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Alameda County  
Environmental Health

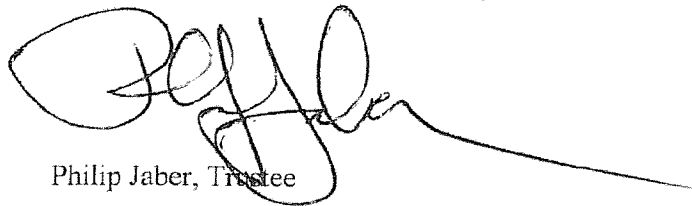
Mr. Mark Detterman  
Alameda County Environmental Health Care Services  
Department of Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

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

A handwritten signature in black ink, appearing to read 'Philip Jaber', with a long horizontal line extending to the right.

Philip Jaber, Trustee



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

August 8, 2011  
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: **Quarterly Groundwater Monitoring Report – Second Quarter 2011**  
Former Olympic Station  
1436 Grant Avenue  
San Lorenzo, California  
ACEHD Case No. RO0000373, GeoTracker No. T0600102256

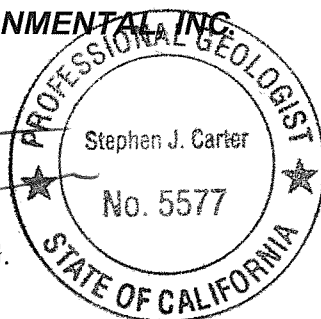
Dear Mr. Detterman:


Stratus Environmental, Inc. (Stratus), on behalf of Mr. Philip Jaber and the George and Frida Jaber 1989 Family Trust, is submitting the attached report, for the former Olympic Station located at 1436 Grant Avenue in San Lorenzo, California (Figure 1). If you have any questions or comments concerning this report, please contact Steve Carter at [scarter@stratusinc.net](mailto:scarter@stratusinc.net) or (530) 676-6008.

Sincerely,

**STRATUS ENVIRONMENTAL, INC.**

  
Stephen J. Carter, P.G.  
Project Manager



  
Gowri S. Kowtha, P.E.  
Principal Engineer

Attachment: Quarterly Groundwater Monitoring Report, Second Quarter 2011

cc: Mr. Philip Jaber  
Ms. Cherie McCaulou, RWQCB

**FORMER OLYMPIC STATION  
QUARTERLY GROUNDWATER MONITORING REPORT**

Facility Address: 1436 Grant Avenue, San Lorenzo, CA  
Consulting Co. / Contact Person: Stratus Environmental, Inc. / Steve Carter, P.G.  
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 QUARTER (Second Quarter 2011):**

1. Stratus prepared and submitted an *Interim Remedial Action Plan Addendum 2* on May 3, 2011. This Addendum proposed installation of one additional soil vapor sampling point as part of previously approved site activities.
2. On May 13, 2011, ACEHD approved the scopes of work outlined in the *Interim Remedial Action Plan* (dated March 15, 2011), the *Interim Remediation Action Plan Addendum* (dated April 22, 2011), and the Addendum 2.
3. Stratus installed extraction wells EX-1 through EX-3 and ozone injection wells IW-1 and IW-2 on May 19 and 20, 2011.
4. Stratus notified Bay Area Air Quality Management District (BAAQMD) of the proposed DPE pilot test event on May 23, 2011.
5. On June 3, 2011, Stratus conducted background sampling for the dual phase extraction event (DPE) pilot test in conjunction with quarterly groundwater monitoring and sampling activities. During this event, wells MW-1 through MW-4 and EX-1 through EX-3 were gauged for depth to water and evaluated for the presence of free product. Following gauging, wells MW-3, MW-4 and EX-1 through EX-3 were purged and sampled. Groundwater samples were analyzed at a state-certified analytical laboratory. Well construction details and tabulated historical groundwater elevation and analytical data are summarized in Tables 1 and 2. Field data sheets, sampling procedures and laboratory analytical reports are included as Attachments A, B, and C respectively.
6. Stratus conducted the DPE pilot test event June 7 through June 12, 2011.
7. The locations and elevations of all groundwater monitoring, extraction and injection wells, along with all soil vapor sampling points were surveyed on June 15, 2011. These data have been uploaded to GeoTracker.

