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By Alameda County Environmental Health 1:14 pm, Oct 29, 2015

Mr. Mark Detterman
Alameda County Environmental Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Re: Former Olympic Service Station
1436 Grant Avenue
San Lorenzo, California
ACEHD Case No. RO0000373, GeoTacker No. T0600102256

Dear Mr. Detterman:

I declare, under penalty of perjury, that the information and or recommendations contained in the attached document are true and correct to the best of my knowledge.

Sincerely,
George and Frida Jaber 1989 Family Trust



Philip Jaber, Trustee



3330 Cameron Park Drive, Ste 550
Cameron Park, California 95682
(530) 676-6004 ~ Fax: (530) 676-6005

October 29, 2015
Project No. 2115-1436-01

Mr. Mark Detterman
Alameda County Health Care Services Agency
Environmental Health Department
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Remediation Status Report and Results of Third Quarter 2015
Groundwater Monitoring and Sampling Event**
Former Olympic Station
1436 Grant Avenue
San Lorenzo, California
ACEHD Case No. RO0000373, GeoTracker No. T0600102256

Dear Mr. Detterman:

On behalf of Mr. Philip Jaber and the George and Frida Jaber 1989 Family Trust, Stratus Environmental, Inc. (Stratus) is submitting the attached report, for the Former Olympic Station located at 1436 Grant Avenue in San Lorenzo, California (the site, see Figures 1 and 2). If you have any questions or comments concerning this report, please contact Gowri Kowtha at gkowtha@stratusinc.net or (530) 676-6001 or Scott Bittinger at (530) 676-2062.

Sincerely,

STRATUS ENVIRONMENTAL, INC.

Scott G. Bittinger, P.G.
Project Geologist

Gowri S. Kowtha, P.E.
Project Manager



Attachment: Remediation Status Report and Results for Third Quarter 2015 Groundwater Monitoring and Sampling Event

cc: Mr. Philip Jaber

**FORMER OLYMPIC STATION
REMEDIATION STATUS REPORT AND RESULTS OF THIRD QUARTER 2015
GROUNDWATER MONITORING AND SAMPLING EVENT**

Facility Address: 1436 Grant Avenue, San Lorenzo, CA

Consulting Co. / Contact Person: Stratus Environmental, Inc. / Gowri Kowtha, P.E.

Consultant Project No: 2115-1436-01

Primary Agency/Regulatory ID No: Mark Detterman, Alameda County Environmental Health Department (ACEHD) / Case No. RO0000373

WORK PERFORMED THIS PERIOD (Third Quarter 2015):

1. On July 7, 2015, Mr. Phillip Jaber and Stratus met with ACEHD to discuss future work activities at the subject site. Following the meeting, Stratus prepared and submitted a document titled *Focused Site Conceptual Model and Work Plan for Additional Site Assessment and Expanded Water Supply Well Survey* on August 12, 2015.
1. On July 14, 2015, Stratus performed the third quarter 2015 groundwater monitoring and sampling event, which consisted of sampling two wells (MW-5A and MW-6A).
2. Stratus continued use of dual phase extraction (DPE) remediation at the property. Operation and maintenance (O&M) visits were conducted on July 1 and 14, August 3 and 18, and September 1 and 22, 2015.

WORK PROPOSED FOR NEXT PERIOD (Fourth Quarter 2015):

1. Stratus will conduct the fourth quarter 2015 groundwater monitoring and sampling event.
2. Stratus will begin implementing the *Work Plan* once ACEHD approval has been obtained.
3. Operation of the DPE system will continue; the length of time that DPE will be completed during the fourth quarter 2015 will be evaluated on an ongoing basis and we anticipate shut down of the equipment by the winter of 2015/2016.

Current Phase of Project:	<u>CAP/REM (Start-up)</u>
Frequency of Groundwater Monitoring:	<u>All Wells = Semi-Annual (second and fourth calendar quarters); Wells MW-5A and MW-6A also gauged during the first and third calendar quarters to assess purge volumes for sampling</u>
Frequency of Groundwater Monitoring and Sampling:	<u>All Wells (except MW-5A and MW-6A) = Semi-Annual (second and fourth calendar quarters); Wells MW-5A and MW-6A sampled quarterly per 9/17/14 directive from ACEHD</u>
Groundwater Sampling Date:	<u>July 14, 2015</u>

Is Free Product (FP) Present on Site:	No
Approximate Depth to Groundwater:	7.85 to 8.00 feet below top of well casing
Groundwater Flow Direction:	Not evaluated (only two wells gauged)
Groundwater Gradient:	Not evaluated (only two wells gauged)

DPE SYSTEM QUARTERLY OPERATION AND PERFORMANCE:

Equipment Inventory:	350 cubic feet per minute (cfm) thermal oxidizer, and two 1,000 pound liquid-phase granular activated carbon vessels, connected in-series.
Extraction Wells:	EX-1 through EX-7, MW-5A, MW-6A
Operating Mode:	Thermal
BAAQMD Permit Nos.:	Plant No. 21776
Influent Air: GRO End of Period (lab):	<20 milligrams per cubic meter (mg/m ³) (9/1/15)
Influent Air: Benzene End of Period (lab):	0.20 mg/m ³ (9/1/15)
Influent Air: MTBE End of Period (lab):	0.20 mg/m ³ (9/1/15)
Flow Rate End of Period:	78.5 acfm (9/22/15)
Applied Vacuum End of Period:	12 inches of water column ("WC) (9/22/15)
GRO Removed this Period in Soil Vapor:	8.5 lbs (between 6/2/15 and 9/1/15)
Cumulative GRO Removed in Soil Vapor:	954.9 lbs (between 7/21/14 and 9/1/15)
Influent Groundwater: GRO End of Period (lab):	<50 µg/L (9/1/15)
Influent Groundwater: Benzene End of Period (lab):	<0.50 µg/L (9/1/15)
Influent Groundwater: MTBE End of Period (lab):	9.7 µg/L (9/1/15)
Average Groundwater Extraction Rate :	3.2 gpm (between 6/2/15 and 9/1/15)
GRO Removed this Period in Groundwater:	0.13 lbs (between 6/2/15 and 9/1/15)
Cumulative GRO Removed in Groundwater:	0.83 lbs (between 7/21/14 and 9/1/15)
Groundwater Removed this Period:	320,590 gallons (between 6/2/15 and 9/1/15)
Cumulative Groundwater Removed:	918,660 gallons (between 7/21/14 and 6/2/15)
Operating Hours This Period:	1,695 hours (between 6/22/15 and 9/22/15)
Number of Shutdowns:	2

GROUNDWATER MONITORING AND SAMPLING EVENT:

An electronic water level sounder was used to gauge depth to water levels in the site's monitoring and extraction wells. Following gauging, purge groundwater samples were collected from the monitoring and extraction wells. Groundwater samples collected from the wells were analyzed at a state-certified analytical laboratory for gasoline range organics (GRO) by EPA Method SW8015B/SW8260B and for benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tert-butyl ether (MTBE) by EPA Method SW8260B. Well construction details are summarized in Table 1, and historical groundwater elevation and

analytical data are summarized in Table 2. Field data sheets documenting measurements and observations obtained by Stratus personnel, a description of sampling and analyses procedures utilized, and laboratory analytical reports with chain-of-custody records are included in Appendix A, B, and C, respectively.

The highest concentrations of fuel contaminants in groundwater have recently detected in monitoring wells installed to a depth of 10 feet below ground surface (bgs), approximately 2 to 3 feet below the current groundwater table at the site. Lower concentrations of fuel contaminants are consistently reported in samples collected from the other monitoring/remediation wells, which have been installed to depths ranging from approximately 20 to 26 feet bgs. During the third quarter 2015, only shallow wells MW-5A and MW-6A, where the highest concentrations of GRO and BTEX have recently been detected, were gauged and sampled.

GRO, benzene, and MTBE were detected at concentrations of 2,800 micrograms per liter ($\mu\text{g/L}$), 390 $\mu\text{g/L}$, and 13 $\mu\text{g/L}$, respectively in the MW-5A sample, and 4,400 $\mu\text{g/L}$, 930 $\mu\text{g/L}$, and 99 $\mu\text{g/L}$, respectively in the MW-6A sample. Concentrations of GRO and BTEX have declined significantly since extraction of soil vapor and groundwater was initiated from wells MW-5A and MW-6A.

REMEDIAL ACTION SUMMARY:

The DPE system consists of a portable 350 cubic feet per minute (cfm) thermal oxidizer owned by CBA Equipment, LLC and permitted to operate by the Bay Area Air Quality Management District (BAAQMD). Soil vapors and groundwater are extracted from the subsurface and then conveyed to the remediation system through above ground piping protected by traffic rated speed bumps. Wells EX-1 through EX-7 have been manifolded to the remediation system; the system was later expanded to accommodate wells MW-5A and MW-6A (discussed below). Groundwater and soil vapors are extracted from a combination of wells intermittently to maximize the systems efficiency. In-well drop tubes (stingers) are used to extract soil vapors and groundwater from each well. Soil vapors are abated on-site through the thermal oxidizer and discharged to the atmosphere. Groundwater is extracted from the subsurface and treated on-site using two 1,000-pound GAC vessels, and then discharged to the sanitary sewer under approved discharge permit (Oro Loma Sanitary Sewer District). The remediation system is equipped to measure the extraction rates (soil vapor and groundwater flow rates). A flow totalizer is installed to record the volume of treated water extracted and discharged to the sanitary sewer. Influent and effluent soil vapor concentrations are also monitored using a photo-ionization detector (PID). The approximate locations of the remedial equipment, above ground conveyance piping, and sewer discharge point are depicted on Figure 2. A process flow diagram of the remediation equipment is presented in Figure 4.

During the third quarter 2015, Stratus technicians conducted six O&M site visits on July 1 and 14, August 3 and 18, and September 1 and 22, 2015. Stratus personnel modified the system on August 3, 2015, by additionally extracting from well EX-6, in an attempt to further reduce the contamination in groundwater and shallow soil vapor in this area of the site. During this period (June 22 through September 22, 2015), the remediation system operated for approximately 1,695 hours. Influent soil vapor extraction flow rates were observed between 71.2 and 78.5 cubic feet per minute (cfm) under an applied vacuum ranging between 12 to 15 inches of mercury ("Hg). Field data sheets documenting measurements and observations collected during each visit are included in Appendix A. Tables 3 through 9 provide a summary of data pertaining to the use of the DPE system.

Soil vapor samples were collected from the system in laboratory-supplied 1-liter Tedlar bags, placed in protective containers, and stored at ambient air temperature. Groundwater samples were collected in laboratory supplied glass VOAs and stored in ice-chilled coolers. Strict chain-of-custody procedures were followed from the time samples were collected, until the time samples were relinquished to the state-certified analytical laboratory. Soil vapor and groundwater samples were analyzed by Alpha Analytical, Inc

(ELAP No. 2019). The soil vapor samples were analyzed for GRO, BTEX, and MTBE using USEPA Method 8260B. Groundwater samples were analyzed for GRO using USEPA Method SW8015B/SW8260B, and for BTEX and MTBE using USEPA Method SW8260B. Analytical data for these samples is included in Appendix C.

During the third quarter 2015, influent GRO and benzene concentrations in the vapor phase reported as non-detect and below reporting limits (less than 15 or 20 mg/m³ for GRO and less than 0.15 or 0.20 mg/m³ for benzene). Influent MTBE concentrations were observed to slightly fluctuate from less than 0.20 to 0.35 mg/m³. No petroleum hydrocarbons or MTBE were detected in the effluent air samples; therefore, the remediation system is operating in compliance with the BAAQMD permit for the equipment. Using the available analytical data and information collected during O&M site visits (air flow rates, hour meter readings, etc.), Stratus estimates that approximately 8.5 pounds of GRO were removed from the subsurface, in the vapor phase, between June 2 and September 1, 2015, and a total of 954.9 pounds of GRO has been removed from the subsurface, in the vapor phase, since startup July 21, 2014, through September 1, 2015 (see Table 6).

Between June 2 and September 1, 2015, approximately 320,590 gallons of groundwater were extracted from the subsurface, treated on-site, and discharged to the sanitary sewer system. Based on flow totalizer measurements, groundwater is being extracted at a rate of approximately 3.2 gallons per minute (gpm; see Table 9). Influent concentrations of fuel contaminants in groundwater are relatively low, and therefore, contaminant mass removal in the dissolved phase is low (see Tables 7 and 9). No petroleum hydrocarbons or MTBE were detected in effluent groundwater, and the GAC groundwater treatment system appears to be operating in compliance with Oro Loma Sanitary Sewer District discharge requirements.

DISCUSSION:

Although contaminant mass extraction rates are low, concentrations of fuel contaminants in groundwater appear to be declining due to DPE. Stratus intends to continue to operate the DPE system until the early winter months, while groundwater levels at the property remain relatively low. We anticipate that DPE will be discontinued during the latter portion of the fourth quarter 2015, or possibly early first quarter 2016. Stratus will provide periodic updates to ACEHD regarding the length of time that DPE will be conducted at the site.

LIMITATIONS:

This document was prepared in general accordance with accepted standards of care that existed at the time this work was performed. No other warranty, expressed or implied, is made. Conclusions and recommendations are based on field observations and data obtained from this work and previous investigations. It should be recognized that definition and evaluation of geologic conditions is a difficult and somewhat inexact science. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the subsurface conditions present. More extensive studies may be performed to reduce uncertainties. This document is solely for the use and information of our client unless otherwise noted.

ATTACHMENTS:

- Table 1 Well Construction Detail Summary
- Table 2 Groundwater Elevation and Analytical Summary
- Table 3 Operational Uptime and Flow Summary – DPE Remediation Event
- Table 4 Induced Vacuum and Depth to Water Measurement Summary – DPE Remediation Event
- Table 5 SVE Component – Analytical Results and Flow Rates – DPE Remediation Event
- Table 6 SVE Component – Extraction and Emission Rates – DPE Remediation Event
- Table 7 Groundwater Extraction Component – Groundwater Analytical Data Summary - DPE Remediation Event (Petroleum Hydrocarbons and MTBE)
- Table 8 Groundwater Extraction Component – Groundwater Analytical Data Summary - DPE Remediation Event (Non-Fuel Contaminant Analyses Required for Sewer Discharge Permit)
- Table 9 Groundwater Extraction Component – Operational Performance and Mass Removal Summary - DPE Remediation Event
- Figure 1 Site Location Map
- Figure 2 Site Plan
- Figure 3 Groundwater Analytical Summary, 10' Depth Monitoring Wells, Third Quarter 2015
- Figure 4 Process Flow Diagram
- Appendix A Field Data Sheets
- Appendix B Sampling and Analyses Procedures
- Appendix C Laboratory Analytical Reports and Chain-of-Custody Documentation

TABLE 1
WELL CONSTRUCTION DETAIL SUMMARY
Former Olympic Service Station, 1436 Grant Avenue, San Lorenzo, CA

Boring/Well I.D.	Date	Boring Depth (feet)	Boring Diameter (inches)	Well Diameter (inches)	Screen Interval (feet bgs)	Slot Size (inches)	Drilling Method	Consultant
Groundwater Monitoring Wells								
MW-1	09/24/99	26.5	8	2	5 - 26.5	0.020	HSA	Aqua Science Engineers
MW-2	09/24/99	20	8	2	5-20	0.020	HSA	Aqua Science Engineers
MW-3	09/24/99	21.5	8	2	5-21	0.020	HSA	Aqua Science Engineers
MW-4	02/09/10	10	10	4	5-10	0.020	Air Knife	Conestoga-Rovers & Associates
MW-5A	05/28/14	10	8	2	5-10	0.020	HSA	Stratus Environmental
MW-5B	05/28/14	20	8	2	15-20	0.020	HSA	Stratus Environmental
MW-6A	05/28/14	10	8	2	5-10	0.020	HSA	Stratus Environmental
MW-6B	05/28/14	20	8	2	15-20	0.020	HSA	Stratus Environmental
Extraction Wells								
EX-1	05/19/11	20	10	4	5-20	0.020	HSA	Stratus Environmental
EX-2	05/19/11	20	10	4	5-20	0.020	HSA	Stratus Environmental
EX-3	05/19/11	20	10	4	5-20	0.020	HSA	Stratus Environmental
EX-4	02/20/14	20	10	4	5-20	0.020	HSA	Stratus Environmental
EX-5	02/20/14	20	10	4	5-20	0.020	HSA	Stratus Environmental
EX-6	02/21/14	20	10	4	5-20	0.020	HSA	Stratus Environmental
EX-7	02/20/14	20	10	4	5-20	0.020	HSA	Stratus Environmental
Injection Wells								
IW-1	05/20/11	11.5	8	0.75	9.5-11.5	microporous	HSA	Stratus Environmental
IW-2	05/20/11	16	8	0.75	14-16	microporous	HSA	Stratus Environmental
Notes:								
HSA = Hollow Stem Auger								
Data regarding the construction of wells MW-1 through MW-4 obtained from groundwater monitoring reports prepared by Conestoga-Rovers & Associates								

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY
Former Olympic Service Station, 1436 Grant Avenue, San Lorenzo, CA

Well ID	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (µg/L)	TPHd (µg/L)	GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	ETBE (µg/L)	TBA (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)
MW-1	10/06/99	8.35	15.00	6.65	--	--	84**	3,900*	<25	<25	<25	<25	3,500	--	--	--	--	--	--	--
	01/13/00	7.90		7.10	--	--	<50	<1,300	18	<13	<13	<13	1,700	--	--	--	--	--	--	--
	04/12/00	7.08		7.92	--	--	56***	<1,000	66	<10	<10	<10	1,600	--	--	--	--	--	--	--
	07/19/00	7.66		7.34	--	--	52**	<1,000	<10	<10	<10	<10	1,200	--	--	--	--	--	--	--
	10/25/00	7.91		7.09	--	--	76***	4,100*	120	<25	<25	<25	6,100	--	--	--	--	--	--	--
	02/16/07	6.32		8.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/01/07	5.88		9.12	--	<250	<50	<50	<1.2	<1.2	<1.2	<1.2	78	<1.2	<1.2	<12	<120	<1.2	<1.2	<1.2
	05/01/07	7.24		8.47	--	<250	<50	<50	<5.0	<5.0	<5.0	<5.0	250	<5.0	<5.0	<50	<500	<5.0	<5.0	<5.0
	08/01/07	7.77		7.94	--	--	<50	<50	<25	<25	<25	<25	520	<25	<25	<25	<250	<2,500	<25	<25
	11/01/07	7.71		8.00	--	--	<50	<50	<12	<12	<12	<12	460	<12	<12	<12	<120	<1,200	<12	<12
	02/01/08	5.71		10.00	--	--	<50	<50	<2.5	<2.5	<2.5	<2.5	110	<2.5	<2.5	<2.5	<10	<250	<2.5	<2.5
	05/02/08	7.52		8.19	--	<250	<50	<50	<5.0	<5.0	<5.0	<5.0	240	<5.0	<5.0	<50	<500	<5.0	<5.0	<5.0
	08/01/08	8.02		7.69	--	--	<50	<50	<10	<10	<10	<10	500	<10	<10	<10	<40	<1,000	<10	<10
	11/04/08	7.28		8.43	--	--	<50	<50	<5.0	<5.0	<5.0	<5.0	260	<5.0	<5.0	<5.0	26	<500	<5.0	<5.0
	08/11/09	8.08		7.63	--	--	<50	<50	<5.0	<5.0	<5.0	<5.0	270	<5.0	<5.0	<5.0	<20	<500	<5.0	<5.0
	02/03/10	6.14		9.57	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	39	--	--	--	--	--	--	--
	05/18/10	7.09		8.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/05/10	7.65		8.06	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	350	--	--	--	--	--	--	--
	02/04/11	7.20		8.51	--	--	--	<50	0.90	<0.5	<0.5	<0.5	62	--	--	--	--	--	--	--
	06/03/11	7.28	18.60	11.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/02/11	7.47		11.13	--	--	--	120	<0.50	<0.50	<0.50	<0.50	160	--	--	--	--	--	--	--
	09/29/11	7.83		10.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/12/11	7.03		11.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/09/11	7.55		11.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/12/11	7.81		10.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/15/12	6.45		12.15	--	--	--	55	<0.50	<0.50	<0.50	<0.50	71	--	--	--	--	--	--	--
	08/28/12	7.81		10.79	--	--	--	120	<0.50	<0.50	<0.50	<0.50	240	--	--	--	--	--	--	--
	02/27/13	7.32		11.28	--	--	--	61	<0.50	<0.50	<0.50	<0.50	69	--	--	--	--	--	--	--
	08/26/13	8.05		10.55	--	--	--	470	<0.50	<0.50	<0.50	<0.50	590	--	--	--	--	--	--	--
	06/19/14	7.86		10.74	--	--	--	190	<0.50	<0.50	<0.50	<0.50	230	--	--	--	--	--	--	--
	11/25/14	7.45		11.15	--	--	--	51	<0.50	<0.50	<0.50	<0.50	100	--	--	--	--	--	--	--
	02/02/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/14/15	7.24		11.36	--	--	--	68	<0.50	<0.50	<0.50	<0.50	120	--	--	--	--	--	--	--
	07/14/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY
Former Olympic Service Station, 1436 Grant Avenue, San Lorenzo, CA

Well ID	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (µg/L)	TPHd (µg/L)	GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	ETBE (µg/L)	TBA (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)
MW-2	10/06/99	7.87	14.46	6.59	<1,000	500[3]	<50	70*	<0.5	<0.5	<0.5	<0.5	11	--	--	--	--	--	--	--
	01/13/00	7.46		7.00	<1,000	500[3]	<50	<50	<0.5	<0.5	<0.5	<0.5	6.2	--	--	--	--	--	--	--
	04/12/00	6.67		7.79	1,100	<500	<50	<50	<0.5	<0.5	<0.5	<0.5	39	--	--	--	--	--	--	--
	07/19/00	7.23		7.23	1,300	<500	<50	<1,000	<10	<10	<10	<10	990	--	--	--	--	--	--	--
	10/25/00	7.52		6.94	--	<500	<50	370	<2.5	<2.5	<2.5	<2.5	690	--	--	--	--	--	--	--
	02/16/07	5.89		8.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/01/07	5.45		9.01	--	<250	<50	<50	<0.5	<0.5	<0.5	<0.5	9.8	<0.5	<0.5	<0.5	<5.0	<50	<0.5	<0.5
	05/01/07	6.83		8.34	--	<250	<50	<50	<5.0	<5.0	<5.0	<5.0	120	<5.0	<5.0	<5.0	<50	<500	<5.0	<5.0
	08/01/07	7.35		7.82	--	--	<50	<50	<5.0	<5.0	<5.0	<5.0	130	<5.0	<5.0	<5.0	<50	<50	<500	<5.0
	11/01/07	7.27		7.90	--	--	<50	<50	<0.5	<0.5	<0.5	<0.5	19	<0.5	<0.5	<0.5	<5.0	<50	<0.5	<0.5
	02/01/08	5.25		9.92	--	--	<50	<50	<0.5	<0.5	<0.5	<0.5	3.3	<0.5	<0.5	<0.5	<2.0	<50	<0.5	<0.5
	05/02/08	7.12		8.05	--	--	<50	<50	<2.5	<2.5	<2.5	<2.5	83	<2.5	<2.5	<2.5	<10	<250	<2.5	<2.5
	08/01/08	7.59		7.58	--	--	<50	<50	<1.0	<1.0	<1.0	<1.0	52	<1.0	<1.0	<1.0	<4.0	<100	<1.0	<1.0
	11/04/08	6.84		8.33	--	--	80	<50	<0.5	<0.5	<0.5	<0.5	5.9	<0.5	<0.5	<0.5	<2.0	<50	<0.5	<0.5
	08/11/09	7.65		7.52	--	--	<50	<50	<0.5	<0.5	<0.5	<0.5	9.4	<0.5	<0.5	<0.5	<2.0	<50	<0.5	<0.5
	02/03/10	5.75		9.42	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	0.86	--	--	--	--	--	--	--
	05/18/10	6.67		8.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/05/10	7.25		7.92	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	57	--	--	--	--	--	--	--
	02/04/11	6.79		8.38	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	4.4	--	--	--	--	--	--	--
	06/03/11	6.82	18.00	11.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/02/11	7.06		10.94	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	46	--	--	--	--	--	--	--
	09/29/11	7.39		10.61	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	41	<1.0	<1.0	<1.0	<10	--	--	<1.0
	10/12/11	6.62		11.38	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	37	<1.0	<1.0	<1.0	<10	--	--	<1.0
	11/09/11	7.11		10.89	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	33	<1.0	<1.0	<1.0	<10	--	--	<1.0
	12/12/11	7.35		10.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/15/12	5.98		12.02	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	4.3	--	--	--	--	--	--	--
	08/28/12	7.39		10.61	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	35	--	--	--	--	--	--	--
	02/27/13	6.91		11.09	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	12	--	--	--	--	--	--	--
	08/26/13	7.61		10.39	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	6.2	--	--	--	--	--	--	--
	06/19/14	7.73		10.27	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	13	--	--	--	--	--	--	--
	11/25/14	7.03		10.97	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	0.67	--	--	--	--	--	--	--
	02/02/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/14/15	6.83	11.17	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	2.1	--	--	--	--	--	--	--
	07/14/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY
Former Olympic Service Station, 1436 Grant Avenue, San Lorenzo, CA

Well ID	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (µg/L)	TPHd (µg/L)	GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	ETBE (µg/L)	TBA (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)
MW-3	10/06/99	7.90	14.41	6.51	--	--	300**	3,900	900	89	160	560	790	--	--	--	--	--	--	--
	01/13/00	7.50		6.91	--	--	210**	740	110	4.8	35	18	290	--	--	--	--	--	--	--
	04/12/00	6.61		7.80	--	--	640***	2,200	650	9.7	180	24	140	--	--	--	--	--	--	--
	07/19/00	7.24		7.17	--	--	270**	2,700*	420	<2.5	160	<2.5	99	--	--	--	--	--	--	--
	10/25/00	7.52		6.89	--	--	150	710*	180	<2.5	24	<2.5	71	--	--	--	--	--	--	--
	02/16/07	5.90		8.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/01/07	5.44		8.97	--	<250	<50	82	20	<1.7	<1.7	<1.7	100	<1.7	<1.7	<1.7	<17	<170	<1.7	<1.7
	05/01/07	6.87		8.26	--	<250	<50	<50	<5.0	<5.0	<5.0	<5.0	88	<5.0	<5.0	<5.0	<50	<500	<5.0	<5.0
	08/01/07	7.40		7.73	--	--	<50	130	12	<2.5	<2.5	<2.5	98	<2.5	<2.5	<2.5	<25	<250	<2.5	<2.5
	11/01/07	7.35		7.78	--	--	<50	77	<2.5	<2.5	<2.5	<2.5	68	<2.5	<2.5	<2.5	<25	<250	<2.5	<2.5
	02/01/08	5.28		9.85	--	--	<50	<50	<2.5	<2.5	<2.5	<2.5	97	<2.5	<2.5	<2.5	<10	<250	<2.5	<2.5
	05/02/08	7.15		7.98	--	--	<50	68	2.3	<1.7	<1.7	<1.7	86	<1.7	<1.7	<1.7	7.2	<170	<1.7	<1.7
	08/01/08	7.66		7.47	--	--	<50	85	3.5	<1.0	<1.0	<1.0	66	<1.0	<1.0	<1.0	7.2	<100	<1.0	<1.0
	11/04/08	6.96		8.17	--	--	<50	<50	<1.0	<1.0	<1.0	<1.0	40	<1.0	<1.0	<1.0	<4.0	<100	<1.0	<1.0
	08/11/09	7.72		7.41	--	--	<50	110	33	<0.50	<0.50	<0.50	28	<0.50	<0.50	<0.50	<2.0	<50	<0.50	<0.50
	02/03/10	5.72		9.41	--	--	--	<50	0.55	<0.50	<0.50	<0.50	25	--	--	--	--	--	--	--
	05/18/10	6.73		8.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/05/10	7.31		7.82	--	--	--	450	110	2.2	0.76	0.64	32	--	--	--	--	--	--	--
	02/04/11	6.80		8.33	--	--	--	220[1]	64	1.6	<0.5	<0.5	36	--	--	--	--	--	--	--
	06/03/11	6.87	17.95	11.08	--	--	--	200	26	<0.50	<0.50	<0.50	34	--	--	--	--	--	--	--
	08/02/11	7.07		10.88	--	--	--	<50	2.5	<0.50	<0.50	<0.50	36	--	--	--	--	--	--	--
	09/29/11	7.43		10.52	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	28	<1.0	<1.0	<1.0	<10	--	--	<1.0
	10/12/11	6.67		11.28	--	--	--	<50	0.91	<0.50	<0.50	<0.50	32	<1.0	<1.0	<1.0	<10	--	--	<1.0
	11/09/11	7.16		10.79	--	--	--	<50	1.8	<0.50	<0.50	<0.50	31	<1.0	<1.0	<1.0	<10	--	--	<1.0
	12/12/11	7.42		10.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/15/12	6.21		11.74	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	24	--	--	--	--	--	--	--
	08/28/12	7.44		10.51	--	--	--	<50	6.5	<0.50	<0.50	<0.50	24	--	--	--	--	--	--	--
	02/27/13	6.90		11.05	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	18	--	--	--	--	--	--	--
	08/26/13	7.72		10.23	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	34	--	--	--	--	--	--	--
	06/19/14	7.50		10.45	--	--	--	<50	2.3	<0.50	<0.50	<0.50	16	--	--	--	--	--	--	--
	11/25/14	7.11		10.84	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	20	--	--	--	--	--	--	--
	02/02/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/14/15	6.85		11.10	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	43	--	--	--	--	--	--	--
	07/14/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY
Former Olympic Service Station, 1436 Grant Avenue, San Lorenzo, CA

