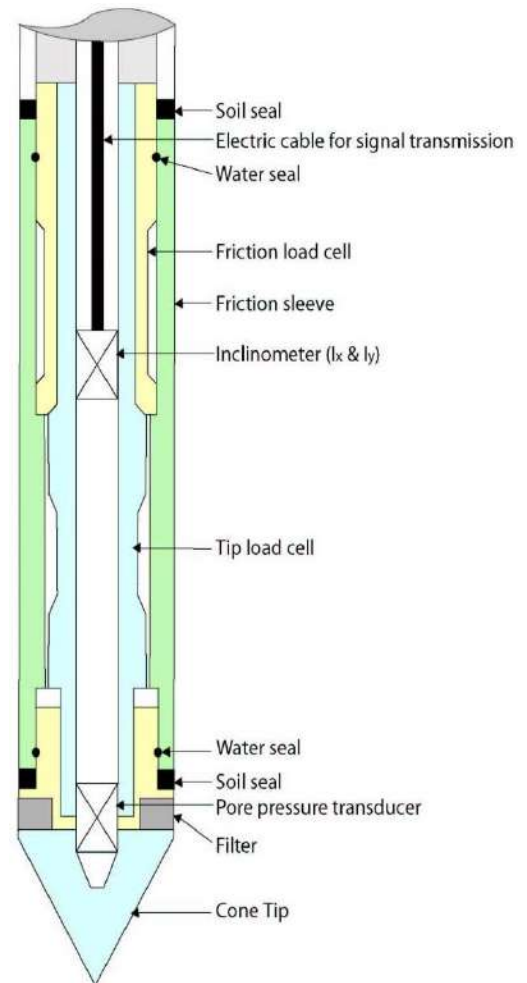


Figure CPT

Gregg 15cm² Standard Cone Specifications

Dimensions	
Cone base area	15 cm ²
Sleeve surface area	225 cm ²
Cone net area ratio	0.80
Specifications	
Cone load cell	
Full scale range	180 kN (20 tons)
Overload capacity	150%
Full scale tip stress	120 MPa (1,200 tsf)
Repeatability	120 kPa (1.2 tsf)
Sleeve load cell	
Full scale range	31 kN (3.5 tons)
Overload capacity	150%
Full scale sleeve stress	1,400 kPa (15 tsf)
Repeatability	1.4 kPa (0.015 tsf)
Pore pressure transducer	
Full scale range	7,000 kPa (1,000 psi)
Overload capacity	150%
Repeatability	7 kPa (1 psi)

Note: The repeatability on site will depend somewhat on ground conditions, abrasion, maintenance and zero load stability.

Cone Penetration Test Data & Interpretation

The Cone Penetration Test (CPT) data collected are presented in graphical and electronic form in the report. The plots include interpreted Soil Behavior Type (SBT) based on the charts described by Robertson (2009 & 2010). Typical plots display SBT based on the non-normalized charts of Robertson (2010). For CPT soundings deeper than 30m, we recommend the use of the normalized charts of Robertson (2009) which can be displayed as SBTn, upon request. The report can also include spreadsheet output of computer calculations of basic interpretation in terms of SBT and SBTn and various geotechnical parameters using current published correlations based on the comprehensive review by Lunne, Robertson and Powell (1997), as well as recent updates by Robertson and Cabal (Guide to Cone Penetration Testing, 2015). The interpretations are presented only as a guide for geotechnical use and should be carefully reviewed. Gregg Drilling does not warranty the correctness or the applicability of any of the geotechnical parameters interpreted by the software and does not assume any liability for use of the results in any design or review. The user should be fully aware of the techniques and limitations of any method used in the software. Some interpretation methods require input of the groundwater level to calculate vertical effective stress. An estimate of the in-situ groundwater level has been made based on field observations and/or CPT results, but should be verified by the user.

A summary of locations and depths is available in Table 1. Note that all penetration depths referenced in the data are with respect to the existing ground surface. Note that it is not always possible to clearly identify a soil type based solely on q_t , f_s , and u_2 . In these situations, experience, judgment, and an assessment of the pore pressure dissipation data should be used to infer the correct soil behavior type.

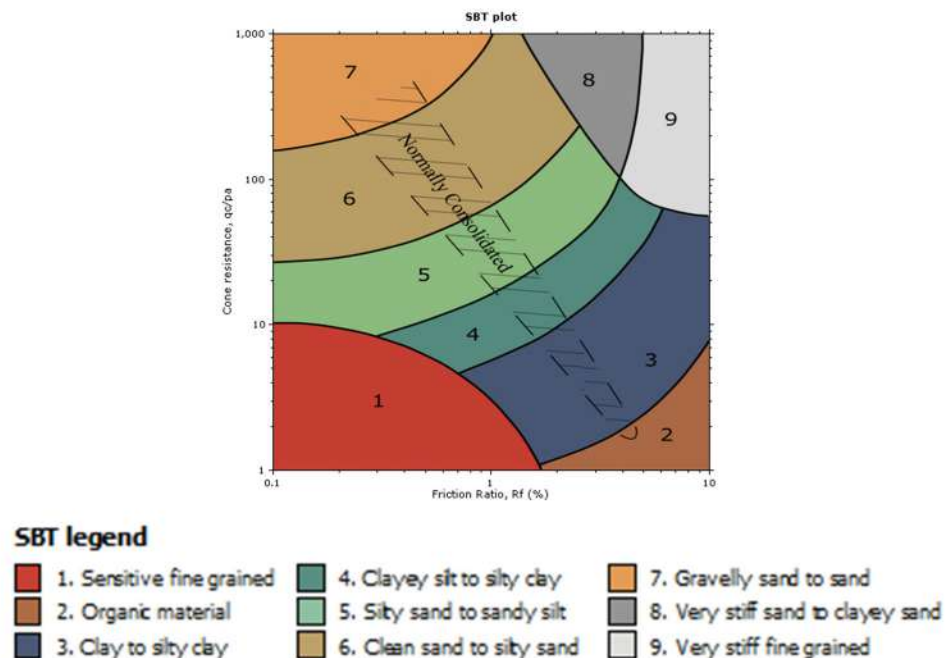


Figure SBT (After Robertson, 2010) – Note: Colors may vary slightly compared to plots

Cone Penetration Test (CPT) Interpretation

Gregg uses a commercial CPT interpretation and plotting software (CPeT-IT <https://geologismiki.gr/products/cpet-it/>). The software takes the CPT data and performs basic interpretation in terms of soil behavior type (SBT) and various geotechnical parameters using current published empirical correlations based on the comprehensive review by Lunne, Robertson and Powell (1997) and updated by Robertson and Cabal (2015). The interpretation is presented in tabular format. The interpretations are presented only as a guide for geotechnical use and should be carefully reviewed. Gregg does not warranty the correctness or the applicability of any of the geotechnical parameters interpreted by the software and does not assume any liability for any use of the results in any design or review. The user should be fully aware of the techniques and limitations of any method used in the software.

The following provides a summary of the methods used for the interpretation. Many of the empirical correlations to estimate geotechnical parameters have constants that have a range of values depending on soil type, geologic origin and other factors. The software uses 'default' values that have been selected to provide, in general, conservatively low estimates of the various geotechnical parameter.

Presented below is a list of formulas used for the estimation of various soil properties. The formulas are presented in SI unit system and assume that all components are expressed in the same units.

:: Unit Weight, g (kN/m³) ::

$$g = g_w \cdot \left(0.27 \cdot \log(R_f) + 0.36 \cdot \log\left(\frac{q_t}{p_a}\right) + 1.236 \right)$$

where g_w = water unit weight

:: Permeability, k (m/s) ::

$$I_c < 3.27 \text{ and } I_c > 1.00 \text{ then } k = 10^{0.952 - 3.04 I_c}$$

$$I_c \leq 4.00 \text{ and } I_c > 3.27 \text{ then } k = 10^{-4.52 - 1.37 I_c}$$

:: N_{SPT} (blows per 30 cm) ::

$$N_{60} = \left(\frac{q_c}{p_s} \right) \cdot \frac{1}{10^{1.1268 - 0.2817 I_c}}$$

$$N_{160} = Q_{tn} \cdot \frac{1}{10^{1.1268 - 0.2817 I_c}}$$

:: Young's Modulus, E_s (MPa) ::

$$(q_t - \sigma_v) \cdot 0.015 \cdot 10^{0.55 I_c + 1.08}$$

(applicable only to $I_c < I_{c, cutoff}$)

:: Relative Density, D_r (%) ::

$$100 \cdot \sqrt{\frac{Q_{tn}}{k_{OR}}} \quad \text{(applicable only to SBT}_n\text{: 5, 6, 7 and 8 or } I_c < I_{c, cutoff}\text{)}$$

:: State Parameter, ψ ::

$$\psi = 0.56 - 0.33 \cdot \log(Q_{30, CS})$$

:: Drained Friction Angle, ϕ (°) ::

$$\phi = \phi'_{cv} + 15.94 \cdot \log(Q_{30, CS}) - 26.88$$

(applicable only to SBT_n: 5, 6, 7 and 8 or $I_c < I_{c, cutoff}$)

:: 1-D constrained modulus, M (MPa) ::

$$\begin{aligned} \text{If } I_c > 2.20 \\ a = 14 \text{ for } Q_{tn} > 14 \\ a = Q_{tn} \text{ for } Q_{tn} \leq 14 \\ M_{CPT} = a \cdot (q_t - \sigma_v) \end{aligned}$$

$$\text{If } I_c \geq 2.20$$

$$M_{CPT} = 0.03 \cdot (q_t - \sigma_v) \cdot 10^{0.55 I_c + 1.88}$$

:: Small strain shear Modulus, G_0 (MPa) ::

$$G_0 = (q_t - \sigma_v) \cdot 0.0188 \cdot 10^{0.55 I_c + 1.68}$$

:: Shear Wave Velocity, V_s (m/s) ::

$$V_s = \left(\frac{G_0}{\rho} \right)^{0.50}$$

:: Undrained peak shear strength, S_u (kPa) ::

$$N_{kt} = 10.50 + 7 \cdot \log(F_r) \text{ or user defined}$$

$$S_u = \frac{(q_t - \sigma_v)}{N_{kt}}$$

(applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c, cutoff}$)

:: Remolded undrained shear strength, $S_{u(rem)}$ (kPa) ::

$$S_{u(rem)} = f_s \quad \text{(applicable only to SBT}_n\text{: 1, 2, 3, 4 and 9 or } I_c > I_{c, cutoff}\text{)}$$

:: Overconsolidation Ratio, OCR ::

$$k_{OCR} = \left[\frac{Q_{tn}^{0.20}}{0.25 \cdot (10.50 + 7 \cdot \log(F_r))} \right]^{-1.25} \text{ or user defined}$$

$$OCR = k_{OCR} \cdot Q_{tn}$$

(applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c, cutoff}$)

:: In situ Stress Ratio, K_0 ::

$$K_0 = (1 - \sin \phi') \cdot OCR^{\sin \phi'}$$

(applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c, cutoff}$)

:: Soil Sensitivity, S_s ::

$$S_s = \frac{N_s}{F_r}$$

(applicable only to SBT_n: 1, 2, 3, 4 and 9 or $I_c > I_{c, cutoff}$)

:: Peak Friction Angle, ϕ' (°) ::

$$\phi' = 29.5^\circ \cdot B_c^{0.121} \cdot (0.256 + 0.336 \cdot B_c + \log Q_t)$$

(applicable for $0.10 < B_c < 1.00$)

Pore Pressure Dissipation Tests (PPDT)

Pore Pressure Dissipation Tests (PPDT's) conducted at various intervals can be used to measure equilibrium water pressure (at the time of the CPT). If conditions are hydrostatic, the equilibrium water pressure can be used to determine the approximate depth of the ground water table. A PPDT is conducted when penetration is halted at specific intervals determined by the field representative. The variation of the penetration pore pressure (u) with time is measured behind the tip of the cone and recorded.

Pore pressure dissipation data can be interpreted to provide estimates of:

- Equilibrium piezometric pressure
- Phreatic Surface
- In-situ horizontal coefficient of consolidation (c_h)
- In-situ horizontal coefficient of permeability (k_h)

In order to correctly interpret the equilibrium piezometric pressure and/or the phreatic surface, the pore pressure must be monitored until it reaches equilibrium, *Figure PPDT*. This time is commonly referred to as t_{100} , the point at which 100% of the excess pore pressure has dissipated.

A complete reference on pore pressure dissipation tests is presented by Robertson et al. 1992 and Lunne et al. 1997.

A summary of the pore pressure dissipation tests is summarized in Table 1.

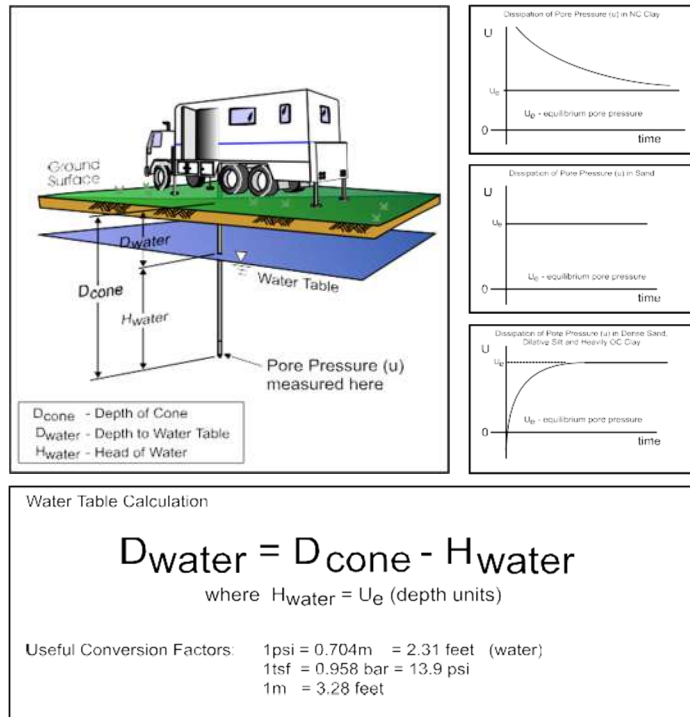


Figure PPDT

Seismic Cone Penetration Testing (SCPT)

Seismic Cone Penetration Testing (SCPT) can be conducted at various intervals during the Cone Penetration Test. Shear wave velocity (V_s) can then be calculated over a specified interval with depth. A small interval for seismic testing, such as 1-1.5m (3-5ft) allows for a detailed look at the shear wave profile with depth. Conversely, a larger interval such as 3-6m (10-20ft) allows for a more average shear wave velocity to be calculated. Gregg's cones have a horizontally active geophone located 0.2m (0.66ft) behind the tip.

To conduct the seismic shear wave test, the penetration of the cone is stopped and the rods are decoupled from the rig. An automatic hammer is triggered to send a shear wave into the soil. The distance from the source to the cone is calculated knowing the total depth of the cone and the horizontal offset distance between the source and the cone. To calculate an interval velocity, a minimum of two tests must be performed at two different depths. The arrival times between the two wave traces are compared to obtain the difference in time (Δt). The difference in depth is calculated (Δd) and velocity can be determined using the simple equation: $v = \Delta d / \Delta t$

Multiple wave traces can be recorded at the same depth to improve quality of the data.

A complete reference on seismic cone penetration tests is presented by Robertson et al. 1986 and Lunne et al. 1997.

A summary the shear wave velocities, arrival times and wave traces are provided with the report.

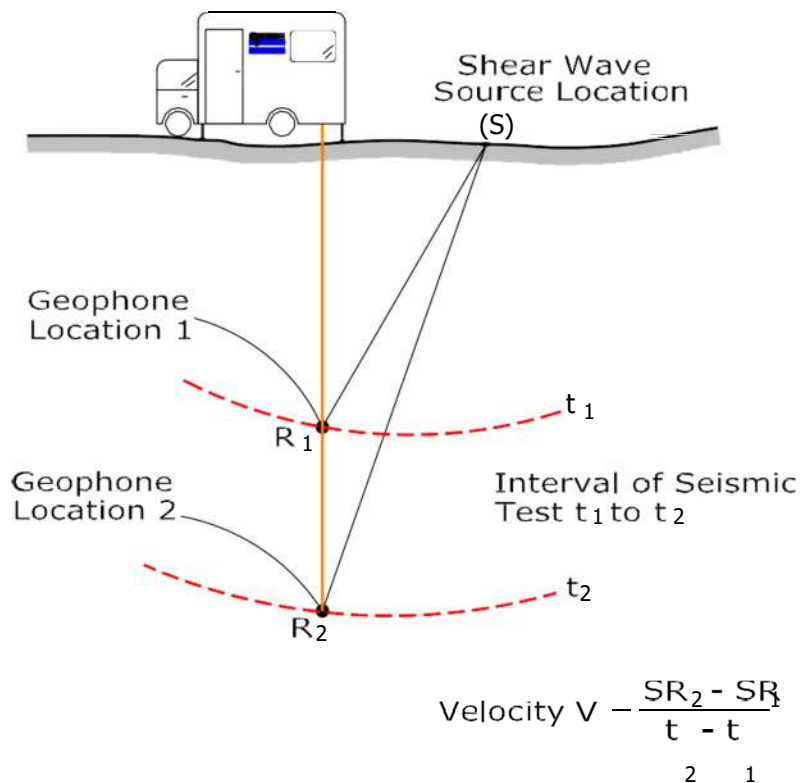


Figure SCPT

Groundwater Sampling

Gregg Drilling & Testing, Inc. conducts groundwater sampling using a sampler as shown in *Figure GWS*. The groundwater sampler has a retrievable stainless steel or disposable PVC screen with steel drop off tip. This allows for samples to be taken at multiple depth intervals within the same sounding location. In areas of slower water recharge, provisions may be made to set temporary PVC well screens during sampling to allow the pushing equipment to advance to the next sample location while the groundwater is allowed to infiltrate.

The groundwater sampler operates by advancing 44.5mm (1¾ inch) hollow push rods with the filter tip in a closed configuration to the base of the desired sampling interval. Once at the desired sample depth, the push rods are retracted; exposing the encased filter screen and allowing groundwater to infiltrate hydrostatically from the formation into the inlet screen. A small diameter bailer (approximately ½ or ¾ inch) is lowered through the push rods into the screen section for sample collection. The number of downhole trips with the bailer and time necessary to complete the sample collection at each depth interval is a function of sampling protocols, volume requirements, and the yield characteristics and storage capacity of the formation. Upon completion of sample collection, the push rods and sampler, with the exception of the PVC screen and steel drop off tip are retrieved to the ground surface, decontaminated and prepared for the next sampling event.

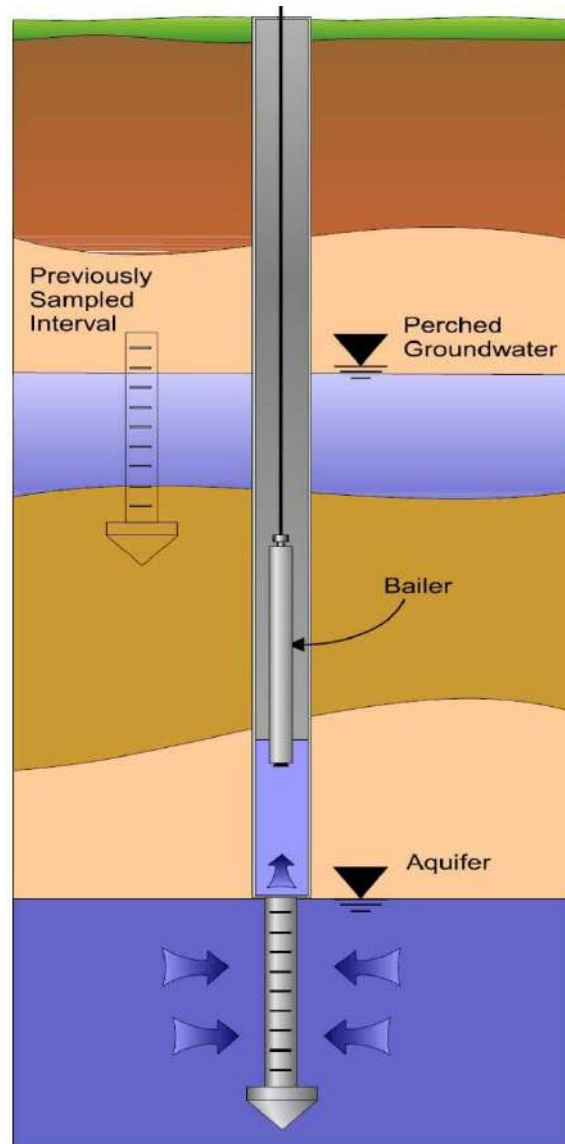


Figure GWS

Soil Sampling

Gregg Drilling & Testing, Inc. uses a piston-type push-in sampler to obtain small soil samples without generating any soil cuttings, *Figure SS*. Two different types of samplers (12 and 18 inch) are used depending on the soil type and density. The soil sampler is initially pushed in a "closed" position to the desired sampling interval using the CPT pushing equipment. Keeping the sampler closed minimizes the potential of cross contamination. The inner tip of the sampler is then retracted leaving a hollow soil sampler with inner 1¼" diameter sample tubes. The hollow sampler is then pushed in a locked "open" position to collect a soil sample. The filled sampler and push rods are then retrieved to the ground surface. Because the soil enters the sampler at a constant rate, the opportunity for 100% recovery is increased. For environmental analysis, the soil sample tube ends are sealed with Teflon and plastic caps. Often, a longer "split tube" can be used for geotechnical sampling.

For a detailed reference on direct push soil sampling, refer to Lunne et al, 1997.

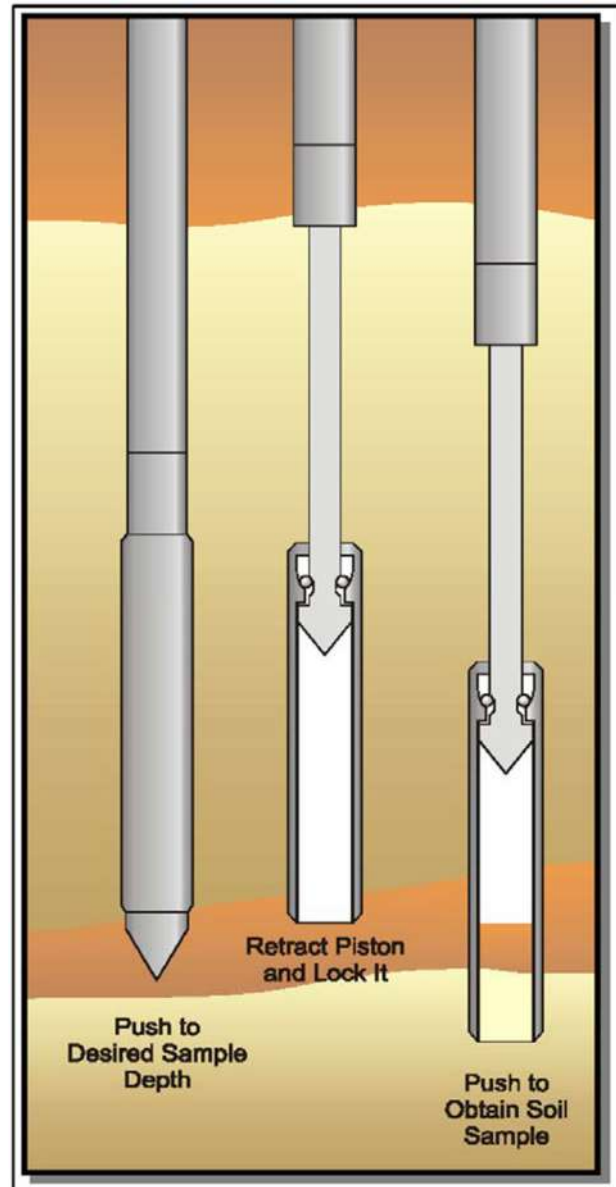


Figure SS

References

ASTM D5778-12, 2012, Standard Test Method for Performing Electronic Friction Cone and Piezocone Penetration Testing of Soils. ASTM West Conshohocken, USA

Lunne, T., Robertson, P.K. and Powell, J.J.M., 1997. Cone Penetration Testing in Geotechnical Practice.

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Robertson, P.K., 2010, "Soil Behavior type from the CPT: an update", 2nd International Symposium on Cone Penetration Testing, Huntington Beach, CA, Vol.2. pp 575-583

Robertson, P.K. and Cabal, K.L., "Guide to Cone Penetration Testing for Geotechnical Engineering", 6th Edition, 2015, 145 p. Free online, <http://www.greggdrilling.com/technical-guides>.

Robertson, P.K., R.G. Campanella, D. Gillespie and A. Rice, "Seismic CPT to Measure In-situ Shear Wave Velocity", Journal of Geotechnical Engineering, ASCE, Vol. 112, No. 8, pp. 791-803, 1986.

Robertson, P.K., Sully, J., Woeller, D.J., Lunne, T., Powell, J.J.M., and Gillespie, D.J., "Guidelines for Estimating Consolidation Parameters in Soils from Piezocone Tests", Canadian Geotechnical Journal, Vol. 29, No. 4, August 1992, pp. 539-550.

Ultra-Violet Induced Fluorescence (UVOST)

Gregg Drilling conducts Laser Induced Fluorescence (LIF) Cone Penetration Tests using a UVOST module that is located behind the standard piezocone, *Figure UVOST*. The laser induced fluorescence cone works on the principle that polycyclic aromatic hydrocarbons (PAH's), mixed with soil and/or groundwater, fluoresce when irradiated by ultra violet light. Therefore, by measuring the intensity of fluorescence, the lateral and vertical extent of hydrocarbon contamination in the ground can be estimated.

The UVOST module uses principles of fluorescence spectrometry by irradiating the soil with ultra violet light produced by a laser and transmitted to the cone through fiber optic cables. The UV light passes through a small window in the side of the cone into the soil. Any hydrocarbon molecules present in the soil absorb the light energy during radiation and immediately re-emit the light at a longer wavelength. This re-emission is termed fluorescence. The UVOST system also measures the emission decay with time at four different wavelengths (350nm, 400nm, 450nm, and 500nm). This allows the software to determine a product "signature" at each data point. This process provides a method to evaluate the type of contaminant. A sample output from the UVOST system is shown in *Figure Output*. In general, the typical detection limit for the UVOST system is <100 ppm and it will operate effectively above and below the saturated zone.

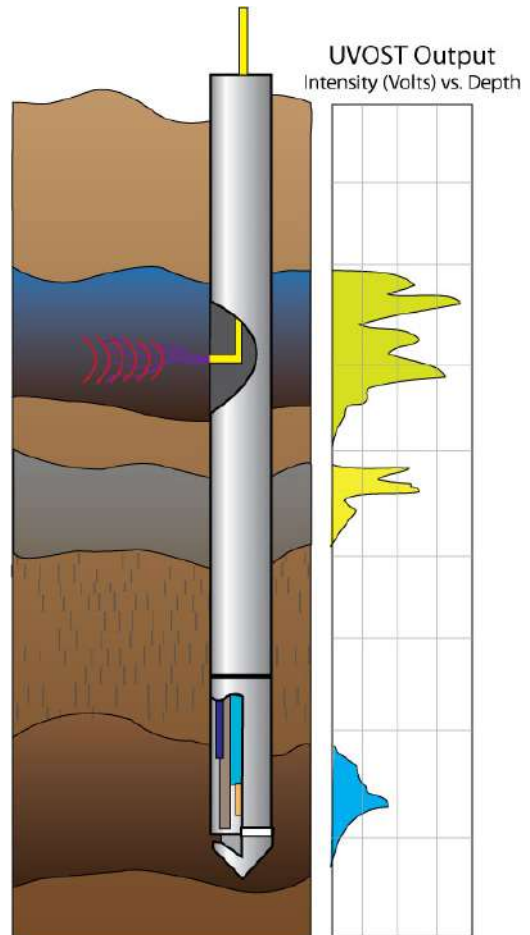


Figure UVOST

With the capability to push up to 200m (600ft) per day, laser induced fluorescence offers a fast and efficient means for delineating PAH contaminant plumes. Color coded logs offer qualitative information in a quick glance and can be produced in the field for real-time decision making. Coupled with the data provided by the CPT, a complete site assessment can be completed with no samples or cuttings, saving laboratory costs as well as site and environmental impact.

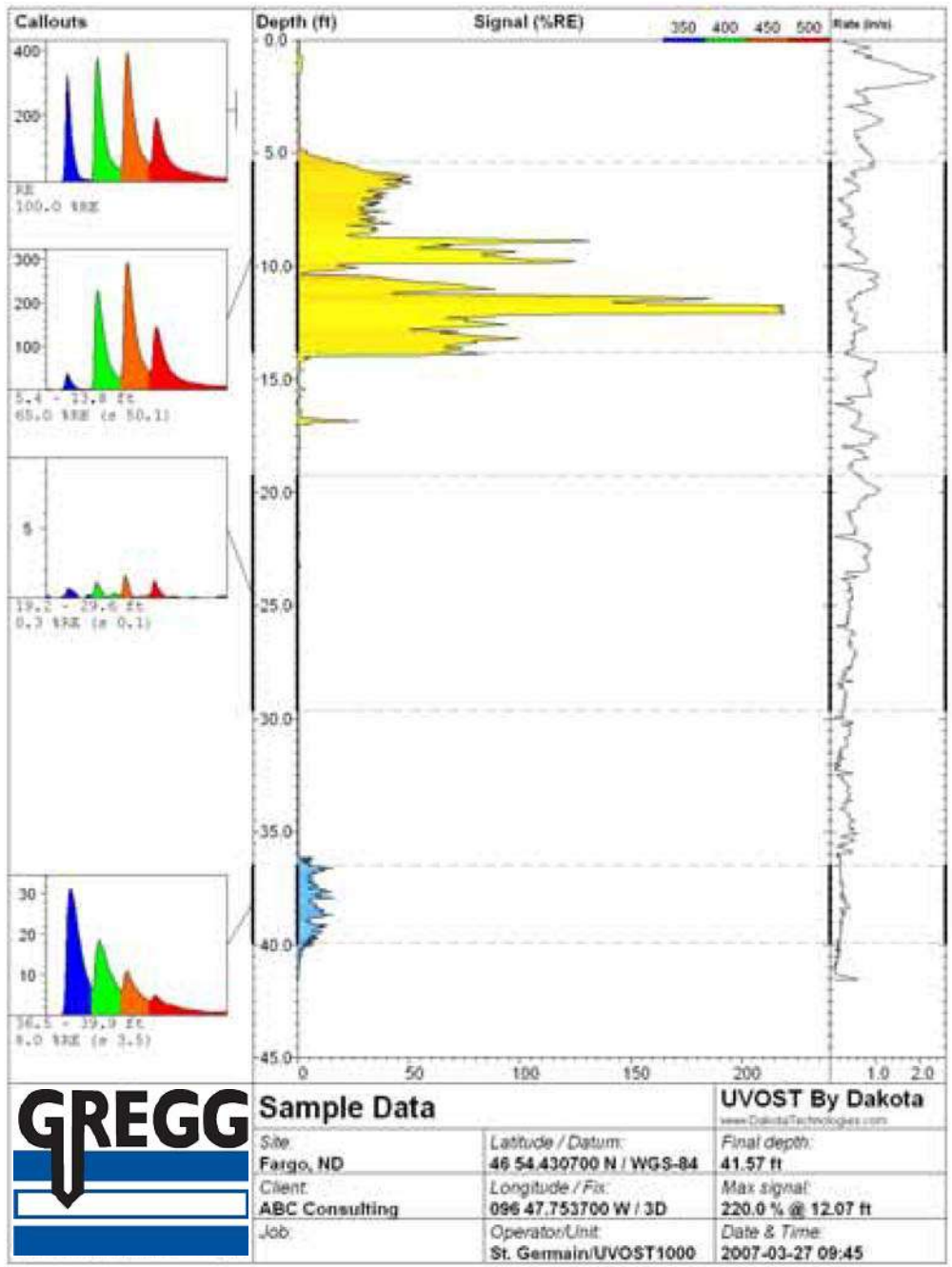


Figure Output

Hydrocarbons detected with UVOST

- Gasoline
- Diesel
- Jet (Kerosene)
- Motor Oil
- Cutting fluids
- Hydraulic fluids
- Crude Oil

Hydrocarbons rarely detected using UVOST

- Extremely weathered gasoline
- Coal tar
- Creosote
- Bunker Oil
- Polychlorinated bi-phenols (PCB's)
- Chlorinated solvent DNAPL
- Dissolved phase (aqueous) PAH's

Potential False Positives (fluorescence observed)

- Sea-shells (weak-medium)
- Paper (medium-strong depending on color)
- Peat/meadow mat (weak)
- Calcite/calcareous sands (weak)
- Tree roots (weak-medium)
- Sewer lines (medium-strong)

Potential False Negatives (do not fluoresce)

- Extremely weathered fuels (especially gasoline)
- Aviation gasoline (weak)
- "Dry" PAHs such as aqueous phase, lamp black, purifier chips
- Creosotes (most)
- Coal tars (most) gasoline (weak)
- Most chlorinated solvents
- Benzene, toluene, xylenes (relatively pure)

DAKOTA TECHNOLOGIES UVOST LOG REFERENCE

2008-12-12

Main Plot :

Signal (total fluorescence) versus depth where signal is relative to the Reference Emitter (RE). The total area of the waveform is divided by the total area of the Reference Emitter yielding the %RE. This %RE scales with the NAPL fluorescence. The fill color is based on relative contribution of each channel's area to the total waveform area (see callout waveform). The channel-to-color relationship and corresponding wavelengths are given in the upper right corner of the main plot.

Callouts :

Waveforms from selected depths or depth ranges showing the multi-wavelength waveform for that depth.

The four peaks are due to fluorescence at four wavelengths and referred to as "channels". Each channel is assigned a color.

Various NAPLs will have a unique waveform "fingerprint" due to the relative amplitude of the four channels and/or broadening of one or more channels.

Basic waveform statistics and any operator notes are given below the callout.

Conductivity Plot :

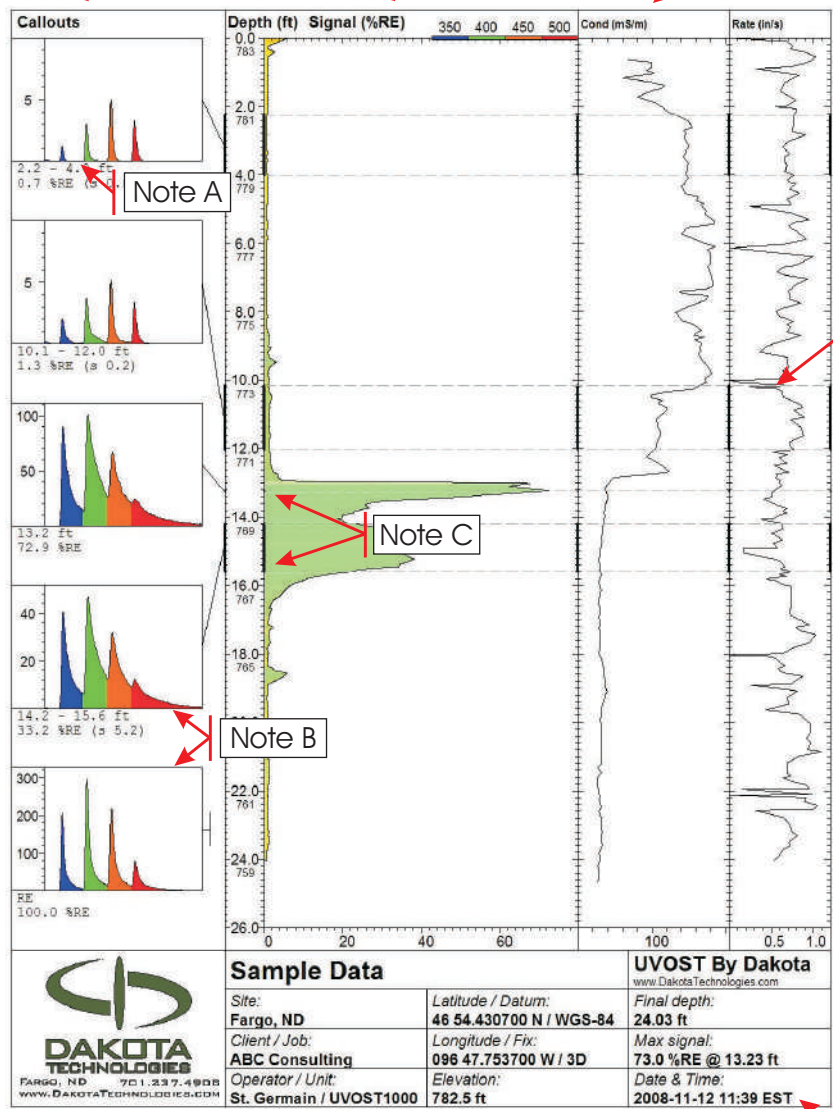
The Electrical Conductivity (EC) of the soil can be logged simultaneously with the UVOST data. EC often provides insight into the stratigraphy. Note the drop in EC from 10 - 13 ft, indicating a shift from consolidated to unconsolidated stratigraphy. This correlates with the observed NAPL distribution.

Rate Plot :

The rate of probe advancement. ~ 0.8in (2cm) per second is preferred.

A noticeable decrease in the rate of advancement may be indicative of difficult probing conditions (gravel, angular sands, etc.) such as that seen here at ~5 ft.

Notice that this log was terminated arbitrarily, not due to "refusal", which would have been indicated by a sudden rate drop at final depth.



Note A :

Time is along the x axis. No scale is given, but it is a consistent 320ns wide. The y axis is in mV and directly corresponds to the amount of light striking the photodetector.

Note B :

These two waveforms are clearly different. The first is weathered diesel from the log itself while the second is the Reference Emitter (a blend of NAPLs) always taken before each log for calibration.

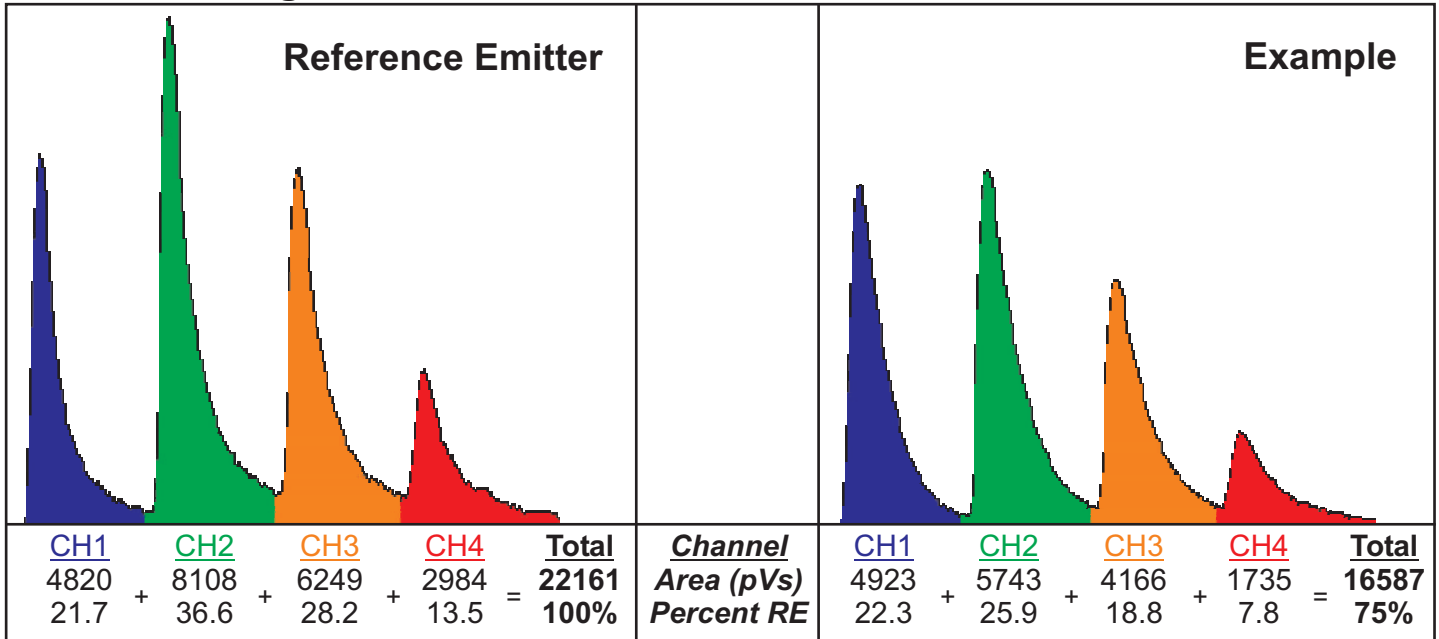
Note C :

Callouts can be a single depth (see 3rd callout) or a range (see 4th callout). The range is noted on the depth axis by a bold line. When the callout is a range, the average and standard deviation in %RE is given below the callout.

Info Box :

Contains pertinent log info including name and location.

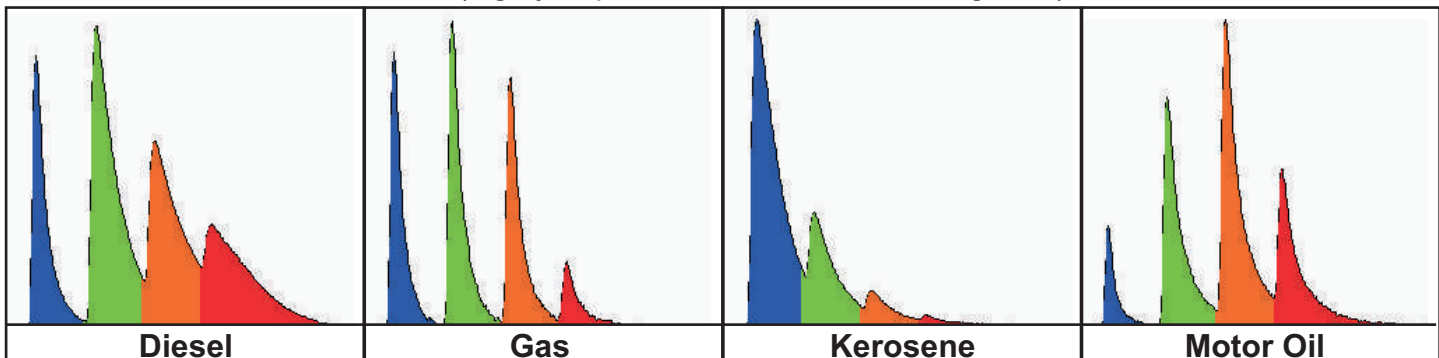
Waveform Signal Calculation



Data Files

*.lif.raw.bin	Raw data file. Header is ASCII format and contains information stored when the file was initially written (e.g. date, total depth, max signal, gps, etc., and any information entered by the operator). All raw waveforms are appended to the bottom of the file in a binary format.
*.lif.plt	Stores the plot scheme history (e.g. callout depths) for associated Raw file. Transfer along with the Raw file in order to recall previous plots.
*.lif.jpg	A jpg image of the OST log including the main signal vs. depth plot, callouts, information, etc.
*.lif.dat.txt	Data export of a single Raw file. ASCII tab delimited format. No string header is provided for the columns (to make importing into other programs easier). Each row is a unique depth reading. The columns are: Depth, Total Signal (%RE), Ch1%, Ch2%, Ch3%, Ch4%, Rate, Conductivity Depth, Conductivity Signal, Hammer Rate. Summing channels 1 to 4 yields the Total Signal.
*.lif.sum.txt	A summary file for a number of Raw files. ASCII tab delimited format. The file contains a string header. The summary includes one row for each Raw file and contains information for each file including: the file name, gps coordinates, max depth, max signal, and depth at which the max signal occurred.
*.lif.log.txt	An activity log generated automatically located in the OST application directory in the 'log' subfolder. Each OST unit the computer operates will generate a separate log file per month. A log file contains much of the header information contained within each separate Raw file, including: date, total depth, max signal, etc.

Common Waveforms (highly dependent on soil, weathering, etc.)



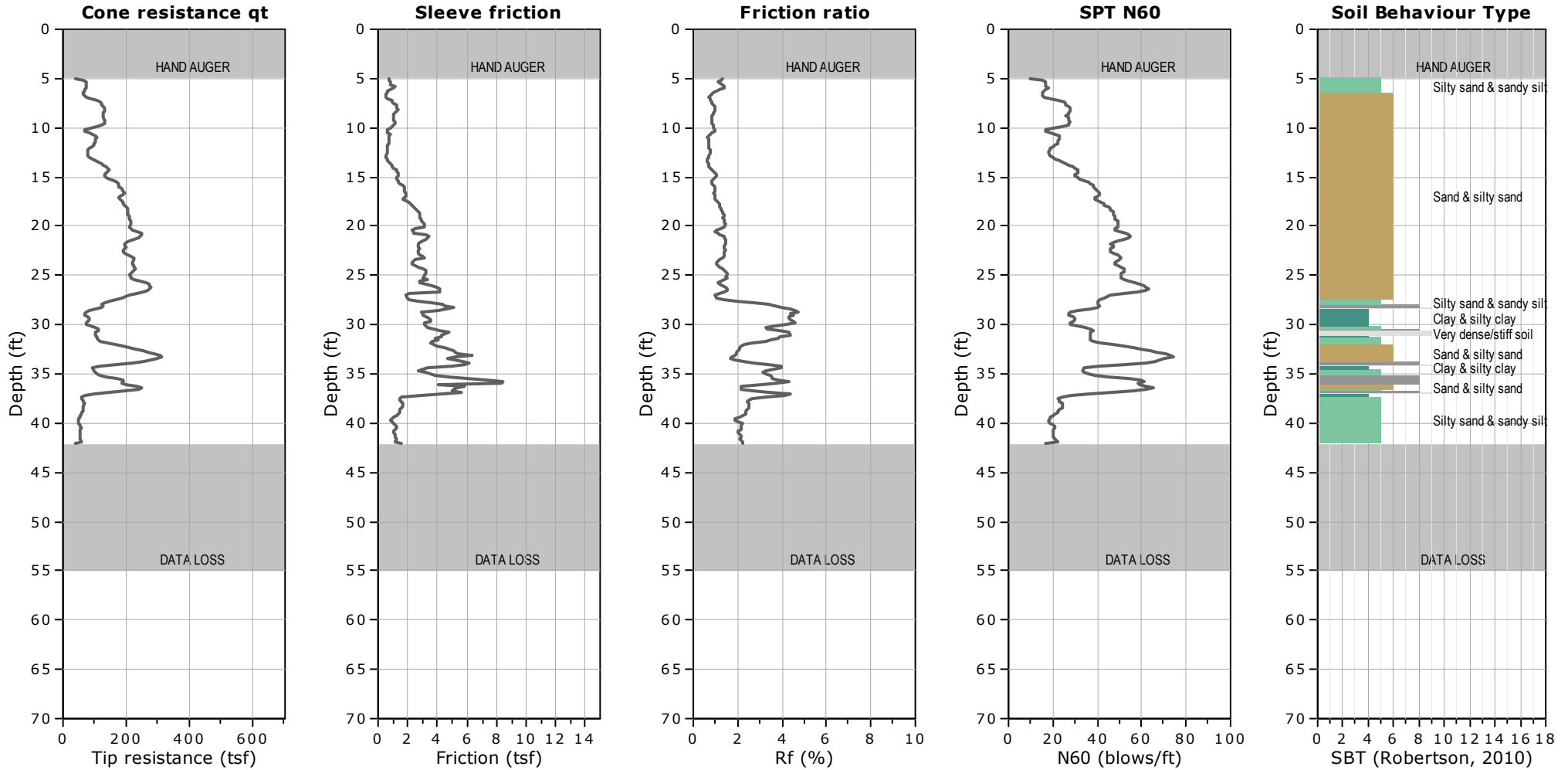


**CONE PENETRATION TEST (CPT)
BORINGS**



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 55.12 ft, Date: 4/8/2019



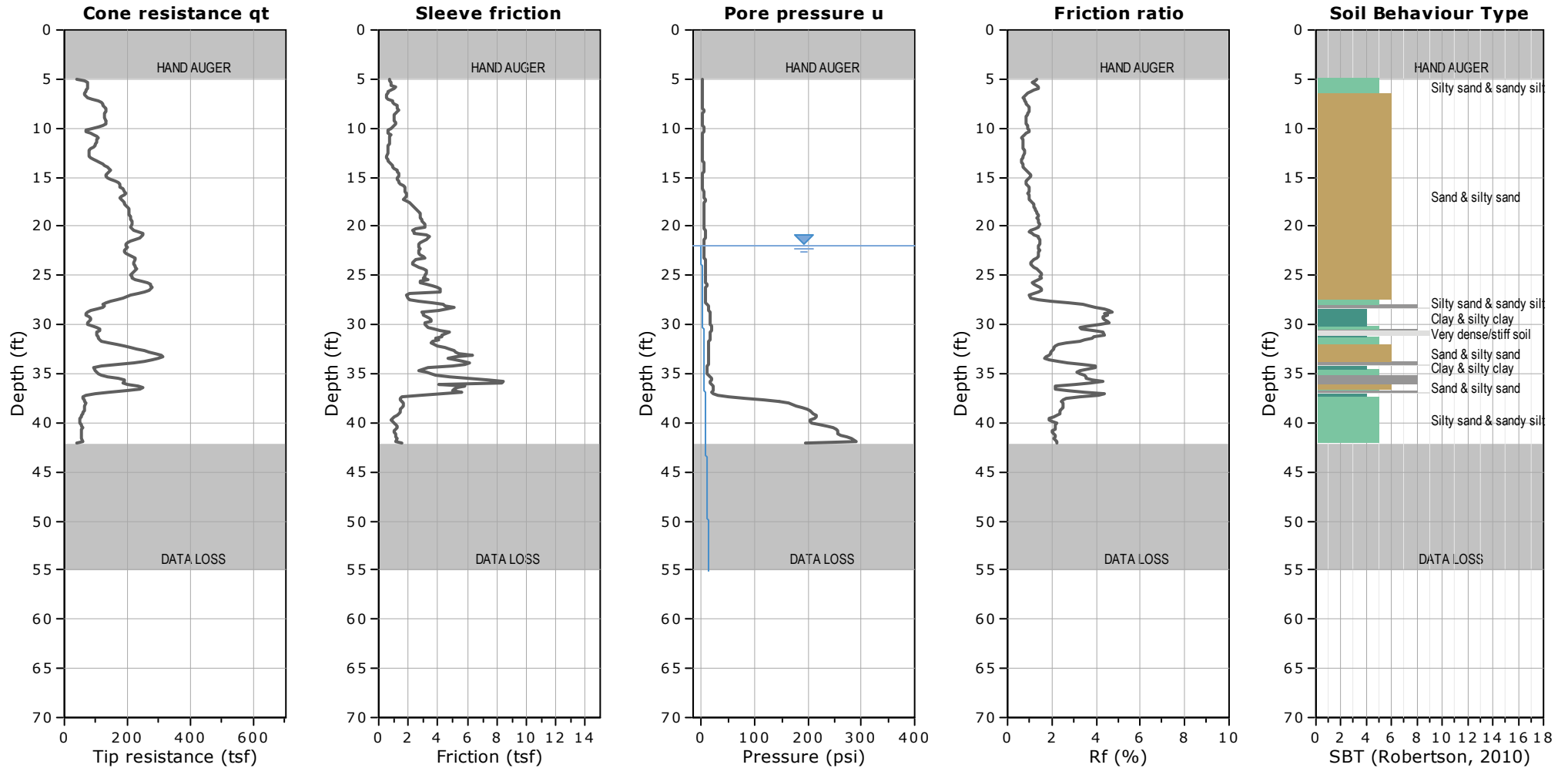
SBTn legend

- | | | |
|---------------------------|------------------------------|-----------------------------------|
| 1. Sensitive fine grained | 4. Clayey silt to silty clay | 7. Gravely sand to sand |
| 2. Organic material | 5. Silty sand to sandy silt | 8. Very stiff sand to clayey sand |
| 3. Clay to silty clay | 6. Clean sand to silty sand | 9. Very stiff fine grained |



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 55.12 ft, Date: 4/8/2019



SBTn legend

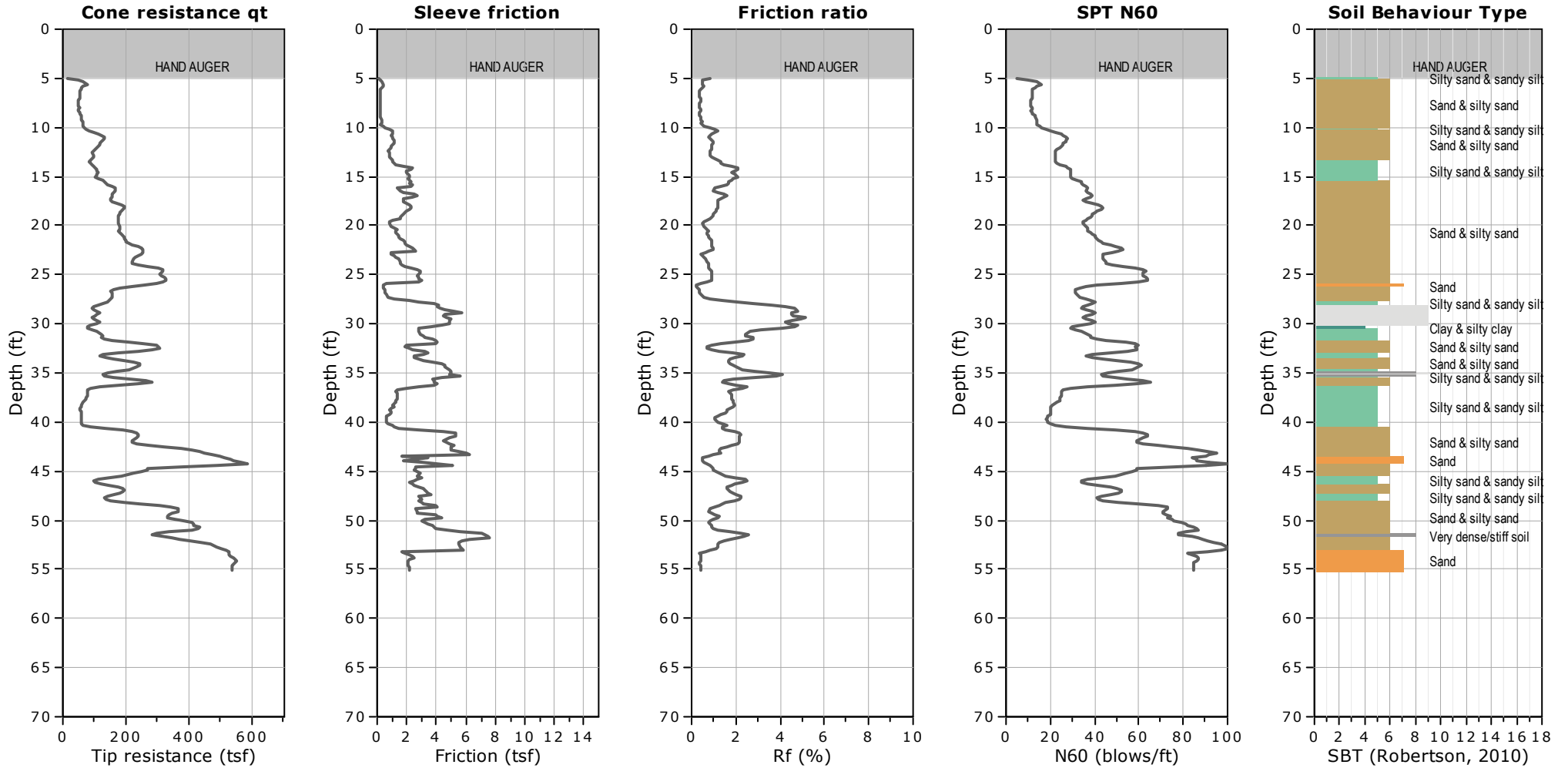
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WATER TABLE FOR ESTIMATING PURPOSES ONLY



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 55.12 ft, Date: 4/8/2019



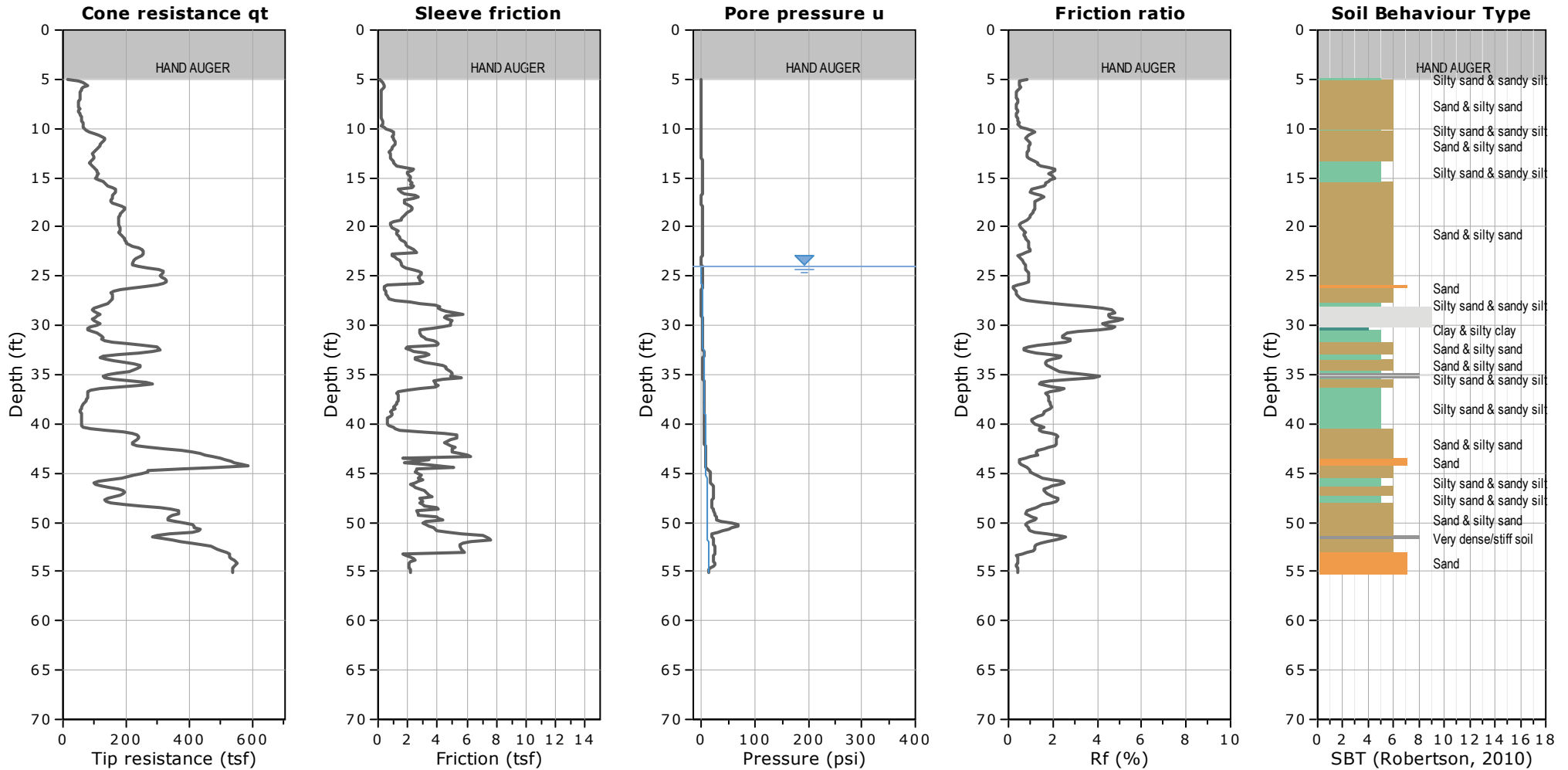
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SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 55.12 ft, Date: 4/8/2019



SBTn legend

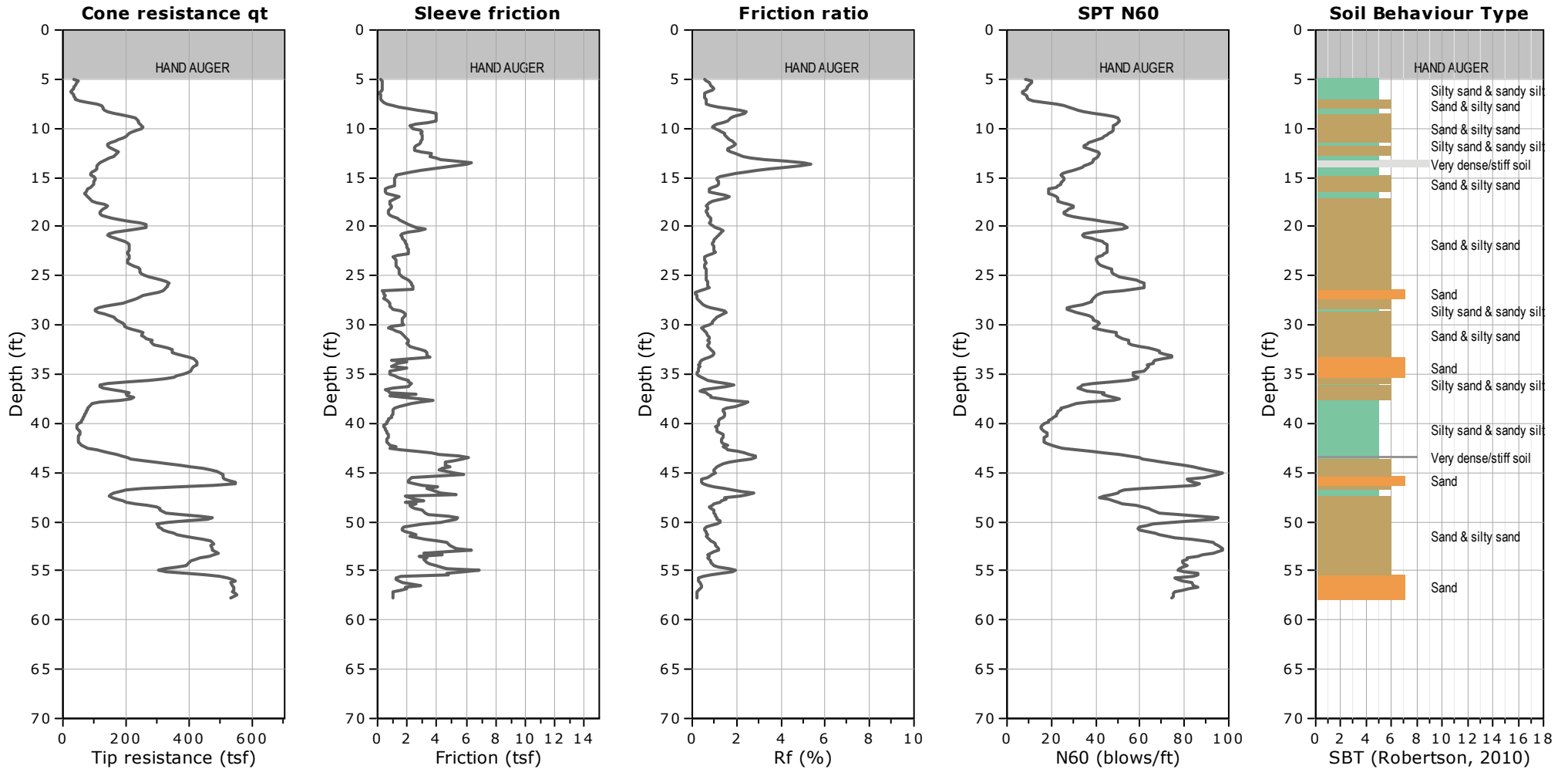
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WATER TABLE FOR ESTIMATING PURPOSES ONLY



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

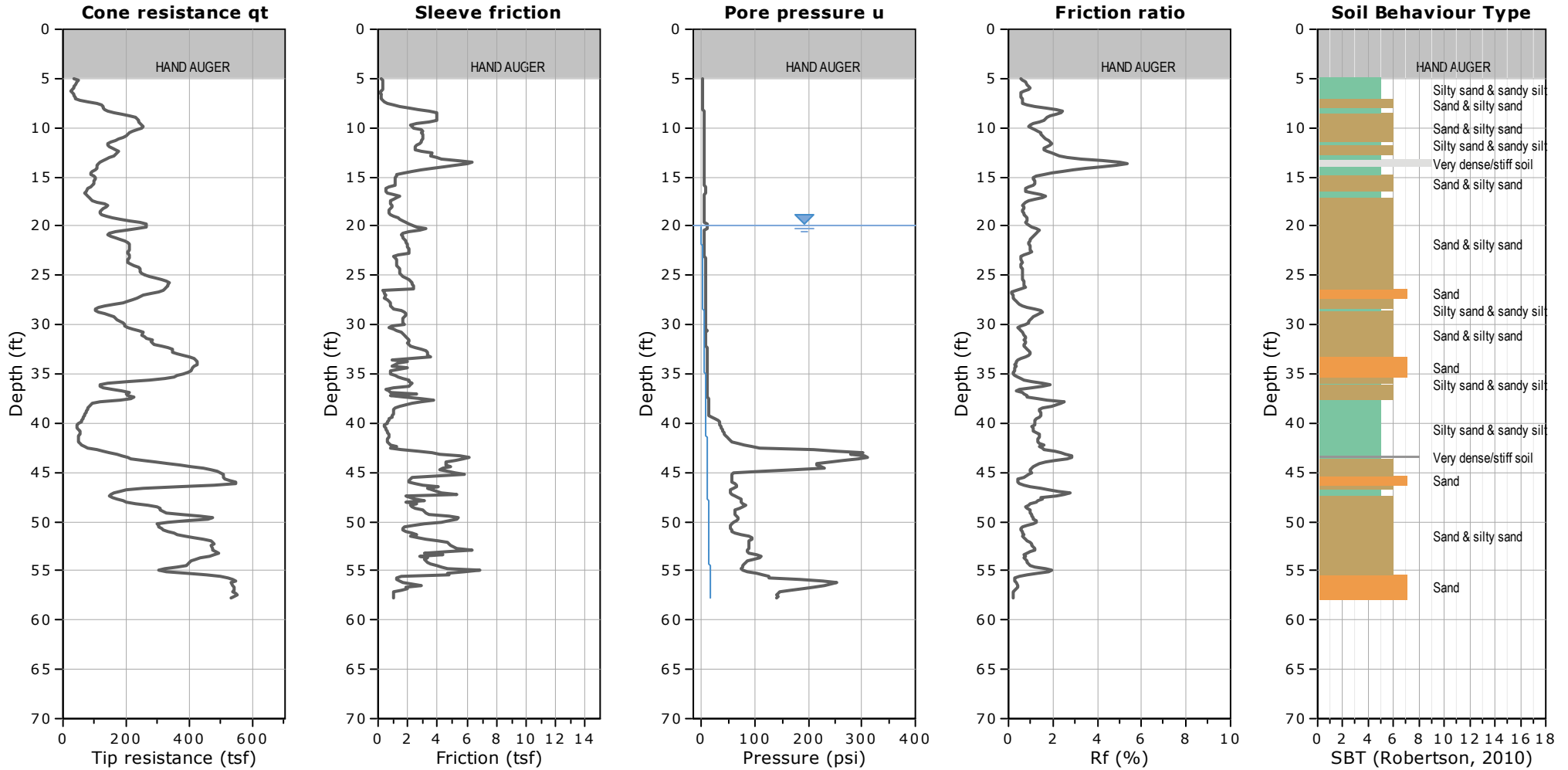
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Total depth: 57.74 ft, Date: 4/8/2019





CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 57.74 ft, Date: 4/8/2019



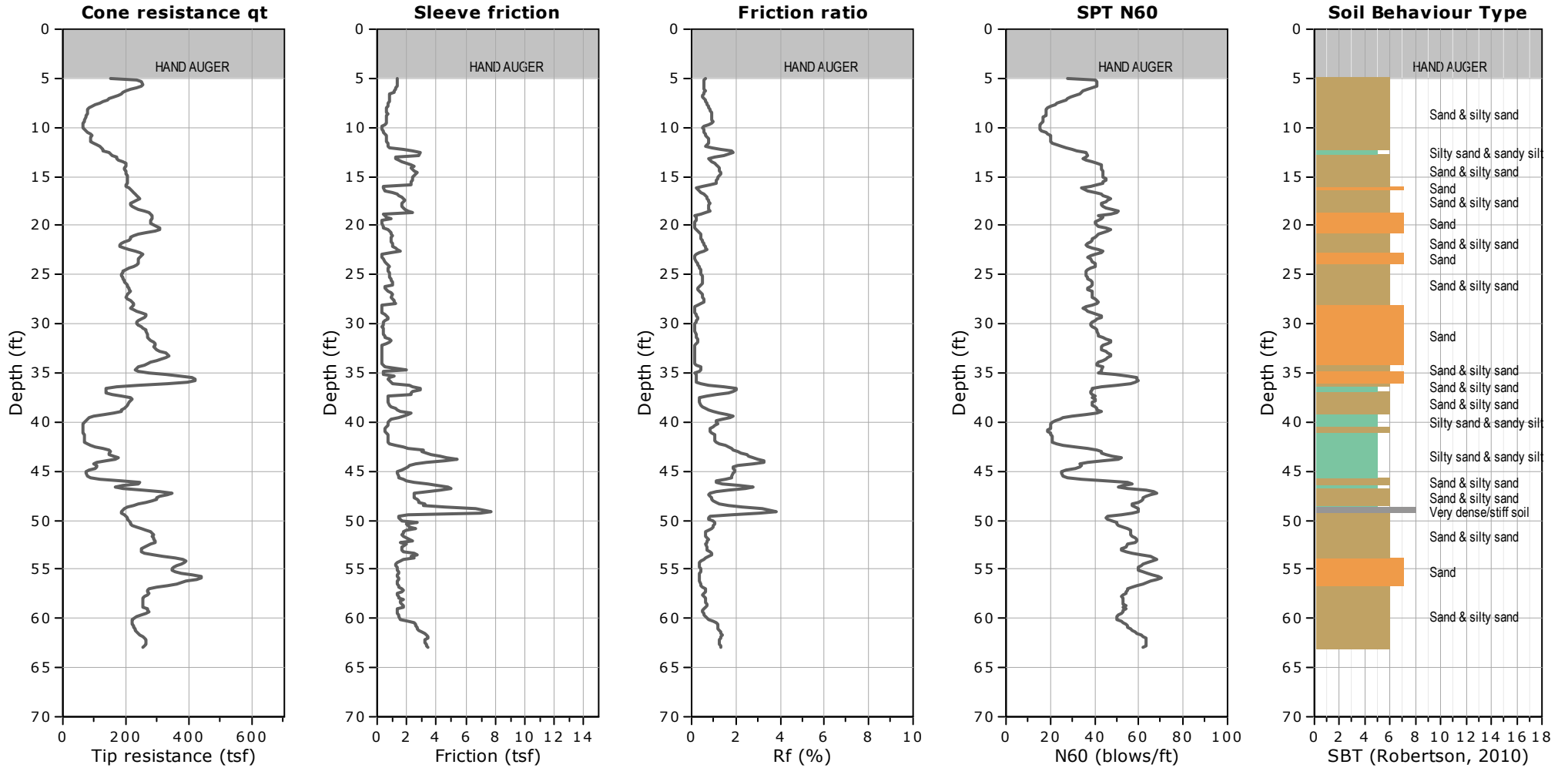
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|---------------------------|------------------------------|-----------------------------------|
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| 2. Organic material | 5. Silty sand to sandy silt | 8. Very stiff sand to clayey sand |
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WATER TABLE FOR ESTIMATING PURPOSES ONLY



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 62.99 ft, Date: 4/8/2019



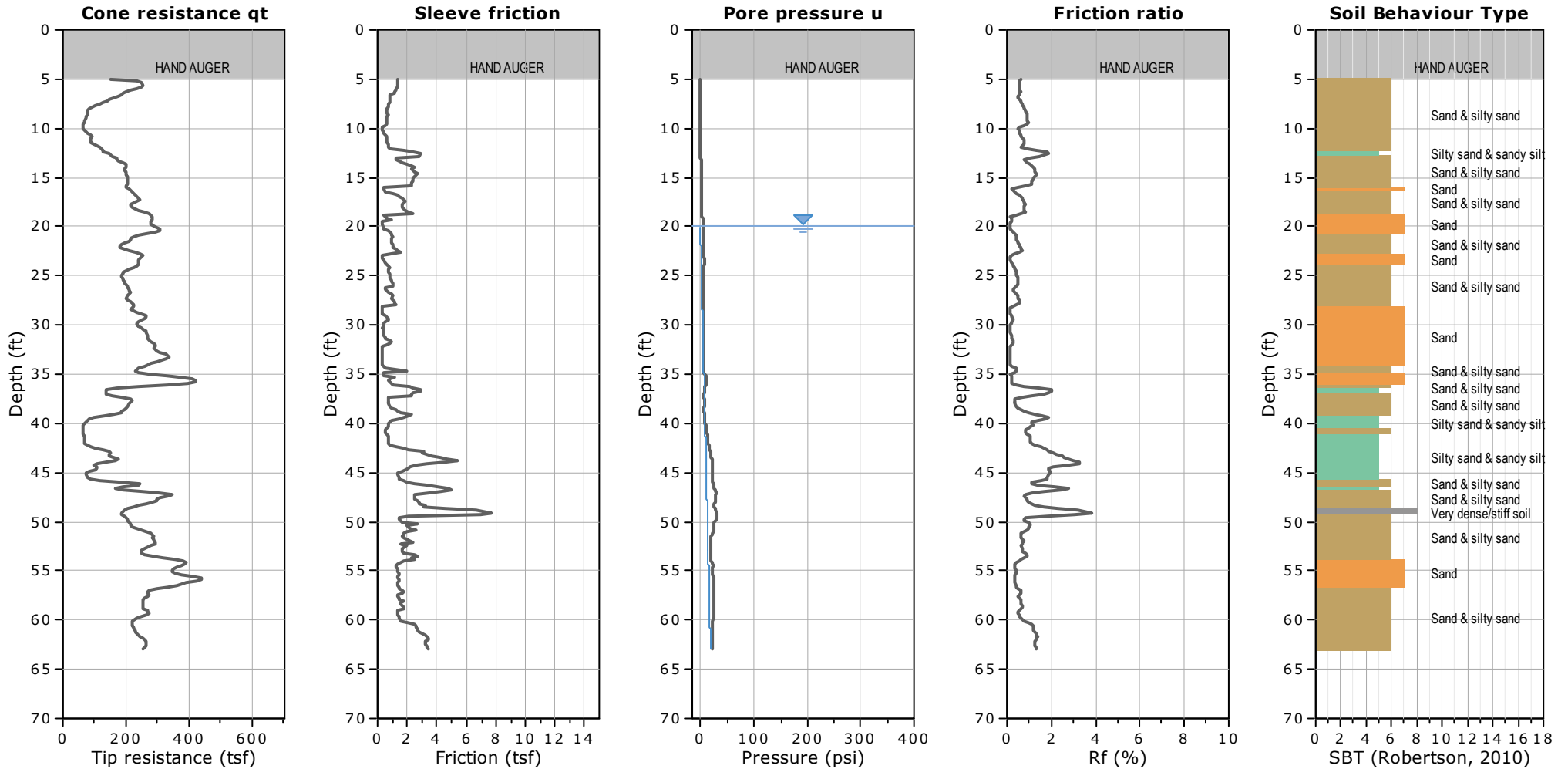
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SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 62.99 ft, Date: 4/8/2019

