November 8, 2017

Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Attention: Mark Detterman

Subject: Report of Groundwater Monitoring Activities and
Workplan to Conduct Additional Investigative Activities
5813-5815 Shellmound Street Site, Emeryville, California
ACEH RO3267; Global ID: T10000011073

Ladies and Gentlemen:

Attached please find a copy of the *Report of Groundwater Monitoring Activities and Workplan to Conduct Additional Investigative Activities* prepared by Gribi Associates. I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website.

Very truly yours,

Dr. Michael K. Park
1940 Webster Street, Suite 200
Oakland, CA 94612

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Attention: Mark Detterman

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5813-5815 Shellmound Street Site, Emeryville, California
ACEH RO#3267; Global ID: T10000011073

Ladies and Gentlemen:

Gribi Associates is pleased to submit this report and workplan on behalf of Dr. Michael Parks for the property located at 5813-5815 Shellmound Street in Emeryville, California (Site) (see Figure 1, Figure 2, Figure 3, and Figure 4). Pursuant to our meeting at your offices on September 22, 2017, this report documents a utilities survey and recent groundwater monitoring well development and sampling activities at the Site. In addition, this report includes a workplan to conduct additional investigative activities to address Alameda County Environmental Health (ACEH) concerns relative to the Site.

1.0 PROJECT APPROACH

During the September 22, 2017 meeting, ACEH provided a path forward for this site that included: (1) Conducting a utilities survey on the Site to assess potential groundwater/vapor migration pathways; (2) Locating, developing, and sampling Site wells C-1 through C-4; and (3) Conducting a soil gas/sub-slab vapor investigation to assess potential vapor intrusion risks relative to Site contaminants. If results of these investigative activities are favorable (decreasing groundwater contaminant impacts and no significant vapor intrusion risk), then regulatory closure would be possible with the implementation of a Site Management Plan limiting direct contact with contaminant-impacted soils and a land use covenant (deed restriction) precluding groundwater use and precluding changes in land use without notification.

2.0 DESCRIPTION OF FIELD ACTIVITIES AND RESULTS

Well location and development activities were conducted on October 10, 2017. The utilities survey was conducted on October 11, 2017.Well purging and sampling activities were conducted on October 13, 2017. All activities were conducted in accordance with standard practices and protocols.

2.1 Well Development and Sampling Activities and Results

2.1.1 Description of Field Activities

Gribi Associates personnel attempted to located wells C-1 and C-3. Well C-3 was located on the west side of the Site parking lot area; however, well C-1 is no longer visible and appears to have been covered over by newer concrete paving along the west side of the Site building. Thus, well development and sampling activities were conducted for wells C-2, C-3, and C-4, but not for well C-1.

Each of the three wells, C-2, C-3, and C-4, was developed by pumping approximately 10 to 20 gallons of water from the well while periodically surging the well. During purging, groundwater was monitored for monitoring Temperature, pH, Specific Conductivity, and visible clarity. When these parameters had stabilized, well development was deemed to be complete. Purged groundwater was contained in sealed drums pending laboratory analysis.

Groundwater monitoring of the three Site wells was conducted more than 72 hours following well development activities. Groundwater monitoring included purging of at least three well volumes per well while monitoring Temperature, pH, Specific Conductivity, and visible clarity. Groundwater monitoring field records are contained in Attachment A.

2.1.2 Results of Groundwater Monitoring Activities

Groundwater monitoring results for the three sampled wells, C-2, C-3, and C-4, are summarized on Figure 5. The laboratory data report is included in Attachment B. Depth to groundwater in the three wells was approximately 5.0 feet below top of casing. The groundwater sample from C-2 showed no detectable concentrations of any of the analytes except 960 ug/L of TPH-MO. The groundwater samples from C-3 and C-4 showed:

Analyte	C-3	C-4
TPH-G	1,600 ug/L	<50 ug/L
TPH-D	30,000 ug/L	4,300 ug/L
TPH-MO	<100 ug/L	<100 ug/L
Benzene	640 ug/L	31 ug/L
Toluene	63 ug/L	0.85 ug/L

Analyte	C-3	C-4
Ethylbenzene	320 ug/L	10 ug/L
Xylenes	168 ug/L	7.1 ug/L
MTBE	<5.0	<1.0
1,2,5-Trimethylbenzene	7.5 ug/L	1.2
1,2,4-Trimethylbenzene	26 ug/L	2.5
Creosote	1,100 ug/L	440 ug/L
Acenaphthene	317 ug/L	133 ug/L
Acenaphthylene	12.3 ug/L	<10 ug/L
Fluoranthene	15.9 ug/L	5.68 ug/L
Fluorene	19.2 ug/L	19.2 ug/L
Naphthalene[1]	7,980 ug/L	181 ug/L
Phenanthrene	108 ug/L	32.6 ug/L

These concentrations are generally much lower than previous 1997 and 1998 concentrations for C-3 and C-4, clearly indicating that natural attenuation is occurring at a fairly rapid rate at the Site.

2.2 Utilities Survey Activities and Results

Gribi Associates contracted Foresite Engineering Surveys to locate below ground utilities on the Site. Results of the utilities survey are shown on Figure 6. The only below-ground utilities in the parking lot area, where Site contaminants are located, are: (1) A storm water drain at the south end of the parking lot, which runs offsite to the south; and (2) A sewer line that runs north to south just west of the Site building. The storm drain is only about 1.5 feet in depth. The sewer line varies from approximately 4 feet at the north end to approximately 7 feet in depth at the south end of the Site. While it is possible that the buried sewer line could act as a migratory conduit, most of the contamination associated with the Site is located on the southwest side of the Site and, thus, not in close proximity to the buried sewer line.

3.0 WORKPLAN TO CONDUCT VAPOR SURVEY

In order to assess potential vapor intrusion concerns, this workplan proposes: (1) The collection of two sub-slab vapor samples and three indoor air samples at/near the Site building to assess potential vapor intrusion into the Site building; and (2) The collection of two shallow soil gas samples along the southwest property line to assess potential vapor intrusion concerns

[1] Naphthalene results reported herein are using USEPA Method 8270 (semi-volatile) analysis. Reported naphthalene results using USEPA Method 8260 (volatile) analysis are higher. Respective 8260 naphthalene results for C-3 and C-4 are 18,000 ug/L and 800 ug/L. The Sunstar Labs QA/QC Manager has provided an explanation for these results, included with the lab report in Attachment B.

in the adjacent west offsite building from identified VOCs on the Site. All sampling activities will be conducted in accordance with *Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air* (DTSC, Final, October 2011) and *Advisory - Active Soil Gas Investigations* (DTSC, July 2015).

3.1 Pre-Field Activities

Prior to implementing this workplan, written approval will be obtained from ACEH. Also, a Site Safety Plan will be prepared, and a tailgate safety meeting will be conducted with all site workers.

3.2 Proposed Sample Locations and Depths

Proposed soil gas sample and indoor air sample locations are shown on Figure 6. The four soil gas samples (SG-1 through SG-4) will include two samples, SG-1 and SG-2, just outside along the west side of the Site building, and two samples, SG-3 and SG-4, along the southwest Site property line. The indoor air samples will include three samples, IA-1, IA-2, and IA-3, inside the Site building, with one in the building restroom area, and one sample, OA-1, outside of the west side of the Site building as a background sample.

Given the shallow depths to groundwater beneath the Site (4 to 5 feet below ground surface (bgs)), it will be necessary to collect soil gas samples above the guidance-recommended depth of 5 feet. For soil gas samples SG-1 and SG-3, which will be located beneath a concrete slab sidewalk on the west side of the Site building, we propose to collect sub-slab vapor samples just below the concrete slab. For soil gas samples SG-3 and SG-4, which will be located in a landscaped area along the southwest property margin, we propose to collect soil gas samples at a maximum depth of 3.0 feet bgs.

3.3 Soil Gas Sampling Procedures

Temporary sub-slab vapor wells will be installed at SG-1 and SG-2. Each of the sub-slab wells will be installed using the following methods: (1) A one inch diameter hole will be drilled through the slab and approximately six inches below the slab; (2) A small amount of filter sand will be placed at the bottom of the hole and a vapor sampling diffuser connected to 1/4-inch diameter Teflon tubing will be placed at the bottom of the hole; (3) Sand will then be added to fully cover the diffuser, and a small amount of dry granular bentonite will be placed above the sand; and (4) Wet, pourable/pliable bentonite will then be placed in the slab portion of the hole to fully seal the temporary vapor well.

Temporary soil gas wells will be installed at SG-3 and SG-4 using hand auger equipment. Each of the temporary wells will be installed using the following methods: (1) A boring will be hand augered to approximately 3.0 feet in depth; (2) A small amount of sand will be placed in the

bottom of the hole and a sampling diffuser with 1/4-inch diameter Teflon tubing will be placed at the bottom of the hole; (3) Sand will then be added to a depth of approximately 2.5 feet in depth, and a small amount of dry granular bentonite will be placed above the sand; and (4) Wet, pourable/pliable bentonite will then be placed in the hole to a depth of approximately 0.5 feet and hydrated slightly to seal the well.

Each of the four sub-slab/soil vapor samples will then be collected using the following procedures:

- Soil vapor samples will not be collected within 72 hours following a significant (>0.5 inches rain) precipitation event.

- A "T" valve will be placed in-line at the ground surface to allow for system purging and for pressure testing of the above ground portion of the sampling train. The sampling tubing will be attached to a 200-milliliter per minute maximum flow controller, then a one liter laboratory-supplied Summa Canister™ (evacuated to 29 inches mercury vacuum) with vacuum pressure valve.

- After allowing the vapor wells to equilibrate for at least two hours, the wells will be purged and sampled. A laboratory supplied purge/pressure test Summa Canister™ (evacuated to 29 inches mercury) will be used to test vacuum pressure in the above ground portion of the sampling train. Sampling train vacuum pressure will be maintained for at least 10 minutes; if pressure drops occur, the system connections will be tightened and the pressure testing continued.

- The vapor well will then be purged of approximately three purge volumes.

- The entire probe and sampling train will be placed under a shroud and a leak test will be conducted. Helium from a compressed gas cylinder will be pumped into the shroud, and the helium concentration inside the shroud will be maintained at approximately 10,000 ppmV (the detection level for the ASTM Method D-1946 is 100 ppmV). Helium monitoring will be conducted using a Mark Radiodetection MGD-2002 helium detector with internal pump (or equivalent). For the sampling train leak test, the helium monitor will be attached to the purge tube and the T-valve opened. A positive reading of helium by the detector will indicate the presence of helium inside the sample train and, therefore, a leak in the sample train. If helium is detected, all connections in the sample train will be tightened and the leak test repeated until no helium was detected.