Well ID	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (µg/L)	TPHd (µg/L)	GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	ETBE (µg/L)	TBA (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)
MW-4	05/18/10	6.68	15.15	8.47	--	--	--	13,000	620	36	170	12	1,200	--	--	--	--	--	--	--
	08/05/10	7.25		7.90	--	--	--	9,200	780	13	230	4.3	1,800	--	--	--	--	--	--	--
	02/04/11	6.71		8.44	--	--	--	4,800[1]	350	7.1	23	<2.5	440	--	--	--	--	--	--	--
	06/03/11	6.78	17.99	11.21	--	--	--	4,700	350	2.6	19	<2.5[2]	670	--	--	--	--	--	--	--
	08/02/11	7.01		10.98	--	--	--	4,700	290	<2.5[2]	12	<2.5[2]	970	--	--	--	--	--	--	--
	09/29/11	7.37		10.62	--	--	--	8,700	590	<5.0[2]	34	<5.0[2]	1,500	<10[2]	28	<10[2]	<100[2]	--	--	<10[2]
	10/12/11	6.61		11.38	--	--	--	1,500	160	<1.0[2]	1.8	<1.0[2]	1,300	<2.0[2]	8.6	<2.0[2]	42	--	--	<2.0[2]
	11/09/11	7.18		10.81	--	--	--	2,800	190	1.4	9.6	1.3	720	<2.0[2]	3.6	<2.0[2]	270	--	--	<2.0[2]
	12/12/11	7.36		10.63	--	--	--	3,800	300	2.4	11	2.5	1,200	--	--	--	--	--	--	--
	03/15/12	6.15		11.84	--	--	--	8,300	530	<5.0[2]	120	72	3,700	--	--	--	--	--	--	--
	08/28/12	7.40		10.59	--	--	--	2,400	250	<4.0[2]	14	<4.0[2]	1,400	--	--	--	--	--	--	--
	02/27/13	6.85		11.14	--	--	--	2,400	160	2.5	8.2	<2.0[2]	1,400	--	--	--	--	--	--	--
	08/26/13	7.69		10.30	--	--	--	4,900	220	<2.5[2]	5.7	<2.5[2]	2,400	--	--	--	--	--	--	--
	06/19/14	7.48		10.51	--	--	--	6,000	260	<4.0[2]	8.8	<4.0[2]	1,600	--	--	--	--	--	--	--
	11/25/14	7.00		10.99	--	--	--	2,900	72	<5.0[2]	<5.0[2]	<5.0[2]	4,500	--	--	--	--	--	--	--
	02/02/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/14/15	7.00		10.99	--	--	--	460	33	<1.0[4]	<1.0[4]	<1.0[4]	730	--	--	--	--	--	--	--
	07/14/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5A	06/19/14	7.53	17.94	10.41	--	--	--	21,000	2,000	<25[2]	1,400	650	<25[2]	--	--	--	--	--	--	--
	09/19/14	8.61		9.33				18,000	1,900	11	1,200	839.9	<5[2]	--	--	--	--	--	--	--
	11/25/14	7.47		10.47	--	--	--	14,000	1,500	<10[2]	1,100	570	<10[2]	--	--	--	--	--	--	--
	02/02/15	6.90		11.04	--	--	--	10,000	970	<20[2]	480	180	<20[2]	--	--	--	--	--	--	--
	04/14/15	6.81		11.13	--	--	--	12,000	1,600	5.2	940	270	7.0	--	--	--	--	--	--	--
	07/14/15	7.85		10.09	--	--	--	2,800	390	<2.0[2]	130	40	13	--	--	--	--	--	--	--
MW-5B	06/19/14	7.52	17.92	10.40	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	32	--	--	--	--	--	--
	11/25/14	7.18		10.74	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	10	--	--	--	--	--	--
	02/02/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/14/15	6.88		11.04	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.1	--	--	--	--	--	--
	07/14/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6A	06/19/14	7.66	18.05	10.39	--	--	--	43,000	3,300	<50[2]	2,000	3,100	77	--	--	--	--	--	--	--
	09/19/14	8.80		9.25				28,000	3,400	19	2,000	1,900	45	--	--	--	--	--	--	--
	11/25/14	7.56		10.49	--	--	--	23,000	2,800	16	1,500	1,730	160	--	--	--	--	--	--	--
	02/02/15	7.13		10.92	--	--	--	14,000	1,100	<20[2]	490	350	35	--	--	--	--	--	--	--
	04/14/15	6.98		11.07	--	--	--	12,000	2,100	<10[2]	880	190	61	--	--	--	--	--	--	--
	07/14/15	8.00		10.05	--	--	--	4,400	930	<5.0[2]	200	263	99	--	--	--	--	--	--	--
MW-6B	06/19/14	7.32	17.69	10.37	--	--	--	86	<0.50	<0.50	<0.50	<0.50	<0.50	82	--	--	--	--	--	--
	11/25/14	6.98		10.71	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	51	--	--	--	--	--	--
	02/02/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/14/15	6.68		11.01	--	--	--	85	<0.50	<0.50	<0.50	<0.50	<0.50	150	--	--	--	--	--	--
	07/14/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY
Former Olympic Service Station, 1436 Grant Avenue, San Lorenzo, CA

Well ID	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (µg/L)	TPHd (µg/L)	GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	ETBE (µg/L)	TBA (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)				
EX-1	06/03/11	6.96	18.14	11.18	--	--	--	76	8.3	<0.50	<0.50	0.99	37	--	--	--	--	--	--	--				
	08/02/11	7.20		10.94	--	--	--	420	37	0.65	3.5	2.9	32	--	--	--	--	--	--	--				
	09/29/11	7.53		10.61	--	--	--	150	13	<0.50	3.2	1.1	23	<1.0	1.2	<1.0	<10	--	--	<1.0				
	10/12/11	6.63		11.51	--	--	--	180	23	0.51	2.8	0.97	27	<1.0	1.0	<1.0	<10	--	--	<1.0				
	11/09/11	7.28		10.86	--	--	--	<50	4.3	<0.50	<0.50	<0.50	34	<1.0	<1.0	<1.0	<10	--	--	<1.0				
	12/12/11	7.50		10.64	--	--	--	520	32	1.3	13	5.58	20	--	--	--	--	--	--	--				
	03/15/12	6.19		11.95	--	--	--	<50	2.6	<0.50	<0.50	<0.50	8.4	--	--	--	--	--	--	--				
	08/28/12	7.53		10.61	--	--	--	410	88	1.2	36	1.4	42	--	--	--	--	--	--	--				
	02/27/13	7.02		11.12	--	--	--	<50	0.75	<0.50	<0.50	14	--	--	--	--	--	--	--	--				
	08/26/13	NM		NM	--	--	--	--	--	Well Covered by Cap - No Sample Collected														
	06/19/14	7.59		10.55	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	19	--	--	--	--	--	--	--	--	--		
	11/25/14	6.95		11.19	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	15	--	--	--	--	--	--	--	--	--		
	02/02/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	04/14/15	NM		NM	--	--	--	64	1.5	<0.50	<0.50	<0.50	49	--	--	--	--	--	--	--	--	--		
	07/14/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
EX-2	06/03/11	6.81	18.14	11.33	--	--	--	760	<1.5[2]	<1.5[2]	<1.5[2]	<1.5[2]	1,100	--	--	--	--	--	--	--	--	--		
	08/02/11	7.03		11.11	--	--	--	920	8.7	<1.0[2]	<1.0[2]	<1.0[2]	920	--	--	--	--	--	--	--	--	--		
	09/29/11	7.37		10.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/12/11	6.65		11.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	11/09/11	7.08		11.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/12/11	7.35		10.79	--	--	--	590	5.6	<1.0[2]	<1.0[2]	<1.0[2]	920	--	--	--	--	--	--	--	--	--		
	03/15/12	6.58		11.56	--	--	--	100	<0.50	<0.50	<0.50	<0.50	130	--	--	--	--	--	--	--	--	--		
	08/28/12	7.35		10.79	--	--	--	<300[2]	2.5	<1.5[2]	<1.5[2]	<1.5[2]	540	--	--	--	--	--	--	--	--	--		
	02/27/13	6.82		11.32	--	--	--	320	0.51	<0.50	<0.50	<0.50	420	--	--	--	--	--	--	--	--	--		
	08/26/13	7.56		10.58	--	--	--	270	<0.50	<0.50	<0.50	<0.50	340	--	--	--	--	--	--	--	--	--		
	06/19/14	7.37		10.77	--	--	--	150	<0.50	<0.50	<0.50	<0.50	170	--	--	--	--	--	--	--	--	--		
	11/25/14	7.02		11.12	--	--	--	72	<0.50	<0.50	<0.50	<0.50	130	--	--	--	--	--	--	--	--	--		
	02/02/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	04/14/15	6.77		11.37	--	--	--	70	<0.50	<0.50	<0.50	<0.50	120	--	--	--	--	--	--	--	--	--		
	07/14/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
EX-3	06/03/11	6.55	17.63	11.08	--	--	--	95	0.93	<0.50	<0.50	<0.50	78	--	--	--	--	--	--	--	--	--	--	
	08/02/11	6.82		10.81	--	--	--	130	1.5	<0.50	<0.50	<0.50	150	--	--	--	--	--	--	--	--	--	--	
	09/29/11	7.15		10.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	10/12/11	6.37		11.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	11/19/11	6.89		10.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	12/12/11	7.12		10.51	--	--	--	100	2.4	<0.50	<0.50	<0.50	84	--	--	--	--	--	--	--	--	--		
	03/15/12	5.70		11.93	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	30	--	--	--	--	--	--	--	--	--		
	08/28/12	7.15		10.48	--	--	--	100	<0.50	<0.50	<0.50	<0.50	190	--	--	--	--	--	--	--	--	--		
	02/27/13	6.63		11.00	--	--	--	84	<0.50	<0.50	<0.50	<0.50	93	--	--	--	--	--	--	--	--	--		
	08/26/13	7.41		10.22	--	--	--	120	<0.50	<0.50	<0.50	<0.50	120	--	--	--	--	--	--	--	--	--		
	06/19/14	7.20		10.43	--	--	--	96	<0.50	<0.50	<0.50	<0.50	110	--	--	--	--	--	--	--	--	--		
	11/25/14	6.85		10.78	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	6.9	--	--	--	--	--	--	--	--	--		
	02/02/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	04/14/15	6.57		11.06	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	13	--	--	--	--	--	--	--	--	--		
	07/14/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY
Former Olympic Service Station, 1436 Grant Avenue, San Lorenzo, CA

Well ID	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (µg/L)	TPHd (µg/L)	GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	ETBE (µg/L)	TBA (µg/L)	Ethanol (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)															
EX-4	06/19/14	7.64	18.30	10.66	--	--	--	210	9.5	<0.50	0.55	0.74	10	--	--	--	--	--	--																
	11/25/14	7.21		11.09	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	8.5	--	--	--	--	--	--																
	02/02/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--																
	04/14/15	7.00		11.30	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	1.1	--	--	--	--	--	--																
	07/14/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--																
EX-5	06/19/14	7.84	18.41	10.57	--	--	--	110	6.0	<0.50	<0.50	<0.50	14	--	--	--	--	--	--																
	11/25/14	7.42		10.99	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	40	--	--	--	--	--	--																
	02/02/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--																
	04/14/15	NM		NM	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	15	--	--	--	--	--	--																
	07/14/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--																
EX-6	06/19/14	7.81	18.29	10.48	--	--	--	190	25	<0.50	5.9	<0.50	18	--	--	--	--	--	--																
	11/25/14	7.44		10.85	--	--	--	250	36	<0.50	7.1	<0.50	160	--	--	--	--	--	--																
	02/02/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--																
	04/14/15	7.17		11.12	--	--	--	180	25	<0.50	3.1	<0.50	110	--	--	--	--	--	--																
	07/14/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--																
EX-7	06/19/14	7.44	18.06	10.62	--	--	--	56	0.79	<0.50	<0.50	<0.50	50	--	--	--	--	--	--																
	11/25/14	7.04		11.02	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	3.3	--	--	--	--	--	--																
	02/02/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--																
	04/14/15	6.81		11.25	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	24	--	--	--	--	--	--																
	07/14/15	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--																
Legend/Key:																																			
ft msl = feet above mean sea level				TPH - mo = total petroleum hydrocarbons as motor oil				MTBE - methyl tertiary butyl ether				TAME = tert amyl methyl ether				Analytical Methods:																			
µg/L = micrograms per liter				TPHd = total petroleum hydrocarbons as diesel				DIPE = di isopropyl ether				TBA = tert butyl ether				GRO analyzed by EPA Method																			
NM = Not measured				GRO = gasoline range organics C6-C12				ETBE = ethyl tertiary butyl ether				EDB = 1,2-dibromoethane				SW8015B/SW8260B, all other analytes																			
1,2-DCA = 1,2-dichloroethane																analyzed by SW8260B.																			
* = Hydrocarbon reported in the gasoline range does not match the gasoline standard.																																			
** = Hydrocarbon reported is in the early diesel range and does not match the diesel standard.																																			
*** = Hydrocarbon reported does not match the pattern of the diesel standard.																																			
-- = No sample collected																																			
[1] Weakly modified or unmodified gasoline is significant.																																			
[2] = Reporting Limits were increased due to high concentrations of target analytes.																																			
[3] = Sample also analyzed for halogenated volatile organic compounds (EPA Method 8010) and semivolatile organic compounds (EPA Method 8270A); all analytes reported as non-detect.																																			
Well elevations and locations surveyed by Morrow Surveying on June 15, 2011. Monitoring wells MW-5A/B, MW-6A/B, and extraction wells EX-4 through EX-7 surveyed by Morrow Surveying on June 2, 2014.																																			
[4] = Reporting Limits were increased due to sample foaming.																																			

TABLE 3
OPERATIONAL UPTIME AND FLOW SUMMARY
DPE REMEDIATION EVENT
Former Olympic Station, 1436 Grant Avenue, San Lorenzo, California

Date & Time	Notes	Hour Meter Reading	Applied Vac	Area	Sys Inf Temp	Sys Inf Air Velocity	Sys Inf Air Flowrate	Control Temp	Effluent Air Temp	Area	Dilution	Dilution	Dilution	pH		PID	
											Air Temp	Air Velocity	Air Flowrate	Inf	Eff	Sys Inf	Eff
		"Hg	ft ²	°F	fpm	acfm	°F	°F	ft ²	°F	fpm	acfm	pH	°F	ppmv	ppmv	
7/21/14 6:00	1	3,478.1	16.0	0.0491	95	2,000	98.2	1,452	1,411	0.0218	76	680	15	7.69	7.60	310	1.6
7/24/14 6:00	2	3,480.0	19.0	0.0491	95	2,000	98.2	1,460	1,410	0.0218	75	800	17	--	--	350	2.1
7/29/14 5:30	3	3,599.7	16.0	0.0491	90	2,200	108.0	1,465	1,425	0.0218	76	720	16	--	8.01	310	1.1
8/4/14 7:10	4	3,600.4	15.0	0.0491	85	2,000	98.2	1,493	1,430	0.0218	69	840	18	--	--	300	1.2
8/18/14 6:30	5	3,862.0	13.0	0.0491	90	2,350	115.4	1,475	1,426	--	--	--	--	7.87	7.89	110	2.3
9/8/14 7:30		4,247.0	12.0	0.0491	100	2,600	127.6	1,463	1,422	--	--	--	--	7.81	7.87	90	2.1
9/19/14 5:00		4,509.0	12.0	0.0491	100	2,700	132.5	1,464	1,425	--	--	--	--	--	--	150	1.7
10/2/14 6:48	6	4,823.0	12.0	0.0491	98	2,800	137.4	1,467	1,429	--	--	--	--	7.91	7.93	25	2.3
10/20/14 10:00	7	5,039.0	14.0	0.0491	90	2,500	122.7	1,460	1,389	--	--	--	--	--	--	45	2.6
11/3/14 7:00	8	5,265.0	14.0	0.0491	90	2,600	127.6	1,426	1,471	--	--	--	--	8.17	8.31	50	2.1
11/18/14 6:00	9	5,269.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/4/14 5:45	10	5,271.0	20.0	0.0491	90	2,000	98.2	1,468	1,310	0.0218	63	3096	68	8.13	8.36	16	2.4
12/16/14 5:30		5,557.0	16.0	0.0491	80	2,500	122.7	1,463	1,420	0.0218	55	2910	63	--	--	50	1.2
1/5/15 7:15	8	5,873.0	19.0	0.0491	72	1,500	73.6	1,534	1,400	0.0218	50	1534	33	8.19	8.41	10	1.8
1/19/15 6:00	8	5,888.0	18.0	0.0491	80	1,800	88.4	1,460	1,365	0.0218	50	1484	32	--	--	10	1.3
2/2/15 5:55	8	5,926.0	17.0	0.0491	80	1,750	85.9	1,467	1,413	0.0218	60	1987	43	8.05	8.13	5	1.3
2/16/15 6:00	8	5,930.0	19.0	0.0491	75	1,500	73.6	1,474	1,350	0.0218	63	1348	29	--	--	6	0.8
3/10/15 5:05	8	5,941.0	20.0	0.0491	78	1,500	73.6	1,463	1,350	0.0218	67	1771	39	8.13	8.21	10	0.9
3/23/15 7:00	11	6,015.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3
OPERATIONAL UPTIME AND FLOW SUMMARY
DPE REMEDIATION EVENT
Former Olympic Station, 1436 Grant Avenue, San Lorenzo, California

Date & Time	Notes	Hour Meter Reading	Applied Vac	Area	Sys Inf Temp	Sys Inf Air Velocity	Sys Inf Air Flowrate	Control Temp	Effluent Air Temp	Area	Dilution Air Temp	Dilution Air Velocity	Dilution Air Flowrate	pH		PID	
														Inf	Eff	Sys Inf	Eff
5/5/15 5:00	12	6,018.0	14.5	0.0491	80	1,600	78.5	1494	1400	0.0218	55	2319	51	7.49	7.96	25	2.5
5/20/15 5:45	13	6,059.0	15.0	0.0491	80	1,450	71.2	1450	--	0.0218	65	685	15	--	--	40	1.3
5/21/15 5:10	14	6,083.0	15.0	0.0491	90	1,500	73.6	1450	--	0.0218	--	--	--	--	--	--	--
6/2/15 4:45	15	6,233.0	15.0	0.0491	90	1,500	73.6	1450	1380	0.0218	--	--	--	8.01	7.81	6	0.3
6/22/15 4:00		6,712.0	14.0	0.0491	85	1,500	73.6	1450	1310	0.0218	--	--	--	--	--	10	0.2
7/1/15 5:30	16	6,929.0	14.0	0.0491	95	1,600	78.5	1456	--	0.0218	--	--	--	--	--	5	0.4
7/14/15 5:15	13	6,930.0	15.0	0.0491	80	1,450	71.2	1450	1376	0.0218	--	--	--	--	--	75	1.2
8/3/15 6:00	17	7,410.0	12.0	0.0491	96	1,600	78.5	1450	1125	0.0218	--	--	--	7.74	7.50	5	0.8
8/18/15 5:00	18	7,725.0	12.0	0.0491	90	1,500	73.6	1460	1105	0.0218	--	--	--	--	--	3	0.8
9/1/15 5:00	19	7,903.0	12.5	0.0491	90	1,500	73.6	1460	1360	0.0218	--	--	--	7.74	7.38	2	0.5
9/22/15 4:45	20	8,407.0	12.0	0.0491	90	1,600	78.5	1450	1125	0.0218	--	--	--	--	--	30	0.9
Average			15.1		88	1,896	93.1	1,463	1,361		63	1552	34	7.9	8.0	75.9	1.4

Legend / Key:

Vac = Vacuum
"Hg = inches mercury
ft² = square feet
Temp = temperature
°F = Fahrenheit
Inf = Influent
-- = not applicable/ not measured

fpm = feet per minute

acfm = actual cubic feet per minute

ppmv = parts per million by volume

PID = Photoionization Detector

Sys Inf = System Influent (includes dilution air)

Eff = Effluent

Sample Calculation:

air flow = area of pipe (0.0491 ft²) × air velocity (fpm) = flowrate (acfm)

TABLE 3
OPERATIONAL UPTIME AND FLOW SUMMARY

DPE REMEDIATION EVENT

Former Olympic Station, 1436 Grant Avenue, San Lorenzo, California

Date & Time	Notes	Hour Meter Reading	Applied Vac	Area	Sys Inf Temp	Sys Inf Air Velocity	Sys Inf Air Flowrate	Control Temp	Effluent Air Temp	Area	Dilution Air Temp	Dilution Air Velocity	Dilution Air Flowrate	pH		PID	
			"Hg	ft ²	°F	fpm	acfm	°F	°F		ft ²	°F	fpm	acfm	pH	°F	ppmv

Notes:

Influent pipe diameter = 3.0 inches

- 1 System briefly started to conduct an initial sampling event extracting from wells EX-2 through EX-7. Stingers placed at 13-feet (EX-2), 10-feet (EX-3, EX-4, and EX-6), 13-feet (EX-5) and 8-feet bgs (EX-7). System down upon departure waiting results.
- 2 System down upon arrival, system re-started for 1-week operation per groundwater discharge permit. System modified to extract from extraction wells EX-2 through EX-6.
- 3 Samples obtained per discharge permit, system shutdown upon departure pending approval of analytical results to begin discharging treated groundwater into on-site sewer cleanout.
- 4 System down upon arrival; groundwater discharge permit approved. System re-started upon departure for continuous operation extracting from wells EX-2 through EX-7 with stinger placed at 6-feet bgs (EX-7).
- 5 System down upon arrival, stinger depths modified, EX-2 through EX-4 and EX-6 placed at 10-feet, EX-5 at 13-feet, and EX-7 at 5-feet bgs.
- 6 System down upon arrival, system modified to extract from wells EX-1 through EX-7, system re-started upon departure.
- 7 System down upon arrival, replaced switch on combustion blower, system re-started upon departure.
- 8 System down upon arrival, system re-started upon departure.
- 9 System down upon arrival, due to scheduled groundwater sampling event system remained down upon departure.
- 10 System down upon arrival, system modified to extract from wells EX-1, EX-5 and EX-6, system re-started upon departure.
- 11 System down upon arrival, system remained down upon departure to evaluate pulse operation and second quarter groundwater sampling.
- 12 System down upon arrival, system re-started to obtain air and water samples. System modified to extract from wells EX-3, EX-6, MW-5A, and MW-6A. Sewer system observed to be backed up, therefore, maintenance to be completed prior to continuous system operation. System manually shutdown upon departure.
- 13 System down upon arrival, system re-started for continuous operation.
- 14 System modified to extract from wells EX-1, EX-6, MW-5A and MW-6A.
- 15 System modified to extract from wells EX-1, MW-5A and MW-6A.
- 16 System manually shutdown temporarily for upcoming sampling event.
- 17 System modified well EX-6 brought on-line, valve open 10%.
- 18 System down upon arrival, flame off, system modified well EX-6 open 25%, system re-started upon departure.
- 19 System modified well EX-6 open 10%.
- 20 System modified well EX-6 open 30%.

TABLE 4
INDUCED VACUUM AND DEPTH TO WATER MEASUREMENT SUMMARY
DPE REMEDIATION EVENT
Former Olympic Station, 1436 Grant Avenue, San Lorenzo, California

Date & Time	Notes	Induced Vacuum ("WC) &/or Depth to Water (feet bgs)											
		MW-1		MW-2		MW-3		MW-4		MW-5A		MW-6A	
		"WC	feet bgs	"WC	feet bgs	"WC	feet bgs	"WC	feet bgs	"WC	feet bgs	"WC	feet bgs
7/21/14 6:00	1	0.00	7.80	0.00	7.38	0.00	7.45	0.0	7.40	0.0	7.48	0.0	7.60
7/24/14 6:00	2	--	--	0.10	8.61	1.00	9.32	0.52	7.86	0.65	7.70	0.50	7.73
7/29/14 5:30		0.01	9.10	0.14	8.98	2.35	9.62	0.75	8.74	0.75	8.80	0.57	8.45
8/4/14 7:10	3	--	--	0.30	8.44	1.37	8.83	0.42	7.73	0.41	8.25	0.39	8.21
8/18/14 6:30	4	--	--	0.55	8.47	0.04	8.95	0.30	8.03	0.36	8.50	0.32	8.52
9/8/14 7:30		0.01	9.09	0.49	8.87	1.19	9.37	--	--	0.40	8.53	0.34	8.69
9/19/14 5:00		0.00	9.16	0.50	8.98	3.33	9.47	--	--	0.40	8.61	0.37	8.80
10/2/14 6:48	5	0.02	9.02	0.56	8.82	3.39	9.35	0.40	8.71	0.10	9.09	0.37	9.14
10/20/14 10:00	6	--	--	--	--	--	--	--	--	--	--	--	--
11/3/14 7:00	7	0.01	8.71	0.50	8.43	12.12	8.91	0.75	7.94	0.60	8.48	0.34	8.55
11/18/14 6:00	8	--	--	--	--	--	--	--	--	--	--	--	--
12/4/14 5:45	9	0.00	6.42	0.07	6.11	1.50	7.63	0.65	6.29	0.70	7.08	0.95	--
12/16/14 5:30		0.00	5.12	0.34	4.77	9.40	6.33	--	--	1.65	5.65	*0.35	5.12
1/5/15 7:15	7	0.00	7.10	0.11	6.79	4.40	8.17	0.99	6.23	1.75	6.11	0.47	6.44
1/19/15 6:00	7	--	--	--	--	--	--	--	--	--	--	--	--
2/2/15 5:55	7	0.00	7.71	0.10	7.38	4.77	8.65	0.85	6.99	0.31	6.90	0.45	7.13
2/16/15 6:00	10	0.00	6.95	0.10	6.62	3.30	7.89	1.05	6.07	1.68	5.58	0.59	6.01
3/10/15 5:05	11	0.00	7.66	0.05	7.27	1.93	7.88	--	--	0.99	6.71	0.16	7.06
3/23/15 7:00	12	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 4
INDUCED VACUUM AND DEPTH TO WATER MEASUREMENT SUMMARY
DPE REMEDIATION EVENT
Former Olympic Station, 1436 Grant Avenue, San Lorenzo, California

Date & Time	Notes	Induced Vacuum ("WC) &/or Depth to Water (feet bgs)											
		MW-1		MW-2		MW-3		MW-4		MW-5A		MW-6A	
		"WC	feet bgs	"WC	feet bgs	"WC	feet bgs	"WC	feet bgs	"WC	feet bgs	"WC	feet bgs
5/15/15 5:00	13	--	--	--	--	--	--	--	--	--	--	--	--
5/20/15 5:45	14	--	--	--	--	--	--	--	--	--	--	--	--
5/21/15 5:10		--	--	--	--	--	--	--	--	--	--	--	--
6/2/15 4:45	15	0.00	8.29	0.00	7.88	0.00	8.40	--	--	--	--	--	--
6/22/15 4:00		0.00	8.45	0.28	8.05	0.02	8.54	0.66	8.95	--	--	--	--
7/1/15 5:30	16	0.00	8.52	0.28	8.10	0.03	8.61	--	--	--	--	--	--
7/14/15 5:15	14	--	--	--	--	--	--	--	--	--	--	--	--
8/3/15 6:00	17	0.00	8.72	0.22	8.40	0.19	9.38	--	--	--	--	--	--
9/1/15 5:00		0.01	8.75	0.20	8.37	0.18	9.13	0.57	9.00	--	--	--	--
9/22/15 4:45		0.00	8.98	0.17	8.62	0.15	9.38	0.57	9.03	--	--	--	--
Average		0.00		0.24		2.41		0.61		0.72		0.42	
Nearest Extraction well & approx. distance (feet)		EX-2	22'	EX-7	11'	EX-6	9'	EX-1	13'	EX-3	28'	EX-6	54'
Legend / Key:													
"WC = Inches of water column													
bgs = below ground surface													
* Positive pressure													
-- = not applicable/ not measured													
Notes:													
1 System extracting from wells EX-2 through EX-7. Stinger depths placed at 13-feet bgs (EX-2 and EX-5), 10-feet bgs (EX-3, EX-4 and EX-6), and 8-feet bgs (EX-7).													
2 System modified extracting from wells EX-2 through EX-6.													
3 System modified extracting from wells EX-2 through EX-7; stinger placed in well EX-7 at 5-feet bgs.													
4 System modified stingers placed at 10-feet bgs (EX-2, EX-4 and EX-6), 13-feet bgs (EX-5), and 5-feet bgs (EX-7).													

TABLE 4
INDUCED VACUUM AND DEPTH TO WATER MEASUREMENT SUMMARY
DPE REMEDIATION EVENT
Former Olympic Station, 1436 Grant Avenue, San Lorenzo, California

Date & Time	Notes	Induced Vacuum ("WC) &/or Depth to Water (feet bgs)											
		MW-1		MW-2		MW-3		MW-4		MW-5A		MW-6A	
		"WC	feet bgs	"WC	feet bgs	"WC	feet bgs	"WC	feet bgs	"WC	feet bgs	"WC	feet bgs
	5 System down upon arrival, system modified to extract from wells EX-1 through EX-7, system re-started upon departure.												
	6 System down upon arrival, switch to combustion blower repaired, system re-started upon departure.												
	7 System down upon arrival system re-started upon departure.												
	8 System down upon arrival system remained down upon departure due to scheduled groundwater monitoring event.												
	9 System modified to extract from wells EX-1, EX-5 and EX-6, system down upon arrival and re-started upon departure.												
	10 System down upon arrival and re-started upon departure, system modified to extract from wells EX-1 and EX-6 (both valves modified to 50% open); well EX-5 remained 100% open.												
	11 System down upon arrival, system modified to extract from wells EX-1 and EX-5 with valves 100% open, system re-started upon departure.												
	12 System temporarily shutdown due to lack of project funding.												
	13 System down upon arrival, site visit completed to set up the system to extract from EX-3, EX-6, MW-5A, and MW-6A. Sewer backed up, therefore, maintenance to be completed and system remained down upon departure.												
	14 System down upon arrival, system re-started for continuous operation.												
	15 System modified to extract from wells EX-1, MW-5A, and MW-6A, therefore, no induced vacuum readings were obtained on those wells.												
	16 System manually shut down for sampling event.												
	17 System down upon arrival, system modified EX-6 brought on-line, system re-started upon departure.												