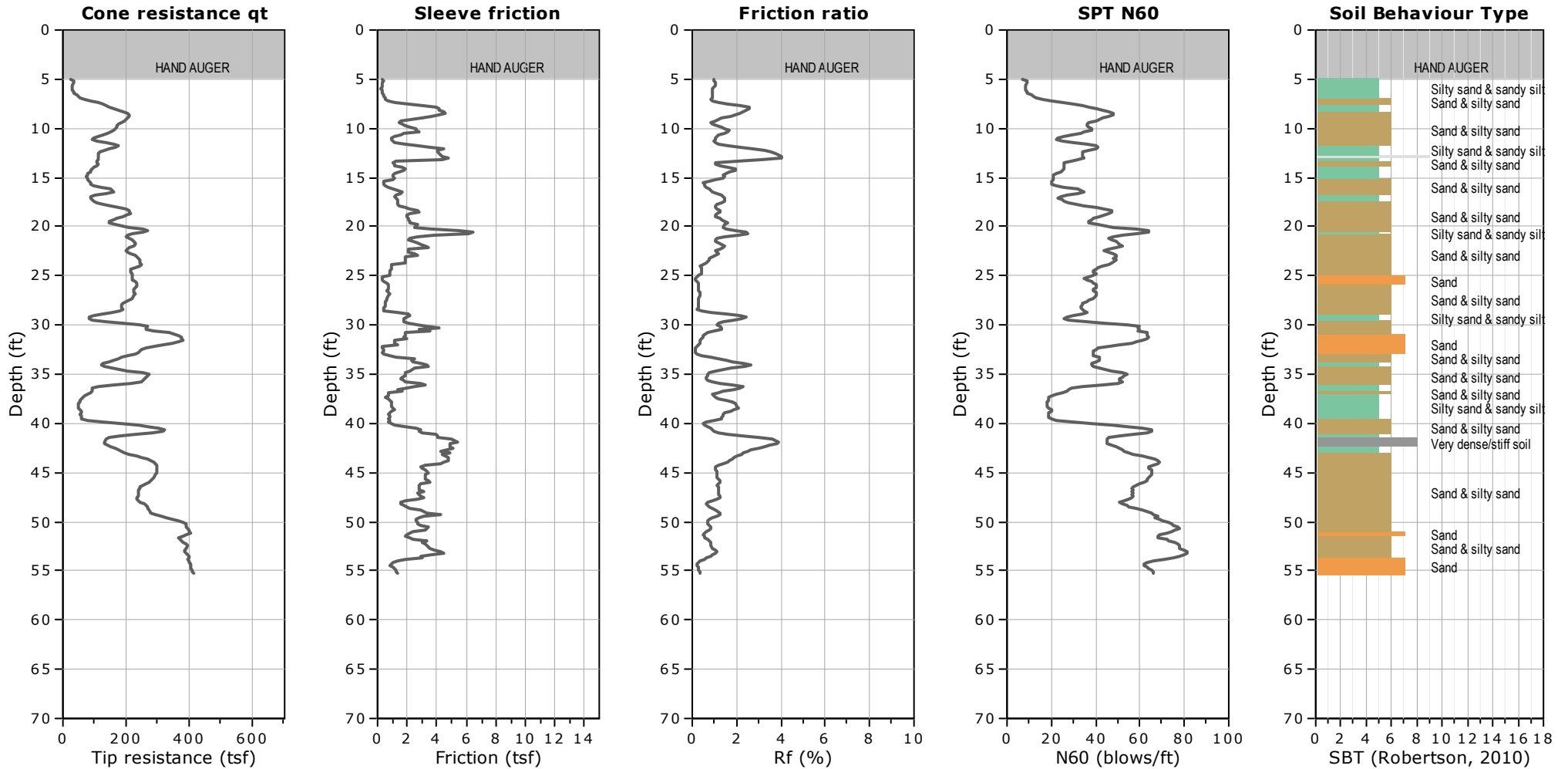


WATER TABLE FOR ESTIMATING PURPOSES ONLY



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 55.28 ft, Date: 4/8/2019



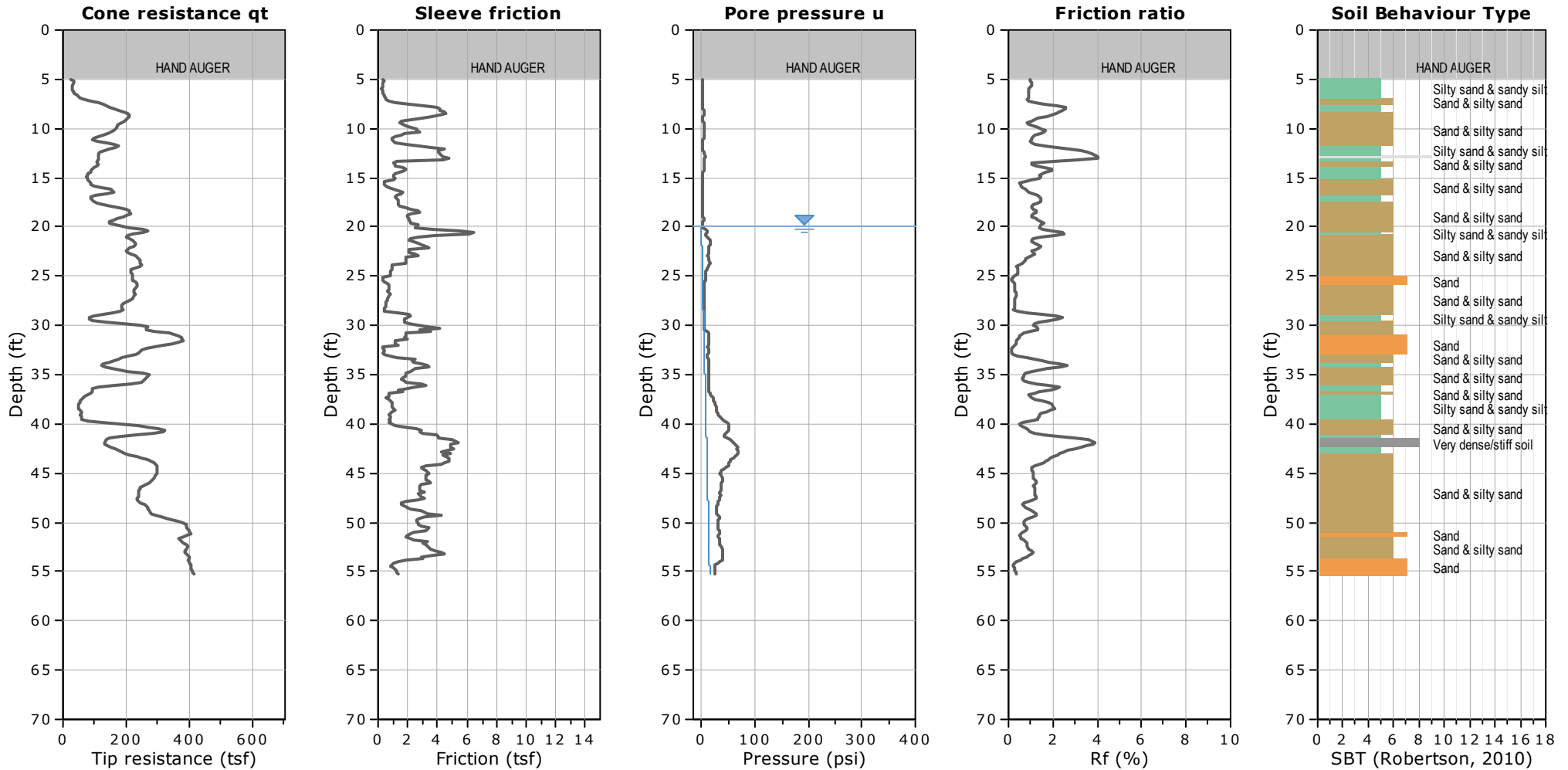
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CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 55.28 ft, Date: 4/8/2019



SBTn legend

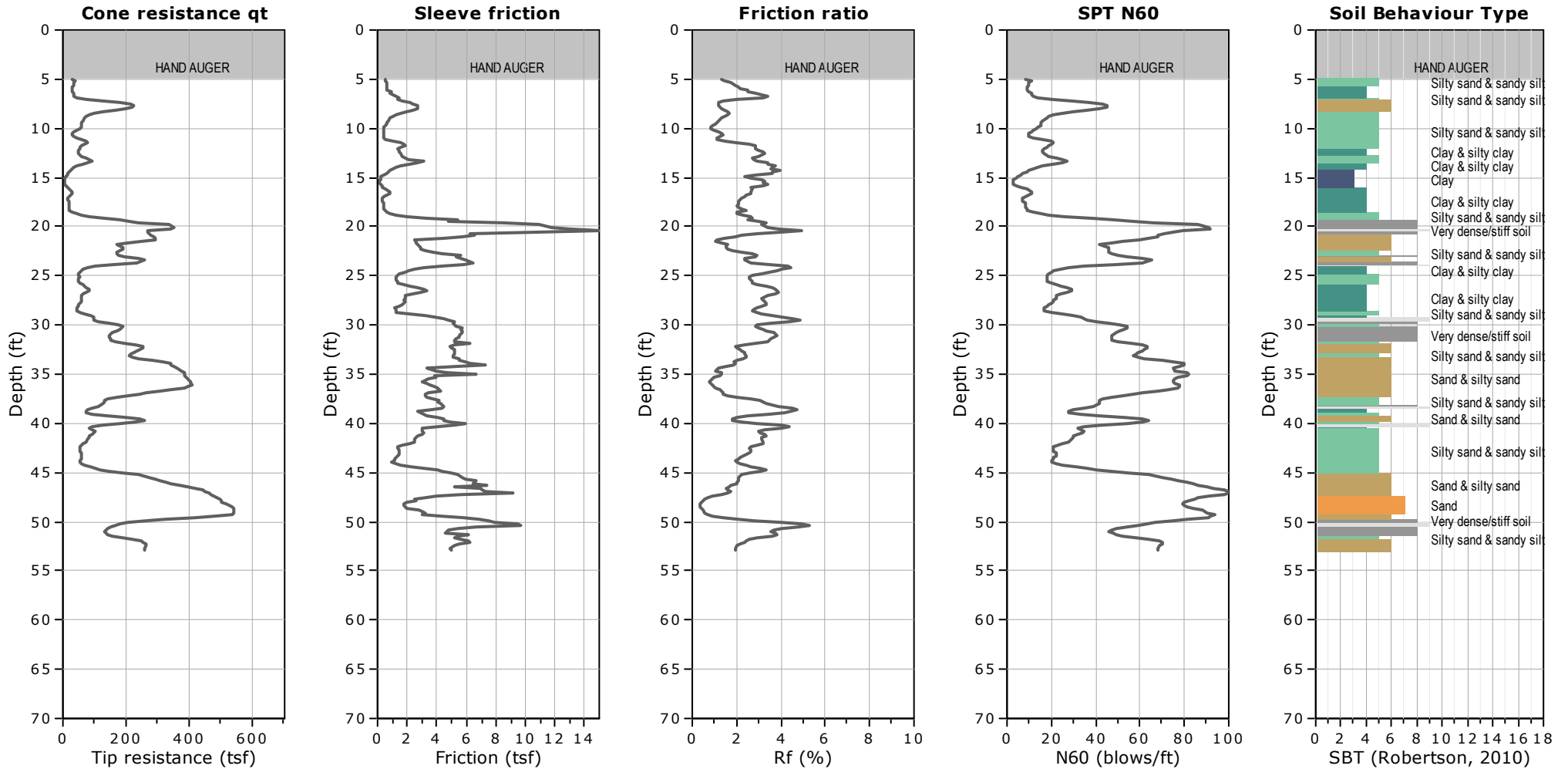
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WATER TABLE FOR ESTIMATING PURPOSES ONLY



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

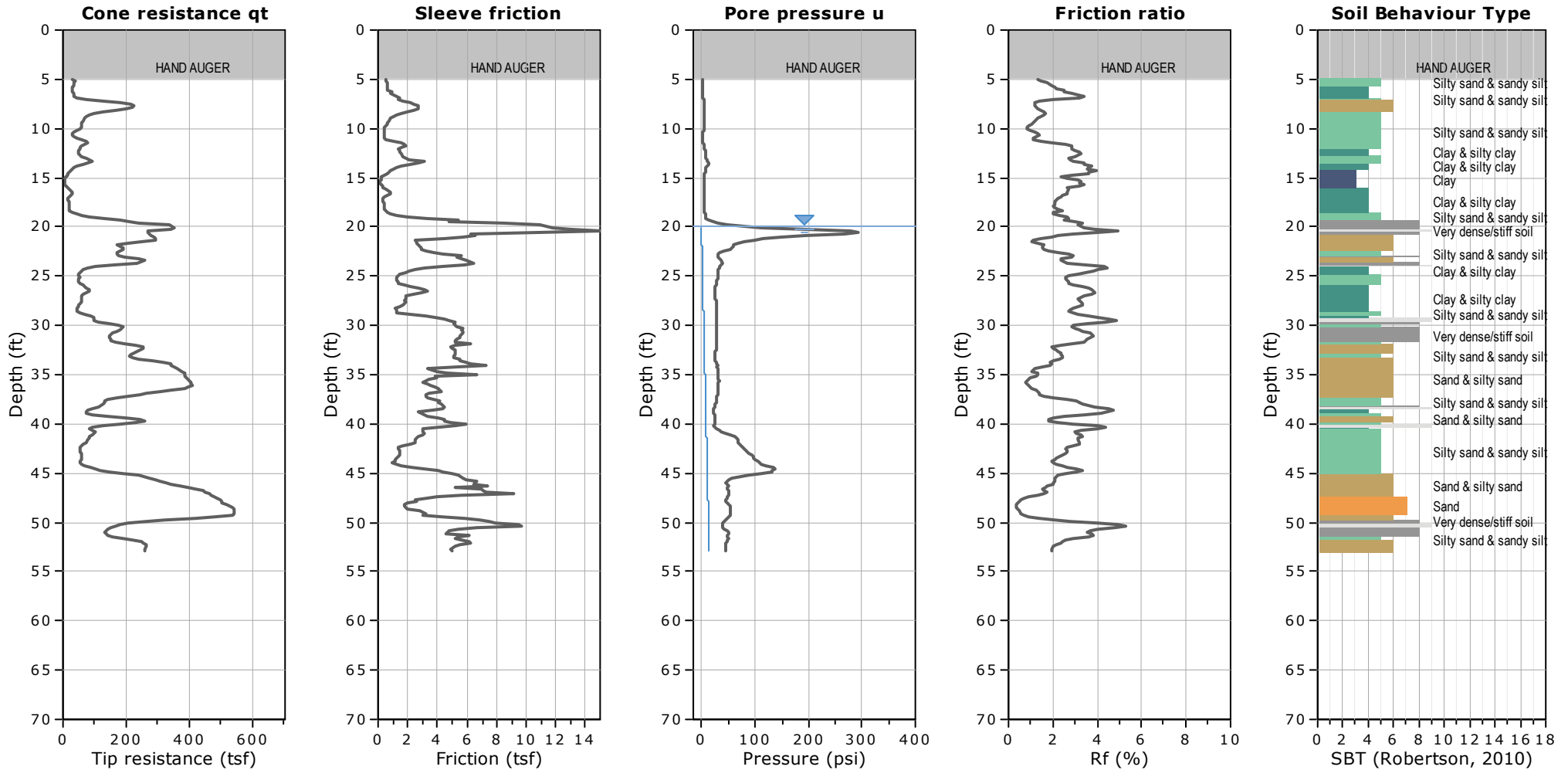
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CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 52.82 ft, Date: 4/9/2019



SBTn legend

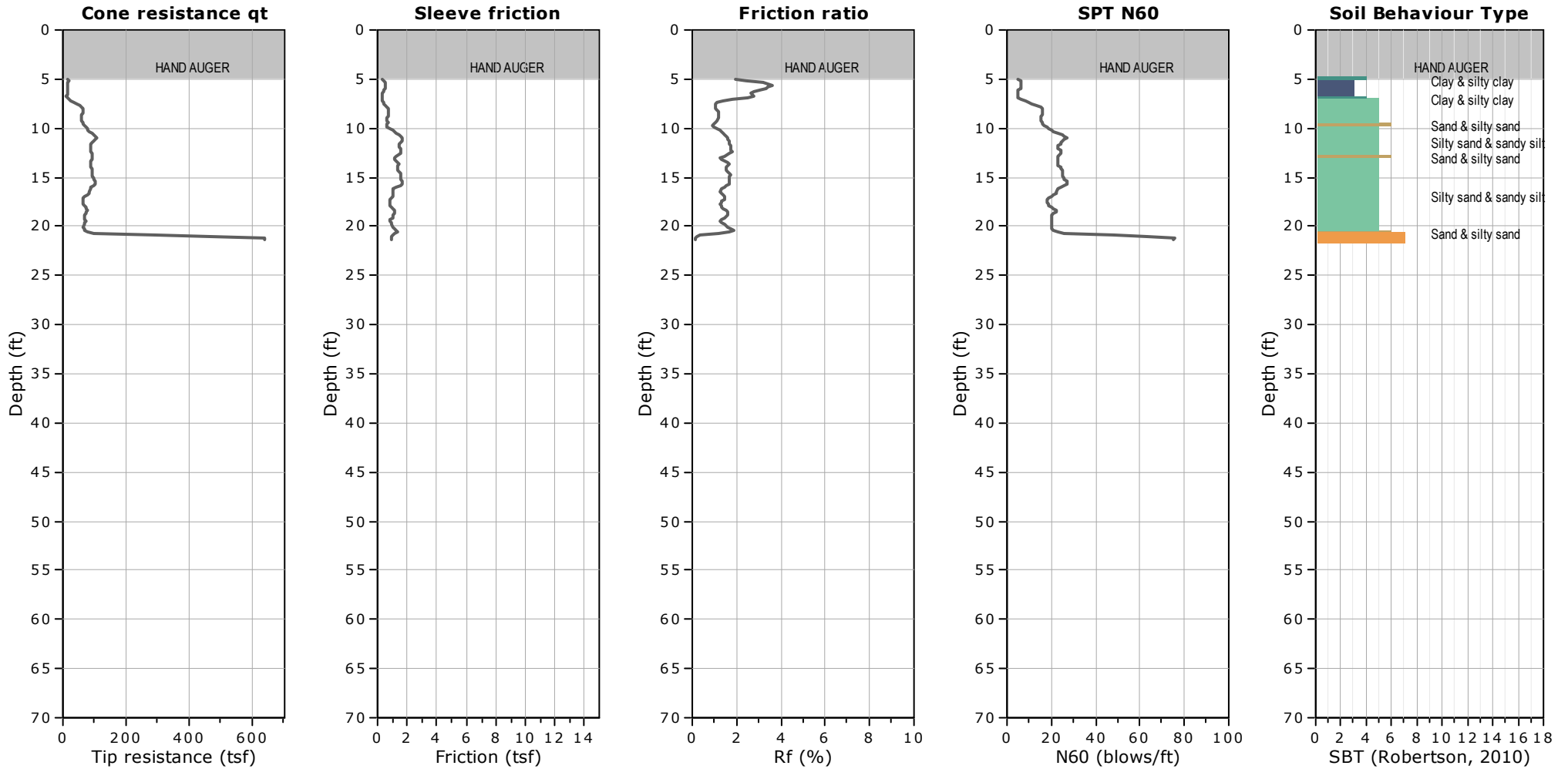
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WATER TABLE FOR ESTIMATING PURPOSES ONLY



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 21.33 ft, Date: 4/9/2019



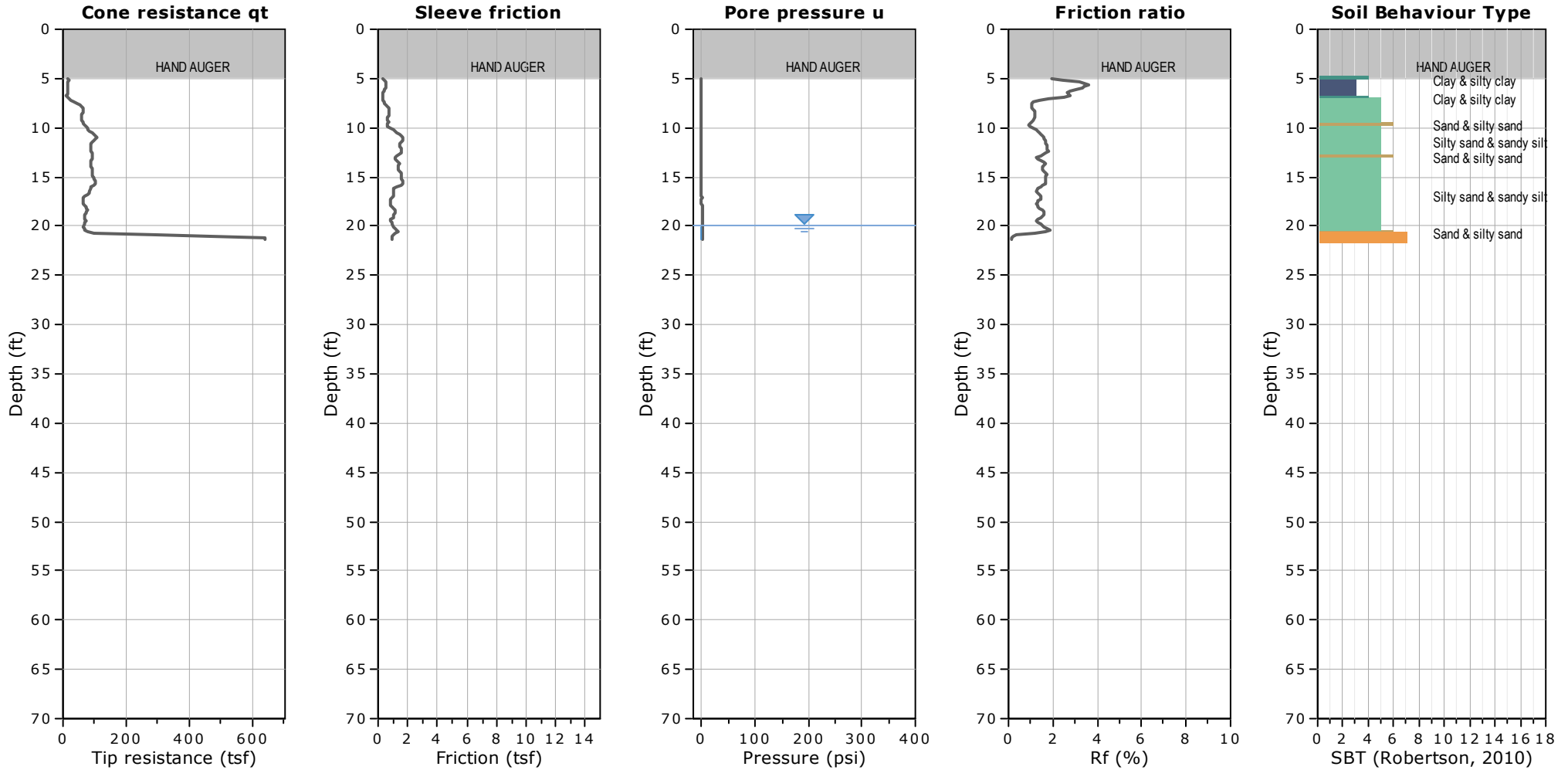
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CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 21.33 ft, Date: 4/9/2019



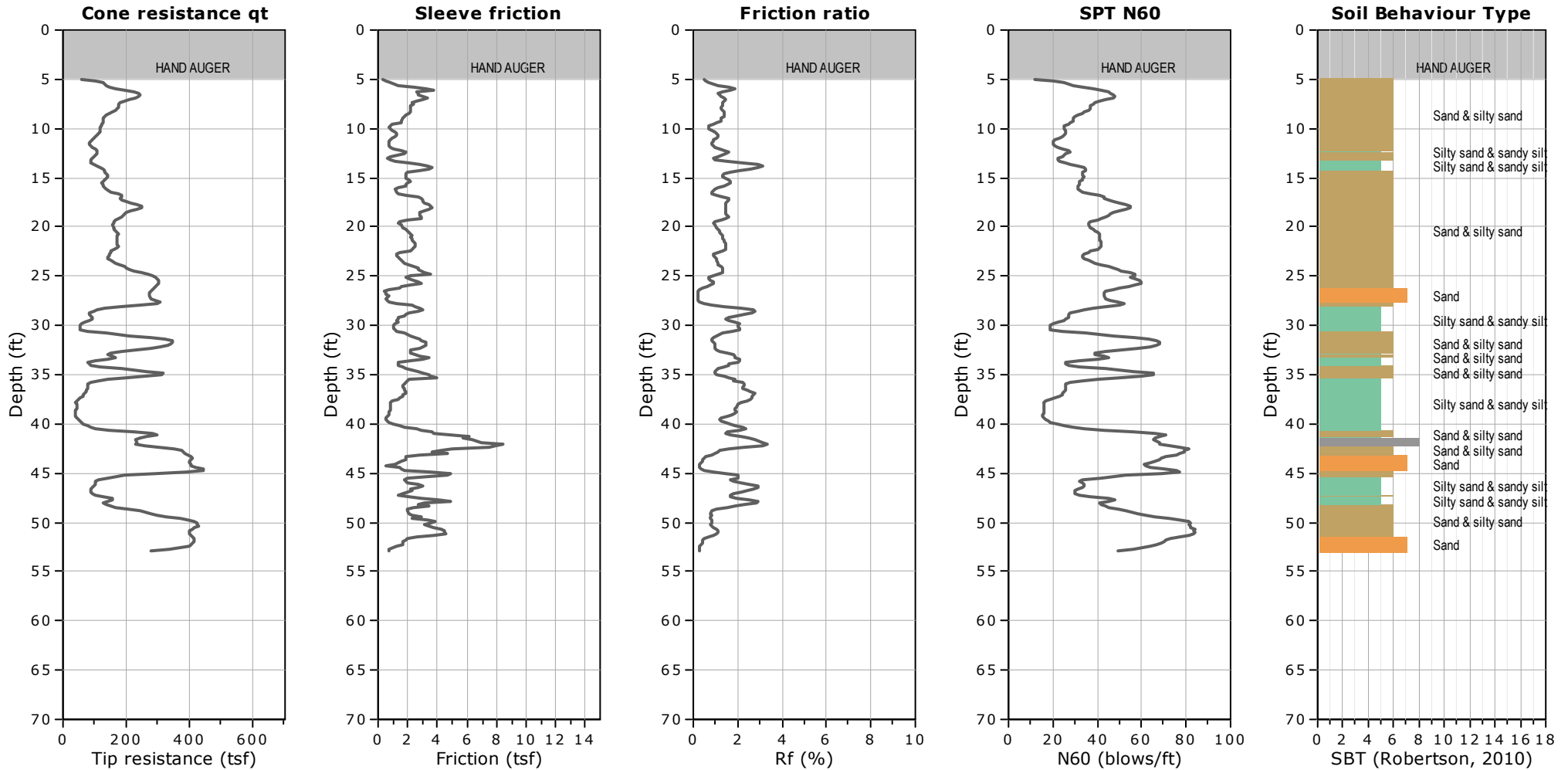
- SBTn legend**
- | | | |
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WATER TABLE FOR ESTIMATING PURPOSES ONLY



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 52.82 ft, Date: 4/9/2019



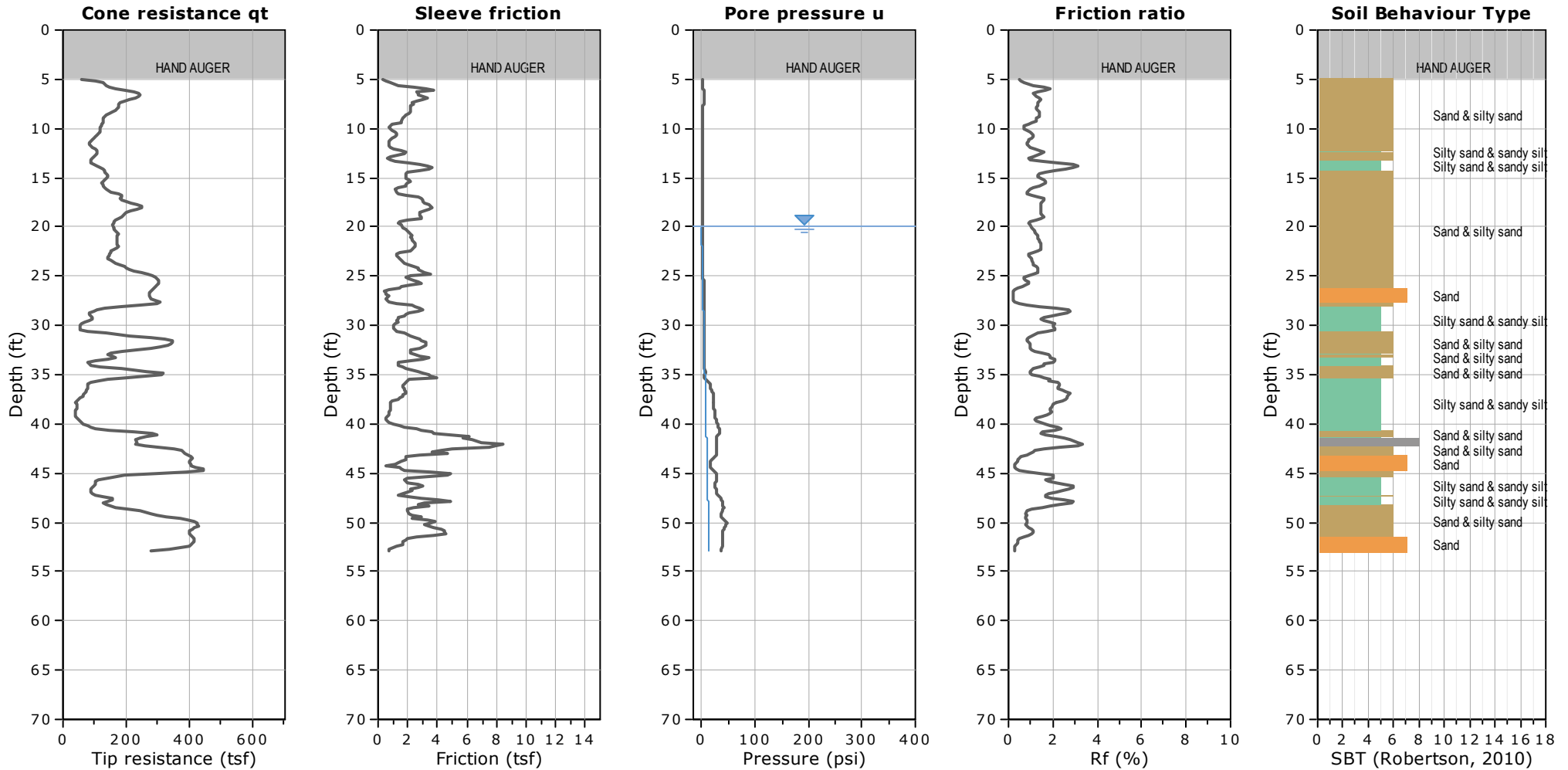
SBTn legend

- | | | |
|---------------------------|------------------------------|-----------------------------------|
| 1. Sensitive fine grained | 4. Clayey silt to silty clay | 7. Gravely sand to sand |
| 2. Organic material | 5. Silty sand to sandy silt | 8. Very stiff sand to clayey sand |
| 3. Clay to silty clay | 6. Clean sand to silty sand | 9. Very stiff fine grained |



CLIENT: CALIFORNIA ENVIRONMENTAL
SITE: 712 NORTH BAKER STREET, LONG BEACH, CA

Field Rep: CHARLES B.
Total depth: 52.82 ft, Date: 4/9/2019



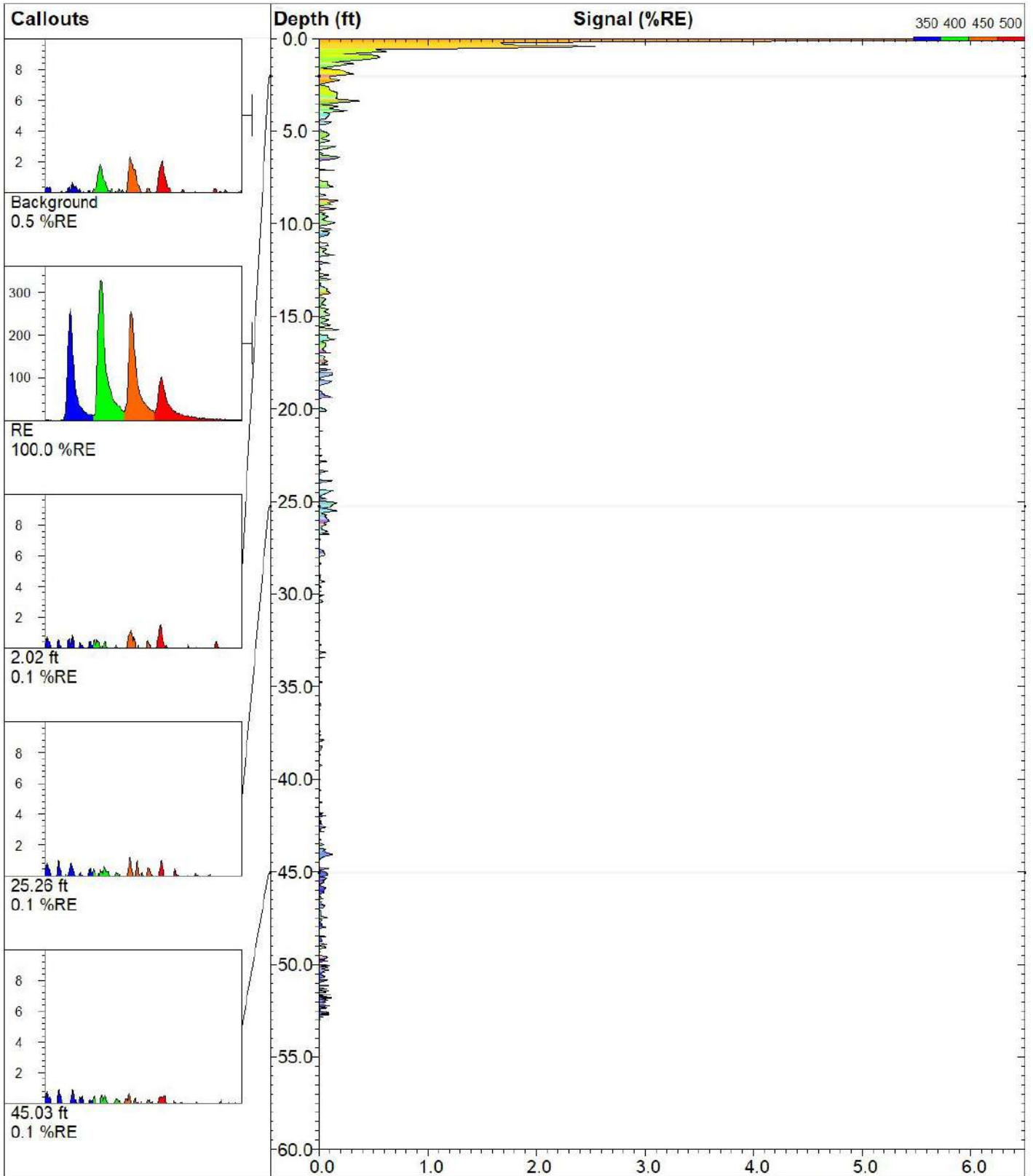
SBTn legend

- | | | |
|---------------------------|------------------------------|-----------------------------------|
| 1. Sensitive fine grained | 4. Clayey silt to silty clay | 7. Gravely sand to sand |
| 2. Organic material | 5. Silty sand to sandy silt | 8. Very stiff sand to clayey sand |
| 3. Clay to silty clay | 6. Clean sand to silty sand | 9. Very stiff fine grained |

WATER TABLE FOR ESTIMATING PURPOSES ONLY



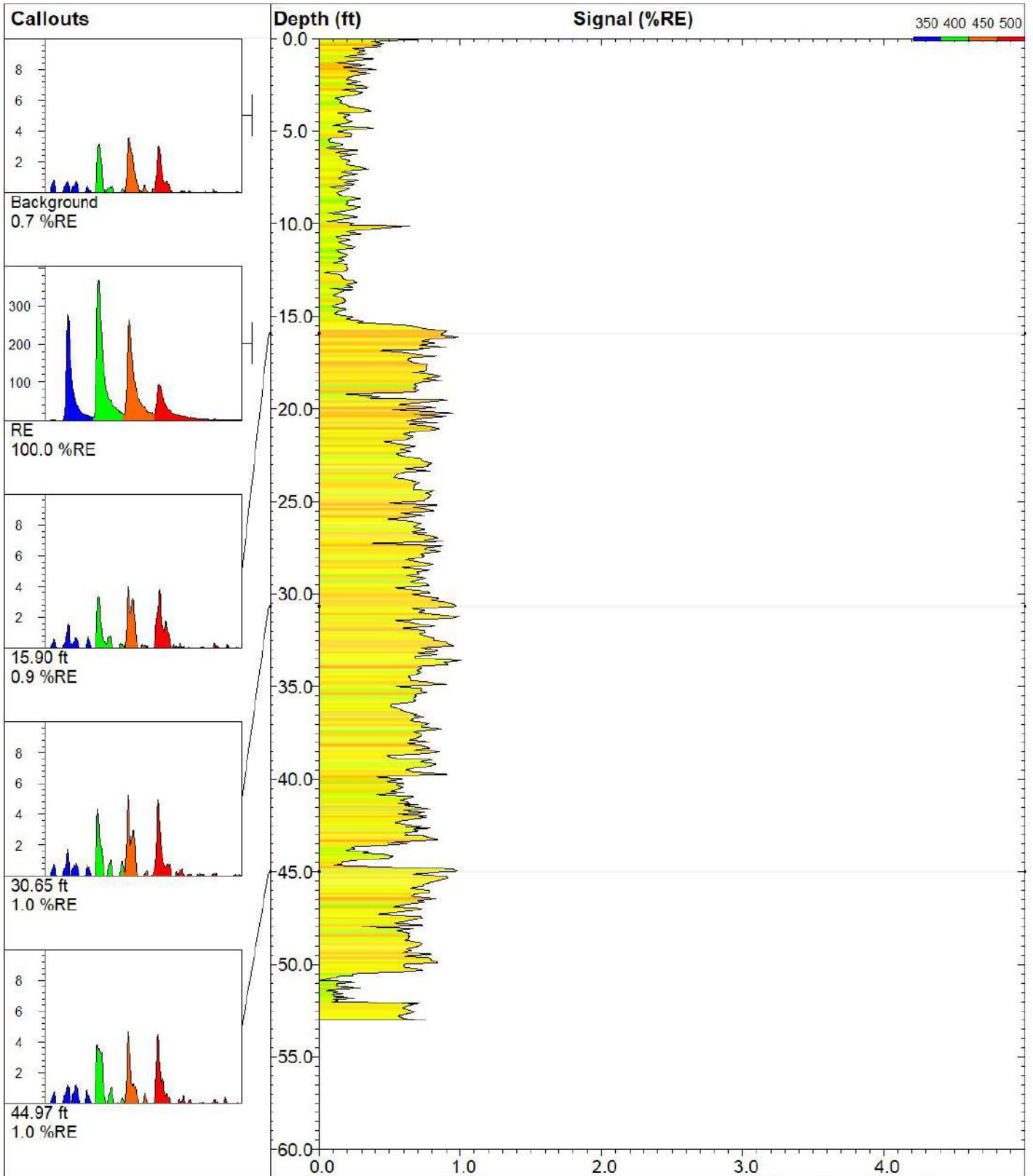
UVOST BORINGS
(AUTO SCALE)



UV-CPT-01

UVOST® By Dakota
www.DakotaTechnologies.com

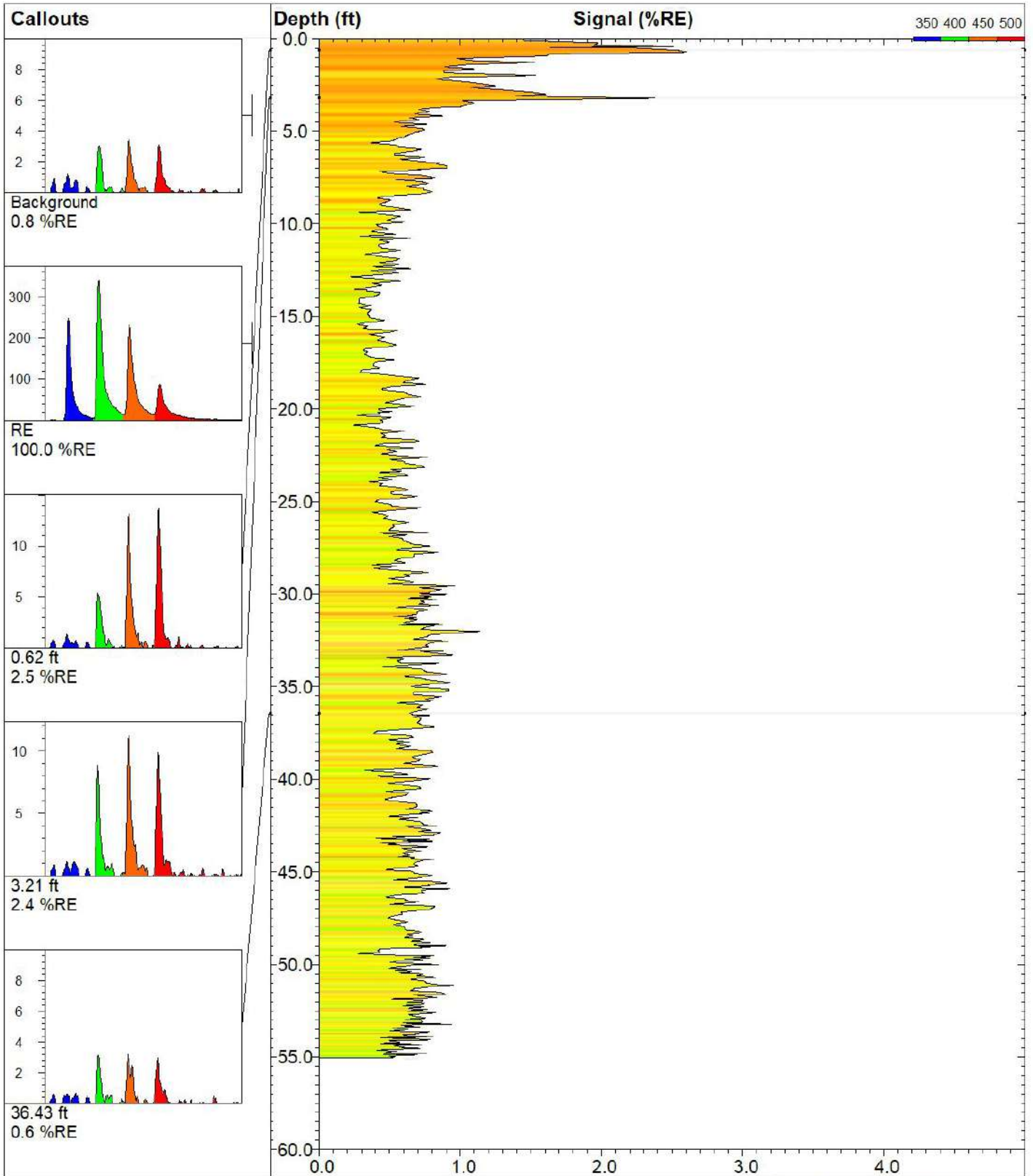
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Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 5.9 %RE @ 0.09 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 07:37 PDT



UV-CPT-02

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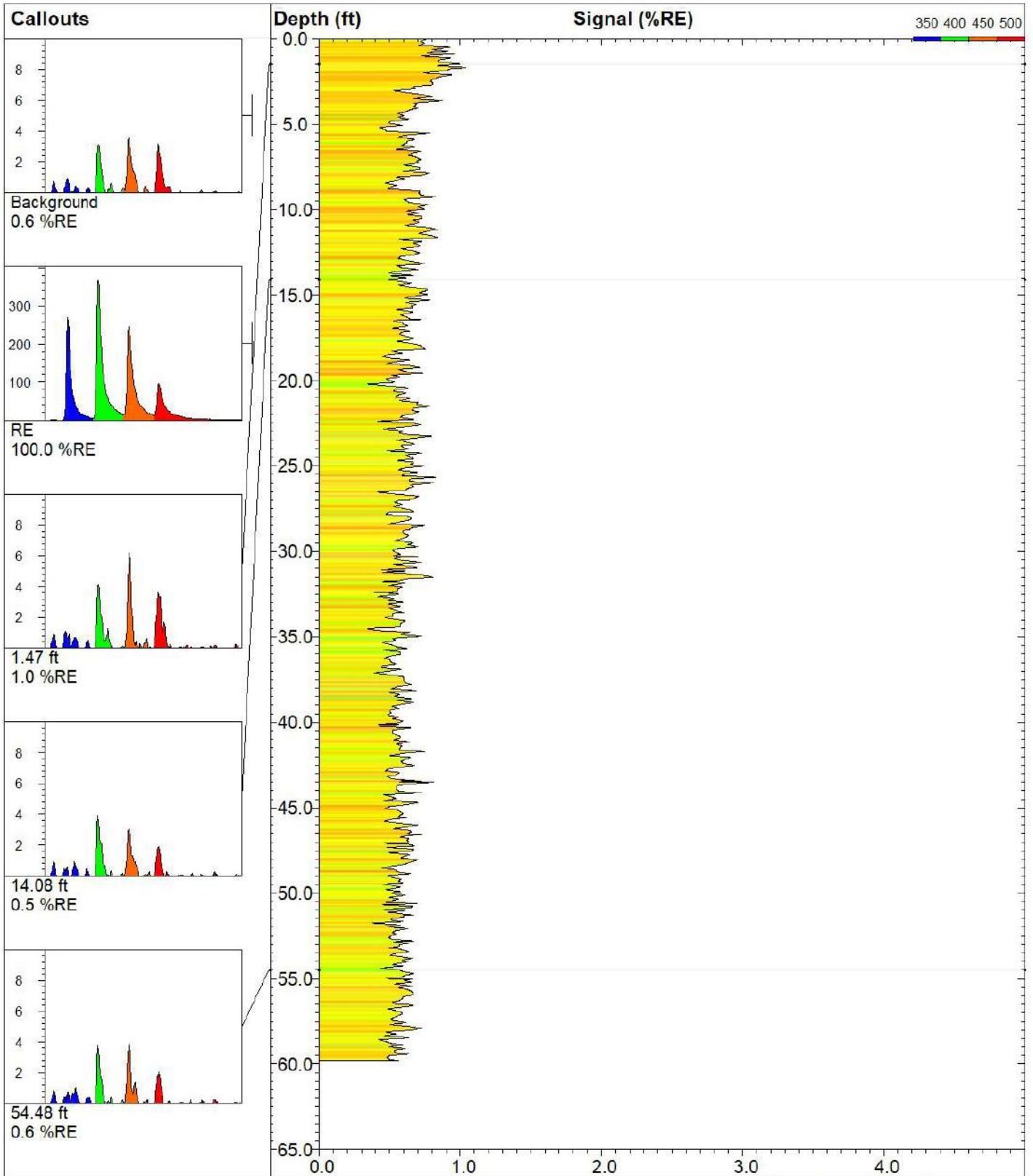
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<i>Client / Job:</i> CALIFORNIA ENV. / UV-D1	<i>X Coord. (Lng-E) / Fix:</i> Unavailable / NA	<i>Max signal:</i> 1.0 %RE @ 33.58 ft
<i>Operator / Unit:</i> ALEX S. / UVOST1007	<i>Elevation:</i> Unavailable	<i>Date & Time:</i> 2019-04-08 09:31 PDT



UV-CPT-03

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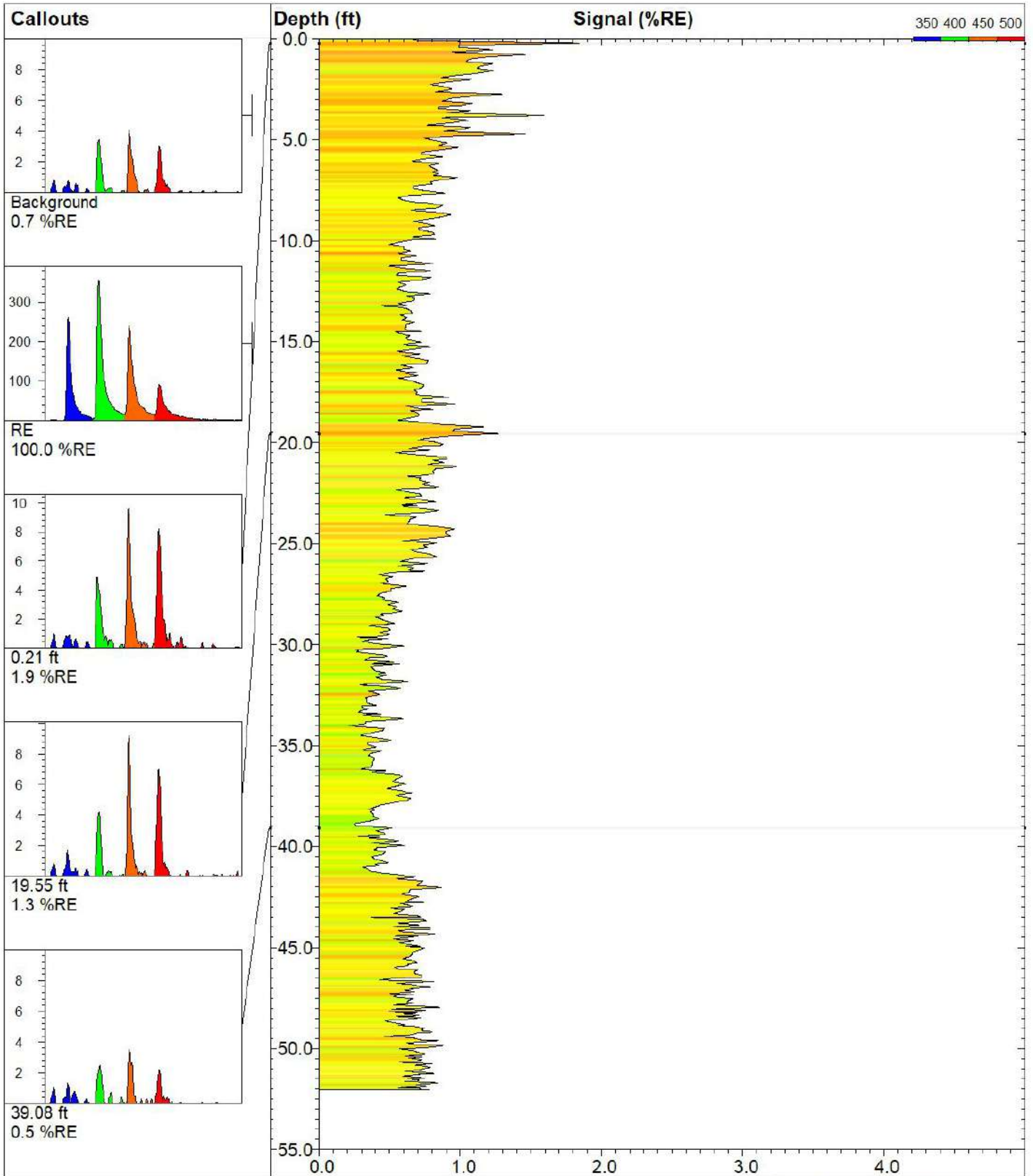
Site: OIL OPERATORS	Y Coord. (Lat-N) / System: Unavailable / NA	Final depth: 55.06 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord. (Lng-E) / Fix: Unavailable / NA	Max signal: 2.6 %RE @ 0.72 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 10:52 PDT



UV-CPT-04

UVOST® By Dakota
www.DakotaTechnologies.com

Site: OIL OPERATORS	Y Coord. (Lat-N) / System: Unavailable / NA	Final depth: 59.80 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord. (Lng-E) / Fix: Unavailable / NA	Max signal: 1.0 %RE @ 1.70 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 13:01 PDT



UV-CPT-05

UVOST® By Dakota
www.DakotaTechnologies.com

Site:
OIL OPERATORS

Y Coord. (Lat-N) / System:
Unavailable / NA

Final depth:
52.05 ft

Client / Job:
CALIFORNIA ENV. / UV-D1

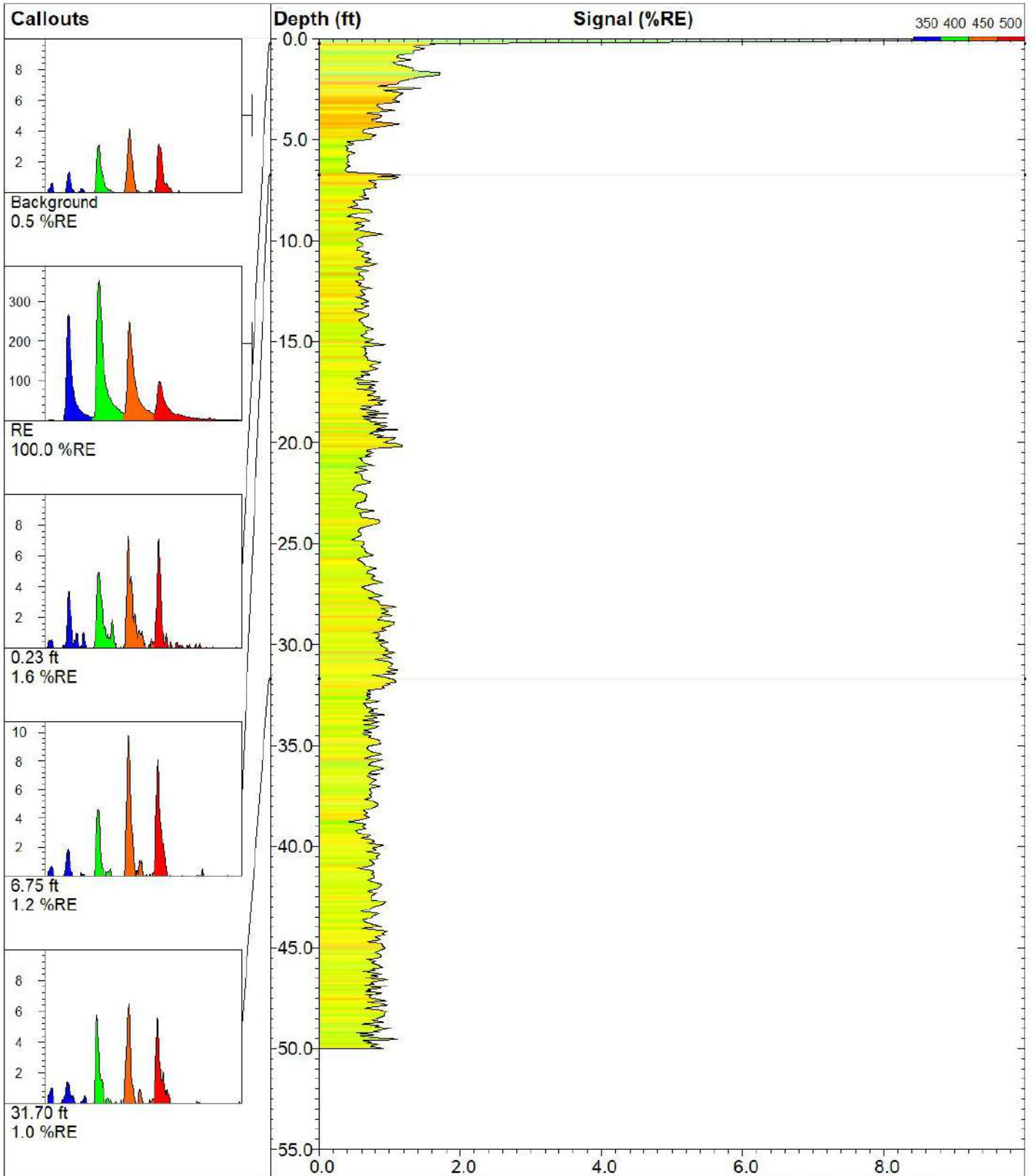
X Coord. (Lng-E) / Fix:
Unavailable / NA

Max signal:
1.9 %RE @ 0.21 ft

Operator / Unit:
ALEX S. / UVOST1007

Elevation:
Unavailable

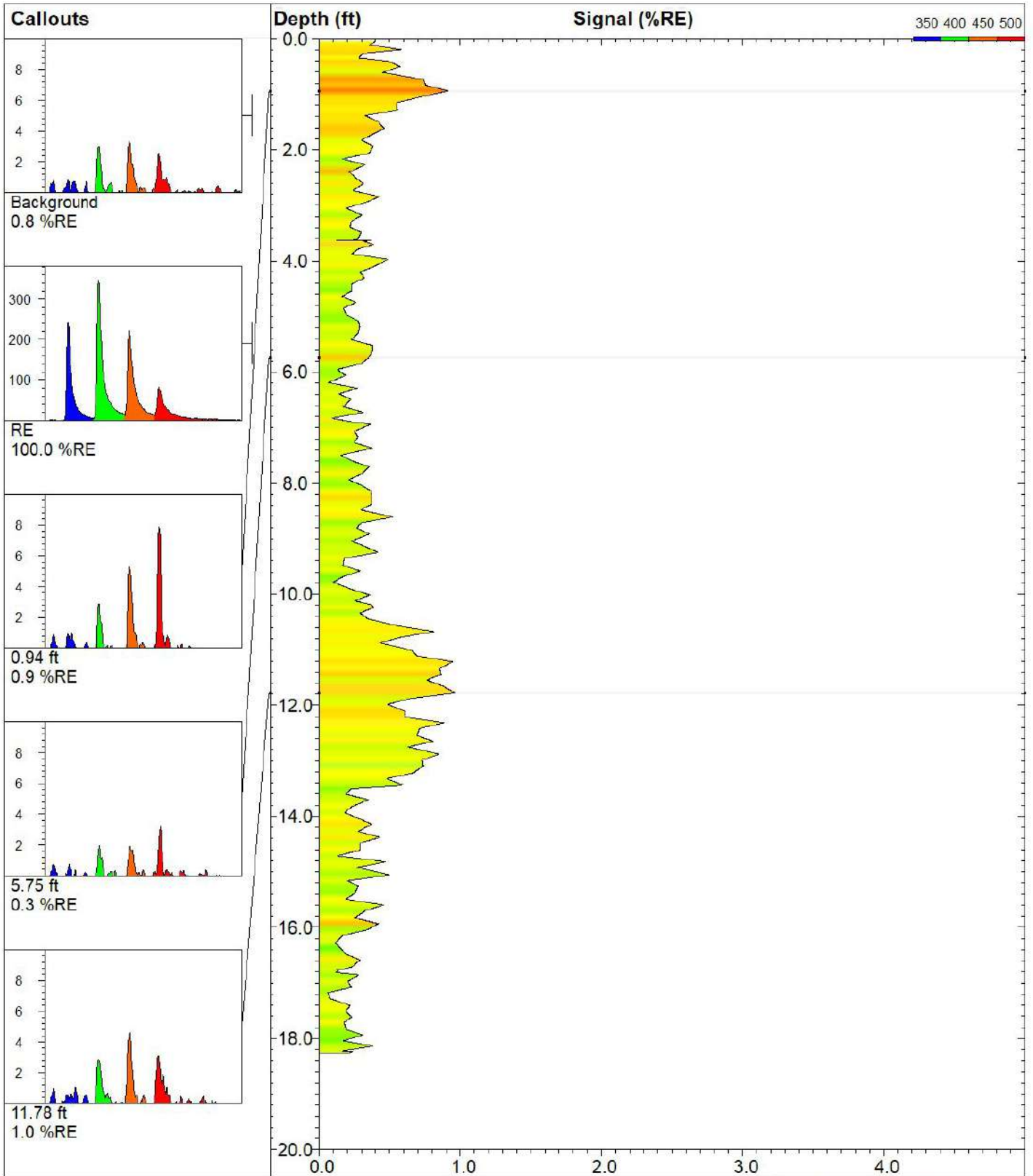
Date & Time:
2019-04-08 14:39 PDT



UV-CPT-06

UVOST® By Dakota
www.DakotaTechnologies.com

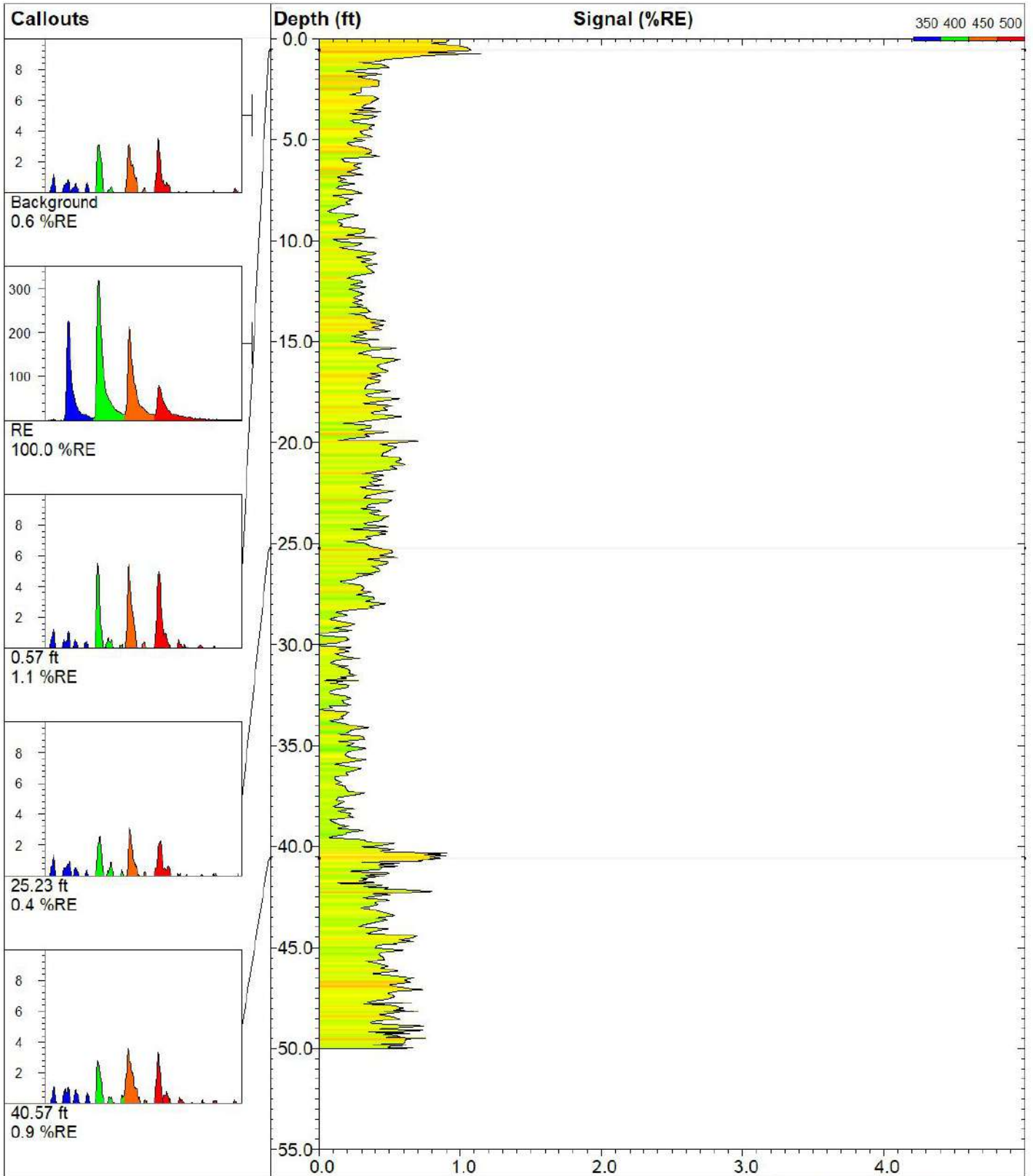
Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 50.00 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 8.6 %RE @ 0.10 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-09 07:27 PDT



UV-CPT-07

UVOST® By Dakota
www.DakotaTechnologies.com

Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 18.26 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 1.0 %RE @ 11.78 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-09 08:57 PDT



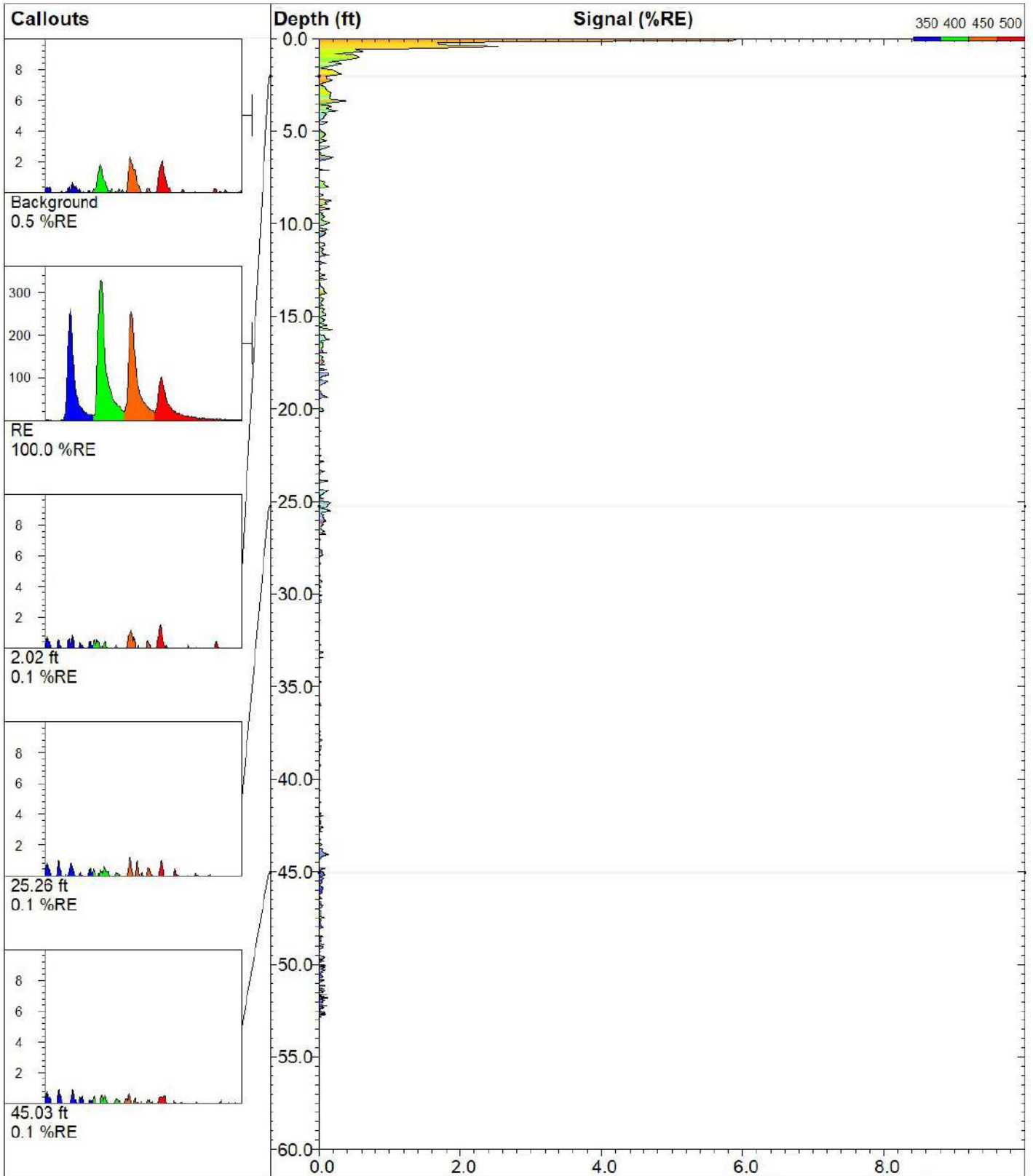
UV-CPT-08

UVOST® By Dakota
www.DakotaTechnologies.com

Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 50.00 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 1.2 %RE @ 0.74 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-09 09:46 PDT



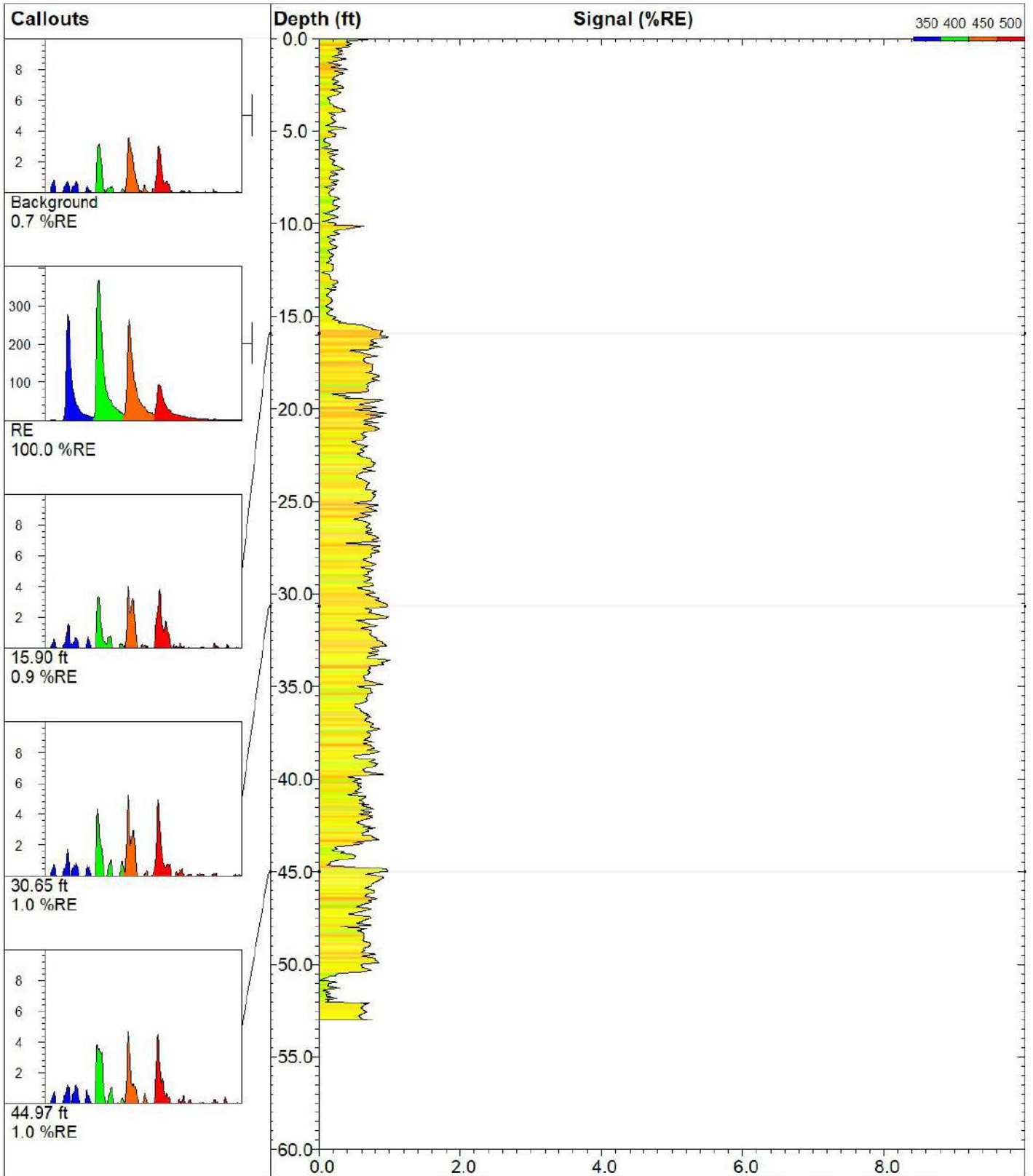
UVOST BORINGS
(NORMALIZED SCALE)



UV-CPT-01

UVOST® By Dakota
www.DakotaTechnologies.com

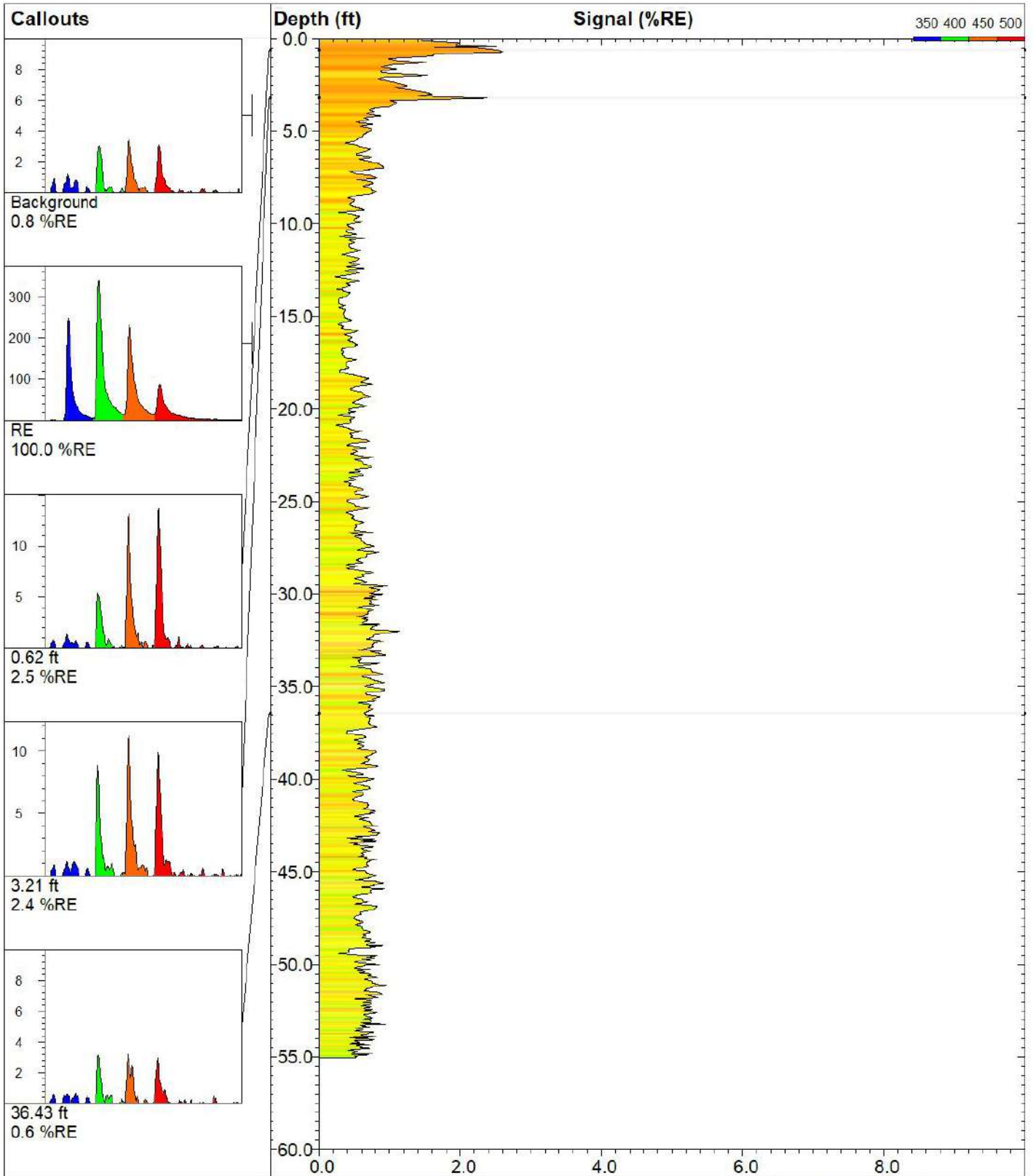
Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 53.01 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 5.9 %RE @ 0.09 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 07:37 PDT



UV-CPT-02

UVOST® By Dakota
www.DakotaTechnologies.com

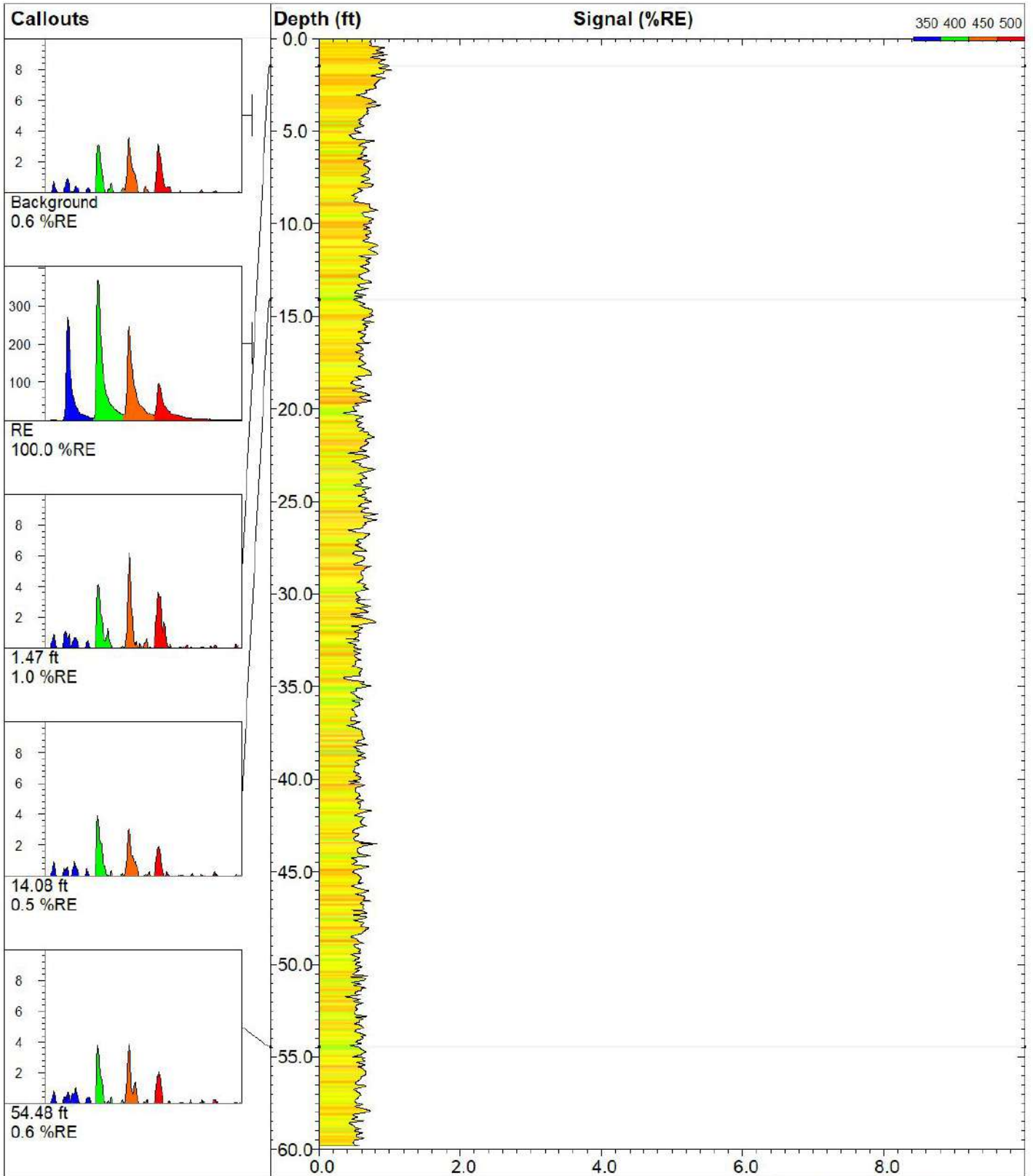
Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 53.02 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 1.0 %RE @ 33.58 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 09:31 PDT