**WORK PROPOSED FOR NEXT QUARTER (Third Quarter 2011):**

1. In accordance with the ACEHD letter of January 28, 2011, wells MW-1 through MW-4 and EX-1 through EX-3 will be monitored and sampled during third quarter 2011.
2. Stratus will submit reports documenting the installation of extraction wells EX-1 through EX-3 and injection wells IW-1 and IW-2.
3. Stratus will submit a report documenting the findings from the DPE pilot test.

4. Stratus will implement the proposed 5-day ozone pilot test.
5. Stratus will complete an evaluation of utility laterals servicing the subject site and adjacent buildings.

Current Phase of Project:	Monitoring / Assessment
Frequency of Groundwater Monitoring:	All Wells = Quarterly
Frequency of Groundwater Monitoring and Sampling:	Wells = MW-4, EX-1, EX-2 & EX-3 (Quarterly) Wells MW-1 through MW-3 (Semi-Annual 1 <sup>st</sup> and 3 <sup>rd</sup> )
Groundwater Sampling Date:	June 3, 2011
Is Free Product (FP) Present on Site:	No: Sheen noted in MW-4 (2Q11)
Approximate Depth to Groundwater:	6.55 to 7.28 ft bgs
Groundwater Flow Direction:	West
Groundwater Gradient:	0.004 ft/ft

#### DISCUSSION:

On June 3, 2011, second quarter 2011 groundwater monitoring and sampling activities were conducted at the site. During this event, all wells were gauged for depth to water and evaluated for the presence of free product; sheen was noted in well MW-4. Following gauging, wells MW-3, MW-4, and EX-1 through EX-3 were purged, and sampled. Groundwater samples were analyzed at a state-certified analytical laboratory for gasoline range organics (GRO), benzene, toluene, ethylbenzene, total xylenes (BTEX) by EPA Method SW8021B/8015Bm, 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, sampling procedures and laboratory analytical reports are included as Attachments A, B and C. GeoWell and analytical data has been uploaded to GeoTracker database and confirmation is located in Attachment D.

At the time of the second quarter 2011 monitoring event, depth-to-water was measured between 6.55 to 7.28 feet below ground surface. Depth-to-water measurements were converted to feet above mean sea level (MSL) and used to construct a groundwater elevation contour map (Figure 3). The groundwater flow direction was to the west with a calculated gradient of 0.004 ft/ft. This is consistent with historical data.

GRO was reported in all sampled wells with a maximum concentration of 4,700 micrograms per liter ( $\mu\text{g/L}$ ) in well MW-4. Benzene was reported in wells MW-3, MW-4, EX-1 and EX-3 (maximum concentration of 350  $\mu\text{g/L}$  [MW-4]). MTBE was reported in all wells sampled during second quarter 2011 with a maximum concentration of 1,100  $\mu\text{g/L}$  in well EX-2. Figure 4 presents GRO, benzene and MTBE analytical results from the second quarter 2011 sampling event.

#### ATTACHMENTS:

- Table 1 Well Construction Details
- Table 2 Groundwater Elevation and Analytical Summary
- Figure 1 Site Location Map
- Figure 2 Site Plan
- Figure 3 Groundwater Elevation Contour Map (Second Quarter 2011)
- Figure 4 Groundwater Analytical Summary (Second Quarter 2011)
- Appendix A Field Data Sheets

- Appendix B Sampling and Analyses Procedures
- Appendix C Laboratory Analytical Reports and Chain-of-Custody Documentation
- Appendix D GeoTracker Electronic Submittal Confirmations
- Appendix E Historical Groundwater Analytical Data