TABLE 5
SVE COMPONENT - ANALYTICAL RESULTS AND FLOW RATES
DPE REMEDIATION EVENT
Former Olympic Station, 1436 Grant Avenue, San Lorenzo, California

Date	Notes	Sample	Flowrate *		Influent Temp. (°F)	Vacuum "Hg	Sample Location	Lab Sample Number	Analyses (mg/m³)					
			Time	(acf m)					GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
07/21/14	1	7:30	98.2	93.4	95	16.0	ASYS INF A EFF	88741-01	5,900	1.0	<0.70	<0.70	<0.70	1.8
								88741-02	<20	<0.20	<0.20	<0.25	<0.20	<0.20
08/04/14		7:40	98.2	95.1	85	15.0	ASYS INF A EFF	88839-01	3,800	4.0	<0.50	0.71	<0.50	1.4
								88839-02	<20	<0.20	<0.20	<0.25	<0.20	<0.20
09/08/14		8:10	127.6	120.3	100	12.0	ASYS INF A EFF	89089-01	410	0.45	<0.20	<0.25	<0.20	0.80
								89089-02	<20	<0.20	<0.20	<0.25	<0.20	<0.20
10/02/14	2	7:30	137.4	130.1	98	12.0	ASYS INF A EFF	89311-01	140	0.36	<0.20	<0.25	<0.20	0.64
								89311-02	<20	<0.20	<0.20	<0.25	<0.20	<0.20
11/03/14		7:40	127.6	122.5	90	14.0	ASYS INF A EFF	89569-01	150	0.38	<0.20	<0.25	<0.20	0.48
								89569-02	<20	<0.20	<0.20	<0.25	<0.20	<0.20
12/04/14		7:05	98.2	94.2	90	20.0	ASYS INF A EFF	89811-01	85	<0.20	<0.20	<0.25	<0.20	<0.20
								89811-02	<20	<0.20	<0.20	<0.25	<0.20	<0.20
01/05/15		15:15	73.6	73.1	72	19.0	ASYS INF A EFF	90047-01	<20	0.45	<0.20	<0.25	<0.20	0.39
								90047-02	<20	<0.20	<0.20	<0.25	<0.20	<0.20
02/02/15		6:53	85.9	84.0	80	17.0	ASYS INF A EFF	90256-01	24	0.38	<0.20	<0.25	<0.20	0.40
								90256-02	<20	<0.20	<0.20	<0.25	<0.20	<0.20
03/10/15		7:25	73.6	72.3	78	20.0	ASYS INF A EFF	90502-01	22	<0.20	<0.20	<0.25	<0.20	0.52
								90502-02	<20	<0.20	<0.20	<0.25	<0.20	<0.20
05/05/15	3	7:07	78.5	76.8	80	14.5	ASYS INF A EFF	STR15050647-01A	110	0.56	<0.20	0.20	<0.20	<0.20
								STR15050646-01A	<20	<0.20	<0.20	<0.20	<0.20	<0.20
06/02/15	4	5:35	73.6	70.7	90	15.0	ASYS INF A EFF	STR15060351-04A	<20	0.20	<0.20	<0.20	<0.20	0.24
								STR15060343-02A	<20	<0.20	<0.20	<0.20	<0.20	<0.20

TABLE 5
SVE COMPONENT - ANALYTICAL RESULTS AND FLOW RATES
DPE REMEDIATION EVENT
Former Olympic Station, 1436 Grant Avenue, San Lorenzo, California

Date	Notes	Sample	Flowrate *		Influent Temp. (°F)	Vacuum "Hg	Sample Location	Lab Sample Number	Analyses (mg/m³)						
			Time	(acf m)	(scfm)				GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	
07/01/15		ASYS INF A EFF	6:03	78.5	74.7	95	14.0	STR15070246-01A STR15070242-01A	<20 <20	<0.20 <0.20	<0.20 <0.20	<0.20 <0.20	<0.20 <0.20	0.28 <0.20	
			08/03/15	5	6:29	78.5	74.6	96	12.0	ASYS INF A EFF	STR15080445-01A STR15080443-01A	<15 <15	<0.15 <0.15	<0.15 <0.15	<0.15 <0.15
09/01/15		ASYS INF A EFF	5:20	73.6	70.7	90	12.5	STR15090248-04A STR15090240-02A	<20 <15	<0.20 <0.15	<0.20 <0.15	<0.20 <0.15	<0.20 <0.15	<0.20 <0.15	<0.20 <0.15

Legend / Key:

acf m = actual cubic feet per minute

scfm = standard cubic feet per minute

Temp. (°F) = temperature in degrees Fahrenheit

"Hg = inches mercury

GRO = gasoline range organics (C4-C13)

* Flowrate used based on most representative field data at time of sampling.

Calculations:

Actual flow rate (acf m) is converted to standard flow rate (scfm) using the following formulas:

Pressure corrected influent flow rate = Flow was taken on positive side of blower, no pressure correction factor needed.

Temperature Corrected influent flow rate = Pressure corrected flow rate * $\{(460 \text{ R} + 68 \text{ deg F}) / (\text{deg F} + 460 \text{ R})\}$

Notes:

1 DPE extracting from extraction wells EX-2 through EX-7.

2 DPE extracting from extraction wells EX-1 through EX-7.

3 DPE extracting from extraction wells EX-3, EX-6, MW-5A and MW-6A.

4 DPE extracting from extraction wells EX-1, MW-5A and MW-6A.

5 DPE extracting from extraction wells EX-1, EX-6, MW-5A and MW-6A.

Laboratory Analytical Methods and Facility:

GRO analyzed using EPA Method 8260B

BTEX and MTBE analyzed using EPA Method 8260B

Kiff Analytical LLC (ELAP #08263CA)

TABLE 6
SVE COMPONENT - EXTRACTION AND EMISSION RATES
DPE REMEDIATION EVENT
Former Olympic Station, 1436 Grant Avenue, San Lorenzo, California

Date	Notes	Influent Sample Time	Hour Meter Reading ¹	Sys. Influent Flowrate (scfm)	Effluent Flowrate ² (scfm)	Sys. Influent Conc. (mg/m ³)			Effluent Conc. (mg/m ³)			Extraction Rate from Wells (lbs/day) ³			Emissions Rate to Atmosphere (lbs/day)			Destruction Removal Efficiency (%)	Cumulative GRO Removal (lbs)	
						GRO	Benzene	MTBE	GRO	Benzene	MTBE	GRO	Benzene	MTBE	GRO	Period	Total			
7/21/14	1	7:30	3,478.1	93.4	173.4	5,900	1.0	1.8	<20	<0.20	<0.20	49.54	0.01	0.015	<0.31	<0.003	<0.003	99.4	3.1	3.1
8/4/14		7:40	3,600.4	95.1	175.1	3,800	4.0	1.4	<20	<0.20	<0.20	41.47	0.02	0.014	<0.31	<0.003	<0.003	99.2	208.7	211.8
9/8/14		8:10	4,247.0	120.3	200.3	410	0.45	0.80	<20	<0.20	<0.20	22.77	0.02	0.012	<0.36	<0.004	<0.004	98.4	613.5	825.3
10/2/14	2	7:30	4,823.0	130.1	210.1	140	0.36	0.64	<20	<0.20	<0.20	3.22	0.005	0.008	<0.38	<0.004	<0.004	88.3	77.2	902.5
11/3/14		7:40	5,265.0	122.5	202.5	150	0.38	0.48	<20	<0.20	<0.20	1.60	0.004	0.006	<0.36	<0.004	<0.004	77.2	29.4	931.9
12/4/14	3	7:05	5,271.0	94.2	174.2	85	<0.20	<0.20	<20	<0.20	<0.20	1.00	<0.002	<0.003	<0.31	<0.003	<0.003	68.5	0.2	932.1
1/5/15			5,873.0	73.1	153.1	<20	0.45	0.39	<20	<0.20	<0.20	<0.34	0.002	0.002	<0.28	<0.003	<0.003	--	8.7	940.8
2/2/15		6:53	5,926.0	84.0	164.0	24	0.38	0.40	<20	<0.20	<0.20	0.17	0.003	0.003	<0.29	<0.003	<0.003	--	0.4	941.2
3/10/15	4	7:25	5,941.0	72.3	152.3	22	<0.20	0.52	<20	<0.20	<0.20	0.15	<0.002	0.003	<0.27	<0.003	<0.003	--	0.1	941.3
5/5/15	5	7:07	6,018.0	76.8	156.8	110	0.56	<0.20	<20	<0.20	<0.20	0.46	0.003	<0.002	<0.28	<0.003	<0.003	--	1.5	942.7
6/2/15	6	5:35	6,233.0	70.7	150.7	<20	0.20	0.24	<20	<0.20	<0.20	<0.41	0.002	0.001	<0.27	<0.003	<0.003	--	3.7	946.4
7/1/15		6:03	6,929.0	74.7	154.7	<20	<0.20	0.28	<20	<0.20	<0.20	<0.13	<0.001	0.002	<0.28	<0.003	<0.003	--	3.9	950.3
8/3/15	7	6:29	7,410.0	74.6	154.6	<15	<0.15	0.35	<15	<0.15	<0.15	<0.12	<0.001	0.002	<0.24	<0.002	<0.002	--	2.4	952.7
9/1/15		5:20	7,903.0	70.7	150.7	<20	<0.20	<0.20	<15	<0.15	<0.15	<0.11	<0.001	<0.002	<0.20	<0.002	<0.002	--	2.3	954.9

Legend / Key:

acf m = actual cubic feet per minute

GRO = gasoline range organics

Conc. = concentration

Sys. = system

scfm = standard cubic feet per minute

MTBE = methyl tertiary butyl ether

lbs/day = pounds per day

mg/m³ = milligrams per cubic meter

¹ Hour meter readings are approximate based on the generator hours recorded on the field data sheets. Hour meter readings were not taken at exact sampling times, therefore, times noted are readings obtained closest to the actual sampling times.

² Effluent Flow rate = System Influent flow rate + combustion air flow rate (80 cfm per manufacturer)

³ To calculate the extraction rate, the system influent concentrations are averaged between the sampling dates.

Sample Calculations:

$$\text{Extraction Rate from Wells (lbs/day)} = \text{Sys Inf Flowrate (ft}^3/\text{min}) \times \text{Avg. Inf Conc (mg/m}^3) \times (1 \text{ lb}/453,593\text{mg}) \times (1,440 \text{ min/day}) \times (1 \text{ m}^3/35.314\text{ft}^3)$$

Wells (lbs/day)

$$\text{Destruction Removal \%} = \frac{\text{Extraction Rate} - \text{Emission Rate}}{\text{Extraction Rate}} \times 100$$

Efficiency, %

Extraction Rate

Notes:

1 DPE extracting from extraction wells EX-2 through EX-7. GRO removed is calculated based on assuming 1.5 hours of operation occurred from start of test to first sample time.

2 DPE extracting from extraction wells EX-1 through EX-7.

3 DPE extracting from extraction wells EX-1, EX-5, and EX-6.

4 DPE extracting from extraction wells EX-1 and EX-5, cumulative GRO removed in through 3/23/15 using analytical results obtained on 3/10/15.

5 DPE extracting from wells EX-3, EX-6, MW-5A, and MW-6A.

6 DPE extracting from wells EX-1, MW-5A, and MW-6A.

7 DPE extracting from wells EX-1, EX-6, MW-5A, and MW-6A.

TABLE 7
GROUNDWATER EXTRACTION COMPONENT - GROUNDWATER ANALYTICAL DATA SUMMARY
DPE REMEDIATION EVENT
Former Olympic Station, 1436 Grant Avenue, San Lorenzo, California

Date	Notes	Sample Time	Sample Location	Laboratory Sample ID	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
07/21/14	1	7:43	WINF	STR14072144-01A	310	3.3	<0.50	<0.50	<0.50	37
		7:54	WGAC1	STR14072240-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		7:47	WGAC2	STR14072240-02A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		9:00	WEFF	STR14072145-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
07/29/14		5:55	WEFF	STR14072940-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
08/18/14		7:15	WINF	STR14081941-01A	170	3.4	<0.50	0.97	<0.50	39
		7:10	WGAC1	STR14081942-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		7:05	WGAC2	STR14081942-02A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		7:00	WEFF	STR14081940-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
09/08/14		7:55	WINF	STR14090941-01A	<50	0.89	<0.50	<0.50	<0.50	12
		7:50	WGAC1	STR14090942-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		7:45	WGAC2	STR14090942-02A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		7:40	WEFF	STR14090940-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
10/02/14	2	7:25	WINF	STR14100342-01A	<50	0.77	<0.50	<0.50	<0.50	11
		7:19	WGAC1	STR14090942-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		7:14	WGAC2	STR14090942-02A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		7:09	WEFF	STR14100341-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
11/03/14		7:58	WINF	STR14110443-01A	<50	<0.50	<0.50	<0.50	<0.50	13
		7:55	WGAC1	STR14100344-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		7:50	WGAC2	STR14100344-02A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		7:45	WEFF	STR14110441-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50

TABLE 7
GROUNDWATER EXTRACTION COMPONENT - GROUNDWATER ANALYTICAL DATA SUMMARY
DPE REMEDIATION EVENT
Former Olympic Station, 1436 Grant Avenue, San Lorenzo, California

Date	Notes	Sample Time	Sample Location	Laboratory Sample ID	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
12/04/14		6:55	WINF	STR14120542-01A	<50	0.98	<0.50	<0.50	<0.50	21
		6:48	WGAC1	STR14120543-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		6:44	WGAC2	STR14120543-02A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		6:40	WEFF	STR14120541-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
01/05/15		7:46	WINF	STR15010644-01A	<50	5.4	<0.50	<0.50	<0.50	29
		7:44	WGAC1	STR15010647-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		7:41	WGAC2	STR15010647-02A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		7:37	WEFF	STR15010641-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
02/02/15		6:47	WINF	STR15020348-01A	<50	2.4	<0.50	<0.50	<0.50	22
		6:44	WGAC1	STR15020349-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		6:40	WGAC2	STR15020349-02A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		6:37	WEFF	STR15020344-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
03/10/15		7:05	WINF	STR15031148-01A	<50	1.5	<0.50	<0.50	<0.50	21
		7:00	WGAC1	STR15031149-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		6:55	WGAC2	STR15031149-02A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		6:52	WEFF	STR15031147-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
05/05/15	3	7:32	WINF	STR15050650-01A	96	5.0	<0.50	2.2	2.16	19
		7:28	WGAC1	STR15050650-02A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		7:25	WGAC2	STR15050650-03A	<50	<0.50	<0.50	<0.50	<0.50	<0.50
		7:22	WEFF	STR15050645-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50

TABLE 7
GROUNDWATER EXTRACTION COMPONENT - GROUNDWATER ANALYTICAL DATA SUMMARY
DPE REMEDIATION EVENT
Former Olympic Station, 1436 Grant Avenue, San Lorenzo, California

Date	Notes	Sample Time	Sample Location	Laboratory Sample ID	GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
06/02/15	4	5:30	WINF	STR15060351-01A	<50	<0.50	<0.50	<0.50	<0.50	7.7	
		5:21	WGAC1	STR15060351-02A	<50	<0.50	<0.50	<0.50	<0.50	<0.50	
		5:17	WGAC2	STR15060351-03A	<50	<0.50	<0.50	<0.50	<0.50	<0.50	
		5:15	WEFF	STR15060343-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50	
07/01/15		5:55	WINF	STR15070246-02A	<50	<0.50	<0.50	<0.50	<0.50	6.9	
		5:50	WGAC1	STR15070246-03A	<50	<0.50	<0.50	<0.50	<0.50	<0.50	
		5:43	WGAC2	STR15070246-04A	<50	<0.50	<0.50	<0.50	<0.50	<0.50	
		5:40	WEFF	STR15070242-02A	<50	<0.50	<0.50	<0.50	<0.50	<0.50	
08/03/15	5	6:23	WINF	STR15080445-02A	<50	<0.50	<0.50	<0.50	<0.50	9.6	
		6:20	WGAC1	STR15080445-03A	<50	<0.50	<0.50	<0.50	<0.50	<0.50	
		6:15	WGAC2	STR15080445-04A	<50	<0.50	<0.50	<0.50	<0.50	<0.50	
		6:10	WEFF	STR15080443-02A	<50	<0.50	<0.50	<0.50	<0.50	<0.50	
09/01/15		5:28	WINF	STR15090248-01A	<50	<0.50	<0.50	<0.50	<0.50	9.7	
		5:26	WGAC1	STR15090248-02A	<50	<0.50	<0.50	<0.50	<0.50	<0.50	
		5:23	WGAC2	STR15090248-03A	<50	<0.50	<0.50	<0.50	<0.50	<0.50	
		5:21	WEFF	STR15090240-01A	<50	<0.50	<0.50	<0.50	<0.50	<0.50	
Legend / Key:					Analytical Methods / Laboratory:						
GRO = Gasoline Range Organics C4-C13					GRO analyzed using EPA Method SW8015B/SW8260B						
MTBE = Methyl tertiary butyl ether					BTEX and MTBE analyzed using EPA Method SW8260B						
BTEX = Benzene, toluene, ethylbenzene, xylenes					Samples analyzed by Alpha Analytical, Inc. (ELAP #2019)						
µg/L = micrograms per liter											
-- = Not analyzed											

TABLE 7
GROUNDWATER EXTRACTION COMPONENT - GROUNDWATER ANALYTICAL DATA SUMMARY
DPE REMEDIATION EVENT
Former Olympic Station, 1436 Grant Avenue, San Lorenzo, California

Date	Notes	Sample Time	Sample Location	Laboratory Sample ID	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Notes:										
	1									
	2									
	3									
	4									
	5									

TABLE 8
GROUNDWATER EXTRACTION COMPONENT - GROUNDWATER ANALYTICAL DATA SUMMARY
DPE REMEDIATION EVENT
Former Olympic Station, 1436 Grant Avenue, San Lorenzo, California

Date	Notes	Sample Time	Sample Location	Laboratory Sample ID	Mercury	Cyanide	Cr	Ni	Cu	Zn	As	Se	Ag	Cd	Pb	Phenols
					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
07/21/14	1	7:43	WINF	STR14072144-01A	<0.20	<0.0001	<10	<10	<20	<100	<5.0	5.8	<5.0	<2.0	6.7	<5.0
		7:54	WGAC1	STR14072240-01A	--	--	--	--	--	--	--	--	--	--	--	--
		7:47	WGAC2	STR14072240-02A	--	--	--	--	--	--	--	--	--	--	--	--
		9:00	WEFF	STR14072145-01A	<0.20	<0.0001	<10	<10	<20	<100	7.7	<5.0	<5.0	<2.0	<5.0	<5.0

Legend / Key:

Phenols = Pentachlorophenol and 2,3,4,6-Tetrachlorophenol

µg/L = micrograms per liter

-- = Not analyzed

Analytical Methods / Laboratory:

Metals analyzed using EPA Method 200.8

Mercury analyzed using EPA Method 245.1

Phenols analyzed using EPA Method SW8270C-SIM

Cyanide analyzed using EPA Method SM4500-CNE

Alpha Analytical, Inc. (California #2019; NELAC #01154CA)

Notes:

1 DPE test, extracting from extraction wells EX-2 through EX-7. Extended analytical results obtained to comply with groundwater discharge permit requirements.

TABLE 9
GROUNDWATER EXTRACTION COMPONENT - OPERATIONAL PERFORMANCE AND MASS REMOVAL SUMMARY
DPE REMEDIATION EVENT
Former Olympic Station, 1436 Grant Avenue, San Lorenzo, California

Date	Notes	Sample Time	Hour Meter Reading ¹	Sewer Discharge Data				Analytical Results			Mass Removed			Cumulative Mass Removed					
				Totalizer Reading (gallons)	Period (gallons)	Cumulative Flow (gallons)	Average Sewer Discharge Flow Rate (gpm) ^a	Influent GRO (µg/L)	Influent Benzene (µg/L)	Influent MTBE (µg/L)	This Period GRO (lbs)	This Period Benzene (lbs)	This Period MTBE (lbs)	GRO (lbs)	Benzene (lbs)	MTBE (lbs)			
7/21/14	1	7:43	3,478.1	60,440	--	--	--	Start of Test											
07/29/14		5:55	3,599.7	110,120	49,680	49,680	6.81	310	3.3	37	0.13	0.0014	0.015	0.13	0.0014	0.015			
08/18/14		7:15	3,862.0	196,310	86,190	135,870	5.48	170	3.4	39	0.17	0.0024	0.027	0.30	0.0038	0.043			
09/08/14		7:55	4,247.0	305,370	109,060	244,930	4.72	<50	0.89	12	<0.10	0.0020	0.023	<0.40	0.0057	0.066			
10/02/14	2	7:25	4,823.0	458,740	153,370	398,300	4.44	<50	0.77	11	<0.06	0.0011	0.015	<0.47	0.0068	0.081			
11/03/14		7:58	5,265.0	618,930	160,190	558,490	6.04	<50	<0.50	13	<0.07	<0.001	0.016	<0.53	<0.008	0.097			
12/04/14	3	6:55	5,271.0	621,440	2,510	561,000	6.97	<50	0.98	21	<0.001	<0.00002	0.0004	<0.53	<0.008	0.097			
01/05/15		7:46	5,873.0	875,710	254,270	815,270	7.04	<50	5.4	29	<0.106	<0.00677	0.0530	<0.64	<0.014	0.150			
02/02/15		6:47	5,926.0	898,290	22,580	837,850	7.10	<50	2.4	22	<0.009	<0.00073	0.0048	<0.65	<0.015	0.155			
03/10/15	4	7:05	5,941.0	904,000	5,710	843,560	6.34	<50	1.5	21	<0.002	<0.00009	0.0010	<0.65	<0.015	0.156			
03/23/15	5	--	6,015.0	927,780	23,780	867,340	5.36	--	--	--	<0.010	<0.00030	0.0042	<0.66	<0.016	0.160			
05/05/15	6	7:32	6,018.0	929,200	1,420	868,760	7.89	96	5.0	19	<0.001	<0.00006	0.0002	<0.66	<0.016	0.160			
06/02/15	7	5:35	6,233.0	979,100	49,900	918,660	3.87	<50	<0.50	7.7	<0.030	<0.00115	0.0056	<0.69	<0.017	0.166			
07/01/15		5:55	6,929.0	1,122,860	143,760	1,062,420	3.44	<50	<0.50	6.9	<0.060	<0.00060	0.0088	<0.75	<0.017	0.175			
08/03/15	8	6:23	7,410.0	1,220,100	97,240	1,159,660	3.37	<50	<0.50	9.6	<0.041	<0.00041	0.0067	<0.79	<0.018	0.181			
09/01/15		5:28	7,903.0	1,299,690	79,590	1,239,250	2.69	<50	<0.50	9.7	<0.033	<0.00033	0.0064	<0.83	<0.018	0.188			

Legend / Key:

GRO = Gasoline Range Organics C4-C13

µg/L = micrograms per liter

MTBE = Methyl tertiary butyl ether

gpm = gallons per minute

Analytical Methods /Laboratory:

GRO analyzed using EPA Method SW8015B/SW8260B

Benzene and MTBE analyzed using EPA Method SW8260B

Alpha Analytical, Inc. (ELAP # 2019)

^a Not representative of actual flow rate, calculation affected by system down time.

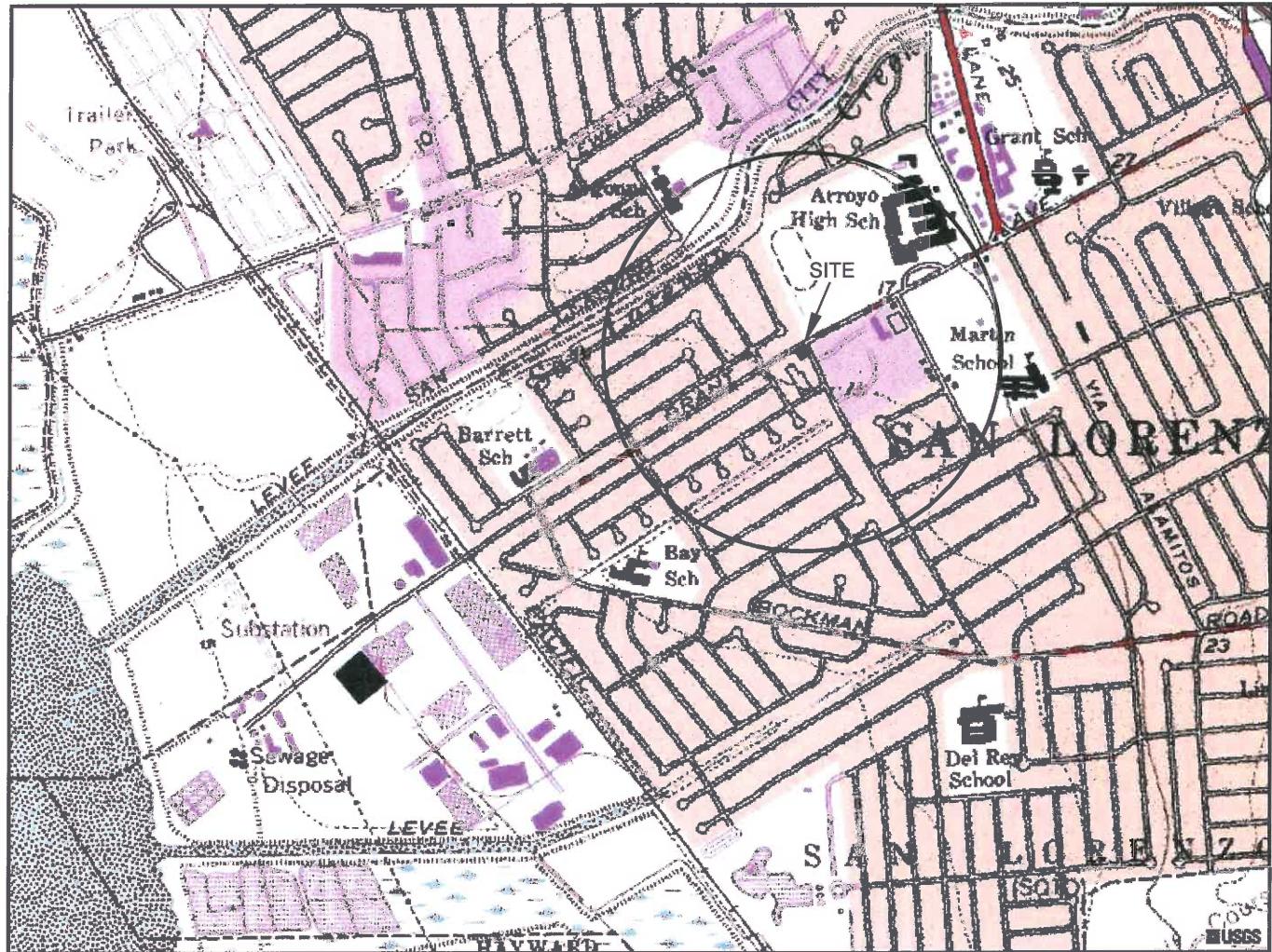
^b Mass removed this period (pounds) = Average concentration (µg/L)[between the sample dates] x Period gallons x (2.2046 x 10⁻⁹)(lb/µg) / 0.26418 (gal/L)

¹ Hour meter readings were not taken at exact sampling times, therefore, times noted are readings obtained closest to the actual sampling times.

TABLE 9
GROUNDWATER EXTRACTION COMPONENT - OPERATIONAL PERFORMANCE AND MASS REMOVAL SUMMARY
DPE REMEDIATION EVENT
Former Olympic Station, 1436 Grant Avenue, San Lorenzo, California

Notes:

- 1 DPE extracting from extraction wells EX-2 through EX-7.
- 2 DPE extracting from extraction wells EX-1 through EX-7.
- 3 DPE extracting from extraction wells EX-1, EX-5 and EX-6.
- 4 DPE extracting from extraction wells EX-1 and EX-5.
- 5 Mass removed is based on analytical results obtained during March 10, 2015 sampling event.
- 6 System was non-operational between March 23 and May 5, 2015 due to budget constraints. After maintenance, the system was re-started for continuous operation on May 20, 2015, extracting from wells EX-3, EX-6, MW-5A and MW-6A.
- 7 DPE extracting from extraction wells EX-1, MW-5A and MW-6A.
- 8 DPE extracting from extraction wells EX-1, EX-6, MW-5A and MW-6A.



GENERAL NOTES:
BASE MAP FROM U.S.G.S.
SAN LORENZO, CA.
7.5 MINUTE TOPOGRAPHIC
PHOTOREVISED 1978



0 1800 FT
APPROXIMATE SCALE

STRATUS
ENVIRONMENTAL, INC.