UV-CPT-03

UVOST® By Dakota
www.DakotaTechnologies.com

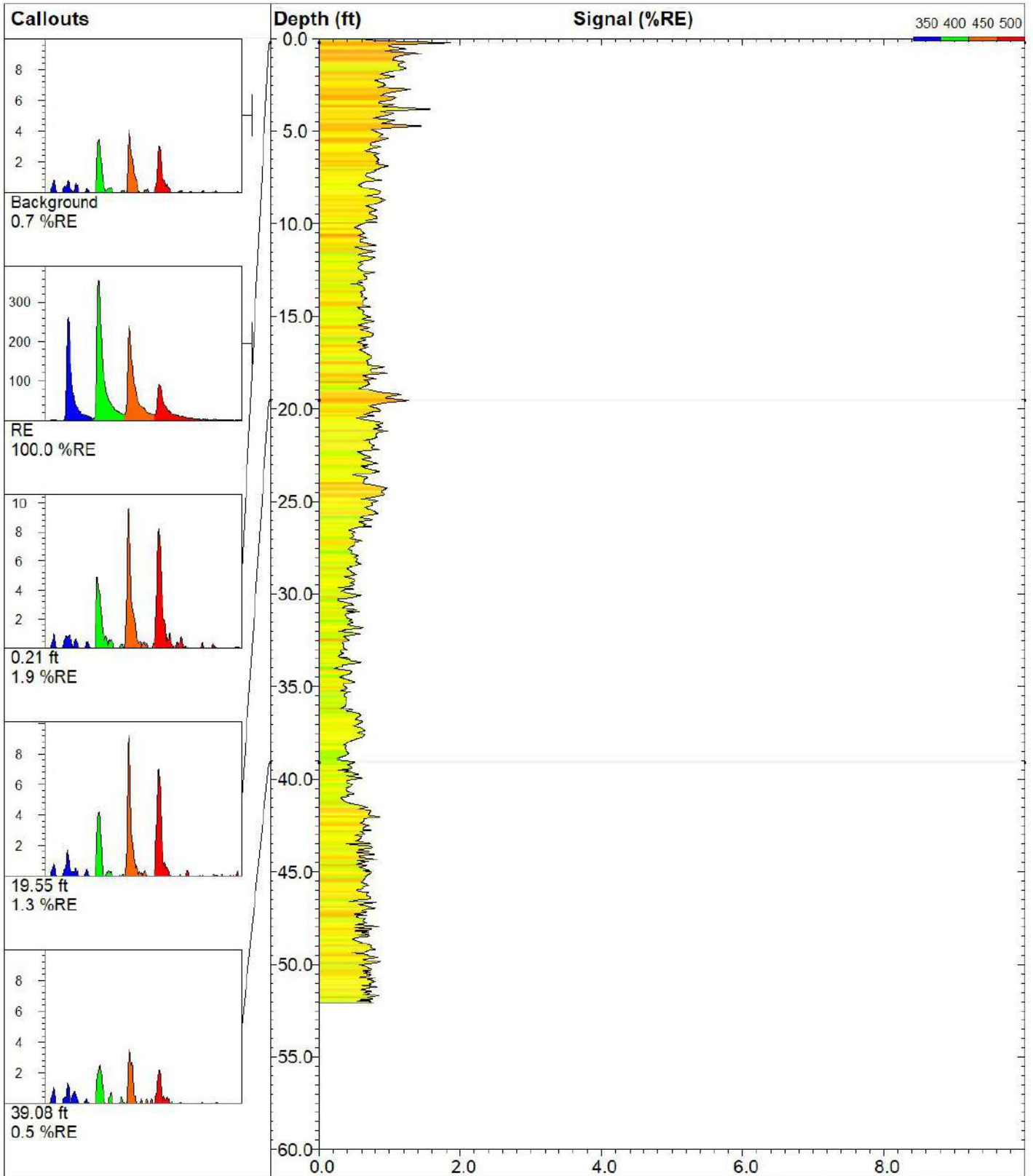
Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 55.06 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 2.6 %RE @ 0.72 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 10:52 PDT



UV-CPT-04

UVOST® By Dakota
www.DakotaTechnologies.com

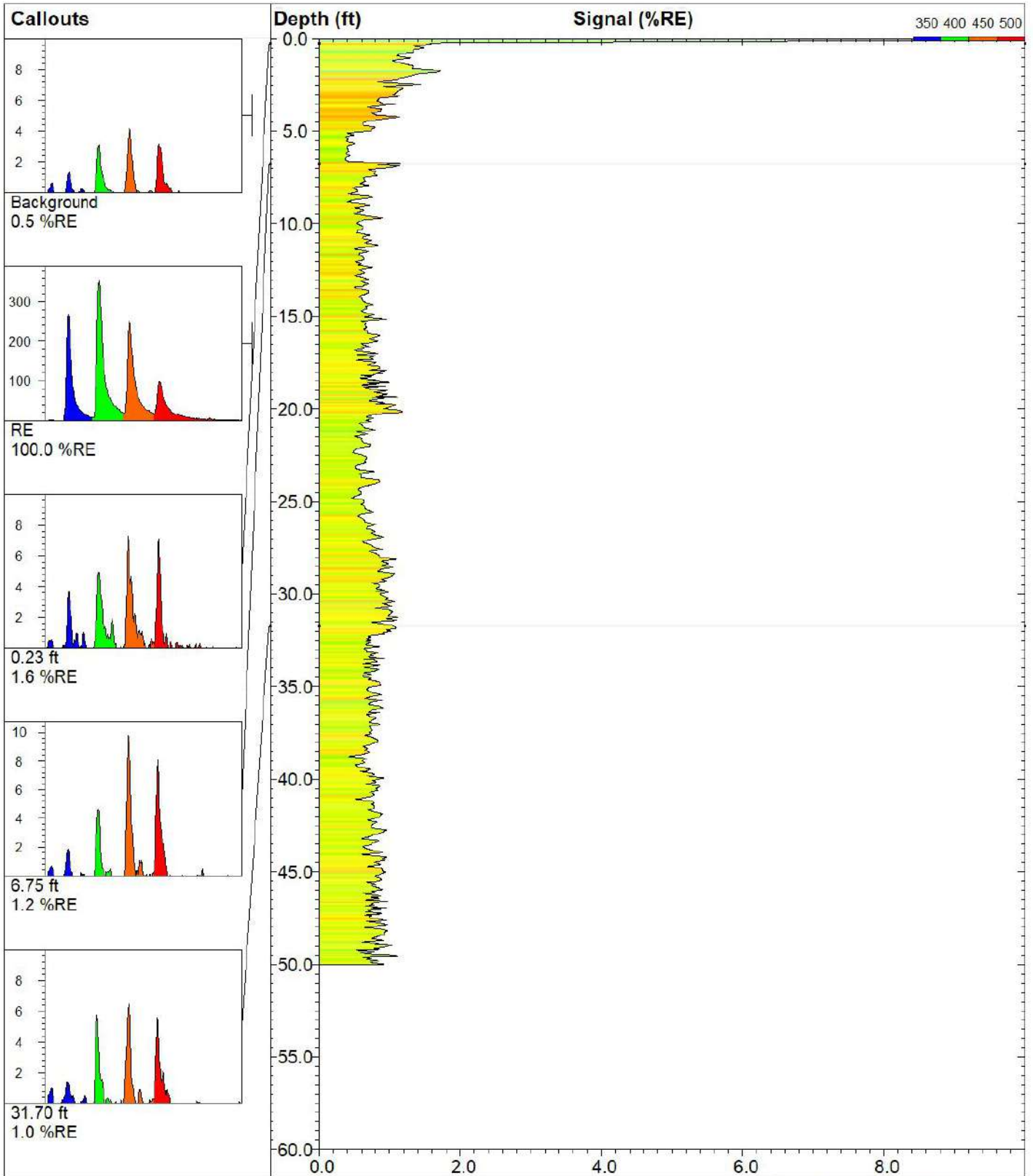
Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 59.80 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 1.0 %RE @ 1.70 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 13:01 PDT



UV-CPT-05

UVOST® By Dakota
www.DakotaTechnologies.com

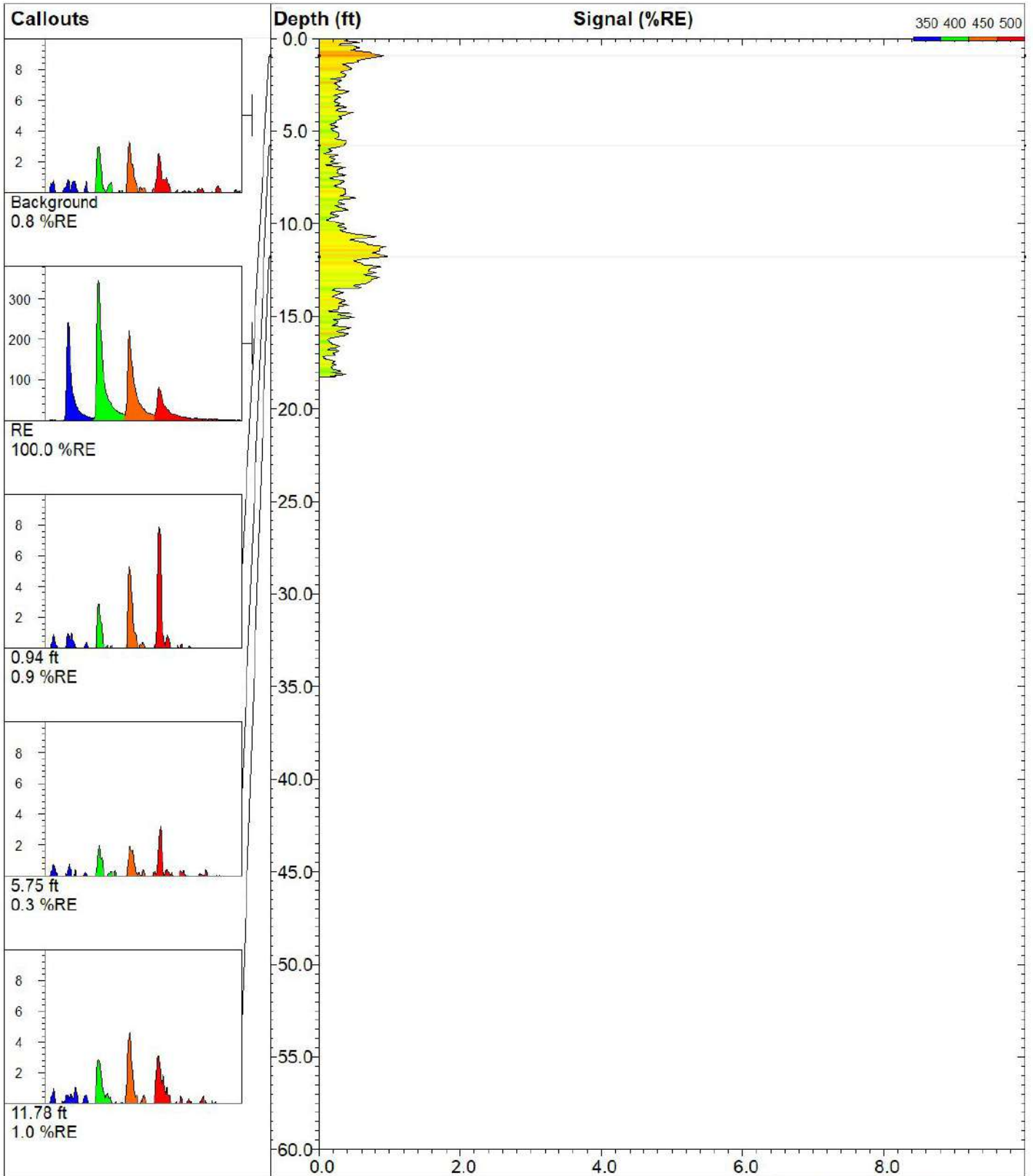
Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 52.05 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 1.9 %RE @ 0.21 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-08 14:39 PDT



UV-CPT-06

UVOST® By Dakota
www.DakotaTechnologies.com

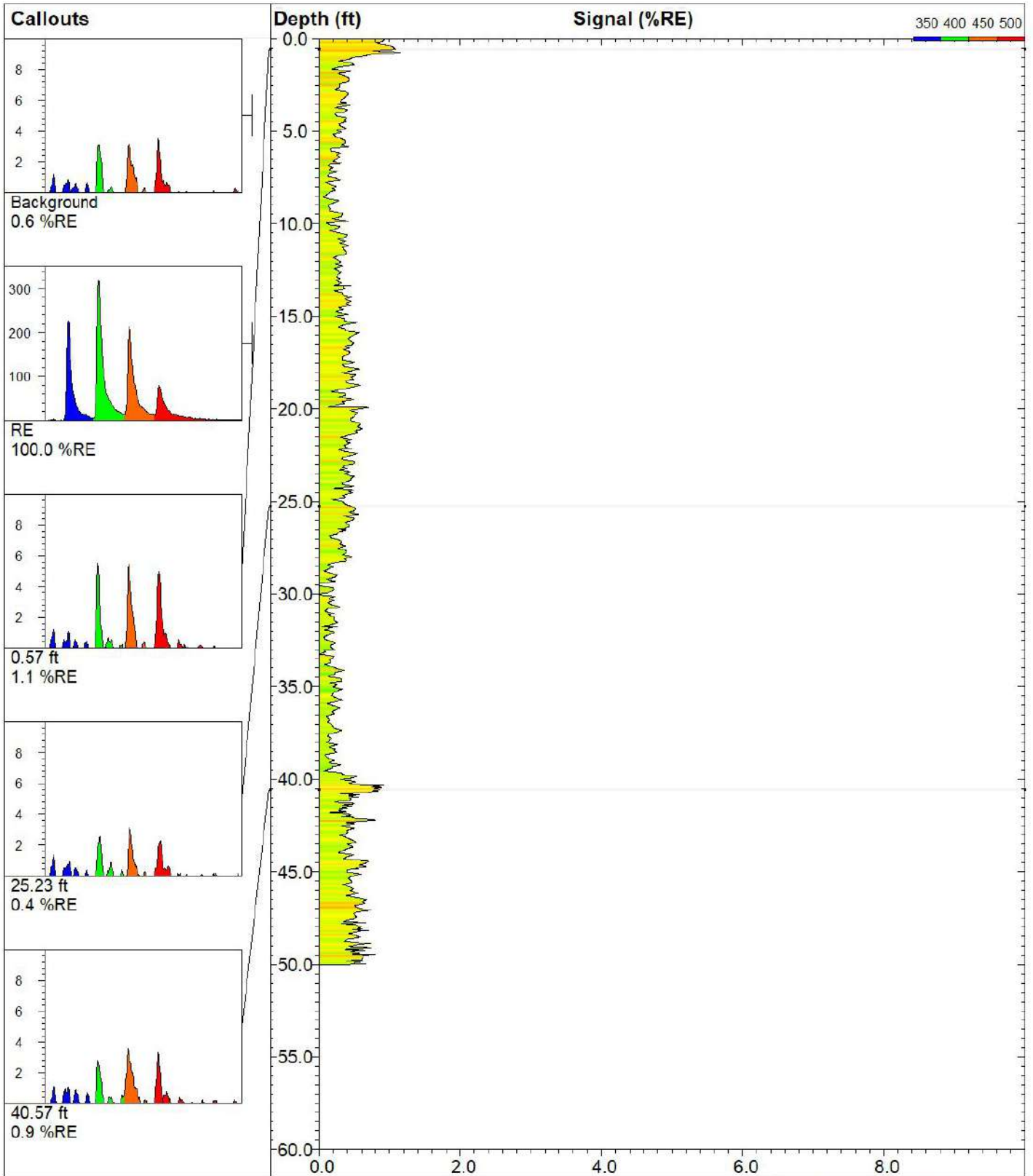
Site: OIL OPERATORS	Y Coord. (Lat-N) / System: Unavailable / NA	Final depth: 50.00 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord. (Lng-E) / Fix: Unavailable / NA	Max signal: 8.6 %RE @ 0.10 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-09 07:27 PDT



UV-CPT-07

UVOST® By Dakota
www.DakotaTechnologies.com

Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 18.26 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 1.0 %RE @ 11.78 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-09 08:57 PDT



UV-CPT-08

UVOST® By Dakota
www.DakotaTechnologies.com

Site: OIL OPERATORS	Y Coord.(Lat-N) / System: Unavailable / NA	Final depth: 50.00 ft
Client / Job: CALIFORNIA ENV. / UV-D1	X Coord.(Lng-E) / Fix: Unavailable / NA	Max signal: 1.2 %RE @ 0.74 ft
Operator / Unit: ALEX S. / UVOST1007	Elevation: Unavailable	Date & Time: 2019-04-09 09:46 PDT

APPENDIX IV

Laboratory Test Report

Supplemental Report 1

The original report has been revised/corrected.

**WORK ORDER NUMBER: 19-06-1669***The difference is service*

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For**Client:** California Environmental**Client Project Name:** OOI
Attention: Charles Buckley
 30423 Canwood St.
 Suite 208
 Agoura Hills, CA 91301-4316

 Approved for release on 07/08/2019 by:
 Don Burley
 Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: OOI
Work Order Number: 19-06-1669

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 06/25/19. They were assigned to Work Order 19-06-1669.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-13A): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

The report has been revised to correct the sample IDs.

Sample Summary

Client: California Environmental	Work Order:	19-06-1669
30423 Canwood St., Suite 208	Project Name:	OOI
Agoura Hills, CA 91301-4316	PO Number:	3029
	Date/Time Received:	06/25/19 17:30
	Number of Containers:	87

Attn: Charles Buckley

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
CESB9-5.5'	19-06-1669-1	06/25/19 08:35	5	Solid
CESB9-10.5'	19-06-1669-2	06/25/19 08:43	5	Solid
CESB9-15.5'	19-06-1669-3	06/25/19 08:52	5	Solid
CESB9-20.5'	19-06-1669-4	06/25/19 09:04	5	Solid
CESB9-25.5'	19-06-1669-5	06/25/19 09:14	5	Solid
CESB9-32'	19-06-1669-6	06/25/19 09:27	5	Solid
CESB9-37.0'	19-06-1669-7	06/25/19 10:08	5	Solid
CESB9-35.5'	19-06-1669-8	06/25/19 10:18	4	Solid
CESB10-3'	19-06-1669-9	06/25/19 11:20	5	Solid
CESB10-10.5'	19-06-1669-10	06/25/19 11:40	5	Solid
CESB10-15.5'	19-06-1669-11	06/25/19 12:20	5	Solid
CESB10-20.5'	19-06-1669-12	06/25/19 12:38	5	Solid
CESB10-25.5'	19-06-1669-13	06/25/19 12:51	5	Solid
CESB10-30'	19-06-1669-14	06/25/19 13:01	4	Solid
CESB10-33'	19-06-1669-15	06/25/19 13:15	4	Solid
CESB10-35'	19-06-1669-16	06/25/19 13:40	3	Solid
CESB10-41'	19-06-1669-17	06/25/19 13:56	3	Solid
CESB10-43'	19-06-1669-18	06/25/19 14:06	3	Solid
CESB10-45'	19-06-1669-19	06/25/19 14:35	3	Solid
CESB9-GW	19-06-1669-20	06/25/19 15:20	3	Aqueous

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

Page 1 of 13

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-5.5'	19-06-1669-1-A	06/25/19 08:35	Solid	GC 49	06/26/19	06/27/19 19:26	190626B02

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	4.8	1.00	
C7	ND	4.8	1.00	
C8	ND	4.8	1.00	
C9-C10	ND	4.8	1.00	
C11-C12	ND	4.8	1.00	
C13-C14	ND	4.8	1.00	
C15-C16	ND	4.8	1.00	
C17-C18	ND	4.8	1.00	
C19-C20	ND	4.8	1.00	
C21-C22	ND	4.8	1.00	
C23-C24	ND	4.8	1.00	
C25-C28	ND	4.8	1.00	
C29-C32	ND	4.8	1.00	
C33-C36	ND	4.8	1.00	
C37-C40	ND	4.8	1.00	
C41-C44	ND	4.8	1.00	
C6-C44 Total	6.6	4.8	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	97	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

Page 2 of 13

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-10.5'	19-06-1669-2-A	06/25/19 08:43	Solid	GC 49	06/26/19	06/27/19 19:48	190626B02

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.1	1.00	
C7	ND	5.1	1.00	
C8	ND	5.1	1.00	
C9-C10	ND	5.1	1.00	
C11-C12	ND	5.1	1.00	
C13-C14	ND	5.1	1.00	
C15-C16	ND	5.1	1.00	
C17-C18	ND	5.1	1.00	
C19-C20	ND	5.1	1.00	
C21-C22	ND	5.1	1.00	
C23-C24	ND	5.1	1.00	
C25-C28	9.4	5.1	1.00	
C29-C32	13	5.1	1.00	
C33-C36	8.6	5.1	1.00	
C37-C40	7.9	5.1	1.00	
C41-C44	ND	5.1	1.00	
C6-C44 Total	55	5.1	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	96	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

Page 3 of 13

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-15.5'	19-06-1669-3-A	06/25/19 08:52	Solid	GC 49	06/26/19	06/27/19 20:08	190626B02

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.2	1.00	
C7	ND	5.2	1.00	
C8	ND	5.2	1.00	
C9-C10	ND	5.2	1.00	
C11-C12	ND	5.2	1.00	
C13-C14	ND	5.2	1.00	
C15-C16	ND	5.2	1.00	
C17-C18	ND	5.2	1.00	
C19-C20	ND	5.2	1.00	
C21-C22	ND	5.2	1.00	
C23-C24	ND	5.2	1.00	
C25-C28	ND	5.2	1.00	
C29-C32	ND	5.2	1.00	
C33-C36	ND	5.2	1.00	
C37-C40	ND	5.2	1.00	
C41-C44	ND	5.2	1.00	
C6-C44 Total	ND	5.2	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	106	61-145	


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

Page 4 of 13

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-20.5'	19-06-1669-4-A	06/25/19 09:04	Solid	GC 49	06/26/19	06/27/19 20:30	190626B02

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	4.8	1.00	
C7	ND	4.8	1.00	
C8	ND	4.8	1.00	
C9-C10	ND	4.8	1.00	
C11-C12	ND	4.8	1.00	
C13-C14	ND	4.8	1.00	
C15-C16	ND	4.8	1.00	
C17-C18	ND	4.8	1.00	
C19-C20	ND	4.8	1.00	
C21-C22	ND	4.8	1.00	
C23-C24	ND	4.8	1.00	
C25-C28	ND	4.8	1.00	
C29-C32	ND	4.8	1.00	
C33-C36	ND	4.8	1.00	
C37-C40	ND	4.8	1.00	
C41-C44	ND	4.8	1.00	
C6-C44 Total	11	4.8	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	97	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-25.5'	19-06-1669-5-A	06/25/19 09:14	Solid	GC 49	06/26/19	06/27/19 20:50	190626B02

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.1	1.00	
C7	ND	5.1	1.00	
C8	ND	5.1	1.00	
C9-C10	ND	5.1	1.00	
C11-C12	ND	5.1	1.00	
C13-C14	ND	5.1	1.00	
C15-C16	ND	5.1	1.00	
C17-C18	ND	5.1	1.00	
C19-C20	ND	5.1	1.00	
C21-C22	ND	5.1	1.00	
C23-C24	ND	5.1	1.00	
C25-C28	ND	5.1	1.00	
C29-C32	ND	5.1	1.00	
C33-C36	ND	5.1	1.00	
C37-C40	ND	5.1	1.00	
C41-C44	ND	5.1	1.00	
C6-C44 Total	ND	5.1	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	100	61-145	


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-32'	19-06-1669-6-A	06/25/19 09:27	Solid	GC 49	06/26/19	06/27/19 21:12	190626B02

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	4.8	1.00	
C7	24	4.8	1.00	
C8	110	4.8	1.00	
C9-C10	420	4.8	1.00	
C11-C12	150	4.8	1.00	
C13-C14	ND	4.8	1.00	
C15-C16	ND	4.8	1.00	
C17-C18	ND	4.8	1.00	
C19-C20	4.9	4.8	1.00	
C21-C22	5.2	4.8	1.00	
C23-C24	ND	4.8	1.00	
C25-C28	ND	4.8	1.00	
C29-C32	ND	4.8	1.00	
C33-C36	ND	4.8	1.00	
C37-C40	ND	4.8	1.00	
C41-C44	ND	4.8	1.00	
C6-C44 Total	730	4.8	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	98	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-37.0'	19-06-1669-7-A	06/25/19 10:08	Solid	GC 49	06/26/19	06/27/19 21:32	190626B02

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	98	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-3'	19-06-1669-9-B	06/25/19 11:20	Solid	GC 49	06/26/19	06/27/19 21:54	190626B02

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.2	1.00	
C7	ND	5.2	1.00	
C8	ND	5.2	1.00	
C9-C10	ND	5.2	1.00	
C11-C12	ND	5.2	1.00	
C13-C14	ND	5.2	1.00	
C15-C16	ND	5.2	1.00	
C17-C18	ND	5.2	1.00	
C19-C20	ND	5.2	1.00	
C21-C22	ND	5.2	1.00	
C23-C24	ND	5.2	1.00	
C25-C28	ND	5.2	1.00	
C29-C32	ND	5.2	1.00	
C33-C36	ND	5.2	1.00	
C37-C40	ND	5.2	1.00	
C41-C44	ND	5.2	1.00	
C6-C44 Total	7.8	5.2	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	95	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-10.5'	19-06-1669-10-A	06/25/19 11:40	Solid	GC 49	06/26/19	06/28/19 09:58	190626B02

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	24	4.9	1.00	
C29-C32	47	4.9	1.00	
C33-C36	38	4.9	1.00	
C37-C40	27	4.9	1.00	
C41-C44	16	4.9	1.00	
C6-C44 Total	160	4.9	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	90	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-15.5'	19-06-1669-11-A	06/25/19 12:20	Solid	GC 49	06/26/19	06/28/19 10:20	190626B02

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	6.1	5.0	1.00	
C23-C24	8.7	5.0	1.00	
C25-C28	51	5.0	1.00	
C29-C32	87	5.0	1.00	
C33-C36	63	5.0	1.00	
C37-C40	46	5.0	1.00	
C41-C44	17	5.0	1.00	
C6-C44 Total	280	5.0	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	89	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-20.5'	19-06-1669-12-A	06/25/19 12:38	Solid	GC 49	06/26/19	06/27/19 22:58	190626B02

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	9.7	5.0	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	78	61-145		

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-25.5'	19-06-1669-13-A	06/25/19 12:51	Solid	GC 49	06/26/19	06/27/19 23:19	190626B02

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.8	1.00	
C7	ND	4.8	1.00	
C8	ND	4.8	1.00	
C9-C10	ND	4.8	1.00	
C11-C12	ND	4.8	1.00	
C13-C14	ND	4.8	1.00	
C15-C16	ND	4.8	1.00	
C17-C18	ND	4.8	1.00	
C19-C20	ND	4.8	1.00	
C21-C22	ND	4.8	1.00	
C23-C24	ND	4.8	1.00	
C25-C28	ND	4.8	1.00	
C29-C32	ND	4.8	1.00	
C33-C36	ND	4.8	1.00	
C37-C40	ND	4.8	1.00	
C41-C44	ND	4.8	1.00	
C6-C44 Total	ND	4.8	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	87	61-145	



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-15-490-3650	N/A	Solid	GC 49	06/26/19	06/26/19 12:28	190626B02

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	94	61-145	


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-5.5'	19-06-1669-1-A	06/25/19 08:35	Solid	ICP 8300	06/28/19	06/29/19 18:29	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		5.57		0.732		0.976	
Lead		1.97		0.488		0.976	
CESB9-10.5'	19-06-1669-2-A	06/25/19 08:43	Solid	ICP 8300	06/28/19	06/29/19 18:36	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		8.47		0.739		0.985	
Lead		3.91		0.493		0.985	
CESB9-15.5'	19-06-1669-3-A	06/25/19 08:52	Solid	ICP 8300	06/28/19	06/29/19 18:38	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		1.78		0.746		0.995	
Lead		2.16		0.498		0.995	
CESB9-20.5'	19-06-1669-4-A	06/25/19 09:04	Solid	ICP 8300	06/28/19	06/29/19 18:40	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		2.04		0.743		0.990	
Lead		3.79		0.495		0.990	
CESB9-25.5'	19-06-1669-5-A	06/25/19 09:14	Solid	ICP 8300	06/28/19	06/29/19 18:42	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		3.00		0.746		0.995	
Lead		1.14		0.498		0.995	
CESB9-32'	19-06-1669-6-A	06/25/19 09:27	Solid	ICP 8300	06/28/19	06/29/19 18:43	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		5.32		0.746		0.995	
Lead		2.54		0.498		0.995	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-37.0'	19-06-1669-7-A	06/25/19 10:08	Solid	ICP 8300	06/28/19	06/29/19 18:45	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		11.5		0.746		0.995	
Lead		3.57		0.498		0.995	
CESB10-3'	19-06-1669-9-A	06/25/19 11:20	Solid	ICP 8300	06/28/19	06/29/19 18:47	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.743		0.990	
Lead		3.02		0.495		0.990	
CESB10-10.5'	19-06-1669-10-A	06/25/19 11:40	Solid	ICP 8300	06/28/19	06/29/19 18:49	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.739		0.985	
Lead		2.11		0.493		0.985	
CESB10-15.5'	19-06-1669-11-A	06/25/19 12:20	Solid	ICP 8300	06/28/19	06/29/19 18:51	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		2.71		0.739		0.985	
Lead		1.82		0.493		0.985	
CESB10-20.5'	19-06-1669-12-A	06/25/19 12:38	Solid	ICP 8300	06/28/19	06/29/19 18:52	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		3.33		0.739		0.985	
Lead		1.20		0.493		0.985	
CESB10-25.5'	19-06-1669-13-A	06/25/19 12:51	Solid	ICP 8300	06/28/19	06/29/19 18:58	190628L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		0.948		0.739		0.985	
Lead		0.827		0.493		0.985	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental	Date Received:	06/25/19
30423 Canwood St., Suite 208	Work Order:	19-06-1669
Agoura Hills, CA 91301-4316	Preparation:	EPA 3050B
	Method:	EPA 6010B
	Units:	mg/kg
Project: OOI		Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	097-01-002-28068	N/A	Solid	ICP 8300	06/28/19	07/01/19 21:31	190628L01

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	ND	0.746	0.995	
Lead	ND	0.498	0.995	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-GW	19-06-1669-20-C	06/25/19 15:20	Aqueous	GC/MS PP	07/01/19	07/02/19 02:55	190701L020

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	100	5.00	
Benzene	200	2.5	5.00	
Bromobenzene	ND	5.0	5.00	
Bromochloromethane	ND	5.0	5.00	
Bromodichloromethane	ND	5.0	5.00	
Bromoform	ND	25	5.00	
Bromomethane	ND	250	5.00	
2-Butanone	ND	50	5.00	
n-Butylbenzene	23	5.0	5.00	
sec-Butylbenzene	17	5.0	5.00	
tert-Butylbenzene	ND	5.0	5.00	
Carbon Disulfide	ND	50	5.00	
Carbon Tetrachloride	ND	2.5	5.00	
Chlorobenzene	ND	5.0	5.00	
Chloroethane	ND	25	5.00	
Chloroform	ND	5.0	5.00	
Chloromethane	ND	50	5.00	
2-Chlorotoluene	ND	5.0	5.00	
4-Chlorotoluene	ND	5.0	5.00	
Dibromochloromethane	ND	5.0	5.00	
1,2-Dibromo-3-Chloropropane	ND	50	5.00	
1,2-Dibromoethane	ND	5.0	5.00	
Dibromomethane	ND	5.0	5.00	
1,2-Dichlorobenzene	ND	5.0	5.00	
1,3-Dichlorobenzene	ND	5.0	5.00	
1,4-Dichlorobenzene	ND	5.0	5.00	
Dichlorodifluoromethane	ND	5.0	5.00	
1,1-Dichloroethane	ND	5.0	5.00	
1,2-Dichloroethane	ND	2.5	5.00	
1,1-Dichloroethene	ND	5.0	5.00	
c-1,2-Dichloroethene	ND	5.0	5.00	
t-1,2-Dichloroethene	ND	5.0	5.00	
1,2-Dichloropropane	ND	5.0	5.00	
1,3-Dichloropropane	ND	5.0	5.00	
2,2-Dichloropropane	ND	5.0	5.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	5.0	5.00	
c-1,3-Dichloropropene	ND	2.5	5.00	
t-1,3-Dichloropropene	ND	2.5	5.00	
Ethylbenzene	720	5.0	5.00	
2-Hexanone	ND	50	5.00	
Isopropylbenzene	150	5.0	5.00	
p-Isopropyltoluene	45	5.0	5.00	
Methylene Chloride	ND	50	5.00	
4-Methyl-2-Pentanone	ND	50	5.00	
Naphthalene	84	50	5.00	
n-Propylbenzene	140	5.0	5.00	
Styrene	ND	5.0	5.00	
1,1,1,2-Tetrachloroethane	ND	5.0	5.00	
1,1,2,2-Tetrachloroethane	ND	5.0	5.00	
Tetrachloroethene	ND	5.0	5.00	
Toluene	13	5.0	5.00	
1,2,3-Trichlorobenzene	ND	5.0	5.00	
1,2,4-Trichlorobenzene	ND	5.0	5.00	
1,1,1-Trichloroethane	ND	5.0	5.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	5.00	
1,1,2-Trichloroethane	ND	5.0	5.00	
Trichloroethene	ND	5.0	5.00	
Trichlorofluoromethane	ND	50	5.00	
1,2,3-Trichloropropane	ND	25	5.00	
1,2,4-Trimethylbenzene	380	5.0	5.00	
1,3,5-Trimethylbenzene	22	5.0	5.00	
Vinyl Acetate	ND	50	5.00	
Vinyl Chloride	ND	2.5	5.00	
p/m-Xylene	340	5.0	5.00	
o-Xylene	110	5.0	5.00	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	5.00	
Tert-Butyl Alcohol (TBA)	ND	50	5.00	
Diisopropyl Ether (DIPE)	ND	10	5.00	
Ethyl-t-Butyl Ether (ETBE)	ND	10	5.00	
Tert-Amyl-Methyl Ether (TAME)	ND	10	5.00	
Ethanol	ND	500	5.00	
TPPH	16000	250	5.00	
Gasoline Range Organics	13000	250	5.00	
Gasoline Range Organics (C4-C12)	15000	250	5.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	96	78-126	
1,2-Dichloroethane-d4	90	75-135	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	96	80-120	
1,4-Bromofluorobenzene	104	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-8589	N/A	Aqueous	GC/MS PP	07/01/19	07/01/19 19:17	190701L020

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	ND	20	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	50	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	1.0	1.00	
1,3,5-Trimethylbenzene	ND	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	78-126	
1,2-Dichloroethane-d4	98	75-135	
Toluene-d8	98	80-120	
Toluene-d8-TPPH	94	80-120	
1,4-Bromofluorobenzene	99	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-5.5'	19-06-1669-1-D	06/25/19 08:35	Solid	GC/MS OO	06/25/19	07/02/19 19:56	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	47	40	1.00	
Benzene	ND	0.81	1.00	
Bromobenzene	ND	0.81	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.81	1.00	
Bromoform	ND	4.0	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.81	1.00	
sec-Butylbenzene	ND	0.81	1.00	
tert-Butylbenzene	ND	0.81	1.00	
Carbon Disulfide	ND	8.1	1.00	
Carbon Tetrachloride	ND	0.81	1.00	
Chlorobenzene	ND	0.81	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.81	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.81	1.00	
4-Chlorotoluene	ND	0.81	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.0	1.00	
1,2-Dibromoethane	ND	0.81	1.00	
Dibromomethane	ND	0.81	1.00	
1,2-Dichlorobenzene	ND	0.81	1.00	
1,3-Dichlorobenzene	ND	0.81	1.00	
1,4-Dichlorobenzene	ND	0.81	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.81	1.00	
1,2-Dichloroethane	ND	0.81	1.00	
1,1-Dichloroethene	ND	0.81	1.00	
c-1,2-Dichloroethene	ND	0.81	1.00	
t-1,2-Dichloroethene	ND	0.81	1.00	
1,2-Dichloropropane	ND	0.81	1.00	
1,3-Dichloropropane	ND	0.81	1.00	
2,2-Dichloropropane	ND	4.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.81	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.81	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.81	1.00	
p-Isopropyltoluene	ND	0.81	1.00	
Methylene Chloride	ND	8.1	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	8.1	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.81	1.00	
1,1,1,2-Tetrachloroethane	ND	0.81	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.81	1.00	
Toluene	ND	0.81	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.81	1.00	
1,1,2-Trichloroethane	ND	0.81	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.1	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	8.1	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	8.1	1.00	
Vinyl Chloride	ND	0.81	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.81	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.81	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.81	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.81	1.00	
Ethanol	ND	400	1.00	
TPPH	ND	40	1.00	
Gasoline Range Organics (C4-C12)	ND	40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	105	79-139	
1,2-Dichloroethane-d4	117	71-155	
1,4-Bromofluorobenzene	100	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-10.5'	19-06-1669-2-D	06/25/19 08:43	Solid	GC/MS OO	06/25/19	07/02/19 20:26	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	58	40	1.00	
Benzene	ND	0.79	1.00	
Bromobenzene	ND	0.79	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.79	1.00	
Bromoform	ND	4.0	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.79	1.00	
sec-Butylbenzene	ND	0.79	1.00	
tert-Butylbenzene	ND	0.79	1.00	
Carbon Disulfide	ND	7.9	1.00	
Carbon Tetrachloride	ND	0.79	1.00	
Chlorobenzene	ND	0.79	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.79	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.79	1.00	
4-Chlorotoluene	ND	0.79	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.0	1.00	
1,2-Dibromoethane	ND	0.79	1.00	
Dibromomethane	ND	0.79	1.00	
1,2-Dichlorobenzene	ND	0.79	1.00	
1,3-Dichlorobenzene	ND	0.79	1.00	
1,4-Dichlorobenzene	ND	0.79	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.79	1.00	
1,2-Dichloroethane	ND	0.79	1.00	
1,1-Dichloroethene	ND	0.79	1.00	
c-1,2-Dichloroethene	ND	0.79	1.00	
t-1,2-Dichloroethene	ND	0.79	1.00	
1,2-Dichloropropane	ND	0.79	1.00	
1,3-Dichloropropane	ND	0.79	1.00	
2,2-Dichloropropane	ND	4.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.79	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.79	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.79	1.00	
p-Isopropyltoluene	ND	0.79	1.00	
Methylene Chloride	ND	7.9	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	7.9	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.79	1.00	
1,1,1,2-Tetrachloroethane	ND	0.79	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.79	1.00	
Toluene	ND	0.79	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.79	1.00	
1,1,2-Trichloroethane	ND	0.79	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.9	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	7.9	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	7.9	1.00	
Vinyl Chloride	ND	0.79	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.79	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.79	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.79	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.79	1.00	
Ethanol	ND	400	1.00	
TPPH	ND	40	1.00	
Gasoline Range Organics (C4-C12)	ND	40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	108	79-139	
1,2-Dichloroethane-d4	118	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-15.5'	19-06-1669-3-D	06/25/19 08:52	Solid	GC/MS OO	06/25/19	07/02/19 20:55	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	43	1.00	
Benzene	ND	0.86	1.00	
Bromobenzene	ND	0.86	1.00	
Bromochloromethane	ND	1.7	1.00	
Bromodichloromethane	ND	0.86	1.00	
Bromoform	ND	4.3	1.00	
Bromomethane	ND	17	1.00	
2-Butanone	ND	17	1.00	
n-Butylbenzene	ND	0.86	1.00	
sec-Butylbenzene	ND	0.86	1.00	
tert-Butylbenzene	ND	0.86	1.00	
Carbon Disulfide	ND	8.6	1.00	
Carbon Tetrachloride	ND	0.86	1.00	
Chlorobenzene	ND	0.86	1.00	
Chloroethane	ND	1.7	1.00	
Chloroform	ND	0.86	1.00	
Chloromethane	ND	17	1.00	
2-Chlorotoluene	ND	0.86	1.00	
4-Chlorotoluene	ND	0.86	1.00	
Dibromochloromethane	ND	1.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.3	1.00	
1,2-Dibromoethane	ND	0.86	1.00	
Dibromomethane	ND	0.86	1.00	
1,2-Dichlorobenzene	ND	0.86	1.00	
1,3-Dichlorobenzene	ND	0.86	1.00	
1,4-Dichlorobenzene	ND	0.86	1.00	
Dichlorodifluoromethane	ND	1.7	1.00	
1,1-Dichloroethane	ND	0.86	1.00	
1,2-Dichloroethane	ND	0.86	1.00	
1,1-Dichloroethene	ND	0.86	1.00	
c-1,2-Dichloroethene	ND	0.86	1.00	
t-1,2-Dichloroethene	ND	0.86	1.00	
1,2-Dichloropropane	ND	0.86	1.00	
1,3-Dichloropropane	ND	0.86	1.00	
2,2-Dichloropropane	ND	4.3	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.7	1.00	
c-1,3-Dichloropropene	ND	0.86	1.00	
t-1,3-Dichloropropene	ND	1.7	1.00	
Ethylbenzene	ND	0.86	1.00	
2-Hexanone	ND	17	1.00	
Isopropylbenzene	ND	0.86	1.00	
p-Isopropyltoluene	ND	0.86	1.00	
Methylene Chloride	ND	8.6	1.00	
4-Methyl-2-Pentanone	ND	17	1.00	
Naphthalene	ND	8.6	1.00	
n-Propylbenzene	ND	1.7	1.00	
Styrene	ND	0.86	1.00	
1,1,1,2-Tetrachloroethane	ND	0.86	1.00	
1,1,2,2-Tetrachloroethane	ND	1.7	1.00	
Tetrachloroethene	ND	0.86	1.00	
Toluene	ND	0.86	1.00	
1,2,3-Trichlorobenzene	ND	1.7	1.00	
1,2,4-Trichlorobenzene	ND	1.7	1.00	
1,1,1-Trichloroethane	ND	0.86	1.00	
1,1,2-Trichloroethane	ND	0.86	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.6	1.00	
Trichloroethene	ND	1.7	1.00	
Trichlorofluoromethane	ND	8.6	1.00	
1,2,3-Trichloropropane	ND	1.7	1.00	
1,2,4-Trimethylbenzene	ND	1.7	1.00	
1,3,5-Trimethylbenzene	ND	1.7	1.00	
Vinyl Acetate	ND	8.6	1.00	
Vinyl Chloride	ND	0.86	1.00	
p/m-Xylene	ND	1.7	1.00	
o-Xylene	ND	0.86	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.7	1.00	
Tert-Butyl Alcohol (TBA)	ND	17	1.00	
Diisopropyl Ether (DIPE)	ND	0.86	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.86	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.86	1.00	
Ethanol	ND	430	1.00	
TPPH	ND	43	1.00	
Gasoline Range Organics (C4-C12)	ND	43	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	106	79-139	
1,2-Dichloroethane-d4	115	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-20.5'	19-06-1669-4-D	06/25/19 09:04	Solid	GC/MS OO	06/25/19	07/02/19 21:25	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	47	1.00	
Benzene	ND	0.95	1.00	
Bromobenzene	ND	0.95	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.95	1.00	
Bromoform	ND	4.7	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.95	1.00	
sec-Butylbenzene	ND	0.95	1.00	
tert-Butylbenzene	ND	0.95	1.00	
Carbon Disulfide	ND	9.5	1.00	
Carbon Tetrachloride	ND	0.95	1.00	
Chlorobenzene	ND	0.95	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.95	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.95	1.00	
4-Chlorotoluene	ND	0.95	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.7	1.00	
1,2-Dibromoethane	ND	0.95	1.00	
Dibromomethane	ND	0.95	1.00	
1,2-Dichlorobenzene	ND	0.95	1.00	
1,3-Dichlorobenzene	ND	0.95	1.00	
1,4-Dichlorobenzene	ND	0.95	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.95	1.00	
1,2-Dichloroethane	ND	0.95	1.00	
1,1-Dichloroethene	ND	0.95	1.00	
c-1,2-Dichloroethene	ND	0.95	1.00	
t-1,2-Dichloroethene	ND	0.95	1.00	
1,2-Dichloropropane	ND	0.95	1.00	
1,3-Dichloropropane	ND	0.95	1.00	
2,2-Dichloropropane	ND	4.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.95	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.95	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.95	1.00	
p-Isopropyltoluene	ND	0.95	1.00	
Methylene Chloride	ND	9.5	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.5	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.95	1.00	
1,1,1,2-Tetrachloroethane	ND	0.95	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	ND	0.95	1.00	
Toluene	ND	0.95	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.95	1.00	
1,1,2-Trichloroethane	ND	0.95	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.5	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.5	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.5	1.00	
Vinyl Chloride	ND	0.95	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.95	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	
Tert-Butyl Alcohol (TBA)	ND	19	1.00	
Diisopropyl Ether (DIPE)	ND	0.95	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.95	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.95	1.00	
Ethanol	ND	470	1.00	
TPPH	ND	47	1.00	
Gasoline Range Organics (C4-C12)	ND	47	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	104	79-139	
1,2-Dichloroethane-d4	116	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-25.5'	19-06-1669-5-D	06/25/19 09:14	Solid	GC/MS OO	06/25/19	07/02/19 21:54	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	51	1.00	
Benzene	1.6	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.1	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.1	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.1	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	510	1.00	
TPPH	ND	51	1.00	
Gasoline Range Organics (C4-C12)	ND	51	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	108	79-139	
1,2-Dichloroethane-d4	116	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-32'	19-06-1669-6-F	06/25/19 09:27	Solid	GC/MS OO	06/25/19	07/04/19 09:04	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	25000	500	
Benzene	ND	500	500	
Bromobenzene	ND	500	500	
Bromochloromethane	ND	1000	500	
Bromodichloromethane	ND	500	500	
Bromoform	ND	2500	500	
Bromomethane	ND	10000	500	
2-Butanone	ND	10000	500	
n-Butylbenzene	2100	500	500	
sec-Butylbenzene	920	500	500	
tert-Butylbenzene	ND	500	500	
Carbon Disulfide	ND	5000	500	
Carbon Tetrachloride	ND	500	500	
Chlorobenzene	ND	500	500	
Chloroethane	ND	1000	500	
Chloroform	ND	500	500	
Chloromethane	ND	10000	500	
2-Chlorotoluene	ND	500	500	
4-Chlorotoluene	ND	500	500	
Dibromochloromethane	ND	1000	500	
1,2-Dibromo-3-Chloropropane	ND	2500	500	
1,2-Dibromoethane	ND	500	500	
Dibromomethane	ND	500	500	
1,2-Dichlorobenzene	ND	500	500	
1,3-Dichlorobenzene	ND	500	500	
1,4-Dichlorobenzene	ND	500	500	
Dichlorodifluoromethane	ND	1000	500	
1,1-Dichloroethane	ND	500	500	
1,2-Dichloroethane	ND	500	500	
1,1-Dichloroethene	ND	500	500	
c-1,2-Dichloroethene	ND	500	500	
t-1,2-Dichloroethene	ND	500	500	
1,2-Dichloropropane	ND	500	500	
1,3-Dichloropropane	ND	500	500	
2,2-Dichloropropane	ND	2500	500	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1000	500	
c-1,3-Dichloropropene	ND	500	500	
t-1,3-Dichloropropene	ND	1000	500	
Ethylbenzene	3000	500	500	
2-Hexanone	ND	10000	500	
Isopropylbenzene	2000	500	500	
p-Isopropyltoluene	2600	500	500	
Methylene Chloride	ND	5000	500	
4-Methyl-2-Pentanone	ND	10000	500	
Naphthalene	ND	5000	500	
n-Propylbenzene	2600	1000	500	
Styrene	ND	500	500	
1,1,1,2-Tetrachloroethane	ND	500	500	
1,1,2,2-Tetrachloroethane	ND	1000	500	
Tetrachloroethene	ND	500	500	
Toluene	ND	500	500	
1,2,3-Trichlorobenzene	ND	1000	500	
1,2,4-Trichlorobenzene	ND	1000	500	
1,1,1-Trichloroethane	ND	500	500	
1,1,2-Trichloroethane	ND	500	500	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	5000	500	
Trichloroethene	ND	1000	500	
Trichlorofluoromethane	ND	5000	500	
1,2,3-Trichloropropane	ND	1000	500	
1,2,4-Trimethylbenzene	11000	1000	500	
1,3,5-Trimethylbenzene	2000	1000	500	
Vinyl Acetate	ND	5000	500	
Vinyl Chloride	ND	500	500	
p/m-Xylene	2500	1000	500	
o-Xylene	ND	500	500	
Methyl-t-Butyl Ether (MTBE)	ND	1000	500	
Tert-Butyl Alcohol (TBA)	ND	10000	500	
Diisopropyl Ether (DIPE)	ND	500	500	
Ethyl-t-Butyl Ether (ETBE)	ND	500	500	
Tert-Amyl-Methyl Ether (TAME)	ND	500	500	
Ethanol	ND	250000	500	
TPPH	1300000	25000	500	
Gasoline Range Organics (C4-C12)	1100000	25000	500	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	96	79-139	
1,2-Dichloroethane-d4	93	71-155	
1,4-Bromofluorobenzene	101	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-37.0'	19-06-1669-7-D	06/25/19 10:08	Solid	GC/MS OO	06/25/19	07/04/19 00:45	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	37	1.00	
Benzene	22	0.74	1.00	
Bromobenzene	ND	0.74	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.74	1.00	
Bromoform	ND	3.7	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	2.0	0.74	1.00	
sec-Butylbenzene	1.6	0.74	1.00	
tert-Butylbenzene	ND	0.74	1.00	
Carbon Disulfide	ND	7.4	1.00	
Carbon Tetrachloride	ND	0.74	1.00	
Chlorobenzene	ND	0.74	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.74	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.74	1.00	
4-Chlorotoluene	ND	0.74	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.7	1.00	
1,2-Dibromoethane	ND	0.74	1.00	
Dibromomethane	ND	0.74	1.00	
1,2-Dichlorobenzene	ND	0.74	1.00	
1,3-Dichlorobenzene	ND	0.74	1.00	
1,4-Dichlorobenzene	ND	0.74	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.74	1.00	
1,2-Dichloroethane	ND	0.74	1.00	
1,1-Dichloroethene	ND	0.74	1.00	
c-1,2-Dichloroethene	ND	0.74	1.00	
t-1,2-Dichloroethene	ND	0.74	1.00	
1,2-Dichloropropane	ND	0.74	1.00	
1,3-Dichloropropane	ND	0.74	1.00	
2,2-Dichloropropane	ND	3.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.74	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	52	0.74	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	13	0.74	1.00	
p-Isopropyltoluene	3.5	0.74	1.00	
Methylene Chloride	ND	7.4	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	11	7.4	1.00	
n-Propylbenzene	12	1.5	1.00	
Styrene	ND	0.74	1.00	
1,1,1,2-Tetrachloroethane	ND	0.74	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.74	1.00	
Toluene	ND	0.74	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.74	1.00	
1,1,2-Trichloroethane	ND	0.74	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.4	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.4	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	41	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.4	1.00	
Vinyl Chloride	ND	0.74	1.00	
p/m-Xylene	42	1.5	1.00	
o-Xylene	1.5	0.74	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.74	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.74	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.74	1.00	
Ethanol	ND	370	1.00	
TPPH	1700	37	1.00	
Gasoline Range Organics (C4-C12)	1500	37	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	107	71-155	
1,4-Bromofluorobenzene	102	80-120	
Toluene-d8	103	80-120	
Toluene-d8-TPPH	95	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-35.5'	19-06-1669-8-E	06/25/19 10:18	Solid	GC/MS OO	06/25/19	07/04/19 09:34	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	21000	500	
Benzene	ND	410	500	
Bromobenzene	ND	410	500	
Bromochloromethane	ND	820	500	
Bromodichloromethane	ND	410	500	
Bromoform	ND	2100	500	
Bromomethane	ND	8200	500	
2-Butanone	ND	8200	500	
n-Butylbenzene	2400	410	500	
sec-Butylbenzene	1300	410	500	
tert-Butylbenzene	ND	410	500	
Carbon Disulfide	ND	4100	500	
Carbon Tetrachloride	ND	410	500	
Chlorobenzene	ND	410	500	
Chloroethane	ND	820	500	
Chloroform	ND	410	500	
Chloromethane	ND	8200	500	
2-Chlorotoluene	ND	410	500	
4-Chlorotoluene	ND	410	500	
Dibromochloromethane	ND	820	500	
1,2-Dibromo-3-Chloropropane	ND	2100	500	
1,2-Dibromoethane	ND	410	500	
Dibromomethane	ND	410	500	
1,2-Dichlorobenzene	ND	410	500	
1,3-Dichlorobenzene	ND	410	500	
1,4-Dichlorobenzene	ND	410	500	
Dichlorodifluoromethane	ND	820	500	
1,1-Dichloroethane	ND	410	500	
1,2-Dichloroethane	ND	410	500	
1,1-Dichloroethene	ND	410	500	
c-1,2-Dichloroethene	ND	410	500	
t-1,2-Dichloroethene	ND	410	500	
1,2-Dichloropropane	ND	410	500	
1,3-Dichloropropane	ND	410	500	
2,2-Dichloropropane	ND	2100	500	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	820	500	
c-1,3-Dichloropropene	ND	410	500	
t-1,3-Dichloropropene	ND	820	500	
Ethylbenzene	5900	410	500	
2-Hexanone	ND	8200	500	
Isopropylbenzene	3500	410	500	
p-Isopropyltoluene	3400	410	500	
Methylene Chloride	ND	4100	500	
4-Methyl-2-Pentanone	ND	8200	500	
Naphthalene	ND	4100	500	
n-Propylbenzene	4100	820	500	
Styrene	ND	410	500	
1,1,1,2-Tetrachloroethane	ND	410	500	
1,1,2,2-Tetrachloroethane	ND	820	500	
Tetrachloroethene	ND	410	500	
Toluene	ND	410	500	
1,2,3-Trichlorobenzene	ND	820	500	
1,2,4-Trichlorobenzene	ND	820	500	
1,1,1-Trichloroethane	ND	410	500	
1,1,2-Trichloroethane	ND	410	500	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	4100	500	
Trichloroethene	ND	820	500	
Trichlorofluoromethane	ND	4100	500	
1,2,3-Trichloropropane	ND	820	500	
1,2,4-Trimethylbenzene	12000	820	500	
1,3,5-Trimethylbenzene	ND	820	500	
Vinyl Acetate	ND	4100	500	
Vinyl Chloride	ND	410	500	
p/m-Xylene	2800	820	500	
o-Xylene	620	410	500	
Methyl-t-Butyl Ether (MTBE)	ND	820	500	
Tert-Butyl Alcohol (TBA)	ND	8200	500	
Diisopropyl Ether (DIPE)	ND	410	500	
Ethyl-t-Butyl Ether (ETBE)	ND	410	500	
Tert-Amyl-Methyl Ether (TAME)	ND	410	500	
Ethanol	ND	210000	500	
TPPH	1600000	21000	500	
Gasoline Range Organics (C4-C12)	1400000	21000	500	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	92	79-139	
1,2-Dichloroethane-d4	92	71-155	
1,4-Bromofluorobenzene	105	80-120	
Toluene-d8	104	80-120	
Toluene-d8-TPPH	94	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-3'	19-06-1669-9-D	06/25/19 11:20	Solid	GC/MS OO	06/25/19	07/02/19 22:24	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	49	1.00	
Benzene	ND	0.98	1.00	
Bromobenzene	ND	0.98	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	0.98	1.00	
Bromoform	ND	4.9	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	0.98	1.00	
sec-Butylbenzene	ND	0.98	1.00	
tert-Butylbenzene	ND	0.98	1.00	
Carbon Disulfide	ND	9.8	1.00	
Carbon Tetrachloride	ND	0.98	1.00	
Chlorobenzene	ND	0.98	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	0.98	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	0.98	1.00	
4-Chlorotoluene	ND	0.98	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.9	1.00	
1,2-Dibromoethane	ND	0.98	1.00	
Dibromomethane	ND	0.98	1.00	
1,2-Dichlorobenzene	ND	0.98	1.00	
1,3-Dichlorobenzene	ND	0.98	1.00	
1,4-Dichlorobenzene	ND	0.98	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	0.98	1.00	
1,2-Dichloroethane	ND	0.98	1.00	
1,1-Dichloroethene	ND	0.98	1.00	
c-1,2-Dichloroethene	ND	0.98	1.00	
t-1,2-Dichloroethene	ND	0.98	1.00	
1,2-Dichloropropane	ND	0.98	1.00	
1,3-Dichloropropane	ND	0.98	1.00	
2,2-Dichloropropane	ND	4.9	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	0.98	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	0.98	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	0.98	1.00	
p-Isopropyltoluene	ND	0.98	1.00	
Methylene Chloride	ND	9.8	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	9.8	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	0.98	1.00	
1,1,1,2-Tetrachloroethane	ND	0.98	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	0.98	1.00	
Toluene	ND	0.98	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	0.98	1.00	
1,1,2-Trichloroethane	ND	0.98	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.8	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	9.8	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	9.8	1.00	
Vinyl Chloride	ND	0.98	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	0.98	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	0.98	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.98	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.98	1.00	
Ethanol	ND	490	1.00	
TPPH	ND	49	1.00	
Gasoline Range Organics (C4-C12)	ND	49	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	110	79-139	
1,2-Dichloroethane-d4	118	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-10.5'	19-06-1669-10-D	06/25/19 11:40	Solid	GC/MS OO	06/25/19	07/02/19 22:53	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	44	41	1.00	
Benzene	ND	0.82	1.00	
Bromobenzene	ND	0.82	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.82	1.00	
Bromoform	ND	4.1	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.82	1.00	
sec-Butylbenzene	ND	0.82	1.00	
tert-Butylbenzene	ND	0.82	1.00	
Carbon Disulfide	ND	8.2	1.00	
Carbon Tetrachloride	ND	0.82	1.00	
Chlorobenzene	ND	0.82	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.82	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.82	1.00	
4-Chlorotoluene	ND	0.82	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.1	1.00	
1,2-Dibromoethane	ND	0.82	1.00	
Dibromomethane	ND	0.82	1.00	
1,2-Dichlorobenzene	ND	0.82	1.00	
1,3-Dichlorobenzene	ND	0.82	1.00	
1,4-Dichlorobenzene	ND	0.82	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.82	1.00	
1,2-Dichloroethane	ND	0.82	1.00	
1,1-Dichloroethene	ND	0.82	1.00	
c-1,2-Dichloroethene	ND	0.82	1.00	
t-1,2-Dichloroethene	ND	0.82	1.00	
1,2-Dichloropropane	ND	0.82	1.00	
1,3-Dichloropropane	ND	0.82	1.00	
2,2-Dichloropropane	ND	4.1	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.82	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.82	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.82	1.00	
p-Isopropyltoluene	ND	0.82	1.00	
Methylene Chloride	ND	8.2	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	8.2	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.82	1.00	
1,1,1,2-Tetrachloroethane	ND	0.82	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.82	1.00	
Toluene	ND	0.82	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.82	1.00	
1,1,2-Trichloroethane	ND	0.82	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.2	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	8.2	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	8.2	1.00	
Vinyl Chloride	ND	0.82	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.82	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.82	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.82	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.82	1.00	
Ethanol	ND	410	1.00	
TPPH	ND	41	1.00	
Gasoline Range Organics (C4-C12)	ND	41	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	106	79-139	
1,2-Dichloroethane-d4	115	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-15.5'	19-06-1669-11-D	06/25/19 12:20	Solid	GC/MS OO	06/25/19	07/02/19 23:23	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	39	1.00	
Benzene	ND	0.78	1.00	
Bromobenzene	ND	0.78	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.78	1.00	
Bromoform	19	3.9	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.78	1.00	
sec-Butylbenzene	ND	0.78	1.00	
tert-Butylbenzene	ND	0.78	1.00	
Carbon Disulfide	ND	7.8	1.00	
Carbon Tetrachloride	ND	0.78	1.00	
Chlorobenzene	ND	0.78	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.78	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.78	1.00	
4-Chlorotoluene	ND	0.78	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.9	1.00	
1,2-Dibromoethane	ND	0.78	1.00	
Dibromomethane	ND	0.78	1.00	
1,2-Dichlorobenzene	ND	0.78	1.00	
1,3-Dichlorobenzene	ND	0.78	1.00	
1,4-Dichlorobenzene	ND	0.78	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.78	1.00	
1,2-Dichloroethane	ND	0.78	1.00	
1,1-Dichloroethene	ND	0.78	1.00	
c-1,2-Dichloroethene	ND	0.78	1.00	
t-1,2-Dichloroethene	ND	0.78	1.00	
1,2-Dichloropropane	ND	0.78	1.00	
1,3-Dichloropropane	ND	0.78	1.00	
2,2-Dichloropropane	ND	3.9	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.78	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.78	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.78	1.00	
p-Isopropyltoluene	ND	0.78	1.00	
Methylene Chloride	ND	7.8	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	7.8	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.78	1.00	
1,1,1,2-Tetrachloroethane	ND	0.78	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.78	1.00	
Toluene	ND	0.78	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.78	1.00	
1,1,2-Trichloroethane	ND	0.78	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.8	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	7.8	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	7.8	1.00	
Vinyl Chloride	ND	0.78	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.78	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.78	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.78	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.78	1.00	
Ethanol	ND	390	1.00	
TPPH	ND	39	1.00	
Gasoline Range Organics (C4-C12)	ND	39	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	107	79-139	
1,2-Dichloroethane-d4	118	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-20.5'	19-06-1669-12-D	06/25/19 12:38	Solid	GC/MS OO	06/25/19	07/02/19 23:52	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	109	79-139	
1,2-Dichloroethane-d4	122	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-25.5'	19-06-1669-13-D	06/25/19 12:51	Solid	GC/MS OO	06/25/19	07/03/19 00:22	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	46	1.00	
Benzene	ND	0.93	1.00	
Bromobenzene	ND	0.93	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.93	1.00	
Bromoform	ND	4.6	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.93	1.00	
sec-Butylbenzene	ND	0.93	1.00	
tert-Butylbenzene	ND	0.93	1.00	
Carbon Disulfide	ND	9.3	1.00	
Carbon Tetrachloride	ND	0.93	1.00	
Chlorobenzene	ND	0.93	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.93	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.93	1.00	
4-Chlorotoluene	ND	0.93	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.6	1.00	
1,2-Dibromoethane	ND	0.93	1.00	
Dibromomethane	ND	0.93	1.00	
1,2-Dichlorobenzene	ND	0.93	1.00	
1,3-Dichlorobenzene	ND	0.93	1.00	
1,4-Dichlorobenzene	ND	0.93	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.93	1.00	
1,2-Dichloroethane	ND	0.93	1.00	
1,1-Dichloroethene	ND	0.93	1.00	
c-1,2-Dichloroethene	ND	0.93	1.00	
t-1,2-Dichloroethene	ND	0.93	1.00	
1,2-Dichloropropane	ND	0.93	1.00	
1,3-Dichloropropane	ND	0.93	1.00	
2,2-Dichloropropane	ND	4.6	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.93	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.93	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.93	1.00	
p-Isopropyltoluene	ND	0.93	1.00	
Methylene Chloride	ND	9.3	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.3	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.93	1.00	
1,1,1,2-Tetrachloroethane	ND	0.93	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	ND	0.93	1.00	
Toluene	ND	0.93	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.93	1.00	
1,1,2-Trichloroethane	ND	0.93	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.3	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.3	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.3	1.00	
Vinyl Chloride	ND	0.93	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.93	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	
Tert-Butyl Alcohol (TBA)	ND	19	1.00	
Diisopropyl Ether (DIPE)	ND	0.93	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.93	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.93	1.00	
Ethanol	ND	460	1.00	
TPPH	ND	46	1.00	
Gasoline Range Organics (C4-C12)	ND	46	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	107	79-139	
1,2-Dichloroethane-d4	117	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-30'	19-06-1669-14-E	06/25/19 13:01	Solid	GC/MS OO	06/25/19	07/04/19 10:03	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	6900	100	
Benzene	ND	140	100	
Bromobenzene	ND	140	100	
Bromochloromethane	ND	270	100	
Bromodichloromethane	ND	140	100	
Bromoform	ND	690	100	
Bromomethane	ND	2700	100	
2-Butanone	ND	2700	100	
n-Butylbenzene	950	140	100	
sec-Butylbenzene	310	140	100	
tert-Butylbenzene	ND	140	100	
Carbon Disulfide	ND	1400	100	
Carbon Tetrachloride	ND	140	100	
Chlorobenzene	ND	140	100	
Chloroethane	ND	270	100	
Chloroform	ND	140	100	
Chloromethane	ND	2700	100	
2-Chlorotoluene	ND	140	100	
4-Chlorotoluene	ND	140	100	
Dibromochloromethane	ND	270	100	
1,2-Dibromo-3-Chloropropane	ND	690	100	
1,2-Dibromoethane	ND	140	100	
Dibromomethane	ND	140	100	
1,2-Dichlorobenzene	ND	140	100	
1,3-Dichlorobenzene	ND	140	100	
1,4-Dichlorobenzene	ND	140	100	
Dichlorodifluoromethane	ND	270	100	
1,1-Dichloroethane	ND	140	100	
1,2-Dichloroethane	ND	140	100	
1,1-Dichloroethene	ND	140	100	
c-1,2-Dichloroethene	ND	140	100	
t-1,2-Dichloroethene	ND	140	100	
1,2-Dichloropropane	ND	140	100	
1,3-Dichloropropane	ND	140	100	
2,2-Dichloropropane	ND	690	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	270	100	
c-1,3-Dichloropropene	ND	140	100	
t-1,3-Dichloropropene	ND	270	100	
Ethylbenzene	1400	140	100	
2-Hexanone	ND	2700	100	
Isopropylbenzene	750	140	100	
p-Isopropyltoluene	860	140	100	
Methylene Chloride	ND	1400	100	
4-Methyl-2-Pentanone	ND	2700	100	
Naphthalene	ND	1400	100	
n-Propylbenzene	1000	270	100	
Styrene	ND	140	100	
1,1,1,2-Tetrachloroethane	ND	140	100	
1,1,2,2-Tetrachloroethane	ND	270	100	
Tetrachloroethene	ND	140	100	
Toluene	ND	140	100	
1,2,3-Trichlorobenzene	ND	270	100	
1,2,4-Trichlorobenzene	ND	270	100	
1,1,1-Trichloroethane	ND	140	100	
1,1,2-Trichloroethane	ND	140	100	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1400	100	
Trichloroethene	ND	270	100	
Trichlorofluoromethane	ND	1400	100	
1,2,3-Trichloropropane	ND	270	100	
1,2,4-Trimethylbenzene	6300	270	100	
1,3,5-Trimethylbenzene	2300	270	100	
Vinyl Acetate	ND	1400	100	
Vinyl Chloride	ND	140	100	
p/m-Xylene	3400	270	100	
o-Xylene	1100	140	100	
Methyl-t-Butyl Ether (MTBE)	ND	270	100	
Tert-Butyl Alcohol (TBA)	ND	2700	100	
Diisopropyl Ether (DIPE)	ND	140	100	
Ethyl-t-Butyl Ether (ETBE)	ND	140	100	
Tert-Amyl-Methyl Ether (TAME)	ND	140	100	
Ethanol	ND	69000	100	
TPPH	360000	6900	100	
Gasoline Range Organics (C4-C12)	310000	6900	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	91	79-139	
1,2-Dichloroethane-d4	87	71-155	
1,4-Bromofluorobenzene	103	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-33'	19-06-1669-15-E	06/25/19 13:15	Solid	GC/MS OO	06/25/19	07/04/19 12:01	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	320000	5000	
Benzene	ND	6400	5000	
Bromobenzene	ND	6400	5000	
Bromochloromethane	ND	13000	5000	
Bromodichloromethane	ND	6400	5000	
Bromoform	ND	32000	5000	
Bromomethane	ND	130000	5000	
2-Butanone	ND	130000	5000	
n-Butylbenzene	36000	6400	5000	
sec-Butylbenzene	12000	6400	5000	
tert-Butylbenzene	ND	6400	5000	
Carbon Disulfide	ND	64000	5000	
Carbon Tetrachloride	ND	6400	5000	
Chlorobenzene	ND	6400	5000	
Chloroethane	ND	13000	5000	
Chloroform	ND	6400	5000	
Chloromethane	ND	130000	5000	
2-Chlorotoluene	ND	6400	5000	
4-Chlorotoluene	ND	6400	5000	
Dibromochloromethane	ND	13000	5000	
1,2-Dibromo-3-Chloropropane	ND	32000	5000	
1,2-Dibromoethane	ND	6400	5000	
Dibromomethane	ND	6400	5000	
1,2-Dichlorobenzene	ND	6400	5000	
1,3-Dichlorobenzene	ND	6400	5000	
1,4-Dichlorobenzene	ND	6400	5000	
Dichlorodifluoromethane	ND	13000	5000	
1,1-Dichloroethane	ND	6400	5000	
1,2-Dichloroethane	ND	6400	5000	
1,1-Dichloroethene	ND	6400	5000	
c-1,2-Dichloroethene	ND	6400	5000	
t-1,2-Dichloroethene	ND	6400	5000	
1,2-Dichloropropane	ND	6400	5000	
1,3-Dichloropropane	ND	6400	5000	
2,2-Dichloropropane	ND	32000	5000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	13000	5000	
c-1,3-Dichloropropene	ND	6400	5000	
t-1,3-Dichloropropene	ND	13000	5000	
Ethylbenzene	54000	6400	5000	
2-Hexanone	ND	130000	5000	
Isopropylbenzene	28000	6400	5000	
p-Isopropyltoluene	32000	6400	5000	
Methylene Chloride	ND	64000	5000	
4-Methyl-2-Pentanone	ND	130000	5000	
Naphthalene	ND	64000	5000	
n-Propylbenzene	40000	13000	5000	
Styrene	ND	6400	5000	
1,1,1,2-Tetrachloroethane	ND	6400	5000	
1,1,2,2-Tetrachloroethane	ND	13000	5000	
Tetrachloroethene	ND	6400	5000	
Toluene	ND	6400	5000	
1,2,3-Trichlorobenzene	ND	13000	5000	
1,2,4-Trichlorobenzene	ND	13000	5000	
1,1,1-Trichloroethane	ND	6400	5000	
1,1,2-Trichloroethane	ND	6400	5000	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	64000	5000	
Trichloroethene	ND	13000	5000	
Trichlorofluoromethane	ND	64000	5000	
1,2,3-Trichloropropane	ND	13000	5000	
1,2,4-Trimethylbenzene	250000	13000	5000	
1,3,5-Trimethylbenzene	89000	13000	5000	
Vinyl Acetate	ND	64000	5000	
Vinyl Chloride	ND	6400	5000	
p/m-Xylene	150000	13000	5000	
o-Xylene	48000	6400	5000	
Methyl-t-Butyl Ether (MTBE)	ND	13000	5000	
Tert-Butyl Alcohol (TBA)	ND	130000	5000	
Diisopropyl Ether (DIPE)	ND	6400	5000	
Ethyl-t-Butyl Ether (ETBE)	ND	6400	5000	
Tert-Amyl-Methyl Ether (TAME)	ND	6400	5000	
Ethanol	ND	3200000	5000	
TPPH	19000000	320000	5000	
Gasoline Range Organics (C4-C12)	16000000	320000	5000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	90	79-139	
1,2-Dichloroethane-d4	86	71-155	
1,4-Bromofluorobenzene	102	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	96	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-35'	19-06-1669-16-D	06/25/19 13:40	Solid	GC/MS OO	06/25/19	07/04/19 11:02	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	80000	2000	
Benzene	ND	1600	2000	
Bromobenzene	ND	1600	2000	
Bromochloromethane	ND	3200	2000	
Bromodichloromethane	ND	1600	2000	
Bromoform	ND	8000	2000	
Bromomethane	ND	32000	2000	
2-Butanone	ND	32000	2000	
n-Butylbenzene	11000	1600	2000	
sec-Butylbenzene	4400	1600	2000	
tert-Butylbenzene	ND	1600	2000	
Carbon Disulfide	ND	16000	2000	
Carbon Tetrachloride	ND	1600	2000	
Chlorobenzene	ND	1600	2000	
Chloroethane	ND	3200	2000	
Chloroform	ND	1600	2000	
Chloromethane	ND	32000	2000	
2-Chlorotoluene	ND	1600	2000	
4-Chlorotoluene	ND	1600	2000	
Dibromochloromethane	ND	3200	2000	
1,2-Dibromo-3-Chloropropane	ND	8000	2000	
1,2-Dibromoethane	ND	1600	2000	
Dibromomethane	ND	1600	2000	
1,2-Dichlorobenzene	ND	1600	2000	
1,3-Dichlorobenzene	ND	1600	2000	
1,4-Dichlorobenzene	ND	1600	2000	
Dichlorodifluoromethane	ND	3200	2000	
1,1-Dichloroethane	ND	1600	2000	
1,2-Dichloroethane	ND	1600	2000	
1,1-Dichloroethene	ND	1600	2000	
c-1,2-Dichloroethene	ND	1600	2000	
t-1,2-Dichloroethene	ND	1600	2000	
1,2-Dichloropropane	ND	1600	2000	
1,3-Dichloropropane	ND	1600	2000	
2,2-Dichloropropane	ND	8000	2000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	3200	2000	
c-1,3-Dichloropropene	ND	1600	2000	
t-1,3-Dichloropropene	ND	3200	2000	
Ethylbenzene	33000	1600	2000	
2-Hexanone	ND	32000	2000	
Isopropylbenzene	13000	1600	2000	
p-Isopropyltoluene	12000	1600	2000	
Methylene Chloride	ND	16000	2000	
4-Methyl-2-Pentanone	ND	32000	2000	
Naphthalene	16000	16000	2000	
n-Propylbenzene	18000	3200	2000	
Styrene	ND	1600	2000	
1,1,1,2-Tetrachloroethane	ND	1600	2000	
1,1,2,2-Tetrachloroethane	ND	3200	2000	
Tetrachloroethene	ND	1600	2000	
Toluene	ND	1600	2000	
1,2,3-Trichlorobenzene	ND	3200	2000	
1,2,4-Trichlorobenzene	ND	3200	2000	
1,1,1-Trichloroethane	ND	1600	2000	
1,1,2-Trichloroethane	ND	1600	2000	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	16000	2000	
Trichloroethene	ND	3200	2000	
Trichlorofluoromethane	ND	16000	2000	
1,2,3-Trichloropropane	ND	3200	2000	
1,2,4-Trimethylbenzene	110000	3200	2000	
1,3,5-Trimethylbenzene	24000	3200	2000	
Vinyl Acetate	ND	16000	2000	
Vinyl Chloride	ND	1600	2000	
p/m-Xylene	53000	3200	2000	
o-Xylene	46000	1600	2000	
Methyl-t-Butyl Ether (MTBE)	ND	3200	2000	
Tert-Butyl Alcohol (TBA)	ND	32000	2000	
Diisopropyl Ether (DIPE)	ND	1600	2000	
Ethyl-t-Butyl Ether (ETBE)	ND	1600	2000	
Tert-Amyl-Methyl Ether (TAME)	ND	1600	2000	
Ethanol	ND	800000	2000	
Gasoline Range Organics (C4-C12)	6000000	80000	2000	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	90	79-139	
1,2-Dichloroethane-d4	83	71-155	
1,4-Bromofluorobenzene	103	80-120	
Toluene-d8	104	80-120	
Toluene-d8-TPPH	93	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-35'	19-06-1669-16-D	06/25/19 13:40	Solid	GC/MS OO	06/25/19	07/04/19 18:36	190704L020

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	7300000	200000	5000	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Toluene-d8-TPPH	98	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-41'	19-06-1669-17-D	06/25/19 13:56	Solid	GC/MS OO	06/25/19	07/04/19 11:31	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	7300	200	
Benzene	260	150	200	
Bromobenzene	ND	150	200	
Bromochloromethane	ND	290	200	
Bromodichloromethane	ND	150	200	
Bromoform	ND	730	200	
Bromomethane	ND	2900	200	
2-Butanone	ND	2900	200	
n-Butylbenzene	650	150	200	
sec-Butylbenzene	360	150	200	
tert-Butylbenzene	ND	150	200	
Carbon Disulfide	ND	1500	200	
Carbon Tetrachloride	ND	150	200	
Chlorobenzene	ND	150	200	
Chloroethane	ND	290	200	
Chloroform	ND	150	200	
Chloromethane	ND	2900	200	
2-Chlorotoluene	ND	150	200	
4-Chlorotoluene	ND	150	200	
Dibromochloromethane	ND	290	200	
1,2-Dibromo-3-Chloropropane	ND	730	200	
1,2-Dibromoethane	ND	150	200	
Dibromomethane	ND	150	200	
1,2-Dichlorobenzene	ND	150	200	
1,3-Dichlorobenzene	ND	150	200	
1,4-Dichlorobenzene	ND	150	200	
Dichlorodifluoromethane	ND	290	200	
1,1-Dichloroethane	ND	150	200	
1,2-Dichloroethane	ND	150	200	
1,1-Dichloroethene	ND	150	200	
c-1,2-Dichloroethene	ND	150	200	
t-1,2-Dichloroethene	ND	150	200	
1,2-Dichloropropane	ND	150	200	
1,3-Dichloropropane	ND	150	200	
2,2-Dichloropropane	ND	730	200	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	290	200	
c-1,3-Dichloropropene	ND	150	200	
t-1,3-Dichloropropene	ND	290	200	
Ethylbenzene	1100	150	200	
2-Hexanone	ND	2900	200	
Isopropylbenzene	870	150	200	
p-Isopropyltoluene	890	150	200	
Methylene Chloride	ND	1500	200	
4-Methyl-2-Pentanone	ND	2900	200	
Naphthalene	ND	1500	200	
n-Propylbenzene	990	290	200	
Styrene	ND	150	200	
1,1,1,2-Tetrachloroethane	ND	150	200	
1,1,2,2-Tetrachloroethane	ND	290	200	
Tetrachloroethene	ND	150	200	
Toluene	ND	150	200	
1,2,3-Trichlorobenzene	ND	290	200	
1,2,4-Trichlorobenzene	ND	290	200	
1,1,1-Trichloroethane	ND	150	200	
1,1,2-Trichloroethane	ND	150	200	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1500	200	
Trichloroethene	ND	290	200	
Trichlorofluoromethane	ND	1500	200	
1,2,3-Trichloropropane	ND	290	200	
1,2,4-Trimethylbenzene	870	290	200	
1,3,5-Trimethylbenzene	530	290	200	
Vinyl Acetate	ND	1500	200	
Vinyl Chloride	ND	150	200	
p/m-Xylene	ND	290	200	
o-Xylene	ND	150	200	
Methyl-t-Butyl Ether (MTBE)	ND	290	200	
Tert-Butyl Alcohol (TBA)	ND	2900	200	
Diisopropyl Ether (DIPE)	ND	150	200	
Ethyl-t-Butyl Ether (ETBE)	ND	150	200	
Tert-Amyl-Methyl Ether (TAME)	ND	150	200	
Ethanol	ND	73000	200	
TPPH	500000	7300	200	
Gasoline Range Organics (C4-C12)	420000	7300	200	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	89	79-139	
1,2-Dichloroethane-d4	85	71-155	
1,4-Bromofluorobenzene	100	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	96	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-43'	19-06-1669-18-B	06/25/19 14:06	Solid	GC/MS OO	06/25/19	07/04/19 01:14	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	38	1.00	
Benzene	ND	0.75	1.00	
Bromobenzene	ND	0.75	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.75	1.00	
Bromoform	ND	3.8	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	ND	0.75	1.00	
sec-Butylbenzene	0.77	0.75	1.00	
tert-Butylbenzene	ND	0.75	1.00	
Carbon Disulfide	ND	7.5	1.00	
Carbon Tetrachloride	ND	0.75	1.00	
Chlorobenzene	ND	0.75	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.75	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.75	1.00	
4-Chlorotoluene	ND	0.75	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.8	1.00	
1,2-Dibromoethane	ND	0.75	1.00	
Dibromomethane	ND	0.75	1.00	
1,2-Dichlorobenzene	ND	0.75	1.00	
1,3-Dichlorobenzene	ND	0.75	1.00	
1,4-Dichlorobenzene	ND	0.75	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.75	1.00	
1,2-Dichloroethane	4.3	0.75	1.00	
1,1-Dichloroethene	ND	0.75	1.00	
c-1,2-Dichloroethene	ND	0.75	1.00	
t-1,2-Dichloroethene	ND	0.75	1.00	
1,2-Dichloropropane	ND	0.75	1.00	
1,3-Dichloropropane	ND	0.75	1.00	
2,2-Dichloropropane	ND	3.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.75	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	ND	0.75	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	0.76	0.75	1.00	
p-Isopropyltoluene	ND	0.75	1.00	
Methylene Chloride	ND	7.5	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.5	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.75	1.00	
1,1,1,2-Tetrachloroethane	ND	0.75	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.75	1.00	
Toluene	ND	0.75	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.75	1.00	
1,1,2-Trichloroethane	ND	0.75	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.5	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.5	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.5	1.00	
Vinyl Chloride	ND	0.75	1.00	
p/m-Xylene	ND	1.5	1.00	
o-Xylene	ND	0.75	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.75	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.75	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.75	1.00	
Ethanol	ND	380	1.00	
TPPH	1600	38	1.00	
Gasoline Range Organics (C4-C12)	1300	38	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	96	79-139	
1,2-Dichloroethane-d4	105	71-155	
1,4-Bromofluorobenzene	102	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-45'	19-06-1669-19-D	06/25/19 14:35	Solid	GC/MS OO	06/25/19	07/03/19 00:51	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	39	1.00	
Benzene	ND	0.78	1.00	
Bromobenzene	ND	0.78	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.78	1.00	
Bromoform	ND	3.9	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.78	1.00	
sec-Butylbenzene	ND	0.78	1.00	
tert-Butylbenzene	ND	0.78	1.00	
Carbon Disulfide	ND	7.8	1.00	
Carbon Tetrachloride	ND	0.78	1.00	
Chlorobenzene	ND	0.78	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.78	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.78	1.00	
4-Chlorotoluene	ND	0.78	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.9	1.00	
1,2-Dibromoethane	ND	0.78	1.00	
Dibromomethane	ND	0.78	1.00	
1,2-Dichlorobenzene	ND	0.78	1.00	
1,3-Dichlorobenzene	ND	0.78	1.00	
1,4-Dichlorobenzene	ND	0.78	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.78	1.00	
1,2-Dichloroethane	ND	0.78	1.00	
1,1-Dichloroethene	ND	0.78	1.00	
c-1,2-Dichloroethene	ND	0.78	1.00	
t-1,2-Dichloroethene	ND	0.78	1.00	
1,2-Dichloropropane	ND	0.78	1.00	
1,3-Dichloropropane	ND	0.78	1.00	
2,2-Dichloropropane	ND	3.9	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.78	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.78	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.78	1.00	
p-Isopropyltoluene	ND	0.78	1.00	
Methylene Chloride	ND	7.8	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	7.8	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.78	1.00	
1,1,1,2-Tetrachloroethane	ND	0.78	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.78	1.00	
Toluene	ND	0.78	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.78	1.00	
1,1,2-Trichloroethane	ND	0.78	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.8	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	7.8	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	7.8	1.00	
Vinyl Chloride	ND	0.78	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.78	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.78	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.78	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.78	1.00	
Ethanol	ND	390	1.00	
TPPH	930	39	1.00	
Gasoline Range Organics (C4-C12)	870	39	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	103	79-139	
1,2-Dichloroethane-d4	112	71-155	
1,4-Bromofluorobenzene	100	80-120	
Toluene-d8	105	80-120	
Toluene-d8-TPPH	105	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2077	N/A	Solid	GC/MS OO	07/02/19	07/02/19 18:57	190702L028