- The vapor sample will then be collected by opening the Summa canister and allowing the vapor to fill the canister until the vacuum pressure in the canister reaches approximately 20 percent of initial (approximately 5 to 6 inched mercury). The flow controller will be used so that the Summa Canister will fill slowly (200 ml per minute or

less) to insure a representative soil vapor sample. Prior to, at start time, and during sampling, periodic vacuum measurements will be recorded on a field data sheet, and initial and final vacuum pressures will be noted on chain-of-custody records.

The vapor samples (filled Summa canisters) will be secured and transported to a California-certified analytical laboratory, under formal chain-of-custody. Following completion of sampling activities, tubing will be removed.

3.4 Indoor Air Sampling Procedures

Indoor air sampling will be conducted during a single 8-hour time period. Prior to conducting sampling, the various areas of the Site and site surroundings were inspected for possible above ground chemical usage that could impact indoor air sample results.

Each of the three Indoor and one outdoor air samples will be collected using the following procedures.

- Soil vapor samples will not be collected within 72 hours following a significant (>0.5 inches rain) precipitation event.

- Each air sample will be collected in a three-liter certified clean Summa Canisters™ supplied by the analytical laboratory. Each Summa Canister will have been pre-evacuated by the laboratory to a vacuum pressure of approximately 29 inches of mercury (Hg). A valve with pressure gauge and an 8-hour flow controller will be attached to the inlet of each canister.

- The air samples will then be collected by opening all of the canister valves at about the same time. The valves will remain open to continuously draw air into the canisters until the vacuum pressure within the canisters drop to approximately 5 inches of Hg, at which point each of the valves will be closed. The close air sample canisters will then be transported to the analytical under formal chain-of-custody protocol.

3.5 Laboratory Analysis of Vapor Samples

The four sub-slab/soil gas samples, SG-1 through SG-4, will be analyzed for the following parameters with appropriate detection levels which are below applicable regulatory screening levels.

- USEPA Method TO-15: Volatile Organic Compounds (VOCs)
- ASTM Method D1946: Fixed Gases (including oxygen, carbon dioxide, nitrogen, and helium)
- RSK 175: Methane (reported in percent)

The four air samples, IA-1, IA-2, IA-3, and OA-4, will be analyzed for the following parameters with appropriate detection levels which are below applicable regulatory screening levels.

- USEPA Method TO-15: Volatile Organic Compounds (VOCs)

All analyses will be conducted by California-certified analytical laboratories, with standard turnaround on results.

3.6 Quality Assurance/Quality Control

For the sub-slab/soil vapor samples, a duplicate sample will be collected at the SG-4 location, where vapor detections would most be expected. For the indoor air samples, the outdoor air sample, OA-1, will help to assess the validity of possible indoor air VOC detections.

3.7 Preparation of Summary Report

A report of findings will be prepared for submittal to ACEH. This report will describe all investigative methods and results, and will include tabulated laboratory analytical results, as well as laboratory data reports and chain-of-custody records.

4.0 PROJECT SCHEDULE

Subject to workplan approval, we anticipate completion of proposed investigative field work in approximately two to three weeks, and submittal of a draft report of findings within four to five weeks.

We appreciate this opportunity to provide this report and workplan for your review. Please contact us if there are questions or if additional information is required.