FORMER OLYMPIC SERVICE STATION
1436 GRANT AVENUE
SAN LORENZO, CALIFORNIA

SITE LOCATION MAP

FIGURE
1

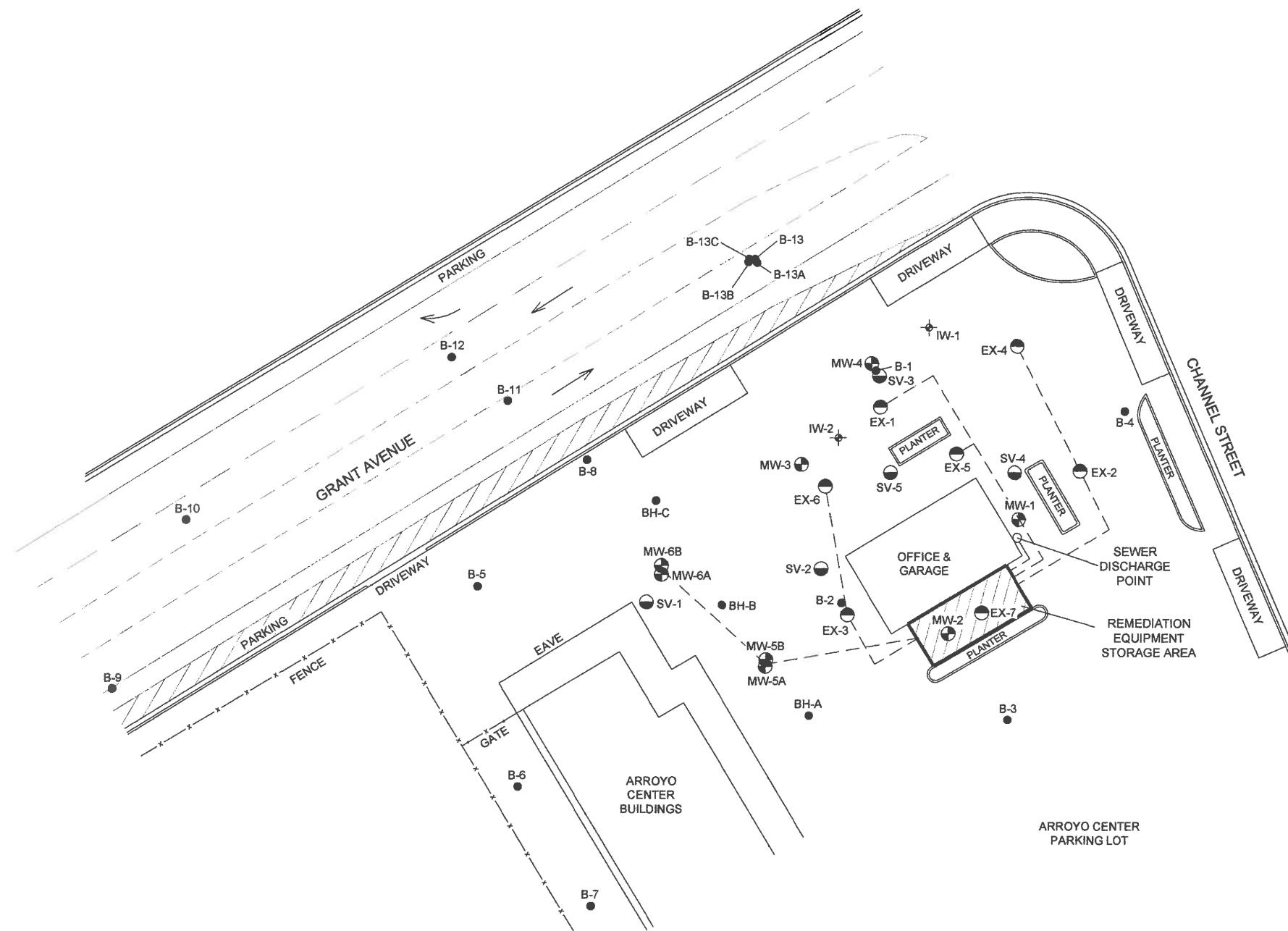
PROJECT NO.
2115-1436-01

N

LEGEND

- MW-1 MONITORING WELL LOCATION
- SV-1 VAPOR EXTRACTION WELL LOCATION
- EX-1 EXTRACTION WELL LOCATION
- ◆ IW-1 OZONE INJECTION WELL LOCATION
- B-1 SOIL BORING LOCATION

— — — APPROXIMATE LOCATIONS OF ABOVE GROUND CONVEYANCE PIPING



STRATUS
ENVIRONMENTAL, INC.

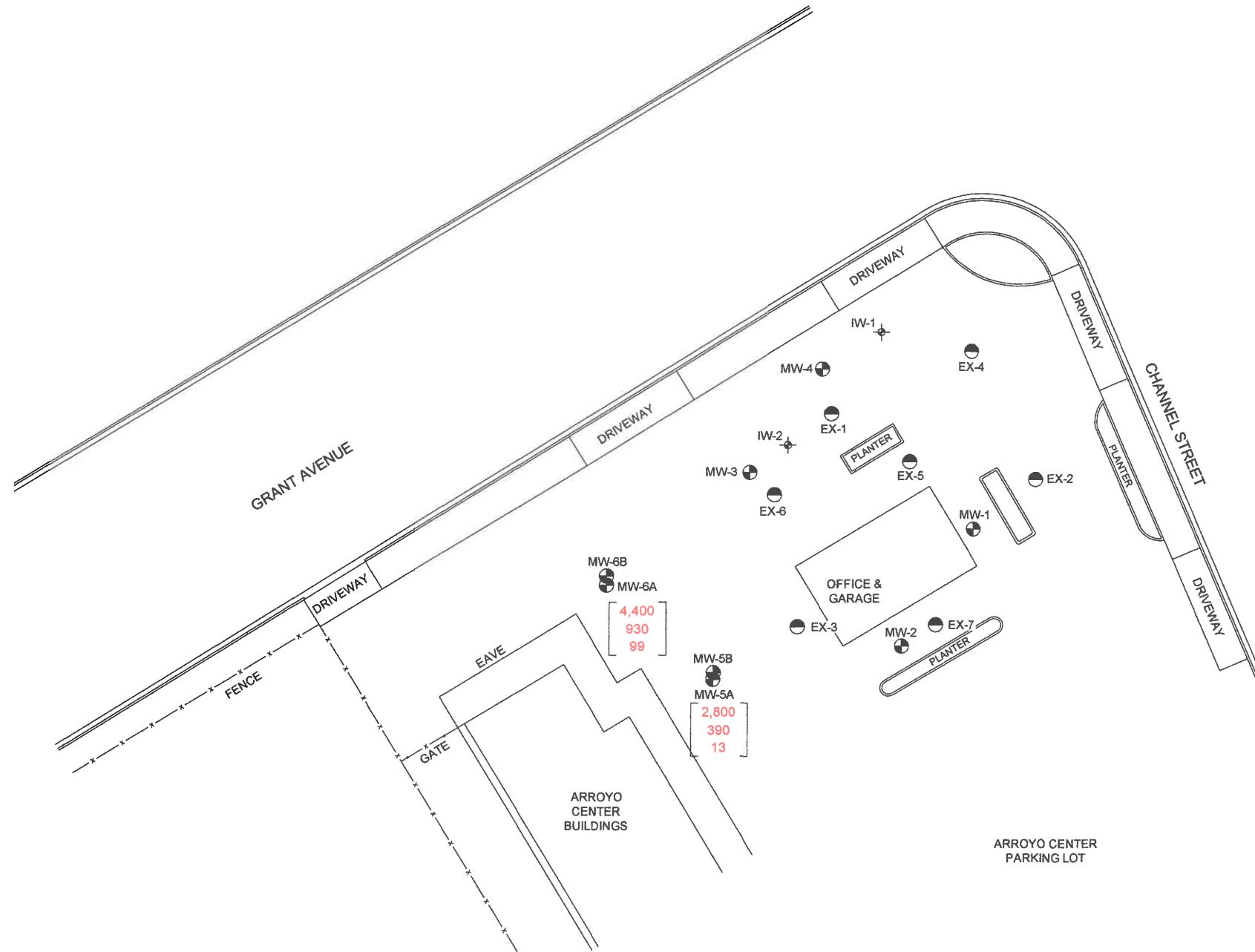
PATH NAME: Olympic
DRAFTER INITIALS: JMP
DATE LAST REVISED: May 15, 2015
FILENAME: Olympic Siteplan

0 40 FT
SCALE

FORMER OLYMPIC SERVICE STATION
1436 GRANT AVENUE
SAN LORENZO, CALIFORNIA

SITE PLAN

FIGURE
2
PROJECT NO.
2115-1436-01



LEGEND

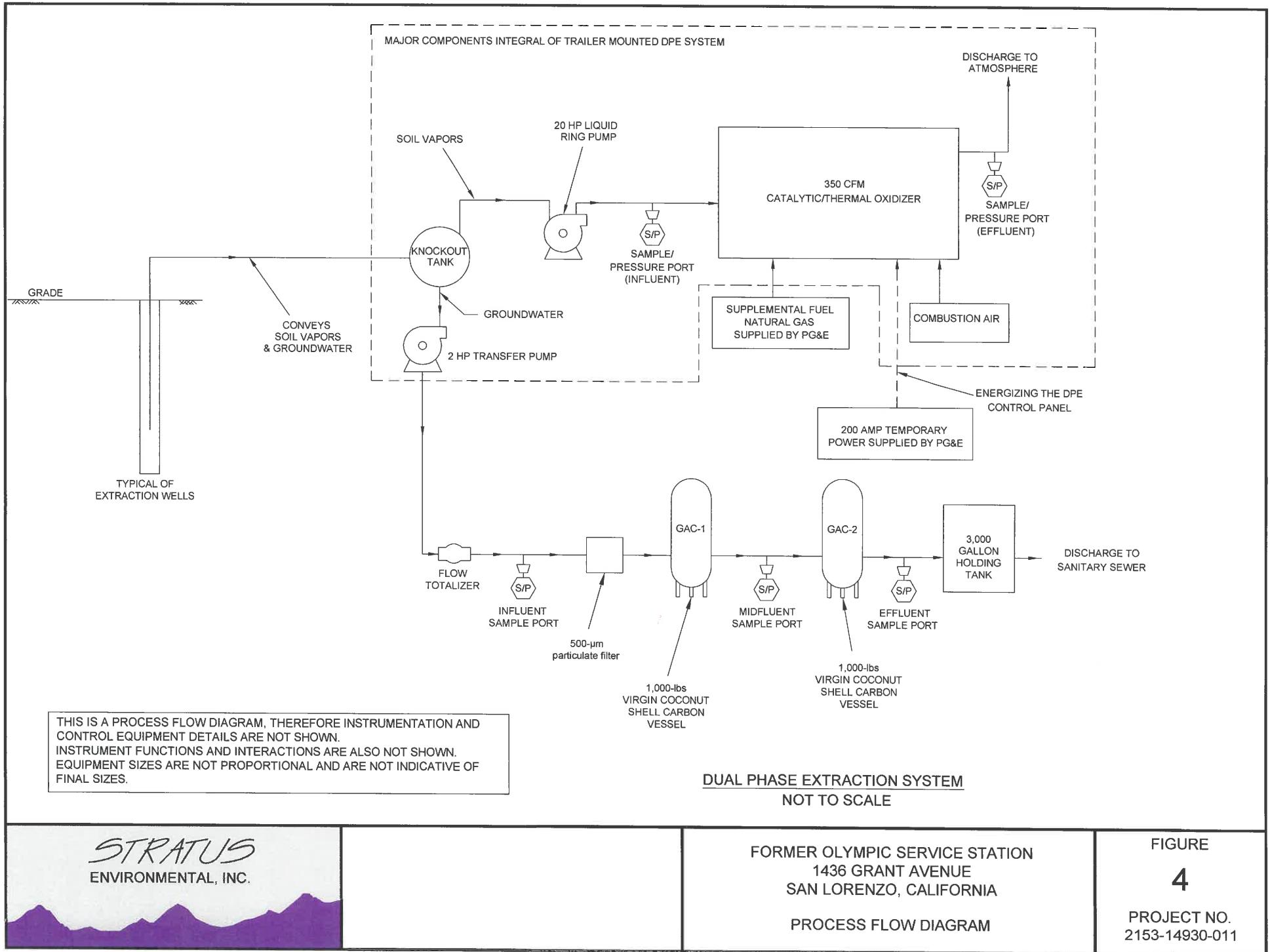
- MW-1 MONITORING WELL LOCATION
- EX-1 EXTRACTION WELL LOCATION
- ◆ IW-1 OZONE INJECTION WELL LOCATION

460	GASOLINE RANGE ORGANICS (GRO) CONCENTRATION IN $\mu\text{g}/\text{L}$
33	BENZENE CONCENTRATION IN $\mu\text{g}/\text{L}$
730	METHYL TERTIARY BUTYL ETHER (MTBE) IN $\mu\text{g}/\text{L}$

WELLS SAMPLED ON 7/14/15
GRO ANALYZED BY EPA METHOD SW8015B/SW8260B
MTBE & BENZENE ANALYZED BY EPA METHOD SW8260B

BASED ON SURVEY PREPARED BY MORROW SURVEYING ON 6/15/11 & UPDATED IN JUNE 2014.

<i>STRATUS</i> ENVIRONMENTAL, INC.	PATH NAME: OlympicQuarterly DRAFTER INITIALS: JED DATE LAST REVISED: August 19, 2015 FILENAME: Olympic Quarterly Figures	0 40 FT SCALE	FORMER OLYMPIC SERVICE STATION 1436 GRANT AVENUE SAN LORENZO, CALIFORNIA GROUNDWATER ANALYTICAL SUMMARY 10' DEPTH MONITORING WELLS 3rd QUARTER 2015	FIGURE 3 PROJECT NO. 2115-1436-01
---------------------------------------	---	------------------	--	--



APPENDIX A

FIELD DATA SHEETS



Site Address 1436 Grant Ave
City San Leandro
Sampled by:
Signature Cotter

Site Number Olympic station
Project Number
Project PM Scott ~~5~~ ORIGINAL
DATE 7-7-85

Multiplier

$2'' = 0.5$ $3'' = 1.0$ $4'' = 2.0$ $6'' = 4.4$

Please refer to groundwater sampling field procedures
pH/Conductivity/temperature Meter - Oakton Model PC-10
DO Meter - Oakton 300 Series (DO is always measured before purge)

CALIBRATION DATE

pH 7-2-19
Conductivity
DO)



1436
Site Address: Grant Ave
City: San Lorenzo
Sampled By: COTILL
Signature:

ORIGINAL

Site Number: Olympic station
Project Number:
Project PM: Scott
DATE: 7/14/05

Well ID MW5A					Well ID MW6A								
Purge start time			Odor Y N		Purge start time			Odor O N					
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons				
time 0532	22.6	7.68	11.30	8	time 0539	23.9	7.66	2.01	8				
time 0534	22.7	7.21	12.40	5.014	time 0541	23.9	7.82	17.88	.5				
time					time								
time					time								
purge stop time	8.69		ORP ~24.7		purge stop time	1.23		ORP ~20.2					
Well ID					Well ID								
Purge start time			Odor Y N		Purge start time			Odor Y N					
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons				
time					time								
time					time								
time					time								
time					time								
purge stop time	ORP		purge stop time		ORP		ORP		ORP				
Well ID					Well ID								
Purge start time			Odor Y N		Purge start time			Odor Y N					
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons				
time					time								
time					time								
time					time								
time					time								
purge stop time	ORP		purge stop time		ORP		ORP		ORP				
Well ID					Well ID								
Purge start time			Odor Y N		Purge start time			Odor Y N					
	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons				
time					time								
time					time								
time					time								
time					time								
purge stop time	ORP		purge stop time		ORP		ORP		ORP				

Former Olympic Service Station

DPE Mass Extraction Event

1436 Grant Avenue

San Lorenzo, California

Date: 7-1-15
 Onsite Time: 0530
 Offsite Time: 0700

Technician:
 Project Engineer:
 Weather Conditions:
 Ambient Temperature:

Q Hill
Debbie
Claus
50

System Information				
System Status Upon Arrival:	Operational <input checked="" type="checkbox"/>	Non-Operational <input type="checkbox"/>	<input type="checkbox"/> Turn on sample wells	<input checked="" type="checkbox"/> 0°F
System Status Upon Departure:	Operational <input type="checkbox"/>	Non-Operational <input checked="" type="checkbox"/>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Hour Meter Reading:	<u>6929</u>		<u>82</u>	
Totalizer Reading on DPE Unit:	<u>1122860</u>		Chart Recorder Replaced <input type="checkbox"/>	% Dilution Valve Open: <input type="checkbox"/>
Combustion Chamber Operating Temperature:	<u>1456</u>		If open, dilution air flowrate, (fpm/cfm) and Temp (deg F): _____	
			pH Meter Calibration _____	

Field Measurements				
Parameter	Influent (Total)	System-Influent	Effluent	Comments
Differential Pressure, "wc				
Air Velocity, FPM		<u>1600</u>		
Pipe Diameter, inches		<u>3</u>		
Air Flow Rate, cfm				
Applied Vacuum, "WC/"Hg	<u>14"</u>	<u>Hg</u>		
Temperature, deg F		<u>95</u>		
PID Readings, ppmv		<u>5</u>	<u>8.4</u>	

Other Readings/Measurements

Well ID	% Open	PID	Vacuum @ Wellhead	Stinger Depth	Well ID	Induced Vacuum "WC/"Hg	DTW
EX-1	<u>100</u>				MW-1	<u>8</u>	<u>8.52</u>
EX-2					MW-2	<u>- .28</u>	<u>8.10</u>
EX-3					MW-3	<u>- .03</u>	<u>8.61</u>
EX-4					MW-4	<u>.1412</u>	
EX-5					MW-5A	<u>.45 ft m</u>	
EX-6					MW-6A	<u>System</u>	
EX-7							
MW 5A	<u>100</u>						
MW 6A	<u>100</u>						

Former Olympic Service Station
DPE Mass Extraction Event
1436 Grant Avenue
San Lorenzo, California

ORIGINAL

Sampling Information			
Sample ID	Date & Time	Sample ID	Date & Time
A SYS INF	7/15 0603	W INF	7/15 0555
A EFF	) 0600	W GAC1	) 0550
		W GAC2	) 0543
		W EFF	) 0540

Operation & Maintenance Notes
Notes:
Notify air board a minimum of 5-days prior to initial start up
Twice a month monitor/recorded LEL readings(hexane calibration) and vapor flow rate per air permit
Notify District's Industrial Waste Inspector a minimum of 24 hours prior to any sampling event (510) 276-4700
Calibrate all instruments (e.g. pH meter)
Flow meter specifications to be approved by District and include a non-resetable totalizer
Collect initial water sample after minimum of 508 gallons
Max discharge rate not to exceed 20gpm
Pick up Trash

Lab Parameters	Sampling Frequency*	Sample Location	Analytical Method
TPH	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method SW8015B
GRO	Start-up/Monthly	AINF/AEFF	EPA Method SW8015B
BTEX	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method 8020
MTBE	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method 8260
BTEX/MTBE	Start-up/Monthly	AINF/AEFF	EPA Method 8260
Lead	Start-up	WINF/WEFF	EPA 200.8
Metals (As, Cd, Cu, Hg, Ni, Se, Ag, Cr, Zn)	Start-up	WINF/WEFF	EPA 200.8
Cyanide	Start-up	WINF/WEFF	SM 4500 CN C,E
Phenols	Start-up	WINF/WEFF	EPA 420.1
pH	Start-up/Monthly	WINF, WEFF	Field measured

* Upon initial start-up of system and prior to discharge of groundwater to the sewer cleanout, obtain samples for groundwater discharge approval from the holding tank. Once approved, the system may be started for continuous operation.

Former Olympic Service Station

DPE Mass Extraction Event

1436 Grant Avenue

San Lorenzo, California

~~ORIGINAL~~Date: 7-14-15
Onsite Time: 0515
Offsite Time: 0645Technician:
Project Engineer:
Weather Conditions:
Ambient Temperature:CHILL
Dobby
Cloudy
50

System Information

System Status Upon Arrival: Operational Non-Operational System Status Upon Departure: Operational Non-Operational Hour Meter Reading: 6930Totalizer Reading on DPE Unit: 1122990 Chart Recorder Paper Replaced Yes
 No

% Dilution Valve Open:

If open, dilution air flowrate,
(fpm/cfm) and Temp (deg F):pH Meter Calibration 7-2-15

Field Measurements					
Parameter	Influent (Total)	System-Influent	Effluent	Comments	
Differential Pressure, "wc					
Air Velocity, FPM		<u>1450</u>			
Pipe Diameter, inches		<u>3</u>			
Air Flow Rate, cfm					
Applied Vacuum, "WC/"Hg	<u>15"</u>	<u>16</u>			
Temperature, deg F		<u>80</u>	<u>1376</u>		
PID Readings, ppmv		<u>75</u>	<u>1.2</u>		

Other Readings/Measurements

Well ID	% Open	PID	Vacuum @ Wellhead	Stinger Depth	Well ID	Induced Vacuum "WC/"Hg	DTW
EX-1	<u>100</u>				MW-1		
EX-2	<u>0</u>				MW-2		
EX-3					MW-3		
EX-4					MW-4		
EX-5					MW-5A		
EX-6					MW-6A		
EX-7	<u>0</u>						
MW-5A	<u>100</u>						
MW-6A	<u>100</u>						

Former Olympic Service Station

DPE Mass Extraction Event

1436 Grant Avenue

San Lorenzo, California



Sampling Information			
Sample ID	Date & Time	Sample ID	Date & Time
A SYS INF		W INF	
A EFF		W GAC1	
		W GAC2	
		W EFF	

Operation & Maintenance Notes	
Notes:	
Notify air board a minimum of 5-days prior to initial start up	
Twice a month monitor/recorder LEL readings(hexane calibration) and vapor flow rate per air permit	
Notify District's Industrial Waste Inspector a minimum of 24 hours prior to any sampling event (510) 276-4700	
Calibrate all instruments (e.g. pH meter)	
Flow meter specifications to be approved by District and include a non-resetable totalizer	
Collect initial water sample after minimum of 508 gallons	
Max discharge rate not to exceed 20gpm	

Lab Parameters	Sampling Frequency*	Sample Location	Analytical Method
TPH	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method SW8015B
GRO	Start-up/Monthly	AINF/AEFF	EPA Method SW8015B
BTEX	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method 8020
MTBE	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method 8260
BTEX/MTBE	Start-up/Monthly	AINF/AEFF	EPA Method 8260
Lead	Start-up	WINF/WEFF	EPA 200.8
Metals (As, Cd, Cu, Hg, Ni, Se, Ag, Cr, Zn)	Start-up	WINF/WEFF	EPA 200.8
Cyanide	Start-up	WINF/WEFF	SM 4500 CN C,E
Phenols	Start-up	WINF/WEFF	EPA 420.1
pH	Start-up/Monthly	WINF, WEFF	Field measured

* Upon initial start-up of system and prior to discharge of groundwater to the sewer cleanout, obtain samples for groundwater discharge approval from the holding tank. Once approved, the system may be started for continuous operation.

Former Olympic Service Station
DPE Mass Extraction Event
1436 Grant Avenue
San Lorenzo, California



Date: 8-3-15
Onsite Time: 0600
Offsite Time: 0700

Technician:
Project Engineer:
Weather Conditions:
Ambient Temperature:

OTILL
Debtress
Cloudy
50

System Information				
System Status Upon Arrival:	Operational <input checked="" type="checkbox"/>	Non-Operational <input type="checkbox"/>		
System Status Upon Departure:	Operational <input checked="" type="checkbox"/>	Non-Operational <input type="checkbox"/>		
Hour Meter Reading:	<u>7410</u>			
Totalizer Reading on DPE Unit:	<u>1220 100</u>		Chart Recorder Paper Replaced <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Combustion Chamber Operating Temperature:	<u>1450</u>		% Dilution Valve Open: <u>87</u>	If open, dilution air flowrate, (fpm/cfm) and Temp (deg F):
			pH Meter Calibration <u>7-31-15</u>	

Field Measurements				
Parameter	Influent (Total)	System-Influent	Effluent	Comments
Differential Pressure, "wc				
Air Velocity, FPM		<u>1600</u>		
Pipe Diameter, inches		<u>3</u>		
Air Flow Rate, cfm				
Applied Vacuum, "WC/"Hg	<u>12"</u>			
Temperature, deg F		<u>96</u>	<u>1125</u>	
PID Readings, ppmv		<u>5</u>	<u>8.8</u>	

Other Readings/Measurements

Well ID	% Open	PID	Vacuum @ Wellhead	Stinger Depth	Well ID	Induced Vacuum "WC/"Hg	DTW
EX-1	<u>100</u>				MW-1	<u>0</u>	<u>8.72</u>
EX-2					MW-2	<u>-0.22</u>	<u>8.40</u>
EX-3					MW-3	<u>-0.19</u>	<u>9.38</u>
EX-4					MW-4	<u>CIAZ</u>	
EX-5					MW-5A		
EX-6	<u>100%</u>				MW-6A		
EX-7							
<u>MW5A</u>	<u>100</u>						
<u>MW6A</u>	<u>100</u>						

Former Olympic Service Station
DPE Mass Extraction Event
1436 Grant Avenue
San Lorenzo, California

 ORIGINAL

Sampling Information			
Sample ID	Date & Time	Sample ID	Date & Time
A SYS INF	8-315 0624	W INF	8-315 0623
A EFF	) 0627	W GAC1	) 0620
		W GAC2	) 0615
		W EFF	) 0610

~~Temp~~
~~Cond~~

Operation & Maintenance Notes			
Notes:			
Notify air board a minimum of 5-days prior to initial start up			
Twice a month monitor/recorder LEL readings(hexane calibration) and vapor flow rate per air permit			
Notify District's Industrial Waste Inspector a minimum of 24 hours prior to any sampling event (510) 276-4700			
Calibrate all instruments (e.g. pH meter)			
Flow meter specifications to be approved by District and include a non-resetable totalizer			
Collect initial water sample after minimum of 508 gallons			
Max discharge rate not to exceed 20gpm			
PM Temp Cond INF 7.74 20.4 821.1 EFF 7.50 20.1 840.6			

Lab Parameters	Sampling Frequency*	Sample Location	Analytical Method
TPH	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method SW8015B
GRO	Start-up/Monthly	AINF/AEFF	EPA Method SW8015B
BTEX	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method 8020
MTBE	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method 8260
BTEX/MTBE	Start-up/Monthly	AINF/AEFF	EPA Method 8260
Lead	Start-up	WINF/WEFF	EPA 200.8
Metals (As, Cd, Cu, Hg, Ni, Se, Ag, Cr, Zn)	Start-up	WINF/WEFF	EPA 200.8
Cyanide	Start-up	WINF/WEFF	SM 4500 CN C,E
Phenols	Start-up	WINF/WEFF	EPA 420.1
pH	Start-up/Monthly	WINF, WEFF	Field measured

* Upon initial start-up of system and prior to discharge of groundwater to the sewer cleanout, obtain samples for groundwater discharge approval from the holding tank. Once approved, the system may be started for continuous operation.

Former Olympic Service Station
DPE Mass Extraction Event
 1436 Grant Avenue
 San Lorenzo, California

ORIGINAL

Date: 8-18-15
 Onsite Time: 0500
 Offsite Time: 0630

Technician:
 Project Engineer:
 Weather Conditions:
 Ambient Temperature:

CHILL
Debbi
C. T. Z.
50

System Information				
System Status Upon Arrival:	Operational <input type="checkbox"/>	Non-Operational <input checked="" type="checkbox"/>	Flue Open <input checked="" type="checkbox"/>	
System Status Upon Departure:	Operational <input checked="" type="checkbox"/>	Non-Operational <input type="checkbox"/>		
Hour Meter Reading:	<u>7725</u>			
Totalizer Reading on DPE Unit:	<u>1267680</u>		Chart Recorder Replaced <input type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Combustion Chamber Operating Temperature:	<u>1460</u>		% Dilution Valve Open: <input type="checkbox"/>	If open, dilution air flowrate, (fpm/cfm) and Temp (deg F): <u>80</u>
	pH Meter Calibration			

Field Measurements				
Parameter	Influent (Total)	System-Influent	Effluent	Comments
Differential Pressure, "wc				
Air Velocity, FPM		<u>1500</u>		
Pipe Diameter, inches		<u>3</u>		
Air Flow Rate, cfm				
Applied Vacuum, "WC/"Hg	<u>12"</u>			
Temperature, deg F		<u>90</u>	<u>110.5</u>	
PID Readings, ppmv		<u>3</u>	<u>12.8</u>	

Other Readings/Measurements

Well ID	% Open	PID	Vacuum @ Wellhead	Stinger Depth	Well ID	Induced Vacuum "WC/"Hg	DTW
EX-1	<u>100</u>				MW-1		
EX-2					MW-2		
EX-3					MW-3		
EX-4					MW-4		
EX-5					MW-5A		
EX-6	<u>25</u>				MW-6A		
EX-7							
MW5A	<u>100</u>						
MW6A	<u>100</u>						

Former Olympic Service Station
DPE Mass Extraction Event
 1436 Grant Avenue
 San Lorenzo, California


ORIGINAL

Sampling Information			
Sample ID	Date & Time	Sample ID	Date & Time
A SYS INF		W INF	
A EFF		W GAC1	
		W GAC2	
		W EFF	

Operation & Maintenance Notes			
Notes:			
Notify air board a minimum of 5-days prior to initial start up			
Twice a month monitor/recorder LEL readings(hexane calibration) and vapor flow rate per air permit			
Notify District's Industrial Waste Inspector a minimum of 24 hours prior to any sampling event (510) 276-4700			
Calibrate all instruments (e.g. pH meter)			
Flow meter specifications to be approved by District and include a non-resetable totalizer			
Collect initial water sample after minimum of 508 gallons			
Max discharge rate not to exceed 20gpm			

Lab Parameters	Sampling Frequency*	Sample Location	Analytical Method
TPH	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method SW8015B
GRO	Start-up/Monthly	AINF/AEFF	EPA Method SW8015B
BTEX	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method 8020
MTBE	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method 8260
BTEX/MTBE	Start-up/Monthly	AINF/AEFF	EPA Method 8260
Lead	Start-up	WINF/WEFF	EPA 200.8
Metals (As, Cd, Cu, Hg, Ni, Se, Ag, Cr, Zn)	Start-up	WINF/WEFF	EPA 200.8
Cyanide	Start-up	WINF/WEFF	SM 4500 CN C,E
Phenols	Start-up	WINF/WEFF	EPA 420.1
pH	Start-up/Monthly	WINF, WEFF	Field measured

* Upon initial start-up of system and prior to discharge of groundwater to the sewer cleanout, obtain samples for groundwater discharge approval from the holding tank. Once approved, the system may be started for continuous operation.