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	100	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2079	N/A	Solid	GC/MS OO	07/03/19	07/03/19 18:51	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	100	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	101	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2080	N/A	Solid	GC/MS OO	07/03/19	07/04/19 06:08	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	5000	50.0	
Benzene	ND	100	50.0	
Bromobenzene	ND	100	50.0	
Bromochloromethane	ND	200	50.0	
Bromodichloromethane	ND	100	50.0	
Bromoform	ND	500	50.0	
Bromomethane	ND	2000	50.0	
2-Butanone	ND	2000	50.0	
n-Butylbenzene	ND	100	50.0	
sec-Butylbenzene	ND	100	50.0	
tert-Butylbenzene	ND	100	50.0	
Carbon Disulfide	ND	1000	50.0	
Carbon Tetrachloride	ND	100	50.0	
Chlorobenzene	ND	100	50.0	
Chloroethane	ND	200	50.0	
Chloroform	ND	100	50.0	
Chloromethane	ND	2000	50.0	
2-Chlorotoluene	ND	100	50.0	
4-Chlorotoluene	ND	100	50.0	
Dibromochloromethane	ND	200	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	100	50.0	
Dibromomethane	ND	100	50.0	
1,2-Dichlorobenzene	ND	100	50.0	
1,3-Dichlorobenzene	ND	100	50.0	
1,4-Dichlorobenzene	ND	100	50.0	
Dichlorodifluoromethane	ND	200	50.0	
1,1-Dichloroethane	ND	100	50.0	
1,2-Dichloroethane	ND	100	50.0	
1,1-Dichloroethene	ND	100	50.0	
c-1,2-Dichloroethene	ND	100	50.0	
t-1,2-Dichloroethene	ND	100	50.0	
1,2-Dichloropropane	ND	100	50.0	
1,3-Dichloropropane	ND	100	50.0	
2,2-Dichloropropane	ND	500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	200	50.0	
c-1,3-Dichloropropene	ND	100	50.0	
t-1,3-Dichloropropene	ND	200	50.0	
Ethylbenzene	ND	100	50.0	
2-Hexanone	ND	2000	50.0	
Isopropylbenzene	ND	100	50.0	
p-Isopropyltoluene	ND	100	50.0	
Methylene Chloride	ND	1000	50.0	
4-Methyl-2-Pentanone	ND	2000	50.0	
Naphthalene	ND	1000	50.0	
n-Propylbenzene	ND	200	50.0	
Styrene	ND	100	50.0	
1,1,1,2-Tetrachloroethane	ND	100	50.0	
1,1,2,2-Tetrachloroethane	ND	200	50.0	
Tetrachloroethene	ND	100	50.0	
Toluene	ND	100	50.0	
1,2,3-Trichlorobenzene	ND	200	50.0	
1,2,4-Trichlorobenzene	ND	200	50.0	
1,1,1-Trichloroethane	ND	100	50.0	
1,1,2-Trichloroethane	ND	100	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	50.0	
Trichloroethene	ND	200	50.0	
Trichlorofluoromethane	ND	1000	50.0	
1,2,3-Trichloropropane	ND	200	50.0	
1,2,4-Trimethylbenzene	ND	200	50.0	
1,3,5-Trimethylbenzene	ND	200	50.0	
Vinyl Acetate	ND	1000	50.0	
Vinyl Chloride	ND	100	50.0	
p/m-Xylene	ND	200	50.0	
o-Xylene	ND	100	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	200	50.0	
Tert-Butyl Alcohol (TBA)	ND	2000	50.0	
Diisopropyl Ether (DIPE)	ND	100	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	100	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	100	50.0	
Ethanol	ND	50000	50.0	
TPPH	ND	5000	50.0	
Gasoline Range Organics (C4-C12)	ND	5000	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	95	79-139	
1,2-Dichloroethane-d4	94	71-155	
1,4-Bromofluorobenzene	95	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2082	N/A	Solid	GC/MS OO	07/04/19	07/04/19 18:06	190704L020

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	ND	5000	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	92	79-139	
1,2-Dichloroethane-d4	88	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	97	80-120	
Toluene-d8-TPPH	98	80-120	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: N/A
Method: ASTM D-2216 (M)
Units: %

Project: OOI

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-5.5'	19-06-1669-1-A	06/25/19 08:35	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		9.3	0.10		1.00		
CESB9-10.5'	19-06-1669-2-A	06/25/19 08:43	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		6.3	0.10		1.00		
CESB9-15.5'	19-06-1669-3-A	06/25/19 08:52	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		7.9	0.10		1.00		
CESB9-20.5'	19-06-1669-4-A	06/25/19 09:04	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		5.1	0.10		1.00		
CESB9-25.5'	19-06-1669-5-A	06/25/19 09:14	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		3.4	0.10		1.00		
CESB9-32'	19-06-1669-6-A	06/25/19 09:27	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		6.0	0.10		1.00		
CESB9-37.0'	19-06-1669-7-A	06/25/19 10:08	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		25	0.10		1.00		
CESB9-35.5'	19-06-1669-8-A	06/25/19 10:18	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Moisture		10	0.10		1.00		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/25/19
 Work Order: 19-06-1669
 Preparation: N/A
 Method: ASTM D-2216 (M)
 Units: %

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-3'	19-06-1669-9-A	06/25/19 11:20	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		2.7		0.10		1.00	
CESB10-10.5'	19-06-1669-10-A	06/25/19 11:40	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		7.8		0.10		1.00	
CESB10-15.5'	19-06-1669-11-A	06/25/19 12:20	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		7.4		0.10		1.00	
CESB10-20.5'	19-06-1669-12-A	06/25/19 12:38	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		4.7		0.10		1.00	
CESB10-25.5'	19-06-1669-13-A	06/25/19 12:51	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		5.7		0.10		1.00	
CESB10-30'	19-06-1669-14-A	06/25/19 13:01	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		5.9		0.10		1.00	
CESB10-33'	19-06-1669-15-A	06/25/19 13:15	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		6.2		0.10		1.00	
Method Blank	099-05-014-8474	N/A	Solid	N/A	06/27/19	06/27/19 14:30	J0627MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		ND		0.10		1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
19-06-1681-1	Sample	Solid	GC 49	06/26/19	06/26/19 13:53	190626S02
19-06-1681-1	Matrix Spike	Solid	GC 49	06/26/19	06/26/19 13:10	190626S02
19-06-1681-1	Matrix Spike Duplicate	Solid	GC 49	06/26/19	06/26/19 13:31	190626S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	ND	400.0	399.0	100	400.2	100	64-130	0	0-15	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3050B
Method: EPA 6010B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
19-06-1612-1	Sample	Concrete	ICP 8300	06/28/19	06/29/19 18:18	190628S01
19-06-1612-1	Matrix Spike	Concrete	ICP 8300	06/28/19	07/01/19 21:37	190628S01
19-06-1612-1	Matrix Spike Duplicate	Concrete	ICP 8300	06/28/19	07/01/19 21:39	190628S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	17.61	25.00	46.00	114	47.09	118	75-125	2	0-20	
Lead	19.83	25.00	44.77	100	46.68	107	75-125	4	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Sample Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: N/A
Method: ASTM D-2216 (M)

Project: OOI

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
19-06-1740-1	Sample	Solid	N/A	06/27/19 00:00	06/27/19 14:30	J0627MOID1
19-06-1740-1	Sample Duplicate	Solid	N/A	06/27/19 00:00	06/27/19 14:30	J0627MOID1

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Moisture	83.30	83.30	0	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

California Environmental	Date Received:	06/25/19
30423 Canwood St., Suite 208	Work Order:	19-06-1669
Agoura Hills, CA 91301-4316	Preparation:	EPA 3550B
Project: OOI	Method:	EPA 8015B (M)

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-490-3650	LCS	Solid	GC 49	06/26/19	06/26/19 12:49	190626B02

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Diesel	400.0	422.9	106	75-123	



RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 3050B
Method: EPA 6010B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
097-01-002-28068	LCS	Solid	ICP 8300	06/28/19	06/29/19 18:15	190628L01			
097-01-002-28068	LCSD	Solid	ICP 8300	06/28/19	06/29/19 18:17	190628L01			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	23.91	96	25.33	101	80-120	6	0-20	
Lead	25.00	25.05	100	26.44	106	80-120	5	0-20	

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-767-8589	LCS	Aqueous	GC/MS PP	07/01/19	07/01/19 17:45	190701L020				
099-12-767-8589	LCSD	Aqueous	GC/MS PP	07/01/19	07/01/19 18:16	190701L020				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	50.57	101	52.58	105	80-120	73-127	4	0-20	
Carbon Tetrachloride	50.00	46.83	94	49.43	99	67-139	55-151	5	0-20	
Chlorobenzene	50.00	47.96	96	48.98	98	78-120	71-127	2	0-20	
1,2-Dibromoethane	50.00	53.77	108	53.34	107	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	48.63	97	49.96	100	63-129	52-140	3	0-20	
1,2-Dichloroethane	50.00	45.59	91	46.96	94	70-130	60-140	3	0-20	
1,1-Dichloroethene	50.00	46.31	93	48.35	97	66-126	56-136	4	0-20	
Ethylbenzene	50.00	50.28	101	51.39	103	80-123	73-130	2	0-20	
Toluene	50.00	47.83	96	49.81	100	80-120	73-127	4	0-20	
Trichloroethene	50.00	49.21	98	51.24	102	80-122	73-129	4	0-20	
Vinyl Chloride	50.00	44.08	88	46.67	93	70-130	60-140	6	0-20	
p/m-Xylene	100.0	99.09	99	101.8	102	75-123	67-131	3	0-25	
o-Xylene	50.00	50.19	100	51.38	103	74-122	66-130	2	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	41.55	83	41.78	84	69-129	59-139	1	0-22	
Tert-Butyl Alcohol (TBA)	250.0	242.5	97	249.7	100	69-129	59-139	3	0-25	
Diisopropyl Ether (DIPE)	50.00	48.68	97	48.42	97	68-128	58-138	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	45.63	91	46.00	92	63-135	51-147	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.36	103	51.80	104	67-133	56-144	1	0-20	
Ethanol	500.0	470.6	94	492.6	99	42-168	21-189	5	0-20	
TPPH	1000	1079	108	996.7	100	65-135	53-147	8	0-30	
Gasoline Range Organics	1000	1038	104	936.5	94	65-135	53-147	10	0-30	
Gasoline Range Organics (C4-C12)	1000	1070	107	986.7	99	65-135	53-147	8	0-30	

Total number of LCS compounds: 22

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2077	LCS	Solid		GC/MS OO	07/02/19	07/02/19 16:59	190702L028			
099-12-779-2077	LCSD	Solid		GC/MS OO	07/02/19	07/02/19 17:28	190702L028			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	47.77	96	47.05	94	80-120	73-127	2	0-20	
Carbon Tetrachloride	50.00	50.19	100	49.22	98	65-137	53-149	2	0-20	
Chlorobenzene	50.00	49.55	99	48.46	97	80-120	73-127	2	0-20	
1,2-Dibromoethane	50.00	51.41	103	50.74	101	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	50.56	101	49.53	99	80-120	73-127	2	0-20	
1,2-Dichloroethane	50.00	48.86	98	47.12	94	80-120	73-127	4	0-20	
1,1-Dichloroethene	50.00	46.93	94	45.59	91	68-128	58-138	3	0-20	
Ethylbenzene	50.00	51.69	103	50.44	101	80-120	73-127	2	0-20	
Toluene	50.00	50.16	100	48.34	97	80-120	73-127	4	0-20	
Trichloroethene	50.00	49.64	99	48.63	97	80-120	73-127	2	0-20	
Vinyl Chloride	50.00	45.72	91	41.74	83	67-127	57-137	9	0-20	
p/m-Xylene	100.0	105.3	105	102.4	102	75-125	67-133	3	0-25	
o-Xylene	50.00	53.52	107	52.26	105	75-125	67-133	2	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	44.21	88	43.57	87	70-124	61-133	1	0-20	
Tert-Butyl Alcohol (TBA)	250.0	227.5	91	220.8	88	73-121	65-129	3	0-20	
Diisopropyl Ether (DIPE)	50.00	48.56	97	48.28	97	69-129	59-139	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	46.76	94	46.17	92	70-124	61-133	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	50.74	101	48.74	97	74-122	66-130	4	0-20	
Ethanol	500.0	485.6	97	442.6	89	51-135	37-149	9	0-27	
TPPH	1000	982.6	98	946.3	95	65-135	53-147	4	0-30	
Gasoline Range Organics (C4-C12)	1000	886.6	89	847.2	85	65-135	53-147	5	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-2079	LCS	Solid	GC/MS OO	07/03/19	07/03/19 16:53	190703L026				
099-12-779-2079	LCSD	Solid	GC/MS OO	07/03/19	07/03/19 17:23	190703L026				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	50.40	101	48.97	98	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	51.80	104	50.00	100	65-137	53-149	4	0-20	
Chlorobenzene	50.00	51.33	103	49.26	99	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	52.69	105	51.98	104	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	52.61	105	50.67	101	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	50.28	101	50.14	100	80-120	73-127	0	0-20	
1,1-Dichloroethene	50.00	48.48	97	47.18	94	68-128	58-138	3	0-20	
Ethylbenzene	50.00	53.88	108	51.42	103	80-120	73-127	5	0-20	
Toluene	50.00	52.83	106	50.99	102	80-120	73-127	4	0-20	
Trichloroethene	50.00	51.86	104	50.45	101	80-120	73-127	3	0-20	
Vinyl Chloride	50.00	45.90	92	41.55	83	67-127	57-137	10	0-20	
p/m-Xylene	100.0	110.3	110	105.1	105	75-125	67-133	5	0-25	
o-Xylene	50.00	55.34	111	53.09	106	75-125	67-133	4	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.03	86	42.48	85	70-124	61-133	1	0-20	
Tert-Butyl Alcohol (TBA)	250.0	230.0	92	214.5	86	73-121	65-129	7	0-20	
Diisopropyl Ether (DIPE)	50.00	50.21	100	48.63	97	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	46.28	93	45.49	91	70-124	61-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.65	103	51.65	103	74-122	66-130	0	0-20	
Ethanol	500.0	500.2	100	466.2	93	51-135	37-149	7	0-27	
TPPH	1000	963.5	96	980.0	98	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	863.5	86	875.5	88	65-135	53-147	1	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-2080	LCS	Solid	GC/MS OO	07/03/19	07/04/19 04:11	190703L036				
099-12-779-2080	LCSD	Solid	GC/MS OO	07/03/19	07/04/19 04:40	190703L036				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	53.69	107	46.30	93	80-120	73-127	15	0-20	
Carbon Tetrachloride	50.00	53.99	108	45.83	92	65-137	53-149	16	0-20	
Chlorobenzene	50.00	55.51	111	47.26	95	80-120	73-127	16	0-20	
1,2-Dibromoethane	50.00	57.66	115	49.67	99	80-120	73-127	15	0-20	
1,2-Dichlorobenzene	50.00	56.19	112	48.06	96	80-120	73-127	16	0-20	
1,2-Dichloroethane	50.00	52.94	106	46.10	92	80-120	73-127	14	0-20	
1,1-Dichloroethene	50.00	53.25	107	44.72	89	68-128	58-138	17	0-20	
Ethylbenzene	50.00	58.01	116	48.84	98	80-120	73-127	17	0-20	
Toluene	50.00	55.88	112	48.01	96	80-120	73-127	15	0-20	
Trichloroethene	50.00	56.29	113	47.80	96	80-120	73-127	16	0-20	
Vinyl Chloride	50.00	49.64	99	40.38	81	67-127	57-137	21	0-20	X
p/m-Xylene	100.0	117.4	117	99.30	99	75-125	67-133	17	0-25	
o-Xylene	50.00	59.74	119	51.04	102	75-125	67-133	16	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	48.34	97	40.43	81	70-124	61-133	18	0-20	
Tert-Butyl Alcohol (TBA)	250.0	253.2	101	219.4	88	73-121	65-129	14	0-20	
Diisopropyl Ether (DIPE)	50.00	54.56	109	46.39	93	69-129	59-139	16	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	52.04	104	43.02	86	70-124	61-133	19	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	55.89	112	47.49	95	74-122	66-130	16	0-20	
Ethanol	500.0	637.9	128	498.5	100	51-135	37-149	25	0-27	
TPPH	1000	904.2	90	887.4	89	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	861.6	86	799.9	80	65-135	53-147	7	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/25/19
Work Order: 19-06-1669
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2082	LCS	Solid		GC/MS OO	07/04/19	07/04/19 14:10	190704L020			
099-12-779-2082	LCSD	Solid		GC/MS OO	07/04/19	07/04/19 14:39	190704L020			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	45.00	90	46.86	94	80-120	73-127	4	0-20	
Carbon Tetrachloride	50.00	43.84	88	46.31	93	65-137	53-149	5	0-20	
Chlorobenzene	50.00	47.42	95	49.04	98	80-120	73-127	3	0-20	
1,2-Dibromoethane	50.00	49.83	100	51.79	104	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	50.00	48.84	98	49.86	100	80-120	73-127	2	0-20	
1,2-Dichloroethane	50.00	44.95	90	45.93	92	80-120	73-127	2	0-20	
1,1-Dichloroethene	50.00	43.20	86	44.49	89	68-128	58-138	3	0-20	
Ethylbenzene	50.00	48.94	98	51.09	102	80-120	73-127	4	0-20	
Toluene	50.00	48.17	96	49.23	98	80-120	73-127	2	0-20	
Trichloroethene	50.00	46.93	94	48.94	98	80-120	73-127	4	0-20	
Vinyl Chloride	50.00	39.76	80	39.65	79	67-127	57-137	0	0-20	
p/m-Xylene	100.0	99.94	100	103.5	103	75-125	67-133	3	0-25	
o-Xylene	50.00	51.08	102	52.52	105	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	44.40	89	44.47	89	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	205.7	82	206.0	82	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	50.00	44.62	89	45.82	92	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.10	94	48.09	96	70-124	61-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	53.46	107	55.18	110	74-122	66-130	3	0-20	
Ethanol	500.0	404.9	81	414.2	83	51-135	37-149	2	0-27	
TPPH	1000	916.0	92	932.6	93	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	823.6	82	832.5	83	65-135	53-147	1	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Sample Analysis Summary Report

Work Order: 19-06-1669

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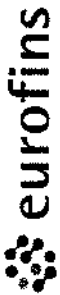
<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
ASTM D-2216 (M)	N/A	1136	N/A	1
EPA 6010B	EPA 3050B	1080	ICP 8300	1
EPA 8015B (M)	EPA 3550B	972	GC 49	1
GC/MS / EPA 8260B	EPA 5035	316	GC/MS OO	2
GC/MS / EPA 8260B	EPA 5035	1178	GC/MS OO	2
GC/MS / EPA 8260B	EPA 5030C	1191	GC/MS PP	2

Glossary of Terms and Qualifiers

Work Order: 19-06-1669

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



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CHAIN OF CUSTODY RECORD

DATE: JUNE 25, 2019
PAGE: 1 OF 2

WO # / LAB USE ONLY
19-06-1669

LABORATORY CLIENT: **CALENVIRO**

ADDRESS: **30423 Canwood Street #208** STATE: **CA** ZIP: **91301**

CITY: **Agoura Hills**

TEL: **818-991-1542**

CLIENT PROJECT NAME / NUMBER: **OOI**

PROJECT CONTACT: **C. Buckley**

SAMPLER(S), (PRINT): **Buckley**

P.O. NO.: **3029**

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
 SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

COELT EDF

GLOBAL ID:

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	LOG CODE:		Field Filled	Preserved	Unpreserved
		DATE	TIME			Unpreserved	Preserved			
1	CE589-5.5'	6/26/19	8:35A	Soil	5					
2	CE589-10.5'		8:43	✓	✓					
3	CE589-15.5'		8:52	✓	✓					
4	CE589-20.5'		9:04	✓	✓					
5	CE589-25.5'		9:14	✓	✓					
6	CE589-30.5'		9:24	✓	✓					
7	CE589-34.0'		9:08	✓	✓					
8	CE589-35.5'		10:18	✓	4					
9	CE5810-3'		11:20	✓	5					
10	CE5810-10.5'		11:40A	✓	5					

Requested Analyzes:

TPH (g) GRO (8260)

TPH (d) DRO

TPH (C6-C36) C6-C14

BTEX / MTBE (8260) 5035

VOCs (8260)

Oxygenates (8260)

Prep (5035) En Core Terra Core

SVOCs (8270)

Pesticides (8081)

PCBs (8082)

PAHs 8270 8270 SIM

T22 Metals 6010/747X 6020/747X

Cr(VI) 7196 7199 218.6

Requested Analyzes: **ARSENIC / LEAD**

Requested Analyzes: **WASTURE / LG**

Relinquished by: (Signature) *[Signature]* Received by: (Signature/Affiliation) **EC**

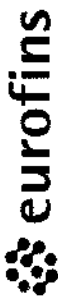
Relinquished by: (Signature) *[Signature]* Received by: (Signature/Affiliation) **DANIEL ER**

Relinquished by: (Signature) *[Signature]* Received by: (Signature/Affiliation)

Date: **6-25-19** Time: **16:38**

Date: **6-25-19** Time: **17:30**





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CHAIN OF CUSTODY RECORD

DATE: JUNE 25 / 2017
PAGE: 2 OF 2

WO # / LAB USE ONLY
19-06-1669

LABORATORY CLIENT: CALENVIRO

ADDRESS: 30423 Canwood Street #208 STATE: CA ZIP: 91301

CITY: Agoura Hills

TEL: 818-991-1542

TURNDOWN TIME (Rush surcharges may apply to any TAT not "STANDARD"):
 SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

COELT EDF GLOBAL ID: LOG CODE:

SPECIAL INSTRUCTIONS:

CLIENT PROJECT NAME / NUMBER: OOI

PROJECT CONTACT: C. Buckley

P.O. NO.: 3029

SAMPLER(S): (PRINT) Buckley

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Field Filtered	Preserved	Unpreserved	TPH (g) (8260)	TPH (g) C6-C8-C14	TPH (g) DRO	BTEX / MTBE (8260)	VOCs (8260)	Oxygenates (8260)	Prep (5035) En Core Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs (8270) SIM	T22 Metals (6010/747X) 6020/747X	Cr(VI) (7196) 7199 218.6	
01	CE5B10-15.5	6/25/17	12:20P	Soil	5				X	X	X	X	X									
02	CE5B10-20.5		12:38		5				X	X	X	X	X									
03	CE5B10-25.5		12:51		5				X	X	X	X	X									
04	CE5B10-30.5		1:01		4				X	X	X	X	X									
05	CE5B10-33'		1:15		4				X	X	X	X	X									
06	CE5B10-35'		1:40		3				X	X	X	X	X									
07	CE5B10-41'		1:56		3				X	X	X	X	X									
08	CE5B10-43'		2:06		3				X	X	X	X	X									
09	CE5B10-45'		2:35		3				X	X	X	X	X									
20	CE5B10-50'		3:20P	H2O	3				X	X	X	X	X									

Received by: (Signature) [Signature]
Received by: (Signature) [Signature]
Received by: (Signature) [Signature]

Date: 6-25-17 Time: 16:38
Date: 6-25-17 Time: 17:30
Date: _____ Time: _____

Received by: (Signature/Affiliation) EC
Received by: (Signature/Affiliation) DANIEL
Received by: (Signature/Affiliation) EC

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: CALENVIRO

DATE: 06/25/2019

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)
 Thermometer ID: SC6 (CF: -0.2°C); Temperature (w/o CF): 5.4 °C (w/ CF): 5.2 °C; Blank Sample
 Sample(s) outside temperature criteria (PM/APM contacted by: _____)
 Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling
 Sample(s) received at ambient temperature; placed on ice for transport by courier
 Ambient Temperature: Air Filter
 Checked by: 1053

CUSTODY SEAL:
 Cooler Present and Intact Present but Not Intact Not Present N/A
 Sample(s) Present and Intact Present but Not Intact Not Present N/A
 Checked by: 1053
 Checked by: CR

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Container(s) for certain analysis free of headspace.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tediar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: VOA VOAh VOAna₂ 100PJ 100PJna₂ 125AGB 125AGBh 125AGBp 125PB 125PBz_{na} (pH_9)
 250AGB 250CGB 250CGBs (pH_2) 250PB 250PBn (pH_2) 500AGB 500AGJ 500AGJs (pH_2) 500PB
 1AGB 1AGBna₂ 1AGBs (pH_2) 1AGBs (O&G) 1PB 1PBna (pH_12) _____ _____
 Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (✓) EnCores® (_____) TerraCores® (B) _____
 Air: Tediar™ Canister Sorbent Tube PUF _____ Other Matrix (____): _____
 Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag
 Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: CR
 s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, z_{na} = Zn (CH₃CO₂)₂ + NaOH Reviewed by: 106

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WORK ORDER NUMBER: 19-06-1771

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: California Environmental

Client Project Name: OOI

Attention: Charles Buckley
30423 Canwood St.
Suite 208
Agoura Hills, CA 91301-4316

Approved for release on 07/09/2019 by:
Don Burley
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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 Work Order Number: 19-06-1771

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 06/26/19. They were assigned to Work Order 19-06-1771.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-13A): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: California Environmental	Work Order:	19-06-1771
30423 Canwood St., Suite 208	Project Name:	OOI
Agoura Hills, CA 91301-4316	PO Number:	3029
	Date/Time Received:	06/26/19 17:50
	Number of Containers:	82

Attn: Charles Buckley

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
CESB11-GW	19-06-1771-1	06/26/19 07:50	3	Aqueous
CESB11-6.5'	19-06-1771-2	06/26/19 08:12	5	Solid
CESB11-11.5'	19-06-1771-3	06/26/19 08:26	5	Solid
CESB11-15.5'	19-06-1771-4	06/26/19 08:36	5	Solid
CESB11-20.5'	19-06-1771-5	06/26/19 08:49	5	Solid
CESB11-25.5'	19-06-1771-6	06/26/19 08:59	5	Solid
CESB11-30'	19-06-1771-7	06/26/19 09:17	4	Solid
CESB11-35.5'	19-06-1771-8	06/26/19 09:36	4	Solid
CESB11-40'	19-06-1771-9	06/26/19 10:10	3	Solid
CESB11-53'	19-06-1771-10	06/26/19 10:55	2	Solid
CESB12-6'	19-06-1771-11	06/26/19 11:45	5	Solid
CESB12-10'	19-06-1771-12	06/26/19 11:55	5	Solid
CESB12-15'	19-06-1771-13	06/26/19 12:15	5	Solid
CESB12-20'	19-06-1771-14	06/26/19 12:25	5	Solid
CESB12-25'	19-06-1771-15	06/26/19 12:40	5	Solid
CESB12-30'	19-06-1771-16	06/26/19 12:55	3	Solid
CESB12-38'	19-06-1771-17	06/26/19 13:08	3	Solid
CESB12-39.5'	19-06-1771-18	06/26/19 13:25	3	Solid
CESB12-42.5'	19-06-1771-19	06/26/19 13:45	3	Solid
CE DUP 1	19-06-1771-20	06/26/19 00:00	1	Solid
CESB12-46'	19-06-1771-21	06/26/19 14:05	3	Solid

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-6.5'	19-06-1771-2-A	06/26/19 08:12	Solid	GC 48	06/28/19	06/29/19 00:54	190628B08A

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	ND	4.9	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	82	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-11.5'	19-06-1771-3-A	06/26/19 08:26	Solid	GC 48	06/28/19	06/29/19 01:15	190628B08A

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	ND	4.9	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	73	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-15.5'	19-06-1771-4-A	06/26/19 08:36	Solid	GC 48	06/28/19	06/29/19 01:36	190628B08A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	67	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-20.5'	19-06-1771-5-A	06/26/19 08:49	Solid	GC 48	06/28/19	06/29/19 01:57	190628B08A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.1	1.00	
C7	ND	5.1	1.00	
C8	ND	5.1	1.00	
C9-C10	ND	5.1	1.00	
C11-C12	ND	5.1	1.00	
C13-C14	ND	5.1	1.00	
C15-C16	ND	5.1	1.00	
C17-C18	ND	5.1	1.00	
C19-C20	ND	5.1	1.00	
C21-C22	ND	5.1	1.00	
C23-C24	ND	5.1	1.00	
C25-C28	ND	5.1	1.00	
C29-C32	ND	5.1	1.00	
C33-C36	ND	5.1	1.00	
C37-C40	ND	5.1	1.00	
C41-C44	ND	5.1	1.00	
C6-C44 Total	ND	5.1	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	71	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental 30423 Canwood St., Suite 208 Agoura Hills, CA 91301-4316	Date Received: 06/26/19 Work Order: 19-06-1771 Preparation: EPA 3550B Method: EPA 8015B (M) Units: mg/kg
Project: OOI	Page 5 of 13

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-25.5'	19-06-1771-6-A	06/26/19 08:59	Solid	GC 48	06/28/19	06/29/19 13:15	190628B08A

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	ND	4.9	1.00	
 <u>Surrogate</u>	 <u>Rec. (%)</u>	 <u>Control Limits</u>	 <u>Qualifiers</u>	
n-Octacosane	95	61-145		

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-30'	19-06-1771-7-A	06/26/19 09:17	Solid	GC 48	06/28/19	06/29/19 02:40	190628B08A

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.0	1.00	
C7	10	5.0	1.00	
C8	27	5.0	1.00	
C9-C10	64	5.0	1.00	
C11-C12	25	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	130	5.0	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	79	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-35.5'	19-06-1771-8-A	06/26/19 09:36	Solid	GC 48	06/28/19	06/29/19 03:01	190628B08A

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.1	1.00	
C7	ND	5.1	1.00	
C8	10	5.1	1.00	
C9-C10	24	5.1	1.00	
C11-C12	12	5.1	1.00	
C13-C14	ND	5.1	1.00	
C15-C16	ND	5.1	1.00	
C17-C18	ND	5.1	1.00	
C19-C20	ND	5.1	1.00	
C21-C22	ND	5.1	1.00	
C23-C24	ND	5.1	1.00	
C25-C28	ND	5.1	1.00	
C29-C32	ND	5.1	1.00	
C33-C36	ND	5.1	1.00	
C37-C40	ND	5.1	1.00	
C41-C44	ND	5.1	1.00	
C6-C44 Total	52	5.1	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	75	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-6'	19-06-1771-11-A	06/26/19 11:45	Solid	GC 48	06/28/19	06/29/19 03:43	190628B08A

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	5.7	5.0	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	82	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-10'	19-06-1771-12-A	06/26/19 11:55	Solid	GC 48	06/28/19	06/29/19 04:04	190628B08A

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.1	1.00	
C7	ND	5.1	1.00	
C8	ND	5.1	1.00	
C9-C10	ND	5.1	1.00	
C11-C12	ND	5.1	1.00	
C13-C14	ND	5.1	1.00	
C15-C16	ND	5.1	1.00	
C17-C18	ND	5.1	1.00	
C19-C20	ND	5.1	1.00	
C21-C22	ND	5.1	1.00	
C23-C24	ND	5.1	1.00	
C25-C28	ND	5.1	1.00	
C29-C32	ND	5.1	1.00	
C33-C36	ND	5.1	1.00	
C37-C40	ND	5.1	1.00	
C41-C44	ND	5.1	1.00	
C6-C44 Total	5.3	5.1	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	73	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-15'	19-06-1771-13-A	06/26/19 12:15	Solid	GC 48	06/28/19	06/29/19 04:25	190628B08A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	79	61-145		


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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-20'	19-06-1771-14-A	06/26/19 12:25	Solid	GC 48	06/28/19	06/29/19 04:46	190628B08A

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	ND	4.9	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	66	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-25'	19-06-1771-15-A	06/26/19 12:40	Solid	GC 48	06/28/19	06/29/19 05:07	190628B08A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.1	1.00	
C7	ND	5.1	1.00	
C8	ND	5.1	1.00	
C9-C10	ND	5.1	1.00	
C11-C12	ND	5.1	1.00	
C13-C14	ND	5.1	1.00	
C15-C16	ND	5.1	1.00	
C17-C18	ND	5.1	1.00	
C19-C20	ND	5.1	1.00	
C21-C22	ND	5.1	1.00	
C23-C24	ND	5.1	1.00	
C25-C28	ND	5.1	1.00	
C29-C32	ND	5.1	1.00	
C33-C36	ND	5.1	1.00	
C37-C40	ND	5.1	1.00	
C41-C44	ND	5.1	1.00	
C6-C44 Total	ND	5.1	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	77	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-15-490-3654	N/A	Solid	GC 48	06/28/19	06/28/19 23:51	190628B08A

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	83	61-145		


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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-6.5'	19-06-1771-2-A	06/26/19 08:12	Solid	ICP 8300	07/01/19	07/01/19 21:53	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		9.37		0.746		0.995	
Lead		1.72		0.498		0.995	
CESB11-11.5'	19-06-1771-3-A	06/26/19 08:26	Solid	ICP 8300	07/01/19	07/01/19 22:04	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		14.1		0.750		1.00	
Lead		2.06		0.500		1.00	
CESB11-15.5'	19-06-1771-4-A	06/26/19 08:36	Solid	ICP 8300	07/01/19	07/01/19 22:06	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		17.8		0.732		0.976	
Lead		1.76		0.488		0.976	
CESB11-20.5'	19-06-1771-5-A	06/26/19 08:49	Solid	ICP 8300	07/01/19	07/01/19 22:07	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		3.98		0.746		0.995	
Lead		ND		0.498		0.995	
CESB11-25.5'	19-06-1771-6-A	06/26/19 08:59	Solid	ICP 8300	07/01/19	07/01/19 22:09	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		1.37		0.750		1.00	
Lead		0.795		0.500		1.00	
CESB11-30'	19-06-1771-7-A	06/26/19 09:17	Solid	ICP 8300	07/01/19	07/01/19 22:11	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		5.18		0.754		1.01	
Lead		1.25		0.503		1.01	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-35.5'	19-06-1771-8-A	06/26/19 09:36	Solid	ICP 8300	07/01/19	07/01/19 22:13	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		14.7		0.725		0.966	
Lead		0.956		0.483		0.966	
CESB12-6'	19-06-1771-11-A	06/26/19 11:45	Solid	ICP 8300	07/01/19	07/01/19 22:15	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		28.1		0.743		0.990	
Lead		1.26		0.495		0.990	
CESB12-10'	19-06-1771-12-A	06/26/19 11:55	Solid	ICP 8300	07/01/19	07/01/19 22:16	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.728		0.971	
Lead		ND		0.485		0.971	
CESB12-15'	19-06-1771-13-A	06/26/19 12:15	Solid	ICP 8300	07/01/19	07/01/19 22:18	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		2.17		0.728		0.971	
Lead		1.08		0.485		0.971	
CESB12-20'	19-06-1771-14-A	06/26/19 12:25	Solid	ICP 8300	07/01/19	07/01/19 22:24	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		2.88		0.735		0.980	
Lead		0.842		0.490		0.980	
CESB12-25'	19-06-1771-15-A	06/26/19 12:40	Solid	ICP 8300	07/01/19	07/01/19 22:26	190701L02A
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		2.63		0.728		0.971	
Lead		ND		0.485		0.971	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental	Date Received:	06/26/19
30423 Canwood St., Suite 208	Work Order:	19-06-1771
Agoura Hills, CA 91301-4316	Preparation:	EPA 3050B
	Method:	EPA 6010B
	Units:	mg/kg
Project: OOI		Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	097-01-002-28071	N/A	Solid	ICP 8300	07/01/19	07/01/19 21:46	190701L02A

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	ND	0.739	0.985	
Lead	ND	0.493	0.985	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-6.5'	19-06-1771-2-D	06/26/19 08:12	Solid	GC/MS OO	06/26/19	07/03/19 19:21	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	46	1.00	
Benzene	ND	0.91	1.00	
Bromobenzene	ND	0.91	1.00	
Bromochloromethane	ND	1.8	1.00	
Bromodichloromethane	ND	0.91	1.00	
Bromoform	ND	4.6	1.00	
Bromomethane	ND	18	1.00	
2-Butanone	ND	18	1.00	
n-Butylbenzene	ND	0.91	1.00	
sec-Butylbenzene	ND	0.91	1.00	
tert-Butylbenzene	ND	0.91	1.00	
Carbon Disulfide	ND	9.1	1.00	
Carbon Tetrachloride	ND	0.91	1.00	
Chlorobenzene	ND	0.91	1.00	
Chloroethane	ND	1.8	1.00	
Chloroform	ND	0.91	1.00	
Chloromethane	ND	18	1.00	
2-Chlorotoluene	ND	0.91	1.00	
4-Chlorotoluene	ND	0.91	1.00	
Dibromochloromethane	ND	1.8	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.6	1.00	
1,2-Dibromoethane	ND	0.91	1.00	
Dibromomethane	ND	0.91	1.00	
1,2-Dichlorobenzene	ND	0.91	1.00	
1,3-Dichlorobenzene	ND	0.91	1.00	
1,4-Dichlorobenzene	ND	0.91	1.00	
Dichlorodifluoromethane	ND	1.8	1.00	
1,1-Dichloroethane	ND	0.91	1.00	
1,2-Dichloroethane	ND	0.91	1.00	
1,1-Dichloroethene	ND	0.91	1.00	
c-1,2-Dichloroethene	ND	0.91	1.00	
t-1,2-Dichloroethene	ND	0.91	1.00	
1,2-Dichloropropane	ND	0.91	1.00	
1,3-Dichloropropane	ND	0.91	1.00	
2,2-Dichloropropane	ND	4.6	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.8	1.00	
c-1,3-Dichloropropene	ND	0.91	1.00	
t-1,3-Dichloropropene	ND	1.8	1.00	
Ethylbenzene	ND	0.91	1.00	
2-Hexanone	ND	18	1.00	
Isopropylbenzene	ND	0.91	1.00	
p-Isopropyltoluene	ND	0.91	1.00	
Methylene Chloride	ND	9.1	1.00	
4-Methyl-2-Pentanone	ND	18	1.00	
Naphthalene	ND	9.1	1.00	
n-Propylbenzene	ND	1.8	1.00	
Styrene	ND	0.91	1.00	
1,1,1,2-Tetrachloroethane	ND	0.91	1.00	
1,1,2,2-Tetrachloroethane	ND	1.8	1.00	
Tetrachloroethene	ND	0.91	1.00	
Toluene	ND	0.91	1.00	
1,2,3-Trichlorobenzene	ND	1.8	1.00	
1,2,4-Trichlorobenzene	ND	1.8	1.00	
1,1,1-Trichloroethane	ND	0.91	1.00	
1,1,2-Trichloroethane	ND	0.91	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.1	1.00	
Trichloroethene	ND	1.8	1.00	
Trichlorofluoromethane	ND	9.1	1.00	
1,2,3-Trichloropropane	ND	1.8	1.00	
1,2,4-Trimethylbenzene	ND	1.8	1.00	
1,3,5-Trimethylbenzene	ND	1.8	1.00	
Vinyl Acetate	ND	9.1	1.00	
Vinyl Chloride	ND	0.91	1.00	
p/m-Xylene	ND	1.8	1.00	
o-Xylene	ND	0.91	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.8	1.00	
Tert-Butyl Alcohol (TBA)	ND	18	1.00	
Diisopropyl Ether (DIPE)	ND	0.91	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.91	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.91	1.00	
Ethanol	ND	460	1.00	
TPPH	ND	46	1.00	
Gasoline Range Organics (C4-C12)	ND	46	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	108	79-139	
1,2-Dichloroethane-d4	113	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-11.5'	19-06-1771-3-D	06/26/19 08:26	Solid	GC/MS OO	06/26/19	07/03/19 19:50	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	68	1.00	
Benzene	ND	1.4	1.00	
Bromobenzene	ND	1.4	1.00	
Bromochloromethane	ND	2.7	1.00	
Bromodichloromethane	ND	1.4	1.00	
Bromoform	ND	6.8	1.00	
Bromomethane	ND	27	1.00	
2-Butanone	ND	27	1.00	
n-Butylbenzene	ND	1.4	1.00	
sec-Butylbenzene	ND	1.4	1.00	
tert-Butylbenzene	ND	1.4	1.00	
Carbon Disulfide	ND	14	1.00	
Carbon Tetrachloride	ND	1.4	1.00	
Chlorobenzene	ND	1.4	1.00	
Chloroethane	ND	2.7	1.00	
Chloroform	ND	1.4	1.00	
Chloromethane	ND	27	1.00	
2-Chlorotoluene	ND	1.4	1.00	
4-Chlorotoluene	ND	1.4	1.00	
Dibromochloromethane	ND	2.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	6.8	1.00	
1,2-Dibromoethane	ND	1.4	1.00	
Dibromomethane	ND	1.4	1.00	
1,2-Dichlorobenzene	ND	1.4	1.00	
1,3-Dichlorobenzene	ND	1.4	1.00	
1,4-Dichlorobenzene	ND	1.4	1.00	
Dichlorodifluoromethane	ND	2.7	1.00	
1,1-Dichloroethane	ND	1.4	1.00	
1,2-Dichloroethane	ND	1.4	1.00	
1,1-Dichloroethene	ND	1.4	1.00	
c-1,2-Dichloroethene	ND	1.4	1.00	
t-1,2-Dichloroethene	ND	1.4	1.00	
1,2-Dichloropropane	ND	1.4	1.00	
1,3-Dichloropropane	ND	1.4	1.00	
2,2-Dichloropropane	ND	6.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.7	1.00	
c-1,3-Dichloropropene	ND	1.4	1.00	
t-1,3-Dichloropropene	ND	2.7	1.00	
Ethylbenzene	ND	1.4	1.00	
2-Hexanone	ND	27	1.00	
Isopropylbenzene	ND	1.4	1.00	
p-Isopropyltoluene	ND	1.4	1.00	
Methylene Chloride	ND	14	1.00	
4-Methyl-2-Pentanone	ND	27	1.00	
Naphthalene	ND	14	1.00	
n-Propylbenzene	ND	2.7	1.00	
Styrene	ND	1.4	1.00	
1,1,1,2-Tetrachloroethane	ND	1.4	1.00	
1,1,2,2-Tetrachloroethane	ND	2.7	1.00	
Tetrachloroethene	ND	1.4	1.00	
Toluene	ND	1.4	1.00	
1,2,3-Trichlorobenzene	ND	2.7	1.00	
1,2,4-Trichlorobenzene	ND	2.7	1.00	
1,1,1-Trichloroethane	ND	1.4	1.00	
1,1,2-Trichloroethane	ND	1.4	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	14	1.00	
Trichloroethene	ND	2.7	1.00	
Trichlorofluoromethane	ND	14	1.00	
1,2,3-Trichloropropane	ND	2.7	1.00	
1,2,4-Trimethylbenzene	ND	2.7	1.00	
1,3,5-Trimethylbenzene	ND	2.7	1.00	
Vinyl Acetate	ND	14	1.00	
Vinyl Chloride	ND	1.4	1.00	
p/m-Xylene	ND	2.7	1.00	
o-Xylene	ND	1.4	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.7	1.00	
Tert-Butyl Alcohol (TBA)	ND	27	1.00	
Diisopropyl Ether (DIPE)	ND	1.4	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.4	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.4	1.00	
Ethanol	ND	680	1.00	
TPPH	ND	68	1.00	
Gasoline Range Organics (C4-C12)	ND	68	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	105	79-139	
1,2-Dichloroethane-d4	116	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-15.5'	19-06-1771-4-D	06/26/19 08:36	Solid	GC/MS OO	06/26/19	07/03/19 20:20	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	42	1.00	
Benzene	ND	0.84	1.00	
Bromobenzene	ND	0.84	1.00	
Bromochloromethane	ND	1.7	1.00	
Bromodichloromethane	ND	0.84	1.00	
Bromoform	ND	4.2	1.00	
Bromomethane	ND	17	1.00	
2-Butanone	ND	17	1.00	
n-Butylbenzene	ND	0.84	1.00	
sec-Butylbenzene	ND	0.84	1.00	
tert-Butylbenzene	ND	0.84	1.00	
Carbon Disulfide	ND	8.4	1.00	
Carbon Tetrachloride	ND	0.84	1.00	
Chlorobenzene	ND	0.84	1.00	
Chloroethane	ND	1.7	1.00	
Chloroform	ND	0.84	1.00	
Chloromethane	ND	17	1.00	
2-Chlorotoluene	ND	0.84	1.00	
4-Chlorotoluene	ND	0.84	1.00	
Dibromochloromethane	ND	1.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.2	1.00	
1,2-Dibromoethane	ND	0.84	1.00	
Dibromomethane	ND	0.84	1.00	
1,2-Dichlorobenzene	ND	0.84	1.00	
1,3-Dichlorobenzene	ND	0.84	1.00	
1,4-Dichlorobenzene	ND	0.84	1.00	
Dichlorodifluoromethane	ND	1.7	1.00	
1,1-Dichloroethane	ND	0.84	1.00	
1,2-Dichloroethane	ND	0.84	1.00	
1,1-Dichloroethene	ND	0.84	1.00	
c-1,2-Dichloroethene	ND	0.84	1.00	
t-1,2-Dichloroethene	ND	0.84	1.00	
1,2-Dichloropropane	ND	0.84	1.00	
1,3-Dichloropropane	ND	0.84	1.00	
2,2-Dichloropropane	ND	4.2	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.7	1.00	
c-1,3-Dichloropropene	ND	0.84	1.00	
t-1,3-Dichloropropene	ND	1.7	1.00	
Ethylbenzene	ND	0.84	1.00	
2-Hexanone	ND	17	1.00	
Isopropylbenzene	ND	0.84	1.00	
p-Isopropyltoluene	ND	0.84	1.00	
Methylene Chloride	ND	8.4	1.00	
4-Methyl-2-Pentanone	ND	17	1.00	
Naphthalene	ND	8.4	1.00	
n-Propylbenzene	ND	1.7	1.00	
Styrene	ND	0.84	1.00	
1,1,1,2-Tetrachloroethane	ND	0.84	1.00	
1,1,2,2-Tetrachloroethane	ND	1.7	1.00	
Tetrachloroethene	ND	0.84	1.00	
Toluene	ND	0.84	1.00	
1,2,3-Trichlorobenzene	ND	1.7	1.00	
1,2,4-Trichlorobenzene	ND	1.7	1.00	
1,1,1-Trichloroethane	ND	0.84	1.00	
1,1,2-Trichloroethane	ND	0.84	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.4	1.00	
Trichloroethene	ND	1.7	1.00	
Trichlorofluoromethane	ND	8.4	1.00	
1,2,3-Trichloropropane	ND	1.7	1.00	
1,2,4-Trimethylbenzene	ND	1.7	1.00	
1,3,5-Trimethylbenzene	ND	1.7	1.00	
Vinyl Acetate	ND	8.4	1.00	
Vinyl Chloride	ND	0.84	1.00	
p/m-Xylene	ND	1.7	1.00	
o-Xylene	ND	0.84	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.7	1.00	
Tert-Butyl Alcohol (TBA)	ND	17	1.00	
Diisopropyl Ether (DIPE)	ND	0.84	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.84	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.84	1.00	
Ethanol	ND	420	1.00	
TPPH	ND	42	1.00	
Gasoline Range Organics (C4-C12)	ND	42	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	108	79-139	
1,2-Dichloroethane-d4	122	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-20.5'	19-06-1771-5-D	06/26/19 08:49	Solid	GC/MS OO	06/26/19	07/04/19 19:05	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	48	1.00	
Benzene	ND	0.97	1.00	
Bromobenzene	ND	0.97	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.97	1.00	
Bromoform	ND	4.8	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.97	1.00	
sec-Butylbenzene	ND	0.97	1.00	
tert-Butylbenzene	ND	0.97	1.00	
Carbon Disulfide	ND	9.7	1.00	
Carbon Tetrachloride	ND	0.97	1.00	
Chlorobenzene	ND	0.97	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.97	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.97	1.00	
4-Chlorotoluene	ND	0.97	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.8	1.00	
1,2-Dibromoethane	ND	0.97	1.00	
Dibromomethane	ND	0.97	1.00	
1,2-Dichlorobenzene	ND	0.97	1.00	
1,3-Dichlorobenzene	ND	0.97	1.00	
1,4-Dichlorobenzene	ND	0.97	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.97	1.00	
1,2-Dichloroethane	ND	0.97	1.00	
1,1-Dichloroethene	ND	0.97	1.00	
c-1,2-Dichloroethene	ND	0.97	1.00	
t-1,2-Dichloroethene	ND	0.97	1.00	
1,2-Dichloropropane	ND	0.97	1.00	
1,3-Dichloropropane	ND	0.97	1.00	
2,2-Dichloropropane	ND	4.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.97	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.97	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.97	1.00	
p-Isopropyltoluene	ND	0.97	1.00	
Methylene Chloride	ND	9.7	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.7	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.97	1.00	
1,1,1,2-Tetrachloroethane	ND	0.97	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	ND	0.97	1.00	
Toluene	ND	0.97	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.97	1.00	
1,1,2-Trichloroethane	ND	0.97	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.7	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.7	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.7	1.00	
Vinyl Chloride	ND	0.97	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.97	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	
Tert-Butyl Alcohol (TBA)	ND	19	1.00	
Diisopropyl Ether (DIPE)	ND	0.97	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.97	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.97	1.00	
Ethanol	ND	480	1.00	
TPPH	ND	48	1.00	
Gasoline Range Organics (C4-C12)	ND	48	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	101	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-25.5'	19-06-1771-6-D	06/26/19 08:59	Solid	GC/MS OO	06/26/19	07/04/19 19:35	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	48	1.00	
Benzene	ND	0.96	1.00	
Bromobenzene	ND	0.96	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.96	1.00	
Bromoform	ND	4.8	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.96	1.00	
sec-Butylbenzene	ND	0.96	1.00	
tert-Butylbenzene	ND	0.96	1.00	
Carbon Disulfide	ND	9.6	1.00	
Carbon Tetrachloride	ND	0.96	1.00	
Chlorobenzene	ND	0.96	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.96	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.96	1.00	
4-Chlorotoluene	ND	0.96	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.8	1.00	
1,2-Dibromoethane	ND	0.96	1.00	
Dibromomethane	ND	0.96	1.00	
1,2-Dichlorobenzene	ND	0.96	1.00	
1,3-Dichlorobenzene	ND	0.96	1.00	
1,4-Dichlorobenzene	ND	0.96	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.96	1.00	
1,2-Dichloroethane	ND	0.96	1.00	
1,1-Dichloroethene	ND	0.96	1.00	
c-1,2-Dichloroethene	ND	0.96	1.00	
t-1,2-Dichloroethene	ND	0.96	1.00	
1,2-Dichloropropane	ND	0.96	1.00	
1,3-Dichloropropane	ND	0.96	1.00	
2,2-Dichloropropane	ND	4.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.96	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.96	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.96	1.00	
p-Isopropyltoluene	ND	0.96	1.00	
Methylene Chloride	ND	9.6	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.6	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.96	1.00	
1,1,1,2-Tetrachloroethane	ND	0.96	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	ND	0.96	1.00	
Toluene	ND	0.96	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.96	1.00	
1,1,2-Trichloroethane	ND	0.96	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.6	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.6	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.6	1.00	
Vinyl Chloride	ND	0.96	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.96	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	
Tert-Butyl Alcohol (TBA)	ND	19	1.00	
Diisopropyl Ether (DIPE)	ND	0.96	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.96	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.96	1.00	
Ethanol	ND	480	1.00	
TPPH	ND	48	1.00	
Gasoline Range Organics (C4-C12)	ND	48	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	97	80-120	
Toluene-d8-TPPH	99	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-30'	19-06-1771-7-C	06/26/19 09:17	Solid	GC/MS OO	06/26/19	07/07/19 20:51	190707L004

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	44	1.00	
Benzene	1.3	0.88	1.00	
Bromobenzene	ND	0.88	1.00	
Bromochloromethane	ND	1.8	1.00	
Bromodichloromethane	ND	0.88	1.00	
Bromoform	ND	4.4	1.00	
Bromomethane	ND	18	1.00	
2-Butanone	ND	18	1.00	
n-Butylbenzene	ND	0.88	1.00	
sec-Butylbenzene	1.9	0.88	1.00	
tert-Butylbenzene	ND	0.88	1.00	
Carbon Disulfide	ND	8.8	1.00	
Carbon Tetrachloride	ND	0.88	1.00	
Chlorobenzene	ND	0.88	1.00	
Chloroethane	ND	1.8	1.00	
Chloroform	ND	0.88	1.00	
Chloromethane	ND	18	1.00	
2-Chlorotoluene	ND	0.88	1.00	
4-Chlorotoluene	ND	0.88	1.00	
Dibromochloromethane	ND	1.8	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.4	1.00	
1,2-Dibromoethane	ND	0.88	1.00	
Dibromomethane	ND	0.88	1.00	
1,2-Dichlorobenzene	ND	0.88	1.00	
1,3-Dichlorobenzene	ND	0.88	1.00	
1,4-Dichlorobenzene	ND	0.88	1.00	
Dichlorodifluoromethane	ND	1.8	1.00	
1,1-Dichloroethane	ND	0.88	1.00	
1,2-Dichloroethane	ND	0.88	1.00	
1,1-Dichloroethene	ND	0.88	1.00	
c-1,2-Dichloroethene	ND	0.88	1.00	
t-1,2-Dichloroethene	ND	0.88	1.00	
1,2-Dichloropropane	ND	0.88	1.00	
1,3-Dichloropropane	ND	0.88	1.00	
2,2-Dichloropropane	ND	4.4	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.8	1.00	
c-1,3-Dichloropropene	ND	0.88	1.00	
t-1,3-Dichloropropene	ND	1.8	1.00	
Ethylbenzene	17	0.88	1.00	
2-Hexanone	ND	18	1.00	
Isopropylbenzene	5.3	0.88	1.00	
p-Isopropyltoluene	4.8	0.88	1.00	
Methylene Chloride	ND	8.8	1.00	
4-Methyl-2-Pentanone	ND	18	1.00	
Naphthalene	ND	8.8	1.00	
n-Propylbenzene	6.0	1.8	1.00	
Styrene	ND	0.88	1.00	
1,1,1,2-Tetrachloroethane	ND	0.88	1.00	
1,1,2,2-Tetrachloroethane	ND	1.8	1.00	
Tetrachloroethene	ND	0.88	1.00	
Toluene	ND	0.88	1.00	
1,2,3-Trichlorobenzene	ND	1.8	1.00	
1,2,4-Trichlorobenzene	ND	1.8	1.00	
1,1,1-Trichloroethane	ND	0.88	1.00	
1,1,2-Trichloroethane	ND	0.88	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.8	1.00	
Trichloroethene	ND	1.8	1.00	
Trichlorofluoromethane	ND	8.8	1.00	
1,2,3-Trichloropropane	ND	1.8	1.00	
1,2,4-Trimethylbenzene	39	1.8	1.00	
1,3,5-Trimethylbenzene	15	1.8	1.00	
Vinyl Acetate	ND	8.8	1.00	
Vinyl Chloride	ND	0.88	1.00	
p/m-Xylene	19	1.8	1.00	
o-Xylene	ND	0.88	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.8	1.00	
Tert-Butyl Alcohol (TBA)	ND	18	1.00	
Diisopropyl Ether (DIPE)	ND	0.88	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.88	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.88	1.00	
Ethanol	ND	440	1.00	
TPPH	3200	44	1.00	
Gasoline Range Organics (C4-C12)	2800	44	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	108	79-139	
1,2-Dichloroethane-d4	112	71-155	
1,4-Bromofluorobenzene	106	80-120	
Toluene-d8	105	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-35.5'	19-06-1771-8-E	06/26/19 09:36	Solid	GC/MS OO	06/26/19	07/04/19 20:33	190704L020

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	4400	100	
Benzene	ND	87	100	
Bromobenzene	ND	87	100	
Bromochloromethane	ND	170	100	
Bromodichloromethane	ND	87	100	
Bromoform	ND	440	100	
Bromomethane	ND	1700	100	
2-Butanone	ND	1700	100	
n-Butylbenzene	320	87	100	
sec-Butylbenzene	150	87	100	
tert-Butylbenzene	ND	87	100	
Carbon Disulfide	ND	870	100	
Carbon Tetrachloride	ND	87	100	
Chlorobenzene	ND	87	100	
Chloroethane	ND	170	100	
Chloroform	ND	87	100	
Chloromethane	ND	1700	100	
2-Chlorotoluene	ND	87	100	
4-Chlorotoluene	ND	87	100	
Dibromochloromethane	ND	170	100	
1,2-Dibromo-3-Chloropropane	ND	440	100	
1,2-Dibromoethane	ND	87	100	
Dibromomethane	ND	87	100	
1,2-Dichlorobenzene	ND	87	100	
1,3-Dichlorobenzene	ND	87	100	
1,4-Dichlorobenzene	ND	87	100	
Dichlorodifluoromethane	ND	170	100	
1,1-Dichloroethane	ND	87	100	
1,2-Dichloroethane	ND	87	100	
1,1-Dichloroethene	ND	87	100	
c-1,2-Dichloroethene	ND	87	100	
t-1,2-Dichloroethene	ND	87	100	
1,2-Dichloropropane	ND	87	100	
1,3-Dichloropropane	ND	87	100	
2,2-Dichloropropane	ND	440	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	170	100	
c-1,3-Dichloropropene	ND	87	100	
t-1,3-Dichloropropene	ND	170	100	
Ethylbenzene	950	87	100	
2-Hexanone	ND	1700	100	
Isopropylbenzene	450	87	100	
p-Isopropyltoluene	360	87	100	
Methylene Chloride	ND	870	100	
4-Methyl-2-Pentanone	ND	1700	100	
Naphthalene	ND	870	100	
n-Propylbenzene	520	170	100	
Styrene	ND	87	100	
1,1,1,2-Tetrachloroethane	ND	87	100	
1,1,2,2-Tetrachloroethane	ND	170	100	
Tetrachloroethene	ND	87	100	
Toluene	ND	87	100	
1,2,3-Trichlorobenzene	ND	170	100	
1,2,4-Trichlorobenzene	ND	170	100	
1,1,1-Trichloroethane	ND	87	100	
1,1,2-Trichloroethane	ND	87	100	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	870	100	
Trichloroethene	ND	170	100	
Trichlorofluoromethane	ND	870	100	
1,2,3-Trichloropropane	ND	170	100	
1,2,4-Trimethylbenzene	1700	170	100	
1,3,5-Trimethylbenzene	310	170	100	
Vinyl Acetate	ND	870	100	
Vinyl Chloride	ND	87	100	
p/m-Xylene	670	170	100	
o-Xylene	100	87	100	
Methyl-t-Butyl Ether (MTBE)	ND	170	100	
Tert-Butyl Alcohol (TBA)	ND	1700	100	
Diisopropyl Ether (DIPE)	ND	87	100	
Ethyl-t-Butyl Ether (ETBE)	ND	87	100	
Tert-Amyl-Methyl Ether (TAME)	ND	87	100	
Ethanol	ND	44000	100	
TPPH	270000	4400	100	
Gasoline Range Organics (C4-C12)	220000	4400	100	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	92	79-139	
1,2-Dichloroethane-d4	87	71-155	
1,4-Bromofluorobenzene	101	80-120	
Toluene-d8	105	80-120	
Toluene-d8-TPPH	99	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-40'	19-06-1771-9-B	06/26/19 10:10	Solid	GC/MS OO	06/26/19	07/03/19 20:49	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	41	1.00	
Benzene	3.9	0.81	1.00	
Bromobenzene	ND	0.81	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.81	1.00	
Bromoform	ND	4.1	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.81	1.00	
sec-Butylbenzene	0.86	0.81	1.00	
tert-Butylbenzene	ND	0.81	1.00	
Carbon Disulfide	ND	8.1	1.00	
Carbon Tetrachloride	ND	0.81	1.00	
Chlorobenzene	ND	0.81	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.81	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.81	1.00	
4-Chlorotoluene	ND	0.81	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.1	1.00	
1,2-Dibromoethane	ND	0.81	1.00	
Dibromomethane	ND	0.81	1.00	
1,2-Dichlorobenzene	ND	0.81	1.00	
1,3-Dichlorobenzene	ND	0.81	1.00	
1,4-Dichlorobenzene	ND	0.81	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.81	1.00	
1,2-Dichloroethane	ND	0.81	1.00	
1,1-Dichloroethene	ND	0.81	1.00	
c-1,2-Dichloroethene	ND	0.81	1.00	
t-1,2-Dichloroethene	ND	0.81	1.00	
1,2-Dichloropropane	ND	0.81	1.00	
1,3-Dichloropropane	ND	0.81	1.00	
2,2-Dichloropropane	ND	4.1	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.81	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.81	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	5.2	0.81	1.00	
p-Isopropyltoluene	2.2	0.81	1.00	
Methylene Chloride	ND	8.1	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	8.1	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.81	1.00	
1,1,1,2-Tetrachloroethane	ND	0.81	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.81	1.00	
Toluene	1.3	0.81	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.81	1.00	
1,1,2-Trichloroethane	ND	0.81	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.1	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	8.1	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	8.1	1.00	
Vinyl Chloride	ND	0.81	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.81	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.81	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.81	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.81	1.00	
Ethanol	ND	410	1.00	
TPPH	720	41	1.00	
Gasoline Range Organics (C4-C12)	690	41	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	102	79-139	
1,2-Dichloroethane-d4	110	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	103	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-53'	19-06-1771-10-B	06/26/19 10:55	Solid	GC/MS OO	06/26/19	07/03/19 21:19	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	39	1.00	
Benzene	ND	0.79	1.00	
Bromobenzene	ND	0.79	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.79	1.00	
Bromoform	ND	3.9	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.79	1.00	
sec-Butylbenzene	ND	0.79	1.00	
tert-Butylbenzene	ND	0.79	1.00	
Carbon Disulfide	ND	7.9	1.00	
Carbon Tetrachloride	ND	0.79	1.00	
Chlorobenzene	ND	0.79	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.79	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.79	1.00	
4-Chlorotoluene	ND	0.79	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.9	1.00	
1,2-Dibromoethane	ND	0.79	1.00	
Dibromomethane	ND	0.79	1.00	
1,2-Dichlorobenzene	ND	0.79	1.00	
1,3-Dichlorobenzene	ND	0.79	1.00	
1,4-Dichlorobenzene	ND	0.79	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.79	1.00	
1,2-Dichloroethane	ND	0.79	1.00	
1,1-Dichloroethene	ND	0.79	1.00	
c-1,2-Dichloroethene	ND	0.79	1.00	
t-1,2-Dichloroethene	ND	0.79	1.00	
1,2-Dichloropropane	ND	0.79	1.00	
1,3-Dichloropropane	ND	0.79	1.00	
2,2-Dichloropropane	ND	3.9	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.79	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.79	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.79	1.00	
p-Isopropyltoluene	ND	0.79	1.00	
Methylene Chloride	ND	7.9	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	7.9	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.79	1.00	
1,1,1,2-Tetrachloroethane	ND	0.79	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.79	1.00	
Toluene	ND	0.79	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.79	1.00	
1,1,2-Trichloroethane	ND	0.79	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.9	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	7.9	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	7.9	1.00	
Vinyl Chloride	ND	0.79	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.79	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.79	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.79	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.79	1.00	
Ethanol	ND	390	1.00	
TPPH	110	39	1.00	
Gasoline Range Organics (C4-C12)	100	39	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	105	79-139	
1,2-Dichloroethane-d4	111	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-6'	19-06-1771-11-D	06/26/19 11:45	Solid	GC/MS OO	06/26/19	07/03/19 21:48	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	37	1.00	
Benzene	ND	0.74	1.00	
Bromobenzene	ND	0.74	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.74	1.00	
Bromoform	ND	3.7	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	ND	0.74	1.00	
sec-Butylbenzene	ND	0.74	1.00	
tert-Butylbenzene	ND	0.74	1.00	
Carbon Disulfide	ND	7.4	1.00	
Carbon Tetrachloride	ND	0.74	1.00	
Chlorobenzene	ND	0.74	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.74	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.74	1.00	
4-Chlorotoluene	ND	0.74	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.7	1.00	
1,2-Dibromoethane	ND	0.74	1.00	
Dibromomethane	ND	0.74	1.00	
1,2-Dichlorobenzene	ND	0.74	1.00	
1,3-Dichlorobenzene	ND	0.74	1.00	
1,4-Dichlorobenzene	ND	0.74	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.74	1.00	
1,2-Dichloroethane	ND	0.74	1.00	
1,1-Dichloroethene	ND	0.74	1.00	
c-1,2-Dichloroethene	ND	0.74	1.00	
t-1,2-Dichloroethene	ND	0.74	1.00	
1,2-Dichloropropane	ND	0.74	1.00	
1,3-Dichloropropane	ND	0.74	1.00	
2,2-Dichloropropane	ND	3.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.74	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	ND	0.74	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	ND	0.74	1.00	
p-Isopropyltoluene	ND	0.74	1.00	
Methylene Chloride	ND	7.4	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.4	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.74	1.00	
1,1,1,2-Tetrachloroethane	ND	0.74	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.74	1.00	
Toluene	ND	0.74	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.74	1.00	
1,1,2-Trichloroethane	ND	0.74	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.4	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.4	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.4	1.00	
Vinyl Chloride	ND	0.74	1.00	
p/m-Xylene	ND	1.5	1.00	
o-Xylene	ND	0.74	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.74	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.74	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.74	1.00	
Ethanol	ND	370	1.00	
TPPH	ND	37	1.00	
Gasoline Range Organics (C4-C12)	ND	37	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	106	79-139	
1,2-Dichloroethane-d4	114	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-10'	19-06-1771-12-D	06/26/19 11:55	Solid	GC/MS OO	06/26/19	07/03/19 22:18	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	35	1.00	
Benzene	ND	0.70	1.00	
Bromobenzene	ND	0.70	1.00	
Bromochloromethane	ND	1.4	1.00	
Bromodichloromethane	ND	0.70	1.00	
Bromoform	ND	3.5	1.00	
Bromomethane	ND	14	1.00	
2-Butanone	ND	14	1.00	
n-Butylbenzene	ND	0.70	1.00	
sec-Butylbenzene	ND	0.70	1.00	
tert-Butylbenzene	ND	0.70	1.00	
Carbon Disulfide	ND	7.0	1.00	
Carbon Tetrachloride	ND	0.70	1.00	
Chlorobenzene	ND	0.70	1.00	
Chloroethane	ND	1.4	1.00	
Chloroform	ND	0.70	1.00	
Chloromethane	ND	14	1.00	
2-Chlorotoluene	ND	0.70	1.00	
4-Chlorotoluene	ND	0.70	1.00	
Dibromochloromethane	ND	1.4	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.5	1.00	
1,2-Dibromoethane	ND	0.70	1.00	
Dibromomethane	ND	0.70	1.00	
1,2-Dichlorobenzene	ND	0.70	1.00	
1,3-Dichlorobenzene	ND	0.70	1.00	
1,4-Dichlorobenzene	ND	0.70	1.00	
Dichlorodifluoromethane	ND	1.4	1.00	
1,1-Dichloroethane	ND	0.70	1.00	
1,2-Dichloroethane	ND	0.70	1.00	
1,1-Dichloroethene	ND	0.70	1.00	
c-1,2-Dichloroethene	ND	0.70	1.00	
t-1,2-Dichloroethene	ND	0.70	1.00	
1,2-Dichloropropane	ND	0.70	1.00	
1,3-Dichloropropane	ND	0.70	1.00	
2,2-Dichloropropane	ND	3.5	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.4	1.00	
c-1,3-Dichloropropene	ND	0.70	1.00	
t-1,3-Dichloropropene	ND	1.4	1.00	
Ethylbenzene	ND	0.70	1.00	
2-Hexanone	ND	14	1.00	
Isopropylbenzene	ND	0.70	1.00	
p-Isopropyltoluene	ND	0.70	1.00	
Methylene Chloride	ND	7.0	1.00	
4-Methyl-2-Pentanone	ND	14	1.00	
Naphthalene	ND	7.0	1.00	
n-Propylbenzene	ND	1.4	1.00	
Styrene	ND	0.70	1.00	
1,1,1,2-Tetrachloroethane	ND	0.70	1.00	
1,1,2,2-Tetrachloroethane	ND	1.4	1.00	
Tetrachloroethene	ND	0.70	1.00	
Toluene	ND	0.70	1.00	
1,2,3-Trichlorobenzene	ND	1.4	1.00	
1,2,4-Trichlorobenzene	ND	1.4	1.00	
1,1,1-Trichloroethane	ND	0.70	1.00	
1,1,2-Trichloroethane	ND	0.70	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.0	1.00	
Trichloroethene	ND	1.4	1.00	
Trichlorofluoromethane	ND	7.0	1.00	
1,2,3-Trichloropropane	ND	1.4	1.00	
1,2,4-Trimethylbenzene	ND	1.4	1.00	
1,3,5-Trimethylbenzene	ND	1.4	1.00	
Vinyl Acetate	ND	7.0	1.00	
Vinyl Chloride	ND	0.70	1.00	
p/m-Xylene	ND	1.4	1.00	
o-Xylene	ND	0.70	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.4	1.00	
Tert-Butyl Alcohol (TBA)	ND	14	1.00	
Diisopropyl Ether (DIPE)	ND	0.70	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.70	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.70	1.00	
Ethanol	ND	350	1.00	
TPPH	ND	35	1.00	
Gasoline Range Organics (C4-C12)	ND	35	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	108	79-139	
1,2-Dichloroethane-d4	115	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-15'	19-06-1771-13-D	06/26/19 12:15	Solid	GC/MS OO	06/26/19	07/03/19 22:47	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	35	1.00	
Benzene	ND	0.71	1.00	
Bromobenzene	ND	0.71	1.00	
Bromochloromethane	ND	1.4	1.00	
Bromodichloromethane	ND	0.71	1.00	
Bromoform	ND	3.5	1.00	
Bromomethane	ND	14	1.00	
2-Butanone	ND	14	1.00	
n-Butylbenzene	ND	0.71	1.00	
sec-Butylbenzene	ND	0.71	1.00	
tert-Butylbenzene	ND	0.71	1.00	
Carbon Disulfide	ND	7.1	1.00	
Carbon Tetrachloride	ND	0.71	1.00	
Chlorobenzene	ND	0.71	1.00	
Chloroethane	ND	1.4	1.00	
Chloroform	ND	0.71	1.00	
Chloromethane	ND	14	1.00	
2-Chlorotoluene	ND	0.71	1.00	
4-Chlorotoluene	ND	0.71	1.00	
Dibromochloromethane	ND	1.4	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.5	1.00	
1,2-Dibromoethane	ND	0.71	1.00	
Dibromomethane	ND	0.71	1.00	
1,2-Dichlorobenzene	ND	0.71	1.00	
1,3-Dichlorobenzene	ND	0.71	1.00	
1,4-Dichlorobenzene	ND	0.71	1.00	
Dichlorodifluoromethane	ND	1.4	1.00	
1,1-Dichloroethane	ND	0.71	1.00	
1,2-Dichloroethane	ND	0.71	1.00	
1,1-Dichloroethene	ND	0.71	1.00	
c-1,2-Dichloroethene	ND	0.71	1.00	
t-1,2-Dichloroethene	ND	0.71	1.00	
1,2-Dichloropropane	ND	0.71	1.00	
1,3-Dichloropropane	ND	0.71	1.00	
2,2-Dichloropropane	ND	3.5	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.4	1.00	
c-1,3-Dichloropropene	ND	0.71	1.00	
t-1,3-Dichloropropene	ND	1.4	1.00	
Ethylbenzene	ND	0.71	1.00	
2-Hexanone	ND	14	1.00	
Isopropylbenzene	ND	0.71	1.00	
p-Isopropyltoluene	ND	0.71	1.00	
Methylene Chloride	ND	7.1	1.00	
4-Methyl-2-Pentanone	ND	14	1.00	
Naphthalene	ND	7.1	1.00	
n-Propylbenzene	ND	1.4	1.00	
Styrene	ND	0.71	1.00	
1,1,1,2-Tetrachloroethane	ND	0.71	1.00	
1,1,2,2-Tetrachloroethane	ND	1.4	1.00	
Tetrachloroethene	ND	0.71	1.00	
Toluene	ND	0.71	1.00	
1,2,3-Trichlorobenzene	ND	1.4	1.00	
1,2,4-Trichlorobenzene	ND	1.4	1.00	
1,1,1-Trichloroethane	ND	0.71	1.00	
1,1,2-Trichloroethane	ND	0.71	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.1	1.00	
Trichloroethene	ND	1.4	1.00	
Trichlorofluoromethane	ND	7.1	1.00	
1,2,3-Trichloropropane	ND	1.4	1.00	
1,2,4-Trimethylbenzene	ND	1.4	1.00	
1,3,5-Trimethylbenzene	ND	1.4	1.00	
Vinyl Acetate	ND	7.1	1.00	
Vinyl Chloride	ND	0.71	1.00	
p/m-Xylene	ND	1.4	1.00	
o-Xylene	ND	0.71	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.4	1.00	
Tert-Butyl Alcohol (TBA)	ND	14	1.00	
Diisopropyl Ether (DIPE)	ND	0.71	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.71	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.71	1.00	
Ethanol	ND	350	1.00	
TPPH	ND	35	1.00	
Gasoline Range Organics (C4-C12)	ND	35	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	109	79-139	
1,2-Dichloroethane-d4	118	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-20'	19-06-1771-14-D	06/26/19 12:25	Solid	GC/MS OO	06/26/19	07/03/19 23:17	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	43	1.00	
Benzene	ND	0.86	1.00	
Bromobenzene	ND	0.86	1.00	
Bromochloromethane	ND	1.7	1.00	
Bromodichloromethane	ND	0.86	1.00	
Bromoform	ND	4.3	1.00	
Bromomethane	ND	17	1.00	
2-Butanone	ND	17	1.00	
n-Butylbenzene	ND	0.86	1.00	
sec-Butylbenzene	ND	0.86	1.00	
tert-Butylbenzene	ND	0.86	1.00	
Carbon Disulfide	ND	8.6	1.00	
Carbon Tetrachloride	ND	0.86	1.00	
Chlorobenzene	ND	0.86	1.00	
Chloroethane	ND	1.7	1.00	
Chloroform	ND	0.86	1.00	
Chloromethane	ND	17	1.00	
2-Chlorotoluene	ND	0.86	1.00	
4-Chlorotoluene	ND	0.86	1.00	
Dibromochloromethane	ND	1.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.3	1.00	
1,2-Dibromoethane	ND	0.86	1.00	
Dibromomethane	ND	0.86	1.00	
1,2-Dichlorobenzene	ND	0.86	1.00	
1,3-Dichlorobenzene	ND	0.86	1.00	
1,4-Dichlorobenzene	ND	0.86	1.00	
Dichlorodifluoromethane	ND	1.7	1.00	
1,1-Dichloroethane	ND	0.86	1.00	
1,2-Dichloroethane	ND	0.86	1.00	
1,1-Dichloroethene	ND	0.86	1.00	
c-1,2-Dichloroethene	ND	0.86	1.00	
t-1,2-Dichloroethene	ND	0.86	1.00	
1,2-Dichloropropane	ND	0.86	1.00	
1,3-Dichloropropane	ND	0.86	1.00	
2,2-Dichloropropane	ND	4.3	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.7	1.00	
c-1,3-Dichloropropene	ND	0.86	1.00	
t-1,3-Dichloropropene	ND	1.7	1.00	
Ethylbenzene	ND	0.86	1.00	
2-Hexanone	ND	17	1.00	
Isopropylbenzene	ND	0.86	1.00	
p-Isopropyltoluene	ND	0.86	1.00	
Methylene Chloride	ND	8.6	1.00	
4-Methyl-2-Pentanone	ND	17	1.00	
Naphthalene	ND	8.6	1.00	
n-Propylbenzene	ND	1.7	1.00	
Styrene	ND	0.86	1.00	
1,1,1,2-Tetrachloroethane	ND	0.86	1.00	
1,1,2,2-Tetrachloroethane	ND	1.7	1.00	
Tetrachloroethene	ND	0.86	1.00	
Toluene	ND	0.86	1.00	
1,2,3-Trichlorobenzene	ND	1.7	1.00	
1,2,4-Trichlorobenzene	ND	1.7	1.00	
1,1,1-Trichloroethane	ND	0.86	1.00	
1,1,2-Trichloroethane	ND	0.86	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.6	1.00	
Trichloroethene	ND	1.7	1.00	
Trichlorofluoromethane	ND	8.6	1.00	
1,2,3-Trichloropropane	ND	1.7	1.00	
1,2,4-Trimethylbenzene	ND	1.7	1.00	
1,3,5-Trimethylbenzene	ND	1.7	1.00	
Vinyl Acetate	ND	8.6	1.00	
Vinyl Chloride	ND	0.86	1.00	
p/m-Xylene	ND	1.7	1.00	
o-Xylene	ND	0.86	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.7	1.00	
Tert-Butyl Alcohol (TBA)	ND	17	1.00	
Diisopropyl Ether (DIPE)	ND	0.86	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.86	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.86	1.00	
Ethanol	ND	430	1.00	
TPPH	150	43	1.00	
Gasoline Range Organics (C4-C12)	110	43	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	109	79-139	
1,2-Dichloroethane-d4	121	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-25'	19-06-1771-15-D	06/26/19 12:40	Solid	GC/MS OO	06/26/19	07/03/19 23:46	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	51	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.1	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	1.4	1.0	1.00	
sec-Butylbenzene	1.1	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.1	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.1	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	1.7	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	510	1.00	
TPPH	1700	51	1.00	
Gasoline Range Organics (C4-C12)	1200	51	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	107	79-139	
1,2-Dichloroethane-d4	117	71-155	
1,4-Bromofluorobenzene	104	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-30'	19-06-1771-16-D	06/26/19 12:55	Solid	GC/MS OO	06/26/19	07/04/19 00:16	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	43	1.00	
Benzene	ND	0.87	1.00	
Bromobenzene	ND	0.87	1.00	
Bromochloromethane	ND	1.7	1.00	
Bromodichloromethane	ND	0.87	1.00	
Bromoform	ND	4.3	1.00	
Bromomethane	ND	17	1.00	
2-Butanone	ND	17	1.00	
n-Butylbenzene	8.7	0.87	1.00	
sec-Butylbenzene	3.8	0.87	1.00	
tert-Butylbenzene	ND	0.87	1.00	
Carbon Disulfide	ND	8.7	1.00	
Carbon Tetrachloride	ND	0.87	1.00	
Chlorobenzene	ND	0.87	1.00	
Chloroethane	ND	1.7	1.00	
Chloroform	ND	0.87	1.00	
Chloromethane	ND	17	1.00	
2-Chlorotoluene	ND	0.87	1.00	
4-Chlorotoluene	ND	0.87	1.00	
Dibromochloromethane	ND	1.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.3	1.00	
1,2-Dibromoethane	ND	0.87	1.00	
Dibromomethane	ND	0.87	1.00	
1,2-Dichlorobenzene	ND	0.87	1.00	
1,3-Dichlorobenzene	ND	0.87	1.00	
1,4-Dichlorobenzene	ND	0.87	1.00	
Dichlorodifluoromethane	ND	1.7	1.00	
1,1-Dichloroethane	ND	0.87	1.00	
1,2-Dichloroethane	ND	0.87	1.00	
1,1-Dichloroethene	ND	0.87	1.00	
c-1,2-Dichloroethene	ND	0.87	1.00	
t-1,2-Dichloroethene	ND	0.87	1.00	
1,2-Dichloropropane	ND	0.87	1.00	
1,3-Dichloropropane	ND	0.87	1.00	
2,2-Dichloropropane	ND	4.3	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.7	1.00	
c-1,3-Dichloropropene	ND	0.87	1.00	
t-1,3-Dichloropropene	ND	1.7	1.00	
Ethylbenzene	1.8	0.87	1.00	
2-Hexanone	ND	17	1.00	
Isopropylbenzene	2.6	0.87	1.00	
p-Isopropyltoluene	9.3	0.87	1.00	
Methylene Chloride	ND	8.7	1.00	
4-Methyl-2-Pentanone	ND	17	1.00	
Naphthalene	ND	8.7	1.00	
n-Propylbenzene	2.9	1.7	1.00	
Styrene	ND	0.87	1.00	
1,1,1,2-Tetrachloroethane	ND	0.87	1.00	
1,1,2,2-Tetrachloroethane	ND	1.7	1.00	
Tetrachloroethene	ND	0.87	1.00	
Toluene	ND	0.87	1.00	
1,2,3-Trichlorobenzene	ND	1.7	1.00	
1,2,4-Trichlorobenzene	ND	1.7	1.00	
1,1,1-Trichloroethane	ND	0.87	1.00	
1,1,2-Trichloroethane	ND	0.87	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.7	1.00	
Trichloroethene	ND	1.7	1.00	
Trichlorofluoromethane	ND	8.7	1.00	
1,2,3-Trichloropropane	ND	1.7	1.00	
1,2,4-Trimethylbenzene	3.4	1.7	1.00	
1,3,5-Trimethylbenzene	2.0	1.7	1.00	
Vinyl Acetate	ND	8.7	1.00	
Vinyl Chloride	ND	0.87	1.00	
p/m-Xylene	ND	1.7	1.00	
o-Xylene	ND	0.87	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.7	1.00	
Tert-Butyl Alcohol (TBA)	ND	17	1.00	
Diisopropyl Ether (DIPE)	ND	0.87	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.87	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.87	1.00	
Ethanol	ND	430	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	105	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	115	71-155	
1,4-Bromofluorobenzene	106	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	102	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-30'	19-06-1771-16-F	06/26/19 12:55	Solid	GC/MS OO	06/26/19	07/04/19 21:03	190704L020