**TABLE 1  
WELL CONSTRUCTION DETAILS**

Former Olympic Service Station, 1436 Grant Avenue, San Lorenzo, CA

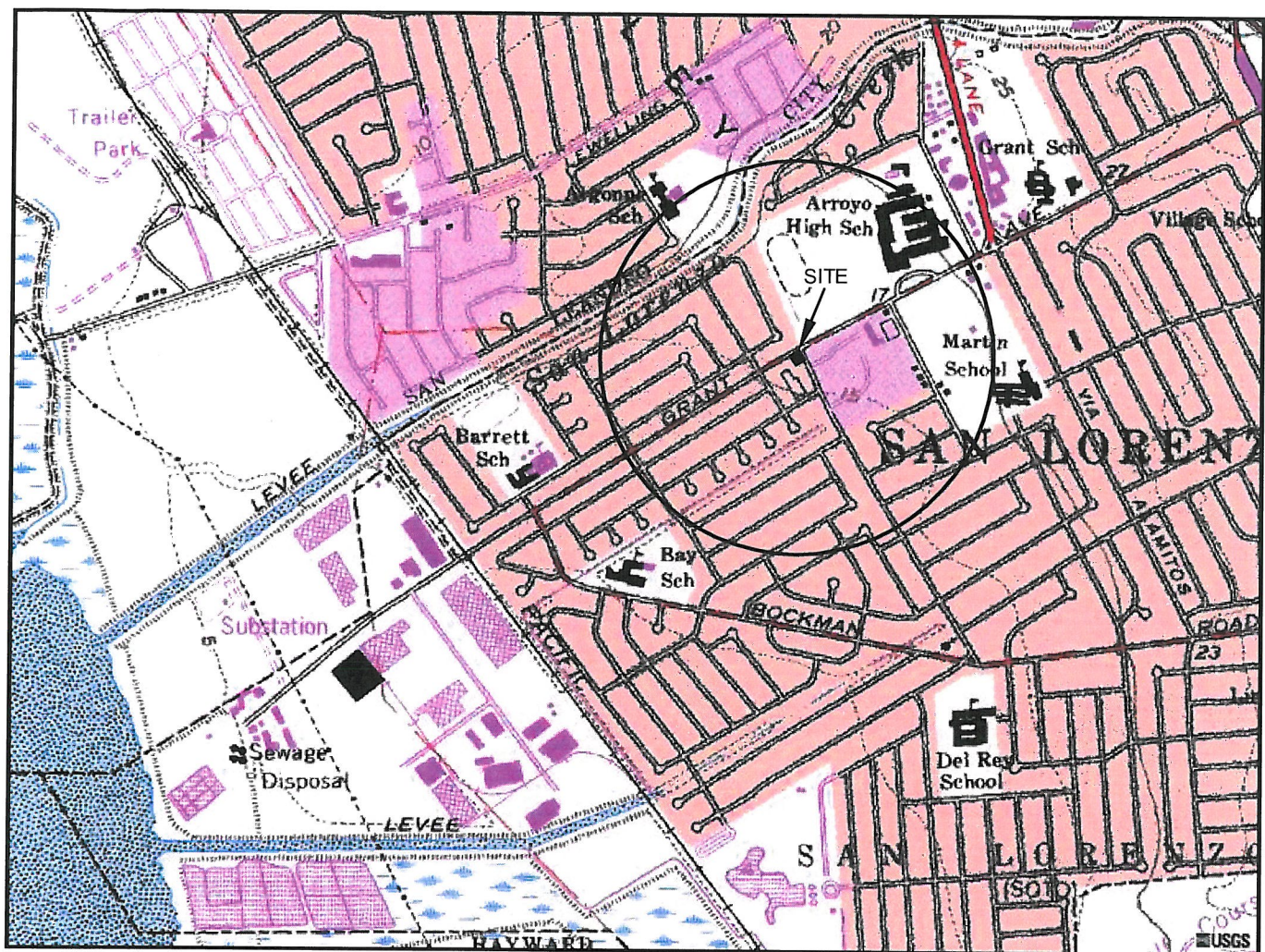
<b>Boring/Well I.D.</b>	<b>Date</b>	<b>Boring Depth (feet)</b>	<b>Boring Diameter (inches)</b>	<b>Well Diameter (inches)</b>	<b>Well Depth (feet)</b>	<b>Screen Interval (feet bgs)</b>	<b>Slot Size (inches)</b>	<b>Drilling Method</b>	<b>Consultant</b>
<b><i>Groundwater Monitoring Wells</i></b>									
MW-1	09/24/99	26.5	8	2	26.5	5 - 26.5	0.020	HSA	Conestoga-Rovers & Associates
MW-2	09/24/99	20.0	8	2	20	5-20	0.020	HSA	Conestoga-Rovers & Associates
MW-3	09/24/99	21.5	8	2	21	5-21	0.020	HSA	Conestoga-Rovers & Associates
MW-4	02/09/10	10.0	10	4	10	5-10	0.020	Air Knife	Conestoga-Rovers & Associates
<b><i>Extraction Wells</i></b>									
EX-1	05/19/11	20.0	10	4	20	5-20	0.020	HSA	Stratus Environmental
EX-2	05/19/11	20.0	10	4	20	5-20	0.020	HSA	Stratus Environmental
EX-3	05/19/11	20.0	10	4	20	5-20	0.020	HSA	Stratus Environmental
Notes: HSA = Hollow Stem Auger									