Former Olympic Service Station
DPE Mass Extraction Event
 1436 Grant Avenue
 San Lorenzo, California

 **ORIGINAL**

Date: 9/15
 Onsite Time: 0500
 Offsite Time: 0610

Technician:
 Project Engineer:
 Weather Conditions:
 Ambient Temperature:

CHILC
Debbie
Clear
50

System Information

System Status Upon Arrival: Operational Non-Operational

System Status Upon Departure: Operational Non-Operational

Hour Meter Reading: 7903

Totalizer Reading on DPE Unit: 1299690 Chart Recorder Paper Replaced

Yes

No

% Dilution Valve Open:

0

Combustion Chamber Operating Temperature: 1460 If open, dilution air flowrate, (fpm/cfm) and Temp (deg F): _____

pH Meter Calibration

8-28-15

Field Measurements

Parameter	Influent (Total)	System-Influent	Effluent	Comments
Differential Pressure, "wc				
Air Velocity, FPM		<u>1500</u>		
Pipe Diameter, inches		<u>3</u>		
Air Flow Rate, cfm				
Applied Vacuum, "WC/ Hg	<u>12.5</u> " Hg			
Temperature, deg F		<u>90°</u>	<u>1360</u>	
PID Readings, ppmv		<u>2</u>	<u>8.5</u>	

Other Readings/Measurements

Well ID	% Open	PID	Vacuum @ Wellhead	Stinger Depth	Well ID	Induced Vacuum WC/Hg	DTW
EX-1	<u>100</u>				MW-1	- .01	<u>8.75</u>
EX-2					MW-2	- .120	<u>8.37</u>
EX-3					MW-3	- .18	<u>9.13</u>
EX-4					MW-4	- .57	<u>9.00</u>
EX-5					MW-5A		
EX-6	<u>10</u>				MW-6A		
EX-7							
MW-5A	<u>100</u>						
MW-6A	<u>100</u>						

Former Olympic Service Station
DPE Mass Extraction Event
 1436 Grant Avenue
 San Lorenzo, California



Sampling Information			
Sample ID	Date & Time	Sample ID	Date & Time
A SYS INF	9-1-15 0520	W INF	9-1-15 0528
A EFF	) 0518	W GAC1	) 0526
		W GAC2	) 0523
		W EFF	0525

INF 7.24
 EFF 7.38

Operation & Maintenance Notes			
Notes:			
Notify air board a minimum of 5-days prior to initial start up			
Twice a month monitor/recorder LEL readings(hexane calibration) and vapor flow rate per air permit			
Notify District's Industrial Waste Inspector a minimum of 24 hours prior to any sampling event (510) 276-4700			
Calibrate all instruments (e.g. pH meter)			
Flow meter specifications to be approved by District and include a non-resetable totalizer			
Collect initial water sample after minimum of 508 gallons			
Max discharge rate not to exceed 20gpm			

Lab Parameters	Sampling Frequency*	Sample Location	Analytical Method
TPH	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method SW8015B
GRO	Start-up/Monthly	AINF/AEFF	EPA Method SW8015B
BTEX	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method 8020
MTBE	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method 8260
BTEX/MTBE	Start-up/Monthly	AINF/AEFF	EPA Method 8260
Lead	Start-up	WINF/WEFF	EPA 200.8
Metals (As, Cd, Cu, Hg, Ni, Se, Ag, Cr, Zn)	Start-up	WINF/WEFF	EPA 200.8
Cyanide	Start-up	WINF/WEFF	SM 4500 CN C,E
Phenols	Start-up	WINF/WEFF	EPA 420.1
pH	Start-up/Monthly	WINF, WEFF	Field measured

* Upon initial start-up of system and prior to discharge of groundwater to the sewer cleanout, obtain samples for groundwater discharge approval from the holding tank. Once approved, the system may be started for continuous operation.

Former Olympic Service Station
DPE Mass Extraction Event
 1436 Grant Avenue
 San Lorenzo, California

ORIGINAL

Date: 9.22-15
 Onsite Time: 0445
 Offsite Time: 0530

Technician:
 Project Engineer:
 Weather Conditions:
 Ambient Temperature:

CHILL
Dabbin
Clyz
50

System Information			
System Status Upon Arrival:	Operational <input checked="" type="checkbox"/>	Non-Operational <input type="checkbox"/>	
System Status Upon Departure:	Operational <input checked="" type="checkbox"/>	Non-Operational <input type="checkbox"/>	
Hour Meter Reading:	<u>8407</u>		
Totalizer Reading on DPE Unit:	<u>1394790</u>	Chart Recorder Paper Replaced <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Combustion Chamber Operating Temperature:	<u>1450</u>	% Dilution Valve Open: <u>82</u>	
		If open, dilution air flowrate, (fpm/cfm) and Temp (deg F):	
		pH Meter Calibration	

Field Measurements				
Parameter	Influent (Total)	System-Influent	Effluent	Comments
Differential Pressure, "wc				
Air Velocity, FPM		<u>1600</u>		
Pipe Diameter, inches		<u>3</u>		
Air Flow Rate, cfm				
Applied Vacuum, "WC/"Hg	<u>12"</u>			
Temperature, deg F		<u>90</u>	<u>1125</u>	
PID Readings, ppmv		<u>30</u>	<u>82.9</u>	

Other Readings/Measurements

Well ID	% Open	PID	Vacuum @ Wellhead	Stinger Depth	Well ID	Induced Vacuum "WC/"Hg	DTW
EX-1	<u>100</u>				MW-1	<u>8</u>	<u>8.98</u>
EX-2					MW-2	<u>-17</u>	<u>8.62</u>
EX-3					MW-3	<u>-15</u>	<u>9.130</u>
EX-4					MW-4	<u>-57</u>	<u>9.03</u>
EX-5					MW-5A	<u>-</u>	
EX-6	<u>30</u>				MW-6A	<u>-</u>	
EX-7							
MW 5A	<u>100</u>						
MW 6A	<u>100</u>						

Former Olympic Service Station
DPE Mass Extraction Event
 1436 Grant Avenue
 San Lorenzo, California

ORIGINAL

Sampling Information			
Sample ID	Date & Time	Sample ID	Date & Time
A SYS INF		W INF	
A EFF		W GAC1	
		W GAC2	
		W EFF	

Operation & Maintenance Notes	
Notes:	
Notify air board a minimum of 5-days prior to initial start up	
Twice a month monitor/recoded LEL readings(hexane calibration) and vapor flow rate per air permit	
Notify District's Industrial Waste Inspector a minimum of 24 hours prior to any sampling event (510) 276-4700	
Calibrate all instruments (e.g. pH meter)	
Flow meter specifications to be approved by District and include a non-resetable totalizer	
Collect initial water sample after minimum of 508 gallons	
Max discharge rate not to exceed 20gpm	

Lab Parameters	Sampling Frequency*	Sample Location	Analytical Method
TPH	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method SW8015B
GRO	Start-up/Monthly	AINF/AEFF	EPA Method SW8015B
BTEX	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method 8020
MTBE	Start-up/Monthly	WINF/WGAC1/WGAC2/WEFF	EPA Method 8260
BTEX/MTBE	Start-up/Monthly	AINF/AEFF	EPA Method 8260
Lead	Start-up	WINF/WEFF	EPA 200.8
Metals (As, Cd, Cu, Hg, Ni, Se, Ag, Cr, Zn)	Start-up	WINF/WEFF	EPA 200.8
Cyanide	Start-up	WINF/WEFF	SM 4500 CN C,E
Phenols	Start-up	WINF/WEFF	EPA 420.1
pH	Start-up/Monthly	WINF, WEFF	Field measured

* Upon initial start-up of system and prior to discharge of groundwater to the sewer cleanout, obtain samples for groundwater discharge approval from the holding tank. Once approved, the system may be started for continuous operation.

APPENDIX B

SAMPLING AND ANALYSES PROCEDURES

APPENDIX B

SAMPLING AND ANALYSIS PROCEDURES

The sampling and analysis procedures as well as the quality assurance plan are contained in this appendix. The procedures and adherence to the quality assurance plan will provide for consistent and reproducible sampling methods; proper application of analytical methods; accurate and precise analytical results; and finally, these procedures will provide guidelines so that the overall objectives of the monitoring program are achieved.

Ground Water and Liquid-Phase Petroleum Hydrocarbon Depth Assessment

A water/hydrocarbon interface probe is used to assess the liquid-phase petroleum hydrocarbon (LPH) thickness, if present, and a water level indicator is used to measure the ground water depth in monitoring wells that do not contain LPH. Depth to ground water or LPH is measured from a datum point at the top of each monitoring well casing. The datum point is typical a notch cut in the north side of the casing edge. If a water level indicator is used, the tip is subjectively analyzed for hydrocarbon sheen.

Subjective Analysis of Ground Water

Prior to purging, a water sample is collected from the monitoring well for subjective assessment. The sample is retrieved by gently lowering a clean, disposable bailer to approximately one-half the bailer length past the air/liquid interface. The bailer is then retrieved, and the sample contained within the bailer is examined for floating LPH and the appearance of a LPH sheen.

Monitoring Well Purging and Sampling

Monitoring wells are purged using a pump or bailer until pH, temperature, and conductivity of the purge water has stabilized and a minimum of three well volumes of water have been removed. If three well volumes can not be removed in one half hour's time the well is allowed to recharge to 80% of original level. After recharging, a ground water sample is then removed from each of the wells using a disposable bailer.

A Teflon bailer, electric submersible or bladder pump will be the only equipment used for well sampling. When samples for volatile organic analysis are being collected, the pump flow will be regulated at approximately 100 milliliters per minute to minimize pump effluent turbulence and aeration. Glass bottles of at least 40-milliliters volume and fitted with Teflon-lined septa will be used in sampling for volatile organics. These bottles will be filled completely to prevent air from remaining in the bottle. A positive meniscus forms when the bottle is completely full. A convex Teflon septum will be placed over the positive meniscus to eliminate air. After the bottle is capped, it is inverted and tapped to verify that it contains no air bubbles. The sample containers for other parameters will be filled, filtered as required, and capped.

The water sample is collected, labeled, and handled according to the Quality Assurance Plan. Water generated during the monitoring event is disposed of accruing to regulatory accepted method pertaining to the site.

QUALITY ASSURANCE PLAN

Procedures to provide data quality should be established and documented so that conditions adverse to quality, such as deficiencies, deviations, nonconformities, defective material, services, and/or equipment, can be promptly identified and corrected.

General Sample Collection and Handling Procedures

Proper collection and handling are essential to ensure the quality of a sample. Each sample is collected in a suitable container, preserved correctly for the intended analysis, and stored prior to analysis for no longer than the maximum allowable holding time. Details on the procedures for collection and handling of samples used on this project can be found in this section.

Soil and Water Sample Labeling and Preservation

Label information includes a unique sample identification number, job identification number, date, and time. After labeling all soil and water samples are placed in a Ziploc® type bag and placed in an ice chest cooled to approximately 4° Celsius. Upon arriving at Stratus' office the samples are transferred to a locked refrigerator cooled to approximately 4° Celsius. Chemical preservation is controlled by the required analysis and is noted on the chain-of-custody form. Trip blanks supplied by the laboratory accompany the groundwater sample containers and groundwater samples.

Upon recovery, the sample container is sealed to minimize the potential of volatilization and cross-contamination prior to chemical analysis. Soil sampling tubes are typically closed at each end with Teflon® sheeting and plastic caps. The sample is then placed in a Ziploc® type bag and sealed. The sample is labeled and refrigerated at approximately 4° Celsius for delivery, under strict chain-of-custody, to the analytical laboratory.

Sample Identification and Chain-of-Custody Procedures

Sample identification and chain-of-custody procedures document sample possession from the time of collection to ultimate disposal. Each sample container submitted for analysis has a label affixed to identify the job number, sampler, date and time of sample collection, and a sample number unique to that sample. This information, in addition to a description of the sample, field measurements made, sampling methodology, names of on-site personnel, and any other pertinent field observations, is recorded on the borehole log or in the field records. The samples are analyzed by a California-certified laboratory.

A chain-of-custody form is used to record possession of the sample from time of collection to its arrival at the laboratory. When the samples are shipped, the person in custody of them relinquishes the samples by signing the chain-of-custody form and

noting the time. The sample-control officer at the laboratory verifies sample integrity and confirms that the samples are collected in the proper containers, preserved correctly, and contain adequate volumes for analysis. These conditions are noted on a Laboratory Sample Receipt Checklist that becomes part of the laboratory report upon request.

If these conditions are met, each sample is assigned a unique log number for identification throughout analysis and reporting. The log number is recorded on the chain-of-custody form and in the legally-required log book maintained by the laboratory. The sample description, date received, client's name, and other relevant information is also recorded.

Equipment Cleaning

Sample bottles, caps, and septa used in sampling for volatile and semivolatile organics will be triple rinsed with high-purity deionized water. After being rinsed, sample bottles will be dried overnight at a temperature of 200°C. Sample caps and septa will be dried overnight at a temperature of 60°C. Sample bottles, caps, and septa will be protected from solvent contact between drying and actual use at the sampling site. Sampling containers will be used only once and discarded after analysis is complete.

Plastic bottles and caps used in sampling for metals will be soaked overnight in a 1-percent nitric acid solution. Next, the bottles and caps will be triple rinsed with deionized water. Finally, the bottles and caps will be air dried before being used at the site. Plastic bottles and caps will be constructed of linear polyethylene or polypropylene. Sampling containers will be used only once and discarded after analysis is complete. Glass and plastic bottles used by Stratus to collect groundwater samples are supplied by the laboratory.

Before the sampling event is started, equipment that will be placed in the well or will come in contact with groundwater will be disassembled and cleaned thoroughly with detergent water, and then steam cleaned with deionized water. Any parts that may absorb contaminants, such as plastic pump valves, etc. will be cleaned as described above or replaced.

During field sampling, equipment surfaces that are placed in the well or contact groundwater will be steam cleaned with deionized water before the next well is purged or sampled. Equipment blanks will be collected and analyzed from non-disposable sampling equipment that is used for collecting groundwater samples at the rate of one blank per twenty samples collected.

Internal Quality Assurance Checks

Internal quality assurance procedures are designed to provide reliability of monitoring and measurement of data. Both field and laboratory quality assurance checks are necessary to evaluate the reliability of sampling and analysis results. Internal quality assurance procedures generally include:

- Laboratory Quality Assurance

- Documentation of instrument performance checks
- Documentation of instrument calibration
- Documentation of the traceability of instrument standards, samples, and data
- Documentation of analytical and QC methodology (QC methodology includes use of spiked samples, duplicate samples, split samples, use of reference blanks, and check standards to check method accuracy and precision)

- Field Quality Assurance

- Documentation of sample preservation and transportation
- Documentation of field instrument calibration and irregularities in performance

Internal laboratory quality assurance checks will be the responsibility of the contract laboratories. Data and reports submitted by field personnel and the contract laboratory will be reviewed and maintained in the project files.

Types of Quality Control Checks

Samples are analyzed using analytical methods outlined in EPA Manual SW 846 and approved by the California Regional Water Quality Control Board-Central Valley Region in the Leaking Underground Fuel Tanks (LUFT) manual and appendices. Standard contract laboratory quality control may include analysis or use of the following:

- Method blanks – reagent water used to prepare calibration standards, spike solutions, etc. is analyzed in the same manner as the sample to demonstrate that analytical interferences are under control.
- Matrix spiked samples – a known amount of spike solution containing selected constituents is added to the sample at concentrations at which the accuracy of the analytical method is to satisfactorily monitor and evaluate laboratory data quality.
- Split samples – a sample is split into two separate aliquots before analysis to assess the reproducibility of the analysis.
- Surrogate samples – samples are spiked with surrogate constituents at known concentrations to monitor both the performance of the analytical system and the effectiveness of the method in dealing with the sample matrix.
- Control charts – graphical presentation of spike or split sample results used to track the accuracy or precision of the analysis.
- Quality control check samples – when spiked sample analysis indicates atypical instrument performance, a quality check sample, which is prepared independently of the calibration standards and contains the constituents of interest, is analyzed to confirm that measurements were performed accurately.

- Calibration standards and devices – traceable standards or devices to set instrument response so that sample analysis results represent the absolute concentration of the constituent.

Field QA samples will be collected to assess sample handling procedures and conditions. Standard field quality control may include the use of the following, and will be collected and analyzed as outlined in EPA Manual SW 846.

- Field blanks – reagent water samples are prepared at the sampling location by the same procedure used to collect field groundwater samples and analyzed with the groundwater samples to assess the impact of sampling techniques on data quality. Typically, one field blank per twenty groundwater samples collected will be analyzed per sampling event.
- Field replicates – duplicate or triplicate samples are collected and analyzed to assess the reproducibility of the analytical data. One replicate groundwater sample per twenty samples collected will be analyzed per sampling event, unless otherwise specified. Triplicate samples will be collected only when specific conditions warrant and generally are sent to an alternate laboratory to confirm the accuracy of the routinely used laboratory.
- Trip blanks – reagent water samples are prepared before field work, transported and stored with the samples and analyzed to assess the impact of sample transport and storage for data quality. In the event that any analyte is detected in the field blank, a trip blank will be included in the subsequent groundwater sampling event.

Data reliability will be evaluated by the certified laboratory and reported on a cover sheet attached to the laboratory data report. Analytical data resulting from the testing of field or trip blanks will be included in the laboratory's report. Results from matrix spike, surrogate, and method blank testing will be reported, along with a statement of whether the samples were analyzed within the appropriate holding time.

Stratus will evaluate the laboratory's report on data reliability and note significant QC results that may make the data biased or unacceptable. Data viability will be performed as outlined in EPA Manual SW 846. If biased or unacceptable data is noted, corrective actions (including re-sample/re-analyze, etc.) will be evaluated on a site-specific basis.

APPENDIX C

**LABORATORY ANALYTICAL REPORTS AND
CHAIN-OF-CUSTODY DOCUMENTATION**



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Stratus Environmental
 3330 Cameron Park Drive
 Cameron Park, CA 956828861

Attn: Scott Bittinger
 Phone: (530) 676-2062
 Fax: (530) 676-6005
 Date Received : 07/15/15

Job: Olympic Station

Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B / SW8260B
 Volatile Organic Compounds (VOCs) EPA Method SW8260B

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID :	MW-5A				
Lab ID :	STR15071541-01A	TPH-P (GRO)	2,800	400 µg/L	07/21/15
Date Sampled	07/14/15 06:15	Methyl tert-butyl ether (MTBE)	13	2.0 µg/L	07/21/15
		Benzene	390	2.0 µg/L	07/21/15
		Toluene	ND	V	07/21/15
		Ethylbenzene	130	2.0 µg/L	07/21/15
		m,p-Xylene	40	2.0 µg/L	07/21/15
		o-Xylene	ND	V	07/21/15
Client ID :	MW-6A				
Lab ID :	STR15071541-02A	TPH-P (GRO)	4,400	1,000 µg/L	07/21/15
Date Sampled	07/14/15 06:30	Methyl tert-butyl ether (MTBE)	99	5.0 µg/L	07/21/15
		Benzene	930	5.0 µg/L	07/21/15
		Toluene	ND	V	07/21/15
		Ethylbenzene	200	5.0 µg/L	07/21/15
		m,p-Xylene	190	5.0 µg/L	07/21/15
		o-Xylene	73	5.0 µg/L	07/21/15

Gasoline Range Organics (GRO) C4-C13

V = Reporting Limits were increased due to high concentrations of target analytes.

ND = Not Detected

Reported in micrograms per Liter, per client request.



Roger Scholl

Randy Gardner

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity : Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



PJ
7/22/15

Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

VOC Sample Preservation Report

Work Order: STR15071541

Job: Olympic Station

Alpha's Sample ID	Client's Sample ID	Matrix	pH
15071541-01A	MW-5A	Aqueous	2
15071541-02A	MW-6A	Aqueous	2

7/22/15

Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
22-Jul-15

QC Summary Report

Work Order:
15071541

Method Blank		Type MBLK	Test Code: EPA Method SW8015B/C / SW8260B							
File ID: 15072104.D		Batch ID: MS15W0721B			Analysis Date: 07/21/2015 11:17					
Sample ID:	MBLK MS15W0721B	Units : µg/L	Run ID: MSD_15_150721A			Prep Date: 07/21/2015 11:17				
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
TPH-P (GRO)		ND	50							
Surr: 1,2-Dichloroethane-d4		9.71		10	97	70	130			
Surr: Toluene-d8		10.8		10	108	70	130			
Surr: 4-Bromofluorobenzene		9.24		10	92	70	130			
Laboratory Control Spike		Type LCS	Test Code: EPA Method SW8015B/C / SW8260B							
File ID: 15072103.D		Batch ID: MS15W0721B			Analysis Date: 07/21/2015 10:53					
Sample ID:	GLCS MS15W0721B	Units : µg/L	Run ID: MSD_15_150721A			Prep Date: 07/21/2015 10:53				
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
TPH-P (GRO)		382	50	400	95	70	130			
Surr: 1,2-Dichloroethane-d4		9.65		10	97	70	130			
Surr: Toluene-d8		10.7		10	107	70	130			
Surr: 4-Bromofluorobenzene		9.11		10	91	70	130			
Sample Matrix Spike		Type MS	Test Code: EPA Method SW8015B/C / SW8260B							
File ID: 15072128.D		Batch ID: MS15W0721B			Analysis Date: 07/21/2015 21:03					
Sample ID:	15071706-01AGS	Units : µg/L	Run ID: MSD_15_150721A			Prep Date: 07/21/2015 21:03				
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
TPH-P (GRO)		1500	250	2000	0	75	54	143		
Surr: 1,2-Dichloroethane-d4		50.4		50	101	70	130			
Surr: Toluene-d8		52.4		50	105	70	130			
Surr: 4-Bromofluorobenzene		43.1		50	86	70	130			
Sample Matrix Spike Duplicate		Type MSD	Test Code: EPA Method SW8015B/C / SW8260B							
File ID: 15072129.D		Batch ID: MS15W0721B			Analysis Date: 07/21/2015 21:27					
Sample ID:	15071706-01AGSD	Units : µg/L	Run ID: MSD_15_150721A			Prep Date: 07/21/2015 21:27				
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
TPH-P (GRO)		1980	250	2000	0	99	54	143	1500	27.5(23) R5
Surr: 1,2-Dichloroethane-d4		48.3		50	97	70	130			
Surr: Toluene-d8		52.8		50	106	70	130			
Surr: 4-Bromofluorobenzene		45.1		50	90	70	130			

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

R5 = MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.

Reported in micrograms per Liter, per client request.



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
22-Jul-15

Work Order:
15071541

QC Summary Report

Method Blank		Type	MBLK	Test Code: EPA Method 624/8260						
File ID: 15072104.D				Batch ID: MS15W0721A		Analysis Date: 07/21/2015 11:17				
Sample ID:	MLBK MS15W0721A	Units : µg/L		Run ID: MSD_15_150721A		Prep Date:	07/21/2015 11:17			
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		ND	0.5							
Benzene		ND	0.5							
Toluene		ND	0.5							
Ethylbenzene		ND	0.5							
m,p-Xylene		ND	0.5							
o-Xylene		ND	0.5							
Surr: 1,2-Dichloroethane-d4		9.71		10	97	70	130			
Surr: Toluene-d8		10.8		10	108	70	130			
Surr: 4-Bromofluorobenzene		9.24		10	92	70	130			
Laboratory Control Spike		Type	LCS	Test Code: EPA Method 624/8260						
File ID: 15072102.D				Batch ID: MS15W0721A		Analysis Date: 07/21/2015 10:28				
Sample ID:	LCS MS15W0721A	Units : µg/L		Run ID: MSD_15_150721A		Prep Date:	07/21/2015 10:28			
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		8.61	0.5	10	86	63	137			
Benzene		9.05	0.5	10	91	70	130			
Toluene		10.5	0.5	10	105	70	130			
Ethylbenzene		9.88	0.5	10	99	70	130			
m,p-Xylene		10.8	0.5	10	108	65	139			
o-Xylene		10.7	0.5	10	107	70	130			
Surr: 1,2-Dichloroethane-d4		9.48		10	95	70	130			
Surr: Toluene-d8		10.4		10	104	70	130			
Surr: 4-Bromofluorobenzene		9.19		10	92	70	130			
Sample Matrix Spike		Type	MS	Test Code: EPA Method 624/8260						
File ID: 15072126.D				Batch ID: MS15W0721A		Analysis Date: 07/21/2015 20:14				
Sample ID:	15071706-01AMS	Units : µg/L		Run ID: MSD_15_150721A		Prep Date:	07/21/2015 20:14			
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		59.2	1.3	50	0	118	56	140		
Benzene		53.9	1.3	50	0	108	67	134		
Toluene		58.6	1.3	50	0.56	116	38	130		
Ethylbenzene		53.4	1.3	50	0	107	70	130		
m,p-Xylene		57.3	1.3	50	0	115	65	139		
o-Xylene		59.9	1.3	50	0	120	69	130		
Surr: 1,2-Dichloroethane-d4		49.9		50	99.9		70	130		
Surr: Toluene-d8		50.6		50	101	70	130			
Surr: 4-Bromofluorobenzene		44.4		50	89	70	130			
Sample Matrix Spike Duplicate		Type	MSD	Test Code: EPA Method 624/8260						
File ID: 15072127.D				Batch ID: MS15W0721A		Analysis Date: 07/21/2015 20:38				
Sample ID:	15071706-01AMSD	Units : µg/L		Run ID: MSD_15_150721A		Prep Date:	07/21/2015 20:38			
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		49.2	1.3	50	0	98	56	140	59.15	18.4(40)
Benzene		45	1.3	50	0	90	67	134	53.86	18.0(21)
Toluene		49.2	1.3	50	0.56	97	38	130	58.55	17.5(20)
Ethylbenzene		43.6	1.3	50	0	87	70	130	53.35	20.0(20)
m,p-Xylene		46.7	1.3	50	0	93	65	139	57.29	20.5(20)
o-Xylene		49.8	1.3	50	0	99.6	69	130	59.87	18.3(20)
Surr: 1,2-Dichloroethane-d4		48.3		50	97	70	130			
Surr: Toluene-d8		51.3		50	103	70	130			
Surr: 4-Bromofluorobenzene		44.3		50	89	70	130			



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
22-Jul-15

QC Summary Report

Work Order:
15071541

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

RS = MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.

Billing Information :

CHAIN-OF-CUSTODY RECORD

Page: 1 of 1

CA

WorkOrder : STR15071541

Report Due By : 5:00 PM On : 22-Jul-15

Client:

Stratus Environmental
 3330 Cameron Park Drive
 Suite 550
 Cameron Park, CA 95682-8861

PO :

Client's COC # : 04344

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
TEL: (775) 355-1044 FAX: (775) 355-0406

Report Attention	Phone Number	EMail Address
Scott Bittinger	(530) 676-2062 x	sbittinger@stratusinc.net

EDD Required : Yes

Sampled by : C. Hill

Cooler Temp	Samples Received	Date Printed
0 °C	15-Jul-15	15-Jul-15

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix	No. of Bottles Date	Requested Tests						Sample Remarks
				Alpha	Sub	TAT	TPH/P_W	VOC_W		
STR15071541-01A	MW-5A	AQ	07/14/15 06:15	3	0	5	GAS-C	BTEX/M_C		
STR15071541-02A	MW-6A	AQ	07/14/15 06:30	3	0	5	GAS-C	BTEX/M_C		

Comments: Security seals intact. Frozen ice.:

Signature	Print Name	Company	Date/Time
Logged in by: <u>Jessica Alvarado</u>	JESSICA ALVARADO	Alpha Analytical, Inc.	7/15/15 1005

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other



Alpha Analytical, Inc.