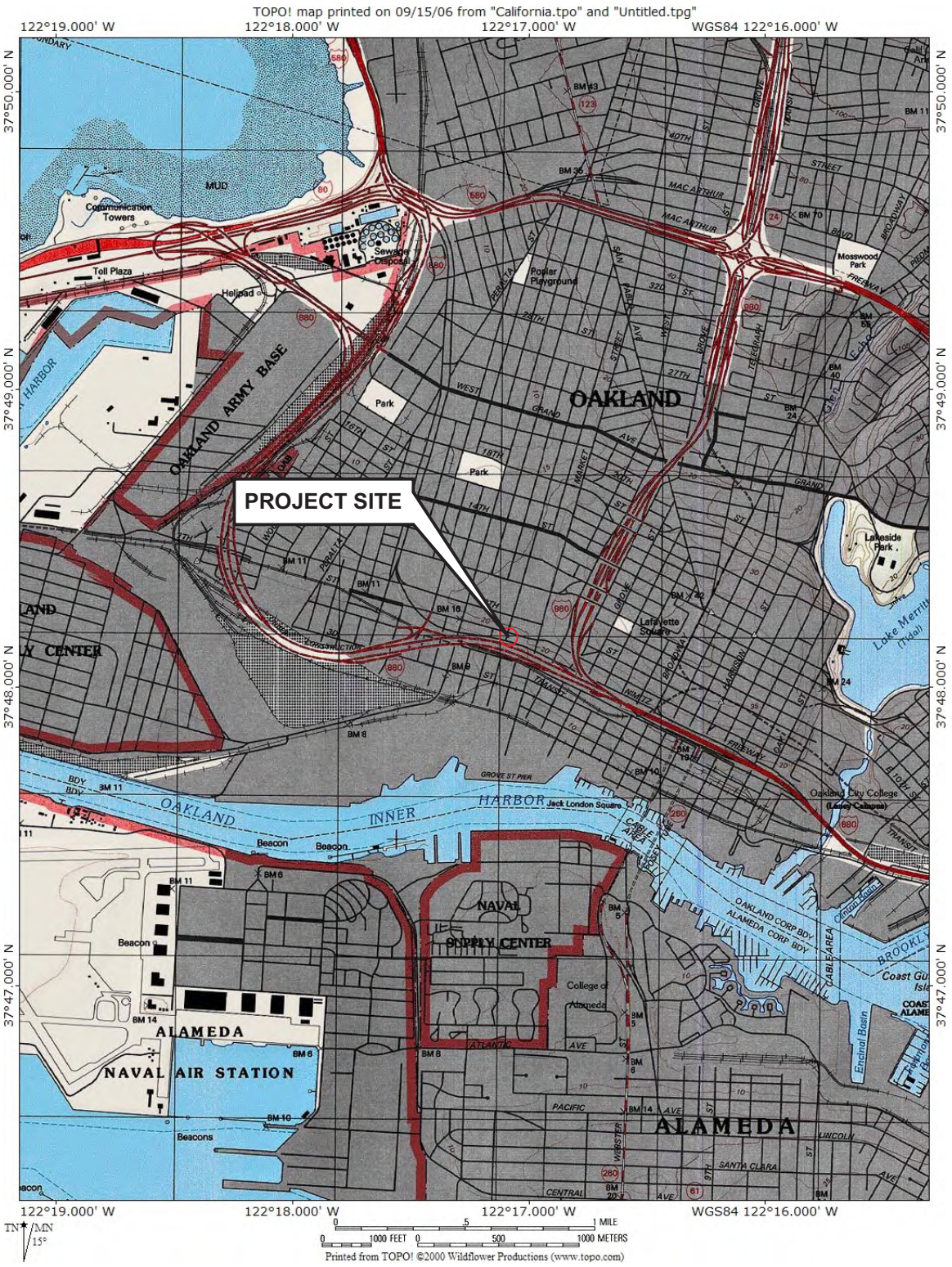
Very truly yours,

James E. Gribi
Professional Geologist
California No. 5843

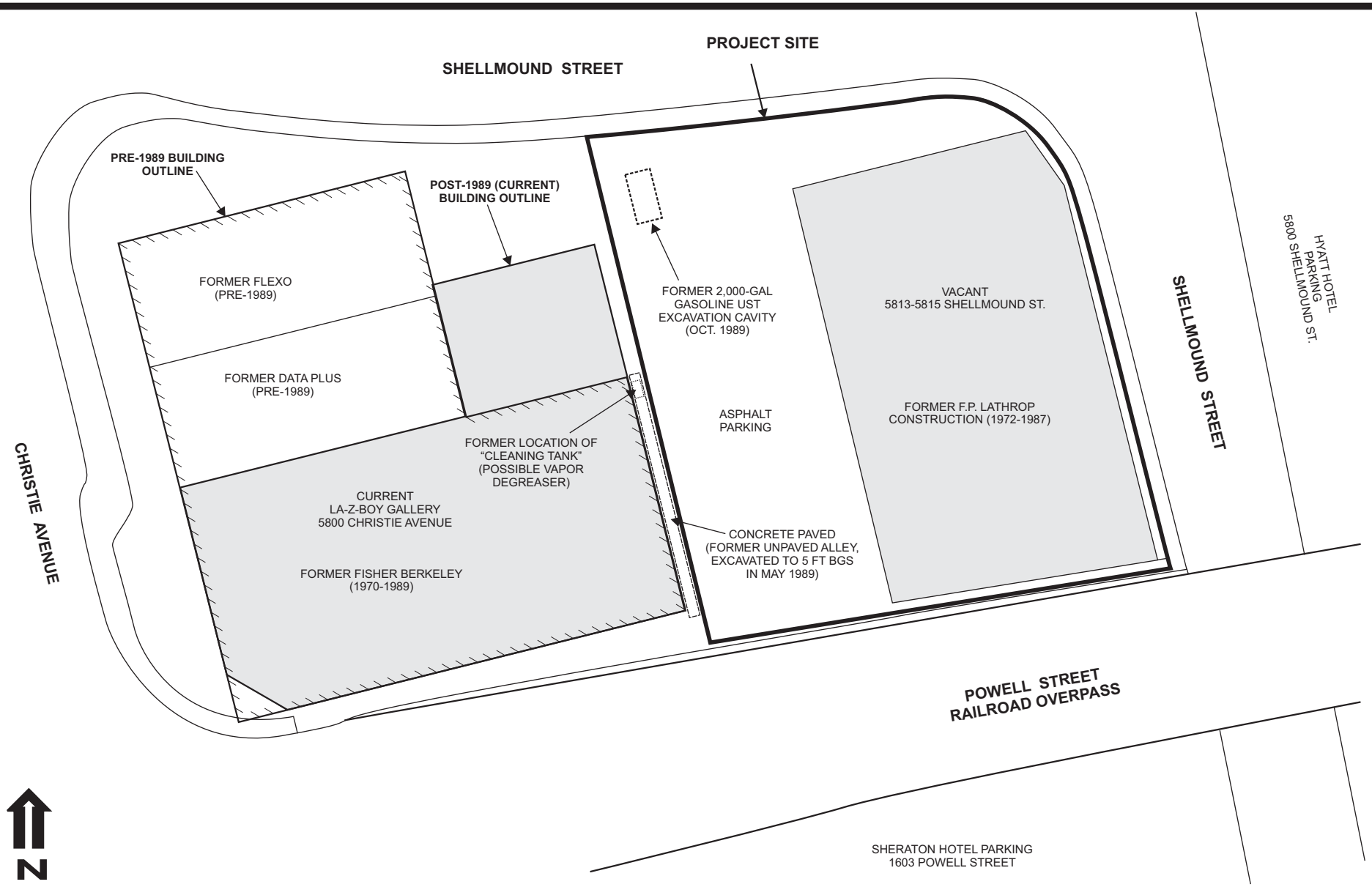
Enclosure

c: Dr. Michael K. Park, 1940 Webster Street, Suite 200, Oakland, CA 94612

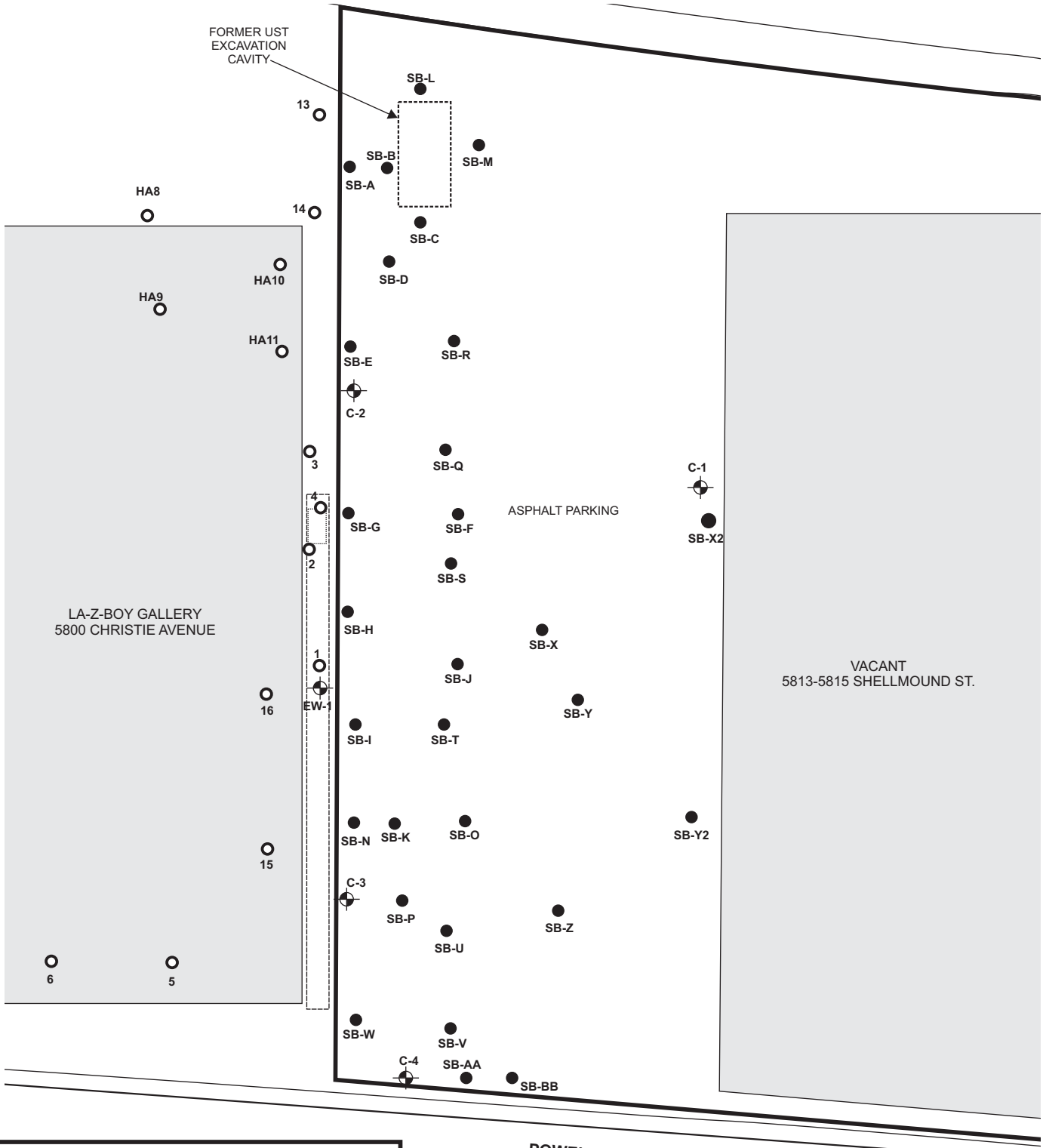
FIGURES



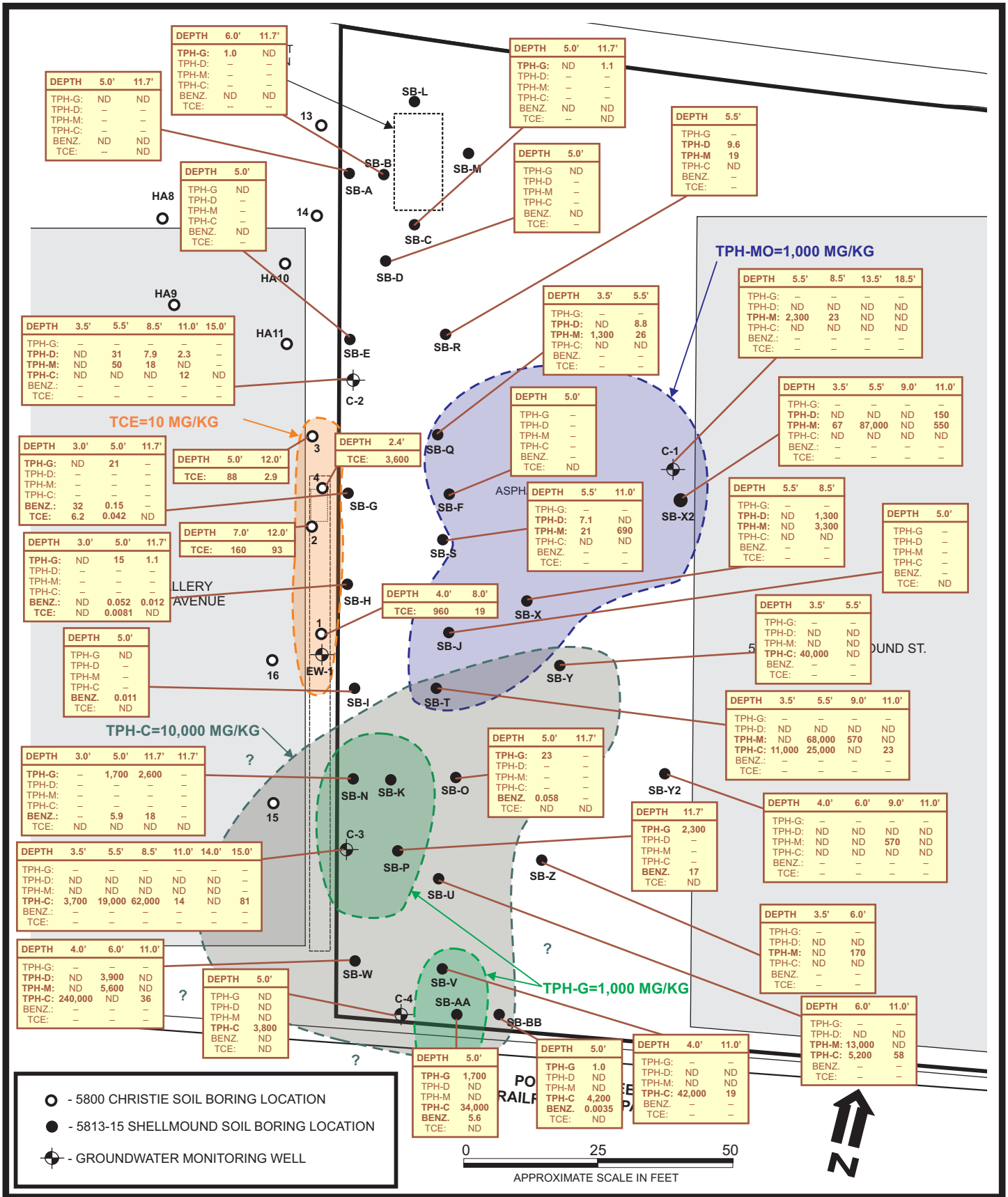
DESIGNED BY:	CHECKED BY: JEG	**SITE VICINITY MAP**	DATE: 11/08/2017	FIGURE: 1
DRAWN BY: JEG	SCALE:			
PROJECT NO:		979 7TH STREET OAKLAND, CALIFORNIA		



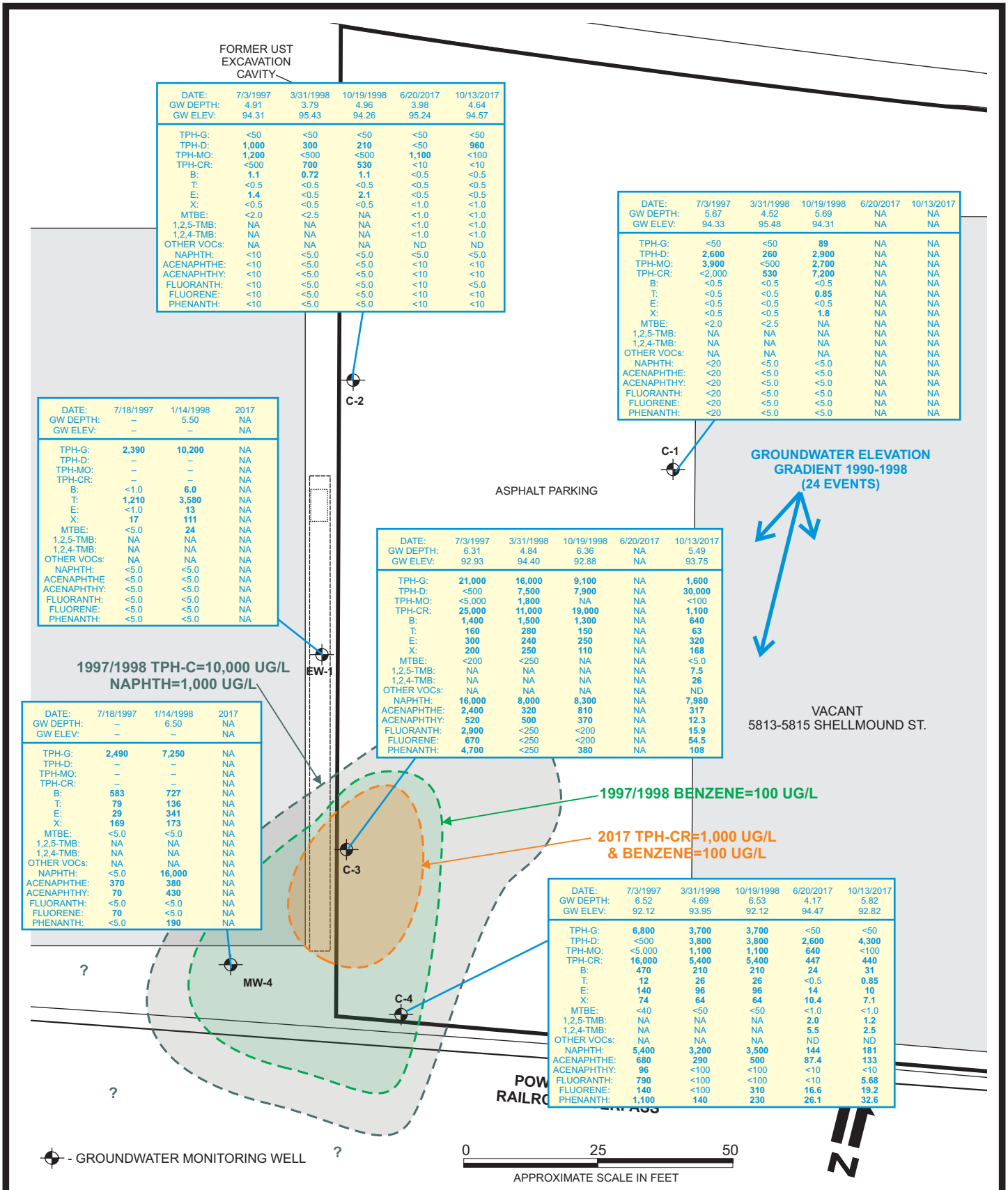
DESIGNED BY:	CHECKED BY: JEG	**SITE PLAN**	DATE: 11/08/2017 FIGURE: **2**
DRAWN BY: JEG	SCALE:		
PROJECT NO:		5613-5815 SHELLMOUND STREET EMERYVILLE, CALIFORNIA	GRIBI