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

Well Number	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)*	Grouwater Elevation (ft msl)	GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
MW-1	02/04/11	7.20	15.71	8.51	<50	0.90	<0.5	<0.5	<0.5	62
	06/03/11	7.28	18.60	11.32			Not Sampled			
MW-2	02/04/11	6.79	15.17	8.38	<50	<0.5	<0.5	<0.5	<0.5	4.4
	06/03/11	6.82	18.00	11.18			Not Sampled			
MW-3	2/4/2011[1]	6.80	15.13	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
MW-4	2/4/2011[1]	6.71	15.15	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
EX-1	06/03/11	6.96	18.14	11.18	76	8.3	<0.50	<0.50	0.99	37
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
EX-3	06/03/11	6.55	17.63	11.08	95	0.93	<0.50	<0.50	<0.50	78

<p><b>Legend/Key:</b></p> <p>NM = Not measured</p> <p>GRO = Gasoline Range Organics C6-C12</p> <p>MTBE = Methyl tertiary butyl ether</p> <p>[1] Weakly modified or unmodified gasoline is significant.</p> <p>[2] = Reporting limits were increased due to high concentrations of target analytes.</p> <p>ft msl = feet above mean sea level</p> <p>µg/L = micrograms per liter</p> <p>*Well elevations and locations surveyed by Morrow Surveying on June 15, 2011.</p>	<p><b>Analytical Methods:</b></p> <p>GRO and BTEX analyzed according to EPA Method 8021B/8015Bm.</p> <p>MTBE analyzed according to EPA Method SW8260B</p>
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GENERAL NOTES:  
 BASE MAP FROM U.S.G.S.  
 SAN LORENZO, CA.  
 7.5 MINUTE TOPOGRAPHIC  
 PHOTOREVISED 1978



APPROXIMATE SCALE



QUADRANGLE LOCATION

*STRATUS*  
 ENVIRONMENTAL, INC.