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	19000	2200	50.0	
Gasoline Range Organics (C4-C12)	13000	2200	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	91	79-139	
1,2-Dichloroethane-d4	89	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	98	80-120	
Toluene-d8-TPPH	100	80-120	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-38'	19-06-1771-17-D	06/26/19 13:08	Solid	GC/MS OO	06/26/19	07/04/19 08:35	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	84000	2000	
Benzene	1900	1700	2000	
Bromobenzene	ND	1700	2000	
Bromochloromethane	ND	3400	2000	
Bromodichloromethane	ND	1700	2000	
Bromoform	ND	8400	2000	
Bromomethane	ND	34000	2000	
2-Butanone	ND	34000	2000	
n-Butylbenzene	16000	1700	2000	
sec-Butylbenzene	5600	1700	2000	
tert-Butylbenzene	ND	1700	2000	
Carbon Disulfide	ND	17000	2000	
Carbon Tetrachloride	ND	1700	2000	
Chlorobenzene	ND	1700	2000	
Chloroethane	ND	3400	2000	
Chloroform	ND	1700	2000	
Chloromethane	ND	34000	2000	
2-Chlorotoluene	ND	1700	2000	
4-Chlorotoluene	ND	1700	2000	
Dibromochloromethane	ND	3400	2000	
1,2-Dibromo-3-Chloropropane	ND	8400	2000	
1,2-Dibromoethane	ND	1700	2000	
Dibromomethane	ND	1700	2000	
1,2-Dichlorobenzene	ND	1700	2000	
1,3-Dichlorobenzene	ND	1700	2000	
1,4-Dichlorobenzene	ND	1700	2000	
Dichlorodifluoromethane	ND	3400	2000	
1,1-Dichloroethane	ND	1700	2000	
1,2-Dichloroethane	ND	1700	2000	
1,1-Dichloroethene	ND	1700	2000	
c-1,2-Dichloroethene	ND	1700	2000	
t-1,2-Dichloroethene	ND	1700	2000	
1,2-Dichloropropane	ND	1700	2000	
1,3-Dichloropropane	ND	1700	2000	
2,2-Dichloropropane	ND	8400	2000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	3400	2000	
c-1,3-Dichloropropene	ND	1700	2000	
t-1,3-Dichloropropene	ND	3400	2000	
Ethylbenzene	45000	1700	2000	
2-Hexanone	ND	34000	2000	
Isopropylbenzene	17000	1700	2000	
p-Isopropyltoluene	15000	1700	2000	
Methylene Chloride	ND	17000	2000	
4-Methyl-2-Pentanone	ND	34000	2000	
Naphthalene	ND	17000	2000	
n-Propylbenzene	22000	3400	2000	
Styrene	ND	1700	2000	
1,1,1,2-Tetrachloroethane	ND	1700	2000	
1,1,2,2-Tetrachloroethane	ND	3400	2000	
Tetrachloroethene	ND	1700	2000	
Toluene	6500	1700	2000	
1,2,3-Trichlorobenzene	ND	3400	2000	
1,2,4-Trichlorobenzene	ND	3400	2000	
1,1,1-Trichloroethane	ND	1700	2000	
1,1,2-Trichloroethane	ND	1700	2000	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	17000	2000	
Trichloroethene	ND	3400	2000	
Trichlorofluoromethane	ND	17000	2000	
1,2,3-Trichloropropane	ND	3400	2000	
1,2,4-Trimethylbenzene	130000	3400	2000	
1,3,5-Trimethylbenzene	45000	3400	2000	
Vinyl Acetate	ND	17000	2000	
Vinyl Chloride	ND	1700	2000	
p/m-Xylene	110000	3400	2000	
o-Xylene	56000	1700	2000	
Methyl-t-Butyl Ether (MTBE)	ND	3400	2000	
Tert-Butyl Alcohol (TBA)	ND	34000	2000	
Diisopropyl Ether (DIPE)	ND	1700	2000	
Ethyl-t-Butyl Ether (ETBE)	ND	1700	2000	
Tert-Amyl-Methyl Ether (TAME)	ND	1700	2000	
Ethanol	ND	840000	2000	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	96	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	93	71-155	
1,4-Bromofluorobenzene	105	80-120	
Toluene-d8	109	80-120	
Toluene-d8-TPPH	96	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-38'	19-06-1771-17-D	06/26/19 13:08	Solid	GC/MS OO	06/26/19	07/07/19 21:20	190707L005

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	4400000	210000	5000	
Gasoline Range Organics (C4-C12)	4100000	210000	5000	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	101	79-139	
1,2-Dichloroethane-d4	97	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	99	80-120	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-39.5'	19-06-1771-18-C	06/26/19 13:25	Solid	GC/MS OO	06/26/19	07/08/19 20:18	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	38	1.00	
Benzene	30	0.75	1.00	
Bromobenzene	ND	0.75	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.75	1.00	
Bromoform	ND	3.8	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	0.98	0.75	1.00	
sec-Butylbenzene	1.3	0.75	1.00	
tert-Butylbenzene	ND	0.75	1.00	
Carbon Disulfide	ND	7.5	1.00	
Carbon Tetrachloride	ND	0.75	1.00	
Chlorobenzene	ND	0.75	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.75	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.75	1.00	
4-Chlorotoluene	ND	0.75	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.8	1.00	
1,2-Dibromoethane	ND	0.75	1.00	
Dibromomethane	ND	0.75	1.00	
1,2-Dichlorobenzene	ND	0.75	1.00	
1,3-Dichlorobenzene	ND	0.75	1.00	
1,4-Dichlorobenzene	ND	0.75	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.75	1.00	
1,2-Dichloroethane	ND	0.75	1.00	
1,1-Dichloroethene	ND	0.75	1.00	
c-1,2-Dichloroethene	ND	0.75	1.00	
t-1,2-Dichloroethene	ND	0.75	1.00	
1,2-Dichloropropane	ND	0.75	1.00	
1,3-Dichloropropane	ND	0.75	1.00	
2,2-Dichloropropane	ND	3.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.75	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	0.93	0.75	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	3.4	0.75	1.00	
p-Isopropyltoluene	2.8	0.75	1.00	
Methylene Chloride	ND	7.5	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.5	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.75	1.00	
1,1,1,2-Tetrachloroethane	ND	0.75	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.75	1.00	
Toluene	1.4	0.75	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.75	1.00	
1,1,2-Trichloroethane	ND	0.75	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.5	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.5	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.5	1.00	
Vinyl Chloride	ND	0.75	1.00	
p/m-Xylene	1.7	1.5	1.00	
o-Xylene	0.95	0.75	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.75	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.75	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.75	1.00	
Ethanol	ND	380	1.00	
TPPH	880	38	1.00	
Gasoline Range Organics (C4-C12)	830	38	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	79-139	
1,2-Dichloroethane-d4	98	71-155	
1,4-Bromofluorobenzene	102	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	100	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-42.5'	19-06-1771-19-C	06/26/19 13:45	Solid	GC/MS OO	06/26/19	07/08/19 20:48	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	34	1.00	
Benzene	67	0.69	1.00	
Bromobenzene	ND	0.69	1.00	
Bromochloromethane	ND	1.4	1.00	
Bromodichloromethane	ND	0.69	1.00	
Bromoform	ND	3.4	1.00	
Bromomethane	ND	14	1.00	
2-Butanone	ND	14	1.00	
n-Butylbenzene	0.72	0.69	1.00	
sec-Butylbenzene	0.91	0.69	1.00	
tert-Butylbenzene	ND	0.69	1.00	
Carbon Disulfide	ND	6.9	1.00	
Carbon Tetrachloride	ND	0.69	1.00	
Chlorobenzene	ND	0.69	1.00	
Chloroethane	ND	1.4	1.00	
Chloroform	ND	0.69	1.00	
Chloromethane	ND	14	1.00	
2-Chlorotoluene	ND	0.69	1.00	
4-Chlorotoluene	ND	0.69	1.00	
Dibromochloromethane	ND	1.4	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.4	1.00	
1,2-Dibromoethane	ND	0.69	1.00	
Dibromomethane	ND	0.69	1.00	
1,2-Dichlorobenzene	ND	0.69	1.00	
1,3-Dichlorobenzene	ND	0.69	1.00	
1,4-Dichlorobenzene	ND	0.69	1.00	
Dichlorodifluoromethane	ND	1.4	1.00	
1,1-Dichloroethane	ND	0.69	1.00	
1,2-Dichloroethane	ND	0.69	1.00	
1,1-Dichloroethene	ND	0.69	1.00	
c-1,2-Dichloroethene	ND	0.69	1.00	
t-1,2-Dichloroethene	ND	0.69	1.00	
1,2-Dichloropropane	ND	0.69	1.00	
1,3-Dichloropropane	ND	0.69	1.00	
2,2-Dichloropropane	ND	3.4	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.4	1.00	
c-1,3-Dichloropropene	ND	0.69	1.00	
t-1,3-Dichloropropene	ND	1.4	1.00	
Ethylbenzene	9.4	0.69	1.00	
2-Hexanone	ND	14	1.00	
Isopropylbenzene	6.3	0.69	1.00	
p-Isopropyltoluene	1.7	0.69	1.00	
Methylene Chloride	ND	6.9	1.00	
4-Methyl-2-Pentanone	ND	14	1.00	
Naphthalene	ND	6.9	1.00	
n-Propylbenzene	3.2	1.4	1.00	
Styrene	ND	0.69	1.00	
1,1,1,2-Tetrachloroethane	ND	0.69	1.00	
1,1,2,2-Tetrachloroethane	ND	1.4	1.00	
Tetrachloroethene	ND	0.69	1.00	
Toluene	0.83	0.69	1.00	
1,2,3-Trichlorobenzene	ND	1.4	1.00	
1,2,4-Trichlorobenzene	ND	1.4	1.00	
1,1,1-Trichloroethane	ND	0.69	1.00	
1,1,2-Trichloroethane	ND	0.69	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	6.9	1.00	
Trichloroethene	ND	1.4	1.00	
Trichlorofluoromethane	ND	6.9	1.00	
1,2,3-Trichloropropane	ND	1.4	1.00	
1,2,4-Trimethylbenzene	ND	1.4	1.00	
1,3,5-Trimethylbenzene	ND	1.4	1.00	
Vinyl Acetate	ND	6.9	1.00	
Vinyl Chloride	ND	0.69	1.00	
p/m-Xylene	ND	1.4	1.00	
o-Xylene	ND	0.69	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.4	1.00	
Tert-Butyl Alcohol (TBA)	ND	14	1.00	
Diisopropyl Ether (DIPE)	ND	0.69	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.69	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.69	1.00	
Ethanol	ND	340	1.00	
TPPH	1100	34	1.00	
Gasoline Range Organics (C4-C12)	1100	34	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	99	71-155	
1,4-Bromofluorobenzene	103	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	99	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CE DUP 1	19-06-1771-20-B	06/26/19 00:00	Solid	GC/MS OO	06/26/19	07/07/19 20:21	190707L004

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	42	1.00	
Benzene	ND	0.83	1.00	
Bromobenzene	ND	0.83	1.00	
Bromochloromethane	ND	1.7	1.00	
Bromodichloromethane	ND	0.83	1.00	
Bromoform	ND	4.2	1.00	
Bromomethane	ND	17	1.00	
2-Butanone	ND	17	1.00	
n-Butylbenzene	ND	0.83	1.00	
sec-Butylbenzene	ND	0.83	1.00	
tert-Butylbenzene	ND	0.83	1.00	
Carbon Disulfide	ND	8.3	1.00	
Carbon Tetrachloride	ND	0.83	1.00	
Chlorobenzene	ND	0.83	1.00	
Chloroethane	ND	1.7	1.00	
Chloroform	ND	0.83	1.00	
Chloromethane	ND	17	1.00	
2-Chlorotoluene	ND	0.83	1.00	
4-Chlorotoluene	ND	0.83	1.00	
Dibromochloromethane	ND	1.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.2	1.00	
1,2-Dibromoethane	ND	0.83	1.00	
Dibromomethane	ND	0.83	1.00	
1,2-Dichlorobenzene	ND	0.83	1.00	
1,3-Dichlorobenzene	ND	0.83	1.00	
1,4-Dichlorobenzene	ND	0.83	1.00	
Dichlorodifluoromethane	ND	1.7	1.00	
1,1-Dichloroethane	ND	0.83	1.00	
1,2-Dichloroethane	ND	0.83	1.00	
1,1-Dichloroethene	ND	0.83	1.00	
c-1,2-Dichloroethene	ND	0.83	1.00	
t-1,2-Dichloroethene	ND	0.83	1.00	
1,2-Dichloropropane	ND	0.83	1.00	
1,3-Dichloropropane	ND	0.83	1.00	
2,2-Dichloropropane	ND	4.2	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.7	1.00	
c-1,3-Dichloropropene	ND	0.83	1.00	
t-1,3-Dichloropropene	ND	1.7	1.00	
Ethylbenzene	ND	0.83	1.00	
2-Hexanone	ND	17	1.00	
Isopropylbenzene	ND	0.83	1.00	
p-Isopropyltoluene	ND	0.83	1.00	
Methylene Chloride	ND	8.3	1.00	
4-Methyl-2-Pentanone	ND	17	1.00	
Naphthalene	ND	8.3	1.00	
n-Propylbenzene	ND	1.7	1.00	
Styrene	ND	0.83	1.00	
1,1,1,2-Tetrachloroethane	ND	0.83	1.00	
1,1,2,2-Tetrachloroethane	ND	1.7	1.00	
Tetrachloroethene	ND	0.83	1.00	
Toluene	ND	0.83	1.00	
1,2,3-Trichlorobenzene	ND	1.7	1.00	
1,2,4-Trichlorobenzene	ND	1.7	1.00	
1,1,1-Trichloroethane	ND	0.83	1.00	
1,1,2-Trichloroethane	ND	0.83	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.3	1.00	
Trichloroethene	ND	1.7	1.00	
Trichlorofluoromethane	ND	8.3	1.00	
1,2,3-Trichloropropane	ND	1.7	1.00	
1,2,4-Trimethylbenzene	ND	1.7	1.00	
1,3,5-Trimethylbenzene	ND	1.7	1.00	
Vinyl Acetate	ND	8.3	1.00	
Vinyl Chloride	ND	0.83	1.00	
p/m-Xylene	ND	1.7	1.00	
o-Xylene	ND	0.83	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.7	1.00	
Tert-Butyl Alcohol (TBA)	ND	17	1.00	
Diisopropyl Ether (DIPE)	ND	0.83	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.83	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.83	1.00	
Ethanol	ND	420	1.00	
TPPH	87	42	1.00	
Gasoline Range Organics (C4-C12)	92	42	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	111	79-139	
1,2-Dichloroethane-d4	119	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	103	80-120	

Return to Contents 

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-46'	19-06-1771-21-B	06/26/19 14:05	Solid	GC/MS OO	06/26/19	07/07/19 22:49	190707L004

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	39	1.00	
Benzene	ND	0.78	1.00	
Bromobenzene	ND	0.78	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.78	1.00	
Bromoform	ND	3.9	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.78	1.00	
sec-Butylbenzene	ND	0.78	1.00	
tert-Butylbenzene	ND	0.78	1.00	
Carbon Disulfide	ND	7.8	1.00	
Carbon Tetrachloride	ND	0.78	1.00	
Chlorobenzene	ND	0.78	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.78	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.78	1.00	
4-Chlorotoluene	ND	0.78	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.9	1.00	
1,2-Dibromoethane	ND	0.78	1.00	
Dibromomethane	ND	0.78	1.00	
1,2-Dichlorobenzene	ND	0.78	1.00	
1,3-Dichlorobenzene	ND	0.78	1.00	
1,4-Dichlorobenzene	ND	0.78	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.78	1.00	
1,2-Dichloroethane	5.4	0.78	1.00	
1,1-Dichloroethene	ND	0.78	1.00	
c-1,2-Dichloroethene	ND	0.78	1.00	
t-1,2-Dichloroethene	ND	0.78	1.00	
1,2-Dichloropropane	ND	0.78	1.00	
1,3-Dichloropropane	ND	0.78	1.00	
2,2-Dichloropropane	ND	3.9	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.78	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.78	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.78	1.00	
p-Isopropyltoluene	ND	0.78	1.00	
Methylene Chloride	ND	7.8	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	7.8	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.78	1.00	
1,1,1,2-Tetrachloroethane	ND	0.78	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.78	1.00	
Toluene	ND	0.78	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.78	1.00	
1,1,2-Trichloroethane	ND	0.78	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.8	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	7.8	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	7.8	1.00	
Vinyl Chloride	ND	0.78	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.78	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.78	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.78	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.78	1.00	
Ethanol	ND	390	1.00	
TPPH	340	39	1.00	
Gasoline Range Organics (C4-C12)	310	39	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	100	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2079	N/A	Solid	GC/MS OO	07/03/19	07/03/19 18:51	190703L026

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	100	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2080	N/A	Solid	GC/MS OO	07/03/19	07/04/19 06:08	190703L036

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	5000	50.0	
Benzene	ND	100	50.0	
Bromobenzene	ND	100	50.0	
Bromochloromethane	ND	200	50.0	
Bromodichloromethane	ND	100	50.0	
Bromoform	ND	500	50.0	
Bromomethane	ND	2000	50.0	
2-Butanone	ND	2000	50.0	
n-Butylbenzene	ND	100	50.0	
sec-Butylbenzene	ND	100	50.0	
tert-Butylbenzene	ND	100	50.0	
Carbon Disulfide	ND	1000	50.0	
Carbon Tetrachloride	ND	100	50.0	
Chlorobenzene	ND	100	50.0	
Chloroethane	ND	200	50.0	
Chloroform	ND	100	50.0	
Chloromethane	ND	2000	50.0	
2-Chlorotoluene	ND	100	50.0	
4-Chlorotoluene	ND	100	50.0	
Dibromochloromethane	ND	200	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	100	50.0	
Dibromomethane	ND	100	50.0	
1,2-Dichlorobenzene	ND	100	50.0	
1,3-Dichlorobenzene	ND	100	50.0	
1,4-Dichlorobenzene	ND	100	50.0	
Dichlorodifluoromethane	ND	200	50.0	
1,1-Dichloroethane	ND	100	50.0	
1,2-Dichloroethane	ND	100	50.0	
1,1-Dichloroethene	ND	100	50.0	
c-1,2-Dichloroethene	ND	100	50.0	
t-1,2-Dichloroethene	ND	100	50.0	
1,2-Dichloropropane	ND	100	50.0	
1,3-Dichloropropane	ND	100	50.0	
2,2-Dichloropropane	ND	500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	200	50.0	
c-1,3-Dichloropropene	ND	100	50.0	
t-1,3-Dichloropropene	ND	200	50.0	
Ethylbenzene	ND	100	50.0	
2-Hexanone	ND	2000	50.0	
Isopropylbenzene	ND	100	50.0	
p-Isopropyltoluene	ND	100	50.0	
Methylene Chloride	ND	1000	50.0	
4-Methyl-2-Pentanone	ND	2000	50.0	
Naphthalene	ND	1000	50.0	
n-Propylbenzene	ND	200	50.0	
Styrene	ND	100	50.0	
1,1,1,2-Tetrachloroethane	ND	100	50.0	
1,1,2,2-Tetrachloroethane	ND	200	50.0	
Tetrachloroethene	ND	100	50.0	
Toluene	ND	100	50.0	
1,2,3-Trichlorobenzene	ND	200	50.0	
1,2,4-Trichlorobenzene	ND	200	50.0	
1,1,1-Trichloroethane	ND	100	50.0	
1,1,2-Trichloroethane	ND	100	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	50.0	
Trichloroethene	ND	200	50.0	
Trichlorofluoromethane	ND	1000	50.0	
1,2,3-Trichloropropane	ND	200	50.0	
1,2,4-Trimethylbenzene	ND	200	50.0	
1,3,5-Trimethylbenzene	ND	200	50.0	
Vinyl Acetate	ND	1000	50.0	
Vinyl Chloride	ND	100	50.0	
p/m-Xylene	ND	200	50.0	
o-Xylene	ND	100	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	200	50.0	
Tert-Butyl Alcohol (TBA)	ND	2000	50.0	
Diisopropyl Ether (DIPE)	ND	100	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	100	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	100	50.0	
Ethanol	ND	50000	50.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	95	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	94	71-155	
1,4-Bromofluorobenzene	95	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2081	N/A	Solid	GC/MS OO	07/04/19	07/04/19 17:37	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	94	79-139	
1,2-Dichloroethane-d4	93	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2082	N/A	Solid	GC/MS OO	07/04/19	07/04/19 18:06	190704L020

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	5000	50.0	
Benzene	ND	100	50.0	
Bromobenzene	ND	100	50.0	
Bromochloromethane	ND	200	50.0	
Bromodichloromethane	ND	100	50.0	
Bromoform	ND	500	50.0	
Bromomethane	ND	2000	50.0	
2-Butanone	ND	2000	50.0	
n-Butylbenzene	ND	100	50.0	
sec-Butylbenzene	ND	100	50.0	
tert-Butylbenzene	ND	100	50.0	
Carbon Disulfide	ND	1000	50.0	
Carbon Tetrachloride	ND	100	50.0	
Chlorobenzene	ND	100	50.0	
Chloroethane	ND	200	50.0	
Chloroform	ND	100	50.0	
Chloromethane	ND	2000	50.0	
2-Chlorotoluene	ND	100	50.0	
4-Chlorotoluene	ND	100	50.0	
Dibromochloromethane	ND	200	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	100	50.0	
Dibromomethane	ND	100	50.0	
1,2-Dichlorobenzene	ND	100	50.0	
1,3-Dichlorobenzene	ND	100	50.0	
1,4-Dichlorobenzene	ND	100	50.0	
Dichlorodifluoromethane	ND	200	50.0	
1,1-Dichloroethane	ND	100	50.0	
1,2-Dichloroethane	ND	100	50.0	
1,1-Dichloroethene	ND	100	50.0	
c-1,2-Dichloroethene	ND	100	50.0	
t-1,2-Dichloroethene	ND	100	50.0	
1,2-Dichloropropane	ND	100	50.0	
1,3-Dichloropropane	ND	100	50.0	
2,2-Dichloropropane	ND	500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	200	50.0	
c-1,3-Dichloropropene	ND	100	50.0	
t-1,3-Dichloropropene	ND	200	50.0	
Ethylbenzene	ND	100	50.0	
2-Hexanone	ND	2000	50.0	
Isopropylbenzene	ND	100	50.0	
p-Isopropyltoluene	ND	100	50.0	
Methylene Chloride	ND	1000	50.0	
4-Methyl-2-Pentanone	ND	2000	50.0	
Naphthalene	ND	1000	50.0	
n-Propylbenzene	ND	200	50.0	
Styrene	ND	100	50.0	
1,1,1,2-Tetrachloroethane	ND	100	50.0	
1,1,2,2-Tetrachloroethane	ND	200	50.0	
Tetrachloroethene	ND	100	50.0	
Toluene	ND	100	50.0	
1,2,3-Trichlorobenzene	ND	200	50.0	
1,2,4-Trichlorobenzene	ND	200	50.0	
1,1,1-Trichloroethane	ND	100	50.0	
1,1,2-Trichloroethane	ND	100	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	50.0	
Trichloroethene	ND	200	50.0	
Trichlorofluoromethane	ND	1000	50.0	
1,2,3-Trichloropropane	ND	200	50.0	
1,2,4-Trimethylbenzene	ND	200	50.0	
1,3,5-Trimethylbenzene	ND	200	50.0	
Vinyl Acetate	ND	1000	50.0	
Vinyl Chloride	ND	100	50.0	
p/m-Xylene	ND	200	50.0	
o-Xylene	ND	100	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	200	50.0	
Tert-Butyl Alcohol (TBA)	ND	2000	50.0	
Diisopropyl Ether (DIPE)	ND	100	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	100	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	100	50.0	
Ethanol	ND	50000	50.0	
TPPH	ND	5000	50.0	
Gasoline Range Organics (C4-C12)	ND	5000	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	92	79-139	
1,2-Dichloroethane-d4	88	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	97	80-120	
Toluene-d8-TPPH	98	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2089	N/A	Solid	GC/MS OO	07/07/19	07/07/19 17:54	190707L004

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	105	79-139	
1,2-Dichloroethane-d4	103	71-155	
1,4-Bromofluorobenzene	94	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	104	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2090	N/A	Solid	GC/MS OO	07/07/19	07/07/19 18:24	190707L005

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	ND	5000	50.0	
Gasoline Range Organics (C4-C12)	ND	5000	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	94	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	103	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2091	N/A	Solid	GC/MS OO	07/08/19	07/08/19 18:50	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	94	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: N/A
Method: ASTM D-2216 (M)
Units: %

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-6.5'	19-06-1771-2-A	06/26/19 08:12	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		8.8		0.10		1.00	
CESB11-11.5'	19-06-1771-3-A	06/26/19 08:26	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		17		0.10		1.00	
CESB11-15.5'	19-06-1771-4-A	06/26/19 08:36	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		11		0.10		1.00	
CESB11-20.5'	19-06-1771-5-A	06/26/19 08:49	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		3.0		0.10		1.00	
CESB11-25.5'	19-06-1771-6-A	06/26/19 08:59	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		3.6		0.10		1.00	
CESB11-30'	19-06-1771-7-A	06/26/19 09:17	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		15		0.10		1.00	
CESB11-35.5'	19-06-1771-8-A	06/26/19 09:36	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		21		0.10		1.00	
CESB12-6'	19-06-1771-11-A	06/26/19 11:45	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		12		0.10		1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/26/19
 Work Order: 19-06-1771
 Preparation: N/A
 Method: ASTM D-2216 (M)
 Units: %

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-10'	19-06-1771-12-A	06/26/19 11:55	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		11		0.10		1.00	
CESB12-15'	19-06-1771-13-A	06/26/19 12:15	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		11		0.10		1.00	
CESB12-20'	19-06-1771-14-A	06/26/19 12:25	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		12		0.10		1.00	
CESB12-25'	19-06-1771-15-A	06/26/19 12:40	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		3.0		0.10		1.00	
Method Blank	099-05-014-8482	N/A	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		ND		0.10		1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: OOI

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
19-06-1424-2	Sample	Sediment	GC 48	06/28/19	06/28/19 22:48	190628S08				
19-06-1424-2	Matrix Spike	Sediment	GC 48	06/28/19	06/28/19 21:45	190628S08				
19-06-1424-2	Matrix Spike Duplicate	Sediment	GC 48	06/28/19	06/28/19 22:06	190628S08				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	ND	400.0	361.8	90	396.6	99	64-130	9	0-15	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3050B
Method: EPA 6010B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CESB11-6.5'	Sample	Solid	ICP 8300	07/01/19	07/01/19 21:53	190701S02
CESB11-6.5'	Matrix Spike	Solid	ICP 8300	07/01/19	07/01/19 21:55	190701S02
CESB11-6.5'	Matrix Spike Duplicate	Solid	ICP 8300	07/01/19	07/01/19 22:02	190701S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	9.372	25.00	34.58	101	32.42	92	75-125	6	0-20	
Lead	1.721	25.00	26.95	101	26.45	99	75-125	2	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Sample Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: N/A
Method: ASTM D-2216 (M)

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
19-06-1878-17	Sample	Solid	N/A	06/28/19 00:00	06/28/19 16:00	J0628MOID3
19-06-1878-17	Sample Duplicate	Solid	N/A	06/28/19 00:00	06/28/19 16:00	J0628MOID3

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Moisture	15.10	16.50	9	0-10	

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-490-3654	LCS	Solid	GC 48	06/28/19	06/29/19 00:12	190628B08A
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Diesel		400.0	388.1	97	75-123	



Calscience

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 3050B
Method: EPA 6010B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
097-01-002-28071	LCS	Solid	ICP 8300	07/01/19	07/01/19 21:48	190701L02A			
097-01-002-28071	LCSD	Solid	ICP 8300	07/01/19	07/01/19 21:51	190701L02A			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	23.89	96	25.07	100	80-120	5	0-20	
Lead	25.00	26.42	106	27.42	110	80-120	4	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-2079	LCS	Solid	GC/MS OO	07/03/19	07/03/19 16:53	190703L026				
099-12-779-2079	LCSD	Solid	GC/MS OO	07/03/19	07/03/19 17:23	190703L026				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	50.40	101	48.97	98	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	51.80	104	50.00	100	65-137	53-149	4	0-20	
Chlorobenzene	50.00	51.33	103	49.26	99	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	52.69	105	51.98	104	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	52.61	105	50.67	101	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	50.28	101	50.14	100	80-120	73-127	0	0-20	
1,1-Dichloroethene	50.00	48.48	97	47.18	94	68-128	58-138	3	0-20	
Ethylbenzene	50.00	53.88	108	51.42	103	80-120	73-127	5	0-20	
Toluene	50.00	52.83	106	50.99	102	80-120	73-127	4	0-20	
Trichloroethene	50.00	51.86	104	50.45	101	80-120	73-127	3	0-20	
Vinyl Chloride	50.00	45.90	92	41.55	83	67-127	57-137	10	0-20	
p/m-Xylene	100.0	110.3	110	105.1	105	75-125	67-133	5	0-25	
o-Xylene	50.00	55.34	111	53.09	106	75-125	67-133	4	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.03	86	42.48	85	70-124	61-133	1	0-20	
Tert-Butyl Alcohol (TBA)	250.0	230.0	92	214.5	86	73-121	65-129	7	0-20	
Diisopropyl Ether (DIPE)	50.00	50.21	100	48.63	97	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	46.28	93	45.49	91	70-124	61-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.65	103	51.65	103	74-122	66-130	0	0-20	
Ethanol	500.0	500.2	100	466.2	93	51-135	37-149	7	0-27	
TPPH	1000	963.5	96	980.0	98	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	863.5	86	875.5	88	65-135	53-147	1	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-2080	LCS	Solid	GC/MS OO	07/03/19	07/04/19 04:11	190703L036				
099-12-779-2080	LCSD	Solid	GC/MS OO	07/03/19	07/04/19 04:40	190703L036				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	53.69	107	46.30	93	80-120	73-127	15	0-20	
Carbon Tetrachloride	50.00	53.99	108	45.83	92	65-137	53-149	16	0-20	
Chlorobenzene	50.00	55.51	111	47.26	95	80-120	73-127	16	0-20	
1,2-Dibromoethane	50.00	57.66	115	49.67	99	80-120	73-127	15	0-20	
1,2-Dichlorobenzene	50.00	56.19	112	48.06	96	80-120	73-127	16	0-20	
1,2-Dichloroethane	50.00	52.94	106	46.10	92	80-120	73-127	14	0-20	
1,1-Dichloroethene	50.00	53.25	107	44.72	89	68-128	58-138	17	0-20	
Ethylbenzene	50.00	58.01	116	48.84	98	80-120	73-127	17	0-20	
Toluene	50.00	55.88	112	48.01	96	80-120	73-127	15	0-20	
Trichloroethene	50.00	56.29	113	47.80	96	80-120	73-127	16	0-20	
Vinyl Chloride	50.00	49.64	99	40.38	81	67-127	57-137	21	0-20	X
p/m-Xylene	100.0	117.4	117	99.30	99	75-125	67-133	17	0-25	
o-Xylene	50.00	59.74	119	51.04	102	75-125	67-133	16	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	48.34	97	40.43	81	70-124	61-133	18	0-20	
Tert-Butyl Alcohol (TBA)	250.0	253.2	101	219.4	88	73-121	65-129	14	0-20	
Diisopropyl Ether (DIPE)	50.00	54.56	109	46.39	93	69-129	59-139	16	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	52.04	104	43.02	86	70-124	61-133	19	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	55.89	112	47.49	95	74-122	66-130	16	0-20	
Ethanol	500.0	637.9	128	498.5	100	51-135	37-149	25	0-27	
TPPH	1000	904.2	90	887.4	89	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	861.6	86	799.9	80	65-135	53-147	7	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2081	LCS	Solid		GC/MS OO	07/04/19	07/04/19 15:39	190704L017			
099-12-779-2081	LCSD	Solid		GC/MS OO	07/04/19	07/04/19 16:08	190704L017			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	45.00	90	46.86	94	80-120	73-127	4	0-20	
Carbon Tetrachloride	50.00	43.84	88	46.31	93	65-137	53-149	5	0-20	
Chlorobenzene	50.00	47.42	95	49.04	98	80-120	73-127	3	0-20	
1,2-Dibromoethane	50.00	49.83	100	51.79	104	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	50.00	48.84	98	49.86	100	80-120	73-127	2	0-20	
1,2-Dichloroethane	50.00	44.95	90	45.93	92	80-120	73-127	2	0-20	
1,1-Dichloroethene	50.00	43.20	86	44.49	89	68-128	58-138	3	0-20	
Ethylbenzene	50.00	48.94	98	51.09	102	80-120	73-127	4	0-20	
Toluene	50.00	48.17	96	49.23	98	80-120	73-127	2	0-20	
Trichloroethene	50.00	46.93	94	48.94	98	80-120	73-127	4	0-20	
Vinyl Chloride	50.00	39.76	80	39.65	79	67-127	57-137	0	0-20	
p/m-Xylene	100.0	99.94	100	103.5	103	75-125	67-133	3	0-25	
o-Xylene	50.00	51.08	102	52.52	105	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	44.40	89	44.47	89	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	205.7	82	206.0	82	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	50.00	44.62	89	45.82	92	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.10	94	48.09	96	70-124	61-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	53.46	107	55.18	110	74-122	66-130	3	0-20	
Ethanol	500.0	404.9	81	414.2	83	51-135	37-149	2	0-27	
TPPH	1000	916.0	92	932.6	93	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	823.6	82	832.5	83	65-135	53-147	1	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2082	LCS	Solid		GC/MS OO	07/04/19	07/04/19 14:10	190704L020			
099-12-779-2082	LCSD	Solid		GC/MS OO	07/04/19	07/04/19 14:39	190704L020			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	45.00	90	46.86	94	80-120	73-127	4	0-20	
Carbon Tetrachloride	50.00	43.84	88	46.31	93	65-137	53-149	5	0-20	
Chlorobenzene	50.00	47.42	95	49.04	98	80-120	73-127	3	0-20	
1,2-Dibromoethane	50.00	49.83	100	51.79	104	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	50.00	48.84	98	49.86	100	80-120	73-127	2	0-20	
1,2-Dichloroethane	50.00	44.95	90	45.93	92	80-120	73-127	2	0-20	
1,1-Dichloroethene	50.00	43.20	86	44.49	89	68-128	58-138	3	0-20	
Ethylbenzene	50.00	48.94	98	51.09	102	80-120	73-127	4	0-20	
Toluene	50.00	48.17	96	49.23	98	80-120	73-127	2	0-20	
Trichloroethene	50.00	46.93	94	48.94	98	80-120	73-127	4	0-20	
Vinyl Chloride	50.00	39.76	80	39.65	79	67-127	57-137	0	0-20	
p/m-Xylene	100.0	99.94	100	103.5	103	75-125	67-133	3	0-25	
o-Xylene	50.00	51.08	102	52.52	105	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	44.40	89	44.47	89	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	205.7	82	206.0	82	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	50.00	44.62	89	45.82	92	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.10	94	48.09	96	70-124	61-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	53.46	107	55.18	110	74-122	66-130	3	0-20	
Ethanol	500.0	404.9	81	414.2	83	51-135	37-149	2	0-27	
TPPH	1000	916.0	92	932.6	93	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	823.6	82	832.5	83	65-135	53-147	1	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-2089	LCS	Solid	GC/MS OO	07/07/19	07/07/19 15:56	190707L004				
099-12-779-2089	LCSD	Solid	GC/MS OO	07/07/19	07/07/19 16:26	190707L004				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	49.62	99	48.47	97	80-120	73-127	2	0-20	
Carbon Tetrachloride	50.00	51.40	103	48.80	98	65-137	53-149	5	0-20	
Chlorobenzene	50.00	49.54	99	49.27	99	80-120	73-127	1	0-20	
1,2-Dibromoethane	50.00	49.74	99	49.67	99	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	50.00	49.77	100	50.10	100	80-120	73-127	1	0-20	
1,2-Dichloroethane	50.00	49.45	99	47.86	96	80-120	73-127	3	0-20	
1,1-Dichloroethene	50.00	47.22	94	45.28	91	68-128	58-138	4	0-20	
Ethylbenzene	50.00	50.63	101	50.47	101	80-120	73-127	0	0-20	
Toluene	50.00	50.76	102	50.24	100	80-120	73-127	1	0-20	
Trichloroethene	50.00	50.60	101	49.39	99	80-120	73-127	2	0-20	
Vinyl Chloride	50.00	47.99	96	46.75	93	67-127	57-137	3	0-20	
p/m-Xylene	100.0	105.6	106	104.7	105	75-125	67-133	1	0-25	
o-Xylene	50.00	53.06	106	52.57	105	75-125	67-133	1	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	41.97	84	40.85	82	70-124	61-133	3	0-20	
Tert-Butyl Alcohol (TBA)	250.0	204.3	82	204.8	82	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	50.00	51.53	103	50.21	100	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.10	94	45.76	92	70-124	61-133	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.81	104	51.04	102	74-122	66-130	1	0-20	
Ethanol	500.0	475.2	95	459.6	92	51-135	37-149	3	0-27	
TPPH	1000	900.1	90	931.6	93	65-135	53-147	3	0-30	
Gasoline Range Organics (C4-C12)	1000	814.1	81	841.2	84	65-135	53-147	3	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-779-2090	LCS	Solid	GC/MS OO	07/07/19	07/07/19 15:56	190707L005				
099-12-779-2090	LCSD	Solid	GC/MS OO	07/07/19	07/07/19 16:26	190707L005				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	49.62	99	48.47	97	80-120	73-127	2	0-20	
Carbon Tetrachloride	50.00	51.40	103	48.80	98	65-137	53-149	5	0-20	
Chlorobenzene	50.00	49.54	99	49.27	99	80-120	73-127	1	0-20	
1,2-Dibromoethane	50.00	49.74	99	49.67	99	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	50.00	49.77	100	50.10	100	80-120	73-127	1	0-20	
1,2-Dichloroethane	50.00	49.45	99	47.86	96	80-120	73-127	3	0-20	
1,1-Dichloroethene	50.00	47.22	94	45.28	91	68-128	58-138	4	0-20	
Ethylbenzene	50.00	50.63	101	50.47	101	80-120	73-127	0	0-20	
Toluene	50.00	50.76	102	50.24	100	80-120	73-127	1	0-20	
Trichloroethene	50.00	50.60	101	49.39	99	80-120	73-127	2	0-20	
Vinyl Chloride	50.00	47.99	96	46.75	93	67-127	57-137	3	0-20	
p/m-Xylene	100.0	105.6	106	104.7	105	75-125	67-133	1	0-25	
o-Xylene	50.00	53.06	106	52.57	105	75-125	67-133	1	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	41.97	84	40.85	82	70-124	61-133	3	0-20	
Tert-Butyl Alcohol (TBA)	250.0	204.3	82	204.8	82	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	50.00	51.53	103	50.21	100	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.10	94	45.76	92	70-124	61-133	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.81	104	51.04	102	74-122	66-130	1	0-20	
Ethanol	500.0	475.2	95	459.6	92	51-135	37-149	3	0-27	
TPPH	1000	900.1	90	931.6	93	65-135	53-147	3	0-30	
Gasoline Range Organics (C4-C12)	1000	814.1	81	841.2	84	65-135	53-147	3	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/26/19
Work Order: 19-06-1771
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

Page 9 of 9

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2091	LCS	Solid		GC/MS OO	07/08/19	07/08/19 16:52	190708L017			
099-12-779-2091	LCSD	Solid		GC/MS OO	07/08/19	07/08/19 17:21	190708L017			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	48.31	97	46.90	94	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.70	95	47.08	94	65-137	53-149	1	0-20	
Chlorobenzene	50.00	50.03	100	48.23	96	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	51.22	102	50.75	101	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	50.84	102	49.04	98	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	46.11	92	45.69	91	80-120	73-127	1	0-20	
1,1-Dichloroethene	50.00	44.88	90	43.30	87	68-128	58-138	4	0-20	
Ethylbenzene	50.00	51.93	104	49.73	99	80-120	73-127	4	0-20	
Toluene	50.00	50.65	101	48.89	98	80-120	73-127	4	0-20	
Trichloroethene	50.00	50.49	101	48.13	96	80-120	73-127	5	0-20	
Vinyl Chloride	50.00	44.24	88	43.65	87	67-127	57-137	1	0-20	
p/m-Xylene	100.0	106.2	106	101.3	101	75-125	67-133	5	0-25	
o-Xylene	50.00	53.69	107	51.69	103	75-125	67-133	4	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.31	87	43.21	86	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	212.4	85	209.5	84	73-121	65-129	1	0-20	
Diisopropyl Ether (DIPE)	50.00	47.91	96	46.72	93	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	48.64	97	48.22	96	70-124	61-133	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	56.21	112	56.24	112	74-122	66-130	0	0-20	
Ethanol	500.0	426.5	85	397.8	80	51-135	37-149	7	0-27	
TPPH	1000	970.0	97	892.2	89	65-135	53-147	8	0-30	
Gasoline Range Organics (C4-C12)	1000	879.4	88	802.7	80	65-135	53-147	9	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Sample Analysis Summary Report

Work Order: 19-06-1771

Page 1 of 1

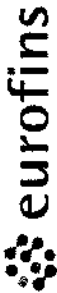
<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
ASTM D-2216 (M)	N/A	1215	N/A	1
EPA 6010B	EPA 3050B	1080	ICP 8300	1
EPA 8015B (M)	EPA 3550B	972	GC 48	1
GC/MS / EPA 8260B	EPA 5035	316	GC/MS OO	2
GC/MS / EPA 8260B	EPA 5035	1178	GC/MS OO	2

Glossary of Terms and Qualifiers

Work Order: 19-06-1771

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 896-5494
For courier service / sample drop off information, contact us26_sales@eurofins.com or call us.

LABORATORY CLIENT:

CALENVIRO

ADDRESS: 30423 Canwood Street #208 STATE: CA ZIP: 91301

CITY: Agoura Hills
TEL: 818-991-1542

TURNAROUND TIME (Rush surcharges may apply to any TAT not STANDARD):

SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

GLOBAL ID:

LOG CODE:

SPECIAL INSTRUCTIONS:

CHAIN OF CUSTODY RECORD
DATE: JUNE 26, 2019
PAGE: 1 OF 2

WO# / LAB USE ONLY
19-06-1771

CLIENT PROJECT NAME / NUMBER:

OOI

PROJECT CONTACT:

C. Buckley

P.O. NO.:

3029

SAMPLER(S) (PRINT)

Buckley

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH (g) GRO	TPH (d) DRO	TPH C6-C36 C6-C44	TPH	BTEX / MTBE 8260	VOCs (8260) Full list +	Oxygenates (8260) Oxy	Prep (5035) En Core Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs 8270 8270 SIM	T22 Metals 6010/747X 6020/747X	Cr(VI) 7196 7199 218.6	ASBESTIC/LEAD	OTHER ANALYSES	
	1	6/26/19	7:50	A20	3		X		X		X			X		X									
	2		8:12	50UL	5				X		X			X		X									
	3		8:26	✓	5				X		X			X		X									
	4		8:36	✓	5				X		X			X		X									
	5		8:49	✓	5				X		X			X		X									
	6		8:57	✓	5				X		X			X		X									
	7		9:17	-	4				X		X			X		X									
	8		9:36	✓	4				X		X			X		X									
	9		10:10	✓	3				X		X			X		X									
	10		10:55	✓	2				X		X			X		X									

Received by: (Signature/Affiliation)

Rudy F

Received by: (Signature/Affiliation)

Rudy F

Received by: (Signature/Affiliation)

Date: 6/26/19 Time: 1920

Date: 6/26/19 Time: 1750

Date: 6/26/19 Time: 1750

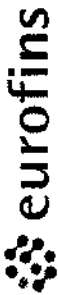
Relinquished by: (Signature)

[Signature]

Relinquished by: (Signature)

Rudy F

Relinquished by: (Signature)



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For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.
LABORATORY CLIENT:

CHAIN OF CUSTODY RECORD
DATE: JUNE 26 2019
PAGE: 2 OF 2

WO # / LAB USE ONLY
1771

CLIENT PROJECT NAME / NUMBER: OOI P.O. NO.: 3029

PROJECT CONTACT: C. Buckley SAMPLER(S): (PRINT) Buckley

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
 SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

GLOBAL ID: _____

COELT EDF _____

SPECIAL INSTRUCTIONS: _____

LOG CODE: _____

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	LOI CODE:		
		DATE	TIME			Unpreserved	Preserved	Field Filtered
11	CE5B12-6'	6/26/19	11:45	Soil	5			
12	CE5B12-10'		11:55		5			
13	CE5B12-15'		12:15		5			
14	CE5B12-20'		12:25		5			
15	CE5B12-25'		12:40		5			
16	CE5B12-30'		12:55		3			
17	CE5B12-38'		1:08		3			
18	CE5B12-38.5'		1:25		3			
19	CE5B12-42.5'		1:45		3			
20	CE DUPI	6/26/19		Soil	1			
21	CE5B12-046	6/26/19	2:05	Soil	3			

Requested Analyzes	Prep (5035) <input type="checkbox"/> En Core <input type="checkbox"/> Terra Core <input type="checkbox"/>	Oxygenates (8260)	VOCs (8260)	BTEX / MTBE <input checked="" type="checkbox"/> 8260 <input checked="" type="checkbox"/> Fony	TPH	TPH <input type="checkbox"/> C6-C36 <input checked="" type="checkbox"/> C6-C44	<input type="checkbox"/> TPH(d) <input type="checkbox"/> DRO	<input checked="" type="checkbox"/> TPH(g) <input checked="" type="checkbox"/> GRO 8260	Received by: (Signature/Affiliation)	Date:	Time:
Cr(VI) <input type="checkbox"/> 7196 <input type="checkbox"/> 7199 <input type="checkbox"/> 218.6									<i>[Signature]</i>	6/26/19	15:20 AM
T22 Metals <input type="checkbox"/> 6010/747X <input type="checkbox"/> 6020/747X									<i>[Signature]</i>	6/26/19	15:20
PAHs <input type="checkbox"/> 8270 <input type="checkbox"/> 8270 SIM									<i>[Signature]</i>	6/26/19	17:50
PCBs (8082)									<i>[Signature]</i>	6/26/19	17:50
Pesticides (8081)									<i>[Signature]</i>	6/26/19	17:50
SVOCs (8270)									<i>[Signature]</i>	6/26/19	17:50
ARSENIC/LEAD									<i>[Signature]</i>	6/26/19	17:50
MDS/STRE									<i>[Signature]</i>	6/26/19	17:50

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: CALENVIRD

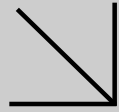
DATE: 06/26/2019

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)
 Thermometer ID: SC6 (CF: -0.2°C); Temperature (w/o CF): 2.5 °C (w/ CF): 2.3 °C; Blank Sample
 Sample(s) outside temperature criteria (PM/APM contacted by: _____)
 Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling
 Sample(s) received at ambient temperature; placed on ice for transport by courier
 Ambient Temperature: Air Filter
 Checked by: 676

CUSTODY SEAL:
 Cooler Present and Intact Present but Not Intact Not Present N/A Checked by: 676
 Sample(s) Present and Intact Present but Not Intact Not Present N/A Checked by: 1198

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Container(s) for certain analysis free of headspace.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE: (Trip Blank Lot Number: _____)
 Aqueous: VOA VOAh VOAna₂ 100PJ 100PJna₂ 125AGB 125AGBh 125AGBp 125PB 125PBz_{na} (pH__9)
 250AGB 250CGB 250CGBs (pH__2) 250PB 250PBn (pH__2) 500AGB 500AGJ 500AGJs (pH__2) 500PB
 1AGB 1AGBna₂ 1AGBs (pH__2) 1AGBs (O&G) 1PB 1PBna (pH__12) _____ _____
 Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (1) EnCores® (____) TerraCores® (3) 2oz PJ _____ _____
 Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (____): _____ _____
 Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag
 Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1198
 s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, z_{na} = Zn (CH₃CO₂)₂ + NaOH Reviewed by: 1053



WORK ORDER NUMBER: 19-06-1878

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: California Environmental

Client Project Name: OOI

Attention: Charles Buckley
30423 Canwood St.
Suite 208
Agoura Hills, CA 91301-4316

Approved for release on 07/11/2019 by:
Don Burley
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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 Work Order Number: 19-06-1878

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 06/27/19. They were assigned to Work Order 19-06-1878.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-13A): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: California Environmental	Work Order:	19-06-1878
30423 Canwood St., Suite 208	Project Name:	OOI
Agoura Hills, CA 91301-4316	PO Number:	
	Date/Time Received:	06/27/19 17:25
	Number of Containers:	102

Attn: Charles Buckley

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
CESB13-7'	19-06-1878-1	06/27/19 07:40	5	Solid
CESB13-11'	19-06-1878-2	06/27/19 07:50	5	Solid
CESB13-15'	19-06-1878-3	06/27/19 08:02	5	Solid
CESB13-20'	19-06-1878-4	06/27/19 08:10	5	Solid
CESB13-25'	19-06-1878-5	06/27/19 08:18	5	Solid
CESB13-30'	19-06-1878-6	06/27/19 08:38	5	Solid
CESB13-32	19-06-1878-7	06/27/19 08:50	5	Solid
CESB13-36	19-06-1878-8	06/27/19 09:00	5	Solid
CESB13-40	19-06-1878-9	06/27/19 09:20	5	Solid
CESB13-42	19-06-1878-10	06/27/19 09:45	3	Solid
CESB13-47'	19-06-1878-11	06/27/19 10:01	3	Solid
CESB14-11'	19-06-1878-12	06/27/19 11:51	5	Solid
CESB14-16'	19-06-1878-13	06/27/19 12:13	5	Solid
CESB14-20'	19-06-1878-14	06/27/19 12:18	5	Solid
CESB14-26'	19-06-1878-15	06/27/19 12:30	5	Solid
CESB14-31	19-06-1878-16	06/27/19 12:45	5	Solid
CESB14-36	19-06-1878-17	06/27/19 13:00	4	Solid
CESB14-42	19-06-1878-18	06/27/19 13:16	3	Solid
CESB14-49.5	19-06-1878-19	06/27/19 14:05	3	Solid
CE DUP 2	19-06-1878-20	06/27/19 00:00	4	Solid
CESB14-46	19-06-1878-21	06/27/19 13:59	3	Solid
CESB14-49.5	19-06-1878-22	06/27/19 14:15	3	Solid
CESB9-GW	19-06-1878-23	06/27/19 15:00	3	Aqueous
CESB10-GW	19-06-1878-24	06/27/19 15:20	1	Aqueous
CESB11-GW	19-06-1878-25	06/27/19 15:50	2	Aqueous

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

Page 1 of 17

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-7'	19-06-1878-1-A	06/27/19 07:40	Solid	GC 49	07/02/19	07/02/19 20:06	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	74	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-11'	19-06-1878-2-A	06/27/19 07:50	Solid	GC 49	07/02/19	07/02/19 20:26	190702B04

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	7.6	5.0	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	79	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-15'	19-06-1878-3-A	06/27/19 08:02	Solid	GC 49	07/02/19	07/02/19 20:49	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	ND	4.9	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	72	61-145		


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-20'	19-06-1878-4-A	06/27/19 08:10	Solid	GC 49	07/02/19	07/02/19 21:10	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	ND	4.9	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	74	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-25'	19-06-1878-5-A	06/27/19 08:18	Solid	GC 49	07/02/19	07/02/19 21:32	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	75	61-145	


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-30'	19-06-1878-6-A	06/27/19 08:38	Solid	GC 49	07/02/19	07/02/19 21:53	190702B04

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	6.0	4.9	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	86	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-32	19-06-1878-7-A	06/27/19 08:50	Solid	GC 49	07/02/19	07/02/19 22:16	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	67	61-145		

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-36	19-06-1878-8-A	06/27/19 09:00	Solid	GC 49	07/02/19	07/02/19 22:37	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	65	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-40	19-06-1878-9-A	06/27/19 09:20	Solid	GC 49	07/02/19	07/02/19 22:58	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	68	61-145	



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-11'	19-06-1878-12-A	06/27/19 11:51	Solid	GC 49	07/02/19	07/02/19 23:20	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	65	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-16'	19-06-1878-13-A	06/27/19 12:13	Solid	GC 49	07/02/19	07/02/19 23:41	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	ND	4.9	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	70	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-20'	19-06-1878-14-A	06/27/19 12:18	Solid	GC 49	07/02/19	07/03/19 00:03	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	67	61-145	



Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-26'	19-06-1878-15-A	06/27/19 12:30	Solid	GC 49	07/02/19	07/03/19 13:50	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	99	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-31	19-06-1878-16-A	06/27/19 12:45	Solid	GC 49	07/02/19	07/03/19 01:08	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	62	61-145	



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-36	19-06-1878-17-A	06/27/19 13:00	Solid	GC 49	07/02/19	07/03/19 01:29	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	61	61-145	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CE DUP 2	19-06-1878-20-A	06/27/19 00:00	Solid	GC 49	07/02/19	07/03/19 01:52	190702B04

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	62	61-145	


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental	Date Received:	06/27/19
30423 Canwood St., Suite 208	Work Order:	19-06-1878
Agoura Hills, CA 91301-4316	Preparation:	EPA 3550B
	Method:	EPA 8015B (M)
	Units:	mg/kg

Project: OOI Page 17 of 17

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-15-490-3658	N/A	Solid	GC 49	07/02/19	07/02/19 18:38	190702B04

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	88	61-145	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-7'	19-06-1878-1-A	06/27/19 07:40	Solid	ICP 8300	07/02/19	07/03/19 19:39	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>	<u>DF</u>		<u>Qualifiers</u>
Arsenic		ND		0.735	0.980		
Lead		1.96		0.490	0.980		
CESB13-11'	19-06-1878-2-A	06/27/19 07:50	Solid	ICP 8300	07/02/19	07/03/19 19:44	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>	<u>DF</u>		<u>Qualifiers</u>
Arsenic		ND		0.718	0.957		
Lead		1.01		0.478	0.957		
CESB13-15'	19-06-1878-3-A	06/27/19 08:02	Solid	ICP 8300	07/02/19	07/03/19 19:46	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>	<u>DF</u>		<u>Qualifiers</u>
Arsenic		ND		0.735	0.980		
Lead		1.50		0.490	0.980		
CESB13-20'	19-06-1878-4-A	06/27/19 08:10	Solid	ICP 8300	07/02/19	07/03/19 19:48	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>	<u>DF</u>		<u>Qualifiers</u>
Arsenic		ND		0.750	1.00		
Lead		1.08		0.500	1.00		
CESB13-25'	19-06-1878-5-A	06/27/19 08:18	Solid	ICP 8300	07/02/19	07/03/19 19:55	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>	<u>DF</u>		<u>Qualifiers</u>
Arsenic		12.7		0.746	0.995		
Lead		ND		0.498	0.995		
CESB13-30'	19-06-1878-6-A	06/27/19 08:38	Solid	ICP 8300	07/02/19	07/03/19 19:57	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>	<u>DF</u>		<u>Qualifiers</u>
Arsenic		1.48		0.777	1.04		
Lead		ND		0.518	1.04		

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-32	19-06-1878-7-A	06/27/19 08:50	Solid	ICP 8300	07/02/19	07/03/19 19:59	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.750		1.00	
Lead		0.525		0.500		1.00	
CESB13-36	19-06-1878-8-A	06/27/19 09:00	Solid	ICP 8300	07/02/19	07/03/19 20:01	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.746		0.995	
Lead		0.853		0.498		0.995	
CESB13-40	19-06-1878-9-A	06/27/19 09:20	Solid	ICP 8300	07/02/19	07/03/19 20:03	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.743		0.990	
Lead		0.516		0.495		0.990	
CESB14-11'	19-06-1878-12-A	06/27/19 11:51	Solid	ICP 8300	07/02/19	07/03/19 20:04	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.754		1.01	
Lead		1.03		0.503		1.01	
CESB14-16'	19-06-1878-13-A	06/27/19 12:13	Solid	ICP 8300	07/02/19	07/03/19 20:06	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		2.99		0.758		1.01	
Lead		3.29		0.505		1.01	
CESB14-20'	19-06-1878-14-A	06/27/19 12:18	Solid	ICP 8300	07/02/19	07/03/19 20:08	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.743		0.990	
Lead		1.43		0.495		0.990	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-26'	19-06-1878-15-A	06/27/19 12:30	Solid	ICP 8300	07/02/19	07/03/19 20:10	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		6.21		0.785		1.05	
Lead		1.31		0.524		1.05	
CESB14-31	19-06-1878-16-A	06/27/19 12:45	Solid	ICP 8300	07/02/19	07/03/19 20:12	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		5.45		0.769		1.03	
Lead		0.694		0.513		1.03	
CESB14-36	19-06-1878-17-A	06/27/19 13:00	Solid	ICP 8300	07/02/19	07/03/19 20:17	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		0.835		0.777		1.04	
Lead		0.818		0.518		1.04	
CE DUP 2	19-06-1878-20-A	06/27/19 00:00	Solid	ICP 8300	07/02/19	07/03/19 20:19	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.773		1.03	
Lead		ND		0.515		1.03	
Method Blank	097-01-002-28079	N/A	Solid	ICP 8300	07/02/19	07/03/19 19:33	190702L01
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.721		0.962	
Lead		ND		0.481		0.962	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB9-GW	19-06-1878-23-C	06/27/19 15:00	Aqueous	GC/MS PP	07/05/19	07/05/19 21:07	190705L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	100	5.00	
Benzene	190	2.5	5.00	
Bromobenzene	ND	5.0	5.00	
Bromochloromethane	ND	5.0	5.00	
Bromodichloromethane	ND	5.0	5.00	
Bromoform	ND	25	5.00	
Bromomethane	ND	250	5.00	
2-Butanone	ND	50	5.00	
n-Butylbenzene	21	5.0	5.00	
sec-Butylbenzene	16	5.0	5.00	
tert-Butylbenzene	ND	5.0	5.00	
Carbon Disulfide	ND	50	5.00	
Carbon Tetrachloride	ND	2.5	5.00	
Chlorobenzene	ND	5.0	5.00	
Chloroethane	ND	25	5.00	
Chloroform	ND	5.0	5.00	
Chloromethane	ND	50	5.00	
2-Chlorotoluene	ND	5.0	5.00	
4-Chlorotoluene	ND	5.0	5.00	
Dibromochloromethane	ND	5.0	5.00	
1,2-Dibromo-3-Chloropropane	ND	50	5.00	
1,2-Dibromoethane	ND	5.0	5.00	
Dibromomethane	ND	5.0	5.00	
1,2-Dichlorobenzene	ND	5.0	5.00	
1,3-Dichlorobenzene	ND	5.0	5.00	
1,4-Dichlorobenzene	ND	5.0	5.00	
Dichlorodifluoromethane	ND	5.0	5.00	
1,1-Dichloroethane	ND	5.0	5.00	
1,2-Dichloroethane	ND	2.5	5.00	
1,1-Dichloroethene	ND	5.0	5.00	
c-1,2-Dichloroethene	ND	5.0	5.00	
t-1,2-Dichloroethene	ND	5.0	5.00	
1,2-Dichloropropane	ND	5.0	5.00	
1,3-Dichloropropane	ND	5.0	5.00	
2,2-Dichloropropane	ND	5.0	5.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	5.0	5.00	
c-1,3-Dichloropropene	ND	2.5	5.00	
t-1,3-Dichloropropene	ND	2.5	5.00	
Ethylbenzene	610	5.0	5.00	
2-Hexanone	ND	50	5.00	
Isopropylbenzene	130	5.0	5.00	
p-Isopropyltoluene	42	5.0	5.00	
Methylene Chloride	ND	50	5.00	
4-Methyl-2-Pentanone	ND	50	5.00	
Naphthalene	60	50	5.00	
n-Propylbenzene	130	5.0	5.00	
Styrene	ND	5.0	5.00	
1,1,1,2-Tetrachloroethane	ND	5.0	5.00	
1,1,2,2-Tetrachloroethane	ND	5.0	5.00	
Tetrachloroethene	ND	5.0	5.00	
Toluene	13	5.0	5.00	
1,2,3-Trichlorobenzene	ND	5.0	5.00	
1,2,4-Trichlorobenzene	ND	5.0	5.00	
1,1,1-Trichloroethane	ND	5.0	5.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	5.00	
1,1,2-Trichloroethane	ND	5.0	5.00	
Trichloroethene	ND	5.0	5.00	
Trichlorofluoromethane	ND	50	5.00	
1,2,3-Trichloropropane	ND	25	5.00	
1,2,4-Trimethylbenzene	330	5.0	5.00	
1,3,5-Trimethylbenzene	27	5.0	5.00	
Vinyl Acetate	ND	50	5.00	
Vinyl Chloride	ND	2.5	5.00	
p/m-Xylene	280	5.0	5.00	
o-Xylene	81	5.0	5.00	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	5.00	
Tert-Butyl Alcohol (TBA)	54	50	5.00	
Diisopropyl Ether (DIPE)	ND	10	5.00	
Ethyl-t-Butyl Ether (ETBE)	ND	10	5.00	
Tert-Amyl-Methyl Ether (TAME)	ND	10	5.00	
Ethanol	ND	500	5.00	
TPPH	15000	250	5.00	
Gasoline Range Organics (C4-C12)	14000	250	5.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	94	78-126	
1,2-Dichloroethane-d4	85	75-135	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	95	80-120	
1,4-Bromofluorobenzene	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB10-GW	19-06-1878-24-A	06/27/19 15:20	Aqueous	GC/MS PP	07/05/19	07/05/19 21:38	190705L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	1000	50.0	
Benzene	390	25	50.0	
Bromobenzene	ND	50	50.0	
Bromochloromethane	ND	50	50.0	
Bromodichloromethane	ND	50	50.0	
Bromoform	ND	250	50.0	
Bromomethane	ND	2500	50.0	
2-Butanone	ND	500	50.0	
n-Butylbenzene	ND	50	50.0	
sec-Butylbenzene	81	50	50.0	
tert-Butylbenzene	ND	50	50.0	
Carbon Disulfide	ND	500	50.0	
Carbon Tetrachloride	ND	25	50.0	
Chlorobenzene	ND	50	50.0	
Chloroethane	ND	250	50.0	
Chloroform	ND	50	50.0	
Chloromethane	ND	500	50.0	
2-Chlorotoluene	ND	50	50.0	
4-Chlorotoluene	ND	50	50.0	
Dibromochloromethane	ND	50	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	50	50.0	
Dibromomethane	ND	50	50.0	
1,2-Dichlorobenzene	ND	50	50.0	
1,3-Dichlorobenzene	ND	50	50.0	
1,4-Dichlorobenzene	ND	50	50.0	
Dichlorodifluoromethane	ND	50	50.0	
1,1-Dichloroethane	ND	50	50.0	
1,2-Dichloroethane	ND	25	50.0	
1,1-Dichloroethene	ND	50	50.0	
c-1,2-Dichloroethene	ND	50	50.0	
t-1,2-Dichloroethene	ND	50	50.0	
1,2-Dichloropropane	ND	50	50.0	
1,3-Dichloropropane	ND	50	50.0	
2,2-Dichloropropane	ND	50	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	50	50.0	
c-1,3-Dichloropropene	ND	25	50.0	
t-1,3-Dichloropropene	ND	25	50.0	
Ethylbenzene	1500	50	50.0	
2-Hexanone	ND	500	50.0	
Isopropylbenzene	290	50	50.0	
p-Isopropyltoluene	220	50	50.0	
Methylene Chloride	ND	500	50.0	
4-Methyl-2-Pentanone	ND	500	50.0	
Naphthalene	830	500	50.0	
n-Propylbenzene	370	50	50.0	
Styrene	ND	50	50.0	
1,1,1,2-Tetrachloroethane	ND	50	50.0	
1,1,2,2-Tetrachloroethane	ND	50	50.0	
Tetrachloroethene	ND	50	50.0	
Toluene	120	50	50.0	
1,2,3-Trichlorobenzene	ND	50	50.0	
1,2,4-Trichlorobenzene	ND	50	50.0	
1,1,1-Trichloroethane	ND	50	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	500	50.0	
1,1,2-Trichloroethane	ND	50	50.0	
Trichloroethene	ND	50	50.0	
Trichlorofluoromethane	ND	500	50.0	
1,2,3-Trichloropropane	ND	250	50.0	
1,2,4-Trimethylbenzene	2800	50	50.0	
1,3,5-Trimethylbenzene	680	50	50.0	
Vinyl Acetate	ND	500	50.0	
Vinyl Chloride	ND	25	50.0	
p/m-Xylene	2700	50	50.0	
o-Xylene	2300	50	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	50	50.0	
Tert-Butyl Alcohol (TBA)	ND	500	50.0	
Diisopropyl Ether (DIPE)	ND	100	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	100	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	100	50.0	
Ethanol	ND	5000	50.0	
TPPH	92000	2500	50.0	
Gasoline Range Organics (C4-C12)	79000	2500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	95	78-126	
1,2-Dichloroethane-d4	90	75-135	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	93	80-120	
1,4-Bromofluorobenzene	99	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-GW	19-06-1878-25-B	06/27/19 15:50	Aqueous	GC/MS PP	07/02/19	07/03/19 00:44	190702L023

Parameter	Result	RL	DF	Qualifiers
Acetone	20	20	1.00	
Benzene	93	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	50	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	9.6	1.0	1.00	
sec-Butylbenzene	7.0	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	77	1.0	1.00	
p-Isopropyltoluene	17	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	91	10	1.00	
n-Propylbenzene	71	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	17	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,3,5-Trimethylbenzene	68	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
o-Xylene	48	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	95	78-126		
1,2-Dichloroethane-d4	88	75-135		
Toluene-d8	105	80-120		
Toluene-d8-TPPH	99	80-120		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 5030C
 Method: GC/MS / EPA 8260B
 Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	108	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB11-GW	19-06-1878-25-B	06/27/19 15:50	Aqueous	GC/MS PP	07/05/19	07/05/19 22:08	190705L008

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Ethylbenzene	520	10	10.0	
1,2,4-Trimethylbenzene	290	10	10.0	
p/m-Xylene	420	10	10.0	
TPPH	8900	500	10.0	
Gasoline Range Organics (C4-C12)	8600	500	10.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	95	78-126	
1,2-Dichloroethane-d4	90	75-135	
Toluene-d8	98	80-120	
Toluene-d8-TPPH	93	80-120	
1,4-Bromofluorobenzene	98	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-8590	N/A	Aqueous	GC/MS PP	07/02/19	07/02/19 18:20	190702L023

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	50	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,3,5-Trimethylbenzene	ND	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	96	78-126		
1,2-Dichloroethane-d4	95	75-135		
Toluene-d8	99	80-120		
Toluene-d8-TPPH	93	80-120		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental	Date Received:	06/27/19
30423 Canwood St., Suite 208	Work Order:	19-06-1878
Agoura Hills, CA 91301-4316	Preparation:	EPA 5030C
	Method:	GC/MS / EPA 8260B
	Units:	ug/L

Project: OOI Page 12 of 15

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	80-120	


Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-8591	N/A	Aqueous	GC/MS PP	07/05/19	07/05/19 19:05	190705L008