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ANALYTICAL REPORT

Stratus Environmental
3330 Cameron Park Drive
Cameron Park, CA 956828861

Attn: Scott Bittinger
Phone: (530) 676-2062
Fax: (530) 676-6005
Date Received : 07/02/15

Job: Olympic Station

Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B / SW8260B
Volatile Organic Compounds (VOCs) EPA Method SW8260B

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID :	Oly A SYS INF				
Lab ID :	STR15070246-01A	TPH-P (GRO)	ND	20 mg/m³	07/02/15 10:54
Date Sampled	07/01/15 06:03	Methyl tert-butyl ether (MTBE)	0.28	0.20 mg/m³	07/02/15 10:54
		Benzene	ND	0.20 mg/m³	07/02/15 10:54
		Toluene	ND	0.20 mg/m³	07/02/15 10:54
		Ethylbenzene	ND	0.20 mg/m³	07/02/15 10:54
		m,p-Xylene	ND	0.20 mg/m³	07/02/15 10:54
		o-Xylene	ND	0.20 mg/m³	07/02/15 10:54
Client ID :	Oly W INF				
Lab ID :	STR15070246-02A	TPH-P (GRO)	ND	50 µg/L	07/09/15
Date Sampled	07/01/15 05:55	Methyl tert-butyl ether (MTBE)	6.9	0.50 µg/L	07/09/15
		Benzene	ND	0.50 µg/L	07/09/15
		Toluene	ND	0.50 µg/L	07/09/15
		Ethylbenzene	ND	0.50 µg/L	07/09/15
		m,p-Xylene	ND	0.50 µg/L	07/09/15
		o-Xylene	ND	0.50 µg/L	07/09/15
Client ID :	Oly W GAC1				
Lab ID :	STR15070246-03A	TPH-P (GRO)	ND	50 µg/L	07/09/15
Date Sampled	07/01/15 05:50	Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	07/09/15
		Benzene	ND	0.50 µg/L	07/09/15
		Toluene	ND	0.50 µg/L	07/09/15
		Ethylbenzene	ND	0.50 µg/L	07/09/15
		m,p-Xylene	ND	0.50 µg/L	07/09/15
		o-Xylene	ND	0.50 µg/L	07/09/15
Client ID :	Oly W GAC2				
Lab ID :	STR15070246-04A	TPH-P (GRO)	ND	50 µg/L	07/09/15
Date Sampled	07/01/15 05:43	Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	07/09/15
		Benzene	ND	0.50 µg/L	07/09/15
		Toluene	ND	0.50 µg/L	07/09/15
		Ethylbenzene	ND	0.50 µg/L	07/09/15
		m,p-Xylene	ND	0.50 µg/L	07/09/15
		o-Xylene	ND	0.50 µg/L	07/09/15



Alpha Analytical, Inc.

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Gasoline Range Organics (GRO) C4-C13

Note: For sample -01A concentrations of air in a Tedlar Bag are at 29 degrees Celsius and 25.66 inches of mercury.

ND = Not Detected

Reported in micrograms per Liter, per client request.



Roger Scholl

Randy Gardner

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



RSG
7/10/15
Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
10-Jul-15

QC Summary Report

Work Order:
15070246

Method Blank		Type	MBLK	Test Code: EPA Method SW8015B/C / SW8260B								
File ID: 15070912.D		Units : mg/m³		Batch ID: MS09A0709B		Analysis Date: 07/09/2015 15:40						
Sample ID:	MBLK MS09A0709B	Result	PQL	Run ID: MSD_09_150709A	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	ND	10										
Surr: 1,2-Dichloroethane-d4	1.76		2		88	70	130					
Surr: Toluene-d8	2.05		2		103	70	130					
Surr: 4-Bromofluorobenzene	1.87		2		94	70	130					
Laboratory Control Spike		Type	LCS	Test Code: EPA Method SW8015B/C / SW8260B								
File ID: 15070905.D		Units : mg/m³		Batch ID: MS09A0709B		Analysis Date: 07/09/2015 11:46						
Sample ID:	GLCS MS09A0709B	Result	PQL	Run ID: MSD_09_150709A	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	401	10	400		100	70	130					
Surr: 1,2-Dichloroethane-d4	8.61		10		86	70	130					
Surr: Toluene-d8	10.2		10		102	70	130					
Surr: 4-Bromofluorobenzene	9.5		10		95	70	130					

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



Alpha Analytical, Inc.

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Date:
10-Jul-15

Work Order:
15070246

QC Summary Report

Method Blank							Type MBLK	Test Code: EPA Method SW8015B/C / SW8260B							
							Batch ID: MS15W0709B	Analysis Date: 07/09/2015 10:23							
Sample ID:	MBLK MS15W0709B	Units : µg/L	Run ID: MSD_15_150709A							Prep Date:	07/09/2015 10:23				
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual				
TPH-P (GRO)		ND	50												
Surr: 1,2-Dichloroethane-d4		9.29		10		93	70	130							
Surr: Toluene-d8		11.6		10		116	70	130							
Surr: 4-Bromofluorobenzene		10.5		10		105	70	130							
Laboratory Control Spike							Type LCS	Test Code: EPA Method SW8015B/C / SW8260B							
							Batch ID: MS15W0709B	Analysis Date: 07/09/2015 09:45							
Sample ID:	GLCS MS15W0709B	Units : µg/L	Run ID: MSD_15_150709A							Prep Date:	07/09/2015 09:45				
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual				
TPH-P (GRO)		395	50	400		99	70	130							
Surr: 1,2-Dichloroethane-d4		10.1		10		101	70	130							
Surr: Toluene-d8		11		10		110	70	130							
Surr: 4-Bromofluorobenzene		9.7		10		97	70	130							
Sample Matrix Spike							Type MS	Test Code: EPA Method SW8015B/C / SW8260B							
							Batch ID: MS15W0709B	Analysis Date: 07/09/2015 20:09							
Sample ID:	15070942-01AGS	Units : µg/L	Run ID: MSD_15_150709A							Prep Date:	07/09/2015 20:09				
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual				
TPH-P (GRO)		1780	250	2000	0	89	54	143							
Surr: 1,2-Dichloroethane-d4		52.9		50		106	70	130							
Surr: Toluene-d8		53.4		50		107	70	130							
Surr: 4-Bromofluorobenzene		44.7		50		89	70	130							
Sample Matrix Spike Duplicate							Type MSD	Test Code: EPA Method SW8015B/C / SW8260B							
							Batch ID: MS15W0709B	Analysis Date: 07/09/2015 20:34							
Sample ID:	15070942-01AGSD	Units : µg/L	Run ID: MSD_15_150709A							Prep Date:	07/09/2015 20:34				
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual				
TPH-P (GRO)		1760	250	2000	0	88	54	143	1776	0.8(23)					
Surr: 1,2-Dichloroethane-d4		53.1		50		106	70	130							
Surr: Toluene-d8		53.9		50		108	70	130							
Surr: 4-Bromofluorobenzene		45		50		90	70	130							

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Reported in micrograms per Liter, per client request.



Alpha Analytical, Inc.

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Date:
10-Jul-15

Work Order:
15070246

QC Summary Report

Method Blank		Type	MBLK	Test Code: EPA Method SW8260B			
File ID:	15070912.D	Units :	mg/m³	Batch ID:	MS09A0709A	Analysis Date:	07/09/2015 15:40
Sample ID:	MBLK MS09A0709A	Result	PQL	Run ID:	MSD_09_150709A	Prep Date:	07/09/2015 15:40
Analyte				SpkVal	SpkRefVal %REC	LCL(ME)	UCL(ME)
Methyl tert-butyl ether (MTBE)	ND	0.1					
Benzene	ND	0.1					
Toluene	ND	0.1					
Ethylbenzene	ND	0.1					
m,p-Xylene	ND	0.1					
o-Xylene	ND	0.1					
Surr: 1,2-Dichloroethane-d4	1.76		2	88	70	130	
Surr: Toluene-d8	2.05		2	103	70	130	
Surr: 4-Bromofluorobenzene	1.87		2	94	70	130	
Laboratory Control Spike		Type	LCS	Test Code: EPA Method SW8260B			
File ID:	15070906.D	Units :	mg/m³	Batch ID:	MS09A0709A	Analysis Date:	07/09/2015 12:41
Sample ID:	LCS MS09A0709A <th>Result</th> <th>PQL</th> <th>Run ID:</th> <td>MSD_09_150709A</td> <th>Prep Date:</th> <td>07/09/2015 12:41</td>	Result	PQL	Run ID:	MSD_09_150709A	Prep Date:	07/09/2015 12:41
Analyte				SpkVal	SpkRefVal %REC	LCL(ME)	UCL(ME)
Methyl tert-butyl ether (MTBE)	10.5	0.1	10	105	63	137	
Benzene	9.46	0.1	10	95	70	130	
Toluene	9.3	0.1	10	93	70	130	
Ethylbenzene	8.29	0.1	10	83	70	130	
m,p-Xylene	8.19	0.1	10	82	65	139	
o-Xylene	8.33	0.1	10	83	70	130	
Surr: 1,2-Dichloroethane-d4	7.62		10	76	70	130	
Surr: Toluene-d8	10.2		10	102	70	130	
Surr: 4-Bromofluorobenzene	9.75		10	98	70	130	

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



Alpha Analytical, Inc.

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Date:
10-Jul-15

QC Summary Report

Work Order:
15070246

Method Blank

File ID: 15070904.D

Sample ID: MBLK MS15W0709A

Units : µg/L

Analyte	Result	Type	MBLK	Test Code:	EPA Method 624/8260	Batch ID:	MS15W0709A	Analysis Date:	07/09/2015 10:23	Prep Date:	07/09/2015 10:23	Qual
Methyl tert-butyl ether (MTBE)	ND		0.5									
Benzene	ND		0.5									
Toluene	ND		0.5									
Ethylbenzene	ND		0.5									
m,p-Xylene	ND		0.5									
o-Xylene	ND		0.5									
Surr: 1,2-Dichloroethane-d4	9.29			10		93	70	130				
Surr: Toluene-d8	11.6			10		116	70	130				
Surr: 4-Bromofluorobenzene	10.5			10		105	70	130				

Laboratory Control Spike

File ID: 15070902.D

Sample ID: LCS MS15W0709A

Units : µg/L

Analyte	Result	Type	LCS	Test Code:	EPA Method 624/8260	Batch ID:	MS15W0709A	Analysis Date:	07/09/2015 09:21	Prep Date:	07/09/2015 09:21	Qual
Methyl tert-butyl ether (MTBE)	7.99		0.5			10	80	63	137			
Benzene	7.82		0.5			10	78	70	130			
Toluene	9.3		0.5			10	93	70	130			
Ethylbenzene	9.08		0.5			10	91	70	130			
m,p-Xylene	9.43		0.5			10	94	65	139			
o-Xylene	9.45		0.5			10	95	70	130			
Surr: 1,2-Dichloroethane-d4	10.3			10		103	70	130				
Surr: Toluene-d8	10.6			10		106	70	130				
Surr: 4-Bromofluorobenzene	9.28			10		93	70	130				

Sample Matrix Spike

File ID: 15070926.D

Sample ID: 15070942-01AMS

Units : µg/L

Analyte	Result	Type	MS	Test Code:	EPA Method 624/8260	Batch ID:	MS15W0709A	Analysis Date:	07/09/2015 19:20	Prep Date:	07/09/2015 19:20	Qual
Methyl tert-butyl ether (MTBE)	38.8		1.3			50	0	78	56	140		
Benzene	33.3		1.3			50	0	67	67	134		M2
Toluene	38.6		1.3			50	0	77	38	130		
Ethylbenzene	37.2		1.3			50	0	74	70	130		
m,p-Xylene	39		1.3			50	0	78	65	139		
o-Xylene	39.6		1.3			50	0	79	69	130		
Surr: 1,2-Dichloroethane-d4	54.3			50		109	70	130				
Surr: Toluene-d8	51.2			50		102	70	130				
Surr: 4-Bromofluorobenzene	44.2			50		88	70	130				

Sample Matrix Spike Duplicate

File ID: 15070927.D

Sample ID: 15070942-01AMSD

Units : µg/L

Analyte	Result	Type	MSD	Test Code:	EPA Method 624/8260	Batch ID:	MS15W0709A	Analysis Date:	07/09/2015 19:45	Prep Date:	07/09/2015 19:45	Qual
Methyl tert-butyl ether (MTBE)	54		1.3			50	0	108	56	140	38.79	32.9(40)
Benzene	47.7		1.3			50	0	95	67	134	33.25	35.7(21)
Toluene	54.6		1.3			50	0	109	38	130	38.6	34.3(20)
Ethylbenzene	52.6		1.3			50	0	105	70	130	37.2	34.3(20)
m,p-Xylene	54.8		1.3			50	0	110	65	139	39.01	33.7(20)
o-Xylene	57.2		1.3			50	0	114	69	130	39.55	36.5(20)
Surr: 1,2-Dichloroethane-d4	53.4			50		107	70	130				
Surr: Toluene-d8	51.3			50		103	70	130				
Surr: 4-Bromofluorobenzene	43.8			50		88	70	130				



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
10-Jul-15

QC Summary Report

Work Order:
15070246

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

R5 = MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.

M2 = Matrix spike recovery was low, the method control sample recovery was acceptable.

Billing Information :

Page: 1 of 1

CHAIN-OF-CUSTODY RECORD

Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
TEL: (775) 355-1044 FAX: (775) 355-0406

Client:

Stratus Environmental
3330 Cameron Park Drive
Suite 550
Cameron Park, CA 95682-8861

PO :

Client's COC # : 04328

Report Attention	Phone Number	EMail Address
Scott Bittinger	(530) 676-2062 x	sbittinger@stratusinc.net

CA

WorkOrder : STR15070246

Report Due By : 5:00 PM On : 10-Jul-15

EDD Required : Yes

Sampled by : C. Hill

<u>Cooler Temp</u>	<u>Samples Received</u>	<u>Date Printed</u>
2 °C	02-Jul-15	02-Jul-15

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix	No. of Bottles Alpha	Requested Tests				Sample Remarks
				TPH/P_A	TPH/P_W	VOC_A	VOC_W	
STR15070246-01A	Oly A SYS INF	AR	07/01/15 06:03	1	0	5	GAS-N/C	BTEX/MTBE
STR15070246-02A	Oly W INF	AQ	07/01/15 05:55	3	0	5	GAS-C	BTEX/M_C
STR15070246-03A	Oly W GAC1	AQ	07/01/15 05:50	3	0	5	GAS-C	BTEX/M_C
STR15070246-04A	Oly W GAC2	AQ	07/01/15 05:43	3	0	5	GAS-C	BTEX/M_C

Comments: Security seals intact. Frozen ice. Chain split due to different TATs.

Signature	Print Name	Company	Date/Time
	JESSICA ALVARADO	Alpha Analytical, Inc.	7/2/15 1035
Logged in by: _____			

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.
The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
 (775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Stratus Environmental
 3330 Cameron Park Drive
 Cameron Park, CA 956828861

Attn: Scott Bittinger
 Phone: (530) 676-2062
 Fax: (530) 676-6005
 Date Received : 07/02/15

Job: Olympic Station

Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B / SW8260B
 Volatile Organic Compounds (VOCs) EPA Method SW8260B

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID :	Oly A EFF				
Lab ID :	STR15070242-01A	TPH-P (GRO)	ND	20 mg/m³	07/02/15 10:23
Date Sampled	07/01/15 06:00	Methyl tert-butyl ether (MTBE)	ND	0.20 mg/m³	07/02/15 10:23
		Benzene	ND	0.20 mg/m³	07/02/15 10:23
		Toluene	ND	0.20 mg/m³	07/02/15 10:23
		Ethylbenzene	ND	0.20 mg/m³	07/02/15 10:23
		m,p-Xylene	ND	0.20 mg/m³	07/02/15 10:23
		o-Xylene	ND	0.20 mg/m³	07/02/15 10:23
Client ID :	Oly W EFF				
Lab ID :	STR15070242-02A	TPH-P (GRO)	ND	50 µg/L	07/02/15
Date Sampled	07/01/15 05:40	Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	07/02/15
		Benzene	ND	0.50 µg/L	07/02/15
		Toluene	ND	0.50 µg/L	07/02/15
		Ethylbenzene	ND	0.50 µg/L	07/02/15
		m,p-Xylene	ND	0.50 µg/L	07/02/15
		o-Xylene	ND	0.50 µg/L	07/02/15

Gasoline Range Organics (GRO) C4-C13

Note: For sample -01A concentrations of air in a Tedlar Bag are at 29 degrees Celsius and 25.66 inches of mercury.

ND = Not Detected

Reported in micrograms per Liter, per client request.



Roger Scholl

Randy Gardner

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager
 Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity : Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



pg
7/2/15
Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

VOC Sample Preservation Report

Work Order: STR15070242

Job: Olympic Station

Alpha's Sample ID	Client's Sample ID	Matrix	pH
15070242-02A	Oly W EFF	Aqueous	2

7/2/15

Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
09-Jul-15

QC Summary Report

Work Order:
15070242

Method Blank		Type	MBLK	Test Code: EPA Method SW8015B/C / SW8260B						
File ID: 15070207.D					Batch ID: MS09A0702B		Analysis Date: 07/02/2015 12:23			
Sample ID:	MBLK MS09A0702B	Units :	mg/m³	Run ID: MSD_09_150702A		Prep Date: 07/02/2015 12:23				
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)
TPH-P (GRO)		ND	10							
Sur: 1,2-Dichloroethane-d4		1.81		2	91	70	130			
Sur: Toluene-d8		2.01		2	101	70	130			
Sur: 4-Bromofluorobenzene		1.9		2	95	70	130			

Laboratory Control Spike		Type	LCS	Test Code: EPA Method SW8015B/C / SW8260B						
File ID: 15070204.D					Batch ID: MS09A0702B		Analysis Date: 07/02/2015 11:02			
Sample ID:	GLCS MS09A0702B	Units :	mg/m³	Run ID: MSD_09_150702A		Prep Date: 07/02/2015 11:02				
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)
TPH-P (GRO)		395	10	400	99	70	130			
Sur: 1,2-Dichloroethane-d4		9.7		10	97	70	130			
Sur: Toluene-d8		9.79		10	98	70	130			
Sur: 4-Bromofluorobenzene		9.57		10	96	70	130			

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
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Date:
09-Jul-15

QC Summary Report

Work Order:
15070242

Method Blank

File ID: C:\HPCHEM\MS10\DATA\150702\15070206.D

Type MBLK Test Code: EPA Method SW8015B/C / SW8260B

Sample ID: MBLK MS10W0702B

Units : µg/L

Batch ID: MS10W0702B

Analysis Date: 07/02/2015 13:09

Analyte

Result

	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	ND	50							
Surr: 1,2-Dichloroethane-d4	10	10	100	70	130				
Surr: Toluene-d8	9.56	10	96	70	130				
Surr: 4-Bromofluorobenzene	8.64	10	86	70	130				

Laboratory Control Spike

File ID: C:\HPCHEM\MS10\DATA\150702\15070204.D

Type LCS Test Code: EPA Method SW8015B/C / SW8260B

Sample ID: GLCS MS10W0702B

Units : µg/L

Batch ID: MS10W0702B

Analysis Date: 07/02/2015 12:21

Analyte

Result

	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	448	50	400	112	70	130			
Surr: 1,2-Dichloroethane-d4	9.88	10	99	70	130				
Surr: Toluene-d8	9.6	10	96	70	130				
Surr: 4-Bromofluorobenzene	8.85	10	89	70	130				

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Reported in micrograms per Liter, per client request.



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
09-Jul-15

QC Summary Report

Work Order:
15070242

Method Blank

File ID: 15070207.D

Sample ID: MBLK MS09A0702A

Analyte	Type	MBLK	Test Code: EPA Method SW8260B						Analysis Date:	07/02/2015 12:23
	Units : mg/m³	Result	PQL	Run ID: MSD_09_150702A	Batch ID: MS09A0702A	Analysis Date:	07/02/2015 12:23	Prep Date:	07/02/2015 12:23	Qual
Methyl tert-butyl ether (MTBE)		ND	0.1							
Benzene		ND	0.1							
Toluene		ND	0.1							
Ethylbenzene		ND	0.1							
m,p-Xylene		ND	0.1							
o-Xylene		ND	0.1							
Sur: 1,2-Dichloroethane-d4		1.81		2	91	70	130			
Sur: Toluene-d8		2.01		2	101	70	130			
Sur: 4-Bromofluorobenzene		1.9		2	95	70	130			

Laboratory Control Spike

File ID: 15070205.D

Sample ID: LCS MS09A0702A

Analyte	Type	LCS	Test Code: EPA Method SW8260B						Analysis Date:	07/02/2015 11:28
	Units : mg/m³	Result	PQL	Run ID: MSD_09_150702A	Batch ID: MS09A0702A	Analysis Date:	07/02/2015 11:28	Prep Date:	07/02/2015 11:28	Qual
Methyl tert-butyl ether (MTBE)		12.4	0.1	10	124	63	137			
Benzene		9.42	0.1	10	94	70	130			
Toluene		9.36	0.1	10	94	70	130			
Ethylbenzene		8.18	0.1	10	82	70	130			
m,p-Xylene		8.14	0.1	10	81	65	139			
o-Xylene		8.22	0.1	10	82	70	130			
Sur: 1,2-Dichloroethane-d4		9.46		10	95	70	130			
Sur: Toluene-d8		9.88		10	99	70	130			
Sur: 4-Bromofluorobenzene		9.73		10	97	70	130			

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
09-Jul-15

Work Order:
15070242

QC Summary Report

Method Blank		Type	MBLK	Test Code: EPA Method 624/8260						
File ID: C:\HPCHEM\MS10\DATA\150702\15070206.D				Batch ID: MS10W0702A		Analysis Date: 07/02/2015 13:09				
Sample ID:	MBLK MS10W0702A	Units : µg/L		Run ID: MSD_10_150702A		Prep Date: 07/02/2015 13:09				
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		ND		0.5						
Benzene		ND		0.5						
Toluene		ND		0.5						
Ethylbenzene		ND		0.5						
m,p-Xylene		ND		0.5						
o-Xylene		ND		0.5						
Sum: 1,2-Dichloroethane-d4		10		10		100	70	130		
Surr: Toluene-d8		9.56		10		96	70	130		
Sum: 4-Bromofluorobenzene		8.64		10		86	70	130		
Laboratory Control Spike		Type	LCS	Test Code: EPA Method 624/8260						
File ID: C:\HPCHEM\MS10\DATA\150702\15070203.D				Batch ID: MS10W0702A		Analysis Date: 07/02/2015 11:57				
Sample ID:	LCS MS10W0702A	Units : µg/L		Run ID: MSD_10_150702A		Prep Date: 07/02/2015 11:57				
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		9.88	0.5	10		99	63	137		
Benzene		9.77	0.5	10		98	70	130		
Toluene		9.35	0.5	10		94	70	130		
Ethylbenzene		10.4	0.5	10		104	70	130		
m,p-Xylene		10.4	0.5	10		104	65	139		
o-Xylene		10.7	0.5	10		107	70	130		
Sum: 1,2-Dichloroethane-d4		10.3		10		103	70	130		
Surr: Toluene-d8		9.75		10		98	70	130		
Sum: 4-Bromofluorobenzene		9.07		10		91	70	130		
Sample Matrix Spike		Type	MS	Test Code: EPA Method 624/8260						
File ID: C:\HPCHEM\MS10\DATA\150702\15070221.D				Batch ID: MS10W0702A		Analysis Date: 07/02/2015 19:08				
Sample ID:	15062520-01AMS	Units : µg/L		Run ID: MSD_10_150702A		Prep Date: 07/02/2015 19:08				
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		57.8	1.3	50	0	116	56	140		
Benzene		60	1.3	50	0	120	67	134		
Toluene		56.7	1.3	50	0	113	38	130		
Ethylbenzene		62.9	1.3	50	0	126	70	130		
m,p-Xylene		62.6	1.3	50	0	125	65	139		
o-Xylene		64.7	1.3	50	0	129	69	130		
Sum: 1,2-Dichloroethane-d4		48.8		50		98	70	130		
Surr: Toluene-d8		47.9		50		96	70	130		
Sum: 4-Bromofluorobenzene		47.5		50		95	70	130		
Sample Matrix Spike Duplicate		Type	MSD	Test Code: EPA Method 624/8260						
File ID: C:\HPCHEM\MS10\DATA\150702\15070222.D				Batch ID: MS10W0702A		Analysis Date: 07/02/2015 19:32				
Sample ID:	15062520-01AMSD	Units : µg/L		Run ID: MSD_10_150702A		Prep Date: 07/02/2015 19:32				
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		47.4	1.3	50	0	95	56	140	57.79	19.7(40)
Benzene		49.6	1.3	50	0	99	67	134	60.04	19.0(21)
Toluene		47.4	1.3	50	0	95	38	130	58.67	17.8(20)
Ethylbenzene		52.6	1.3	50	0	105	70	130	62.91	17.9(20)
m,p-Xylene		52.4	1.3	50	0	105	65	139	62.59	17.7(20)
o-Xylene		54	1.3	50	0	108	69	130	64.68	18.1(20)
Sum: 1,2-Dichloroethane-d4		47.8		50		96	70	130		
Surr: Toluene-d8		48.9		50		98	70	130		
Sum: 4-Bromofluorobenzene		48		50		96	70	130		



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
09-Jul-15

QC Summary Report

Work Order:
15070242

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Billing Information :

RUSH!
CA

Page: 1 of 1

CHAIN-OF-CUSTODY RECORD**Alpha Analytical, Inc.**

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
TEL: (775) 355-1044 FAX: (775) 355-0406

Client:

Stratus Environmental
3330 Cameron Park Drive
Suite 550
Cameron Park, CA 95682-8861

PO :

Client's COC # : 04328

Report Attention	Phone Number	EMail Address
Scott Bittinger	(530) 676-2062 x	sbittinger@stratusinc.net

WorkOrder : STR15070242

Report Due By : 5:00 PM On : 02-Jul-15

EDD Required : Yes

Sampled by : C. Hill

Cooler Temp	Samples Received	Date Printed
2 °C	02-Jul-15	02-Jul-15

Job : Olympic Station

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix	No. of Bottles Date	Requested Tests			Sample Remarks
				TPH/P_A	TPH/P_W	VOC_A	
STR15070242-01A	Oly A EFF	AR	07/01/15 06:00	1	0	0	GAS-N/C BTEX/MTB_E
STR15070242-02A	Oly W EFF	AQ	07/01/15 05:40	3	0	0	GAS-C BTEX/M_C

Comments: ASAP TAT. Security seals intact. Frozen ice. Chain split due to different TATs.

Signature

Print Name

Company

Date/Time

Logged in by:

JESSICA ALVARADO

Alpha Analytical, Inc.

7/15 9:55

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:
 Company: State Water
 Alt.: 126565
 Address: 3333 Cawelti Lane PG
 City, State, Zip: Chico, CA 95928
 Phone Number: Fax



Alpha Analytical, Inc.
 Main Laboratory: 255 Glendale Avn, Suite Z, Sparks, NV 89431
 Northern CA: 9801 Horn Road, Suite C, Rm. 100, Cordova, CA 95627
 Southern CA: 1007 E. Dominguez St., Suite O, Carson, CA 90746
 Northern NV: 1250 Lameille Hwy #110, Elko, NV 89801
 Southern NV: 6255 McLeod Ave, Suite 24, Las Vegas, NV 89120

Phone: 775-366-1044
 Fax: 775-366-6406
 Phone: 916-366-9089
 Phone: 714-186-2001
 Phone: 775-366-7043
 Phone: 702-281-4848

04328

Page # 1 of 1

Customer/Cient Info:

Company: State Water
 Address:
 City, State, Zip:

Job and Purchase Order Info:

Job #: 126565
 Job Name: Olympic State
 P.O. #:

Report Attention/Project Manager:

SCOTT

QC Deliverable Info:

EDD Required? Yes / No

EDF Required? Yes / No

Samples Collected from which State? (circle one) AR CA KS NV OR WA DOD Site Other

Time Sampled (MM/DD)	Date Sampled (MM/DD)	Matrix (See Key Below)	Lab ID Number (For Lab Use Only)	Sample Description	TAT	# Contaminants* (See Key Below)	Analysis Requested		Remarks
							Field Filtrate?	Yes	
06/03	7/15	AQ		Oil A Sys I/F STD	1	X X X X	CRC	Bx X	
06/03	7/15	AQ	STR15070242-01A	Oil A EFF	24	I	Bx X	MTBEC	
05/25	7/15	AQ		Oil W INF STD	3	X X X X			
05/25	7/15	AQ		Oil W GAC 1 STD	3	X X X X			
05/23	7/15	AQ		Oil W GAEZ STD	3	X X X X			
05/24	7/15	AQ	-02A	Oil W EFT	24	3	X X X X		

ADDITIONAL INSTRUCTIONS:

I (field sampler) attest to the validity and authenticity of this sample(s). I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. NAC 445.0636 (c) (2).

Sampled By: CHILL

Relinquished by: (Signature/Affiliation):

State Water

Date: 7/15/15

Time: 1222

Received by: (Signature/Affiliation):

Mengissa T. J.