DESIGNED BY:	CHECKED BY: JEG	**PREVIOUS SAMPLE LOCATIONS**	DATE: 11/08/2017	FIGURE: 3
DRAWN BY: JEG	SCALE:			
PROJECT NO:		979 7TH STREET OAKLAND, CALIFORNIA		



DESIGNED BY:	CHECKED BY: JEG	HISTORIC (PRE-1995) SOIL HYDROCARBON RESULTS	DATE: 11/08/2017 FIGURE: 4
DRAWN BY: JEG	SCALE:		
PROJECT NO:		979 7TH STREET OAKLAND, CALIFORNIA	GRIBI



DATE:	7/3/1997	3/31/1998	10/19/1998	6/20/2017	10/13/2017
GW DEPTH:	4.91	3.79	4.96	3.98	4.64
GW ELEV:	94.31	95.43	94.26	95.24	94.57
TPH-G:	<50	<50	<50	<50	<50
TPH-D:	**1,000**	**300**	**210**	<50	**960**
TPH-MO:	**1,200**	<500	<500	**1,100**	<100
TPH-CR:	<500	**700**	**530**	<10	<10
B:	**1.1**	**0.72**	**1.1**	<0.5	<0.5
T:	<0.5	<0.5	<0.5	<0.5	<0.5
E:	**1.4**	<0.5	**2.1**	<0.5	<0.5
X:	<0.5	<0.5	<0.5	<1.0	<1.0
MTBE:	<2.0	<2.5	NA	<1.0	<1.0
1,2,5-TMB:	NA	NA	NA	<1.0	<1.0
1,2,4-TMB:	NA	NA	NA	<1.0	<1.0
OTHER VOCs:	NA	NA	NA	ND	ND
NAPHTH:	<10	<5.0	<5.0	<5.0	<5.0
ACENAPHTHE:	<10	<5.0	<5.0	<10	<10
ACENAPHTHY:	<10	<5.0	<5.0	<10	<10
FLUORANTH:	<10	<5.0	<5.0	<10	<5.0
FLUORENE:	<10	<5.0	<5.0	<10	<10
PHENANTH:	<10	<5.0	<5.0	<10	<10

DATE:	7/3/1997	3/31/1998	10/19/1998	6/20/2017	10/13/2017
GW DEPTH:	5.67	4.52	5.69	NA	NA
GW ELEV:	94.33	95.48	94.31	NA	NA
TPH-G:	<50	<50	**89**	NA	NA
TPH-D:	**2,600**	**260**	**2,900**	NA	NA
TPH-MO:	**3,900**	<500	**2,700**	NA	NA
TPH-CR:	<2,000	**530**	**7,200**	NA	NA
B:	<0.5	<0.5	<0.5	NA	NA
T:	<0.5	<0.5	**0.85**	NA	NA
E:	<0.5	<0.5	<0.5	NA	NA
X:	<0.5	<0.5	**1.8**	NA	NA
MTBE:	<2.0	<2.5	NA	NA	NA
1,2,5-TMB:	NA	NA	NA	NA	NA
1,2,4-TMB:	NA	NA	NA	NA	NA
OTHER VOCs:	NA	NA	NA	NA	NA
NAPHTH:	<20	<5.0	<5.0	NA	NA
ACENAPHTHE:	<20	<5.0	<5.0	NA	NA
ACENAPHTHY:	<20	<5.0	<5.0	NA	NA
FLUORANTH:	<20	<5.0	<5.0	NA	NA
FLUORENE:	<20	<5.0	<5.0	NA	NA
PHENANTH:	<20	<5.0	<5.0	NA	NA

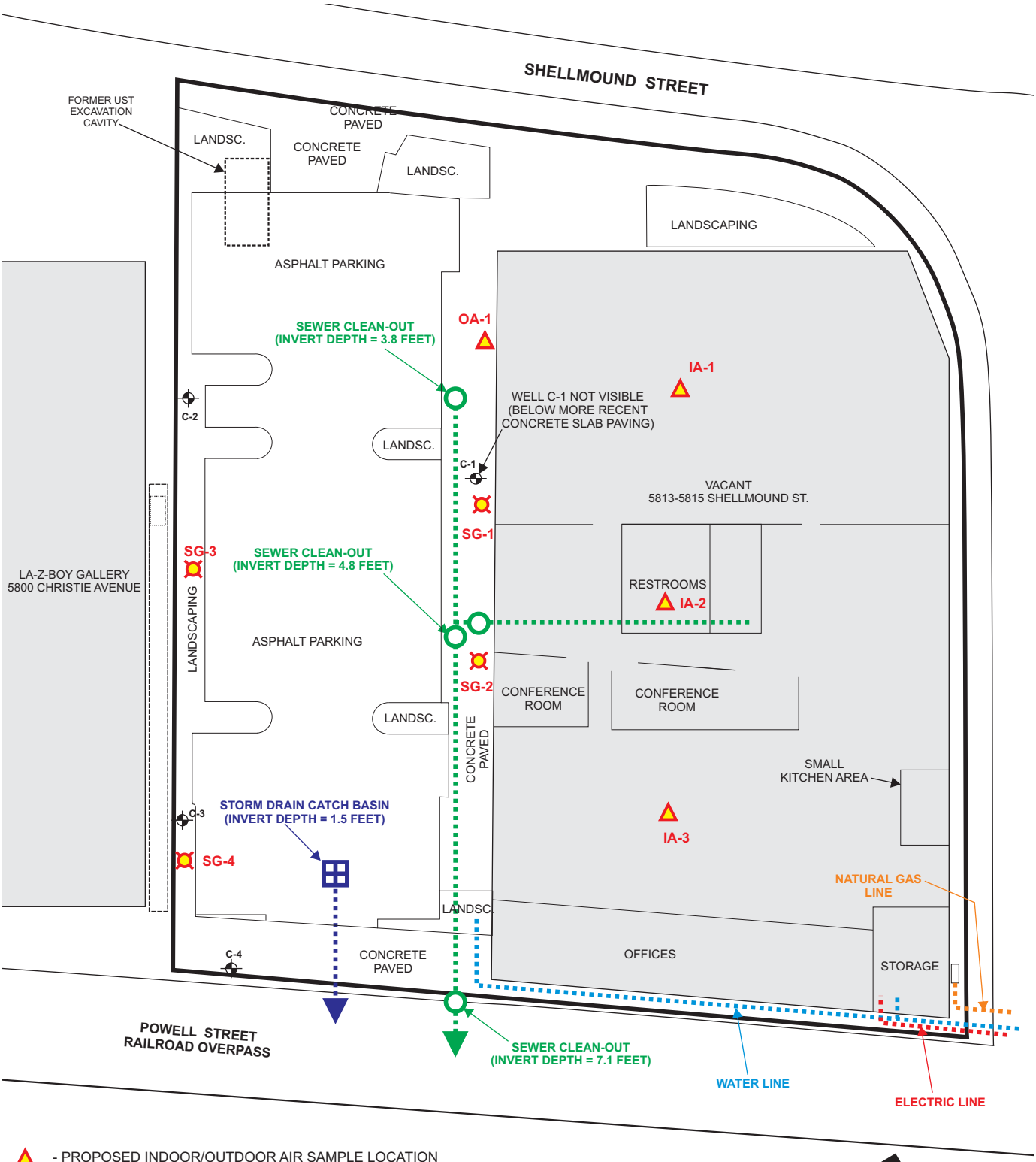
DATE:	7/18/1997	1/14/1998	2017
GW DEPTH:	–	5.50	NA
GW ELEV:	–	–	NA
TPH-G:	**2,390**	**10,200**	NA
TPH-D:	–	–	NA
TPH-MO:	–	–	NA
TPH-CR:	–	–	NA
B:	<1.0	**6.0**	NA
T:	**1,210**	**3,580**	NA
E:	<1.0	**13**	NA
X:	**17**	**111**	NA
MTBE:	<5.0	**24**	NA
1,2,5-TMB:	NA	NA	NA
1,2,4-TMB:	NA	NA	NA
OTHER VOCs:	NA	NA	NA
NAPHTH:	<5.0	<5.0	NA
ACENAPHTHE	<5.0	<5.0	NA
ACENAPHTHY:	<5.0	<5.0	NA
FLUORANTH:	<5.0	<5.0	NA
FLUORENE:	<5.0	<5.0	NA
PHENANTH:	<5.0	<5.0	NA