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Acetone	ND	20	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	50	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	1.0	1.00	
1,3,5-Trimethylbenzene	ND	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	78-126	
1,2-Dichloroethane-d4	91	75-135	
Toluene-d8	97	80-120	
Toluene-d8-TPPH	91	80-120	
1,4-Bromofluorobenzene	96	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-7'	19-06-1878-1-D	06/27/19 07:40	Solid	GC/MS OO	06/27/19	07/04/19 21:32	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	34	1.00	
Benzene	ND	0.68	1.00	
Bromobenzene	ND	0.68	1.00	
Bromochloromethane	ND	1.4	1.00	
Bromodichloromethane	ND	0.68	1.00	
Bromoform	ND	3.4	1.00	
Bromomethane	ND	14	1.00	
2-Butanone	ND	14	1.00	
n-Butylbenzene	ND	0.68	1.00	
sec-Butylbenzene	ND	0.68	1.00	
tert-Butylbenzene	ND	0.68	1.00	
Carbon Disulfide	ND	6.8	1.00	
Carbon Tetrachloride	ND	0.68	1.00	
Chlorobenzene	ND	0.68	1.00	
Chloroethane	ND	1.4	1.00	
Chloroform	ND	0.68	1.00	
Chloromethane	ND	14	1.00	
2-Chlorotoluene	ND	0.68	1.00	
4-Chlorotoluene	ND	0.68	1.00	
Dibromochloromethane	ND	1.4	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.4	1.00	
1,2-Dibromoethane	ND	0.68	1.00	
Dibromomethane	ND	0.68	1.00	
1,2-Dichlorobenzene	ND	0.68	1.00	
1,3-Dichlorobenzene	ND	0.68	1.00	
1,4-Dichlorobenzene	ND	0.68	1.00	
Dichlorodifluoromethane	ND	1.4	1.00	
1,1-Dichloroethane	ND	0.68	1.00	
1,2-Dichloroethane	ND	0.68	1.00	
1,1-Dichloroethene	ND	0.68	1.00	
c-1,2-Dichloroethene	ND	0.68	1.00	
t-1,2-Dichloroethene	ND	0.68	1.00	
1,2-Dichloropropane	ND	0.68	1.00	
1,3-Dichloropropane	ND	0.68	1.00	
2,2-Dichloropropane	ND	3.4	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.4	1.00	
c-1,3-Dichloropropene	ND	0.68	1.00	
t-1,3-Dichloropropene	ND	1.4	1.00	
Ethylbenzene	ND	0.68	1.00	
2-Hexanone	ND	14	1.00	
Isopropylbenzene	ND	0.68	1.00	
p-Isopropyltoluene	ND	0.68	1.00	
Methylene Chloride	ND	6.8	1.00	
4-Methyl-2-Pentanone	ND	14	1.00	
Naphthalene	ND	6.8	1.00	
n-Propylbenzene	ND	1.4	1.00	
Styrene	ND	0.68	1.00	
1,1,1,2-Tetrachloroethane	ND	0.68	1.00	
1,1,2,2-Tetrachloroethane	ND	1.4	1.00	
Tetrachloroethene	ND	0.68	1.00	
Toluene	ND	0.68	1.00	
1,2,3-Trichlorobenzene	ND	1.4	1.00	
1,2,4-Trichlorobenzene	ND	1.4	1.00	
1,1,1-Trichloroethane	ND	0.68	1.00	
1,1,2-Trichloroethane	ND	0.68	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	6.8	1.00	
Trichloroethene	ND	1.4	1.00	
Trichlorofluoromethane	ND	6.8	1.00	
1,2,3-Trichloropropane	ND	1.4	1.00	
1,2,4-Trimethylbenzene	ND	1.4	1.00	
1,3,5-Trimethylbenzene	ND	1.4	1.00	
Vinyl Acetate	ND	6.8	1.00	
Vinyl Chloride	ND	0.68	1.00	
p/m-Xylene	ND	1.4	1.00	
o-Xylene	ND	0.68	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.4	1.00	
Tert-Butyl Alcohol (TBA)	ND	14	1.00	
Diisopropyl Ether (DIPE)	ND	0.68	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.68	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.68	1.00	
Ethanol	ND	340	1.00	
TPPH	ND	34	1.00	
Gasoline Range Organics (C4-C12)	ND	34	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	102	79-139	
1,2-Dichloroethane-d4	106	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-11'	19-06-1878-2-D	06/27/19 07:50	Solid	GC/MS OO	06/27/19	07/04/19 22:02	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	35	1.00	
Benzene	ND	0.70	1.00	
Bromobenzene	ND	0.70	1.00	
Bromochloromethane	ND	1.4	1.00	
Bromodichloromethane	ND	0.70	1.00	
Bromoform	ND	3.5	1.00	
Bromomethane	ND	14	1.00	
2-Butanone	ND	14	1.00	
n-Butylbenzene	ND	0.70	1.00	
sec-Butylbenzene	ND	0.70	1.00	
tert-Butylbenzene	ND	0.70	1.00	
Carbon Disulfide	ND	7.0	1.00	
Carbon Tetrachloride	ND	0.70	1.00	
Chlorobenzene	ND	0.70	1.00	
Chloroethane	ND	1.4	1.00	
Chloroform	ND	0.70	1.00	
Chloromethane	ND	14	1.00	
2-Chlorotoluene	ND	0.70	1.00	
4-Chlorotoluene	ND	0.70	1.00	
Dibromochloromethane	ND	1.4	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.5	1.00	
1,2-Dibromoethane	ND	0.70	1.00	
Dibromomethane	ND	0.70	1.00	
1,2-Dichlorobenzene	ND	0.70	1.00	
1,3-Dichlorobenzene	ND	0.70	1.00	
1,4-Dichlorobenzene	ND	0.70	1.00	
Dichlorodifluoromethane	ND	1.4	1.00	
1,1-Dichloroethane	ND	0.70	1.00	
1,2-Dichloroethane	ND	0.70	1.00	
1,1-Dichloroethene	ND	0.70	1.00	
c-1,2-Dichloroethene	ND	0.70	1.00	
t-1,2-Dichloroethene	ND	0.70	1.00	
1,2-Dichloropropane	ND	0.70	1.00	
1,3-Dichloropropane	ND	0.70	1.00	
2,2-Dichloropropane	ND	3.5	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.4	1.00	
c-1,3-Dichloropropene	ND	0.70	1.00	
t-1,3-Dichloropropene	ND	1.4	1.00	
Ethylbenzene	ND	0.70	1.00	
2-Hexanone	ND	14	1.00	
Isopropylbenzene	ND	0.70	1.00	
p-Isopropyltoluene	ND	0.70	1.00	
Methylene Chloride	ND	7.0	1.00	
4-Methyl-2-Pentanone	ND	14	1.00	
Naphthalene	ND	7.0	1.00	
n-Propylbenzene	ND	1.4	1.00	
Styrene	ND	0.70	1.00	
1,1,1,2-Tetrachloroethane	ND	0.70	1.00	
1,1,2,2-Tetrachloroethane	ND	1.4	1.00	
Tetrachloroethene	ND	0.70	1.00	
Toluene	ND	0.70	1.00	
1,2,3-Trichlorobenzene	ND	1.4	1.00	
1,2,4-Trichlorobenzene	ND	1.4	1.00	
1,1,1-Trichloroethane	ND	0.70	1.00	
1,1,2-Trichloroethane	ND	0.70	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.0	1.00	
Trichloroethene	ND	1.4	1.00	
Trichlorofluoromethane	ND	7.0	1.00	
1,2,3-Trichloropropane	ND	1.4	1.00	
1,2,4-Trimethylbenzene	ND	1.4	1.00	
1,3,5-Trimethylbenzene	ND	1.4	1.00	
Vinyl Acetate	ND	7.0	1.00	
Vinyl Chloride	ND	0.70	1.00	
p/m-Xylene	ND	1.4	1.00	
o-Xylene	ND	0.70	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.4	1.00	
Tert-Butyl Alcohol (TBA)	ND	14	1.00	
Diisopropyl Ether (DIPE)	ND	0.70	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.70	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.70	1.00	
Ethanol	ND	350	1.00	
TPPH	47	35	1.00	
Gasoline Range Organics (C4-C12)	42	35	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	102	79-139	
1,2-Dichloroethane-d4	104	71-155	
1,4-Bromofluorobenzene	100	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-15'	19-06-1878-3-D	06/27/19 08:02	Solid	GC/MS OO	06/27/19	07/04/19 22:31	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	34	1.00	
Benzene	ND	0.67	1.00	
Bromobenzene	ND	0.67	1.00	
Bromochloromethane	ND	1.3	1.00	
Bromodichloromethane	ND	0.67	1.00	
Bromoform	ND	3.4	1.00	
Bromomethane	ND	13	1.00	
2-Butanone	ND	13	1.00	
n-Butylbenzene	ND	0.67	1.00	
sec-Butylbenzene	ND	0.67	1.00	
tert-Butylbenzene	ND	0.67	1.00	
Carbon Disulfide	ND	6.7	1.00	
Carbon Tetrachloride	ND	0.67	1.00	
Chlorobenzene	ND	0.67	1.00	
Chloroethane	ND	1.3	1.00	
Chloroform	ND	0.67	1.00	
Chloromethane	ND	13	1.00	
2-Chlorotoluene	ND	0.67	1.00	
4-Chlorotoluene	ND	0.67	1.00	
Dibromochloromethane	ND	1.3	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.4	1.00	
1,2-Dibromoethane	ND	0.67	1.00	
Dibromomethane	ND	0.67	1.00	
1,2-Dichlorobenzene	ND	0.67	1.00	
1,3-Dichlorobenzene	ND	0.67	1.00	
1,4-Dichlorobenzene	ND	0.67	1.00	
Dichlorodifluoromethane	ND	1.3	1.00	
1,1-Dichloroethane	ND	0.67	1.00	
1,2-Dichloroethane	ND	0.67	1.00	
1,1-Dichloroethene	ND	0.67	1.00	
c-1,2-Dichloroethene	ND	0.67	1.00	
t-1,2-Dichloroethene	ND	0.67	1.00	
1,2-Dichloropropane	ND	0.67	1.00	
1,3-Dichloropropane	ND	0.67	1.00	
2,2-Dichloropropane	ND	3.4	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.3	1.00	
c-1,3-Dichloropropene	ND	0.67	1.00	
t-1,3-Dichloropropene	ND	1.3	1.00	
Ethylbenzene	ND	0.67	1.00	
2-Hexanone	ND	13	1.00	
Isopropylbenzene	ND	0.67	1.00	
p-Isopropyltoluene	ND	0.67	1.00	
Methylene Chloride	ND	6.7	1.00	
4-Methyl-2-Pentanone	ND	13	1.00	
Naphthalene	ND	6.7	1.00	
n-Propylbenzene	ND	1.3	1.00	
Styrene	ND	0.67	1.00	
1,1,1,2-Tetrachloroethane	ND	0.67	1.00	
1,1,2,2-Tetrachloroethane	ND	1.3	1.00	
Tetrachloroethene	ND	0.67	1.00	
Toluene	ND	0.67	1.00	
1,2,3-Trichlorobenzene	ND	1.3	1.00	
1,2,4-Trichlorobenzene	ND	1.3	1.00	
1,1,1-Trichloroethane	ND	0.67	1.00	
1,1,2-Trichloroethane	ND	0.67	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	6.7	1.00	
Trichloroethene	ND	1.3	1.00	
Trichlorofluoromethane	ND	6.7	1.00	
1,2,3-Trichloropropane	ND	1.3	1.00	
1,2,4-Trimethylbenzene	ND	1.3	1.00	
1,3,5-Trimethylbenzene	ND	1.3	1.00	
Vinyl Acetate	ND	6.7	1.00	
Vinyl Chloride	ND	0.67	1.00	
p/m-Xylene	ND	1.3	1.00	
o-Xylene	ND	0.67	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.3	1.00	
Tert-Butyl Alcohol (TBA)	ND	13	1.00	
Diisopropyl Ether (DIPE)	ND	0.67	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.67	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.67	1.00	
Ethanol	ND	340	1.00	
TPPH	41	34	1.00	
Gasoline Range Organics (C4-C12)	56	34	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	103	79-139	
1,2-Dichloroethane-d4	107	71-155	
1,4-Bromofluorobenzene	100	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-20'	19-06-1878-4-D	06/27/19 08:10	Solid	GC/MS OO	06/27/19	07/04/19 23:01	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	39	1.00	
Benzene	ND	0.77	1.00	
Bromobenzene	ND	0.77	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.77	1.00	
Bromoform	ND	3.9	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	ND	0.77	1.00	
sec-Butylbenzene	ND	0.77	1.00	
tert-Butylbenzene	ND	0.77	1.00	
Carbon Disulfide	ND	7.7	1.00	
Carbon Tetrachloride	ND	0.77	1.00	
Chlorobenzene	ND	0.77	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.77	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.77	1.00	
4-Chlorotoluene	ND	0.77	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.9	1.00	
1,2-Dibromoethane	ND	0.77	1.00	
Dibromomethane	ND	0.77	1.00	
1,2-Dichlorobenzene	ND	0.77	1.00	
1,3-Dichlorobenzene	ND	0.77	1.00	
1,4-Dichlorobenzene	ND	0.77	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.77	1.00	
1,2-Dichloroethane	ND	0.77	1.00	
1,1-Dichloroethene	ND	0.77	1.00	
c-1,2-Dichloroethene	ND	0.77	1.00	
t-1,2-Dichloroethene	ND	0.77	1.00	
1,2-Dichloropropane	ND	0.77	1.00	
1,3-Dichloropropane	ND	0.77	1.00	
2,2-Dichloropropane	ND	3.9	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.77	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	ND	0.77	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	ND	0.77	1.00	
p-Isopropyltoluene	ND	0.77	1.00	
Methylene Chloride	ND	7.7	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.7	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.77	1.00	
1,1,1,2-Tetrachloroethane	ND	0.77	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.77	1.00	
Toluene	ND	0.77	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.77	1.00	
1,1,2-Trichloroethane	ND	0.77	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.7	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.7	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.7	1.00	
Vinyl Chloride	ND	0.77	1.00	
p/m-Xylene	ND	1.5	1.00	
o-Xylene	ND	0.77	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.77	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.77	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.77	1.00	
Ethanol	ND	390	1.00	
TPPH	150	39	1.00	
Gasoline Range Organics (C4-C12)	110	39	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	103	79-139	
1,2-Dichloroethane-d4	110	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-25'	19-06-1878-5-D	06/27/19 08:18	Solid	GC/MS OO	06/27/19	07/04/19 23:30	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	58	1.00	
Benzene	ND	1.2	1.00	
Bromobenzene	ND	1.2	1.00	
Bromochloromethane	ND	2.3	1.00	
Bromodichloromethane	ND	1.2	1.00	
Bromoform	ND	5.8	1.00	
Bromomethane	ND	23	1.00	
2-Butanone	ND	23	1.00	
n-Butylbenzene	ND	1.2	1.00	
sec-Butylbenzene	ND	1.2	1.00	
tert-Butylbenzene	ND	1.2	1.00	
Carbon Disulfide	ND	12	1.00	
Carbon Tetrachloride	ND	1.2	1.00	
Chlorobenzene	ND	1.2	1.00	
Chloroethane	ND	2.3	1.00	
Chloroform	ND	1.2	1.00	
Chloromethane	ND	23	1.00	
2-Chlorotoluene	ND	1.2	1.00	
4-Chlorotoluene	ND	1.2	1.00	
Dibromochloromethane	ND	2.3	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.8	1.00	
1,2-Dibromoethane	ND	1.2	1.00	
Dibromomethane	ND	1.2	1.00	
1,2-Dichlorobenzene	ND	1.2	1.00	
1,3-Dichlorobenzene	ND	1.2	1.00	
1,4-Dichlorobenzene	ND	1.2	1.00	
Dichlorodifluoromethane	ND	2.3	1.00	
1,1-Dichloroethane	ND	1.2	1.00	
1,2-Dichloroethane	ND	1.2	1.00	
1,1-Dichloroethene	ND	1.2	1.00	
c-1,2-Dichloroethene	ND	1.2	1.00	
t-1,2-Dichloroethene	ND	1.2	1.00	
1,2-Dichloropropane	ND	1.2	1.00	
1,3-Dichloropropane	ND	1.2	1.00	
2,2-Dichloropropane	ND	5.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.3	1.00	
c-1,3-Dichloropropene	ND	1.2	1.00	
t-1,3-Dichloropropene	ND	2.3	1.00	
Ethylbenzene	ND	1.2	1.00	
2-Hexanone	ND	23	1.00	
Isopropylbenzene	ND	1.2	1.00	
p-Isopropyltoluene	ND	1.2	1.00	
Methylene Chloride	ND	12	1.00	
4-Methyl-2-Pentanone	ND	23	1.00	
Naphthalene	ND	12	1.00	
n-Propylbenzene	ND	2.3	1.00	
Styrene	ND	1.2	1.00	
1,1,1,2-Tetrachloroethane	ND	1.2	1.00	
1,1,2,2-Tetrachloroethane	ND	2.3	1.00	
Tetrachloroethene	ND	1.2	1.00	
Toluene	ND	1.2	1.00	
1,2,3-Trichlorobenzene	ND	2.3	1.00	
1,2,4-Trichlorobenzene	ND	2.3	1.00	
1,1,1-Trichloroethane	ND	1.2	1.00	
1,1,2-Trichloroethane	ND	1.2	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	12	1.00	
Trichloroethene	ND	2.3	1.00	
Trichlorofluoromethane	ND	12	1.00	
1,2,3-Trichloropropane	ND	2.3	1.00	
1,2,4-Trimethylbenzene	ND	2.3	1.00	
1,3,5-Trimethylbenzene	ND	2.3	1.00	
Vinyl Acetate	ND	12	1.00	
Vinyl Chloride	ND	1.2	1.00	
p/m-Xylene	ND	2.3	1.00	
o-Xylene	ND	1.2	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.3	1.00	
Tert-Butyl Alcohol (TBA)	ND	23	1.00	
Diisopropyl Ether (DIPE)	ND	1.2	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.2	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.2	1.00	
Ethanol	ND	580	1.00	
TPPH	1500	58	1.00	
Gasoline Range Organics (C4-C12)	1000	58	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	103	79-139	
1,2-Dichloroethane-d4	110	71-155	
1,4-Bromofluorobenzene	102	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	103	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-30'	19-06-1878-6-D	06/27/19 08:38	Solid	GC/MS OO	06/27/19	07/04/19 23:59	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	47	1.00	
Benzene	ND	0.94	1.00	
Bromobenzene	ND	0.94	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.94	1.00	
Bromoform	ND	4.7	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.94	1.00	
sec-Butylbenzene	1.8	0.94	1.00	
tert-Butylbenzene	ND	0.94	1.00	
Carbon Disulfide	ND	9.4	1.00	
Carbon Tetrachloride	ND	0.94	1.00	
Chlorobenzene	ND	0.94	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.94	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.94	1.00	
4-Chlorotoluene	ND	0.94	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.7	1.00	
1,2-Dibromoethane	ND	0.94	1.00	
Dibromomethane	ND	0.94	1.00	
1,2-Dichlorobenzene	ND	0.94	1.00	
1,3-Dichlorobenzene	ND	0.94	1.00	
1,4-Dichlorobenzene	ND	0.94	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.94	1.00	
1,2-Dichloroethane	ND	0.94	1.00	
1,1-Dichloroethene	ND	0.94	1.00	
c-1,2-Dichloroethene	ND	0.94	1.00	
t-1,2-Dichloroethene	ND	0.94	1.00	
1,2-Dichloropropane	ND	0.94	1.00	
1,3-Dichloropropane	ND	0.94	1.00	
2,2-Dichloropropane	ND	4.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.94	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.94	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.94	1.00	
p-Isopropyltoluene	ND	0.94	1.00	
Methylene Chloride	ND	9.4	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.4	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.94	1.00	
1,1,1,2-Tetrachloroethane	ND	0.94	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	ND	0.94	1.00	
Toluene	ND	0.94	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.94	1.00	
1,1,2-Trichloroethane	ND	0.94	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.4	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.4	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.4	1.00	
Vinyl Chloride	ND	0.94	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.94	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	
Tert-Butyl Alcohol (TBA)	ND	19	1.00	
Diisopropyl Ether (DIPE)	ND	0.94	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.94	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.94	1.00	
Ethanol	ND	470	1.00	
TPPH	3000	47	1.00	
Gasoline Range Organics (C4-C12)	2000	47	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	100	79-139	
1,2-Dichloroethane-d4	106	71-155	
1,4-Bromofluorobenzene	105	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-32	19-06-1878-7-D	06/27/19 08:50	Solid	GC/MS OO	06/27/19	07/05/19 00:29	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	44	1.00	
Benzene	ND	0.88	1.00	
Bromobenzene	ND	0.88	1.00	
Bromochloromethane	ND	1.8	1.00	
Bromodichloromethane	ND	0.88	1.00	
Bromoform	ND	4.4	1.00	
Bromomethane	ND	18	1.00	
2-Butanone	ND	18	1.00	
n-Butylbenzene	8.5	0.88	1.00	
sec-Butylbenzene	5.0	0.88	1.00	
tert-Butylbenzene	ND	0.88	1.00	
Carbon Disulfide	ND	8.8	1.00	
Carbon Tetrachloride	ND	0.88	1.00	
Chlorobenzene	ND	0.88	1.00	
Chloroethane	ND	1.8	1.00	
Chloroform	ND	0.88	1.00	
Chloromethane	ND	18	1.00	
2-Chlorotoluene	ND	0.88	1.00	
4-Chlorotoluene	ND	0.88	1.00	
Dibromochloromethane	ND	1.8	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.4	1.00	
1,2-Dibromoethane	ND	0.88	1.00	
Dibromomethane	ND	0.88	1.00	
1,2-Dichlorobenzene	ND	0.88	1.00	
1,3-Dichlorobenzene	ND	0.88	1.00	
1,4-Dichlorobenzene	ND	0.88	1.00	
Dichlorodifluoromethane	ND	1.8	1.00	
1,1-Dichloroethane	ND	0.88	1.00	
1,2-Dichloroethane	ND	0.88	1.00	
1,1-Dichloroethene	ND	0.88	1.00	
c-1,2-Dichloroethene	ND	0.88	1.00	
t-1,2-Dichloroethene	ND	0.88	1.00	
1,2-Dichloropropane	ND	0.88	1.00	
1,3-Dichloropropane	ND	0.88	1.00	
2,2-Dichloropropane	ND	4.4	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.8	1.00	
c-1,3-Dichloropropene	ND	0.88	1.00	
t-1,3-Dichloropropene	ND	1.8	1.00	
Ethylbenzene	ND	0.88	1.00	
2-Hexanone	ND	18	1.00	
Isopropylbenzene	2.5	0.88	1.00	
p-Isopropyltoluene	5.7	0.88	1.00	
Methylene Chloride	ND	8.8	1.00	
4-Methyl-2-Pentanone	ND	18	1.00	
Naphthalene	ND	8.8	1.00	
n-Propylbenzene	2.0	1.8	1.00	
Styrene	ND	0.88	1.00	
1,1,1,2-Tetrachloroethane	ND	0.88	1.00	
1,1,2,2-Tetrachloroethane	ND	1.8	1.00	
Tetrachloroethene	ND	0.88	1.00	
Toluene	ND	0.88	1.00	
1,2,3-Trichlorobenzene	ND	1.8	1.00	
1,2,4-Trichlorobenzene	ND	1.8	1.00	
1,1,1-Trichloroethane	ND	0.88	1.00	
1,1,2-Trichloroethane	ND	0.88	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.8	1.00	
Trichloroethene	ND	1.8	1.00	
Trichlorofluoromethane	ND	8.8	1.00	
1,2,3-Trichloropropane	ND	1.8	1.00	
1,2,4-Trimethylbenzene	ND	1.8	1.00	
1,3,5-Trimethylbenzene	ND	1.8	1.00	
Vinyl Acetate	ND	8.8	1.00	
Vinyl Chloride	ND	0.88	1.00	
p/m-Xylene	ND	1.8	1.00	
o-Xylene	ND	0.88	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.8	1.00	
Tert-Butyl Alcohol (TBA)	ND	18	1.00	
Diisopropyl Ether (DIPE)	ND	0.88	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.88	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.88	1.00	
Ethanol	ND	440	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	101	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	106	71-155	
1,4-Bromofluorobenzene	109	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-32	19-06-1878-7-F	06/27/19 08:50	Solid	GC/MS OO	06/27/19	07/06/19 23:23	190706L022

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	6400	4700	100	
Gasoline Range Organics (C4-C12)	ND	4700	100	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	101	79-139	
1,2-Dichloroethane-d4	101	71-155	
1,4-Bromofluorobenzene	94	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	103	80-120	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-36	19-06-1878-8-D	06/27/19 09:00	Solid	GC/MS OO	06/27/19	07/05/19 00:58	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	58	1.00	
Benzene	2.1	1.2	1.00	
Bromobenzene	ND	1.2	1.00	
Bromochloromethane	ND	2.3	1.00	
Bromodichloromethane	ND	1.2	1.00	
Bromoform	ND	5.8	1.00	
Bromomethane	ND	23	1.00	
2-Butanone	ND	23	1.00	
n-Butylbenzene	11	1.2	1.00	
sec-Butylbenzene	6.6	1.2	1.00	
tert-Butylbenzene	ND	1.2	1.00	
Carbon Disulfide	ND	12	1.00	
Carbon Tetrachloride	ND	1.2	1.00	
Chlorobenzene	ND	1.2	1.00	
Chloroethane	ND	2.3	1.00	
Chloroform	ND	1.2	1.00	
Chloromethane	ND	23	1.00	
2-Chlorotoluene	ND	1.2	1.00	
4-Chlorotoluene	ND	1.2	1.00	
Dibromochloromethane	ND	2.3	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.8	1.00	
1,2-Dibromoethane	ND	1.2	1.00	
Dibromomethane	ND	1.2	1.00	
1,2-Dichlorobenzene	ND	1.2	1.00	
1,3-Dichlorobenzene	ND	1.2	1.00	
1,4-Dichlorobenzene	ND	1.2	1.00	
Dichlorodifluoromethane	ND	2.3	1.00	
1,1-Dichloroethane	ND	1.2	1.00	
1,2-Dichloroethane	ND	1.2	1.00	
1,1-Dichloroethene	ND	1.2	1.00	
c-1,2-Dichloroethene	ND	1.2	1.00	
t-1,2-Dichloroethene	ND	1.2	1.00	
1,2-Dichloropropane	ND	1.2	1.00	
1,3-Dichloropropane	ND	1.2	1.00	
2,2-Dichloropropane	ND	5.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.3	1.00	
c-1,3-Dichloropropene	ND	1.2	1.00	
t-1,3-Dichloropropene	ND	2.3	1.00	
Ethylbenzene	1.9	1.2	1.00	
2-Hexanone	ND	23	1.00	
Isopropylbenzene	5.2	1.2	1.00	
p-Isopropyltoluene	8.7	1.2	1.00	
Methylene Chloride	ND	12	1.00	
4-Methyl-2-Pentanone	ND	23	1.00	
Naphthalene	ND	12	1.00	
n-Propylbenzene	2.6	2.3	1.00	
Styrene	ND	1.2	1.00	
1,1,1,2-Tetrachloroethane	ND	1.2	1.00	
1,1,2,2-Tetrachloroethane	ND	2.3	1.00	
Tetrachloroethene	ND	1.2	1.00	
Toluene	ND	1.2	1.00	
1,2,3-Trichlorobenzene	ND	2.3	1.00	
1,2,4-Trichlorobenzene	ND	2.3	1.00	
1,1,1-Trichloroethane	ND	1.2	1.00	
1,1,2-Trichloroethane	ND	1.2	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	12	1.00	
Trichloroethene	ND	2.3	1.00	
Trichlorofluoromethane	ND	12	1.00	
1,2,3-Trichloropropane	ND	2.3	1.00	
1,2,4-Trimethylbenzene	3.8	2.3	1.00	
1,3,5-Trimethylbenzene	2.9	2.3	1.00	
Vinyl Acetate	ND	12	1.00	
Vinyl Chloride	ND	1.2	1.00	
p/m-Xylene	ND	2.3	1.00	
o-Xylene	ND	1.2	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.3	1.00	
Tert-Butyl Alcohol (TBA)	ND	23	1.00	
Diisopropyl Ether (DIPE)	ND	1.2	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.2	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.2	1.00	
Ethanol	ND	580	1.00	
Gasoline Range Organics (C4-C12)	4300	58	1.00	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	107	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	101	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-36	19-06-1878-8-F	06/27/19 09:00	Solid	GC/MS OO	06/27/19	07/06/19 23:52	190706L022

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	5900	4500	100	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	101	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	101	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-40	19-06-1878-9-D	06/27/19 09:20	Solid	GC/MS OO	06/27/19	07/07/19 23:18	190707L004

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	43	1.00	
Benzene	15	0.86	1.00	
Bromobenzene	ND	0.86	1.00	
Bromochloromethane	ND	1.7	1.00	
Bromodichloromethane	ND	0.86	1.00	
Bromoform	ND	4.3	1.00	
Bromomethane	ND	17	1.00	
2-Butanone	ND	17	1.00	
n-Butylbenzene	9.4	0.86	1.00	
sec-Butylbenzene	4.2	0.86	1.00	
tert-Butylbenzene	ND	0.86	1.00	
Carbon Disulfide	ND	8.6	1.00	
Carbon Tetrachloride	ND	0.86	1.00	
Chlorobenzene	ND	0.86	1.00	
Chloroethane	ND	1.7	1.00	
Chloroform	ND	0.86	1.00	
Chloromethane	ND	17	1.00	
2-Chlorotoluene	ND	0.86	1.00	
4-Chlorotoluene	ND	0.86	1.00	
Dibromochloromethane	ND	1.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.3	1.00	
1,2-Dibromoethane	ND	0.86	1.00	
Dibromomethane	ND	0.86	1.00	
1,2-Dichlorobenzene	ND	0.86	1.00	
1,3-Dichlorobenzene	ND	0.86	1.00	
1,4-Dichlorobenzene	ND	0.86	1.00	
Dichlorodifluoromethane	ND	1.7	1.00	
1,1-Dichloroethane	ND	0.86	1.00	
1,2-Dichloroethane	ND	0.86	1.00	
1,1-Dichloroethene	ND	0.86	1.00	
c-1,2-Dichloroethene	ND	0.86	1.00	
t-1,2-Dichloroethene	ND	0.86	1.00	
1,2-Dichloropropane	ND	0.86	1.00	
1,3-Dichloropropane	ND	0.86	1.00	
2,2-Dichloropropane	ND	4.3	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.7	1.00	
c-1,3-Dichloropropene	ND	0.86	1.00	
t-1,3-Dichloropropene	ND	1.7	1.00	
Ethylbenzene	45	0.86	1.00	
2-Hexanone	ND	17	1.00	
Isopropylbenzene	15	0.86	1.00	
p-Isopropyltoluene	11	0.86	1.00	
Methylene Chloride	ND	8.6	1.00	
4-Methyl-2-Pentanone	ND	17	1.00	
Naphthalene	15	8.6	1.00	
n-Propylbenzene	15	1.7	1.00	
Styrene	ND	0.86	1.00	
1,1,1,2-Tetrachloroethane	ND	0.86	1.00	
1,1,2,2-Tetrachloroethane	ND	1.7	1.00	
Tetrachloroethene	ND	0.86	1.00	
Toluene	1.5	0.86	1.00	
1,2,3-Trichlorobenzene	ND	1.7	1.00	
1,2,4-Trichlorobenzene	ND	1.7	1.00	
1,1,1-Trichloroethane	ND	0.86	1.00	
1,1,2-Trichloroethane	ND	0.86	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.6	1.00	
Trichloroethene	ND	1.7	1.00	
Trichlorofluoromethane	ND	8.6	1.00	
1,2,3-Trichloropropane	ND	1.7	1.00	
1,2,4-Trimethylbenzene	78	1.7	1.00	
1,3,5-Trimethylbenzene	21	1.7	1.00	
Vinyl Acetate	ND	8.6	1.00	
Vinyl Chloride	ND	0.86	1.00	
p/m-Xylene	7.5	1.7	1.00	
o-Xylene	9.0	0.86	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.7	1.00	
Tert-Butyl Alcohol (TBA)	ND	17	1.00	
Diisopropyl Ether (DIPE)	ND	0.86	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.86	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.86	1.00	
Ethanol	ND	430	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	101	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	105	71-155	
1,4-Bromofluorobenzene	108	80-120	
Toluene-d8	114	80-120	
Toluene-d8-TPPH	89	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-40	19-06-1878-9-F	06/27/19 09:20	Solid	GC/MS OO	06/27/19	07/06/19 21:25	190706L022

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	39000	3900	100	
Gasoline Range Organics (C4-C12)	34000	3900	100	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	103	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	103	80-120	
Toluene-d8-TPPH	103	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-42	19-06-1878-10-B	06/27/19 09:45	Solid	GC/MS OO	06/27/19	07/06/19 17:30	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	37	1.00	
Benzene	2.6	0.74	1.00	
Bromobenzene	ND	0.74	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.74	1.00	
Bromoform	ND	3.7	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	ND	0.74	1.00	
sec-Butylbenzene	ND	0.74	1.00	
tert-Butylbenzene	ND	0.74	1.00	
Carbon Disulfide	ND	7.4	1.00	
Carbon Tetrachloride	ND	0.74	1.00	
Chlorobenzene	ND	0.74	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.74	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.74	1.00	
4-Chlorotoluene	ND	0.74	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.7	1.00	
1,2-Dibromoethane	ND	0.74	1.00	
Dibromomethane	ND	0.74	1.00	
1,2-Dichlorobenzene	ND	0.74	1.00	
1,3-Dichlorobenzene	ND	0.74	1.00	
1,4-Dichlorobenzene	ND	0.74	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.74	1.00	
1,2-Dichloroethane	2.1	0.74	1.00	
1,1-Dichloroethene	ND	0.74	1.00	
c-1,2-Dichloroethene	ND	0.74	1.00	
t-1,2-Dichloroethene	ND	0.74	1.00	
1,2-Dichloropropane	ND	0.74	1.00	
1,3-Dichloropropane	ND	0.74	1.00	
2,2-Dichloropropane	ND	3.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.74	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	ND	0.74	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	ND	0.74	1.00	
p-Isopropyltoluene	ND	0.74	1.00	
Methylene Chloride	ND	7.4	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.4	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.74	1.00	
1,1,1,2-Tetrachloroethane	ND	0.74	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.74	1.00	
Toluene	ND	0.74	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.74	1.00	
1,1,2-Trichloroethane	ND	0.74	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.4	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.4	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.4	1.00	
Vinyl Chloride	ND	0.74	1.00	
p/m-Xylene	ND	1.5	1.00	
o-Xylene	ND	0.74	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.74	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.74	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.74	1.00	
Ethanol	ND	370	1.00	
TPPH	230	37	1.00	
Gasoline Range Organics (C4-C12)	220	37	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	106	79-139	
1,2-Dichloroethane-d4	117	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	103	80-120	
Toluene-d8-TPPH	104	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-47'	19-06-1878-11-B	06/27/19 10:01	Solid	GC/MS OO	06/27/19	07/06/19 17:59	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	40	1.00	
Benzene	ND	0.80	1.00	
Bromobenzene	ND	0.80	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.80	1.00	
Bromoform	ND	4.0	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.80	1.00	
sec-Butylbenzene	ND	0.80	1.00	
tert-Butylbenzene	ND	0.80	1.00	
Carbon Disulfide	ND	8.0	1.00	
Carbon Tetrachloride	ND	0.80	1.00	
Chlorobenzene	ND	0.80	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.80	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.80	1.00	
4-Chlorotoluene	ND	0.80	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.0	1.00	
1,2-Dibromoethane	ND	0.80	1.00	
Dibromomethane	ND	0.80	1.00	
1,2-Dichlorobenzene	ND	0.80	1.00	
1,3-Dichlorobenzene	ND	0.80	1.00	
1,4-Dichlorobenzene	ND	0.80	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.80	1.00	
1,2-Dichloroethane	6.2	0.80	1.00	
1,1-Dichloroethene	ND	0.80	1.00	
c-1,2-Dichloroethene	ND	0.80	1.00	
t-1,2-Dichloroethene	ND	0.80	1.00	
1,2-Dichloropropane	ND	0.80	1.00	
1,3-Dichloropropane	ND	0.80	1.00	
2,2-Dichloropropane	ND	4.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.80	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.80	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.80	1.00	
p-Isopropyltoluene	ND	0.80	1.00	
Methylene Chloride	ND	8.0	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	8.0	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.80	1.00	
1,1,1,2-Tetrachloroethane	ND	0.80	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.80	1.00	
Toluene	ND	0.80	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.80	1.00	
1,1,2-Trichloroethane	ND	0.80	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.0	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	8.0	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	8.0	1.00	
Vinyl Chloride	ND	0.80	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.80	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.80	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.80	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.80	1.00	
Ethanol	ND	400	1.00	
TPPH	220	40	1.00	
Gasoline Range Organics (C4-C12)	210	40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	107	79-139	
1,2-Dichloroethane-d4	113	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	103	80-120	
Toluene-d8-TPPH	104	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-11'	19-06-1878-12-D	06/27/19 11:51	Solid	GC/MS OO	06/27/19	07/06/19 18:29	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	37	1.00	
Benzene	ND	0.74	1.00	
Bromobenzene	ND	0.74	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.74	1.00	
Bromoform	ND	3.7	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	ND	0.74	1.00	
sec-Butylbenzene	ND	0.74	1.00	
tert-Butylbenzene	ND	0.74	1.00	
Carbon Disulfide	ND	7.4	1.00	
Carbon Tetrachloride	ND	0.74	1.00	
Chlorobenzene	ND	0.74	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.74	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.74	1.00	
4-Chlorotoluene	ND	0.74	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.7	1.00	
1,2-Dibromoethane	ND	0.74	1.00	
Dibromomethane	ND	0.74	1.00	
1,2-Dichlorobenzene	ND	0.74	1.00	
1,3-Dichlorobenzene	ND	0.74	1.00	
1,4-Dichlorobenzene	ND	0.74	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.74	1.00	
1,2-Dichloroethane	ND	0.74	1.00	
1,1-Dichloroethene	ND	0.74	1.00	
c-1,2-Dichloroethene	ND	0.74	1.00	
t-1,2-Dichloroethene	ND	0.74	1.00	
1,2-Dichloropropane	ND	0.74	1.00	
1,3-Dichloropropane	ND	0.74	1.00	
2,2-Dichloropropane	ND	3.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.74	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	ND	0.74	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	ND	0.74	1.00	
p-Isopropyltoluene	ND	0.74	1.00	
Methylene Chloride	ND	7.4	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.4	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.74	1.00	
1,1,1,2-Tetrachloroethane	ND	0.74	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.74	1.00	
Toluene	ND	0.74	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.74	1.00	
1,1,2-Trichloroethane	ND	0.74	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.4	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.4	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.4	1.00	
Vinyl Chloride	ND	0.74	1.00	
p/m-Xylene	ND	1.5	1.00	
o-Xylene	ND	0.74	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.74	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.74	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.74	1.00	
Ethanol	ND	370	1.00	
TPPH	ND	37	1.00	
Gasoline Range Organics (C4-C12)	ND	37	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	113	79-139	
1,2-Dichloroethane-d4	118	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-16'	19-06-1878-13-D	06/27/19 12:13	Solid	GC/MS OO	06/27/19	07/06/19 18:58	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	38	1.00	
Benzene	ND	0.76	1.00	
Bromobenzene	ND	0.76	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.76	1.00	
Bromoform	ND	3.8	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	ND	0.76	1.00	
sec-Butylbenzene	ND	0.76	1.00	
tert-Butylbenzene	ND	0.76	1.00	
Carbon Disulfide	ND	7.6	1.00	
Carbon Tetrachloride	ND	0.76	1.00	
Chlorobenzene	ND	0.76	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.76	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.76	1.00	
4-Chlorotoluene	ND	0.76	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.8	1.00	
1,2-Dibromoethane	ND	0.76	1.00	
Dibromomethane	ND	0.76	1.00	
1,2-Dichlorobenzene	ND	0.76	1.00	
1,3-Dichlorobenzene	ND	0.76	1.00	
1,4-Dichlorobenzene	ND	0.76	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.76	1.00	
1,2-Dichloroethane	ND	0.76	1.00	
1,1-Dichloroethene	ND	0.76	1.00	
c-1,2-Dichloroethene	ND	0.76	1.00	
t-1,2-Dichloroethene	ND	0.76	1.00	
1,2-Dichloropropane	ND	0.76	1.00	
1,3-Dichloropropane	ND	0.76	1.00	
2,2-Dichloropropane	ND	3.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.76	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	ND	0.76	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	ND	0.76	1.00	
p-Isopropyltoluene	ND	0.76	1.00	
Methylene Chloride	ND	7.6	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.6	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.76	1.00	
1,1,1,2-Tetrachloroethane	ND	0.76	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.76	1.00	
Toluene	ND	0.76	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.76	1.00	
1,1,2-Trichloroethane	ND	0.76	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.6	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.6	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.6	1.00	
Vinyl Chloride	ND	0.76	1.00	
p/m-Xylene	ND	1.5	1.00	
o-Xylene	ND	0.76	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.76	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.76	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.76	1.00	
Ethanol	ND	380	1.00	
TPPH	ND	38	1.00	
Gasoline Range Organics (C4-C12)	ND	38	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	113	79-139	
1,2-Dichloroethane-d4	118	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-20'	19-06-1878-14-D	06/27/19 12:18	Solid	GC/MS OO	06/27/19	07/06/19 19:28	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	37	1.00	
Benzene	ND	0.73	1.00	
Bromobenzene	ND	0.73	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.73	1.00	
Bromoform	ND	3.7	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	ND	0.73	1.00	
sec-Butylbenzene	ND	0.73	1.00	
tert-Butylbenzene	ND	0.73	1.00	
Carbon Disulfide	ND	7.3	1.00	
Carbon Tetrachloride	ND	0.73	1.00	
Chlorobenzene	ND	0.73	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.73	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.73	1.00	
4-Chlorotoluene	ND	0.73	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.7	1.00	
1,2-Dibromoethane	ND	0.73	1.00	
Dibromomethane	ND	0.73	1.00	
1,2-Dichlorobenzene	ND	0.73	1.00	
1,3-Dichlorobenzene	ND	0.73	1.00	
1,4-Dichlorobenzene	ND	0.73	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.73	1.00	
1,2-Dichloroethane	ND	0.73	1.00	
1,1-Dichloroethene	ND	0.73	1.00	
c-1,2-Dichloroethene	ND	0.73	1.00	
t-1,2-Dichloroethene	ND	0.73	1.00	
1,2-Dichloropropane	ND	0.73	1.00	
1,3-Dichloropropane	ND	0.73	1.00	
2,2-Dichloropropane	ND	3.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.73	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	ND	0.73	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	ND	0.73	1.00	
p-Isopropyltoluene	ND	0.73	1.00	
Methylene Chloride	ND	7.3	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.3	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.73	1.00	
1,1,1,2-Tetrachloroethane	ND	0.73	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.73	1.00	
Toluene	ND	0.73	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.73	1.00	
1,1,2-Trichloroethane	ND	0.73	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.3	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.3	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.3	1.00	
Vinyl Chloride	ND	0.73	1.00	
p/m-Xylene	ND	1.5	1.00	
o-Xylene	ND	0.73	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.73	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.73	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.73	1.00	
Ethanol	ND	370	1.00	
TPPH	93	37	1.00	
Gasoline Range Organics (C4-C12)	93	37	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	115	79-139	
1,2-Dichloroethane-d4	119	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-26'	19-06-1878-15-D	06/27/19 12:30	Solid	GC/MS OO	06/27/19	07/06/19 19:57	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	40	1.00	
Benzene	ND	0.80	1.00	
Bromobenzene	ND	0.80	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.80	1.00	
Bromoform	ND	4.0	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.80	1.00	
sec-Butylbenzene	ND	0.80	1.00	
tert-Butylbenzene	ND	0.80	1.00	
Carbon Disulfide	ND	8.0	1.00	
Carbon Tetrachloride	ND	0.80	1.00	
Chlorobenzene	ND	0.80	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.80	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.80	1.00	
4-Chlorotoluene	ND	0.80	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.0	1.00	
1,2-Dibromoethane	ND	0.80	1.00	
Dibromomethane	ND	0.80	1.00	
1,2-Dichlorobenzene	ND	0.80	1.00	
1,3-Dichlorobenzene	ND	0.80	1.00	
1,4-Dichlorobenzene	ND	0.80	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.80	1.00	
1,2-Dichloroethane	ND	0.80	1.00	
1,1-Dichloroethene	ND	0.80	1.00	
c-1,2-Dichloroethene	ND	0.80	1.00	
t-1,2-Dichloroethene	ND	0.80	1.00	
1,2-Dichloropropane	ND	0.80	1.00	
1,3-Dichloropropane	ND	0.80	1.00	
2,2-Dichloropropane	ND	4.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.80	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.80	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.80	1.00	
p-Isopropyltoluene	ND	0.80	1.00	
Methylene Chloride	ND	8.0	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	8.0	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.80	1.00	
1,1,1,2-Tetrachloroethane	ND	0.80	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.80	1.00	
Toluene	ND	0.80	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.80	1.00	
1,1,2-Trichloroethane	ND	0.80	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.0	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	8.0	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	8.0	1.00	
Vinyl Chloride	ND	0.80	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.80	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.80	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.80	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.80	1.00	
Ethanol	ND	400	1.00	
TPPH	240	40	1.00	
Gasoline Range Organics (C4-C12)	150	40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	112	79-139	
1,2-Dichloroethane-d4	122	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-31	19-06-1878-16-E	06/27/19 12:45	Solid	GC/MS OO	06/27/19	07/08/19 22:16	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	58	1.00	
Benzene	ND	1.2	1.00	
Bromobenzene	ND	1.2	1.00	
Bromochloromethane	ND	2.3	1.00	
Bromodichloromethane	ND	1.2	1.00	
Bromoform	ND	5.8	1.00	
Bromomethane	ND	23	1.00	
2-Butanone	ND	23	1.00	
n-Butylbenzene	18	1.2	1.00	
sec-Butylbenzene	8.1	1.2	1.00	
tert-Butylbenzene	ND	1.2	1.00	
Carbon Disulfide	ND	12	1.00	
Carbon Tetrachloride	ND	1.2	1.00	
Chlorobenzene	ND	1.2	1.00	
Chloroethane	ND	2.3	1.00	
Chloroform	ND	1.2	1.00	
Chloromethane	ND	23	1.00	
2-Chlorotoluene	ND	1.2	1.00	
4-Chlorotoluene	ND	1.2	1.00	
Dibromochloromethane	ND	2.3	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.8	1.00	
1,2-Dibromoethane	ND	1.2	1.00	
Dibromomethane	ND	1.2	1.00	
1,2-Dichlorobenzene	ND	1.2	1.00	
1,3-Dichlorobenzene	ND	1.2	1.00	
1,4-Dichlorobenzene	ND	1.2	1.00	
Dichlorodifluoromethane	ND	2.3	1.00	
1,1-Dichloroethane	ND	1.2	1.00	
1,2-Dichloroethane	ND	1.2	1.00	
1,1-Dichloroethene	ND	1.2	1.00	
c-1,2-Dichloroethene	ND	1.2	1.00	
t-1,2-Dichloroethene	ND	1.2	1.00	
1,2-Dichloropropane	ND	1.2	1.00	
1,3-Dichloropropane	ND	1.2	1.00	
2,2-Dichloropropane	ND	5.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.3	1.00	
c-1,3-Dichloropropene	ND	1.2	1.00	
t-1,3-Dichloropropene	ND	2.3	1.00	
Ethylbenzene	3.8	1.2	1.00	
2-Hexanone	ND	23	1.00	
Isopropylbenzene	8.0	1.2	1.00	
p-Isopropyltoluene	19	1.2	1.00	
Methylene Chloride	ND	12	1.00	
4-Methyl-2-Pentanone	ND	23	1.00	
Naphthalene	ND	12	1.00	
n-Propylbenzene	7.8	2.3	1.00	
Styrene	ND	1.2	1.00	
1,1,1,2-Tetrachloroethane	ND	1.2	1.00	
1,1,2,2-Tetrachloroethane	ND	2.3	1.00	
Tetrachloroethene	ND	1.2	1.00	
Toluene	ND	1.2	1.00	
1,2,3-Trichlorobenzene	ND	2.3	1.00	
1,2,4-Trichlorobenzene	ND	2.3	1.00	
1,1,1-Trichloroethane	ND	1.2	1.00	
1,1,2-Trichloroethane	ND	1.2	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	12	1.00	
Trichloroethene	ND	2.3	1.00	
Trichlorofluoromethane	ND	12	1.00	
1,2,3-Trichloropropane	ND	2.3	1.00	
1,2,4-Trimethylbenzene	ND	2.3	1.00	
1,3,5-Trimethylbenzene	ND	2.3	1.00	
Vinyl Acetate	ND	12	1.00	
Vinyl Chloride	ND	1.2	1.00	
p/m-Xylene	ND	2.3	1.00	
o-Xylene	ND	1.2	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.3	1.00	
Tert-Butyl Alcohol (TBA)	ND	23	1.00	
Diisopropyl Ether (DIPE)	ND	1.2	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.2	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.2	1.00	
Ethanol	ND	580	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	97	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	98	71-155	
1,4-Bromofluorobenzene	107	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	100	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-31	19-06-1878-16-F	06/27/19 12:45	Solid	GC/MS OO	06/27/19	07/06/19 21:55	190706L022

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	11000	4900	100	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	104	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	95	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	101	80-120	


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-36	19-06-1878-17-E	06/27/19 13:00	Solid	GC/MS OO	06/27/19	07/10/19 20:41	190710L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	2100	50.0	
Benzene	ND	43	50.0	
Bromobenzene	ND	43	50.0	
Bromochloromethane	ND	85	50.0	
Bromodichloromethane	ND	43	50.0	
Bromoform	ND	210	50.0	
Bromomethane	ND	850	50.0	
2-Butanone	ND	850	50.0	
n-Butylbenzene	110	43	50.0	
sec-Butylbenzene	62	43	50.0	
tert-Butylbenzene	ND	43	50.0	
Carbon Disulfide	ND	430	50.0	
Carbon Tetrachloride	ND	43	50.0	
Chlorobenzene	ND	43	50.0	
Chloroethane	ND	85	50.0	
Chloroform	ND	43	50.0	
Chloromethane	ND	850	50.0	
2-Chlorotoluene	ND	43	50.0	
4-Chlorotoluene	ND	43	50.0	
Dibromochloromethane	ND	85	50.0	
1,2-Dibromo-3-Chloropropane	ND	210	50.0	
1,2-Dibromoethane	ND	43	50.0	
Dibromomethane	ND	43	50.0	
1,2-Dichlorobenzene	ND	43	50.0	
1,3-Dichlorobenzene	ND	43	50.0	
1,4-Dichlorobenzene	ND	43	50.0	
Dichlorodifluoromethane	ND	85	50.0	
1,1-Dichloroethane	ND	43	50.0	
1,2-Dichloroethane	ND	43	50.0	
1,1-Dichloroethene	ND	43	50.0	
c-1,2-Dichloroethene	ND	43	50.0	
t-1,2-Dichloroethene	ND	43	50.0	
1,2-Dichloropropane	ND	43	50.0	
1,3-Dichloropropane	ND	43	50.0	
2,2-Dichloropropane	ND	210	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	85	50.0	
c-1,3-Dichloropropene	ND	43	50.0	
t-1,3-Dichloropropene	ND	85	50.0	
Ethylbenzene	150	43	50.0	
2-Hexanone	ND	850	50.0	
Isopropylbenzene	110	43	50.0	
p-Isopropyltoluene	74	43	50.0	
Methylene Chloride	ND	430	50.0	
4-Methyl-2-Pentanone	ND	850	50.0	
Naphthalene	ND	430	50.0	
n-Propylbenzene	140	85	50.0	
Styrene	ND	43	50.0	
1,1,1,2-Tetrachloroethane	ND	43	50.0	
1,1,2,2-Tetrachloroethane	ND	85	50.0	
Tetrachloroethene	ND	43	50.0	
Toluene	ND	43	50.0	
1,2,3-Trichlorobenzene	ND	85	50.0	
1,2,4-Trichlorobenzene	ND	85	50.0	
1,1,1-Trichloroethane	ND	43	50.0	
1,1,2-Trichloroethane	ND	43	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	430	50.0	
Trichloroethene	ND	85	50.0	
Trichlorofluoromethane	ND	430	50.0	
1,2,3-Trichloropropane	ND	85	50.0	
1,2,4-Trimethylbenzene	ND	85	50.0	
1,3,5-Trimethylbenzene	ND	85	50.0	
Vinyl Acetate	ND	430	50.0	
Vinyl Chloride	ND	43	50.0	
p/m-Xylene	ND	85	50.0	
o-Xylene	ND	43	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	85	50.0	
Tert-Butyl Alcohol (TBA)	ND	850	50.0	
Diisopropyl Ether (DIPE)	ND	43	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	43	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	43	50.0	
Ethanol	ND	21000	50.0	
TPPH	56000	2100	50.0	
Gasoline Range Organics (C4-C12)	43000	2100	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	103	79-139	
1,2-Dichloroethane-d4	101	71-155	
1,4-Bromofluorobenzene	101	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-42	19-06-1878-18-B	06/27/19 13:16	Solid	GC/MS OO	06/27/19	07/08/19 23:15	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	40	1.00	
Benzene	0.98	0.79	1.00	
Bromobenzene	ND	0.79	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.79	1.00	
Bromoform	ND	4.0	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	1.3	0.79	1.00	
sec-Butylbenzene	1.9	0.79	1.00	
tert-Butylbenzene	ND	0.79	1.00	
Carbon Disulfide	ND	7.9	1.00	
Carbon Tetrachloride	ND	0.79	1.00	
Chlorobenzene	ND	0.79	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.79	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.79	1.00	
4-Chlorotoluene	ND	0.79	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.0	1.00	
1,2-Dibromoethane	ND	0.79	1.00	
Dibromomethane	ND	0.79	1.00	
1,2-Dichlorobenzene	ND	0.79	1.00	
1,3-Dichlorobenzene	ND	0.79	1.00	
1,4-Dichlorobenzene	ND	0.79	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.79	1.00	
1,2-Dichloroethane	ND	0.79	1.00	
1,1-Dichloroethene	ND	0.79	1.00	
c-1,2-Dichloroethene	ND	0.79	1.00	
t-1,2-Dichloroethene	ND	0.79	1.00	
1,2-Dichloropropane	ND	0.79	1.00	
1,3-Dichloropropane	ND	0.79	1.00	
2,2-Dichloropropane	ND	4.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.79	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.79	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	0.90	0.79	1.00	
p-Isopropyltoluene	1.6	0.79	1.00	
Methylene Chloride	ND	7.9	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	7.9	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.79	1.00	
1,1,1,2-Tetrachloroethane	ND	0.79	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.79	1.00	
Toluene	ND	0.79	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.79	1.00	
1,1,2-Trichloroethane	ND	0.79	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.9	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	7.9	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	7.9	1.00	
Vinyl Chloride	ND	0.79	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.79	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.79	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.79	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.79	1.00	
Ethanol	ND	400	1.00	
TPPH	1500	40	1.00	
Gasoline Range Organics (C4-C12)	1300	40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	95	79-139	
1,2-Dichloroethane-d4	93	71-155	
1,4-Bromofluorobenzene	102	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	93	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-49.5	19-06-1878-19-C	06/27/19 14:05	Solid	GC/MS OO	06/27/19	07/06/19 20:27	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	38	1.00	
Benzene	ND	0.77	1.00	
Bromobenzene	ND	0.77	1.00	
Bromochloromethane	ND	1.5	1.00	
Bromodichloromethane	ND	0.77	1.00	
Bromoform	ND	3.8	1.00	
Bromomethane	ND	15	1.00	
2-Butanone	ND	15	1.00	
n-Butylbenzene	ND	0.77	1.00	
sec-Butylbenzene	ND	0.77	1.00	
tert-Butylbenzene	ND	0.77	1.00	
Carbon Disulfide	ND	7.7	1.00	
Carbon Tetrachloride	ND	0.77	1.00	
Chlorobenzene	ND	0.77	1.00	
Chloroethane	ND	1.5	1.00	
Chloroform	ND	0.77	1.00	
Chloromethane	ND	15	1.00	
2-Chlorotoluene	ND	0.77	1.00	
4-Chlorotoluene	ND	0.77	1.00	
Dibromochloromethane	ND	1.5	1.00	
1,2-Dibromo-3-Chloropropane	ND	3.8	1.00	
1,2-Dibromoethane	ND	0.77	1.00	
Dibromomethane	ND	0.77	1.00	
1,2-Dichlorobenzene	ND	0.77	1.00	
1,3-Dichlorobenzene	ND	0.77	1.00	
1,4-Dichlorobenzene	ND	0.77	1.00	
Dichlorodifluoromethane	ND	1.5	1.00	
1,1-Dichloroethane	ND	0.77	1.00	
1,2-Dichloroethane	3.8	0.77	1.00	
1,1-Dichloroethene	ND	0.77	1.00	
c-1,2-Dichloroethene	ND	0.77	1.00	
t-1,2-Dichloroethene	ND	0.77	1.00	
1,2-Dichloropropane	ND	0.77	1.00	
1,3-Dichloropropane	ND	0.77	1.00	
2,2-Dichloropropane	ND	3.8	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.5	1.00	
c-1,3-Dichloropropene	ND	0.77	1.00	
t-1,3-Dichloropropene	ND	1.5	1.00	
Ethylbenzene	ND	0.77	1.00	
2-Hexanone	ND	15	1.00	
Isopropylbenzene	ND	0.77	1.00	
p-Isopropyltoluene	ND	0.77	1.00	
Methylene Chloride	ND	7.7	1.00	
4-Methyl-2-Pentanone	ND	15	1.00	
Naphthalene	ND	7.7	1.00	
n-Propylbenzene	ND	1.5	1.00	
Styrene	ND	0.77	1.00	
1,1,1,2-Tetrachloroethane	ND	0.77	1.00	
1,1,2,2-Tetrachloroethane	ND	1.5	1.00	
Tetrachloroethene	ND	0.77	1.00	
Toluene	ND	0.77	1.00	
1,2,3-Trichlorobenzene	ND	1.5	1.00	
1,2,4-Trichlorobenzene	ND	1.5	1.00	
1,1,1-Trichloroethane	ND	0.77	1.00	
1,1,2-Trichloroethane	ND	0.77	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.7	1.00	
Trichloroethene	ND	1.5	1.00	
Trichlorofluoromethane	ND	7.7	1.00	
1,2,3-Trichloropropane	ND	1.5	1.00	
1,2,4-Trimethylbenzene	ND	1.5	1.00	
1,3,5-Trimethylbenzene	ND	1.5	1.00	
Vinyl Acetate	ND	7.7	1.00	
Vinyl Chloride	ND	0.77	1.00	
p/m-Xylene	ND	1.5	1.00	
o-Xylene	ND	0.77	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.5	1.00	
Tert-Butyl Alcohol (TBA)	ND	15	1.00	
Diisopropyl Ether (DIPE)	ND	0.77	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.77	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.77	1.00	
Ethanol	ND	380	1.00	
TPPH	78	38	1.00	
Gasoline Range Organics (C4-C12)	71	38	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	109	79-139	
1,2-Dichloroethane-d4	113	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CE DUP 2	19-06-1878-20-E	06/27/19 00:00	Solid	GC/MS OO	06/27/19	07/08/19 21:47	190708L023

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	8200	50.0	
Benzene	ND	160	50.0	
Bromobenzene	ND	160	50.0	
Bromochloromethane	ND	330	50.0	
Bromodichloromethane	ND	160	50.0	
Bromoform	ND	820	50.0	
Bromomethane	ND	3300	50.0	
2-Butanone	ND	3300	50.0	
n-Butylbenzene	ND	160	50.0	
sec-Butylbenzene	ND	160	50.0	
tert-Butylbenzene	ND	160	50.0	
Carbon Disulfide	ND	1600	50.0	
Carbon Tetrachloride	ND	160	50.0	
Chlorobenzene	ND	160	50.0	
Chloroethane	ND	330	50.0	
Chloroform	ND	160	50.0	
Chloromethane	ND	3300	50.0	
2-Chlorotoluene	ND	160	50.0	
4-Chlorotoluene	ND	160	50.0	
Dibromochloromethane	ND	330	50.0	
1,2-Dibromo-3-Chloropropane	ND	820	50.0	
1,2-Dibromoethane	ND	160	50.0	
Dibromomethane	ND	160	50.0	
1,2-Dichlorobenzene	ND	160	50.0	
1,3-Dichlorobenzene	ND	160	50.0	
1,4-Dichlorobenzene	ND	160	50.0	
Dichlorodifluoromethane	ND	330	50.0	
1,1-Dichloroethane	ND	160	50.0	
1,2-Dichloroethane	ND	160	50.0	
1,1-Dichloroethene	ND	160	50.0	
c-1,2-Dichloroethene	ND	160	50.0	
t-1,2-Dichloroethene	ND	160	50.0	
1,2-Dichloropropane	ND	160	50.0	
1,3-Dichloropropane	ND	160	50.0	
2,2-Dichloropropane	ND	820	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	330	50.0	
c-1,3-Dichloropropene	ND	160	50.0	
t-1,3-Dichloropropene	ND	330	50.0	
Ethylbenzene	ND	160	50.0	
2-Hexanone	ND	3300	50.0	
Isopropylbenzene	ND	160	50.0	
p-Isopropyltoluene	ND	160	50.0	
Methylene Chloride	ND	1600	50.0	
4-Methyl-2-Pentanone	ND	3300	50.0	
Naphthalene	ND	1600	50.0	
n-Propylbenzene	ND	330	50.0	
Styrene	ND	160	50.0	
1,1,1,2-Tetrachloroethane	ND	160	50.0	
1,1,2,2-Tetrachloroethane	ND	330	50.0	
Tetrachloroethene	ND	160	50.0	
Toluene	ND	160	50.0	
1,2,3-Trichlorobenzene	ND	330	50.0	
1,2,4-Trichlorobenzene	ND	330	50.0	
1,1,1-Trichloroethane	ND	160	50.0	
1,1,2-Trichloroethane	ND	160	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1600	50.0	
Trichloroethene	ND	330	50.0	
Trichlorofluoromethane	ND	1600	50.0	
1,2,3-Trichloropropane	ND	330	50.0	
1,2,4-Trimethylbenzene	ND	330	50.0	
1,3,5-Trimethylbenzene	ND	330	50.0	
Vinyl Acetate	ND	1600	50.0	
Vinyl Chloride	ND	160	50.0	
p/m-Xylene	ND	330	50.0	
o-Xylene	ND	160	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	330	50.0	
Tert-Butyl Alcohol (TBA)	ND	3300	50.0	
Diisopropyl Ether (DIPE)	ND	160	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	160	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	160	50.0	
Ethanol	ND	82000	50.0	
TPPH	65000	8200	50.0	
Gasoline Range Organics (C4-C12)	44000	8200	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	88	79-139	
1,2-Dichloroethane-d4	82	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-46	19-06-1878-21-C	06/27/19 13:59	Solid	GC/MS OO	06/27/19	07/06/19 20:56	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	40	1.00	
Benzene	20	0.79	1.00	
Bromobenzene	ND	0.79	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.79	1.00	
Bromoform	ND	4.0	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.79	1.00	
sec-Butylbenzene	ND	0.79	1.00	
tert-Butylbenzene	ND	0.79	1.00	
Carbon Disulfide	ND	7.9	1.00	
Carbon Tetrachloride	ND	0.79	1.00	
Chlorobenzene	ND	0.79	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.79	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.79	1.00	
4-Chlorotoluene	ND	0.79	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.0	1.00	
1,2-Dibromoethane	ND	0.79	1.00	
Dibromomethane	ND	0.79	1.00	
1,2-Dichlorobenzene	ND	0.79	1.00	
1,3-Dichlorobenzene	ND	0.79	1.00	
1,4-Dichlorobenzene	ND	0.79	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.79	1.00	
1,2-Dichloroethane	ND	0.79	1.00	
1,1-Dichloroethene	ND	0.79	1.00	
c-1,2-Dichloroethene	ND	0.79	1.00	
t-1,2-Dichloroethene	ND	0.79	1.00	
1,2-Dichloropropane	ND	0.79	1.00	
1,3-Dichloropropane	ND	0.79	1.00	
2,2-Dichloropropane	ND	4.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.79	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	ND	0.79	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	0.83	0.79	1.00	
p-Isopropyltoluene	ND	0.79	1.00	
Methylene Chloride	ND	7.9	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	7.9	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.79	1.00	
1,1,1,2-Tetrachloroethane	ND	0.79	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.79	1.00	
Toluene	ND	0.79	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.79	1.00	
1,1,2-Trichloroethane	ND	0.79	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	7.9	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	7.9	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	7.9	1.00	
Vinyl Chloride	ND	0.79	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.79	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.79	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.79	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.79	1.00	
Ethanol	ND	400	1.00	
TPPH	270	40	1.00	
Gasoline Range Organics (C4-C12)	250	40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	108	79-139	
1,2-Dichloroethane-d4	120	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	103	80-120	
Toluene-d8-TPPH	104	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2081	N/A	Solid	GC/MS OO	07/04/19	07/04/19 17:37	190704L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	94	79-139	
1,2-Dichloroethane-d4	93	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2085	N/A	Solid	GC/MS OO	07/06/19	07/06/19 16:31	190706L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	106	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	95	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2087	N/A	Solid	GC/MS OO	07/06/19	07/06/19 17:00	190706L022

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	ND	5000	50.0	
Gasoline Range Organics (C4-C12)	ND	5000	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	102	71-155	
1,4-Bromofluorobenzene	94	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	102	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2089	N/A	Solid	GC/MS OO	07/07/19	07/07/19 17:54	190707L004

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	105	79-139	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental	Date Received:	06/27/19
30423 Canwood St., Suite 208	Work Order:	19-06-1878
Agoura Hills, CA 91301-4316	Preparation:	EPA 5035
	Method:	GC/MS / EPA 8260B
	Units:	ug/kg
Project: OOI		Page 72 of 81

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	103	71-155	
1,4-Bromofluorobenzene	94	80-120	
Toluene-d8	102	80-120	
Toluene-d8-TPPH	104	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2091	N/A	Solid	GC/MS OO	07/08/19	07/08/19 18:50	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	94	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2092	N/A	Solid	GC/MS OO	07/08/19	07/08/19 19:20	190708L023

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	5000	50.0	
Benzene	ND	100	50.0	
Bromobenzene	ND	100	50.0	
Bromochloromethane	ND	200	50.0	
Bromodichloromethane	ND	100	50.0	
Bromoform	ND	500	50.0	
Bromomethane	ND	2000	50.0	
2-Butanone	ND	2000	50.0	
n-Butylbenzene	ND	100	50.0	
sec-Butylbenzene	ND	100	50.0	
tert-Butylbenzene	ND	100	50.0	
Carbon Disulfide	ND	1000	50.0	
Carbon Tetrachloride	ND	100	50.0	
Chlorobenzene	ND	100	50.0	
Chloroethane	ND	200	50.0	
Chloroform	ND	100	50.0	
Chloromethane	ND	2000	50.0	
2-Chlorotoluene	ND	100	50.0	
4-Chlorotoluene	ND	100	50.0	
Dibromochloromethane	ND	200	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	100	50.0	
Dibromomethane	ND	100	50.0	
1,2-Dichlorobenzene	ND	100	50.0	
1,3-Dichlorobenzene	ND	100	50.0	
1,4-Dichlorobenzene	ND	100	50.0	
Dichlorodifluoromethane	ND	200	50.0	
1,1-Dichloroethane	ND	100	50.0	
1,2-Dichloroethane	ND	100	50.0	
1,1-Dichloroethene	ND	100	50.0	
c-1,2-Dichloroethene	ND	100	50.0	
t-1,2-Dichloroethene	ND	100	50.0	
1,2-Dichloropropane	ND	100	50.0	
1,3-Dichloropropane	ND	100	50.0	
2,2-Dichloropropane	ND	500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	200	50.0	
c-1,3-Dichloropropene	ND	100	50.0	
t-1,3-Dichloropropene	ND	200	50.0	
Ethylbenzene	ND	100	50.0	
2-Hexanone	ND	2000	50.0	
Isopropylbenzene	ND	100	50.0	
p-Isopropyltoluene	ND	100	50.0	
Methylene Chloride	ND	1000	50.0	
4-Methyl-2-Pentanone	ND	2000	50.0	
Naphthalene	ND	1000	50.0	
n-Propylbenzene	ND	200	50.0	
Styrene	ND	100	50.0	
1,1,1,2-Tetrachloroethane	ND	100	50.0	
1,1,2,2-Tetrachloroethane	ND	200	50.0	
Tetrachloroethene	ND	100	50.0	
Toluene	ND	100	50.0	
1,2,3-Trichlorobenzene	ND	200	50.0	
1,2,4-Trichlorobenzene	ND	200	50.0	
1,1,1-Trichloroethane	ND	100	50.0	
1,1,2-Trichloroethane	ND	100	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	50.0	
Trichloroethene	ND	200	50.0	
Trichlorofluoromethane	ND	1000	50.0	
1,2,3-Trichloropropane	ND	200	50.0	
1,2,4-Trimethylbenzene	ND	200	50.0	
1,3,5-Trimethylbenzene	ND	200	50.0	
Vinyl Acetate	ND	1000	50.0	
Vinyl Chloride	ND	100	50.0	
p/m-Xylene	ND	200	50.0	
o-Xylene	ND	100	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	200	50.0	
Tert-Butyl Alcohol (TBA)	ND	2000	50.0	
Diisopropyl Ether (DIPE)	ND	100	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	100	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	100	50.0	
Ethanol	ND	50000	50.0	
TPPH	ND	5000	50.0	
Gasoline Range Organics (C4-C12)	ND	5000	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	96	79-139	
1,2-Dichloroethane-d4	93	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2094	N/A	Solid	GC/MS OO	07/10/19	07/10/19 19:39	190710L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	5000	50.0	
Benzene	ND	100	50.0	
Bromobenzene	ND	100	50.0	
Bromochloromethane	ND	200	50.0	
Bromodichloromethane	ND	100	50.0	
Bromoform	ND	500	50.0	
Bromomethane	ND	2000	50.0	
2-Butanone	ND	2000	50.0	
n-Butylbenzene	ND	100	50.0	
sec-Butylbenzene	ND	100	50.0	
tert-Butylbenzene	ND	100	50.0	
Carbon Disulfide	ND	1000	50.0	
Carbon Tetrachloride	ND	100	50.0	
Chlorobenzene	ND	100	50.0	
Chloroethane	ND	200	50.0	
Chloroform	ND	100	50.0	
Chloromethane	ND	2000	50.0	
2-Chlorotoluene	ND	100	50.0	
4-Chlorotoluene	ND	100	50.0	
Dibromochloromethane	ND	200	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	100	50.0	
Dibromomethane	ND	100	50.0	
1,2-Dichlorobenzene	ND	100	50.0	
1,3-Dichlorobenzene	ND	100	50.0	
1,4-Dichlorobenzene	ND	100	50.0	
Dichlorodifluoromethane	ND	200	50.0	
1,1-Dichloroethane	ND	100	50.0	
1,2-Dichloroethane	ND	100	50.0	
1,1-Dichloroethene	ND	100	50.0	
c-1,2-Dichloroethene	ND	100	50.0	
t-1,2-Dichloroethene	ND	100	50.0	
1,2-Dichloropropane	ND	100	50.0	
1,3-Dichloropropane	ND	100	50.0	
2,2-Dichloropropane	ND	500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	200	50.0	
c-1,3-Dichloropropene	ND	100	50.0	
t-1,3-Dichloropropene	ND	200	50.0	
Ethylbenzene	ND	100	50.0	
2-Hexanone	ND	2000	50.0	
Isopropylbenzene	ND	100	50.0	
p-Isopropyltoluene	ND	100	50.0	
Methylene Chloride	ND	1000	50.0	
4-Methyl-2-Pentanone	ND	2000	50.0	
Naphthalene	ND	1000	50.0	
n-Propylbenzene	ND	200	50.0	
Styrene	ND	100	50.0	
1,1,1,2-Tetrachloroethane	ND	100	50.0	
1,1,2,2-Tetrachloroethane	ND	200	50.0	
Tetrachloroethene	ND	100	50.0	
Toluene	ND	100	50.0	
1,2,3-Trichlorobenzene	ND	200	50.0	
1,2,4-Trichlorobenzene	ND	200	50.0	
1,1,1-Trichloroethane	ND	100	50.0	
1,1,2-Trichloroethane	ND	100	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	50.0	
Trichloroethene	ND	200	50.0	
Trichlorofluoromethane	ND	1000	50.0	
1,2,3-Trichloropropane	ND	200	50.0	
1,2,4-Trimethylbenzene	ND	200	50.0	
1,3,5-Trimethylbenzene	ND	200	50.0	
Vinyl Acetate	ND	1000	50.0	
Vinyl Chloride	ND	100	50.0	
p/m-Xylene	ND	200	50.0	
o-Xylene	ND	100	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	200	50.0	
Tert-Butyl Alcohol (TBA)	ND	2000	50.0	
Diisopropyl Ether (DIPE)	ND	100	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	100	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	100	50.0	
Ethanol	ND	50000	50.0	
TPPH	ND	5000	50.0	
Gasoline Range Organics (C4-C12)	ND	5000	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	97	71-155	
1,4-Bromofluorobenzene	93	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	102	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: N/A
Method: ASTM D-2216 (M)
Units: %

Project: OOI

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-7'	19-06-1878-1-A	06/27/19 07:40	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		12		0.10		1.00	
CESB13-11'	19-06-1878-2-A	06/27/19 07:50	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		12		0.10		1.00	
CESB13-15'	19-06-1878-3-A	06/27/19 08:02	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		12		0.10		1.00	
CESB13-20'	19-06-1878-4-A	06/27/19 08:10	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		8.2		0.10		1.00	
CESB13-25'	19-06-1878-5-A	06/27/19 08:18	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		9.0		0.10		1.00	
CESB13-30'	19-06-1878-6-A	06/27/19 08:38	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		4.1		0.10		1.00	
CESB13-32	19-06-1878-7-A	06/27/19 08:50	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		4.3		0.10		1.00	
CESB13-36	19-06-1878-8-A	06/27/19 09:00	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		19		0.10		1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: N/A
Method: ASTM D-2216 (M)
Units: %

Project: OOI

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-40	19-06-1878-9-A	06/27/19 09:20	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		21		0.10		1.00	
CESB14-11'	19-06-1878-12-A	06/27/19 11:51	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		7.3		0.10		1.00	
CESB14-16'	19-06-1878-13-A	06/27/19 12:13	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		11		0.10		1.00	
CESB14-20'	19-06-1878-14-A	06/27/19 12:18	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		8.1		0.10		1.00	
CESB14-26'	19-06-1878-15-A	06/27/19 12:30	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		4.5		0.10		1.00	
CESB14-31	19-06-1878-16-A	06/27/19 12:45	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		15		0.10		1.00	
CESB14-36	19-06-1878-17-A	06/27/19 13:00	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		15		0.10		1.00	
CE DUP 2	19-06-1878-20-A	06/27/19 00:00	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		12		0.10		1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/27/19
 Work Order: 19-06-1878
 Preparation: N/A
 Method: ASTM D-2216 (M)
 Units: %

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-05-014-8483	N/A	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB1

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Moisture	ND	0.10	1.00	

Method Blank	099-05-014-8482	N/A	Solid	N/A	06/28/19	06/28/19 16:00	J0628MOIB2
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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Moisture	ND	0.10	1.00	



Calscience

Quality Control - Spike/Spike Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: OOI

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
CESB14-20'	Sample	Solid	GC 49	07/02/19	07/03/19 00:03	190702S04				
CESB14-20'	Matrix Spike	Solid	GC 49	07/02/19	07/02/19 19:22	190702S04				
CESB14-20'	Matrix Spike Duplicate	Solid	GC 49	07/02/19	07/02/19 19:43	190702S04				
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
TPH as Diesel	ND	400.0	396.1	99	403.8	101	64-130	2	0-15	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3050B
Method: EPA 6010B

Project: OOI

Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CESB13-7'	Sample	Solid	ICP 8300	07/02/19	07/03/19 19:39	190702S01
CESB13-7'	Matrix Spike	Solid	ICP 8300	07/02/19	07/03/19 19:41	190702S01
CESB13-7'	Matrix Spike Duplicate	Solid	ICP 8300	07/02/19	07/03/19 19:42	190702S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	ND	25.00	25.65	103	24.55	98	75-125	4	0-20	
Lead	1.964	25.00	27.84	104	27.01	100	75-125	3	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Sample Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: N/A
Method: ASTM D-2216 (M)

Project: OOI

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
19-06-1826-1	Sample	Solid	N/A	06/28/19 00:00	06/28/19 16:00	J0628MOID1
19-06-1826-1	Sample Duplicate	Solid	N/A	06/28/19 00:00	06/28/19 16:00	J0628MOID1

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Moisture	86.30	85.80	1	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Sample Duplicate

California Environmental	Date Received:	06/27/19
30423 Canwood St., Suite 208	Work Order:	19-06-1878
Agoura Hills, CA 91301-4316	Preparation:	N/A
Project: OOI	Method:	ASTM D-2216 (M)

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
CESB14-36	Sample	Solid	N/A	06/28/19 00:00	06/28/19 16:00	J0628MOID3
CESB14-36	Sample Duplicate	Solid	N/A	06/28/19 00:00	06/28/19 16:00	J0628MOID3
<u>Parameter</u>		<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Moisture		15.10	16.50	9	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-490-3658	LCS	Solid	GC 49	07/02/19	07/02/19 19:01	190702B04
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Diesel		400.0	390.3	98	75-123	

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 3050B
Method: EPA 6010B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
097-01-002-28079	LCS	Solid	ICP 8300	07/02/19	07/03/19 19:35	190702L01			
097-01-002-28079	LCSD	Solid	ICP 8300	07/02/19	07/03/19 19:37	190702L01			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	26.04	104	26.45	106	80-120	2	0-20	
Lead	25.00	28.18	113	28.45	114	80-120	1	0-20	