Date: 7-1-15

Time: 1222

Relinquished by: (Signature/Affiliation):

State Water

Date: 7/2/15

Time: 950

Received by: (Signature/Affiliation):

J. J.

Date: 7/2/15

Time: 950

* Key: AQ - Aqueous

OT - Other

Soil

WA - Waste

B - Brass

L - Lifer

O - Orbo

OT - Other

P - Plastic

S - Soil Jar

T - Tedlar

V - VOA

NOTE: Samples are discarded 60 days after sample receipt unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples recovered by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Stratus Environmental
3330 Cameron Park Drive
Cameron Park, CA 956828861

Attn: Scott Bittinger
Phone: (530) 676-2062
Fax: (530) 676-6005
Date Received : 08/04/15

Job: Olympic Station

Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B / SW8260B
Volatile Organic Compounds (VOCs) EPA Method SW8260B

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID :	Oly A SYS INF				
Lab ID :	STR15080445-01A	TPH-P (GRO)	ND	15 mg/m³	08/04/15 13:24
Date Sampled	08/03/15 06:29	Methyl tert-butyl ether (MTBE)	0.35	0.15 mg/m³	08/04/15 13:24
		Benzene	ND	0.15 mg/m³	08/04/15 13:24
		Toluene	ND	0.15 mg/m³	08/04/15 13:24
		Ethylbenzene	ND	0.15 mg/m³	08/04/15 13:24
		m,p-Xylene	ND	0.15 mg/m³	08/04/15 13:24
		o-Xylene	ND	0.15 mg/m³	08/04/15 13:24
Client ID :	Oly W INF				
Lab ID :	STR15080445-02A	TPH-P (GRO)	ND	50 µg/L	08/07/15
Date Sampled	08/03/15 06:23	Methyl tert-butyl ether (MTBE)	9.6	0.50 µg/L	08/07/15
		Benzene	ND	0.50 µg/L	08/07/15
		Toluene	ND	0.50 µg/L	08/07/15
		Ethylbenzene	ND	0.50 µg/L	08/07/15
		m,p-Xylene	ND	0.50 µg/L	08/07/15
		o-Xylene	ND	0.50 µg/L	08/07/15
Client ID :	Oly W GAC1				
Lab ID :	STR15080445-03A	TPH-P (GRO)	ND	50 µg/L	08/07/15
Date Sampled	08/03/15 06:20	Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	08/07/15
		Benzene	ND	0.50 µg/L	08/07/15
		Toluene	ND	0.50 µg/L	08/07/15
		Ethylbenzene	ND	0.50 µg/L	08/07/15
		m,p-Xylene	ND	0.50 µg/L	08/07/15
		o-Xylene	ND	0.50 µg/L	08/07/15
Client ID :	Oly W GAC2				
Lab ID :	STR15080445-04A	TPH-P (GRO)	ND	50 µg/L	08/07/15
Date Sampled	08/03/15 06:15	Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	08/07/15
		Benzene	ND	0.50 µg/L	08/07/15
		Toluene	ND	0.50 µg/L	08/07/15
		Ethylbenzene	ND	0.50 µg/L	08/07/15
		m,p-Xylene	ND	0.50 µg/L	08/07/15
		o-Xylene	ND	0.50 µg/L	08/07/15



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Gasoline Range Organics (GRO) C4-C13

Note: For sample -01A concentrations of air in a Tedlar Bag are at 29 degrees Celsius and 25.57 inches of mercury.

ND = Not Detected

Reported in micrograms per Liter, per client request.



Roger Scholl

Randy Gardner

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity : Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



PJ
8/11/15

Report Date



Alpha Analytical, Inc.

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VOC Sample Preservation Report

Work Order: STR15080445

Job: Olympic Station

Alpha's Sample ID	Client's Sample ID	Matrix	pH
15080445-02A	Oly W INF	Aqueous	2
15080445-03A	Oly W GAC1	Aqueous	2
15080445-04A	Oly W GAC2	Aqueous	2

8/11/15

Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
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Date:
11-Aug-15

Work Order:
15080445

QC Summary Report

Method Blank		Type	MBLK	Test Code: EPA Method SW8015B/C / SW8260B						
File ID: 15081015.D					Batch ID: MS15A0810B		Analysis Date: 08/10/2015 15:38			
Sample ID:	MBLK MS15A0810B	Units :	mg/m³	Run ID: MSD_15_150810A				Prep Date:	08/10/2015 15:38	
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
TPH-P (GRO)		ND	10							
Surr: 1,2-Dichloroethane-d4		1.99		2	100	70	130			
Surr: Toluene-d8		2.12		2	106	70	130			
Surr: 4-Bromofluorobenzene		1.75		2	88	70	130			
Laboratory Control Spike		Type	LCS	Test Code: EPA Method SW8015B/C / SW8260B						
File ID: 15081003.D					Batch ID: MS15A0810B		Analysis Date: 08/10/2015 10:40			
Sample ID:	GLCS MS15A0810B	Units :	mg/m³	Run ID: MSD_15_150810A				Prep Date:	08/10/2015 10:40	
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
TPH-P (GRO)		356	10	400	89	70	130			
Surr: 1,2-Dichloroethane-d4		9.33		10	93	70	130			
Surr: Toluene-d8		10.7		10	107	70	130			
Surr: 4-Bromofluorobenzene		9.68		10	97	70	130			

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



Alpha Analytical, Inc.

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Date:
11-Aug-15

Work Order:
15080445

QC Summary Report

Method Blank		Type MBLK	Test Code: EPA Method SW8015B/C / SW8260B							
File ID: 15080704.D		Units : µg/L			Batch ID: MS15W0807B			Analysis Date: 08/07/2015 11:46		
Sample ID:	MBLK MS15W0807B	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
TPH-P (GRO)	ND	50								
Surr: 1,2-Dichloroethane-d4	9.6		10	96	70	130				
Surr: Toluene-d8	11		10	110	70	130				
Surr: 4-Bromofluorobenzene	9.68		10	97	70	130				
Laboratory Control Spike		Type LCS	Test Code: EPA Method SW8015B/C / SW8260B							
File ID: 15080703.D		Units : µg/L			Batch ID: MS15W0807B			Analysis Date: 08/07/2015 11:16		
Sample ID:	GLCS MS15W0807B	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
TPH-P (GRO)	376	50	400	94	70	130				
Surr: 1,2-Dichloroethane-d4	9.75		10	98	70	130				
Surr: Toluene-d8	10.7		10	107	70	130				
Surr: 4-Bromofluorobenzene	9.51		10	95	70	130				
Sample Matrix Spike		Type MS	Test Code: EPA Method SW8015B/C / SW8260B							
File ID: 15080723.D		Units : µg/L			Batch ID: MS15W0807B			Analysis Date: 08/07/2015 19:38		
Sample ID:	15080543-05AGS	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
TPH-P (GRO)	1840	250	2000	0	92	54	143			
Surr: 1,2-Dichloroethane-d4	53.5		50	107	70	130				
Surr: Toluene-d8	51.5		50	103	70	130				
Surr: 4-Bromofluorobenzene	44.4		50	89	70	130				
Sample Matrix Spike Duplicate		Type MSD	Test Code: EPA Method SW8015B/C / SW8260B							
File ID: 15081014.D		Units : µg/L			Batch ID: MS15W0807B			Analysis Date: 08/10/2015 15:13		
Sample ID:	15080543-05AGSD	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
TPH-P (GRO)	2460	250	2000	0	123	54	143	1836	29.2(23)	R5
Surr: 1,2-Dichloroethane-d4	52.5		50	105	70	130				
Surr: Toluene-d8	52.1		50	104	70	130				
Surr: 4-Bromofluorobenzene	43.6		50	87	70	130				

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

R5 = MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.



Alpha Analytical, Inc.

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Date:
11-Aug-15

QC Summary Report

Work Order:
15080445

Method Blank		Type	MBLK	Test Code: EPA Method SW8260B											
Sample ID:	File ID:	Units : mg/m³		Batch ID:	MS15A0810A	Analysis Date: 08/10/2015 15:38									
Analyte		Result	PQL	Run ID:	MSD_15_150810A	Prep Date:	08/10/2015 15:38	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		ND	0.1												
Benzene		ND	0.1												
Toluene		ND	0.1												
Ethylbenzene		ND	0.1												
m,p-Xylene		ND	0.1												
o-Xylene		ND	0.1												
Surr: 1,2-Dichloroethane-d4		1.99			2		100	70	130						
Surr: Toluene-d8		2.12			2		106	70	130						
Surr: 4-Bromofluorobenzene		1.75			2		88	70	130						

Laboratory Control Spike		Type	LCS	Test Code: EPA Method SW8260B											
Sample ID:	File ID:	Units : mg/m³		Batch ID:	MS15A0810A	Analysis Date: 08/10/2015 10:10									
Analyte		Result	PQL	Run ID:	MSD_15_150810A	Prep Date:	08/10/2015 10:10	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		10.4	0.1		10		104	63	137						
Benzene		9.23	0.1		10		92	70	130						
Toluene		10.7	0.1		10		107	70	130						
Ethylbenzene		9.81	0.1		10		98	70	130						
m,p-Xylene		10.9	0.1		10		109	65	139						
o-Xylene		10.9	0.1		10		109	70	130						
Surr: 1,2-Dichloroethane-d4		9.79			10		98	70	130						
Surr: Toluene-d8		10.3			10		103	70	130						
Surr: 4-Bromofluorobenzene		9.1			10		91	70	130						

Comments:

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Alpha Analytical, Inc.

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Date:
11-Aug-15

Work Order:
15080445

QC Summary Report

Method Blank		Type	MBLK	Test Code: EPA Method 624/8260						
File ID: 15080704.D		Units : µg/L		Run ID: MSD_15_150807A		Batch ID: MS15W0807A			Analysis Date: 08/07/2015 11:46	
Sample ID:	MBLK MS15W0807A	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	Prep Date:	08/07/2015 11:46
Analyte									RPDRefVal	%RPD(Limit)
Methyl tert-butyl ether (MTBE)		ND		0.5						
Benzene		ND		0.5						
Toluene		ND		0.5						
Ethylbenzene		ND		0.5						
m,p-Xylene		ND		0.5						
o-Xylene		ND		0.5						
Surr: 1,2-Dichloroethane-d4		9.6			10	96	70	130		
Surr: Toluene-d8		11			10	110	70	130		
Surr: 4-Bromofluorobenzene		9.68			10	97	70	130		
Laboratory Control Spike		Type	LCS	Test Code: EPA Method 624/8260						
File ID: 15080702.D		Units : µg/L		Run ID: MSD_15_150807A		Batch ID: MS15W0807A			Analysis Date: 08/07/2015 10:49	
Sample ID:	LCS MS15W0807A	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	Prep Date:	08/07/2015 10:49
Analyte									RPDRefVal	%RPD(Limit)
Methyl tert-butyl ether (MTBE)		9.02		0.5	10	90	63	137		
Benzene		8.28		0.5	10	83	70	130		
Toluene		9.5		0.5	10	95	70	130		
Ethylbenzene		8.81		0.5	10	88	70	130		
m,p-Xylene		9.69		0.5	10	97	65	139		
o-Xylene		9.75		0.5	10	98	70	130		
Surr: 1,2-Dichloroethane-d4		10.3			10	103	70	130		
Surr: Toluene-d8		10.4			10	104	70	130		
Surr: 4-Bromofluorobenzene		9.09			10	91	70	130		
Sample Matrix Spike		Type	MS	Test Code: EPA Method 624/8260						
File ID: 15080722.D		Units : µg/L		Run ID: MSD_15_150807A		Batch ID: MS15W0807A			Analysis Date: 08/07/2015 19:13	
Sample ID:	15080543-05AMS	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	Prep Date:	08/07/2015 19:13
Analyte									RPDRefVal	%RPD(Limit)
Methyl tert-butyl ether (MTBE)		51.2		1.3	50	0	102	56	140	
Benzene		45.8		1.3	50	0	92	67	134	
Toluene		51.1		1.3	50	0	102	38	130	
Ethylbenzene		48.2		1.3	50	0	96	70	130	
m,p-Xylene		52.7		1.3	50	0	105	65	139	
o-Xylene		53.3		1.3	50	0	107	69	130	
Surr: 1,2-Dichloroethane-d4		52.8			50	106	70	130		
Surr: Toluene-d8		50.2			50	100	70	130		
Surr: 4-Bromofluorobenzene		43.9			50	88	70	130		
Sample Matrix Spike Duplicate		Type	MSD	Test Code: EPA Method 624/8260						
File ID: 15081011.D		Units : µg/L		Run ID: MSD_15_150807A		Batch ID: MS15W0807A			Analysis Date: 08/10/2015 14:00	
Sample ID:	15080543-05AMSD	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	Prep Date:	08/10/2015 14:00
Analyte									RPDRefVal	%RPD(Limit)
Methyl tert-butyl ether (MTBE)		54.3		1.3	50	0	109	56	140	51.24
Benzene		45.5		1.3	50	0	91	67	134	45.75
Toluene		50.6		1.3	50	0	101	38	130	51.14
Ethylbenzene		46.2		1.3	50	0	92	70	130	48.19
m,p-Xylene		51		1.3	50	0	102	65	139	52.72
o-Xylene		51.5		1.3	50	0	103	69	130	53.29
Surr: 1,2-Dichloroethane-d4		50.7			50	101	70	130		3.4(20)
Surr: Toluene-d8		50.8			50	102	70	130		
Surr: 4-Bromofluorobenzene		43.2			50	86	70	130		



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
11-Aug-15

QC Summary Report

Work Order:
15080445

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Billing Information :

Page: 1 of 1

CHAIN-OF-CUSTODY RECORD

Alpha Analytical, Inc.

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
TEL: (775) 355-1044 FAX: (775) 355-0406

Client:

Stratus Environmental
3330 Cameron Park Drive
Suite 550
Cameron Park, CA 95682-8861

PO :

Client's COC # : 04321

Report Attention	Phone Number	EMail Address
Scott Bittinger	(530) 676-2062 x	sbittinger@stratusinc.net

CA

WorkOrder : STR15080445

Report Due By : 5:00 PM On : 11-Aug-15

EDD Required : Yes

Sampled by : C. Hill

Cooler Temp	Samples Received	Date Printed
0 °C	04-Aug-15	04-Aug-15

Job : Olympic Station

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix	No. of Bottles	Requested Tests						Sample Remarks		
				Date	Alpha	Sub	TAT	TPH/P_A	TPH/P_W	VOC_A	VOC_W	
STR15080445-01A	Oly A SYS INF	AR	1	08/03/15 06:29	1	0	5	GAS-N/C		BTEX/MTBE		
STR15080445-02A	Oly W INF	AQ	3	08/03/15 06:23	3	0	5		GAS-C		BTEX/M_C	
STR15080445-03A	Oly W GAC1	AQ	3	08/03/15 06:20	3	0	5		GAS-C		BTEX/M_C	
STR15080445-04A	Oly W GAC2	AQ	3	08/03/15 06:15	3	0	5		GAS-C		BTEX/M_C	

Comments: Security seals intact. Frozen ice. Chain split due to different TATs. :

Logged in by:	Signature	Print Name	Company
<u>Jessica Alvarado</u>	<u>JESSICA ALVARADO</u>	<u>Alpha Analytical, Inc.</u>	<u>8/4/15 11:40</u>

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.
The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other



Alpha Analytical, Inc.

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ANALYTICAL REPORT

Stratus Environmental
 3330 Cameron Park Drive
 Cameron Park, CA 956828861

Attn: Scott Bittinger
 Phone: (530) 676-2062
 Fax: (530) 676-6005
 Date Received : 08/04/15

Job: Olympic Station

Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B / SW8260B
 Volatile Organic Compounds (VOCs) EPA Method SW8260B

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID :	Oly A EFF				
Lab ID :	STR15080443-01A	TPH-P (GRO)	ND	15 mg/m³	08/04/15 11:34
Date Sampled	08/03/15 06:27	Methyl tert-butyl ether (MTBE)	ND	0.15 mg/m³	08/04/15 11:34
		Benzene	ND	0.15 mg/m³	08/04/15 11:34
		Toluene	ND	0.15 mg/m³	08/04/15 11:34
		Ethylbenzene	ND	0.15 mg/m³	08/04/15 11:34
		m,p-Xylene	ND	0.15 mg/m³	08/04/15 11:34
		o-Xylene	ND	0.15 mg/m³	08/04/15 11:34
Client ID :	Oly W EFF				
Lab ID :	STR15080443-02A	TPH-P (GRO)	ND	50 µg/L	08/04/15
Date Sampled	08/03/15 06:10	Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	08/04/15
		Benzene	ND	0.50 µg/L	08/04/15
		Toluene	ND	0.50 µg/L	08/04/15
		Ethylbenzene	ND	0.50 µg/L	08/04/15
		m,p-Xylene	ND	0.50 µg/L	08/04/15
		o-Xylene	ND	0.50 µg/L	08/04/15

Gasoline Range Organics (GRO) C4-C13

Note: For sample -01A concentrations of air in a Tedlar Bag are at 29 degrees Celsius and 25.60 inches of mercury.

ND = Not Detected

Reported in micrograms per Liter, per client request.



Roger Scholl

Randy Gardner

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



PJ
8/6/15
Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

VOC Sample Preservation Report

Work Order: STR15080443

Job: Olympic Station

Alpha's Sample ID	Client's Sample ID	Matrix	pH
15080443-02A	Oly W EFF	Aqueous	2

8/6/15

Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
06-Aug-15

QC Summary Report

Work Order:
15080443

Method Blank		Type	MBLK	Test Code: EPA Method SW8015B/C / SW8260B					
File ID: C:\HPCHEM\MS10\DATA\150804\15080405.D				Batch ID: MS10A0804B			Analysis Date: 08/04/2015 13:06		
Sample ID:	MBLK MS10A0804B	Units :	mg/m³	Run ID:	MSD_10_150804A		Prep Date:	08/04/2015 13:06	
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)
TPH-P (GRO)	ND	10							
Sur: 1,2-Dichloroethane-d4	1.79		2	90	70	130			
Sur: Toluene-d8	1.91		2	96	70	130			
Sur: 4-Bromofluorobenzene	2.05		2	103	70	130			
Laboratory Control Spike		Type	LCS	Test Code: EPA Method SW8015B/C / SW8260B					
File ID: C:\HPCHEM\MS10\DATA\150804\15080403.D				Batch ID: MS10A0804B			Analysis Date: 08/04/2015 11:51		
Sample ID:	GLCS MS10A0804B	Units :	mg/m³	Run ID:	MSD_10_150804A		Prep Date:	08/04/2015 11:51	
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)
TPH-P (GRO)	423	10	400	106	70	130			
Sur: 1,2-Dichloroethane-d4	9.83		10	98	70	130			
Sur: Toluene-d8	9.03		10	90	70	130			
Sur: 4-Bromofluorobenzene	10.4		10	104	70	130			

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
06-Aug-15

Work Order:
15080443

QC Summary Report

Method Blank							Type MBLK	Test Code: EPA Method SW8015B/C / SW8260B						
File ID: 15080404.D							Batch ID: MS09W0804B	Analysis Date: 08/04/2015 11:30						
Sample ID: MBLK MS09W0804B		Units : µg/L	Run ID: MSD_09_150804A		Prep Date: 08/04/2015 11:30									
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual				
TPH-P (GRO)	ND	50												
Surr: 1,2-Dichloroethane-d4	8.02		10		80	70	130							
Surr: Toluene-d8	11.3		10		113	70	130							
Surr: 4-Bromofluorobenzene	10.4		10		104	70	130							
Laboratory Control Spike							Type LCS	Test Code: EPA Method SW8015B/C / SW8260B						
File ID: 15080403.D							Batch ID: MS09W0804B	Analysis Date: 08/04/2015 10:44						
Sample ID: GLCS MS09W0804B		Units : µg/L	Run ID: MSD_09_150804A		Prep Date: 08/04/2015 10:44									
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual				
TPH-P (GRO)	393	50	400		98	70	130							
Surr: 1,2-Dichloroethane-d4	8.84		10		88	70	130							
Surr: Toluene-d8	11.3		10		113	70	130							
Surr: 4-Bromofluorobenzene	10.9		10		109	70	130							
Sample Matrix Spike							Type MS	Test Code: EPA Method SW8015B/C / SW8260B						
File ID: 15080418.D							Batch ID: MS09W0804B	Analysis Date: 08/04/2015 17:13						
Sample ID: 15080442-01AGS		Units : µg/L	Run ID: MSD_09_150804A		Prep Date: 08/04/2015 17:13									
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual				
TPH-P (GRO)	2100	250	2000	0	105	54	143							
Surr: 1,2-Dichloroethane-d4	48.7		50		97	70	130							
Surr: Toluene-d8	53.6		50		107	70	130							
Surr: 4-Bromofluorobenzene	54		50		108	70	130							
Sample Matrix Spike Duplicate							Type MSD	Test Code: EPA Method SW8015B/C / SW8260B						
File ID: 15080419.D							Batch ID: MS09W0804B	Analysis Date: 08/04/2015 17:37						
Sample ID: 15080442-01AGSD		Units : µg/L	Run ID: MSD_09_150804A		Prep Date: 08/04/2015 17:37									
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual				
TPH-P (GRO)	2120	250	2000	0	106	54	143	2100	0.9(23)					
Surr: 1,2-Dichloroethane-d4	49.2		50		98	70	130							
Surr: Toluene-d8	54.3		50		109	70	130							
Surr: 4-Bromofluorobenzene	54.8		50		110	70	130							

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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Date:
06-Aug-15

QC Summary Report

Work Order:
15080443

Method Blank

File ID: C:\HPCHEM\MS10\DATA\150804\15080405.D Type MBLK Test Code: EPA Method SW8260B

Sample ID: MBLK MS10A0804A Units : mg/m³ Run ID: MSD_10_150804A Batch ID: MS10A0804A Analysis Date: 08/04/2015 13:06

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	ND	0.1								
Benzene	ND	0.1								
Toluene	ND	0.1								
Ethylbenzene	ND	0.1								
m,p-Xylene	ND	0.1								
o-Xylene	ND	0.1								
Surr: 1,2-Dichloroethane-d4	1.79		2		90	70	130			
Surr: Toluene-d8	1.91		2		96	70	130			
Surr: 4-Bromofluorobenzene	2.05		2		103	70	130			

Laboratory Control Spike

File ID: C:\HPCHEM\MS10\DATA\150804\15080402.D Type LCS Test Code: EPA Method SW8260B

Sample ID: LCS MS10A0804A Units : mg/m³ Run ID: MSD_10_150804A Batch ID: MS10A0804A Analysis Date: 08/04/2015 11:30

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	10.2	0.1	10		102	63	137			
Benzene	11.4	0.1	10		114	70	130			
Toluene	9.39	0.1	10		94	70	130			
Ethylbenzene	10.3	0.1	10		103	70	130			
m,p-Xylene	10.2	0.1	10		102	65	139			
o-Xylene	10.6	0.1	10		106	70	130			
Surr: 1,2-Dichloroethane-d4	9.75		10		98	70	130			
Surr: Toluene-d8	8.93		10		89	70	130			
Sur: 4-Bromofluorobenzene	9.89		10		99	70	130			

Comments:

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Date:
06-Aug-15

Work Order:
15080443

QC Summary Report

Method Blank		Type	MBLK	Test Code: EPA Method 624/8260						
File ID: 15080404.D				Batch ID: MS09W0804A				Analysis Date: 08/04/2015 11:30		
Sample ID:	MBLK MS09W0804A	Units : µg/L		Run ID: MSD_09_150804A				Prep Date: 08/04/2015 11:30		
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		ND		0.5						
Benzene		ND		0.5						
Toluene		ND		0.5						
Ethylbenzene		ND		0.5						
m,p-Xylene		ND		0.5						
o-Xylene		ND		0.5						
Surr: 1,2-Dichloroethane-d4		8.02		10	80	70	130			
Surr: Toluene-d8		11.3		10	113	70	130			
Surr: 4-Bromofluorobenzene		10.4		10	104	70	130			
Laboratory Control Spike		Type	LCS	Test Code: EPA Method 624/8260						
File ID: 15080402.D				Batch ID: MS09W0804A				Analysis Date: 08/04/2015 10:18		
Sample ID:	LCS MS09W0804A	Units : µg/L		Run ID: MSD_09_150804A				Prep Date: 08/04/2015 10:18		
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		10.3	0.5	10	103	63	137			
Benzene		11.6	0.5	10	116	70	130			
Toluene		11.4	0.5	10	114	70	130			
Ethylbenzene		11.6	0.5	10	116	70	130			
m,p-Xylene		11.7	0.5	10	117	65	139			
o-Xylene		12.3	0.5	10	123	70	130			
Surr: 1,2-Dichloroethane-d4		8.68		10	87	70	130			
Surr: Toluene-d8		11		10	110	70	130			
Surr: 4-Bromofluorobenzene		10.2		10	102	70	130			
Sample Matrix Spike		Type	MS	Test Code: EPA Method 624/8260						
File ID: 15080416.D				Batch ID: MS09W0804A				Analysis Date: 08/04/2015 16:25		
Sample ID:	15080442-01AMS	Units : µg/L		Run ID: MSD_09_150804A				Prep Date: 08/04/2015 16:25		
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		54	1.3	50	0	108	56	140		
Benzene		59.1	1.3	50	0	118	67	134		
Toluene		57	1.3	50	0	114	38	130		
Ethylbenzene		54.8	1.3	50	0	110	70	130		
m,p-Xylene		52.9	1.3	50	0	106	65	139		
o-Xylene		56.8	1.3	50	0	114	69	130		
Surr: 1,2-Dichloroethane-d4		51.1		50	102	70	130			
Surr: Toluene-d8		51.5		50	103	70	130			
Surr: 4-Bromofluorobenzene		52.7		50	105	70	130			
Sample Matrix Spike Duplicate		Type	MSD	Test Code: EPA Method 624/8260						
File ID: 15080417.D				Batch ID: MS09W0804A				Analysis Date: 08/04/2015 16:49		
Sample ID:	15080442-01AMSD	Units : µg/L		Run ID: MSD_09_150804A				Prep Date: 08/04/2015 16:49		
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		55.1	1.3	50	0	110	56	140	53.96	2.0(40)
Benzene		57.8	1.3	50	0	116	67	134	59.11	2.2(21)
Toluene		56.4	1.3	50	0	113	38	130	57	1.0(20)
Ethylbenzene		54.4	1.3	50	0	109	70	130	54.8	0.8(20)
m,p-Xylene		52.8	1.3	50	0	106	65	139	52.94	0.3(20)
o-Xylene		58.1	1.3	50	0	116	69	130	56.77	2.4(20)
Surr: 1,2-Dichloroethane-d4		50.1		50	100	70	130			
Surr: Toluene-d8		51.7		50	103	70	130			
Surr: 4-Bromofluorobenzene		51.4		50	103	70	130			



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
06-Aug-15

QC Summary Report

Work Order:
15080443

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Billing Information :

RUSH
CA

Page: 1 of 1

CHAIN-OF-CUSTODY RECORD**Alpha Analytical, Inc.**

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
TEL: (775) 355-1044 FAX: (775) 355-0406

Client:

Stratus Environmental
3330 Cameron Park Drive
Suite 550
Cameron Park, CA 95682-8861

PO :

Client's COC # : 04321

Report Attention	Phone Number	EMail Address
Scott Bittinger	(530) 676-2062 x	sbittinger@stratusinc.net

Job : Olympic Station

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix	No. of Bottles	Requested Tests								Sample Remarks
				TPH/P_A	TPH/P_W	VOC_A	VOC_W					
STR15080443-01A	Oly A EFF	AR	08/03/15 06:27	1	0	0	GAS-N/C		BTEX/MTBE			Tedlar.
STR15080443-02A	Oly W EFF	AQ	08/03/15 06:10	3	0	0	GAS-C		BTEX/M_C			

Comments: ASAP TAT. Security seals intact. Frozen ice. Chain split due to different TATs.

Signature	Print Name	Company	Date/Time
Logged in by: <u>Jessica Alvarado</u>	<u>JESSICA ALVARADO</u>	Alpha Analytical, Inc.	<u>8/4/15 10:30</u>

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.
The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

Billing Information:
 Company: Syrinx's
 Attn: Debbie
 Address: 3330 Cimarron Pkwy
 City, State, Zip: Cimarron Pkwy
 Phone Number: _____ Fax: _____



Alpha Analytical, Inc.
 Main Laboratory: 255 Glendale Ave, Suite 21 Sparks, NV 89431
 Northern CA: 9891 Horn Road, Suite C, Rancho Cordova, CA 95827
 Southern CA: 1007 E. Dominguez St., Suite O, Carson, CA 90746
 Northern NV: 1250 Lamoille Hwy., #310, Elko, NV 89801
 Southern NV: 6255 McLeod Ave, Suite 24, Las Vegas, NV 89120

Phone: 775-355-1044
 Fax: 775-355-0406
 Phone: 916-366-9089
 Phone: 714-386-2901
 Phone: 775-388-7043
 Phone: 702-281-4848

04321

Page # 1 of 1

Consultant/ Client Info:
 Company: Syrinx's

Job and Purchase Order Info:

Report Attention/Project Manager:

QC Deliverable Info:

Address: _____
 City, State, Zip: _____

Job #: _____
 Job Name: Olympic station
 P.O. #: _____

Name: SLVTT
 Email Address: _____
 Phone #: _____
 Cell #: _____

EDD Required? Yes / No EDF Required? Yes / No
 Global ID: _____
 Data Validation Packages: III or IV

Samples Collected from which State? (circle one)

AR KS NV OR WA DOD Site Other

Time Sampled (HHMM)	Date Sampled (MM/DD)	Matrix* (See Key Below)	Lab ID Number (For Lab Use Only)	Sample Description	TAT	# Containers* (See Key Below)	Analysis Requested		Remarks
							Field Filtered?	Yes	
0315	0629	AR		Oly A Sys Inv-STD	1	1	X	X X	
0315	0627	AR	STR15080443 DM	Oly A EFP 24	1	1	X	X X	
0315	0623	AQ		Oly W Inv- STD	3	X X	X X	X X	
	0620	)		Oly W GAC1 STD	3	X X	X X	X Y	
	0615	)		Oly W GAC2 STD	3	X X	X X	X X	
0314	0610	AQ	02A	Oly W EFP	24	3	X X	X X X	
ADDITIONAL INSTRUCTIONS:									

I (field sampler) attest to the validity and authenticity of this sample(s). I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. NAC 445.0838 (c) (2).