FORMER OLYMPIC SERVICE STATION  
 1436 GRANT AVENUE  
 SAN LORENZO, CALIFORNIA

FIGURE






1

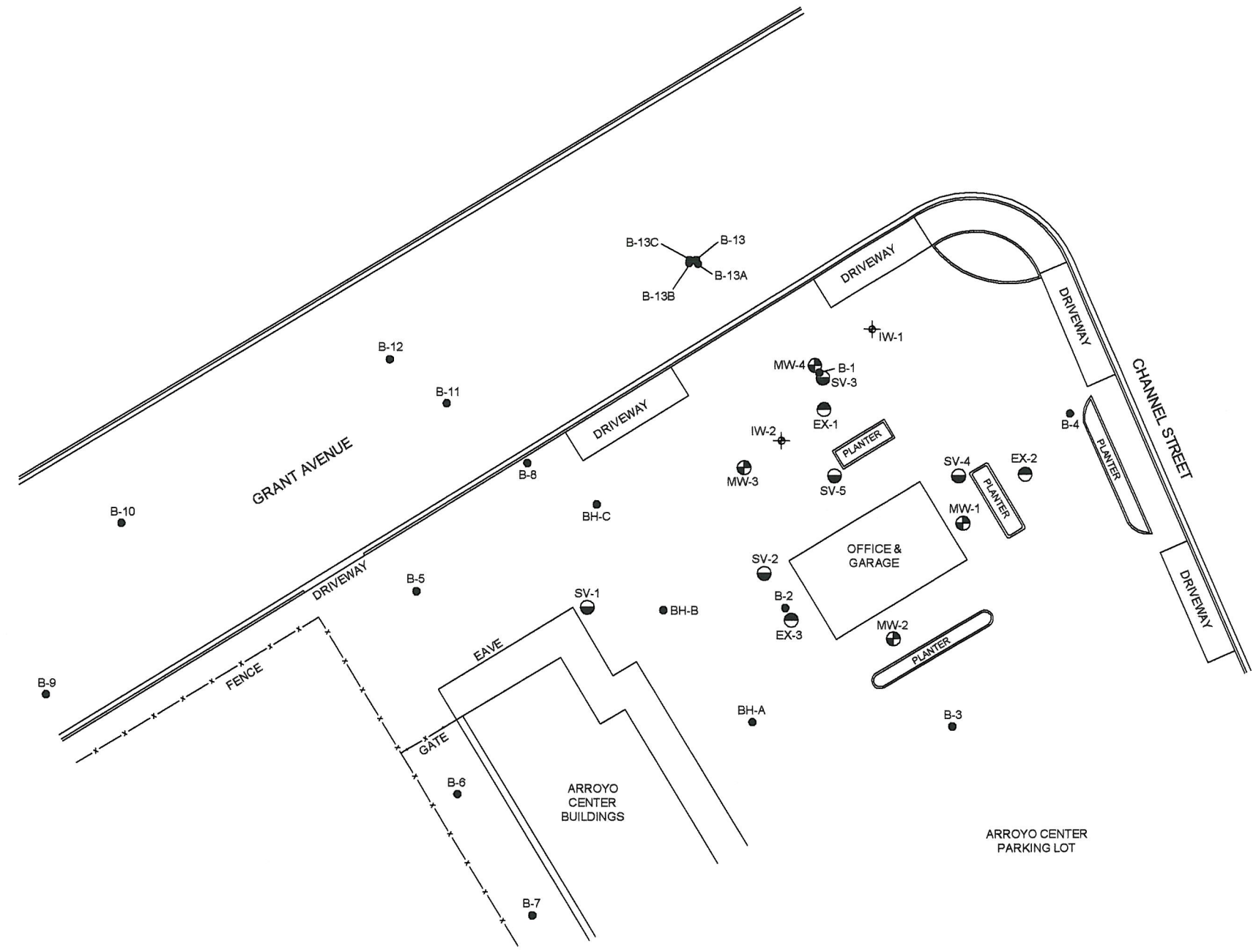
PROJECT NO.  
 2115-1436-01

SITE LOCATION MAP

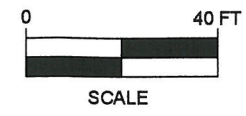




- LEGEND
-  MW-1 MONITORING WELL LOCATION
  -  SV-1 VAPOR EXTRACTION WELL LOCATION
  -  EX-1 EXTRACTION WELL LOCATION
  -  IW-1 OZONE INJECTION WELL LOCATION
  -  B-1 SOIL BORING LOCATION