DATE:	7/3/1997	3/31/1998	10/19/1998	6/20/2017	10/13/2017
GW DEPTH:	6.31	4.84	6.36	NA	5.49
GW ELEV:	92.93	94.40	92.88	NA	93.75
TPH-G:	**21,000**	**16,000**	**9,100**	NA	**1,600**
TPH-D:	<500	**7,500**	**7,900**	NA	**30,000**
TPH-MO:	<5,000	**1,800**	NA	NA	<100
TPH-CR:	**25,000**	**11,000**	**19,000**	NA	**1,100**
B:	**1,400**	**1,500**	**1,300**	NA	**640**
T:	**160**	**280**	**150**	NA	**63**
E:	**300**	**240**	**250**	NA	**320**
X:	**200**	**250**	**110**	NA	**168**
MTBE:	<200	<250	NA	NA	<5.0
1,2,5-TMB:	NA	NA	NA	NA	**7.5**
1,2,4-TMB:	NA	NA	NA	NA	**26**
OTHER VOCs:	NA	NA	NA	NA	ND
NAPHTH:	**16,000**	**8,000**	**8,300**	NA	**7,980**
ACENAPHTHE:	**2,400**	**320**	**810**	NA	**317**
ACENAPHTHY:	**520**	**500**	**370**	NA	**12.3**
FLUORANTH:	**2,900**	<250	<200	NA	**15.9**
FLUORENE:	**670**	<250	<200	NA	**54.5**
PHENANTH:	**4,700**	<250	**380**	NA	**108**

DATE:	7/18/1997	1/14/1998	2017
GW DEPTH:	–	6.50	NA
GW ELEV:	–	–	NA
TPH-G:	**2,490**	**7,250**	NA
TPH-D:	–	–	NA
TPH-MO:	–	–	NA
TPH-CR:	–	–	NA
B:	**583**	**727**	NA
T:	**79**	**136**	NA
E:	**29**	**341**	NA
X:	**169**	**173**	NA
MTBE:	<5.0	<5.0	NA
1,2,5-TMB:	NA	NA	NA
1,2,4-TMB:	NA	NA	NA
OTHER VOCs:	NA	NA	NA
NAPHTH:	<5.0	**16,000**	NA
ACENAPHTHE:	**370**	**380**	NA
ACENAPHTHY:	**70**	**430**	NA
FLUORANTH:	<5.0	<5.0	NA
FLUORENE:	**70**	<5.0	NA
PHENANTH:	<5.0	**190**	NA

DATE:	7/3/1997	3/31/1998	10/19/1998	6/20/2017	10/13/2017
GW DEPTH:	6.52	4.69	6.53	4.17	5.82
GW ELEV:	92.12	93.95	92.12	94.47	92.82
TPH-G:	**6,800**	**3,700**	**3,700**	<50	<50
TPH-D:	<500	**3,800**	**3,800**	**2,600**	**4,300**
TPH-MO:	<5,000	**1,100**	**1,100**	**640**	<100
TPH-CR:	**16,000**	**5,400**	**5,400**	**447**	**440**
B:	**470**	**210**	**210**	**24**	**31**
T:	**12**	**26**	**26**	<0.5	**0.85**
E:	**140**	**96**	**96**	**14**	**10**
X:	**74**	**64**	**64**	**10.4**	**7.1**
MTBE:	<40	<50	<50	<1.0	<1.0
1,2,5-TMB:	NA	NA	NA	**2.0**	**1.2**
1,2,4-TMB:	NA	NA	NA	**5.5**	**2.5**
OTHER VOCs:	NA	NA	NA	ND	ND
NAPHTH:	**5,400**	**3,200**	**3,500**	**144**	**181**
ACENAPHTHE:	**680**	**290**	**500**	**87.4**	**133**
ACENAPHTHY:	**96**	<100	<100	<10	<10
FLUORANTH:	**790**	<100	<100	<10	**5.68**
FLUORENE:	**140**	<100	**310**	**16.6**	**19.2**
PHENANTH:	**1,100**	**140**	**230**	**26.1**	**32.6**

DESIGNED BY:	CHECKED BY: JEG	**GROUNDWATER HYDROCARBON RESULTS**	DATE: 11/08/2017 / FIGURE: 5
DRAWN BY: JEG	SCALE:		
PROJECT NO:		979 7TH STREET OAKLAND, CALIFORNIA	GRIBI



- PROPOSED INDOOR/OUTDOOR AIR SAMPLE LOCATION
- PROPOSED SOIL GAS SAMPLE LOCATION
- GROUNDWATER MONITORING WELL LOCATION

0 30 60

APPROXIMATE SCALE IN FEET

N

DESIGNED BY:	CHECKED BY: JEG	**SUBSURFACE UTILITIES & PROPOSED VAPOR SAMPLE LOCATIONS**	DATE: 11/08/2017	FIGURE: 6
DRAWN BY: JEG	SCALE:			
PROJECT NO:		979 7TH STREET OAKLAND, CALIFORNIA		

ATTACHMENT A

GROUNDWATER SAMPLING FIELD RECORDS

Groundwater Monitoring Field Sheet

Client Name: Park
Project Name:
Sampling Personnel: MHR
Date: 10/13/2012
Weather Conditions: Hazy, mid

Well ID: C-2
Casing Diameter (inches): 2.0
Total Depth (feet): 14.0
Depth to Water: 4.64
Depth to Free Product: —
Water Column (ft): 9.36
Product Thickness: 0
One Well Volume (gal): 1.59
3x Well Volume (gal): 4.8

Notes:
One Well Volume is determine by multiplying "Water Column" by:
- 0.059 for 3/4-inch well, 0.17 for 2-inch well, 0.38 for 3-inch well, 0.66 for 4-inch well, 1.50 for 6-inch well

FIELD METHODS

Activity	*Bailer*	*Pump*	*Comments*
Purge Method		X	12V purge pump
Sample Method		X	12V purge pump

FIELD PARAMETERS

Time	*Volume Purged*	*Temp. (F or C)*	*E.C. (mS/cm)*	*D.O. (mg/L)*	*pH*	*ORP (mV)*	*Comments*
1138							
1140	2	20.7	8.90		6.87		
1142	4	20.1	8.87		6.85		
1144	6	20.0	8.66		6.85		

SAMPLE OBSERVATIONS

Characteristic	*None*	*Slight*	*Moderate*	*Strong*	*Comments*
Color	X				
Odor	X				
Turbidity	X				
Sheen	X				
Other:					

Sample Time: 1145
Sampler's Signature: MHR

Groundwater Monitoring Field Sheet

Client Name: Park
Project Name:
Sampling Personnel: MHR
Date: 10/13/2017
Weather Conditions: Windy, mild

Well ID: C-3
Casing Diameter (inches): 2.0
Total Depth (feet): 15.0
Depth to Water: 5.49
Depth to Free Product: —
Water Column (ft): 9.51
Product Thickness: 0
One Well Volume (gal): 1.62
3x Well Volume (gal): 4.9

Notes:
One Well Volume is determine by multiplying "Water Column" by:
- 0.059 for 3/4-inch well, 0.17 for 2-inch well, 0.38 for 3-inch well, 0.66 for 4-inch well, 1.50 for 6-inch well

FIELD METHODS

Activity	*Bailer*	*Pump*	*Comments*
Purge Method		X	12V purge pump
Sample Method		X	12V purge pump

FIELD PARAMETERS

Time	*Volume Purged*	*Temp. (F or C)*	*E.C. (mS/cm)*	*D.O. (mg/L)*	*pH*	*ORP (mV)*	*Comments*
1418							
1424	5	20.8	0.91		7.01		
1433	10	20.4	0.93		7.11		Slow purging.

SAMPLE OBSERVATIONS

Characteristic	*None*	*Slight*	*Moderate*	*Strong*	*Comments*
Color	X				
Odor		X→			HC
Turbidity	X				
Sheen	X				
Other:					

Sample Time: 1435
Sampler's Signature: MHR

Groundwater Monitoring Field Sheet

Client Name: Paric
Project Name:
Sampling Personnel: MSR
Date: 10/13/2017
Weather Conditions: Hazy mild

Well ID: C-4
Casing Diameter (inches): 2.0
Total Depth (feet): 14.1
Depth to Water: 5.82
Depth to Free Product: —
Water Column (ft): 8.28
Product Thickness: 0
One Well Volume (gal): 1.41
3x Well Volume (gal): 4.2

Notes:
One Well Volume is determine by multiplying "Water Column" by:
- 0.059 for 3/4-inch well, 0.17 for 2-inch well, 0.38 for 3-inch well, 0.66 for 4-inch well, 1.50 for 6-inch well

FIELD METHODS

Activity	*Bailer*	*Pump*	*Comments*
Purge Method		X	12V purge pump
Sample Method		X	12V purge pump

FIELD PARAMETERS

Time	*Volume Purged*	*Temp. (F or C)*	*E.C. (mS/cm)*	*D.O. (mg/L)*	*pH*	*ORP (mV)*	*Comments*
1307							
1310	2	19.6	1.31		7.05		
1313	4	19.6	1.54		7.04		
1316	6	19.7	1.59		7.04		

SAMPLE OBSERVATIONS

Characteristic	*None*	*Slight*	*Moderate*	*Strong*	*Comments*
Color	X				
Odor		X			HC
Turbidity	X				
Sheen	X				
Other:					

Sample Time 1320 **Sampler's Signature** MSR

ATTACHMENT B

LABORATORY REPORT AND
CHAIN OF CUSTODY RECORDS

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

28 October 2017

Jim Gribi
Gribi Associates
1090 Adam Street, Suite K
Benicia, CA 94510

RE: Goldsmith Lathrop

Enclosed are the results of analyses for samples received by the laboratory on 10/17/17 09:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Mike Jaroudi For Lisa Nguyen
Project Manager Assistant

SunStar Laboratories, Inc.
PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive
Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
C-2	T172672-01	Water	10/13/17 11:45	10/17/17 09:20
C-3	T172672-02	Water	10/13/17 13:20	10/17/17 09:20
C-4	T172672-03	Water	10/13/17 14:35	10/17/17 09:20

SunStar Laboratories, Inc.