Sampled By: <u>CHH</u>	Date: <u>8-3-15</u>	Time: <u>1020</u>	Received by: (Signature/Affiliation): <u>Merissa T</u>	Date: <u>8-3-15</u>	Time: <u>1020</u>
Relinquished by: (Signature/Affiliation): <u>Olympic station</u>	Date: <u>8-3-15</u>	Time: <u>1020</u>	Received by: (Signature/Affiliation): <u>JAH</u>	Date: <u>8-4-15</u>	Time: <u>930</u>
Relinquished by: (Signature/Affiliation):	Date:	Time:	Received by: (Signature/Affiliation):	Date:	Time:

* Key: AQ - Aqueous OT - Other So-Soil WA - Waste ** B - Brass L - Liter O - Orbo OT - Other P - Plastic S-Soil Jar T - Tedlar V - VOA

NOTE: Samples are discarded 60 days after sample receipt unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

ANALYTICAL REPORT

Stratus Environmental
3330 Cameron Park Drive
Cameron Park, CA 956828861

Attn: Scott Bittinger
Phone: (530) 676-2062
Fax: (530) 676-6005
Date Received : 09/02/15

Job: Olympic Station

Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B / SW8260B
Volatile Organic Compounds (VOCs) EPA Method SW8260B

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID :	Oly W INF				
Lab ID :	STR15090248-01A	TPH-P (GRO)	ND	50 µg/L	09/04/15
Date Sampled	09/01/15 05:28	Methyl tert-butyl ether (MTBE)	9.7	0.50 µg/L	09/04/15
		Benzene	ND	0.50 µg/L	09/04/15
		Toluene	ND	0.50 µg/L	09/04/15
		Ethylbenzene	ND	0.50 µg/L	09/04/15
		m,p-Xylene	ND	0.50 µg/L	09/04/15
		o-Xylene	ND	0.50 µg/L	09/04/15
Client ID :	Oly W GAC1				
Lab ID :	STR15090248-02A	TPH-P (GRO)	ND	50 µg/L	09/04/15
Date Sampled	09/01/15 05:26	Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	09/04/15
		Benzene	ND	0.50 µg/L	09/04/15
		Toluene	ND	0.50 µg/L	09/04/15
		Ethylbenzene	ND	0.50 µg/L	09/04/15
		m,p-Xylene	ND	0.50 µg/L	09/04/15
		o-Xylene	ND	0.50 µg/L	09/04/15
Client ID :	Oly W GAC2				
Lab ID :	STR15090248-03A	TPH-P (GRO)	ND	50 µg/L	09/04/15
Date Sampled	09/01/15 05:23	Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	09/04/15
		Benzene	ND	0.50 µg/L	09/04/15
		Toluene	ND	0.50 µg/L	09/04/15
		Ethylbenzene	ND	0.50 µg/L	09/04/15
		m,p-Xylene	ND	0.50 µg/L	09/04/15
		o-Xylene	ND	0.50 µg/L	09/04/15
Client ID :	Oly A SYS INF				
Lab ID :	STR15090248-04A	TPH-P (GRO)	ND	20 mg/m³	09/02/15 16:05
Date Sampled	09/01/15 05:20	Methyl tert-butyl ether (MTBE)	ND	0.20 mg/m³	09/02/15 16:05
		Benzene	ND	0.20 mg/m³	09/02/15 16:05
		Toluene	ND	0.20 mg/m³	09/02/15 16:05
		Ethylbenzene	ND	0.20 mg/m³	09/02/15 16:05
		m,p-Xylene	ND	0.20 mg/m³	09/02/15 16:05
		o-Xylene	ND	0.20 mg/m³	09/02/15 16:05



Alpha Analytical, Inc.

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Gasoline Range Organics (GRO) C4-C13

Note: For sample -04A concentrations of air in a Tedlar Bag are at 28 degrees Celsius and 25.47 inches of mercury.

ND = Not Detected

Reported in micrograms per Liter, per client request.

Roger Scholl

Randy Gardner

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager

Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity : Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



JH
9/10/15
Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

VOC Sample Preservation Report

Work Order: STR15090248

Job: Olympic Station

Alpha's Sample ID	Client's Sample ID	Matrix	pH
15090248-01A	Oly W INF	Aqueous	2
15090248-02A	Oly W GAC1	Aqueous	2
15090248-03A	Oly W GAC2	Aqueous	2

9/10/15

Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
09-Sep-15

QC Summary Report

Work Order:
15090248

Method Blank		Type	MBLK	Test Code: EPA Method SW8015B/C / SW8260B						
File ID: 15090805.D					Batch ID: MS08A0908B		Analysis Date: 09/08/2015 12:42			
Sample ID:	MBLK MS08A0908B	Units :	mg/m³	Run ID:	MSD_08_150908A	Prep Date:	09/08/2015 12:42			
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
TPH-P (GRO)		ND	10							
Surr: 1,2-Dichloroethane-d4		1.94		2	97	70	130			
Surr: Toluene-d8		2.24		2	112	70	130			
Surr: 4-Bromofluorobenzene		1.63		2	82	70	130			
Laboratory Control Spike		Type	LCS	Test Code: EPA Method SW8015B/C / SW8260B						
File ID: 15090803.D					Batch ID: MS08A0908B		Analysis Date: 09/08/2015 11:40			
Sample ID:	GLCS MS08A0908B	Units :	mg/m³	Run ID:	MSD_08_150908A	Prep Date:	09/08/2015 11:40			
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
TPH-P (GRO)		454	10	400	114	70	130			
Surr: 1,2-Dichloroethane-d4		9.7		10	97	70	130			
Surr: Toluene-d8		9.29		10	93	70	130			
Surr: 4-Bromofluorobenzene		10.6		10	106	70	130			

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



Alpha Analytical, Inc.

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(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
09-Sep-15

Work Order:
15090248

QC Summary Report

Method Blank							Type MBLK	Test Code: EPA Method SW8015B/C / SW8260B						
								Batch ID: MS08W0904B			Analysis Date: 09/04/2015 11:46			
Sample ID:	MBLK	MS08W0904B	Units : µg/L	Result	PQL	Run ID: MSD_08_150904A	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)			ND	50										
Surr: 1,2-Dichloroethane-d4			10.8			10		108	70	130				
Surr: Toluene-d8			10.6			10		106	70	130				
Surr: 4-Bromofluorobenzene			8.77			10		88	70	130				
Laboratory Control Spike							Type LCS	Test Code: EPA Method SW8015B/C / SW8260B						
								Batch ID: MS08W0904B			Analysis Date: 09/04/2015 11:14			
Sample ID:	GLCS	MS08W0904B	Units : µg/L	Result	PQL	Run ID: MSD_08_150904A	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)			387	50	400			97	70	130				
Surr: 1,2-Dichloroethane-d4			10			10		100	70	130				
Surr: Toluene-d8			9.53			10		95	70	130				
Surr: 4-Bromofluorobenzene			10.2			10		102	70	130				
Sample Matrix Spike							Type MS	Test Code: EPA Method SW8015B/C / SW8260B						
								Batch ID: MS08W0904B			Analysis Date: 09/04/2015 21:34			
Sample ID:	15090248-01AGS		Units : µg/L	Result	PQL	Run ID: MSD_08_150904A	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)			2210	250	2000		0	110	54	143				
Surr: 1,2-Dichloroethane-d4			53.6		50			107	70	130				
Surr: Toluene-d8			48		50			96	70	130				
Surr: 4-Bromofluorobenzene			50		50			100	70	130				
Sample Matrix Spike Duplicate							Type MSD	Test Code: EPA Method SW8015B/C / SW8260B						
								Batch ID: MS08W0904B			Analysis Date: 09/04/2015 21:58			
Sample ID:	15090248-01AGSD		Units : µg/L	Result	PQL	Run ID: MSD_08_150904A	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)			2140	250	2000		0	107	54	143		2209	3.0(23)	
Surr: 1,2-Dichloroethane-d4			53.3		50			107	70	130				
Surr: Toluene-d8			48.4		50			97	70	130				
Surr: 4-Bromofluorobenzene			51.7		50			103	70	130				

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Reported in micrograms per Liter, per client request.



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
09-Sep-15

Work Order:
15090248

QC Summary Report

Method Blank		Type MBLK	Test Code: EPA Method SW8260B				
File ID: 15090805.D		Batch ID: MS08A0908A			Analysis Date: 09/08/2015 12:42		
Sample ID:	MBLK MS08A0908A	Units : mg/m³	Run ID: MSD_08_150908A		Prep Date:	09/08/2015 12:42	
Analyte		Result	PQL	SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal %RPD(Limit)		Qual	
Methyl tert-butyl ether (MTBE)		ND	0.1				
Benzene		ND	0.1				
Toluene		ND	0.1				
Ethylbenzene		ND	0.1				
m,p-Xylene		ND	0.1				
o-Xylene		ND	0.1				
Surr: 1,2-Dichloroethane-d4		1.94	2	97 70 130			
Surr: Toluene-d8		2.24	2	112 70 130			
Surr: 4-Bromofluorobenzene		1.63	2	82 70 130			
Laboratory Control Spike		Type LCS	Test Code: EPA Method SW8260B				
File ID: 15090802.D		Batch ID: MS08A0908A			Analysis Date: 09/08/2015 11:09		
Sample ID:	LCS MS08A0908A	Units : mg/m³	Run ID: MSD_08_150908A		Prep Date:	09/08/2015 11:09	
Analyte		Result	PQL	SpkVal SpkRefVal %REC LCL(ME) UCL(ME) RPDRefVal %RPD(Limit)		Qual	
Methyl tert-butyl ether (MTBE)		12.3	0.1	10 123 63 137			
Benzene		10.7	0.1	10 107 70 130			
Toluene		10.8	0.1	10 108 70 130			
Ethylbenzene		10.6	0.1	10 106 70 130			
m,p-Xylene		10.6	0.1	10 106 65 139			
o-Xylene		10.3	0.1	10 103 70 130			
Surr: 1,2-Dichloroethane-d4		10.3	10	103 70 130			
Surr: Toluene-d8		9.67	10	97 70 130			
Surr: 4-Bromofluorobenzene		9.53	10	95 70 130			

Comments:

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Date:
09-Sep-15

Work Order:
15090248

QC Summary Report

Method Blank		Type MBLK	Test Code: EPA Method 624/8260							
File ID: 15090404.D		Batch ID: MS08W0904A			Analysis Date: 09/04/2015 11:46					
Sample ID:	MBLK MS08W0904A	Units : µg/L	Run ID: MSD_08_150904A		Prep Date: 09/04/2015 11:46					
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	ND	0.5								
Benzene	ND	0.5								
Toluene	ND	0.5								
Ethylbenzene	ND	0.5								
m,p-Xylene	ND	0.5								
o-Xylene	ND	0.5								
Surr: 1,2-Dichloroethane-d4	10.8		10		108	70	130			
Surr: Toluene-d8	10.6		10		106	70	130			
Surr: 4-Bromofluorobenzene	8.77		10		88	70	130			
Laboratory Control Spike		Type LCS	Test Code: EPA Method 624/8260							
File ID: 15090402.D		Batch ID: MS08W0904A			Analysis Date: 09/04/2015 10:47					
Sample ID:	LCS MS08W0904A	Units : µg/L	Run ID: MSD_08_150904A		Prep Date: 09/04/2015 10:47					
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	11.8	0.5	10		118	63	137			
Benzene	10.5	0.5	10		105	70	130			
Toluene	10.1	0.5	10		101	70	130			
Ethylbenzene	9.81	0.5	10		98	70	130			
m,p-Xylene	9.75	0.5	10		98	65	139			
o-Xylene	9.76	0.5	10		98	70	130			
Surr: 1,2-Dichloroethane-d4	10.7		10		107	70	130			
Surr: Toluene-d8	9.38		10		94	70	130			
Surr: 4-Bromofluorobenzene	9.59		10		96	70	130			
Sample Matrix Spike		Type MS	Test Code: EPA Method 624/8260							
File ID: 15090427.D		Batch ID: MS08W0904A			Analysis Date: 09/04/2015 20:48					
Sample ID:	15090248-01AMS	Units : µg/L	Run ID: MSD_08_150904A		Prep Date: 09/04/2015 20:48					
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	73.9	1.3	50		9.7	128	56	140		
Benzene	52.1	1.3	50		0	104	67	134		
Toluene	54.2	1.3	50		0	108	38	130		
Ethylbenzene	52.6	1.3	50		0	105	70	130		
m,p-Xylene	51.4	1.3	50		0	103	65	139		
o-Xylene	50.6	1.3	50		0	101	69	130		
Surr: 1,2-Dichloroethane-d4	54.9		50		110	70	130			
Surr: Toluene-d8	47.4		50		95	70	130			
Surr: 4-Bromofluorobenzene	46.3		50		93	70	130			
Sample Matrix Spike Duplicate		Type MSD	Test Code: EPA Method 624/8260							
File ID: 15090428.D		Batch ID: MS08W0904A			Analysis Date: 09/04/2015 21:12					
Sample ID:	15090248-01AMSD	Units : µg/L	Run ID: MSD_08_150904A		Prep Date: 09/04/2015 21:12					
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	76.4	1.3	50		9.7	133	56	140	73.91	3.3(40)
Benzene	53.6	1.3	50		0	107	67	134	52.11	2.9(21)
Toluene	54.3	1.3	50		0	109	38	130	54.23	0.2(20)
Ethylbenzene	51.5	1.3	50		0	103	70	130	52.61	2.1(20)
m,p-Xylene	50.9	1.3	50		0	102	65	139	51.37	0.9(20)
o-Xylene	50.2	1.3	50		0	100	69	130	50.61	0.8(20)
Surr: 1,2-Dichloroethane-d4	56.3		50		113	70	130			
Surr: Toluene-d8	47.3		50		95	70	130			
Surr: 4-Bromofluorobenzene	45.4		50		91	70	130			



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
09-Sep-15

QC Summary Report

Work Order:
15090248

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Billing Information :

Page: 1 of 1

CHAIN-OF-CUSTODY RECORD**Alpha Analytical, Inc.**

255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778

TEL: (775) 355-1044 FAX: (775) 355-0406

CA**WorkOrder : STR15090248****Report Due By : 5:00 PM On : 10-Sep-15**

Client:

Stratus Environmental
 3330 Cameron Park Drive
 Suite 550
 Cameron Park, CA 95682-8861

PO :

Client's COC # : 04518

Report Attention	Phone Number	EMail Address
Scott Bittinger	(530) 676-2062 x	sbittinger@stratusinc.net

EDD Required : Yes

Sampled by : C. Hill

Cooler Temp	Samples Received	Date Printed
0 °C	02-Sep-15	02-Sep-15

Job : Olympic Station

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix	No. of Bottles Date	Requested Tests						Sample Remarks
				TPH/P_A	TPH/P_W	VOC_A	VOC_W			
STR15090248-01A	Oly W INF	AQ	09/01/15 05:28	3	0	5		GAS-C	BTEX/M_C	
STR15090248-02A	Oly W GAC1	AQ	09/01/15 05:26	3	0	5		GAS-C	BTEX/M_C	
STR15090248-03A	Oly W GAC2	AQ	09/01/15 05:23	3	0	5		GAS-C	BTEX/M_C	
STR15090248-04A	Oly A SYS INF	AR	09/01/15 05:20	1	0	5	GAS-N/C		BTEX/MTBE	Tedlar.

Comments: Security seals intact. Frozen ice. Chain split due to different TATs.:

Signature

Print Name

Company

Date/Time

Logged in by:

JESSICA ALVARADO.

Alpha Analytical, Inc.

9/2/15 1225

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.

Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other



Alpha Analytical, Inc.

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ANALYTICAL REPORT

Stratus Environmental
 3330 Cameron Park Drive
 Cameron Park, CA 956828861

Attn: Scott Bittinger
 Phone: (530) 676-2062
 Fax: (530) 676-6005
 Date Received : 09/02/15

Job: Olympic Station

Total Petroleum Hydrocarbons - Purgeable (TPH-P) EPA Method SW8015B / SW8260B
 Volatile Organic Compounds (VOCs) EPA Method SW8260B

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID :	Oly W EFF				
Lab ID :	STR15090240-01A	TPH-P (GRO)	ND	50 µg/L	09/02/15
Date Sampled	09/01/15 05:21	Methyl tert-butyl ether (MTBE)	ND	0.50 µg/L	09/02/15
		Benzene	ND	0.50 µg/L	09/02/15
		Toluene	ND	0.50 µg/L	09/02/15
		Ethylbenzene	ND	0.50 µg/L	09/02/15
		m,p-Xylene	ND	0.50 µg/L	09/02/15
		o-Xylene	ND	0.50 µg/L	09/02/15
Client ID :	Oly A EFF				
Lab ID :	STR15090240-02A	TPH-P (GRO)	ND	15 mg/m³	09/02/15 10:15
Date Sampled	09/01/15 05:18	Methyl tert-butyl ether (MTBE)	ND	0.15 mg/m³	09/02/15 10:15
		Benzene	ND	0.15 mg/m³	09/02/15 10:15
		Toluene	ND	0.15 mg/m³	09/02/15 10:15
		Ethylbenzene	ND	0.15 mg/m³	09/02/15 10:15
		m,p-Xylene	ND	0.15 mg/m³	09/02/15 10:15
		o-Xylene	ND	0.15 mg/m³	09/02/15 10:15

Gasoline Range Organics (GRO) C4-C13

Note: For sample -02A concentrations of air in a Tedlar Bag are at 24 degrees Celsius and 30.00 inches of mercury.

ND = Not Detected

Reported in micrograms per Liter, per client request.



Roger Scholl

Randy Gardner

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager
 Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 281-4848 / Carson, CA • (714) 386-2901 / info@alpha-analytical.com

Alpha Analytical, Inc. certifies that the test results meet all requirements of NELAC unless footnoted otherwise.

Statement of Data Authenticity: Alpha Analytical, Inc. attests that the data reported has not been altered in any way.

Alpha Analytical, Inc. currently holds appropriate and available California (#2019) and NELAC (01154CA) certifications for the data reported. Test results relate only to reported samples.



RG
9/2/15

Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

VOC Sample Preservation Report

Work Order: STR15090240

Job: Olympic Station

Alpha's Sample ID	Client's Sample ID	Matrix	pH
15090240-01A	Oly W EFF	Aqueous	2

9/2/15

Report Date



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
04-Sep-15

QC Summary Report

Work Order:
15090240

Method Blank		Type	MBLK	Test Code: EPA Method SW8015B/C / SW8260B						
File ID: 15090205.D					Batch ID: MS15A0902B			Analysis Date: 09/02/2015 11:54		
Sample ID:	MBLK MS15A0902B	Units :	mg/m³	Run ID: MSD_15_150902A			Prep Date: 09/02/2015 11:54			
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)
TPH-P (GRO)		ND		10						
Surr: 1,2-Dichloroethane-d4		1.78		2	89	70	130			
Surr: Toluene-d8		2.08		2	104	70	130			
Surr: 4-Bromofluorobenzene		2.02		2	101	70	130			
Laboratory Control Spike		Type	LCS	Test Code: EPA Method SW8015B/C / SW8260B						
File ID: 15090203.D					Batch ID: MS15A0902B			Analysis Date: 09/02/2015 10:50		
Sample ID:	GLCS MS15A0902B	Units :	mg/m³	Run ID: MSD_15_150902A			Prep Date: 09/02/2015 10:50			
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)
TPH-P (GRO)		427	10	400	107	70	130			
Surr: 1,2-Dichloroethane-d4		8.8		10	88	70	130			
Surr: Toluene-d8		10.5		10	105	70	130			
Surr: 4-Bromofluorobenzene		10		10	100	70	130			

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.



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Date:
04-Sep-15

QC Summary Report

Work Order:
15090240

Method Blank							Type MBLK	Test Code: EPA Method SW8015B/C / SW8260B					
							Batch ID: MS09W0902B			Analysis Date: 09/02/2015 12:34			
Sample ID:	MBLK	MS09W0902B	Units : µg/L	Run ID: MSD_09_150902A			Prep Date: 09/02/2015 12:34						
Analyte	Result	PQL		SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual		
TPH-P (GRO)	ND	50											
Surr: 1,2-Dichloroethane-d4	10.2		10		102	70	130						
Surr: Toluene-d8	10.2		10		102	70	130						
Surr: 4-Bromofluorobenzene	9.68		10		97	70	130						
Laboratory Control Spike							Type LCS	Test Code: EPA Method SW8015B/C / SW8260B					
							Batch ID: MS09W0902B			Analysis Date: 09/02/2015 12:09			
Sample ID:	GLCS	MS09W0902B	Units : µg/L	Run ID: MSD_09_150902A			Prep Date: 09/02/2015 12:09						
Analyte	Result	PQL		SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual		
TPH-P (GRO)	421	50	400		105	70	130						
Surr: 1,2-Dichloroethane-d4	10.3		10		103	70	130						
Surr: Toluene-d8	9.97		10		99.7	70	130						
Surr: 4-Bromofluorobenzene	10.1		10		101	70	130						
Sample Matrix Spike							Type MS	Test Code: EPA Method SW8015B/C / SW8260B					
							Batch ID: MS09W0902B			Analysis Date: 09/02/2015 17:26			
Sample ID:	15090240-01AGS		Units : µg/L	Run ID: MSD_09_150902A			Prep Date: 09/02/2015 17:26						
Analyte	Result	PQL		SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual		
TPH-P (GRO)	2130	250	2000	0	107	54	143						
Surr: 1,2-Dichloroethane-d4	51.4		50		103	70	130						
Surr: Toluene-d8	49.8		50		99.6	70	130						
Surr: 4-Bromofluorobenzene	50		50		100	70	130						
Sample Matrix Spike Duplicate							Type MSD	Test Code: EPA Method SW8015B/C / SW8260B					
							Batch ID: MS09W0902B			Analysis Date: 09/02/2015 17:50			
Sample ID:	15090240-01AGSD		Units : µg/L	Run ID: MSD_09_150902A			Prep Date: 09/02/2015 17:50						
Analyte	Result	PQL		SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual		
TPH-P (GRO)	2250	250	2000	0	113	54	143		2132	5.6(23)			
Surr: 1,2-Dichloroethane-d4	51.3		50		103	70	130						
Surr: Toluene-d8	50.4		50		101	70	130						
Surr: 4-Bromofluorobenzene	48.6		50		97	70	130						

Comments:

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Reported in micrograms per Liter, per client request.



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Date:
04-Sep-15

Work Order:
15090240

QC Summary Report

Method Blank		Type	MLBK	Test Code: EPA Method SW8260B									
File ID: 15090205.D		Batch ID: MS15A0902A				Analysis Date: 09/02/2015 11:54							
Sample ID:	MBLK MS15A0902A	Units :	mg/m³	Run ID:	MSD_15_150902A	Prep Date:	09/02/2015 11:54						
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual		
Methyl tert-butyl ether (MTBE)		ND		0.1									
Benzene		ND		0.1									
Toluene		ND		0.1									
Ethylbenzene		ND		0.1									
m,p-Xylene		ND		0.1									
o-Xylene		ND		0.1									
Surr: 1,2-Dichloroethane-d4		1.78		2	89	70	130						
Surr: Toluene-d8		2.08		2	104	70	130						
Surr: 4-Bromofluorobenzene		2.02		2	101	70	130						
Laboratory Control Spike		Type	LCS	Test Code: EPA Method SW8260B									
File ID: 15090202.D		Batch ID: MS15A0902A				Analysis Date: 09/02/2015 10:25							
Sample ID:	LCS MS15A0902A	Units :	mg/m³	Run ID:	MSD_15_150902A	Prep Date:	09/02/2015 10:25						
Analyte		Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual		
Methyl tert-butyl ether (MTBE)		8.74	0.1	10	87	63	137						
Benzene		8.97	0.1	10	90	70	130						
Toluene		10	0.1	10	100	70	130						
Ethylbenzene		9.36	0.1	10	94	70	130						
m,p-Xylene		9.8	0.1	10	98	65	139						
o-Xylene		9.44	0.1	10	94	70	130						
Surr: 1,2-Dichloroethane-d4		8.94		10	89	70	130						
Surr: Toluene-d8		10.4		10	104	70	130						
Surr: 4-Bromofluorobenzene		9.98		10	99.8	70	130						

Comments:

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Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
04-Sep-15

QC Summary Report

Work Order:
15090240

Method Blank		Type	M BLK	Test Code: EPA Method 624/8260								
File ID: 15090204.D					Batch ID: MS09W0902A		Analysis Date: 09/02/2015 12:34					
Sample ID:	MBLK MS09W0902A	Units : µg/L			Run ID: MSD_09_150902A				Prep Date: 09/02/2015 12:34			
Analyte		Result	PQL		SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		ND		0.5								
Benzene		ND		0.5								
Toluene		ND		0.5								
Ethylbenzene		ND		0.5								
m,p-Xylene		ND		0.5								
o-Xylene		ND		0.5								
Surr: 1,2-Dichloroethane-d4		10.2			10		102	70	130			
Surr: Toluene-d8		10.2			10		102	70	130			
Surr: 4-Bromofluorobenzene		9.68			10		97	70	130			
Laboratory Control Spike		Type	LCS	Test Code: EPA Method 624/8260								
File ID: 15090202.D					Batch ID: MS09W0902A		Analysis Date: 09/02/2015 11:44					
Sample ID:	LCS MS09W0902A	Units : µg/L			Run ID: MSD_09_150902A				Prep Date: 09/02/2015 11:44			
Analyte		Result	PQL		SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		9.06		0.5	10		91	63	137			
Benzene		10		0.5	10		100	70	130			
Toluene		9.7		0.5	10		97	70	130			
Ethylbenzene		8.74		0.5	10		87	70	130			
m,p-Xylene		9.21		0.5	10		92	65	139			
o-Xylene		9.93		0.5	10		99	70	130			
Surr: 1,2-Dichloroethane-d4		10			10		100	70	130			
Surr: Toluene-d8		10			10		100	70	130			
Surr: 4-Bromofluorobenzene		9.84			10		98	70	130			
Sample Matrix Spike		Type	MS	Test Code: EPA Method 624/8260								
File ID: 15090214.D					Batch ID: MS09W0902A		Analysis Date: 09/02/2015 16:37					
Sample ID:	15090240-01AMS	Units : µg/L			Run ID: MSD_09_150902A				Prep Date: 09/02/2015 16:37			
Analyte		Result	PQL		SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		48.8		1.3	50		0	98	56	140		
Benzene		51.1		1.3	50		0	102	67	134		
Toluene		47.9		1.3	50		0	96	38	130		
Ethylbenzene		41.8		1.3	50		0	84	70	130		
m,p-Xylene		43.2		1.3	50		0	86	65	139		
o-Xylene		48.6		1.3	50		0	97	69	130		
Surr: 1,2-Dichloroethane-d4		52			50		104	70	130			
Surr: Toluene-d8		49.1			50		98	70	130			
Surr: 4-Bromofluorobenzene		49.6			50		99	70	130			
Sample Matrix Spike Duplicate		Type	MSD	Test Code: EPA Method 624/8260								
File ID: 15090215.D					Batch ID: MS09W0902A		Analysis Date: 09/02/2015 17:01					
Sample ID:	15090240-01AMSD	Units : µg/L			Run ID: MSD_09_150902A				Prep Date: 09/02/2015 17:01			
Analyte		Result	PQL		SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)		54		1.3	50		0	108	56	140	48.79	10.1(40)
Benzene		57.1		1.3	50		0	114	67	134	51.11	11.0(21)
Toluene		53.1		1.3	50		0	106	38	130	47.86	10.4(20)
Ethylbenzene		47.2		1.3	50		0	94	70	130	41.81	12.1(20)
m,p-Xylene		49.2		1.3	50		0	98	65	139	43.23	13.0(20)
o-Xylene		54.5		1.3	50		0	109	69	130	48.62	11.4(20)
Surr: 1,2-Dichloroethane-d4		51			50		102	70	130			
Surr: Toluene-d8		49			50		98	70	130			
Surr: 4-Bromofluorobenzene		48.7			50		97	70	130			



Alpha Analytical, Inc.

255 Glendale Ave. • Suite 21 • Sparks, Nevada 89431-5778
(775) 355-1044 • (775) 355-0406 FAX • 1-800-283-1183

Date:
04-Sep-15

QC Summary Report

Work Order:
15090240

Comments:

Calculations are based off of raw (non-rounded) data. However, for reporting purposes, all QC data is rounded to three significant figures. Therefore, hand calculated values may differ slightly.

Billing Information :

RUSH
CA

Page: 1 of 1

CHAIN-OF-CUSTODY RECORD**Alpha Analytical, Inc.**255 Glendale Avenue, Suite 21 Sparks, Nevada 89431-5778
TEL: (775) 355-1044 FAX: (775) 355-0406**WorkOrder : STR15090240****Report Due By : 5:00 PM On : 02-Sep-15**

Client:

Stratus Environmental
3330 Cameron Park Drive
Suite 550
Cameron Park, CA 95682-8861

PO :

Client's COC # : 04518

Report Attention	Phone Number	EMail Address
Scott Bittinger	(530) 676-2062 x	sbittinger@stratusinc.net

EDD Required : Yes

Sampled by : C. Hill

Cooler Temp	Samples Received	Date Printed
0 °C	02-Sep-15	02-Sep-15

Job : Olympic Station

QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Alpha Sample ID	Client Sample ID	Collection Matrix	No. of Bottles Alpha	Requested Tests							Sample Remarks
				TPH/P_A	TPH/P_W	VOC_A	VOC_W				
STR15090240-01A	Oly W EFF	AQ	09/01/15 05:21	3	0	0		GAS-C		BTEX/M_C	
STR15090240-02A	Oly A EFF	AR	09/01/15 05:18	1	0	0	GAS-N/C		BTEX/MTB_E		Tedlar.

Comments: ASAP TAT. Security seals intact. Frozen ice. Chain split due to different TATs. :

Signature	Print Name	Company	Date/Time
Jessica Awarsado	JESSICA AWARSADO	Alpha Analytical, Inc.	9/2/15 9:55

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.
The report for the analysis of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for the report.
Matrix Type : AQ(Aqueous) AR(Air) SO(Soil) WS(Waste) DW(Drinking Water) OT(Other) Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