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-767-8590	LCS	Aqueous	GC/MS PP	07/02/19	07/02/19 16:48	190702L023				
099-12-767-8590	LCSD	Aqueous	GC/MS PP	07/02/19	07/02/19 17:18	190702L023				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	51.01	102	52.82	106	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.70	95	49.71	99	67-139	55-151	4	0-20	
Chlorobenzene	50.00	48.58	97	50.40	101	78-120	71-127	4	0-20	
1,2-Dibromoethane	50.00	54.31	109	54.93	110	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	49.75	99	50.50	101	63-129	52-140	1	0-20	
1,2-Dichloroethane	50.00	47.23	94	47.66	95	70-130	60-140	1	0-20	
1,1-Dichloroethene	50.00	46.86	94	48.49	97	66-126	56-136	3	0-20	
Ethylbenzene	50.00	50.81	102	53.42	107	80-123	73-130	5	0-20	
Toluene	50.00	49.29	99	50.50	101	80-120	73-127	2	0-20	
Trichloroethene	50.00	50.13	100	51.72	103	80-122	73-129	3	0-20	
Vinyl Chloride	50.00	42.26	85	43.48	87	70-130	60-140	3	0-20	
p/m-Xylene	100.0	100.2	100	104.5	105	75-123	67-131	4	0-25	
o-Xylene	50.00	51.24	102	52.97	106	74-122	66-130	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.10	86	43.80	88	69-129	59-139	2	0-22	
Tert-Butyl Alcohol (TBA)	250.0	254.1	102	245.0	98	69-129	59-139	4	0-25	
Diisopropyl Ether (DIPE)	50.00	49.02	98	50.63	101	68-128	58-138	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.13	94	47.82	96	63-135	51-147	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	53.21	106	53.79	108	67-133	56-144	1	0-20	
Ethanol	500.0	521.7	104	489.7	98	42-168	21-189	6	0-20	
TPPH	1000	1051	105	1022	102	65-135	53-147	3	0-30	
Gasoline Range Organics (C4-C12)	1000	1035	104	1012	101	65-135	53-147	2	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-767-8591	LCS	Aqueous	GC/MS PP	07/05/19	07/05/19 17:33	190705L008				
099-12-767-8591	LCSD	Aqueous	GC/MS PP	07/05/19	07/05/19 18:04	190705L008				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	49.24	98	50.73	101	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	44.53	89	46.67	93	67-139	55-151	5	0-20	
Chlorobenzene	50.00	46.94	94	48.06	96	78-120	71-127	2	0-20	
1,2-Dibromoethane	50.00	52.45	105	52.29	105	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	50.00	48.97	98	50.17	100	63-129	52-140	2	0-20	
1,2-Dichloroethane	50.00	44.89	90	44.40	89	70-130	60-140	1	0-20	
1,1-Dichloroethene	50.00	42.91	86	43.99	88	66-126	56-136	2	0-20	
Ethylbenzene	50.00	48.43	97	49.80	100	80-123	73-130	3	0-20	
Toluene	50.00	47.21	94	49.30	99	80-120	73-127	4	0-20	
Trichloroethene	50.00	49.03	98	49.82	100	80-122	73-129	2	0-20	
Vinyl Chloride	50.00	35.30	71	36.37	73	70-130	60-140	3	0-20	
p/m-Xylene	100.0	95.51	96	96.98	97	75-123	67-131	2	0-25	
o-Xylene	50.00	48.41	97	49.32	99	74-122	66-130	2	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	40.18	80	39.76	80	69-129	59-139	1	0-22	
Tert-Butyl Alcohol (TBA)	250.0	245.6	98	241.7	97	69-129	59-139	2	0-25	
Diisopropyl Ether (DIPE)	50.00	45.07	90	45.15	90	68-128	58-138	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	43.13	86	42.95	86	63-135	51-147	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	50.59	101	50.63	101	67-133	56-144	0	0-20	
Ethanol	500.0	477.1	95	485.6	97	42-168	21-189	2	0-20	
TPPH	1000	1002	100	966.9	97	65-135	53-147	4	0-30	
Gasoline Range Organics (C4-C12)	1000	987.7	99	953.1	95	65-135	53-147	4	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2081	LCS	Solid		GC/MS OO	07/04/19	07/04/19 15:39	190704L017			
099-12-779-2081	LCSD	Solid		GC/MS OO	07/04/19	07/04/19 16:08	190704L017			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	45.00	90	46.86	94	80-120	73-127	4	0-20	
Carbon Tetrachloride	50.00	43.84	88	46.31	93	65-137	53-149	5	0-20	
Chlorobenzene	50.00	47.42	95	49.04	98	80-120	73-127	3	0-20	
1,2-Dibromoethane	50.00	49.83	100	51.79	104	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	50.00	48.84	98	49.86	100	80-120	73-127	2	0-20	
1,2-Dichloroethane	50.00	44.95	90	45.93	92	80-120	73-127	2	0-20	
1,1-Dichloroethene	50.00	43.20	86	44.49	89	68-128	58-138	3	0-20	
Ethylbenzene	50.00	48.94	98	51.09	102	80-120	73-127	4	0-20	
Toluene	50.00	48.17	96	49.23	98	80-120	73-127	2	0-20	
Trichloroethene	50.00	46.93	94	48.94	98	80-120	73-127	4	0-20	
Vinyl Chloride	50.00	39.76	80	39.65	79	67-127	57-137	0	0-20	
p/m-Xylene	100.0	99.94	100	103.5	103	75-125	67-133	3	0-25	
o-Xylene	50.00	51.08	102	52.52	105	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	44.40	89	44.47	89	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	205.7	82	206.0	82	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	50.00	44.62	89	45.82	92	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.10	94	48.09	96	70-124	61-133	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	53.46	107	55.18	110	74-122	66-130	3	0-20	
Ethanol	500.0	404.9	81	414.2	83	51-135	37-149	2	0-27	
TPPH	1000	916.0	92	932.6	93	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	823.6	82	832.5	83	65-135	53-147	1	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2085	LCS	Solid		GC/MS OO	07/06/19	07/06/19 15:02	190706L008			
099-12-779-2085	LCSD	Solid		GC/MS OO	07/06/19	07/06/19 15:32	190706L008			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	47.19	94	48.58	97	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.02	94	50.73	101	65-137	53-149	8	0-20	
Chlorobenzene	50.00	48.25	97	49.52	99	80-120	73-127	3	0-20	
1,2-Dibromoethane	50.00	48.12	96	50.33	101	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	50.00	47.72	95	49.87	100	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	48.35	97	48.95	98	80-120	73-127	1	0-20	
1,1-Dichloroethene	50.00	43.98	88	47.53	95	68-128	58-138	8	0-20	
Ethylbenzene	50.00	49.19	98	50.95	102	80-120	73-127	4	0-20	
Toluene	50.00	49.41	99	50.64	101	80-120	73-127	2	0-20	
Trichloroethene	50.00	47.41	95	49.70	99	80-120	73-127	5	0-20	
Vinyl Chloride	50.00	39.37	79	42.11	84	67-127	57-137	7	0-20	
p/m-Xylene	100.0	102.3	102	105.6	106	75-125	67-133	3	0-25	
o-Xylene	50.00	51.47	103	53.13	106	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	38.70	77	41.44	83	70-124	61-133	7	0-20	
Tert-Butyl Alcohol (TBA)	250.0	203.8	82	209.2	84	73-121	65-129	3	0-20	
Diisopropyl Ether (DIPE)	50.00	47.78	96	51.28	103	69-129	59-139	7	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	42.36	85	45.41	91	70-124	61-133	7	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	48.47	97	50.01	100	74-122	66-130	3	0-20	
Ethanol	500.0	476.0	95	459.2	92	51-135	37-149	4	0-27	
TPPH	1000	924.3	92	948.7	95	65-135	53-147	3	0-30	
Gasoline Range Organics (C4-C12)	1000	822.0	82	857.9	86	65-135	53-147	4	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2087	LCS	Solid		GC/MS OO	07/06/19	07/06/19 15:02	190706L022			
099-12-779-2087	LCSD	Solid		GC/MS OO	07/06/19	07/06/19 15:32	190706L022			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	47.19	94	48.58	97	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.02	94	50.73	101	65-137	53-149	8	0-20	
Chlorobenzene	50.00	48.25	97	49.52	99	80-120	73-127	3	0-20	
1,2-Dibromoethane	50.00	48.12	96	50.33	101	80-120	73-127	4	0-20	
1,2-Dichlorobenzene	50.00	47.72	95	49.87	100	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	48.35	97	48.95	98	80-120	73-127	1	0-20	
1,1-Dichloroethene	50.00	43.98	88	47.53	95	68-128	58-138	8	0-20	
Ethylbenzene	50.00	49.19	98	50.95	102	80-120	73-127	4	0-20	
Toluene	50.00	49.41	99	50.64	101	80-120	73-127	2	0-20	
Trichloroethene	50.00	47.41	95	49.70	99	80-120	73-127	5	0-20	
Vinyl Chloride	50.00	39.37	79	42.11	84	67-127	57-137	7	0-20	
p/m-Xylene	100.0	102.3	102	105.6	106	75-125	67-133	3	0-25	
o-Xylene	50.00	51.47	103	53.13	106	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	38.70	77	41.44	83	70-124	61-133	7	0-20	
Tert-Butyl Alcohol (TBA)	250.0	203.8	82	209.2	84	73-121	65-129	3	0-20	
Diisopropyl Ether (DIPE)	50.00	47.78	96	51.28	103	69-129	59-139	7	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	42.36	85	45.41	91	70-124	61-133	7	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	48.47	97	50.01	100	74-122	66-130	3	0-20	
Ethanol	500.0	476.0	95	459.2	92	51-135	37-149	4	0-27	
TPPH	1000	924.3	92	948.7	95	65-135	53-147	3	0-30	
Gasoline Range Organics (C4-C12)	1000	822.0	82	857.9	86	65-135	53-147	4	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2089	LCS	Solid		GC/MS OO	07/07/19	07/07/19 15:56	190707L004			
099-12-779-2089	LCSD	Solid		GC/MS OO	07/07/19	07/07/19 16:26	190707L004			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	49.62	99	48.47	97	80-120	73-127	2	0-20	
Carbon Tetrachloride	50.00	51.40	103	48.80	98	65-137	53-149	5	0-20	
Chlorobenzene	50.00	49.54	99	49.27	99	80-120	73-127	1	0-20	
1,2-Dibromoethane	50.00	49.74	99	49.67	99	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	50.00	49.77	100	50.10	100	80-120	73-127	1	0-20	
1,2-Dichloroethane	50.00	49.45	99	47.86	96	80-120	73-127	3	0-20	
1,1-Dichloroethene	50.00	47.22	94	45.28	91	68-128	58-138	4	0-20	
Ethylbenzene	50.00	50.63	101	50.47	101	80-120	73-127	0	0-20	
Toluene	50.00	50.76	102	50.24	100	80-120	73-127	1	0-20	
Trichloroethene	50.00	50.60	101	49.39	99	80-120	73-127	2	0-20	
Vinyl Chloride	50.00	47.99	96	46.75	93	67-127	57-137	3	0-20	
p/m-Xylene	100.0	105.6	106	104.7	105	75-125	67-133	1	0-25	
o-Xylene	50.00	53.06	106	52.57	105	75-125	67-133	1	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	41.97	84	40.85	82	70-124	61-133	3	0-20	
Tert-Butyl Alcohol (TBA)	250.0	204.3	82	204.8	82	73-121	65-129	0	0-20	
Diisopropyl Ether (DIPE)	50.00	51.53	103	50.21	100	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.10	94	45.76	92	70-124	61-133	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.81	104	51.04	102	74-122	66-130	1	0-20	
Ethanol	500.0	475.2	95	459.6	92	51-135	37-149	3	0-27	
TPPH	1000	900.1	90	931.6	93	65-135	53-147	3	0-30	
Gasoline Range Organics (C4-C12)	1000	814.1	81	841.2	84	65-135	53-147	3	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



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Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

Page 9 of 11

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2091	LCS	Solid		GC/MS OO	07/08/19	07/08/19 16:52	190708L017			
099-12-779-2091	LCSD	Solid		GC/MS OO	07/08/19	07/08/19 17:21	190708L017			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	48.31	97	46.90	94	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.70	95	47.08	94	65-137	53-149	1	0-20	
Chlorobenzene	50.00	50.03	100	48.23	96	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	51.22	102	50.75	101	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	50.84	102	49.04	98	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	46.11	92	45.69	91	80-120	73-127	1	0-20	
1,1-Dichloroethene	50.00	44.88	90	43.30	87	68-128	58-138	4	0-20	
Ethylbenzene	50.00	51.93	104	49.73	99	80-120	73-127	4	0-20	
Toluene	50.00	50.65	101	48.89	98	80-120	73-127	4	0-20	
Trichloroethene	50.00	50.49	101	48.13	96	80-120	73-127	5	0-20	
Vinyl Chloride	50.00	44.24	88	43.65	87	67-127	57-137	1	0-20	
p/m-Xylene	100.0	106.2	106	101.3	101	75-125	67-133	5	0-25	
o-Xylene	50.00	53.69	107	51.69	103	75-125	67-133	4	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.31	87	43.21	86	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	212.4	85	209.5	84	73-121	65-129	1	0-20	
Diisopropyl Ether (DIPE)	50.00	47.91	96	46.72	93	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	48.64	97	48.22	96	70-124	61-133	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	56.21	112	56.24	112	74-122	66-130	0	0-20	
Ethanol	500.0	426.5	85	397.8	80	51-135	37-149	7	0-27	
TPPH	1000	970.0	97	892.2	89	65-135	53-147	8	0-30	
Gasoline Range Organics (C4-C12)	1000	879.4	88	802.7	80	65-135	53-147	9	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2092	LCS	Solid		GC/MS OO	07/08/19	07/08/19 16:52	190708L023			
099-12-779-2092	LCSD	Solid		GC/MS OO	07/08/19	07/08/19 17:21	190708L023			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	48.31	97	46.90	94	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.70	95	47.08	94	65-137	53-149	1	0-20	
Chlorobenzene	50.00	50.03	100	48.23	96	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	51.22	102	50.75	101	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	50.84	102	49.04	98	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	46.11	92	45.69	91	80-120	73-127	1	0-20	
1,1-Dichloroethane	50.00	44.88	90	43.30	87	68-128	58-138	4	0-20	
Ethylbenzene	50.00	51.93	104	49.73	99	80-120	73-127	4	0-20	
Toluene	50.00	50.65	101	48.89	98	80-120	73-127	4	0-20	
Trichloroethene	50.00	50.49	101	48.13	96	80-120	73-127	5	0-20	
Vinyl Chloride	50.00	44.24	88	43.65	87	67-127	57-137	1	0-20	
p/m-Xylene	100.0	106.2	106	101.3	101	75-125	67-133	5	0-25	
o-Xylene	50.00	53.69	107	51.69	103	75-125	67-133	4	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.31	87	43.21	86	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	212.4	85	209.5	84	73-121	65-129	1	0-20	
Diisopropyl Ether (DIPE)	50.00	47.91	96	46.72	93	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	48.64	97	48.22	96	70-124	61-133	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	56.21	112	56.24	112	74-122	66-130	0	0-20	
Ethanol	500.0	426.5	85	397.8	80	51-135	37-149	7	0-27	
TPPH	1000	970.0	97	892.2	89	65-135	53-147	8	0-30	
Gasoline Range Organics (C4-C12)	1000	879.4	88	802.7	80	65-135	53-147	9	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/27/19
Work Order: 19-06-1878
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

Page 11 of 11

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2094	LCS	Solid		GC/MS OO	07/10/19	07/10/19 17:11	190710L008			
099-12-779-2094	LCSD	Solid		GC/MS OO	07/10/19	07/10/19 17:41	190710L008			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	45.99	92	47.04	94	80-120	73-127	2	0-20	
Carbon Tetrachloride	50.00	47.48	95	47.51	95	65-137	53-149	0	0-20	
Chlorobenzene	50.00	46.07	92	47.94	96	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	49.00	98	51.79	104	80-120	73-127	6	0-20	
1,2-Dichlorobenzene	50.00	46.43	93	48.49	97	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	46.24	92	48.38	97	80-120	73-127	5	0-20	
1,1-Dichloroethene	50.00	42.66	85	43.14	86	68-128	58-138	1	0-20	
Ethylbenzene	50.00	46.23	92	48.42	97	80-120	73-127	5	0-20	
Toluene	50.00	46.67	93	48.43	97	80-120	73-127	4	0-20	
Trichloroethene	50.00	47.10	94	47.79	96	80-120	73-127	1	0-20	
Vinyl Chloride	50.00	39.78	80	41.05	82	67-127	57-137	3	0-20	
p/m-Xylene	100.0	95.25	95	100.5	100	75-125	67-133	5	0-25	
o-Xylene	50.00	48.29	97	50.91	102	75-125	67-133	5	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	41.61	83	43.42	87	70-124	61-133	4	0-20	
Tert-Butyl Alcohol (TBA)	250.0	193.3	77	203.2	81	73-121	65-129	5	0-20	
Diisopropyl Ether (DIPE)	50.00	48.05	96	49.42	99	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	46.21	92	47.57	95	70-124	61-133	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.75	103	53.76	108	74-122	66-130	4	0-20	
Ethanol	500.0	367.0	73	397.1	79	51-135	37-149	8	0-27	
TPPH	1000	920.5	92	938.7	94	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	895.1	90	850.0	85	65-135	53-147	5	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



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Sample Analysis Summary Report

Work Order: 19-06-1878

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
ASTM D-2216 (M)	N/A	1215	N/A	1
EPA 6010B	EPA 3050B	1080	ICP 8300	1
EPA 8015B (M)	EPA 3550B	1028	GC 49	1
GC/MS / EPA 8260B	EPA 5035	1178	GC/MS OO	2
GC/MS / EPA 8260B	EPA 5030C	1191	GC/MS PP	2


Return to Contents

Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

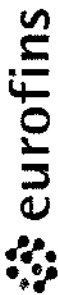
Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 19-06-1878

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



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7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us@eurofins.com or call us.

LABORATORY CLIENT:

CALENVIRO

ADDRESS: 30423 Canwood Street #208 STATE: CA ZIP: 91301

TEL: 818-991-1542

Agoura Hills

TURNAROUND TIME (Rush surcharges may apply to any TAT not 'STANDARD'):

SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

GLOBAL ID:

LOG CODE:

SPECIAL INSTRUCTIONS:

CHAIN OF CUSTODY RECORD
DATE: JUNE 27, 2019
PAGE: 1 OF 3

WO # / LAB USE ONLY
19-06-1878

CLIENT PROJECT NAME / NUMBER:

OOI

PROJECT CONTACT:

C. Buckley

P.O. NO.:

3029

SAMPLER(S): (PRINT)

Buckley

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Field Filtered	Preserved	Unpreserved	Field Filtered	Preserved	Unpreserved	TPH (g) <input checked="" type="checkbox"/> GRO 8260	<input type="checkbox"/> TPH(d) <input type="checkbox"/> DRO	TPH <input type="checkbox"/> C6-C13 <input checked="" type="checkbox"/> C6-C4 BOLS	TPH	BTEX / MTBE <input type="checkbox"/> 8260 <input type="checkbox"/>	VOCs (8260) <input checked="" type="checkbox"/> Dry	Oxygenates (8260)	Prep (5035) <input checked="" type="checkbox"/> En Core <input checked="" type="checkbox"/> Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs <input type="checkbox"/> 8270 <input type="checkbox"/> 8270 SIM	T22 Metals <input type="checkbox"/> 8010/747X <input type="checkbox"/> 6020/747X	Cr(VI) <input type="checkbox"/> 7196 <input type="checkbox"/> 7199 <input type="checkbox"/> 218.6	ARSENIC/LEAD	MERCURY	
1	CE5813-71	6/24/19	7:40	Soil	5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	-11		7:50		5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3	-15		8:02		5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4	-20		8:10		5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
5	-25		8:15		5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
6	-30		8:38		5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
7	-32		8:50		5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
8	-36		9:00		5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
9	-40		9:20		5							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
10	-42		9:45		3							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Received by: (Signature/Affiliation)

COY. WEN

Date: 06/27/19 Time: 16:07

Received by: (Signature/Affiliation)

DANNGLE B

Date: 06/27/19 Time: 17:25

Received by: (Signature/Affiliation)

Time:

Relinquished by: (Signature)

CB

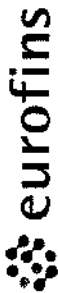
Relinquished by: (Signature)

Sentoy Wte

Relinquished by: (Signature)

Date:

Time:



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CHAIN OF CUSTODY RECORD

DATE: JUNE 27, 2019
PAGE: 2 OF 3

WO # / LAB USE ONLY
19-06-1878

LABORATORY CLIENT: **CALENVIRO**

ADDRESS: 30423 Canwood Street #208 STATE: CA ZIP: 91301

CITY: Agoura Hills

TEL: 818-991-1542

CLIENT PROJECT NAME / NUMBER: OOI P.O. NO.: 3029

PROJECT CONTACT: C. Buckley SAMPLER(S) (PRINT): Buckley

REQUESTED ANALYSES

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
 SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

COELTEDF GLOBAL ID: _____ LOG CODE: _____

SPECIAL INSTRUCTIONS: _____

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	LOG CODE:		
		DATE	TIME			Unpreserved	Preserved	Field Filtered
11	CE5B13-47	6/21/19	10:01	Soil	3			
12	CE5B14-11		11:51		5			
13	CE5B14-16		12:13		5			
14	CE5B14-20		12:18		5			
15	CE5B14-26		12:30		5			
16	CE5B14-31		12:45		5			
17	CE5B14-36		1PM		4			
18	CE5B14-42		1:16		3			
19	CE5B14-49.5		2:05		3			
20	CE DUP 2				4			

Please check box or fill in blank as needed.

TPH (G) GRO	TPH (G) DR0	TPH □ C6-C36 □ C6-C44	TPH	BTEX / MTBE □ 8260 □	VOCs (8260) + ORY	Oxygenates (8260)	Prep (5035) □ En Core □ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs □ 8270 □ 8270 SIM	T22 Metals □ 6010/747X □ 6020/747X	Cr(VI) □ 7196 □ 7199 □ 218.6
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X
X	X	X	X	X	X	X	X	X	X	X	X	X	X

Received by: (Signature/Affiliation) Sally Over Date: 06/27/19 Time: 16:07

Relinquished by: (Signature) Sally Over

Received by: (Signature/Affiliation) Danmye G Date: 06/27/19 Time: 17:25

Relinquished by: (Signature) Sally Over

Received by: (Signature/Affiliation) _____ Date: _____ Time: _____





Calscience

7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

LABORATORY CLIENT:

CALENVIRO

ADDRESS: 30423 Canwood Street #208 STATE: CA ZIP: 91301
CITY:

TEL: 818-991-1542
Agoura Hills

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

GLOBAL ID:

LOG CODE:

SPECIAL INSTRUCTIONS:

CHAIN OF CUSTODY RECORD
DATE: JUNE 27 OF 3
PAGE: 3

WO # / LAB USE ONLY
19-06-1878

CLIENT PROJECT NAME / NUMBER:

OOI

3029

PROJECT CONTACT:

C. Buckley

SAMPLER(S) (PRINT)

Buckley

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH (g) / GRO	TPH (d) / DRO	TPH / C6-C36 / C6-C44	TPH	BTEX / MTBE / 8260	VOCs (8260) / 404	Oxygenates (8260)	Prep (5035) / En Core / Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs / 8270 / 8270 SIM	T22 Metals / 6010/747X / 6020/747X	Cr(VI) / 7196 / 7199 / 218.6	
21	CE5B14-46	6/29/17	1:55	SOL	3				XX					XX									
22	CE5B14-49.5	✓	2:15	✓	3				XX					XX									
23	CE5B11-6W	✓	3P	H20	3				XX					XX									
24	CE5B10-6W	✓	3:20	H20	1				XX					XX									
25	CE5B10-6W		3:50	H20	2				XX					XX									

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
	Santa Clara	06/27/19	16:07
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Santa Clara	Dannyle G	06/27/19	17:25
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: CALENVERO

DATE: 06/27/2019

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: -0.2°C); Temperature (w/o CF): 5.1 °C (w/ CF): 4.9 °C; Blank Sample

- Sample(s) outside temperature criteria (PM/APM contacted by: _____)
- Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: 1167

CUSTODY SEAL:

- Cooler Present and Intact Present but Not Intact Not Present N/A
- Sample(s) Present and Intact Present but Not Intact Not Present N/A

Checked by: 1167
Checked by: 728

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Container(s) for certain analysis free of headspace	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

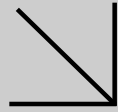
CONTAINER TYPE:

(Trip Blank Lot Number: _____)

- Aqueous: VOA VOAh VOAna₂ 100PJ 100PJna₂ 125AGB 125AGBh 125AGBp 125PB 125PBz_{na} (pH__9)
- 250AGB 250CGB 250CGBs (pH__2) 250PB 250PBn (pH__2) 500AGB 500AGJ 500AGJs (pH__2) 500PB
- 1AGB 1AGBna₂ 1AGBs (pH__2) 1AGBs (O&G) 1PB 1PBna (pH__12) _____ _____
- Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (P) EnCores® (____) TerraCores® (3) 2 OR PJ _____ _____
- Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (____): _____ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag
 Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 728
 s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, z_{na} = Zn (CH₃CO₂)₂ + NaOH Reviewed by: 1167

* 4) 6715-9)



WORK ORDER NUMBER: 19-06-1989

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: California Environmental

Client Project Name: OOI

Attention: Charles Buckley
30423 Canwood St.
Suite 208
Agoura Hills, CA 91301-4316

Approved for release on 07/12/2019 by:
Don Burley
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience (Calscience) certifies that the test results provided in this report meet all NELAC Institute requirements for parameters for which accreditation is required or available. Any exceptions to NELAC Institute requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

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Work Order Number: 19-06-1989

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 06/28/19. They were assigned to Work Order 19-06-1989.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-13A): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: California Environmental	Work Order:	19-06-1989
30423 Canwood St., Suite 208	Project Name:	OOI
Agoura Hills, CA 91301-4316	PO Number:	
	Date/Time Received:	06/28/19 17:26
	Number of Containers:	61

Attn: Charles Buckley

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
CESB15-5	19-06-1989-1	06/28/19 07:39	5	Solid
CESB15-10	19-06-1989-2	06/28/19 07:50	5	Solid
CESB15-15	19-06-1989-3	06/28/19 08:02	5	Solid
CESB15-20	19-06-1989-4	06/28/19 08:18	5	Solid
CESB15-25	19-06-1989-5	06/28/19 08:42	5	Solid
CESB15-30	19-06-1989-6	06/28/19 08:51	5	Solid
CESB15-31.8	19-06-1989-7	06/28/19 08:59	4	Solid
CESB15-37	19-06-1989-8	06/28/19 09:45	4	Solid
CESB15-40	19-06-1989-9	06/28/19 10:07	4	Solid
CESB15-44	19-06-1989-10	06/28/19 10:55	4	Solid
CESB12-GW	19-06-1989-11	06/28/19 12:03	3	Aqueous
CESB13-GW	19-06-1989-12	06/28/19 12:35	3	Aqueous
CESB14-GW	19-06-1989-13	06/28/19 13:05	3	Aqueous
CESB15-GW	19-06-1989-14	06/28/19 13:50	3	Aqueous
CE Dup #3	19-06-1989-15	06/28/19 00:00	3	Solid

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-5	19-06-1989-1-A	06/28/19 07:39	Solid	GC 50	07/01/19	07/02/19 05:12	190701B02A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	84	61-145		



Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

Page 2 of 11

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-10	19-06-1989-2-A	06/28/19 07:50	Solid	GC 50	07/01/19	07/02/19 05:33	190701B02A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	82	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-15	19-06-1989-3-A	06/28/19 08:02	Solid	GC 50	07/01/19	07/02/19 05:53	190701B02A

Parameter	Result	RL	DF	Qualifiers
C6	ND	4.9	1.00	
C7	ND	4.9	1.00	
C8	ND	4.9	1.00	
C9-C10	ND	4.9	1.00	
C11-C12	ND	4.9	1.00	
C13-C14	ND	4.9	1.00	
C15-C16	ND	4.9	1.00	
C17-C18	ND	4.9	1.00	
C19-C20	ND	4.9	1.00	
C21-C22	ND	4.9	1.00	
C23-C24	ND	4.9	1.00	
C25-C28	ND	4.9	1.00	
C29-C32	ND	4.9	1.00	
C33-C36	ND	4.9	1.00	
C37-C40	ND	4.9	1.00	
C41-C44	ND	4.9	1.00	
C6-C44 Total	ND	4.9	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	71	61-145		


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-20	19-06-1989-4-A	06/28/19 08:18	Solid	GC 50	07/01/19	07/02/19 06:14	190701B02A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	88	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-25	19-06-1989-5-A	06/28/19 08:42	Solid	GC 50	07/01/19	07/02/19 06:34	190701B02A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	79	61-145		



Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-30	19-06-1989-6-A	06/28/19 08:51	Solid	GC 50	07/01/19	07/02/19 07:16	190701B02A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	78	61-145		


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-31.8	19-06-1989-7-A	06/28/19 08:59	Solid	GC 50	07/01/19	07/02/19 07:36	190701B02A

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	7.2	5.0	1.00	
C11-C12	7.5	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	17	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	80	61-145		

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 3550B
Method: EPA 8015B (M)
Units: mg/kg

Project: OOI

Page 8 of 11

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-37	19-06-1989-8-A	06/28/19 09:45	Solid	GC 50	07/01/19	07/02/19 12:05	190701B02A

Comment(s): - The total concentration includes individual carbon range concentrations (estimated), if any, below the RL reported as ND.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	83	50	10.0	
C7	390	50	10.0	
C8	460	50	10.0	
C9-C10	970	50	10.0	
C11-C12	330	50	10.0	
C13-C14	ND	50	10.0	
C15-C16	ND	50	10.0	
C17-C18	ND	50	10.0	
C19-C20	ND	50	10.0	
C21-C22	ND	50	10.0	
C23-C24	ND	50	10.0	
C25-C28	ND	50	10.0	
C29-C32	ND	50	10.0	
C33-C36	ND	50	10.0	
C37-C40	ND	50	10.0	
C41-C44	ND	50	10.0	
C6-C44 Total	2300	50	10.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
n-Octacosane	86	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-40	19-06-1989-9-A	06/28/19 10:07	Solid	GC 50	07/01/19	07/02/19 08:17	190701B02A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	72	61-145		



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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-44	19-06-1989-10-A	06/28/19 10:55	Solid	GC 50	07/01/19	07/02/19 08:38	190701B02A

Parameter	Result	RL	DF	Qualifiers
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
n-Octacosane	69	61-145		



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 3550B
 Method: EPA 8015B (M)
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-15-490-3657	N/A	Solid	GC 50	07/01/19	07/02/19 00:25	190701B02A

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
C6	ND	5.0	1.00	
C7	ND	5.0	1.00	
C8	ND	5.0	1.00	
C9-C10	ND	5.0	1.00	
C11-C12	ND	5.0	1.00	
C13-C14	ND	5.0	1.00	
C15-C16	ND	5.0	1.00	
C17-C18	ND	5.0	1.00	
C19-C20	ND	5.0	1.00	
C21-C22	ND	5.0	1.00	
C23-C24	ND	5.0	1.00	
C25-C28	ND	5.0	1.00	
C29-C32	ND	5.0	1.00	
C33-C36	ND	5.0	1.00	
C37-C40	ND	5.0	1.00	
C41-C44	ND	5.0	1.00	
C6-C44 Total	ND	5.0	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
n-Octacosane	88	61-145	


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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-5	19-06-1989-1-A	06/28/19 07:39	Solid	ICP 8300	07/01/19	07/02/19 16:14	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		2.12		0.773		1.03	
Lead		1.68		0.515		1.03	
CESB15-10	19-06-1989-2-A	06/28/19 07:50	Solid	ICP 8300	07/01/19	07/02/19 16:19	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		2.29		0.765		1.02	
Lead		1.94		0.510		1.02	
CESB15-15	19-06-1989-3-A	06/28/19 08:02	Solid	ICP 8300	07/01/19	07/02/19 16:25	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		4.40		0.725		0.966	
Lead		1.70		0.483		0.966	
CESB15-20	19-06-1989-4-A	06/28/19 08:18	Solid	ICP 8300	07/01/19	07/02/19 16:27	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.765		1.02	
Lead		4.23		0.510		1.02	
CESB15-25	19-06-1989-5-A	06/28/19 08:42	Solid	ICP 8300	07/01/19	07/02/19 16:29	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		3.15		0.773		1.03	
Lead		0.998		0.515		1.03	
CESB15-30	19-06-1989-6-A	06/28/19 08:51	Solid	ICP 8300	07/01/19	07/02/19 16:31	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		1.32		0.781		1.04	
Lead		4.61		0.521		1.04	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 3050B
 Method: EPA 6010B
 Units: mg/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-31.8	19-06-1989-7-A	06/28/19 08:59	Solid	ICP 8300	07/01/19	07/02/19 16:33	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		13.3		0.777		1.04	
Lead		7.11		0.518		1.04	
CESB15-37	19-06-1989-8-A	06/28/19 09:45	Solid	ICP 8300	07/01/19	07/02/19 16:34	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		4.47		0.777		1.04	
Lead		1.74		0.518		1.04	
CESB15-40	19-06-1989-9-A	06/28/19 10:07	Solid	ICP 8300	07/01/19	07/02/19 16:36	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		24.2		0.718		0.957	
Lead		3.80		0.478		0.957	
CESB15-44	19-06-1989-10-A	06/28/19 10:55	Solid	ICP 8300	07/01/19	07/02/19 16:38	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		3.45		0.735		0.980	
Lead		2.13		0.490		0.980	
Method Blank	097-01-002-28084	N/A	Solid	ICP 8300	07/01/19	07/02/19 16:05	190701L05
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Arsenic		ND		0.732		0.976	
Lead		ND		0.488		0.976	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-GW	19-06-1989-11-B	06/28/19 12:03	Aqueous	GC/MS PP	07/05/19	07/05/19 20:06	190705L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	200	10.0	
Benzene	520	5.0	10.0	
Bromobenzene	ND	10	10.0	
Bromochloromethane	ND	10	10.0	
Bromodichloromethane	ND	10	10.0	
Bromoform	ND	50	10.0	
Bromomethane	ND	500	10.0	
2-Butanone	ND	100	10.0	
n-Butylbenzene	ND	10	10.0	
sec-Butylbenzene	36	10	10.0	
tert-Butylbenzene	ND	10	10.0	
Carbon Disulfide	ND	100	10.0	
Carbon Tetrachloride	ND	5.0	10.0	
Chlorobenzene	ND	10	10.0	
Chloroethane	ND	50	10.0	
Chloroform	ND	10	10.0	
Chloromethane	ND	100	10.0	
2-Chlorotoluene	ND	10	10.0	
4-Chlorotoluene	ND	10	10.0	
Dibromochloromethane	ND	10	10.0	
1,2-Dibromo-3-Chloropropane	ND	100	10.0	
1,2-Dibromoethane	ND	10	10.0	
Dibromomethane	ND	10	10.0	
1,2-Dichlorobenzene	ND	10	10.0	
1,3-Dichlorobenzene	ND	10	10.0	
1,4-Dichlorobenzene	ND	10	10.0	
Dichlorodifluoromethane	ND	10	10.0	
1,1-Dichloroethane	ND	10	10.0	
1,2-Dichloroethane	ND	5.0	10.0	
1,1-Dichloroethene	ND	10	10.0	
c-1,2-Dichloroethene	ND	10	10.0	
t-1,2-Dichloroethene	ND	10	10.0	
1,2-Dichloropropane	ND	10	10.0	
1,3-Dichloropropane	ND	10	10.0	
2,2-Dichloropropane	ND	10	10.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	10	10.0	
c-1,3-Dichloropropene	ND	5.0	10.0	
t-1,3-Dichloropropene	ND	5.0	10.0	
Ethylbenzene	1200	10	10.0	
2-Hexanone	ND	100	10.0	
Isopropylbenzene	220	10	10.0	
p-Isopropyltoluene	97	10	10.0	
Methylene Chloride	ND	100	10.0	
4-Methyl-2-Pentanone	ND	100	10.0	
Naphthalene	260	100	10.0	
n-Propylbenzene	240	10	10.0	
Styrene	ND	10	10.0	
1,1,1,2-Tetrachloroethane	ND	10	10.0	
1,1,2,2-Tetrachloroethane	ND	10	10.0	
Tetrachloroethene	ND	10	10.0	
Toluene	430	10	10.0	
1,2,3-Trichlorobenzene	ND	10	10.0	
1,2,4-Trichlorobenzene	ND	10	10.0	
1,1,1-Trichloroethane	ND	10	10.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	100	10.0	
1,1,2-Trichloroethane	ND	10	10.0	
Trichloroethene	ND	10	10.0	
Trichlorofluoromethane	ND	100	10.0	
1,2,3-Trichloropropane	ND	50	10.0	
1,2,4-Trimethylbenzene	1300	10	10.0	
1,3,5-Trimethylbenzene	470	10	10.0	
Vinyl Acetate	ND	100	10.0	
Vinyl Chloride	ND	5.0	10.0	
p/m-Xylene	2700	10	10.0	
o-Xylene	1500	10	10.0	
Methyl-t-Butyl Ether (MTBE)	ND	10	10.0	
Tert-Butyl Alcohol (TBA)	ND	100	10.0	
Diisopropyl Ether (DIPE)	ND	20	10.0	
Ethyl-t-Butyl Ether (ETBE)	ND	20	10.0	
Tert-Amyl-Methyl Ether (TAME)	ND	20	10.0	
Ethanol	ND	1000	10.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	96	78-126		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 5030C
 Method: GC/MS / EPA 8260B
 Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	90	75-135	
Toluene-d8	103	80-120	
Toluene-d8-TPPH	98	80-120	
1,4-Bromofluorobenzene	109	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB12-GW	19-06-1989-11-A	06/28/19 12:03	Aqueous	GC/MS PP	07/02/19	07/03/19 01:14	190702L023

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	38000	2500	50.0	
Gasoline Range Organics (C4-C12)	36000	2500	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Toluene-d8-TPPH	95	80-120	


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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
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Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB13-GW	19-06-1989-12-A	06/28/19 12:35	Aqueous	GC/MS PP	07/02/19	07/03/19 01:45	190702L023

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	100	5.00	
Benzene	220	2.5	5.00	
Bromobenzene	ND	5.0	5.00	
Bromochloromethane	ND	5.0	5.00	
Bromodichloromethane	ND	5.0	5.00	
Bromoform	ND	25	5.00	
Bromomethane	ND	250	5.00	
2-Butanone	ND	50	5.00	
n-Butylbenzene	ND	5.0	5.00	
sec-Butylbenzene	8.7	5.0	5.00	
tert-Butylbenzene	ND	5.0	5.00	
Carbon Disulfide	ND	50	5.00	
Carbon Tetrachloride	ND	2.5	5.00	
Chlorobenzene	ND	5.0	5.00	
Chloroethane	ND	25	5.00	
Chloroform	ND	5.0	5.00	
Chloromethane	ND	50	5.00	
2-Chlorotoluene	ND	5.0	5.00	
4-Chlorotoluene	ND	5.0	5.00	
Dibromochloromethane	ND	5.0	5.00	
1,2-Dibromo-3-Chloropropane	ND	50	5.00	
1,2-Dibromoethane	ND	5.0	5.00	
Dibromomethane	ND	5.0	5.00	
1,2-Dichlorobenzene	ND	5.0	5.00	
1,3-Dichlorobenzene	ND	5.0	5.00	
1,4-Dichlorobenzene	ND	5.0	5.00	
Dichlorodifluoromethane	ND	5.0	5.00	
1,1-Dichloroethane	ND	5.0	5.00	
1,2-Dichloroethane	ND	2.5	5.00	
1,1-Dichloroethene	ND	5.0	5.00	
c-1,2-Dichloroethene	ND	5.0	5.00	
t-1,2-Dichloroethene	ND	5.0	5.00	
1,2-Dichloropropane	ND	5.0	5.00	
1,3-Dichloropropane	ND	5.0	5.00	
2,2-Dichloropropane	ND	5.0	5.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	5.0	5.00	
c-1,3-Dichloropropene	ND	2.5	5.00	
t-1,3-Dichloropropene	ND	2.5	5.00	
Ethylbenzene	530	5.0	5.00	
2-Hexanone	ND	50	5.00	
Isopropylbenzene	86	5.0	5.00	
p-Isopropyltoluene	21	5.0	5.00	
Methylene Chloride	ND	50	5.00	
4-Methyl-2-Pentanone	ND	50	5.00	
Naphthalene	130	50	5.00	
n-Propylbenzene	73	5.0	5.00	
Styrene	ND	5.0	5.00	
1,1,1,2-Tetrachloroethane	ND	5.0	5.00	
1,1,2,2-Tetrachloroethane	ND	5.0	5.00	
Tetrachloroethene	ND	5.0	5.00	
Toluene	26	5.0	5.00	
1,2,3-Trichlorobenzene	ND	5.0	5.00	
1,2,4-Trichlorobenzene	ND	5.0	5.00	
1,1,1-Trichloroethane	ND	5.0	5.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	5.00	
1,1,2-Trichloroethane	ND	5.0	5.00	
Trichloroethene	ND	5.0	5.00	
Trichlorofluoromethane	ND	50	5.00	
1,2,3-Trichloropropane	ND	25	5.00	
1,2,4-Trimethylbenzene	420	5.0	5.00	
1,3,5-Trimethylbenzene	100	5.0	5.00	
Vinyl Acetate	ND	50	5.00	
Vinyl Chloride	ND	2.5	5.00	
p/m-Xylene	89	5.0	5.00	
o-Xylene	110	5.0	5.00	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	5.00	
Tert-Butyl Alcohol (TBA)	ND	50	5.00	
Diisopropyl Ether (DIPE)	ND	10	5.00	
Ethyl-t-Butyl Ether (ETBE)	ND	10	5.00	
Tert-Amyl-Methyl Ether (TAME)	ND	10	5.00	
Ethanol	ND	500	5.00	
TPPH	11000	250	5.00	
Gasoline Range Organics (C4-C12)	10000	250	5.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 5030C
 Method: GC/MS / EPA 8260B
 Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	95	78-126	
1,2-Dichloroethane-d4	88	75-135	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	94	80-120	
1,4-Bromofluorobenzene	100	80-120	


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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
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Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB14-GW	19-06-1989-13-B	06/28/19 13:05	Aqueous	GC/MS PP	07/10/19	07/10/19 23:20	190710L010

Parameter	Result	RL	DF	Qualifiers
Acetone	260	40	2.00	
Benzene	94	1.0	2.00	
Bromobenzene	ND	2.0	2.00	
Bromochloromethane	ND	2.0	2.00	
Bromodichloromethane	ND	2.0	2.00	
Bromoform	ND	10	2.00	
Bromomethane	ND	100	2.00	
2-Butanone	ND	20	2.00	
n-Butylbenzene	14	2.0	2.00	
sec-Butylbenzene	15	2.0	2.00	
tert-Butylbenzene	ND	2.0	2.00	
Carbon Disulfide	ND	20	2.00	
Carbon Tetrachloride	ND	1.0	2.00	
Chlorobenzene	ND	2.0	2.00	
Chloroethane	ND	10	2.00	
Chloroform	ND	2.0	2.00	
Chloromethane	ND	20	2.00	
2-Chlorotoluene	ND	2.0	2.00	
4-Chlorotoluene	ND	2.0	2.00	
Dibromochloromethane	ND	2.0	2.00	
1,2-Dibromo-3-Chloropropane	ND	20	2.00	
1,2-Dibromoethane	ND	2.0	2.00	
Dibromomethane	ND	2.0	2.00	
1,2-Dichlorobenzene	ND	2.0	2.00	
1,3-Dichlorobenzene	ND	2.0	2.00	
1,4-Dichlorobenzene	ND	2.0	2.00	
Dichlorodifluoromethane	ND	2.0	2.00	
1,1-Dichloroethane	ND	2.0	2.00	
1,2-Dichloroethane	12	1.0	2.00	
1,1-Dichloroethene	ND	2.0	2.00	
c-1,2-Dichloroethene	ND	2.0	2.00	
t-1,2-Dichloroethene	ND	2.0	2.00	
1,2-Dichloropropane	ND	2.0	2.00	
1,3-Dichloropropane	ND	2.0	2.00	
2,2-Dichloropropane	ND	2.0	2.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	2.00	
c-1,3-Dichloropropene	ND	1.0	2.00	
t-1,3-Dichloropropene	ND	1.0	2.00	
Ethylbenzene	240	2.0	2.00	
2-Hexanone	ND	20	2.00	
Isopropylbenzene	94	2.0	2.00	
p-Isopropyltoluene	19	2.0	2.00	
Methylene Chloride	ND	20	2.00	
4-Methyl-2-Pentanone	ND	20	2.00	
Naphthalene	91	20	2.00	
n-Propylbenzene	84	2.0	2.00	
Styrene	ND	2.0	2.00	
1,1,1,2-Tetrachloroethane	ND	2.0	2.00	
1,1,2,2-Tetrachloroethane	ND	2.0	2.00	
Tetrachloroethene	ND	2.0	2.00	
Toluene	6.5	2.0	2.00	
1,2,3-Trichlorobenzene	ND	2.0	2.00	
1,2,4-Trichlorobenzene	ND	2.0	2.00	
1,1,1-Trichloroethane	ND	2.0	2.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	20	2.00	
1,1,2-Trichloroethane	ND	2.0	2.00	
Trichloroethene	ND	2.0	2.00	
Trichlorofluoromethane	ND	20	2.00	
1,2,3-Trichloropropane	ND	10	2.00	
1,2,4-Trimethylbenzene	2.1	2.0	2.00	
1,3,5-Trimethylbenzene	3.8	2.0	2.00	
Vinyl Acetate	ND	20	2.00	
Vinyl Chloride	ND	1.0	2.00	
p/m-Xylene	23	2.0	2.00	
o-Xylene	26	2.0	2.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	2.00	
Tert-Butyl Alcohol (TBA)	ND	20	2.00	
Diisopropyl Ether (DIPE)	ND	4.0	2.00	
Ethyl-t-Butyl Ether (ETBE)	ND	4.0	2.00	
Tert-Amyl-Methyl Ether (TAME)	ND	4.0	2.00	
Ethanol	ND	200	2.00	
TPPH	7200	100	2.00	
Gasoline Range Organics (C4-C12)	6500	100	2.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	78-126	
1,2-Dichloroethane-d4	92	75-135	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	94	80-120	
1,4-Bromofluorobenzene	103	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-GW	19-06-1989-14-A	06/28/19 13:50	Aqueous	GC/MS PP	07/05/19	07/05/19 19:35	190705L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	200	10.0	
Benzene	7.2	5.0	10.0	
Bromobenzene	ND	10	10.0	
Bromochloromethane	ND	10	10.0	
Bromodichloromethane	ND	10	10.0	
Bromoform	ND	50	10.0	
Bromomethane	ND	500	10.0	
2-Butanone	ND	100	10.0	
n-Butylbenzene	78	10	10.0	
sec-Butylbenzene	46	10	10.0	
tert-Butylbenzene	ND	10	10.0	
Carbon Disulfide	ND	100	10.0	
Carbon Tetrachloride	ND	5.0	10.0	
Chlorobenzene	ND	10	10.0	
Chloroethane	ND	50	10.0	
Chloroform	ND	10	10.0	
Chloromethane	ND	100	10.0	
2-Chlorotoluene	ND	10	10.0	
4-Chlorotoluene	ND	10	10.0	
Dibromochloromethane	ND	10	10.0	
1,2-Dibromo-3-Chloropropane	ND	100	10.0	
1,2-Dibromoethane	ND	10	10.0	
Dibromomethane	ND	10	10.0	
1,2-Dichlorobenzene	ND	10	10.0	
1,3-Dichlorobenzene	ND	10	10.0	
1,4-Dichlorobenzene	ND	10	10.0	
Dichlorodifluoromethane	ND	10	10.0	
1,1-Dichloroethane	ND	10	10.0	
1,2-Dichloroethane	ND	5.0	10.0	
1,1-Dichloroethene	ND	10	10.0	
c-1,2-Dichloroethene	ND	10	10.0	
t-1,2-Dichloroethene	ND	10	10.0	
1,2-Dichloropropane	ND	10	10.0	
1,3-Dichloropropane	ND	10	10.0	
2,2-Dichloropropane	ND	10	10.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	10	10.0	
c-1,3-Dichloropropene	ND	5.0	10.0	
t-1,3-Dichloropropene	ND	5.0	10.0	
Ethylbenzene	610	10	10.0	
2-Hexanone	ND	100	10.0	
Isopropylbenzene	300	10	10.0	
p-Isopropyltoluene	110	10	10.0	
Methylene Chloride	ND	100	10.0	
4-Methyl-2-Pentanone	ND	100	10.0	
Naphthalene	430	100	10.0	
n-Propylbenzene	300	10	10.0	
Styrene	ND	10	10.0	
1,1,1,2-Tetrachloroethane	ND	10	10.0	
1,1,2,2-Tetrachloroethane	ND	10	10.0	
Tetrachloroethene	ND	10	10.0	
Toluene	ND	10	10.0	
1,2,3-Trichlorobenzene	ND	10	10.0	
1,2,4-Trichlorobenzene	ND	10	10.0	
1,1,1-Trichloroethane	ND	10	10.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	100	10.0	
1,1,2-Trichloroethane	ND	10	10.0	
Trichloroethene	ND	10	10.0	
Trichlorofluoromethane	ND	100	10.0	
1,2,3-Trichloropropane	ND	50	10.0	
1,2,4-Trimethylbenzene	1100	10	10.0	
1,3,5-Trimethylbenzene	280	10	10.0	
Vinyl Acetate	ND	100	10.0	
Vinyl Chloride	ND	5.0	10.0	
p/m-Xylene	570	10	10.0	
o-Xylene	22	10	10.0	
Methyl-t-Butyl Ether (MTBE)	ND	10	10.0	
Tert-Butyl Alcohol (TBA)	ND	100	10.0	
Diisopropyl Ether (DIPE)	ND	20	10.0	
Ethyl-t-Butyl Ether (ETBE)	ND	20	10.0	
Tert-Amyl-Methyl Ether (TAME)	ND	20	10.0	
Ethanol	ND	1000	10.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	95	78-126		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	91	75-135	
Toluene-d8	106	80-120	
Toluene-d8-TPPH	99	80-120	
1,4-Bromofluorobenzene	103	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-GW	19-06-1989-14-B	06/28/19 13:50	Aqueous	GC/MS PP	07/05/19	07/05/19 20:36	190705L008

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	44000	2000	40.0	
Gasoline Range Organics (C4-C12)	41000	2000	40.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Toluene-d8-TPPH	94	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-8590	N/A	Aqueous	GC/MS PP	07/02/19	07/02/19 18:20	190702L023

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	50	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	1.0	1.00	
1,3,5-Trimethylbenzene	ND	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	96	78-126	
1,2-Dichloroethane-d4	95	75-135	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	93	80-120	
1,4-Bromofluorobenzene	98	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-8591	N/A	Aqueous	GC/MS PP	07/05/19	07/05/19 19:05	190705L008

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	50	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	1.0	1.00	
1,3,5-Trimethylbenzene	ND	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	78-126	
1,2-Dichloroethane-d4	91	75-135	
Toluene-d8	97	80-120	
Toluene-d8-TPPH	91	80-120	
1,4-Bromofluorobenzene	96	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-767-8594	N/A	Aqueous	GC/MS PP	07/10/19	07/10/19 19:17	190710L010

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	20	1.00	
Benzene	ND	0.50	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	1.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	50	1.00	
2-Butanone	ND	10	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	0.50	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	10	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	1.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	1.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	0.50	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	1.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.0	1.00	
c-1,3-Dichloropropene	ND	0.50	1.00	
t-1,3-Dichloropropene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	10	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	10	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	1.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	1.0	1.00	
1,2,4-Trichlorobenzene	ND	1.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
Trichloroethene	ND	1.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	1.0	1.00	
1,3,5-Trimethylbenzene	ND	1.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	0.50	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B
Units: ug/L

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	78-126	
1,2-Dichloroethane-d4	98	75-135	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	92	80-120	
1,4-Bromofluorobenzene	98	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-5	19-06-1989-1-D	06/28/19 07:39	Solid	GC/MS LL	06/28/19	07/06/19 16:12	190706L002

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	42	1.00	
Benzene	ND	0.83	1.00	
Bromobenzene	ND	0.83	1.00	
Bromochloromethane	ND	1.7	1.00	
Bromodichloromethane	ND	0.83	1.00	
Bromoform	ND	4.2	1.00	
Bromomethane	ND	17	1.00	
2-Butanone	ND	17	1.00	
n-Butylbenzene	ND	0.83	1.00	
sec-Butylbenzene	ND	0.83	1.00	
tert-Butylbenzene	ND	0.83	1.00	
Carbon Disulfide	ND	8.3	1.00	
Carbon Tetrachloride	ND	0.83	1.00	
Chlorobenzene	ND	0.83	1.00	
Chloroethane	ND	1.7	1.00	
Chloroform	ND	0.83	1.00	
Chloromethane	ND	17	1.00	
2-Chlorotoluene	ND	0.83	1.00	
4-Chlorotoluene	ND	0.83	1.00	
Dibromochloromethane	ND	1.7	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.2	1.00	
1,2-Dibromoethane	ND	0.83	1.00	
Dibromomethane	ND	0.83	1.00	
1,2-Dichlorobenzene	ND	0.83	1.00	
1,3-Dichlorobenzene	ND	0.83	1.00	
1,4-Dichlorobenzene	ND	0.83	1.00	
Dichlorodifluoromethane	ND	1.7	1.00	
1,1-Dichloroethane	ND	0.83	1.00	
1,2-Dichloroethane	ND	0.83	1.00	
1,1-Dichloroethene	ND	0.83	1.00	
c-1,2-Dichloroethene	ND	0.83	1.00	
t-1,2-Dichloroethene	ND	0.83	1.00	
1,2-Dichloropropane	ND	0.83	1.00	
1,3-Dichloropropane	ND	0.83	1.00	
2,2-Dichloropropane	ND	4.2	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.7	1.00	
c-1,3-Dichloropropene	ND	0.83	1.00	
t-1,3-Dichloropropene	ND	1.7	1.00	
Ethylbenzene	ND	0.83	1.00	
2-Hexanone	ND	17	1.00	
Isopropylbenzene	ND	0.83	1.00	
p-Isopropyltoluene	ND	0.83	1.00	
Methylene Chloride	ND	8.3	1.00	
4-Methyl-2-Pentanone	ND	17	1.00	
Naphthalene	ND	8.3	1.00	
n-Propylbenzene	ND	1.7	1.00	
Styrene	ND	0.83	1.00	
1,1,1,2-Tetrachloroethane	ND	0.83	1.00	
1,1,2,2-Tetrachloroethane	ND	1.7	1.00	
Tetrachloroethene	ND	0.83	1.00	
Toluene	ND	0.83	1.00	
1,2,3-Trichlorobenzene	ND	1.7	1.00	
1,2,4-Trichlorobenzene	ND	1.7	1.00	
1,1,1-Trichloroethane	ND	0.83	1.00	
1,1,2-Trichloroethane	ND	0.83	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.3	1.00	
Trichloroethene	ND	1.7	1.00	
Trichlorofluoromethane	ND	8.3	1.00	
1,2,3-Trichloropropane	ND	1.7	1.00	
1,2,4-Trimethylbenzene	ND	1.7	1.00	
1,3,5-Trimethylbenzene	ND	1.7	1.00	
Vinyl Acetate	ND	8.3	1.00	
Vinyl Chloride	ND	0.83	1.00	
p/m-Xylene	ND	1.7	1.00	
o-Xylene	ND	0.83	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.7	1.00	
Tert-Butyl Alcohol (TBA)	ND	17	1.00	
Diisopropyl Ether (DIPE)	ND	0.83	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.83	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.83	1.00	
Ethanol	ND	420	1.00	
TPPH	ND	42	1.00	
Gasoline Range Organics (C4-C12)	ND	42	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	109	79-139	
1,2-Dichloroethane-d4	115	71-155	
1,4-Bromofluorobenzene	95	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-10	19-06-1989-2-D	06/28/19 07:50	Solid	GC/MS LL	06/28/19	07/06/19 16:38	190706L002

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	47	1.00	
Benzene	ND	0.93	1.00	
Bromobenzene	ND	0.93	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.93	1.00	
Bromoform	ND	4.7	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.93	1.00	
sec-Butylbenzene	ND	0.93	1.00	
tert-Butylbenzene	ND	0.93	1.00	
Carbon Disulfide	ND	9.3	1.00	
Carbon Tetrachloride	ND	0.93	1.00	
Chlorobenzene	ND	0.93	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.93	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.93	1.00	
4-Chlorotoluene	ND	0.93	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.7	1.00	
1,2-Dibromoethane	ND	0.93	1.00	
Dibromomethane	ND	0.93	1.00	
1,2-Dichlorobenzene	ND	0.93	1.00	
1,3-Dichlorobenzene	ND	0.93	1.00	
1,4-Dichlorobenzene	ND	0.93	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.93	1.00	
1,2-Dichloroethane	ND	0.93	1.00	
1,1-Dichloroethene	ND	0.93	1.00	
c-1,2-Dichloroethene	ND	0.93	1.00	
t-1,2-Dichloroethene	ND	0.93	1.00	
1,2-Dichloropropane	ND	0.93	1.00	
1,3-Dichloropropane	ND	0.93	1.00	
2,2-Dichloropropane	ND	4.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.93	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.93	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.93	1.00	
p-Isopropyltoluene	ND	0.93	1.00	
Methylene Chloride	ND	9.3	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.3	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.93	1.00	
1,1,1,2-Tetrachloroethane	ND	0.93	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	ND	0.93	1.00	
Toluene	ND	0.93	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.93	1.00	
1,1,2-Trichloroethane	ND	0.93	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.3	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.3	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.3	1.00	
Vinyl Chloride	ND	0.93	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.93	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	
Tert-Butyl Alcohol (TBA)	ND	19	1.00	
Diisopropyl Ether (DIPE)	ND	0.93	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.93	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.93	1.00	
Ethanol	ND	470	1.00	
TPPH	ND	47	1.00	
Gasoline Range Organics (C4-C12)	ND	47	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	109	79-139	
1,2-Dichloroethane-d4	116	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	97	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-15	19-06-1989-3-D	06/28/19 08:02	Solid	GC/MS LL	06/28/19	07/06/19 17:04	190706L002

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	77	1.00	
Benzene	ND	1.5	1.00	
Bromobenzene	ND	1.5	1.00	
Bromochloromethane	ND	3.1	1.00	
Bromodichloromethane	ND	1.5	1.00	
Bromoform	ND	7.7	1.00	
Bromomethane	ND	31	1.00	
2-Butanone	ND	31	1.00	
n-Butylbenzene	ND	1.5	1.00	
sec-Butylbenzene	ND	1.5	1.00	
tert-Butylbenzene	ND	1.5	1.00	
Carbon Disulfide	ND	15	1.00	
Carbon Tetrachloride	ND	1.5	1.00	
Chlorobenzene	ND	1.5	1.00	
Chloroethane	ND	3.1	1.00	
Chloroform	ND	1.5	1.00	
Chloromethane	ND	31	1.00	
2-Chlorotoluene	ND	1.5	1.00	
4-Chlorotoluene	ND	1.5	1.00	
Dibromochloromethane	ND	3.1	1.00	
1,2-Dibromo-3-Chloropropane	ND	7.7	1.00	
1,2-Dibromoethane	ND	1.5	1.00	
Dibromomethane	ND	1.5	1.00	
1,2-Dichlorobenzene	ND	1.5	1.00	
1,3-Dichlorobenzene	ND	1.5	1.00	
1,4-Dichlorobenzene	ND	1.5	1.00	
Dichlorodifluoromethane	ND	3.1	1.00	
1,1-Dichloroethane	ND	1.5	1.00	
1,2-Dichloroethane	ND	1.5	1.00	
1,1-Dichloroethene	ND	1.5	1.00	
c-1,2-Dichloroethene	ND	1.5	1.00	
t-1,2-Dichloroethene	ND	1.5	1.00	
1,2-Dichloropropane	ND	1.5	1.00	
1,3-Dichloropropane	ND	1.5	1.00	
2,2-Dichloropropane	ND	7.7	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	3.1	1.00	
c-1,3-Dichloropropene	ND	1.5	1.00	
t-1,3-Dichloropropene	ND	3.1	1.00	
Ethylbenzene	ND	1.5	1.00	
2-Hexanone	ND	31	1.00	
Isopropylbenzene	ND	1.5	1.00	
p-Isopropyltoluene	ND	1.5	1.00	
Methylene Chloride	ND	15	1.00	
4-Methyl-2-Pentanone	ND	31	1.00	
Naphthalene	ND	15	1.00	
n-Propylbenzene	ND	3.1	1.00	
Styrene	ND	1.5	1.00	
1,1,1,2-Tetrachloroethane	ND	1.5	1.00	
1,1,2,2-Tetrachloroethane	ND	3.1	1.00	
Tetrachloroethene	ND	1.5	1.00	
Toluene	ND	1.5	1.00	
1,2,3-Trichlorobenzene	ND	3.1	1.00	
1,2,4-Trichlorobenzene	ND	3.1	1.00	
1,1,1-Trichloroethane	ND	1.5	1.00	
1,1,2-Trichloroethane	ND	1.5	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	15	1.00	
Trichloroethene	ND	3.1	1.00	
Trichlorofluoromethane	ND	15	1.00	
1,2,3-Trichloropropane	ND	3.1	1.00	
1,2,4-Trimethylbenzene	ND	3.1	1.00	
1,3,5-Trimethylbenzene	ND	3.1	1.00	
Vinyl Acetate	ND	15	1.00	
Vinyl Chloride	ND	1.5	1.00	
p/m-Xylene	ND	3.1	1.00	
o-Xylene	ND	1.5	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	3.1	1.00	
Tert-Butyl Alcohol (TBA)	ND	31	1.00	
Diisopropyl Ether (DIPE)	ND	1.5	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.5	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.5	1.00	
Ethanol	ND	770	1.00	
TPPH	84	77	1.00	
Gasoline Range Organics (C4-C12)	80	77	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	100	79-139	
1,2-Dichloroethane-d4	113	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	101	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-20	19-06-1989-4-D	06/28/19 08:18	Solid	GC/MS LL	06/28/19	07/06/19 17:30	190706L002

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	49	1.00	
Benzene	ND	0.97	1.00	
Bromobenzene	ND	0.97	1.00	
Bromochloromethane	ND	1.9	1.00	
Bromodichloromethane	ND	0.97	1.00	
Bromoform	ND	4.9	1.00	
Bromomethane	ND	19	1.00	
2-Butanone	ND	19	1.00	
n-Butylbenzene	ND	0.97	1.00	
sec-Butylbenzene	ND	0.97	1.00	
tert-Butylbenzene	ND	0.97	1.00	
Carbon Disulfide	ND	9.7	1.00	
Carbon Tetrachloride	ND	0.97	1.00	
Chlorobenzene	ND	0.97	1.00	
Chloroethane	ND	1.9	1.00	
Chloroform	ND	0.97	1.00	
Chloromethane	ND	19	1.00	
2-Chlorotoluene	ND	0.97	1.00	
4-Chlorotoluene	ND	0.97	1.00	
Dibromochloromethane	ND	1.9	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.9	1.00	
1,2-Dibromoethane	ND	0.97	1.00	
Dibromomethane	ND	0.97	1.00	
1,2-Dichlorobenzene	ND	0.97	1.00	
1,3-Dichlorobenzene	ND	0.97	1.00	
1,4-Dichlorobenzene	ND	0.97	1.00	
Dichlorodifluoromethane	ND	1.9	1.00	
1,1-Dichloroethane	ND	0.97	1.00	
1,2-Dichloroethane	ND	0.97	1.00	
1,1-Dichloroethene	ND	0.97	1.00	
c-1,2-Dichloroethene	ND	0.97	1.00	
t-1,2-Dichloroethene	ND	0.97	1.00	
1,2-Dichloropropane	ND	0.97	1.00	
1,3-Dichloropropane	ND	0.97	1.00	
2,2-Dichloropropane	ND	4.9	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.9	1.00	
c-1,3-Dichloropropene	ND	0.97	1.00	
t-1,3-Dichloropropene	ND	1.9	1.00	
Ethylbenzene	ND	0.97	1.00	
2-Hexanone	ND	19	1.00	
Isopropylbenzene	ND	0.97	1.00	
p-Isopropyltoluene	ND	0.97	1.00	
Methylene Chloride	ND	9.7	1.00	
4-Methyl-2-Pentanone	ND	19	1.00	
Naphthalene	ND	9.7	1.00	
n-Propylbenzene	ND	1.9	1.00	
Styrene	ND	0.97	1.00	
1,1,1,2-Tetrachloroethane	ND	0.97	1.00	
1,1,2,2-Tetrachloroethane	ND	1.9	1.00	
Tetrachloroethene	ND	0.97	1.00	
Toluene	ND	0.97	1.00	
1,2,3-Trichlorobenzene	ND	1.9	1.00	
1,2,4-Trichlorobenzene	ND	1.9	1.00	
1,1,1-Trichloroethane	ND	0.97	1.00	
1,1,2-Trichloroethane	ND	0.97	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	9.7	1.00	
Trichloroethene	ND	1.9	1.00	
Trichlorofluoromethane	ND	9.7	1.00	
1,2,3-Trichloropropane	ND	1.9	1.00	
1,2,4-Trimethylbenzene	ND	1.9	1.00	
1,3,5-Trimethylbenzene	ND	1.9	1.00	
Vinyl Acetate	ND	9.7	1.00	
Vinyl Chloride	ND	0.97	1.00	
p/m-Xylene	ND	1.9	1.00	
o-Xylene	ND	0.97	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.9	1.00	
Tert-Butyl Alcohol (TBA)	ND	19	1.00	
Diisopropyl Ether (DIPE)	ND	0.97	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.97	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.97	1.00	
Ethanol	ND	490	1.00	
TPPH	ND	49	1.00	
Gasoline Range Organics (C4-C12)	ND	49	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	106	79-139	
1,2-Dichloroethane-d4	110	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-25	19-06-1989-5-D	06/28/19 08:42	Solid	GC/MS OO	06/28/19	07/08/19 23:45	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	51	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.1	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.1	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.1	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	510	1.00	
TPPH	ND	51	1.00	
Gasoline Range Organics (C4-C12)	ND	51	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	92	79-139	
1,2-Dichloroethane-d4	94	71-155	
1,4-Bromofluorobenzene	101	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-30	19-06-1989-6-D	06/28/19 08:51	Solid	GC/MS OO	06/28/19	07/09/19 00:14	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	51	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.1	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.1	1.00	
Bromomethane	ND	21	1.00	
2-Butanone	ND	21	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.1	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	21	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.1	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.1	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.1	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.1	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.1	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.1	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	21	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	21	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.1	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.1	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.1	1.00	
1,2,4-Trichlorobenzene	ND	2.1	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.1	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.1	1.00	
1,2,4-Trimethylbenzene	ND	2.1	1.00	
1,3,5-Trimethylbenzene	ND	2.1	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.1	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.1	1.00	
Tert-Butyl Alcohol (TBA)	ND	21	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	510	1.00	
TPPH	ND	51	1.00	
Gasoline Range Organics (C4-C12)	ND	51	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	97	79-139	
1,2-Dichloroethane-d4	95	71-155	
1,4-Bromofluorobenzene	100	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-31.8	19-06-1989-7-E	06/28/19 08:59	Solid	GC/MS LL	06/28/19	07/06/19 19:15	190706L003

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	2700	50.0	
Benzene	ND	54	50.0	
Bromobenzene	ND	54	50.0	
Bromochloromethane	ND	110	50.0	
Bromodichloromethane	ND	54	50.0	
Bromoform	ND	270	50.0	
Bromomethane	ND	1100	50.0	
2-Butanone	ND	1100	50.0	
n-Butylbenzene	ND	54	50.0	
sec-Butylbenzene	230	54	50.0	
tert-Butylbenzene	ND	54	50.0	
Carbon Disulfide	ND	540	50.0	
Carbon Tetrachloride	ND	54	50.0	
Chlorobenzene	ND	54	50.0	
Chloroethane	ND	110	50.0	
Chloroform	ND	54	50.0	
Chloromethane	ND	1100	50.0	
2-Chlorotoluene	ND	54	50.0	
4-Chlorotoluene	ND	54	50.0	
Dibromochloromethane	ND	110	50.0	
1,2-Dibromo-3-Chloropropane	ND	270	50.0	
1,2-Dibromoethane	ND	54	50.0	
Dibromomethane	ND	54	50.0	
1,2-Dichlorobenzene	ND	54	50.0	
1,3-Dichlorobenzene	ND	54	50.0	
1,4-Dichlorobenzene	ND	54	50.0	
Dichlorodifluoromethane	ND	110	50.0	
1,1-Dichloroethane	ND	54	50.0	
1,2-Dichloroethane	ND	54	50.0	
1,1-Dichloroethene	ND	54	50.0	
c-1,2-Dichloroethene	ND	54	50.0	
t-1,2-Dichloroethene	ND	54	50.0	
1,2-Dichloropropane	ND	54	50.0	
1,3-Dichloropropane	ND	54	50.0	
2,2-Dichloropropane	ND	270	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	110	50.0	
c-1,3-Dichloropropene	ND	54	50.0	
t-1,3-Dichloropropene	ND	110	50.0	
Ethylbenzene	130	54	50.0	
2-Hexanone	ND	1100	50.0	
Isopropylbenzene	190	54	50.0	
p-Isopropyltoluene	1000	54	50.0	
Methylene Chloride	ND	540	50.0	
4-Methyl-2-Pentanone	ND	1100	50.0	
Naphthalene	ND	540	50.0	
n-Propylbenzene	240	110	50.0	
Styrene	ND	54	50.0	
1,1,1,2-Tetrachloroethane	ND	54	50.0	
1,1,2,2-Tetrachloroethane	ND	110	50.0	
Tetrachloroethene	ND	54	50.0	
Toluene	ND	54	50.0	
1,2,3-Trichlorobenzene	ND	110	50.0	
1,2,4-Trichlorobenzene	ND	110	50.0	
1,1,1-Trichloroethane	ND	54	50.0	
1,1,2-Trichloroethane	ND	54	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	540	50.0	
Trichloroethene	ND	110	50.0	
Trichlorofluoromethane	ND	540	50.0	
1,2,3-Trichloropropane	ND	110	50.0	
1,2,4-Trimethylbenzene	360	110	50.0	
1,3,5-Trimethylbenzene	1600	110	50.0	
Vinyl Acetate	ND	540	50.0	
Vinyl Chloride	ND	54	50.0	
p/m-Xylene	ND	110	50.0	
o-Xylene	ND	54	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	110	50.0	
Tert-Butyl Alcohol (TBA)	ND	1100	50.0	
Diisopropyl Ether (DIPE)	ND	54	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	54	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	54	50.0	
Ethanol	ND	27000	50.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	101	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	96	71-155	
1,4-Bromofluorobenzene	105	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	100	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-31.8	19-06-1989-7-E	06/28/19 08:59	Solid	GC/MS OO	06/28/19	07/09/19 02:11	190708L023

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	320000	14000	250	
Gasoline Range Organics (C4-C12)	250000	14000	250	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	89	79-139	
1,2-Dichloroethane-d4	80	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	100	80-120	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-37	19-06-1989-8-E	06/28/19 09:45	Solid	GC/MS OO	06/28/19	07/09/19 01:13	190708L023

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	53000	1000	
Benzene	ND	1100	1000	
Bromobenzene	ND	1100	1000	
Bromochloromethane	ND	2100	1000	
Bromodichloromethane	ND	1100	1000	
Bromoform	ND	5300	1000	
Bromomethane	ND	21000	1000	
2-Butanone	ND	21000	1000	
n-Butylbenzene	2100	1100	1000	
sec-Butylbenzene	ND	1100	1000	
tert-Butylbenzene	ND	1100	1000	
Carbon Disulfide	ND	11000	1000	
Carbon Tetrachloride	ND	1100	1000	
Chlorobenzene	ND	1100	1000	
Chloroethane	ND	2100	1000	
Chloroform	ND	1100	1000	
Chloromethane	ND	21000	1000	
2-Chlorotoluene	ND	1100	1000	
4-Chlorotoluene	ND	1100	1000	
Dibromochloromethane	ND	2100	1000	
1,2-Dibromo-3-Chloropropane	ND	5300	1000	
1,2-Dibromoethane	ND	1100	1000	
Dibromomethane	ND	1100	1000	
1,2-Dichlorobenzene	ND	1100	1000	
1,3-Dichlorobenzene	ND	1100	1000	
1,4-Dichlorobenzene	ND	1100	1000	
Dichlorodifluoromethane	ND	2100	1000	
1,1-Dichloroethane	ND	1100	1000	
1,2-Dichloroethane	ND	1100	1000	
1,1-Dichloroethene	ND	1100	1000	
c-1,2-Dichloroethene	ND	1100	1000	
t-1,2-Dichloroethene	ND	1100	1000	
1,2-Dichloropropane	ND	1100	1000	
1,3-Dichloropropane	ND	1100	1000	
2,2-Dichloropropane	ND	5300	1000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2100	1000	
c-1,3-Dichloropropene	ND	1100	1000	
t-1,3-Dichloropropene	ND	2100	1000	
Ethylbenzene	3700	1100	1000	
2-Hexanone	ND	21000	1000	
Isopropylbenzene	3500	1100	1000	
p-Isopropyltoluene	2600	1100	1000	
Methylene Chloride	ND	11000	1000	
4-Methyl-2-Pentanone	ND	21000	1000	
Naphthalene	ND	11000	1000	
n-Propylbenzene	3900	2100	1000	
Styrene	ND	1100	1000	
1,1,1,2-Tetrachloroethane	ND	1100	1000	
1,1,2,2-Tetrachloroethane	ND	2100	1000	
Tetrachloroethene	ND	1100	1000	
Toluene	ND	1100	1000	
1,2,3-Trichlorobenzene	ND	2100	1000	
1,2,4-Trichlorobenzene	ND	2100	1000	
1,1,1-Trichloroethane	ND	1100	1000	
1,1,2-Trichloroethane	ND	1100	1000	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11000	1000	
Trichloroethene	ND	2100	1000	
Trichlorofluoromethane	ND	11000	1000	
1,2,3-Trichloropropane	ND	2100	1000	
1,2,4-Trimethylbenzene	13000	2100	1000	
1,3,5-Trimethylbenzene	3900	2100	1000	
Vinyl Acetate	ND	11000	1000	
Vinyl Chloride	ND	1100	1000	
p/m-Xylene	3800	2100	1000	
o-Xylene	ND	1100	1000	
Methyl-t-Butyl Ether (MTBE)	ND	2100	1000	
Tert-Butyl Alcohol (TBA)	ND	21000	1000	
Diisopropyl Ether (DIPE)	ND	1100	1000	
Ethyl-t-Butyl Ether (ETBE)	ND	1100	1000	
Tert-Amyl-Methyl Ether (TAME)	ND	1100	1000	
Ethanol	ND	530000	1000	
TPPH	2000000	53000	1000	
Gasoline Range Organics (C4-C12)	1700000	53000	1000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	92	79-139	
1,2-Dichloroethane-d4	83	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	95	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-40	19-06-1989-9-C	06/28/19 10:07	Solid	GC/MS LL	06/28/19	07/06/19 17:57	190706L002

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	41	1.00	
Benzene	3.2	0.82	1.00	
Bromobenzene	ND	0.82	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.82	1.00	
Bromoform	ND	4.1	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.82	1.00	
sec-Butylbenzene	ND	0.82	1.00	
tert-Butylbenzene	ND	0.82	1.00	
Carbon Disulfide	ND	8.2	1.00	
Carbon Tetrachloride	ND	0.82	1.00	
Chlorobenzene	ND	0.82	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.82	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.82	1.00	
4-Chlorotoluene	ND	0.82	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.1	1.00	
1,2-Dibromoethane	ND	0.82	1.00	
Dibromomethane	ND	0.82	1.00	
1,2-Dichlorobenzene	ND	0.82	1.00	
1,3-Dichlorobenzene	ND	0.82	1.00	
1,4-Dichlorobenzene	ND	0.82	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.82	1.00	
1,2-Dichloroethane	ND	0.82	1.00	
1,1-Dichloroethene	ND	0.82	1.00	
c-1,2-Dichloroethene	ND	0.82	1.00	
t-1,2-Dichloroethene	ND	0.82	1.00	
1,2-Dichloropropane	ND	0.82	1.00	
1,3-Dichloropropane	ND	0.82	1.00	
2,2-Dichloropropane	ND	4.1	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.82	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	1.3	0.82	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	ND	0.82	1.00	
p-Isopropyltoluene	ND	0.82	1.00	
Methylene Chloride	ND	8.2	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	9.5	8.2	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.82	1.00	
1,1,1,2-Tetrachloroethane	ND	0.82	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.82	1.00	
Toluene	ND	0.82	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.82	1.00	
1,1,2-Trichloroethane	ND	0.82	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.2	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	8.2	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	ND	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	8.2	1.00	
Vinyl Chloride	ND	0.82	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.82	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.82	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.82	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.82	1.00	
Ethanol	ND	410	1.00	
TPPH	320	41	1.00	
Gasoline Range Organics (C4-C12)	320	41	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	108	79-139	
1,2-Dichloroethane-d4	111	71-155	
1,4-Bromofluorobenzene	98	80-120	
Toluene-d8	98	80-120	
Toluene-d8-TPPH	97	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-44	19-06-1989-10-C	06/28/19 10:55	Solid	GC/MS OO	06/28/19	07/09/19 00:43	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	40	1.00	
Benzene	2.1	0.81	1.00	
Bromobenzene	ND	0.81	1.00	
Bromochloromethane	ND	1.6	1.00	
Bromodichloromethane	ND	0.81	1.00	
Bromoform	ND	4.0	1.00	
Bromomethane	ND	16	1.00	
2-Butanone	ND	16	1.00	
n-Butylbenzene	ND	0.81	1.00	
sec-Butylbenzene	1.3	0.81	1.00	
tert-Butylbenzene	ND	0.81	1.00	
Carbon Disulfide	ND	8.1	1.00	
Carbon Tetrachloride	ND	0.81	1.00	
Chlorobenzene	ND	0.81	1.00	
Chloroethane	ND	1.6	1.00	
Chloroform	ND	0.81	1.00	
Chloromethane	ND	16	1.00	
2-Chlorotoluene	ND	0.81	1.00	
4-Chlorotoluene	ND	0.81	1.00	
Dibromochloromethane	ND	1.6	1.00	
1,2-Dibromo-3-Chloropropane	ND	4.0	1.00	
1,2-Dibromoethane	ND	0.81	1.00	
Dibromomethane	ND	0.81	1.00	
1,2-Dichlorobenzene	ND	0.81	1.00	
1,3-Dichlorobenzene	ND	0.81	1.00	
1,4-Dichlorobenzene	ND	0.81	1.00	
Dichlorodifluoromethane	ND	1.6	1.00	
1,1-Dichloroethane	ND	0.81	1.00	
1,2-Dichloroethane	ND	0.81	1.00	
1,1-Dichloroethene	ND	0.81	1.00	
c-1,2-Dichloroethene	ND	0.81	1.00	
t-1,2-Dichloroethene	ND	0.81	1.00	
1,2-Dichloropropane	ND	0.81	1.00	
1,3-Dichloropropane	ND	0.81	1.00	
2,2-Dichloropropane	ND	4.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	1.6	1.00	
c-1,3-Dichloropropene	ND	0.81	1.00	
t-1,3-Dichloropropene	ND	1.6	1.00	
Ethylbenzene	1.2	0.81	1.00	
2-Hexanone	ND	16	1.00	
Isopropylbenzene	5.8	0.81	1.00	
p-Isopropyltoluene	2.3	0.81	1.00	
Methylene Chloride	ND	8.1	1.00	
4-Methyl-2-Pentanone	ND	16	1.00	
Naphthalene	ND	8.1	1.00	
n-Propylbenzene	ND	1.6	1.00	
Styrene	ND	0.81	1.00	
1,1,1,2-Tetrachloroethane	ND	0.81	1.00	
1,1,2,2-Tetrachloroethane	ND	1.6	1.00	
Tetrachloroethene	ND	0.81	1.00	
Toluene	ND	0.81	1.00	
1,2,3-Trichlorobenzene	ND	1.6	1.00	
1,2,4-Trichlorobenzene	ND	1.6	1.00	
1,1,1-Trichloroethane	ND	0.81	1.00	
1,1,2-Trichloroethane	ND	0.81	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	8.1	1.00	
Trichloroethene	ND	1.6	1.00	
Trichlorofluoromethane	ND	8.1	1.00	
1,2,3-Trichloropropane	ND	1.6	1.00	
1,2,4-Trimethylbenzene	1.8	1.6	1.00	
1,3,5-Trimethylbenzene	ND	1.6	1.00	
Vinyl Acetate	ND	8.1	1.00	
Vinyl Chloride	ND	0.81	1.00	
p/m-Xylene	ND	1.6	1.00	
o-Xylene	ND	0.81	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.6	1.00	
Tert-Butyl Alcohol (TBA)	ND	16	1.00	
Diisopropyl Ether (DIPE)	ND	0.81	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	0.81	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	0.81	1.00	
Ethanol	ND	400	1.00	
TPPH	2700	40	1.00	
Gasoline Range Organics (C4-C12)	2500	40	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	94	79-139	
1,2-Dichloroethane-d4	92	71-155	
1,4-Bromofluorobenzene	102	80-120	
Toluene-d8	104	80-120	
Toluene-d8-TPPH	95	80-120	

Return to Contents 

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CE Dup #3	19-06-1989-15-D	06/28/19 00:00	Solid	GC/MS OO	06/28/19	07/09/19 01:42	190708L023