Mike Jaroudi For Lisa Nguyen, Project Manager Assistant

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Providing Quality Analytical Services Nationwide

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Lake Forest, California 92630
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949.297.5027 Fax

Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

DETECTIONS SUMMARY

Sample ID: C-2 **Laboratory ID:** T172672-01

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**0.96**	0.050	mg/l	EPA 8015B	

Sample ID: C-3 **Laboratory ID:** T172672-02

Analyte	Result	Reporting Limit	Units	Method	Notes
C6-C12 (GRO)	**1.6**	0.050	mg/l	EPA 8015B	
C13-C28 (DRO)	**30**	0.050	mg/l	EPA 8015B	
Naphthalene	**18000**	500	ug/l	EPA 8260B	
1,3,5-Trimethylbenzene	**7.5**	5.0	ug/l	EPA 8260B	
1,2,4-Trimethylbenzene	**26**	5.0	ug/l	EPA 8260B	
Benzene	**640**	2.5	ug/l	EPA 8260B	
Toluene	**62**	2.5	ug/l	EPA 8260B	
Ethylbenzene	**320**	2.5	ug/l	EPA 8260B	
m,p-Xylene	**92**	5.0	ug/l	EPA 8260B	
o-Xylene	**76**	2.5	ug/l	EPA 8260B	
Creosote	**1100**	100	ug/l	EPA 8270C	
Acenaphthene	**317**	10.0	ug/l	EPA 8270C	
Acenaphthylene	**12.3**	10.0	ug/l	EPA 8270C	
Fluoranthene	**15.9**	5.00	ug/l	EPA 8270C	
Fluorene	**54.5**	10.0	ug/l	EPA 8270C	
Naphthalene	**7980**	500	ug/l	EPA 8270C	
Phenanthrene	**108**	10.0	ug/l	EPA 8270C	
Pyrene	**10.2**	10.0	ug/l	EPA 8270C	

Sample ID: C-4 **Laboratory ID:** T172672-03

Analyte	Result	Reporting Limit	Units	Method	Notes
C13-C28 (DRO)	**4.3**	0.050	mg/l	EPA 8015B	
Isopropylbenzene	**2.4**	1.0	ug/l	EPA 8260B	
Naphthalene	**800**	50	ug/l	EPA 8260B	
1,3,5-Trimethylbenzene	**1.2**	1.0	ug/l	EPA 8260B	

SunStar Laboratories, Inc.

Mike Jaroudi For Lisa Nguyen, Project Manager Assistant

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Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

Sample ID: C-4 **Laboratory ID:** T172672-03

Analyte	Result	Reporting Limit	Units	Method	Notes
1,2,4-Trimethylbenzene	**2.5**	1.0	ug/l	EPA 8260B	
Benzene	**31**	0.50	ug/l	EPA 8260B	
Toluene	**0.85**	0.50	ug/l	EPA 8260B	
Ethylbenzene	**10**	0.50	ug/l	EPA 8260B	
m,p-Xylene	**3.9**	1.0	ug/l	EPA 8260B	
o-Xylene	**3.2**	0.50	ug/l	EPA 8260B	
Creosote	**440**	10	ug/l	EPA 8270C	
Acenaphthene	**133**	10.0	ug/l	EPA 8270C	
Fluoranthene	**5.68**	5.00	ug/l	EPA 8270C	
Fluorene	**19.2**	10.0	ug/l	EPA 8270C	
Naphthalene	**181**	5.00	ug/l	EPA 8270C	
Phenanthrene	**32.6**	10.0	ug/l	EPA 8270C	

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Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

C-2

T172672-01 (Water)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B									
C6-C12 (GRO)	ND	0.050	mg/l	1	7101710	10/17/17	10/17/17	EPA 8015B	
C13-C28 (DRO)	**0.96**	0.050	"	"	"	"	"	"	
C29-C40 (MORO)	ND	0.10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*77.3 %*	*65-135*		"	"	"	"	
Volatile Organic Compounds by EPA Method 8260B									
Bromobenzene	ND	1.0	ug/l	1	7101709	10/17/17	10/18/17	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	

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Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

C-2

T172672-01 (Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
cis-1,2-Dichloroethene	ND	1.0	ug/l	1	7101709	10/17/17	10/18/17	EPA 8260B	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

Mike Jaroudi For Lisa Nguyen, Project Manager Assistant

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Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

C-2

T172672-01 (Water)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organic Compounds by EPA Method 8260B									
o-Xylene	ND	0.50	ug/l	1	7101709	10/17/17	10/18/17	EPA 8260B	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*97.5 %*	*88.8-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*106 %*	*83.5-119*		"	"	"	"	
Surrogate: Dibromofluoromethane		*95.4 %*	*81.1-136*		"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Creosote	ND	10	ug/l	1	7101941	10/19/17	10/28/17	EPA 8270C	
Surrogate: Terphenyl-dl4		*47.6 %*	*29.1-130*		"	"	"	"	
PAH compounds by Semivolatile GCMS									
Acenaphthene	ND	10.0	ug/l	1	7101941	"	10/28/17	EPA 8270C	
Acenaphthylene	ND	10.0	"	"	"	"	"	"	
Anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	20.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10.0	"	"	"	"	"	"	
Chrysene	ND	10.0	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
Fluorene	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
Phenanthrene	ND	10.0	"	"	"	"	"	"	
Pyrene	ND	10.0	"	"	"	"	"	"	
Surrogate: Terphenyl-dl4		*47.6 %*	*33-141*		"	"	"	"	

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Mike Jaroudi For Lisa Nguyen, Project Manager Assistant

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Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

C-2

T172672-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

SunStar Laboratories, Inc.

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949.297.5027 Fax

Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

C-3

T172672-02 (Water)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B									
C6-C12 (GRO)	**1.6**	0.050	mg/l	1	7101710	10/17/17	10/17/17	EPA 8015B	
C13-C28 (DRO)	**30**	0.050	"	"	"	"	"	"	
C29-C40 (MORO)	ND	0.10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*76.4 %*	*65-135*		"	"	"	"	
Volatile Organic Compounds by EPA Method 8260B									
Bromobenzene	ND	5.0	ug/l	5	7101709	10/17/17	10/17/17	EPA 8260B	R-07
Bromochloromethane	ND	5.0	"	"	"	"	"	"	R-07
Bromodichloromethane	ND	5.0	"	"	"	"	"	"	R-07
Bromoform	ND	5.0	"	"	"	"	"	"	R-07
Bromomethane	ND	5.0	"	"	"	"	"	"	R-07
n-Butylbenzene	ND	5.0	"	"	"	"	"	"	R-07
sec-Butylbenzene	ND	5.0	"	"	"	"	"	"	R-07
tert-Butylbenzene	ND	5.0	"	"	"	"	"	"	R-07
Carbon tetrachloride	ND	5.0	"	"	"	"	"	"	R-07
Chlorobenzene	ND	5.0	"	"	"	"	"	"	R-07
Chloroethane	ND	5.0	"	"	"	"	"	"	R-07
Chloroform	ND	5.0	"	"	"	"	"	"	R-07
Chloromethane	ND	5.0	"	"	"	"	"	"	R-07
2-Chlorotoluene	ND	5.0	"	"	"	"	"	"	R-07
4-Chlorotoluene	ND	5.0	"	"	"	"	"	"	R-07
Dibromochloromethane	ND	5.0	"	"	"	"	"	"	R-07
1,2-Dibromo-3-chloropropane	ND	25	"	"	"	"	"	"	R-07
1,2-Dibromoethane (EDB)	ND	5.0	"	"	"	"	"	"	R-07
Dibromomethane	ND	5.0	"	"	"	"	"	"	R-07
1,2-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	R-07
1,3-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	R-07
1,4-Dichlorobenzene	ND	5.0	"	"	"	"	"	"	R-07
Dichlorodifluoromethane	ND	2.5	"	"	"	"	"	"	R-07
1,1-Dichloroethane	ND	5.0	"	"	"	"	"	"	R-07
1,2-Dichloroethane	ND	2.5	"	"	"	"	"	"	R-07
1,1-Dichloroethene	ND	5.0	"	"	"	"	"	"	R-07
cis-1,2-Dichloroethene	ND	5.0	"	"	"	"	"	"	R-07

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Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

C-3

T172672-02 (Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
trans-1,2-Dichloroethene	ND	5.0	ug/l	5	7101709	10/17/17	10/17/17	EPA 8260B	R-07
1,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	R-07
1,3-Dichloropropane	ND	5.0	"	"	"	"	"	"	R-07
2,2-Dichloropropane	ND	5.0	"	"	"	"	"	"	R-07
1,1-Dichloropropene	ND	5.0	"	"	"	"	"	"	R-07
cis-1,3-Dichloropropene	ND	2.5	"	"	"	"	"	"	R-07
trans-1,3-Dichloropropene	ND	2.5	"	"	"	"	"	"	R-07
Hexachlorobutadiene	ND	5.0	"	"	"	"	"	"	R-07
Isopropylbenzene	ND	5.0	"	"	"	"	"	"	R-07
p-Isopropyltoluene	ND	5.0	"	"	"	"	"	"	R-07
Methylene chloride	ND	5.0	"	"	"	"	"	"	R-07
Naphthalene	**18000**	500	"	500	"	"	"	"	
n-Propylbenzene	ND	5.0	"	5	"	"	"	"	R-07
Styrene	ND	5.0	"	"	"	"	"	"	R-07
1,1,2,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	R-07
1,1,1,2-Tetrachloroethane	ND	5.0	"	"	"	"	"	"	R-07
Tetrachloroethene	ND	5.0	"	"	"	"	"	"	R-07
1,2,3-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	R-07
1,2,4-Trichlorobenzene	ND	5.0	"	"	"	"	"	"	R-07
1,1,2-Trichloroethane	ND	5.0	"	"	"	"	"	"	R-07
1,1,1-Trichloroethane	ND	5.0	"	"	"	"	"	"	R-07
Trichloroethene	ND	5.0	"	"	"	"	"	"	R-07
Trichlorofluoromethane	ND	5.0	"	"	"	"	"	"	R-07
1,2,3-Trichloropropane	ND	5.0	"	"	"	"	"	"	R-07
1,3,5-Trimethylbenzene	**7.5**	5.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**26**	5.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.0	"	"	"	"	"	"	R-07
Benzene	**640**	2.5	"	"	"	"	"	"	
Toluene	**62**	2.5	"	"	"	"	"	"	
Ethylbenzene	**320**	2.5	"	"	"	"	"	"	
m,p-Xylene	**92**	5.0	"	"	"	"	"	"	
o-Xylene	**76**	2.5	"	"	"	"	"	"	

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Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