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	57000	1000	
Benzene	ND	1100	1000	
Bromobenzene	ND	1100	1000	
Bromochloromethane	ND	2300	1000	
Bromodichloromethane	ND	1100	1000	
Bromoform	ND	5700	1000	
Bromomethane	ND	23000	1000	
2-Butanone	ND	23000	1000	
n-Butylbenzene	9300	1100	1000	
sec-Butylbenzene	4300	1100	1000	
tert-Butylbenzene	ND	1100	1000	
Carbon Disulfide	ND	11000	1000	
Carbon Tetrachloride	ND	1100	1000	
Chlorobenzene	ND	1100	1000	
Chloroethane	ND	2300	1000	
Chloroform	ND	1100	1000	
Chloromethane	ND	23000	1000	
2-Chlorotoluene	ND	1100	1000	
4-Chlorotoluene	ND	1100	1000	
Dibromochloromethane	ND	2300	1000	
1,2-Dibromo-3-Chloropropane	ND	5700	1000	
1,2-Dibromoethane	ND	1100	1000	
Dibromomethane	ND	1100	1000	
1,2-Dichlorobenzene	ND	1100	1000	
1,3-Dichlorobenzene	ND	1100	1000	
1,4-Dichlorobenzene	ND	1100	1000	
Dichlorodifluoromethane	ND	2300	1000	
1,1-Dichloroethane	ND	1100	1000	
1,2-Dichloroethane	ND	1100	1000	
1,1-Dichloroethene	ND	1100	1000	
c-1,2-Dichloroethene	ND	1100	1000	
t-1,2-Dichloroethene	ND	1100	1000	
1,2-Dichloropropane	ND	1100	1000	
1,3-Dichloropropane	ND	1100	1000	
2,2-Dichloropropane	ND	5700	1000	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2300	1000	
c-1,3-Dichloropropene	ND	1100	1000	
t-1,3-Dichloropropene	ND	2300	1000	
Ethylbenzene	30000	1100	1000	
2-Hexanone	ND	23000	1000	
Isopropylbenzene	16000	1100	1000	
p-Isopropyltoluene	11000	1100	1000	
Methylene Chloride	ND	11000	1000	
4-Methyl-2-Pentanone	ND	23000	1000	
Naphthalene	17000	11000	1000	
n-Propylbenzene	18000	2300	1000	
Styrene	ND	1100	1000	
1,1,1,2-Tetrachloroethane	ND	1100	1000	
1,1,2,2-Tetrachloroethane	ND	2300	1000	
Tetrachloroethene	ND	1100	1000	
Toluene	ND	1100	1000	
1,2,3-Trichlorobenzene	ND	2300	1000	
1,2,4-Trichlorobenzene	ND	2300	1000	
1,1,1-Trichloroethane	ND	1100	1000	
1,1,2-Trichloroethane	ND	1100	1000	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	11000	1000	
Trichloroethene	ND	2300	1000	
Trichlorofluoromethane	ND	11000	1000	
1,2,3-Trichloropropane	ND	2300	1000	
1,2,4-Trimethylbenzene	78000	2300	1000	
1,3,5-Trimethylbenzene	20000	2300	1000	
Vinyl Acetate	ND	11000	1000	
Vinyl Chloride	ND	1100	1000	
p/m-Xylene	29000	2300	1000	
o-Xylene	ND	1100	1000	
Methyl-t-Butyl Ether (MTBE)	ND	2300	1000	
Tert-Butyl Alcohol (TBA)	ND	23000	1000	
Diisopropyl Ether (DIPE)	ND	1100	1000	
Ethyl-t-Butyl Ether (ETBE)	ND	1100	1000	
Tert-Amyl-Methyl Ether (TAME)	ND	1100	1000	
Ethanol	ND	570000	1000	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	90	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	81	71-155	
1,4-Bromofluorobenzene	103	80-120	
Toluene-d8	106	80-120	
Toluene-d8-TPPH	92	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CE Dup #3	19-06-1989-15-D	06/28/19 00:00	Solid	GC/MS OO	06/28/19	07/10/19 21:10	190710L008

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	5200000	280000	5000	
Gasoline Range Organics (C4-C12)	4700000	280000	5000	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	102	79-139	
1,2-Dichloroethane-d4	99	71-155	
1,4-Bromofluorobenzene	99	80-120	
Toluene-d8	101	80-120	
Toluene-d8-TPPH	99	80-120	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2084	N/A	Solid	GC/MS LL	07/06/19	07/06/19 15:20	190706L002

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	93	71-155	
1,4-Bromofluorobenzene	93	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	98	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2086	N/A	Solid	GC/MS LL	07/06/19	07/06/19 15:46	190706L003

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	5000	50.0	
Benzene	ND	100	50.0	
Bromobenzene	ND	100	50.0	
Bromochloromethane	ND	200	50.0	
Bromodichloromethane	ND	100	50.0	
Bromoform	ND	500	50.0	
Bromomethane	ND	2000	50.0	
2-Butanone	ND	2000	50.0	
n-Butylbenzene	ND	100	50.0	
sec-Butylbenzene	ND	100	50.0	
tert-Butylbenzene	ND	100	50.0	
Carbon Disulfide	ND	1000	50.0	
Carbon Tetrachloride	ND	100	50.0	
Chlorobenzene	ND	100	50.0	
Chloroethane	ND	200	50.0	
Chloroform	ND	100	50.0	
Chloromethane	ND	2000	50.0	
2-Chlorotoluene	ND	100	50.0	
4-Chlorotoluene	ND	100	50.0	
Dibromochloromethane	ND	200	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	100	50.0	
Dibromomethane	ND	100	50.0	
1,2-Dichlorobenzene	ND	100	50.0	
1,3-Dichlorobenzene	ND	100	50.0	
1,4-Dichlorobenzene	ND	100	50.0	
Dichlorodifluoromethane	ND	200	50.0	
1,1-Dichloroethane	ND	100	50.0	
1,2-Dichloroethane	ND	100	50.0	
1,1-Dichloroethene	ND	100	50.0	
c-1,2-Dichloroethene	ND	100	50.0	
t-1,2-Dichloroethene	ND	100	50.0	
1,2-Dichloropropane	ND	100	50.0	
1,3-Dichloropropane	ND	100	50.0	
2,2-Dichloropropane	ND	500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	200	50.0	
c-1,3-Dichloropropene	ND	100	50.0	
t-1,3-Dichloropropene	ND	200	50.0	
Ethylbenzene	ND	100	50.0	
2-Hexanone	ND	2000	50.0	
Isopropylbenzene	ND	100	50.0	
p-Isopropyltoluene	ND	100	50.0	
Methylene Chloride	ND	1000	50.0	
4-Methyl-2-Pentanone	ND	2000	50.0	
Naphthalene	ND	1000	50.0	
n-Propylbenzene	ND	200	50.0	
Styrene	ND	100	50.0	
1,1,1,2-Tetrachloroethane	ND	100	50.0	
1,1,2,2-Tetrachloroethane	ND	200	50.0	
Tetrachloroethene	ND	100	50.0	
Toluene	ND	100	50.0	
1,2,3-Trichlorobenzene	ND	200	50.0	
1,2,4-Trichlorobenzene	ND	200	50.0	
1,1,1-Trichloroethane	ND	100	50.0	
1,1,2-Trichloroethane	ND	100	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	50.0	
Trichloroethene	ND	200	50.0	
Trichlorofluoromethane	ND	1000	50.0	
1,2,3-Trichloropropane	ND	200	50.0	
1,2,4-Trimethylbenzene	ND	200	50.0	
1,3,5-Trimethylbenzene	ND	200	50.0	
Vinyl Acetate	ND	1000	50.0	
Vinyl Chloride	ND	100	50.0	
p/m-Xylene	ND	200	50.0	
o-Xylene	ND	100	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	200	50.0	
Tert-Butyl Alcohol (TBA)	ND	2000	50.0	
Diisopropyl Ether (DIPE)	ND	100	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	100	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	100	50.0	
Ethanol	ND	50000	50.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
Dibromofluoromethane	98	79-139		

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
 30423 Canwood St., Suite 208
 Agoura Hills, CA 91301-4316

Date Received: 06/28/19
 Work Order: 19-06-1989
 Preparation: EPA 5035
 Method: GC/MS / EPA 8260B
 Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,2-Dichloroethane-d4	96	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	98	80-120	



RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2091	N/A	Solid	GC/MS OO	07/08/19	07/08/19 18:50	190708L017

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	50	1.00	
Benzene	ND	1.0	1.00	
Bromobenzene	ND	1.0	1.00	
Bromochloromethane	ND	2.0	1.00	
Bromodichloromethane	ND	1.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	20	1.00	
2-Butanone	ND	20	1.00	
n-Butylbenzene	ND	1.0	1.00	
sec-Butylbenzene	ND	1.0	1.00	
tert-Butylbenzene	ND	1.0	1.00	
Carbon Disulfide	ND	10	1.00	
Carbon Tetrachloride	ND	1.0	1.00	
Chlorobenzene	ND	1.0	1.00	
Chloroethane	ND	2.0	1.00	
Chloroform	ND	1.0	1.00	
Chloromethane	ND	20	1.00	
2-Chlorotoluene	ND	1.0	1.00	
4-Chlorotoluene	ND	1.0	1.00	
Dibromochloromethane	ND	2.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.00	
1,2-Dibromoethane	ND	1.0	1.00	
Dibromomethane	ND	1.0	1.00	
1,2-Dichlorobenzene	ND	1.0	1.00	
1,3-Dichlorobenzene	ND	1.0	1.00	
1,4-Dichlorobenzene	ND	1.0	1.00	
Dichlorodifluoromethane	ND	2.0	1.00	
1,1-Dichloroethane	ND	1.0	1.00	
1,2-Dichloroethane	ND	1.0	1.00	
1,1-Dichloroethene	ND	1.0	1.00	
c-1,2-Dichloroethene	ND	1.0	1.00	
t-1,2-Dichloroethene	ND	1.0	1.00	
1,2-Dichloropropane	ND	1.0	1.00	
1,3-Dichloropropane	ND	1.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	2.0	1.00	
c-1,3-Dichloropropene	ND	1.0	1.00	
t-1,3-Dichloropropene	ND	2.0	1.00	
Ethylbenzene	ND	1.0	1.00	
2-Hexanone	ND	20	1.00	
Isopropylbenzene	ND	1.0	1.00	
p-Isopropyltoluene	ND	1.0	1.00	
Methylene Chloride	ND	10	1.00	
4-Methyl-2-Pentanone	ND	20	1.00	
Naphthalene	ND	10	1.00	
n-Propylbenzene	ND	2.0	1.00	
Styrene	ND	1.0	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	1.00	
1,1,2,2-Tetrachloroethane	ND	2.0	1.00	
Tetrachloroethene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
1,2,3-Trichlorobenzene	ND	2.0	1.00	
1,2,4-Trichlorobenzene	ND	2.0	1.00	
1,1,1-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloroethane	ND	1.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	1.00	
Trichloroethene	ND	2.0	1.00	
Trichlorofluoromethane	ND	10	1.00	
1,2,3-Trichloropropane	ND	2.0	1.00	
1,2,4-Trimethylbenzene	ND	2.0	1.00	
1,3,5-Trimethylbenzene	ND	2.0	1.00	
Vinyl Acetate	ND	10	1.00	
Vinyl Chloride	ND	1.0	1.00	
p/m-Xylene	ND	2.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	20	1.00	
Diisopropyl Ether (DIPE)	ND	1.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	1.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	1.0	1.00	
Ethanol	ND	500	1.00	
TPPH	ND	50	1.00	
Gasoline Range Organics (C4-C12)	ND	50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	99	79-139	
1,2-Dichloroethane-d4	94	71-155	
1,4-Bromofluorobenzene	97	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	100	80-120	

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2092	N/A	Solid	GC/MS OO	07/08/19	07/08/19 19:20	190708L023

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	5000	50.0	
Benzene	ND	100	50.0	
Bromobenzene	ND	100	50.0	
Bromochloromethane	ND	200	50.0	
Bromodichloromethane	ND	100	50.0	
Bromoform	ND	500	50.0	
Bromomethane	ND	2000	50.0	
2-Butanone	ND	2000	50.0	
n-Butylbenzene	ND	100	50.0	
sec-Butylbenzene	ND	100	50.0	
tert-Butylbenzene	ND	100	50.0	
Carbon Disulfide	ND	1000	50.0	
Carbon Tetrachloride	ND	100	50.0	
Chlorobenzene	ND	100	50.0	
Chloroethane	ND	200	50.0	
Chloroform	ND	100	50.0	
Chloromethane	ND	2000	50.0	
2-Chlorotoluene	ND	100	50.0	
4-Chlorotoluene	ND	100	50.0	
Dibromochloromethane	ND	200	50.0	
1,2-Dibromo-3-Chloropropane	ND	500	50.0	
1,2-Dibromoethane	ND	100	50.0	
Dibromomethane	ND	100	50.0	
1,2-Dichlorobenzene	ND	100	50.0	
1,3-Dichlorobenzene	ND	100	50.0	
1,4-Dichlorobenzene	ND	100	50.0	
Dichlorodifluoromethane	ND	200	50.0	
1,1-Dichloroethane	ND	100	50.0	
1,2-Dichloroethane	ND	100	50.0	
1,1-Dichloroethene	ND	100	50.0	
c-1,2-Dichloroethene	ND	100	50.0	
t-1,2-Dichloroethene	ND	100	50.0	
1,2-Dichloropropane	ND	100	50.0	
1,3-Dichloropropane	ND	100	50.0	
2,2-Dichloropropane	ND	500	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
1,1-Dichloropropene	ND	200	50.0	
c-1,3-Dichloropropene	ND	100	50.0	
t-1,3-Dichloropropene	ND	200	50.0	
Ethylbenzene	ND	100	50.0	
2-Hexanone	ND	2000	50.0	
Isopropylbenzene	ND	100	50.0	
p-Isopropyltoluene	ND	100	50.0	
Methylene Chloride	ND	1000	50.0	
4-Methyl-2-Pentanone	ND	2000	50.0	
Naphthalene	ND	1000	50.0	
n-Propylbenzene	ND	200	50.0	
Styrene	ND	100	50.0	
1,1,1,2-Tetrachloroethane	ND	100	50.0	
1,1,2,2-Tetrachloroethane	ND	200	50.0	
Tetrachloroethene	ND	100	50.0	
Toluene	ND	100	50.0	
1,2,3-Trichlorobenzene	ND	200	50.0	
1,2,4-Trichlorobenzene	ND	200	50.0	
1,1,1-Trichloroethane	ND	100	50.0	
1,1,2-Trichloroethane	ND	100	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	1000	50.0	
Trichloroethene	ND	200	50.0	
Trichlorofluoromethane	ND	1000	50.0	
1,2,3-Trichloropropane	ND	200	50.0	
1,2,4-Trimethylbenzene	ND	200	50.0	
1,3,5-Trimethylbenzene	ND	200	50.0	
Vinyl Acetate	ND	1000	50.0	
Vinyl Chloride	ND	100	50.0	
p/m-Xylene	ND	200	50.0	
o-Xylene	ND	100	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	200	50.0	
Tert-Butyl Alcohol (TBA)	ND	2000	50.0	
Diisopropyl Ether (DIPE)	ND	100	50.0	
Ethyl-t-Butyl Ether (ETBE)	ND	100	50.0	
Tert-Amyl-Methyl Ether (TAME)	ND	100	50.0	
Ethanol	ND	50000	50.0	
TPPH	ND	5000	50.0	
Gasoline Range Organics (C4-C12)	ND	5000	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B
Units: ug/kg

Project: OOI

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<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	96	79-139	
1,2-Dichloroethane-d4	93	71-155	
1,4-Bromofluorobenzene	96	80-120	
Toluene-d8	99	80-120	
Toluene-d8-TPPH	101	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-779-2094	N/A	Solid	GC/MS OO	07/10/19	07/10/19 19:39	190710L008

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
TPPH	ND	5000	50.0	
Gasoline Range Organics (C4-C12)	ND	5000	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Dibromofluoromethane	98	79-139	
1,2-Dichloroethane-d4	97	71-155	
1,4-Bromofluorobenzene	93	80-120	
Toluene-d8	100	80-120	
Toluene-d8-TPPH	102	80-120	



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: N/A
Method: ASTM D-2216 (M)
Units: %

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-5	19-06-1989-1-A	06/28/19 07:39	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		12		0.10		1.00	
CESB15-10	19-06-1989-2-A	06/28/19 07:50	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		4.7		0.10		1.00	
CESB15-15	19-06-1989-3-A	06/28/19 08:02	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		3.5		0.10		1.00	
CESB15-20	19-06-1989-4-A	06/28/19 08:18	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		2.9		0.10		1.00	
CESB15-25	19-06-1989-5-A	06/28/19 08:42	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		5.4		0.10		1.00	
CESB15-30	19-06-1989-6-A	06/28/19 08:51	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		5.2		0.10		1.00	
CESB15-31.8	19-06-1989-7-A	06/28/19 08:59	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		20		0.10		1.00	
CESB15-37	19-06-1989-8-A	06/28/19 09:45	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		22		0.10		1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: N/A
Method: ASTM D-2216 (M)
Units: %

Project: OOI

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
CESB15-40	19-06-1989-9-A	06/28/19 10:07	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		21		0.10		1.00	
CESB15-44	19-06-1989-10-A	06/28/19 10:55	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		16		0.10		1.00	
Method Blank	099-05-014-8477	N/A	Solid	N/A	07/01/19	07/01/19 16:00	J0701MOIB1
<u>Parameter</u>		<u>Result</u>		<u>RL</u>		<u>DF</u>	<u>Qualifiers</u>
Moisture		ND		0.10		1.00	


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 3550B
Method: EPA 8015B (M)

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
19-06-1493-32	Sample	Solid	GC 50	07/01/19	07/02/19 04:10	190701S02
19-06-1493-32	Matrix Spike	Solid	GC 50	07/01/19	07/02/19 01:06	190701S02
19-06-1493-32	Matrix Spike Duplicate	Solid	GC 50	07/01/19	07/02/19 01:26	190701S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	ND	400.0	401.2	100	399.1	100	64-130	1	0-15	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 3050B
Method: EPA 6010B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
CESB15-5	Sample	Solid	ICP 8300	07/01/19	07/02/19 16:14	190701S05
CESB15-5	Matrix Spike	Solid	ICP 8300	07/01/19	07/02/19 16:15	190701S05
CESB15-5	Matrix Spike Duplicate	Solid	ICP 8300	07/01/19	07/02/19 16:17	190701S05

<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Arsenic	2.115	25.00	28.78	107	29.38	109	75-125	2	0-20	
Lead	1.684	25.00	27.28	102	28.23	106	75-125	3	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Sample Duplicate

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: N/A
Method: ASTM D-2216 (M)

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
CESB15-5	Sample	Solid	N/A	07/01/19 00:00	07/01/19 16:00	J0701MOID1
CESB15-5	Sample Duplicate	Solid	N/A	07/01/19 00:00	07/01/19 16:00	J0701MOID1

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Moisture	12.00	12.00	0	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

California Environmental 30423 Canwood St., Suite 208 Agoura Hills, CA 91301-4316 Project: OOI	Date Received: 06/28/19 Work Order: 19-06-1989 Preparation: EPA 3550B Method: EPA 8015B (M)
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-490-3657	LCS	Solid	GC 50	07/01/19	07/02/19 00:45	190701B02A

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Diesel	400.0	413.6	103	75-123	



RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 3050B
Method: EPA 6010B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
097-01-002-28084	LCS	Solid	ICP 8300	07/01/19	07/02/19 16:07	190701L05			
097-01-002-28084	LCSD	Solid	ICP 8300	07/01/19	07/02/19 16:09	190701L05			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	24.78	99	24.21	97	80-120	2	0-20	
Lead	25.00	26.81	107	26.25	105	80-120	2	0-20	

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-767-8590	LCS	Aqueous	GC/MS PP	07/02/19	07/02/19 16:48	190702L023				
099-12-767-8590	LCSD	Aqueous	GC/MS PP	07/02/19	07/02/19 17:18	190702L023				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	51.01	102	52.82	106	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.70	95	49.71	99	67-139	55-151	4	0-20	
Chlorobenzene	50.00	48.58	97	50.40	101	78-120	71-127	4	0-20	
1,2-Dibromoethane	50.00	54.31	109	54.93	110	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	49.75	99	50.50	101	63-129	52-140	1	0-20	
1,2-Dichloroethane	50.00	47.23	94	47.66	95	70-130	60-140	1	0-20	
1,1-Dichloroethene	50.00	46.86	94	48.49	97	66-126	56-136	3	0-20	
Ethylbenzene	50.00	50.81	102	53.42	107	80-123	73-130	5	0-20	
Toluene	50.00	49.29	99	50.50	101	80-120	73-127	2	0-20	
Trichloroethene	50.00	50.13	100	51.72	103	80-122	73-129	3	0-20	
Vinyl Chloride	50.00	42.26	85	43.48	87	70-130	60-140	3	0-20	
p/m-Xylene	100.0	100.2	100	104.5	105	75-123	67-131	4	0-25	
o-Xylene	50.00	51.24	102	52.97	106	74-122	66-130	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.10	86	43.80	88	69-129	59-139	2	0-22	
Tert-Butyl Alcohol (TBA)	250.0	254.1	102	245.0	98	69-129	59-139	4	0-25	
Diisopropyl Ether (DIPE)	50.00	49.02	98	50.63	101	68-128	58-138	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	47.13	94	47.82	96	63-135	51-147	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	53.21	106	53.79	108	67-133	56-144	1	0-20	
Ethanol	500.0	521.7	104	489.7	98	42-168	21-189	6	0-20	
TPPH	1000	1051	105	1022	102	65-135	53-147	3	0-30	
Gasoline Range Organics (C4-C12)	1000	1035	104	1012	101	65-135	53-147	2	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-767-8591	LCS	Aqueous		GC/MS PP	07/05/19	07/05/19 17:33	190705L008			
099-12-767-8591	LCSD	Aqueous		GC/MS PP	07/05/19	07/05/19 18:04	190705L008			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	49.24	98	50.73	101	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	44.53	89	46.67	93	67-139	55-151	5	0-20	
Chlorobenzene	50.00	46.94	94	48.06	96	78-120	71-127	2	0-20	
1,2-Dibromoethane	50.00	52.45	105	52.29	105	80-120	73-127	0	0-20	
1,2-Dichlorobenzene	50.00	48.97	98	50.17	100	63-129	52-140	2	0-20	
1,2-Dichloroethane	50.00	44.89	90	44.40	89	70-130	60-140	1	0-20	
1,1-Dichloroethene	50.00	42.91	86	43.99	88	66-126	56-136	2	0-20	
Ethylbenzene	50.00	48.43	97	49.80	100	80-123	73-130	3	0-20	
Toluene	50.00	47.21	94	49.30	99	80-120	73-127	4	0-20	
Trichloroethene	50.00	49.03	98	49.82	100	80-122	73-129	2	0-20	
Vinyl Chloride	50.00	35.30	71	36.37	73	70-130	60-140	3	0-20	
p/m-Xylene	100.0	95.51	96	96.98	97	75-123	67-131	2	0-25	
o-Xylene	50.00	48.41	97	49.32	99	74-122	66-130	2	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	40.18	80	39.76	80	69-129	59-139	1	0-22	
Tert-Butyl Alcohol (TBA)	250.0	245.6	98	241.7	97	69-129	59-139	2	0-25	
Diisopropyl Ether (DIPE)	50.00	45.07	90	45.15	90	68-128	58-138	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	43.13	86	42.95	86	63-135	51-147	0	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	50.59	101	50.63	101	67-133	56-144	0	0-20	
Ethanol	500.0	477.1	95	485.6	97	42-168	21-189	2	0-20	
TPPH	1000	1002	100	966.9	97	65-135	53-147	4	0-30	
Gasoline Range Organics (C4-C12)	1000	987.7	99	953.1	95	65-135	53-147	4	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5030C
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-767-8594	LCS	Aqueous		GC/MS PP	07/10/19	07/10/19 17:45	190710L010			
099-12-767-8594	LCSD	Aqueous		GC/MS PP	07/10/19	07/10/19 18:16	190710L010			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	49.79	100	50.08	100	80-120	73-127	1	0-20	
Carbon Tetrachloride	50.00	50.26	101	50.68	101	67-139	55-151	1	0-20	
Chlorobenzene	50.00	48.30	97	49.15	98	78-120	71-127	2	0-20	
1,2-Dibromoethane	50.00	52.56	105	50.04	100	80-120	73-127	5	0-20	
1,2-Dichlorobenzene	50.00	49.75	100	49.81	100	63-129	52-140	0	0-20	
1,2-Dichloroethane	50.00	49.31	99	49.74	99	70-130	60-140	1	0-20	
1,1-Dichloroethene	50.00	48.52	97	49.33	99	66-126	56-136	2	0-20	
Ethylbenzene	50.00	51.37	103	51.60	103	80-123	73-130	0	0-20	
Toluene	50.00	48.70	97	49.77	100	80-120	73-127	2	0-20	
Trichloroethene	50.00	50.21	100	51.79	104	80-122	73-129	3	0-20	
Vinyl Chloride	50.00	46.37	93	47.71	95	70-130	60-140	3	0-20	
p/m-Xylene	100.0	98.66	99	99.40	99	75-123	67-131	1	0-25	
o-Xylene	50.00	50.14	100	50.30	101	74-122	66-130	0	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.64	87	42.39	85	69-129	59-139	3	0-22	
Tert-Butyl Alcohol (TBA)	250.0	230.0	92	236.1	94	69-129	59-139	3	0-25	
Diisopropyl Ether (DIPE)	50.00	50.73	101	50.54	101	68-128	58-138	0	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	48.02	96	46.68	93	63-135	51-147	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	52.70	105	51.19	102	67-133	56-144	3	0-20	
Ethanol	500.0	479.6	96	505.1	101	42-168	21-189	5	0-20	
TPPH	1000	1023	102	998.0	100	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	1003	100	983.1	98	65-135	53-147	2	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2084	LCS	Solid		GC/MS LL	07/06/19	07/06/19 14:02	190706L002			
099-12-779-2084	LCSD	Solid		GC/MS LL	07/06/19	07/06/19 14:28	190706L002			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	44.33	89	44.70	89	80-120	73-127	1	0-20	
Carbon Tetrachloride	50.00	48.35	97	48.74	97	65-137	53-149	1	0-20	
Chlorobenzene	50.00	47.29	95	47.61	95	80-120	73-127	1	0-20	
1,2-Dibromoethane	50.00	49.27	99	50.58	101	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	50.00	47.17	94	48.47	97	80-120	73-127	3	0-20	
1,2-Dichloroethane	50.00	46.46	93	48.31	97	80-120	73-127	4	0-20	
1,1-Dichloroethene	50.00	46.21	92	45.96	92	68-128	58-138	1	0-20	
Ethylbenzene	50.00	45.74	91	46.29	93	80-120	73-127	1	0-20	
Toluene	50.00	44.97	90	46.04	92	80-120	73-127	2	0-20	
Trichloroethene	50.00	47.10	94	45.87	92	80-120	73-127	3	0-20	
Vinyl Chloride	50.00	44.84	90	45.40	91	67-127	57-137	1	0-20	
p/m-Xylene	100.0	94.84	95	96.23	96	75-125	67-133	1	0-25	
o-Xylene	50.00	45.02	90	46.32	93	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	39.94	80	41.75	83	70-124	61-133	4	0-20	
Tert-Butyl Alcohol (TBA)	250.0	217.9	87	222.8	89	73-121	65-129	2	0-20	
Diisopropyl Ether (DIPE)	50.00	43.93	88	45.04	90	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	42.19	84	44.22	88	70-124	61-133	5	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	47.62	95	48.66	97	74-122	66-130	2	0-20	
Ethanol	500.0	494.2	99	446.5	89	51-135	37-149	10	0-27	
TPPH	1000	989.3	99	975.3	98	65-135	53-147	1	0-30	
Gasoline Range Organics (C4-C12)	1000	988.1	99	970.9	97	65-135	53-147	2	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2086	LCS	Solid		GC/MS LL	07/06/19	07/06/19 14:02	190706L003			
099-12-779-2086	LCSD	Solid		GC/MS LL	07/06/19	07/06/19 14:28	190706L003			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	44.33	89	44.70	89	80-120	73-127	1	0-20	
Carbon Tetrachloride	50.00	48.35	97	48.74	97	65-137	53-149	1	0-20	
Chlorobenzene	50.00	47.29	95	47.61	95	80-120	73-127	1	0-20	
1,2-Dibromoethane	50.00	49.27	99	50.58	101	80-120	73-127	3	0-20	
1,2-Dichlorobenzene	50.00	47.17	94	48.47	97	80-120	73-127	3	0-20	
1,2-Dichloroethane	50.00	46.46	93	48.31	97	80-120	73-127	4	0-20	
1,1-Dichloroethene	50.00	46.21	92	45.96	92	68-128	58-138	1	0-20	
Ethylbenzene	50.00	45.74	91	46.29	93	80-120	73-127	1	0-20	
Toluene	50.00	44.97	90	46.04	92	80-120	73-127	2	0-20	
Trichloroethene	50.00	47.10	94	45.87	92	80-120	73-127	3	0-20	
Vinyl Chloride	50.00	44.84	90	45.40	91	67-127	57-137	1	0-20	
p/m-Xylene	100.0	94.84	95	96.23	96	75-125	67-133	1	0-25	
o-Xylene	50.00	45.02	90	46.32	93	75-125	67-133	3	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	39.94	80	41.75	83	70-124	61-133	4	0-20	
Tert-Butyl Alcohol (TBA)	250.0	217.9	87	222.8	89	73-121	65-129	2	0-20	
Diisopropyl Ether (DIPE)	50.00	43.93	88	45.04	90	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	42.19	84	44.22	88	70-124	61-133	5	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	47.62	95	48.66	97	74-122	66-130	2	0-20	
Ethanol	500.0	494.2	99	446.5	89	51-135	37-149	10	0-27	
TPPH	1000	989.3	99	975.3	98	65-135	53-147	1	0-30	
Gasoline Range Organics (C4-C12)	1000	988.1	99	970.9	97	65-135	53-147	2	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2091	LCS	Solid		GC/MS OO	07/08/19	07/08/19 16:52	190708L017			
099-12-779-2091	LCSD	Solid		GC/MS OO	07/08/19	07/08/19 17:21	190708L017			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	48.31	97	46.90	94	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.70	95	47.08	94	65-137	53-149	1	0-20	
Chlorobenzene	50.00	50.03	100	48.23	96	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	51.22	102	50.75	101	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	50.84	102	49.04	98	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	46.11	92	45.69	91	80-120	73-127	1	0-20	
1,1-Dichloroethane	50.00	44.88	90	43.30	87	68-128	58-138	4	0-20	
Ethylbenzene	50.00	51.93	104	49.73	99	80-120	73-127	4	0-20	
Toluene	50.00	50.65	101	48.89	98	80-120	73-127	4	0-20	
Trichloroethene	50.00	50.49	101	48.13	96	80-120	73-127	5	0-20	
Vinyl Chloride	50.00	44.24	88	43.65	87	67-127	57-137	1	0-20	
p/m-Xylene	100.0	106.2	106	101.3	101	75-125	67-133	5	0-25	
o-Xylene	50.00	53.69	107	51.69	103	75-125	67-133	4	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.31	87	43.21	86	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	212.4	85	209.5	84	73-121	65-129	1	0-20	
Diisopropyl Ether (DIPE)	50.00	47.91	96	46.72	93	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	48.64	97	48.22	96	70-124	61-133	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	56.21	112	56.24	112	74-122	66-130	0	0-20	
Ethanol	500.0	426.5	85	397.8	80	51-135	37-149	7	0-27	
TPPH	1000	970.0	97	892.2	89	65-135	53-147	8	0-30	
Gasoline Range Organics (C4-C12)	1000	879.4	88	802.7	80	65-135	53-147	9	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2092	LCS	Solid		GC/MS OO	07/08/19	07/08/19 16:52	190708L023			
099-12-779-2092	LCSD	Solid		GC/MS OO	07/08/19	07/08/19 17:21	190708L023			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	48.31	97	46.90	94	80-120	73-127	3	0-20	
Carbon Tetrachloride	50.00	47.70	95	47.08	94	65-137	53-149	1	0-20	
Chlorobenzene	50.00	50.03	100	48.23	96	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	51.22	102	50.75	101	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	50.84	102	49.04	98	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	46.11	92	45.69	91	80-120	73-127	1	0-20	
1,1-Dichloroethene	50.00	44.88	90	43.30	87	68-128	58-138	4	0-20	
Ethylbenzene	50.00	51.93	104	49.73	99	80-120	73-127	4	0-20	
Toluene	50.00	50.65	101	48.89	98	80-120	73-127	4	0-20	
Trichloroethene	50.00	50.49	101	48.13	96	80-120	73-127	5	0-20	
Vinyl Chloride	50.00	44.24	88	43.65	87	67-127	57-137	1	0-20	
p/m-Xylene	100.0	106.2	106	101.3	101	75-125	67-133	5	0-25	
o-Xylene	50.00	53.69	107	51.69	103	75-125	67-133	4	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	43.31	87	43.21	86	70-124	61-133	0	0-20	
Tert-Butyl Alcohol (TBA)	250.0	212.4	85	209.5	84	73-121	65-129	1	0-20	
Diisopropyl Ether (DIPE)	50.00	47.91	96	46.72	93	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	48.64	97	48.22	96	70-124	61-133	1	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	56.21	112	56.24	112	74-122	66-130	0	0-20	
Ethanol	500.0	426.5	85	397.8	80	51-135	37-149	7	0-27	
TPPH	1000	970.0	97	892.2	89	65-135	53-147	8	0-30	
Gasoline Range Organics (C4-C12)	1000	879.4	88	802.7	80	65-135	53-147	9	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS/LCSD

California Environmental
30423 Canwood St., Suite 208
Agoura Hills, CA 91301-4316

Date Received: 06/28/19
Work Order: 19-06-1989
Preparation: EPA 5035
Method: GC/MS / EPA 8260B

Project: OOI

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Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-779-2094	LCS	Solid		GC/MS OO	07/10/19	07/10/19 17:11	190710L008			
099-12-779-2094	LCSD	Solid		GC/MS OO	07/10/19	07/10/19 17:41	190710L008			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	45.99	92	47.04	94	80-120	73-127	2	0-20	
Carbon Tetrachloride	50.00	47.48	95	47.51	95	65-137	53-149	0	0-20	
Chlorobenzene	50.00	46.07	92	47.94	96	80-120	73-127	4	0-20	
1,2-Dibromoethane	50.00	49.00	98	51.79	104	80-120	73-127	6	0-20	
1,2-Dichlorobenzene	50.00	46.43	93	48.49	97	80-120	73-127	4	0-20	
1,2-Dichloroethane	50.00	46.24	92	48.38	97	80-120	73-127	5	0-20	
1,1-Dichloroethene	50.00	42.66	85	43.14	86	68-128	58-138	1	0-20	
Ethylbenzene	50.00	46.23	92	48.42	97	80-120	73-127	5	0-20	
Toluene	50.00	46.67	93	48.43	97	80-120	73-127	4	0-20	
Trichloroethene	50.00	47.10	94	47.79	96	80-120	73-127	1	0-20	
Vinyl Chloride	50.00	39.78	80	41.05	82	67-127	57-137	3	0-20	
p/m-Xylene	100.0	95.25	95	100.5	100	75-125	67-133	5	0-25	
o-Xylene	50.00	48.29	97	50.91	102	75-125	67-133	5	0-25	
Methyl-t-Butyl Ether (MTBE)	50.00	41.61	83	43.42	87	70-124	61-133	4	0-20	
Tert-Butyl Alcohol (TBA)	250.0	193.3	77	203.2	81	73-121	65-129	5	0-20	
Diisopropyl Ether (DIPE)	50.00	48.05	96	49.42	99	69-129	59-139	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	46.21	92	47.57	95	70-124	61-133	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.75	103	53.76	108	74-122	66-130	4	0-20	
Ethanol	500.0	367.0	73	397.1	79	51-135	37-149	8	0-27	
TPPH	1000	920.5	92	938.7	94	65-135	53-147	2	0-30	
Gasoline Range Organics (C4-C12)	1000	895.1	90	850.0	85	65-135	53-147	5	0-30	

Total number of LCS compounds: 21

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



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Sample Analysis Summary Report

Work Order: 19-06-1989

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
ASTM D-2216 (M)	N/A	1215	N/A	1
EPA 6010B	EPA 3050B	1080	ICP 8300	1
EPA 8015B (M)	EPA 3550B	1028	GC 50	1
GC/MS / EPA 8260B	EPA 5035	1120	GC/MS LL	2
GC/MS / EPA 8260B	EPA 5035	1178	GC/MS OO	2
GC/MS / EPA 8260B	EPA 5030C	1191	GC/MS PP	2


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Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

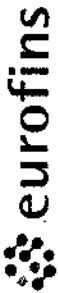
Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 19-06-1989

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



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For courier service / sample drop off information, contact us26_sales@eurofins.com or call us.

CHAIN OF CUSTODY RECORD

DATE: JUNE 28, 2019
PAGE: 1 OF 2

WO# / LAB USE ONLY
19-06-1989

CLIENT PROJECT NAME / NUMBER: **OOI** P.O. NO.: **3029**

PROJECT CONTACT: **C. Buckley** SAMPLER(S) (PRINT): **Buckley CB**

REQUESTED ANALYSES

Please check box or fill in blank as needed.

TPH (d) □ DRO	TPH □ C6-C36 □ C6-C4 □ B015	TPH	BTEX / MTBE □ 8260 □	VOCs (8260) <u>Full list + Oxy 8260</u>	Oxygenates (8260)	Prep (5035) □ En Core □ Terra Core	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PAHs □ 8270 □ 8270 SIM	T22 Metals □ 6010/747X □ 6020/747X	Cr(VI) □ 7196 □ 7199 □ 218.6
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Received by: (Signature/Affiliation) [Signature] Date: 6-28-19 Time: 16:00

Received by: (Signature/Affiliation) [Signature] Date: 6-28-19 Time: 17:26

Received by: (Signature/Affiliation) [Signature] Date: _____ Time: _____

LABORATORY CLIENT: **CALENVIRO**

ADDRESS: **30423 Canwood Street #208**

CITY: **Agoura Hills** STATE: **CA** ZIP: **91301**

TEL: **818-991-1542**

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

COELT EDF GLOBAL ID: _____ LOG CODE: _____

SPECIAL INSTRUCTIONS: _____

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	Field Filtered	Preserved	Unpreserved
		DATE	TIME					
1	CE5B15-5'	5/28/17	7:37	Soil	5			
2	15-10'		7:50					
3	15-15'		8:02					
4	15-20'		8:18					
5	15-25'		8:42					
6	15-30'		8:51					
7	15-31.8'		8:57					
8	15-37'		9:45					
9	15-40'		10:07					
10	15-44'		10:55					

Received by: (Signature/Affiliation) [Signature] Date: _____ Time: _____

Received by: (Signature/Affiliation) [Signature] Date: _____ Time: _____

Received by: (Signature/Affiliation) [Signature] Date: _____ Time: _____



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CHAIN OF CUSTODY RECORD

WOP / LAB USE ONLY
19-06-1989

DATE: June 28, 2019
PAGE: 2 OF 2

CLIENT PROJECT NAME / NUMBER:

P.O. NO.:

3027

PROJECT CONTACT:

SAMPLER(S), (PRINT)

LABORATORY CLIENT: CALCIURO

ADDRESS: 30423 CAWOODST 208

CITY: Agoura Hills STATE: CA ZIP: [REDACTED]

TEL: 818 991-1599 E-MAIL: [REDACTED]

PROJECT CONTACT: C. Buckley

SAMPLER(S), (PRINT): Buckley B

REQUESTED ANALYSES

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):

SAME DAY 24 HR 48 HR 72 HR 5 DAYS STANDARD

LOG CODE:

GLOBAL ID:

SPECIAL INSTRUCTIONS:

Please check box or fill in blank as needed.

Unpreserved

Preserved

Field Filtered

NO. OF CONT.

MATRIX

SAMPLING DATE

TIME

SAMPLE ID

LAB USE ONLY

11 CESB12-GW 6/28/19 12:03P water 3

12 CESB13-GW 12:35P 2

13 CESB14-GW 1:05P 3

14 CESB15-GW 1:50P 3

15 CEDU013 5/28/19 3

Container Type: 40 mL VOA preserved with HCL

Field Point Names: Turbid, CLEAR, Turbid

Requested Analyses: LEAD/ARSENIC, COPPER, MERCURY

Received by: (Signature/Affiliation) [Signature] EC

Relinquished by: (Signature) [Signature] EC

Relinquished by: (Signature) [Signature] EC

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: CAL ENVIRO

DATE: 06/28/2019

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)
 Thermometer ID: SC6 (CF: -0.2°C); Temperature (w/o CF): 5.1 °C (w/ CF): 4.9 °C; Blank Sample
 Sample(s) outside temperature criteria (PM/APM contacted by: _____)
 Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling
 Sample(s) received at ambient temperature; placed on ice for transport by courier
 Ambient Temperature: Air Filter Checked by: 1053

CUSTODY SEAL:
 Cooler Present and Intact Present but Not Intact Not Present N/A Checked by: 1053
 Sample(s) Present and Intact Present but Not Intact Not Present N/A Checked by: 718

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input checked="" type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Acid/base preserved samples - pH within acceptable range	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Container(s) for certain analysis free of headspace.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tediar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE: (Trip Blank Lot Number: _____)
 Aqueous: VOA VOA^h VOA_{na2} 100PJ 100PJ_{na2} 125AGB 125AGB_h 125AGB_p 125PB 125PB_{znna} (pH__9)
 250AGB 250CGB 250CGB_s (pH__2) 250PB 250PB_n (pH__2) 500AGB 500AGJ 500AGJ_s (pH__2) 500PB
 1AGB 1AGB_{na2} 1AGB_s (pH__2) 1AGB_s (O&G) 1PB 1PB_{na} (pH__12) _____ _____
 Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (2) EnCores® (____) TerraCores® (3) 2oz RJ _____ _____
 Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (____): _____ _____
 Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag
 Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 718
 s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, znna = Zn (CH₃CO₂)₂ + NaOH Reviewed by: 691

* (7) 85-10

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APPENDIX V

Long Beach City - Boring Permit



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

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



WELL PERMIT

PERMIT#: **2599**

DATE ISSUED: **April 8, 2019**

PROPOSED DATE: **April 8, 2019**

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

Site Address: **712 N. Baker Street
Long Beach, CA 90806**

Owner: **OOI Inc.**

Owner Address: **2852 Gundry Avenue
Signal Hill, CA 90755
(562) 595-6440**

Consulting Firm: **California Environmental**

Consulting Firm Address **30423 Can wood Street, Suite 208
Agoura Hills, CA 91301
(818) 903-6530**

Drilling Company: **Gregg Drilling, LLC**

Drilling Co. Address: **2726 Walnut Avenue
Signal Hill, CA 90755
(562) 427-6849**

Type of Permit: **Soil Boring**

Type of Well:

Total No. of Well/Soil Boring: **12 Borings**

This permit valid for one year from proposed date above.

Vanna Kho
Cross-Connection/Water Quality



CITY OF LONG BEACH



Date: 4/8/19

Check #: _____

Cash Credit Card

TO: CASHIER HE0610 HE0612 HE0613 HE0617 HE0620 HE0621 HE0905A

FROM: BUREAU OF ENVIRONMENTAL HEALTH
SUBJECT: PAYMENT FOR SERVICES RENDERED

CHARLES BUCKLEY W/CAL ENVIRONMENTAL
NAME/COMPANY

BORING PERMIT FOR 712 N. BAKER ST ON 4/8/19
DESCRIPTION/EVENT/ADDRESS

Clerk Signature: [Signature]

Consumer Protection Program: 543001 543003 543004 543005 710001 778004

Non-Profit Profit Organizer FM Organizer \$ _____ Certified FM @ \$ _____

TFF FM TFF Special Event Mobile FTP \$ _____ Tobacco Facility @ \$ _____

_____ Un-Pkgd TFF @ \$ _____ Pre-pkgd TFF @ \$ _____ Hawkers @ \$ _____

20% Discount Organizer/TFF \$ - _____ TFF Late Fee \$ _____ TFF Field Licensing \$ _____

Administrative Citation \$ _____ Demolition \$ _____ Cal Code Booklet @ \$ _____

Food Cart/Vehicle Impound 1st 2nd 3rd \$ _____ Copies @ \$ _____

Food Facility Walk-thru first 1 1/2 hr. \$ _____ Walk-thru Hourly \$ _____ Plan Check Consultation \$ _____

Plan Revision \$ _____ Return Check \$ _____ Other: _____

Well Permits: 543004 543005 New Well Construction Destruction

Construction of Monitoring Well(s) @ \$ _____ 12 Soil Boring \$ 420.⁰⁰

Well Abandonment/Destruction @ \$ _____ Cathodic Well @ \$ _____

Construction of Drinking Water Well(s) @ \$ _____ Water Shut Down Test \$ _____

Cross Connection Test/Survey \$ _____ Water Line Clearance \$ _____

Cross Connection Test/Survey after Hours \$ _____ Water Line Clearance Sample \$ _____

Other: EXPEDITE FEE: \$ 420.⁰⁰

Hazmat Program: 543004 543005 643007 778020

UST Removal Report \$ _____ UST Removal Reports - Add'l. Hrs. \$ _____

Site Characterization/Mitigation \$ _____ Noise Variance \$ _____

Body Art Practitioner Annual Registration \$ _____ Body Art Event Organizer \$ _____

Tattooing Body Piercing Branding Permanent Cosmetic Application Temporary Body Artist \$ _____

Other: _____

\$35.00 charge will be added to all returned checks

OFFICE USE ONLY

Sub Total Amount: \$ 840.⁰⁰ Discount: - _____ Total Amount Paid: \$ _____

Cashier Signature: [Signature] Date: 4-8-19

White Copy - File

Yellow Copy - Customer

Pink Copy - Operator

APPENDIX VII

Health and Safety Plan (HASP)

HEALTH AND SAFETY PLAN

EXCAVATION AND REMOVAL OF SOIL

Oil Operators, Inc. (OOI) Property
712 Baker Street, Long Beach, California 90806

FOR

CALIFORNIA ENVIRONMENTAL

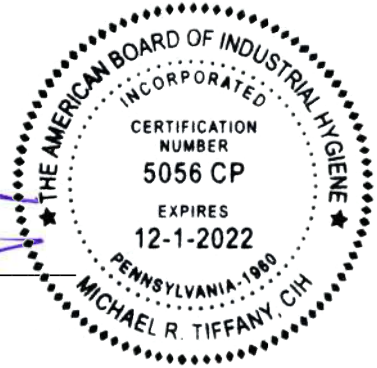
30423 Canwood Street, Suite 208
Agoura Hills, California 91301

Attention: Mr. Charles Buckley

PREPARED BY



Michael R. Tiffany, CIH No. 5056
Certified Industrial Hygienist



ACG Job No. E1906-1315

August 23, 2019

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**SITE-SPECIFIC HEALTH AND SAFETY PLAN
for
EXCAVATION AND GRADING OF POTENTIALLY CONTAMINATED SOIL**

INTRODUCTION

The purpose of this Health and Safety Plan (HSP) is to provide site-specific health and safety requirements for soil removal work to be conducted by California Environmental at the subject property. This HSP applies to employees of California Environmental (CE), the grading contractor, and their subcontractors (collectively, “contractors”). This Health and Safety Plan is a site-specific addendum to the contractors’ corporate Injury and Illness Prevention Programs (IIPPs), which are in effect for this project.

The site is owned by Oil Operators Inc. and was formerly utilized for treatment of oil field production brines and other fluid by-products of oil. The soil removal is being undertaken to remove contamination prior to development. The Remedial Action Plan and previous site assessments contain information on the location and concentration of residual contaminants in soil beneath the clean fill.

Preparation of this Health and Safety Plan is not intended to relieve any contractor, their representatives or any other professionals from their duties and responsibilities with respect to overall site safety for the project. All contractors are responsible for observing all additional health and safety requirements as mandated by Cal/OSHA, the Los Angeles County Fire Department, the South Coast Air Quality Management District, and all other pertinent health and safety rules governing work activities to be conducted at a construction site.

DESCRIPTION OF WORK

The work covered by this HSP involves the removal of 15 feet of petroleum and metals-impacted soil within two former basins, removal and re-compaction of treated soil, and the addition of a cap of clean soil to the northern section of the site. Soil removal includes the excavation, stockpiling, sampling, and loading of soil. Soil will be excavated using an excavator and/or a rubber-tired loader. Scrapers will be used for removal and placement of treated soil. Excavated soil may be temporarily stockpiled on plastic for verification sampling. Soil to be exported will be loaded into trucks and transported to offsite disposal facilities.

Plastic sheeting, water spray, and/or vapor suppression compounds will be used as necessary to reduce fugitive dust emissions.

The objective of this Health and Safety Plan is to provide for proper identification, safe handling and mitigation of contaminated soil that may be encountered during excavation work at the site. To achieve this objective, the following must be accomplished.

- Monitor the working face, excavation, stockpile, and loading area for visible dust emissions, toxic concentrations of dust, explosive or toxic gases, and any changes in materials or conditions.
- Protect workers from hazards that may be encountered during the project.
- Provide for proper identification of contaminated soils.
- Provide for proper handling of contaminated soils.



PHYSICAL HAZARDS

The excavation activities proposed at the subject property may present physical hazards including heavy equipment operations, open excavations, vehicular traffic, and heat stress. These hazards are common to construction work sites and are covered in the contractors' IPPs.

The following precautions will be observed to protect workers from physical hazards:

- Hard hats and steel-toed boots will be worn at all times.
- Safety glasses will be worn when using impact tools, cutting tools, or grinders.
- Work gloves will be worn when handling equipment or tools.
- High visibility safety vests will be worn by workers on foot in the presence of operating equipment or vehicle traffic.
- Hearing protective devices will be worn in accordance with the contractor's hearing conservation program.
- Equipment will be operated only by trained operators.
- Workers will not enter excavations unless they are sloped and/or shored in accordance with Cal/OSHA regulations.

Excessive exposure to a hot work environment can bring about a variety of heat-induced disorders, including heat stroke, heat exhaustion, cramps, and fainting. Preventative measures in effect for this project include:

- Rest periods in shaded or air-conditioned areas when necessary for the workers to self-limit heat exposure.
- Drinking water in adequate quantity will be provided outside the exclusion zone.
- Site workers will be trained in heat stress recognition and prevention.

Heat stress is unlikely with acclimatized workers in Level D at temperatures below 90 °F. Site workers receive heat stress training as part of HAZWOPER training. If ambient temperatures exceed 90 °F or if Level C PPE is donned then additional heat stress precautions will be implemented.



HAZARD EVALUATION - HAZARDOUS CHEMICALS

Previous investigations conducted at this site have established the presence of metals, volatile organic compounds (VOCs) and petroleum hydrocarbon compounds in soil. **TABLE 1** presents the maximum contaminant levels in site soils and the screening ratio as compared to the Cal/OSHA Permissible Exposure Limit (PEL).

A 2015 site investigation report by Tetra Tech report indicates that the primary contaminants in soil at the subject property are arsenic and lead. Based on Tetra Tech's findings, arsenic up to 120 mg/kg and lead up to 820 mg/kg may be encountered during upcoming excavation activities. Volatile organic compounds and petroleum hydrocarbons are also present on site.

TABLE 1
HAZARD EVALUATION
Chemicals of Concern

Compound	Cal-OSHA PEL mg/m ³	Maximum soil concentration mg/Kg (ppm)	Screening Ratio
Lead	0.05	820	0.16
Arsenic	0.01	120	0.12
Naphthalene	2.62	51	0.0002
Gasoline	900	1500	1.7 x10 ⁻⁵
Benzene	3.19	3.8	1.2x10 ⁻⁵
Ethylbenzene	22	3.9	1.8 x10 ⁻⁶
Toluene	37	2.6	7.0 x10 ⁻⁷
Xylene	435	11	2.5 x10 ⁻⁷

Screening ratio = (soil concentration (mg/Kg) x 10 mg/m³) ÷ PEL ÷ 1 x10⁻⁶ (mg/Kg)

The screening ratio used to evaluate the hazard of contaminants in airborne dust is the ratio of airborne exposure to the PEL at a total airborne dust loading of 10 mg/m³, the PEL for nuisance dust. The highest screening ratio present for contaminants on site is lead at 0.16. At the highest lead soil concentration expected to remain at the site (820 mg/Kg), airborne exposure to lead will not exceed the PEL at 10 mg/m³ total dust. An airborne exposure of 10 mg/m³ corresponds to visible dust emissions reaching the breathing zone. Keeping the airborne total dust concentration below 10 mg/m³ will keep lead, arsenic, VOC and petroleum hydrocarbon exposures below their respected PELs. Although the probability of encountering hazardous airborne concentrations of toxic or irritating chemicals at this site is believed to be low, provision is made in this plan for air monitoring to detect such hazards. Appropriate responses in the event that hazardous concentrations are encountered are given below.

Under SCAQMD Rule 1466, dust suppression will be implemented to keep PM10 dust emissions at the property line at less than 0.025 mg/m³ over ambient. This will keep breathing zone exposures well below PELs.

The chemical contaminants at this site are not expected to present a significant hazard of airborne exposure. There is a slight hazard of ingestion exposure. Compliance with the **PERSONAL HEALTH AND HYGIENE** section of this plan will protect against accidental ingestion of contaminated soil.



CHEMICAL HAZARDS

Lead and arsenic are the primary contaminants of concern at the site. Additional contaminants include volatile organic compounds and petroleum hydrocarbons.

Lead

Lead in its elemental form is a heavy ductile gray metal. It does not corrode or decompose readily, and it melts at relatively low temperatures. These properties made it very useful for such things as soldering pipe joints and electrical connections. Lead compounds were widely used in paints for structural steel, heavy equipment, and pavement striping. Tetraethyl lead was added to gasoline until 1979, resulting in contamination of soil with aerielly-deposited lead oxide fume near roadways.

Lead has toxic properties that make it hazardous if inhaled or ingested. The Cal/OSHA PEL for lead is 50 $\mu\text{g}/\text{m}^3$ (micrograms per cubic meter) of air as an 8-hour Time-Weighted Average (TWA). The Action Level is 30 $\mu\text{g}/\text{m}^3$. The IDLH Level (Immediately Dangerous to Life & Health) is 100 mg/m^3 . The National Ambient Air Quality Standard (NAAQS) for lead is 0.15 $\mu\text{g}/\text{m}^3$ as a rolling three-month average.

Repeated exposure to airborne lead in excess of the PEL may produce a variety of symptoms, including: weakness, eye irritation, facial pallor, paleness of the eyes, lassitude, insomnia, anemia, tremors, malnutrition, constipation, weakness or paralysis of the wrists and ankles, abdominal pain, nephropathy, encephalopathy, gingival lead line, hypertension, anorexia, and weight loss. The target organs include the central nervous system, kidneys, eyes, blood, gingival tissue, and the gastro-intestinal tract.

Development of lead-related ailments in adults generally takes many years of repeated exposure when the levels are low, but can be more rapid if high concentrations are encountered. High-level exposures can cause acute health effects including seizures, coma, and death within hours or days. Uncontrolled burning of lead-based paint or other lead-containing materials can result in life-threatening exposure.

Arsenic

Exposure to airborne inorganic arsenic may cause lung cancer, and it can be a skin irritant. Inorganic arsenic may also affect your body if swallowed. Arsenic (chemical symbol As) is a naturally occurring semi-metallic element. Many inorganic arsenic compounds are found in the environment, frequently occurring as the sulfide form in complex minerals containing copper, lead, iron, nickel, cobalt, and other metals. Inorganic arsenic compounds were widely used as pesticides from the mid-1800s to the mid-1900s. By the mid 1970s, arsenic use was shifting from pesticides to wood preservatives, and by 1980, wood preservatives were the primary use. Inorganic arsenic compounds are known to be human carcinogens based on sufficient evidence of carcinogenicity in humans. Epidemiological studies and case reports of humans exposed to arsenic compounds for medical treatment, in drinking water, or occupationally have demonstrated that exposure to inorganic arsenic compounds increases the risk of cancer, particularly lung cancer. Inhalation and dermal contact are the primary routes of occupational exposure to arsenic.

Inorganic Arsenic: Although there are many studies of humans exposed to arsenic in air, cases of acute poisoning due to inhalation are exceedingly rare in industry. This suggests that death is not likely to be of concern following acute exposure, even at the very high exposure levels (1-100 mg/m^3 As) found previously in the workplace. Delayed lethality from chronic exposure attributable to increased risk of cardiovascular disease or lung cancer is the primary concern for occupational exposures. Workers exposed to arsenic dusts in air often experience irritation to the mucous membranes of the nose and



throat. This may lead to laryngitis, bronchitis, or rhinitis. The health impact of worker exposure to inorganic arsenic by inhalation is chiefly related to repeated exposures over long periods of time. Skin contact with inorganic arsenic may irritate skin and can be absorbed through intact skin. Exposure by ingestion is generally more hazardous than by inhalation.

Petroleum Hydrocarbons

Petroleum hydrocarbons in the form of gasoline, diesel fuel, or motor oil may be present in site soils. Hydrocarbon vapors can present two types of safety hazards. When ambient temperatures are higher than the flash point of the hydrocarbon material, or if the material is heated to that level during work, a fire or explosion hazard can develop. Respiratory hazards can develop when vapors are generated while workers in an area where natural ventilation is incapable of dispersing the vapor below hazardous levels. A trench is an example of an area where ventilation may be inadequate.

Petroleum hydrocarbons tend to give off vapors that can have a variety of detrimental effects, ranging from mild irritation of tissues to intoxicating effects to serious toxic impacts on major organs. The most significant hazards of heavier hydrocarbons include skin or tissue irritation. They do not tend to produce atmospheric hazards unless heated. The lighter hydrocarbons are much more volatile, and will readily produce hazardous levels of vapors. The vapors of some of the aromatic and aliphatic hydrocarbons are very hazardous.

Volatile Organic Compounds

Volatile organic compounds are typically encountered in proximity to gasoline or diesel fuel production, refining, storage, distribution, or dispensing facilities or where these fuels have been spilled or released to the environment. The hazards chiefly involve the BTEX group (benzene, toluene, ethyl benzene, and xylene) and naphthalene, although other aromatic and aliphatic hydrocarbons are present.

Benzene

Benzene is a known human carcinogen. The most important health hazards are cancer (leukemia), bone marrow effects, and injuries to the blood-forming tissue from chronic low-level exposure. The routes of exposure for benzene are inhalation, skin absorption, ingestion, and skin and/or eye contact. The effects of short-term, acute exposure is skin, eyes, and respiratory irritation; nausea; loss of appetite; dermatitis; and effects on the central nervous system, such as dizziness, headache, lassitude (weakness, exhaustion), and staggered gait. Exposure above the PEL may result in collapse, bronchitis, pneumonia, unconsciousness, and death. The target organs are the eyes, skin, respiratory system, blood, central nervous system, and bone marrow.

Toluene

Exposure to vapors of toluene may cause irritation of the eyes, nose, upper respiratory tract, and skin. Routes of exposure for toluene are inhalation, skin absorption, ingestion, and skin and/or eye contact. Exposure to 200 ppm for 8 hours cause mild fatigue, weakness, confusion, tearing, and a sensation of prickling, tingling, or creeping on the skin that has no objective cause. Exposure to higher concentrations may cause headache, nausea, dizziness, dilated pupils, and euphoria, and in severe cases may cause unconsciousness and death. The liquid is irritating to the eyes and the skin. Contact with the eyes may cause transient corneal damage, conjunctive irritation, and burns if not promptly removed. Repeated and/or prolonged contact with the skin may cause drying, cracking, and dermatitis. Toluene may be absorbed through the skin in toxic amounts. Ingestion causes irritation of the gastrointestinal



tract and may cause effects resembling those from inhalation of the vapor. Chronic overexposure to toluene may cause irreversible liver and kidney injury.

Ethylbenzene

The routes of exposure for ethylbenzene are inhalation, ingestion, and skin and/or eye contact. Ethylbenzene vapor is severely irritating to the eyes and to the mucous membranes of the respiratory system. Sustained inhalation of excessive levels can cause depression of the central nervous system (CNS) characterized by dizziness, headache, narcosis, and coma. Skin contact with liquid ethylbenzene causes irritation; dermatitis and defatting can also develop. The acute oral toxicity of ethylbenzene is low, however, ingestion poses a serious aspiration hazard. Aspirating even a small amount into the lungs can result in extensive edema (lungs filled with fluid) and hemorrhaging of the lung tissue. No systemic effects are suspected at the levels that produce pronounced skin and eye irritation. The established Permissible Exposure Level (PEL) is set well below this intolerable level.

Xylene

Liquid xylenes are a skin irritant and causes itching, dryness, and defatting; prolonged contact may cause blistering. Inhaling xylenes can depress the Central Nervous System (CNS) and can cause dizziness, excitement, drowsiness, incoordination, and staggering gait. Ingesting it can result in gastrointestinal disturbance such as nausea, vomiting, abdominal pain, and possibly hematemesis (vomiting blood). Effects on the eyes, kidneys, liver, lungs, blood, and the CNS are also reported.

Naphthalene

Naphthalene is a polycyclic hydrocarbon and is the primary chemical utilized in moth balls. It has a distinctive odor. Acute exposure to naphthalene is associated with liver damage, hemolytic anemia, and neurological effects. Chronic exposure has been shown to cause cataracts and retinal damage. The International Agency for Research on Cancer classifies naphthalene as possibly carcinogenic to humans and animals. Routes of exposure are inhalation, ingestion, and skin contact.

Dermal Exposure

Repeated or prolonged contact with various chemical compounds can irritate the eyes and/or skin. Certain compounds are readily absorbed through skin and can cause systemic poisoning. However, contact of sufficient duration with chemicals on this project is judged to be unlikely with proper training and skin protection (i.e., gloves). All personnel are required to wear nitrile gloves when handling potential hazardous materials/waste (soil) at the site.

Direct skin contact with chemical compounds should be minimized by washing hands and other parts of the body in contact with the materials with soap and water and rinsing thoroughly. The washing is required at the beginning and end of the shift, during any break and any time skin comes in contact with chemical compounds.

Ingestion Exposure

The ingestion exposure risk is judged to be low for this project. No eating, drinking, or smoking will be allowed in the work zone. All personnel are required to wash their hands at the beginning, during, and end of the work shift, before eating or drinking, and at any time the hands come in contact with chemical compounds.



LEVELS OF PROTECTION

Level D protection is recommended for all work. The protection level will be upgraded if hazardous concentrations of chemicals are encountered in the operator breathing zone. If contaminated soil is exposed, Level C protective clothing is recommended for workers in direct contact with contaminated soil.

Four levels of protection are described as follows:

Level B: A NIOSH approved portable pressure demand self-contained breathing apparatus. Appropriate protective clothing: Chemical splash resistant suit (Saranex-coated Tyvek coveralls) with neoprene gloves and steel-toed neoprene boots. Protective eyewear and hearing protectors where appropriate.

Level C: A NIOSH approved half-face air-purifying respirator with dual P-100 filter cartridges. Appropriate protective clothing: Tyvek coveralls with neoprene or nitrile gloves and steel-toed neoprene boots. Protective eyewear and hearing protectors where appropriate.

Level C (modified): Respiratory protection as for Level C. Appropriate protective clothing: As for Level D. Protective eyewear and hearing protectors where appropriate.

Level D: Work uniform, steel-toed work boots, hard hat, and work gloves. Protective eyewear and hearing protectors where appropriate.

COMMUNITY PROTECTION

The subject site is bounded on the east side by Golden Avenue with single-family residences beyond and on the northeast and southeast corners by parks. The north side of the site is directly adjacent to the 405 freeway. The Los Angeles River lies directly west of the site. Exposure risks to potential residential receptors will be managed during excavation and hauling by emissions controls (dust suppression) and perimeter air monitoring in accordance with SCAQMD Rule 1466 and by track-out prevention and other protocols in accordance with the storm water pollution prevention plan (SWPPP).

Work hours will be 8 AM to 5 PM on weekdays. Any work taking place on Saturdays will be conducted between the hours of 8 AM and 4 PM.

The soil management plan calls for fencing with windscreens and continuous direct-reading real-time ambient monitoring of PM10 concentrations as specified by South Coast Air Quality Management District (SCAQMD) Rule 1466.



AIR MONITORING

PERSONAL EXPOSURE MONITORING

Based on the maximum expected lead and arsenic concentrations in soils at the site (820 and 120 mg/Kg respectively), the action levels for lead (0.03 mg/m^3) and arsenic (0.005 mg/m^3) will not be exceeded if the total dust level in the breathing zone does not exceed the nuisance dust PEL of 10 mg/m^3 . Other contaminants including naphthalene are not expected to approach PELs.

Visual observation will be used to monitor the work area for visible emissions of dust. If visible emissions are present, water spray or mist shall be used for dust suppression. If plain water is not effective at controlling visible emissions, the water shall be amended with a wetting agent. If visible dust emissions reach the worker breathing zone, work shall stop until emissions are controlled.

Real-time monitoring of VOC concentrations will be conducted for worker and community health and safety. Monitoring will be conducted during excavating and/or loading, using a MiniRAE or MultiRAE gas monitoring instrument in accordance with SCAQMD rule 1166.

If air sampling for worker exposure is required, air samples will be collected in the worker's breathing zone using battery-powered personal sampling pumps with 37-mm cassettes containing 0.8- μm mixed-cellulose-ester (MCE) filters. Samples will be collected on workers representing the highest anticipated exposures. Samples will be submitted to an AIHA IHLAP-accredited laboratory for analysis of lead and arsenic using inductively-coupled mass spectrometry (ICP). Sampling and analysis will be conducted in accordance with NIOSH Method 7300 or 7303.

Action levels for air monitoring are shown in **TABLE 2** below.



TABLE 2
AIR MONITORING
Action Levels and Action to be Taken

Device	Reading†	Location	Time Period	Action*
Direct Reading Instrument	< 50 ppm VOC	Working face	--	Continue periodic monitoring. Level D.
	> 50 ppm VOC	Working face	> 1 minute	Monitor OBZ. Follow SCAQMD Rule 1166 for vapor suppression.
	>1,000 ppm VOC	OBZ	>1 minute	Upgrade to Level C (modified). Follow SCAQMD Rule 1166 requirements for direct loading or binning of soil
Dust Monitoring	No visible emissions	anywhere	--	Continue monitoring. Level D.
	Visible emissions	anywhere	> 1 minute	Implement dust suppression. Level D.
Laboratory Analysis	$\geq 0.5 \times$ PEL for metals	OBZ	full shift	Upgrade to Level C (modified).*

OBZ = Operator Breathing Zone

Upgrade/downgrade in PPE may be made based on the results of air sampling after consulting with the CIH.



PERIMETER MONITORING

Upwind and downwind perimeter air monitoring will be performed during construction activities to ensure that the public will not be exposed to airborne soil contaminated with heavy metals above regulatory limits.

This project is subject to SCAQMD Rule 1466, *Control Of Particulate Emissions From Soils With Toxic Air Contaminants*. A Dust Control Supervisor trained under SCAQMD Rule 403 will be on site during excavation and loading of metals-contaminated soil. Air monitoring and dust suppression will be implemented as follows:

- ◆ Notify SCAQMD in accordance with Rule 1466.
- ◆ Monitor wind speed and direction with an onsite weather station.
- ◆ Continuously monitor airborne particulate concentrations at the perimeter with datalogging instruments.
- ◆ Collection of full-shift air samples for metals analysis
- ◆ Continuously monitor visible emissions at the working face.
- ◆ Compare data with action levels to ensure fugitive dust associated with the remediation remains below the action levels. Should an action level be exceeded, dust suppression techniques will be implemented.
- ◆ Record observations and continuous air monitoring data every 15 minutes or less in accordance with SCAQMD Rule 1466. Air monitoring data is automatically datalogged every five minutes.

INSTRUMENTATION

Instrumentation for SCAQMD Rule 1466 air monitoring will consist of the following:

- ◆ SCAQMD-approved TSI DustTrak DRX or Aeroqual Dust Sentry aerosol monitors
- ◆ Environmental enclosures.
- ◆ Auto-zero attachments.
- ◆ Omnidirectional heated inlets.
- ◆ Dataloggers and cellular modems.
- ◆ A datalogging weather station.
- ◆ The aerosol monitors will be identical in in make and model; settings; calibration; configuration; and calibration, correction, and correlation factors.



PERIMETER AIR MONITORING ACTION LEVELS

In accordance with SCAQMD Rule 1466, the aerosol monitors will datalog PM10 concentrations every 5 minutes as 15-minute rolling averages. The dust control supervisor will calculate the 2-hour rolling average at the top of every hour and calculate the difference (Δ) between the upwind (ambient) monitor and the higher of the downwind monitors. The Δ value is compared to the action level in **Table 3** below.

TABLE 3
PERIMETER AIR MONITORING ACTION LEVELS

Parameter	Location	Action Level	Action
Visible Dust	Working face	Visible dust plume more than 20 feet from working face.	Increase dust suppression.
PM10	Perimeter	25 $\mu\text{g}/\text{m}^3$ Δ over upwind (2-hour average)	Increase emissions controls or partial curtailment of operations, reassess dust suppression efforts. Stop work if PM10 remains above action level.
Wind Speed	Site	15 mph (15-minute average) 25 mph (instantaneous)	Stop earth-moving activities, cover stockpiles.

Perimeter air samples for metals will be collected by drawing air through 37-mm diameter cassettes with 0.8- μm mixed-cellulose-ester membrane filters, using hi-volume battery-powered sampling pumps. The sample cassettes will be placed at breathing-zone height at the upwind and downwind perimeter of the work area. The airflow rate will be measured before and after sampling using a calibrated rotometer. The samples will be analyzed for arsenic and lead using inductively-coupled plasma atomic emission spectrometry (ICP-AES) by an AIHA accredited laboratory in accordance with OSHA Method 7303.



SAFETY MANAGEMENT

The contractors' Site Safety Officer (SSO) and Field Site Safety Officer (FSSO) will ensure that all contractor personnel comply with all applicable regulations and requirements of this plan. The SSO will supervise the FSSO and coordinate and cooperate with the contractors' superintendents, foremen, subcontractors, employees, the owner's representative, authorized visitors, and agency representatives.

Site Safety Officer: Charles Buckley (818) 991-1542

Field Site Safety Officer: Greg Buensuceso (805) 341-6538

Dust Control Supervisor: Michael Tiffany, CIH (805) 340-2617

1. Personnel shall be physically able (and mentally willing) to comply with safety requirements.
2. A copy of this health & safety plan shall be kept at the job site and made available to each individual who will work at the site.
3. All contractors and sub-contractors working at the site should have and comply with the following:
 - A corporate Injury & Illness Prevention Plan.
 - A site specific Health and Safety plan.
4. These plans should include and/or address as a separate plan, the following:
 - A written Respiratory Protection program
 - A worker Hazard Communication program
 - A Medical Exposure Monitoring Program
 - A Hearing Conservation Program
5. A tail-gate meeting shall be held to review the safety program at the start of work and periodically as needed.
6. Site workers and visitors shall sign an acknowledgement sheet that confirms that they have read and understand this HSP.
6. Unsafe acts shall be stopped when discovered.
7. Required safety equipment shall be onsite and shall be checked to verify completeness and function prior to being put into service.
8. Any change in site conditions, such as the discovery of previously undefined areas of contamination, will be reviewed by the SSO and this HSP will be amended if necessary.



EXCLUSION ZONE

The exclusion zone shall be as determined by the FSSO and SSO during excavation activities. The FSSO will be responsible for ensuring that unauthorized and unnecessary personnel are excluded from the work zone. Personnel not actively involved in site work activities (other than inspectors from concerned regulatory agencies) shall not be allowed within the exclusion zone. When necessary, work zones will be enclosed, barricaded or otherwise marked off and posted by the FSSO or contractor foreman to prevent the ingress of unauthorized persons and to warn others as to the potential hazards present and to stay clear.

EMERGENCY PROCEDURES

COMMUNICATION PROCEDURES

A site phone will be available to all workers in the event of an emergency. All emergency services can be obtained by calling 911.

EMERGENCY EXITS

All site entrances will be left open to provide for emergency egress during the course of the work but shall be barricaded or marked and inspected periodically to discourage the entrance of unauthorized persons.

EMERGENCY EQUIPMENT

The following emergency equipment will be available onsite:

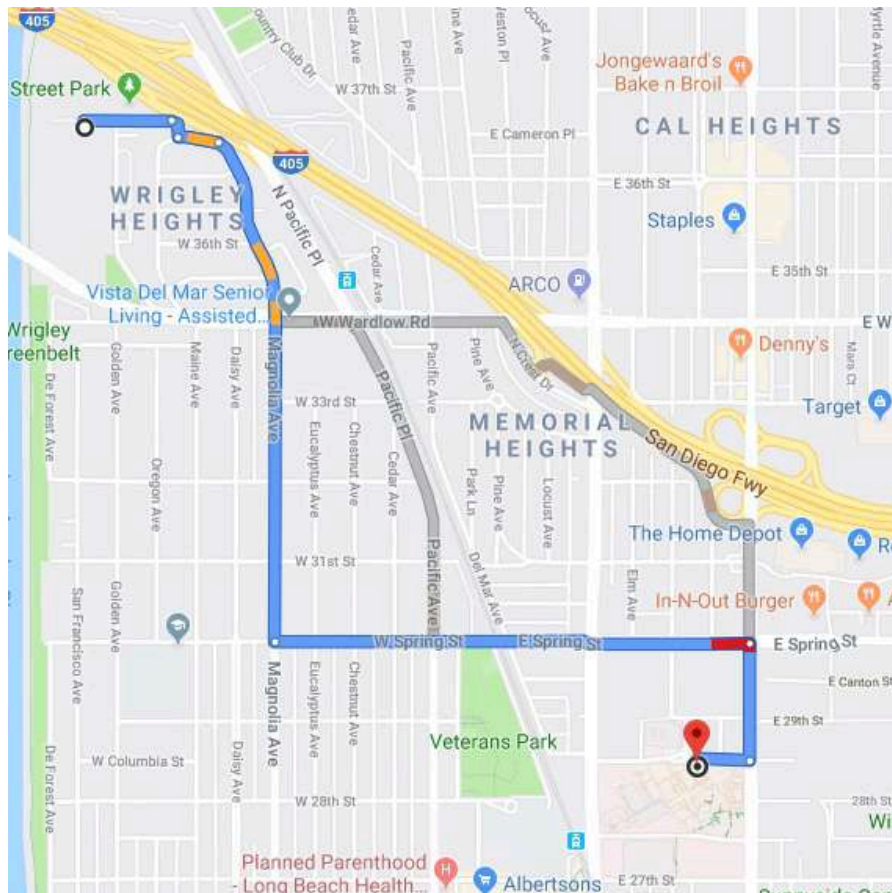
- A first aid kit.
- A fire extinguisher.

EMERGENCY SERVICES

The address, phone number, and name of the local hospital and medical emergency room will be posted on site. Hospital location and driving directions are shown below. All emergency services can be obtained by dialing 911.



Long Beach Memorial Medical Center
2801 Atlantic Ave., Long Beach, CA 90806
Phone: 562-933-2000



1. Head **EAST** on **Baker Street**.
2. After 0.1 miles the road turns **SLIGHT RIGHT** and becomes **AMBECO RD.**
3. After 175 feet, turn **LEFT** onto **WEST 39th ST.**
4. After 340 feet, road turns **SLIGHT RIGHT** and becomes **MAGNOLIA AVE.**
5. After 0.8 miles, turn **LEFT** onto **W. SPRING ST.**
6. After 0.7 miles, turn **RIGHT** onto **ATLANTIC AVE.**
7. After 0.2 miles, turn **RIGHT** onto **E. COLOMBIA ST.**
8. After 450 feet, the destination is on the **LEFT.**



DECONTAMINATION

Vehicle and equipment decontamination procedures are addressed in the site-specific Soil Management Plan. Personnel decontamination procedures are described below.

The personnel decontamination area will be set up at the exit from the exclusion zone. The decontamination area will be equipped with the following:

- Plastic sheeting to contain fluids and provide a clean surface.
- Buckets with detergent solution and clean water.
- Brushes, sponges, and towels.
- Drinking water.

Level D decontamination procedures:

1. Any disposable PPE, such as nitrile gloves or Tyvek coveralls, shall be removed in the decontamination area and placed into the designated waste containers.
2. All personnel will wash face and hands with detergent and water when prior to eating, drinking, using the restroom, or leaving the site.
3. Equipment or tools will be decontaminated by wet wiping with detergent and water.

SAFETY/TRAINING REQUIREMENTS

Personnel engaging in onsite activities will be properly trained for those activities. All personnel who use respiratory protective equipment will be properly trained in its use and properly fitted to their assigned respirators. All workers required to wear a respirator will be medically cleared. If a worker is or may be exposed above the PEL, they shall be enrolled in a medical surveillance program within 30 days.

All site workers will be trained for hazardous waste operations in accordance with 8CCR §5192, including up-to-date refresher courses. Dust control supervisors will have completed the SCAQMD South Coast Air Basin Fugitive Dust Control Class.



PERSONAL HEALTH AND HYGIENE

1. Personal safety and the safety of fellow workers require that all employees arrive at the job and remain mentally alert. No alcohol or drugs shall be permitted at any job site.
2. Parts of the body that come into contact with toxic or irritating chemicals should be washed immediately with detergent and water.
3. Any cut or abrasion shall be treated immediately. A qualified professional health practitioner shall be consulted if the safety manager deems it necessary.
4. Hands and face shall be washed prior to eating, drinking, using the restroom, or smoking, and at the end of the work shift.
5. No smoking is allowed in the exclusion zone. Smoking will be allowed only in an area designated by the contractor's superintendent.

EQUIPMENT

Personal Safety Equipment

Workers shall have available personal protective safety equipment as follows:

1. Plastic hard hats meeting ANSI standards.
2. Steel-toed work boots.
3. Appropriate hearing protection in accordance with the contractor's hearing conservation program.
4. Safety glasses meeting ANSI standards.
5. High-visibility safety vest for work in areas of vehicular traffic.
6. Work gloves for handling heavy tools or equipment.

Personnel And Environmental Monitoring Equipment

Air monitoring equipment is listed in the Air Monitoring section.

Facility Safety Equipment

The following safety equipment shall be continuously available at the job site in sufficient quantities:

1. Clean water, detergent, and paper towels.
2. First aid kit (10 unit).
3. Fire extinguisher.
4. Site phone.



ACKNOWLEDGEMENT

The undersigned site personnel and visitors acknowledge that they have read and understand the above Site-Specific Health & Safety Plan and are familiar with its provisions.

NAME	COMPANY	SIGNATURE