C-3

T172672-02 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SunStar Laboratories, Inc.									
Volatile Organic Compounds by EPA Method 8260B									
Tert-amyl methyl ether	ND	10	ug/l	5	7101709	10/17/17	10/17/17	EPA 8260B	R-07
Tert-butyl alcohol	ND	50	"	"	"	"	"	"	R-07
Di-isopropyl ether	ND	10	"	"	"	"	"	"	R-07
Ethyl tert-butyl ether	ND	10	"	"	"	"	"	"	R-07
Methyl tert-butyl ether	ND	5.0	"	"	"	"	"	"	R-07
Surrogate: Toluene-d8		*97.9 %*		*88.8-117*		*"*	*"*	*"*	*"*
Surrogate: 4-Bromofluorobenzene		*111 %*		*83.5-119*		*"*	*"*	*"*	*"*
Surrogate: Dibromofluoromethane		*93.6 %*		*81.1-136*		*"*	*"*	*"*	*"*
Semivolatile Organic Compounds by EPA Method 8270C									
Creosote	**1100**	100	ug/l	10	7101941	10/19/17	10/28/17	EPA 8270C	
Surrogate: Terphenyl-dl4		*38.4 %*		*29.1-130*		*"*	*"*	*"*	*"*
PAH compounds by Semivolatile GCMS									
Acenaphthene	**317**	10.0	ug/l	1	7101941	"	10/28/17	EPA 8270C	
Acenaphthylene	**12.3**	10.0	"	"	"	"	"	"	
Anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	20.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10.0	"	"	"	"	"	"	
Chrysene	ND	10.0	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
Fluoranthene	**15.9**	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
Fluorene	**54.5**	10.0	"	"	"	"	"	"	
Naphthalene	**7980**	500	"	100	"	"	"	"	
Phenanthrene	**108**	10.0	"	1	"	"	"	"	
Pyrene	**10.2**	10.0	"	"	"	"	"	"	
Surrogate: Terphenyl-dl4		*38.4 %*		*33-141*		*"*	*"*	*"*	*"*

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1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

C-4

T172672-03 (Water)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Extractable Petroleum Hydrocarbons by 8015B									
C6-C12 (GRO)	ND	0.050	mg/l	1	7101710	10/17/17	10/17/17	EPA 8015B	
C13-C28 (DRO)	**4.3**	0.050	"	"	"	"	"	"	
C29-C40 (MORO)	ND	0.10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		*79.7 %*	*65-135*		"	"	"	"	
Volatile Organic Compounds by EPA Method 8260B									
Bromobenzene	ND	1.0	ug/l	1	7101709	10/17/17	10/18/17	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.0	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	

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1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

C-4

T172672-03 (Water)

SunStar Laboratories, Inc.

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
cis-1,2-Dichloroethene	ND	1.0	ug/l	1	7101709	10/17/17	10/18/17	EPA 8260B	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	**2.4**	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	**800**	50	"	50	"	"	"	"	
n-Propylbenzene	ND	1.0	"	1	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**1.2**	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**2.5**	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
Benzene	**31**	0.50	"	"	"	"	"	"	
Toluene	**0.85**	0.50	"	"	"	"	"	"	
Ethylbenzene	**10**	0.50	"	"	"	"	"	"	
m,p-Xylene	**3.9**	1.0	"	"	"	"	"	"	
o-Xylene	**3.2**	0.50	"	"	"	"	"	"	

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Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

C-4

T172672-03 (Water)

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Volatile Organic Compounds by EPA Method 8260B									
Tert-amyl methyl ether	ND	2.0	ug/l	1	7101709	10/17/17	10/18/17	EPA 8260B	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	
Surrogate: Toluene-d8		*96.9 %*	*88.8-117*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*107 %*	*83.5-119*		"	"	"	"	
Surrogate: Dibromofluoromethane		*92.9 %*	*81.1-136*		"	"	"	"	
Semivolatile Organic Compounds by EPA Method 8270C									
Creosote	**440**	10	ug/l	1	7101941	10/19/17	10/28/17	EPA 8270C	
Surrogate: Terphenyl-dl4		*36.8 %*	*29.1-130*		"	"	"	"	
PAH compounds by Semivolatile GCMS									
Acenaphthene	**133**	10.0	ug/l	1	7101941	"	10/28/17	EPA 8270C	
Acenaphthylene	ND	10.0	"	"	"	"	"	"	
Anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	20.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10.0	"	"	"	"	"	"	
Chrysene	ND	10.0	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
Fluoranthene	**5.68**	5.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
Fluorene	**19.2**	10.0	"	"	"	"	"	"	
Naphthalene	**181**	5.00	"	"	"	"	"	"	
Phenanthrene	**32.6**	10.0	"	"	"	"	"	"	
Pyrene	ND	10.0	"	"	"	"	"	"	
Surrogate: Terphenyl-dl4		*36.8 %*	*33-141*		"	"	"	"	

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Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

Extractable Petroleum Hydrocarbons by 8015B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7101710 - EPA 3510C GC										
Blank (7101710-BLK1)				Prepared & Analyzed: 10/17/17						
C6-C12 (GRO)	ND	0.050	mg/l							
C13-C28 (DRO)	ND	0.050	"							
C29-C40 (MORO)	ND	0.10	"							
Surrogate: p-Terphenyl	*3.24*		*"*	*4.00*		*80.9*	*65-135*			
LCS (7101710-BS1)				Prepared & Analyzed: 10/17/17						
C13-C28 (DRO)	21.0	0.050	mg/l	20.0		105	75-125			
Surrogate: p-Terphenyl	*3.47*		*"*	*4.00*		*86.7*	*65-135*			
LCS Dup (7101710-BSD1)				Prepared & Analyzed: 10/17/17						
C13-C28 (DRO)	23.5	0.050	mg/l	20.0		118	75-125	11.2	20	
Surrogate: p-Terphenyl	*3.28*		*"*	*4.00*		*82.0*	*65-135*			

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Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7101709 - EPA 5030 GCMS										
Blank (7101709-BLK1)				Prepared & Analyzed: 10/17/17						
Bromobenzene	ND	1.0	ug/l							
Bromochloromethane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
Bromoform	ND	1.0	"							
Bromomethane	ND	1.0	"							
n-Butylbenzene	ND	1.0	"							
sec-Butylbenzene	ND	1.0	"							
tert-Butylbenzene	ND	1.0	"							
Carbon tetrachloride	ND	1.0	"							
Chlorobenzene	ND	1.0	"							
Chloroethane	ND	1.0	"							
Chloroform	ND	1.0	"							
Chloromethane	ND	1.0	"							
2-Chlorotoluene	ND	1.0	"							
4-Chlorotoluene	ND	1.0	"							
Dibromochloromethane	ND	1.0	"							
1,2-Dibromo-3-chloropropane	ND	5.0	"							
1,2-Dibromoethane (EDB)	ND	1.0	"							
Dibromomethane	ND	1.0	"							
1,2-Dichlorobenzene	ND	1.0	"							
1,3-Dichlorobenzene	ND	1.0	"							
1,4-Dichlorobenzene	ND	1.0	"							
Dichlorodifluoromethane	ND	0.50	"							
1,1-Dichloroethane	ND	1.0	"							
1,2-Dichloroethane	ND	0.50	"							
1,1-Dichloroethene	ND	1.0	"							
cis-1,2-Dichloroethene	ND	1.0	"							
trans-1,2-Dichloroethene	ND	1.0	"							
1,2-Dichloropropane	ND	1.0	"							
1,3-Dichloropropane	ND	1.0	"							
2,2-Dichloropropane	ND	1.0	"							
1,1-Dichloropropene	ND	1.0	"							
cis-1,3-Dichloropropene	ND	0.50	"							
trans-1,3-Dichloropropene	ND	0.50	"							
Hexachlorobutadiene	ND	1.0	"							
Isopropylbenzene	ND	1.0	"							

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Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7101709 - EPA 5030 GCMS										
Blank (7101709-BLK1)				Prepared & Analyzed: 10/17/17						
p-Isopropyltoluene	ND	1.0	ug/l							
Methylene chloride	ND	1.0	"							
Naphthalene	ND	1.0	"							
n-Propylbenzene	ND	1.0	"							
Styrene	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,1,1,2-Tetrachloroethane	ND	1.0	"							
Tetrachloroethene	ND	1.0	"							
1,2,3-Trichlorobenzene	ND	1.0	"							
1,2,4-Trichlorobenzene	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
1,1,1-Trichloroethane	ND	1.0	"							
Trichloroethene	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
1,2,3-Trichloropropane	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
Vinyl chloride	ND	1.0	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	0.50	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	10	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	1.0	"							
Surrogate: Toluene-d8	*8.13*		*"*	*8.00*		*102*	*88.8-117*			
Surrogate: 4-Bromofluorobenzene	*8.28*		*"*	*8.00*		*104*	*83.5-119*			
Surrogate: Dibromofluoromethane	*7.62*		*"*	*8.00*		*95.2*	*81.1-136*			

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Mike Jaroudi For Lisa Nguyen, Project Manager Assistant

SunStar Laboratories, Inc.
Providing Quality Analytical Services Nationwide

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Lake Forest, California 92630
949.297.5020 Phone
949.297.5027 Fax

Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7101709 - EPA 5030 GCMS										
LCS (7101709-BS1)				Prepared & Analyzed: 10/17/17						
Chlorobenzene	20.4	1.0	ug/l	20.0		102	75-125			
1,1-Dichloroethene	18.1	1.0	"	20.0		90.4	75-125			
Trichloroethene	19.0	1.0	"	20.0		94.8	75-125			
Benzene	18.3	0.50	"	20.0		91.4	75-125			
Toluene	18.0	0.50	"	20.0		90.2	75-125			
Surrogate: Toluene-d8	*7.80*		*"*	*8.00*		*97.5*	*88.8-117*			
Surrogate: 4-Bromofluorobenzene	*8.33*		*"*	*8.00*		*104*	*83.5-119*			
Surrogate: Dibromofluoromethane	*7.83*		*"*	*8.00*		*97.9*	*81.1-136*			
LCS Dup (7101709-BSD1)				Prepared & Analyzed: 10/17/17						
Chlorobenzene	22.2	1.0	ug/l	20.0		111	75-125	8.55	20	
1,1-Dichloroethene	18.9	1.0	"	20.0		94.6	75-125	4.43	20	
Trichloroethene	20.1	1.0	"	20.0		100	75-125	5.59	20	
Benzene	19.5	0.50	"	20.0		97.3	75-125	6.20	20	
Toluene	19.5	0.50	"	20.0		97.3	75-125	7.57	20	
Surrogate: Toluene-d8	*7.93*		*"*	*8.00*		*99.1*	*88.8-117*			
Surrogate: 4-Bromofluorobenzene	*8.43*		*"*	*8.00*		*105*	*83.5-119*			
Surrogate: Dibromofluoromethane	*7.47*		*"*	*8.00*		*93.4*	*81.1-136*			

SunStar Laboratories, Inc.

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Mike Jaroudi For Lisa Nguyen, Project Manager Assistant

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Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7101941 - EPA 3510C GCMS/ECD										
Blank (7101941-BLK1)				Prepared: 10/19/17 Analyzed: 10/28/17						
Creosote	ND	10	ug/l							
Surrogate: Terphenyl-dl4	*85.3*		*"*	*200*		*42.7*	*29.1-130*			

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949.297.5027 Fax

Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

PAH compounds by Semivolatile GCMS - Quality Control

SunStar Laboratories, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7101941 - EPA 3510C GCMS/ECD										
Blank (7101941-BLK1)				Prepared: 10/19/17 Analyzed: 10/28/17						
Acenaphthene	ND	10.0	ug/l							
Acenaphthylene	ND	10.0	"							
Anthracene	ND	10.0	"							
Benzo (a) anthracene	ND	10.0	"							
Benzo (b) fluoranthene	ND	10.0	"							
Benzo (k) fluoranthene	ND	10.0	"							
Benzo (g,h,i) perylene	ND	20.0	"							
Benzo (a) pyrene	ND	10.0	"							
Chrysene	ND	10.0	"							
Dibenz (a,h) anthracene	ND	10.0	"							
Fluoranthene	ND	5.00	"							
Indeno (1,2,3-cd) pyrene	ND	10.0	"							
Fluorene	ND	10.0	"							
Naphthalene	ND	5.00	"							
Phenanthrene	ND	10.0	"							
Pyrene	ND	10.0	"							
Surrogate: Terphenyl-dl4	*154*		*"*	*200*		*77.2*	*33-141*			
LCS (7101941-BS1)				Prepared: 10/19/17 Analyzed: 10/28/17						
Acenaphthene	132	10.0	ug/l	200		66.0	50-130			
Pyrene	105	10.0	"	200		52.4	26-127			
Surrogate: Terphenyl-dl4	*144*		*"*	*200*		*72.1*	*33-141*			
LCS Dup (7101941-BSD1)				Prepared: 10/19/17 Analyzed: 10/27/17						
Acenaphthene	132	10.0	ug/l	200		65.9	50-130	0.152	31	
Pyrene	101	10.0	"	200		50.7	26-127	3.26	31	
Surrogate: Terphenyl-dl4	*140*		*"*	*200*		*70.1*	*33-141*			

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Mike Jaroudi For Lisa Nguyen, Project Manager Assistant

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PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

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949.297.5027 Fax

Gribi Associates	Project: Goldsmith Lathrop	
1090 Adam Street, Suite K	Project Number: [none]	**Reported:**
Benicia CA, 94510	Project Manager: Jim Gribi	10/28/17 14:53

Notes and Definitions

R-07	Reporting limit for this compound(s) has been raised to account for dilution necessary due to high levels of interfering compound(s) and/or matrix affect.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

SunStar Laboratories, Inc.

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Mike Jaroudi For Lisa Nguyen, Project Manager Assistant

SunStar Laboratories, Inc.

PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Chain of Custody Record

Client: Gribi Associates
Address: 1090 Adams St, #K, Benicia, CA
Phone: 707-748-7743 Fax: 707-748-7763
Project Manager: J. Gribi

Date: 10/15/2017 Page: 1 Of 1
Project Name: Goldsmith Lathrop
Collector: M. Rosmer Client Project #:
Batch #: T172672 EDF #: T0600102203

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260	8260 + OXY + lead scavenged	8260 BTEX, OXY only	8270	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals	6020 ICP-MS Metals	8270 PNAs w/ creosote			Laboratory ID #	Comments/Preservative	Total # of containers
Jeg #C-2	10/13	1145	water	VOA		X						X			X			01		1
Jeg #C-3	10/13	1320	water	VOA		X						X			X			02		1
Jeg #C-4	10/13	1435	water	VOA		X						X			X			03		1

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
MAR	10/15/17 1100	[signature]	10/15/17 1100
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
GSO	10/17/17 9:20	[signature]	10/17/17 9:20
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers: 12
Chain of Custody seals Y/N/NA: 0
Seals intact? Y/N/NA: 0
Received good condition/cold: 5.1

Turn around time: Std.

Notes

Sample disposal Instructions: Disposal @ $2.00 each ____ Return to client ____ Pickup ____

COC 162735

SunStar Laboratories — Celebrating 20 Years!

SAMPLE RECEIVING REVIEW SHEET

Batch/Work Order #: T172672

Client Name: Gribi

Project: Goldsmith Lathrop

Delivered by: ☐ Client ☐ SunStar Courier ☒ GSO ☐ FedEx ☐ Other

If Courier, Received by: —

Date/Time Courier Received: —

Lab Received by: Brian

Date/Time Lab Received: 10/17/17 9:20

Total number of coolers received: 1

Temperature:	Cooler #1	5.1 °C +/- the CF (- 0.2°C) =	4.9	°C corrected temperature
Temperature:	Cooler #2	°C +/- the CF (- 0.2°C) =		°C corrected temperature
Temperature:	Cooler #3	°C +/- the CF (- 0.2°C) =		°C corrected temperature

Temperature criteria = ≤ 6°C (no frozen containers)	Within criteria?	☒ **Yes** ☐ **No**
If NO:		
Samples received on ice?	☐ Yes	☐ **No → Complete Non-Conformance Sheet**
If on ice, samples received same day collected?	☐ Yes → Acceptable	☐ **No → Complete Non-Conformance Sheet**

Custody seals intact on cooler/sample	☐ Yes	☐ No*	☒ N/A
Sample containers intact	☒ Yes	☐ No*	
Sample labels match Chain of Custody IDs	☒ Yes	☐ No*	
Total number of containers received match COC	☒ Yes	☐ No*	
Proper containers received for analyses requested on COC	☒ Yes	☐ No*	
Proper preservative indicated on COC/containers for analyses requested	☒ Yes	☐ No*	☐ N/A
Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times	☒ **Yes**	☐ **No***	

* Complete Non-Conformance Receiving Sheet if checked

Cooler/Sample Review - Initials and date: JH 10-17-17

Comments:

(949) 297-5020 ■ www.sunstarlabs.com ■ 25712 Commercentre Drive ■ Lake Forest, CA 92630

SunStar Laboratories, Inc.

PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE

25712 Commercentre Drive, Lake Forest, CA 92630
949-297-5020

Chain of Custody Record

Client: Gribi Associates
Address: 1090 Adams St, #K, Benicia, CA
Phone: 707-748-7743 Fax: 707-748-7783
Project Manager: J. Gribi

Date: 10/18/2017 Page: _____ Of _____
Project Name: Goldsmith Lathrop
Collector: M. Rosman Client Project #: _____
Batch #: ~~T172694~~ T172692 EDF #: T0600102203

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260	8260 + OXY	8260 BTEX, OXY only	8270	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chain	6010/7000 Title 22 Metals	6020 ICP-MS Metals	8270 PNAs + Creosote			Laboratory ID #	Comments/Preservative	Total # of containers
MC-2	10/18		water	1 L Amb.											X			01		
MC-3	10/18		water	1 L Amb											X			02		
MC-4	10/18		water	1 L Amb											X			03		

Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time
[signature]	10/18/17 1455	[signature]	10/18/17 1455
[signature] GSO	10.19.17 9:00	[signature]	10.19.17 9:00
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time

Total # of containers: 3
Chain of Custody seals Y/N/NA: NA
Seals intact? Y/N/NA: NA
Received good condition/cold: 4.1

Turn around time: Standard

Notes

Sample disposal Instructions: Disposal @ $2.00 each ____ Return to client ____ Pickup ____

COC 162736

Lisa

From: James Gribi [jgribi@gribiassociates.com]
Sent: Thursday, October 26, 2017 6:12 PM
To: Lisa
Cc: Mathew Rosman; Terry Ferrell
Subject: RE: Report for Goldsmith Lathrop (T172672)

Lisa,

For the 8260, can you please report all of the VOCs?

Thanks!
Jim

James E. Gribi, PG
Principal / Senior Geologist
Gribi Associates
1090 Adams Street, Suite K
Benicia, CA 94510

Phone: 707-748-7743
Cell: 707-631-1505

From: Lisa [mailto:lisa@sunstarlabs.com]
Sent: Tuesday, October 24, 2017 11:09 AM
To: James Gribi <jgribi@gribiassociates.com>
Cc: Mathew Rosman <mrosman@gribiassociates.com>; Terry Ferrell <tferrell@gribiassociates.com>
Subject: Report for Goldsmith Lathrop (T172672)

Hello Jim,

Attached is the report for the following:

Project: Goldsmith Lathrop
Project Number: n/a

8270 PAH and 8270 Creosote results are scheduled to be delivered on 10/26/17 on a standard TAT. An EDF will be sent along with full report once the 8270 results are in. Please let me know if an EDF is required prior to this.

Please let me know if you have any concerns or need any further analyses. Thank you for choosing SunStar Labs.

Lisa Nguyen
Project Manager Assistant

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CA ELAP Certification: 2250 | CA Small Business Certification: 31511

James Gribi

From: Charles <charles@sunstarlabs.com>
Sent: Wednesday, November 8, 2017 9:02 AM
To: James Gribi
Cc: 'Bill'
Subject: Naphthalene by 8260 vs. 8270

Hi Jim,

My name is Charles and I am fairly new as the QA/QC Manager at SunStar Laboratories. I have about 20 years experience in the environmental laboratory, including as a VOA analyst, in Quality Assurance, and as a Project Manager. Bill passed on your concern about an apparent discrepancy between the results for Naphthalene when comparing EPA Method 8260 with 8270. I appreciate your concern and thank you for recognizing that as the 8260 results are greater than 2X the 8270 reasons. Normally the discrepancy is not quite so large, but they are often considerably different.

The difference is for a couple reasons. First, VOAs by 8260 is designed to handle compounds with a boiling point of less than 150C, yet Naphthalene has a BP of slightly over 200C. Naphthalene comes off at the end of the VOA run. Volatile samples are not extracted, we just add an Internal Standard and a Surrogate and it is purged, trapped, and eluted onto the column.

However, the Semivolatile method, (EPA Method 8270) undergoes a full extraction where the nonpolar analytes in a polar water sample are extracted into an organic solvent, the extract is dried down to concentrate the target analytes and then the extract is placed on the instrument. The extraction and concentrating process allows for losses, sometimes those losses are significant. We concentrate a couple hundred milliliters down to 1 mL and sometimes this heating process results in the loss of target analytes. The Surrogate recovery is still acceptable, but analytes like Naphthalene may experience considerable losses.

There has been a debate for years about the preferred method for Naphthalene detection, in my opinion I believe that the Semivolatile method is more reproducible and it is my preferred method. However, in my experience, volatiles are requested more often and hence most consultants have broader experience reviewing naphthalene from Volatiles.

I hope this helps and please let me know if you need any additional information. If you should find yourself in Lake Forest sometime around lunch, let me know and you can visit the lab and maybe I can take you to lunch--and we can charge it to Bill.

Thanks,

Charles

Charles Morrow
QA/QC Manager

SunStar 20 Laboratories

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