Olympic Siteplan  
July 19, 2011  
REV  
JMP



FORMER OLYMPIC SERVICE STATION  
1436 GRANT AVENUE  
SAN LORENZO, CALIFORNIA

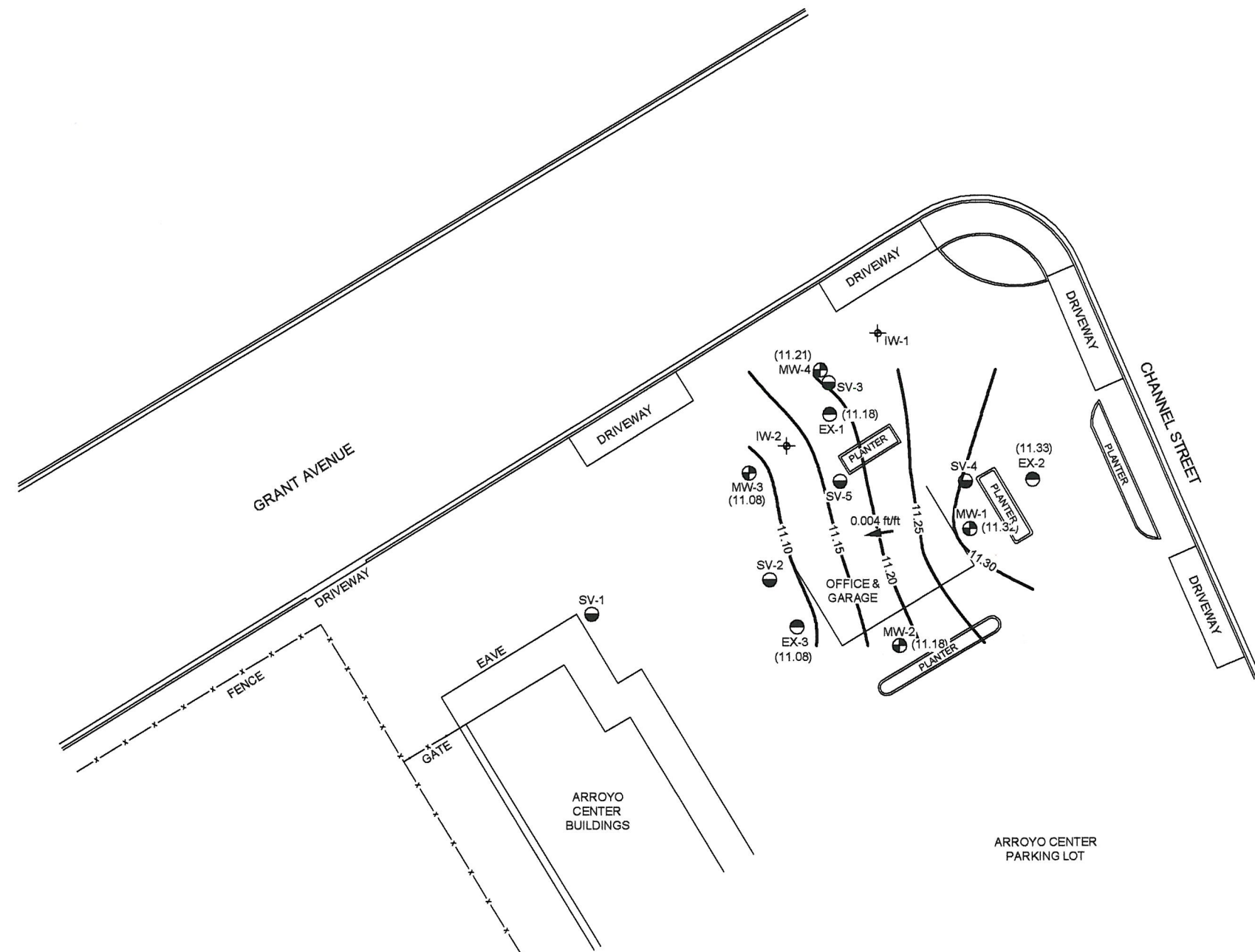
SITE PLAN

FIGURE  
**2**  
PROJECT NO.  
2115-1436-01



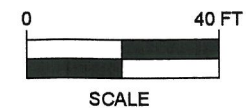
LEGEND

- MW-1 MONITORING WELL LOCATION
- SV-1 VAPOR EXTRACTION WELL LOCATION
- EX-1 EXTRACTION WELL LOCATION
- ⊕ IW-1 OZONE INJECTION WELL LOCATION
- (11.32) GROUNDWATER ELEVATION IN FEET RELATIVE TO MSL
- 11.10— GROUNDWATER ELEVATION CONTOUR IN FEET RELATIVE TO MSL
- ➔ INFERRED GROUNDWATER FLOW DIRECTION
  
- WELLS MEASURED ON 6/03/11
- MSL = MEAN SEA LEVEL



Olympic Quarterly Figures  
REV July 19, 2011  
JMP  
Olympic Quarterly

**STRATUS**  
ENVIRONMENTAL, INC.



FORMER OLYMPIC SERVICE STATION  
1436 GRANT AVENUE  
SAN LORENZO, CALIFORNIA  
  
GROUNDWATER ELEVATION CONTOUR MAP  
2nd QUARTER 2011

FIGURE  
**3**  
PROJECT NO.  
2115-1436-01

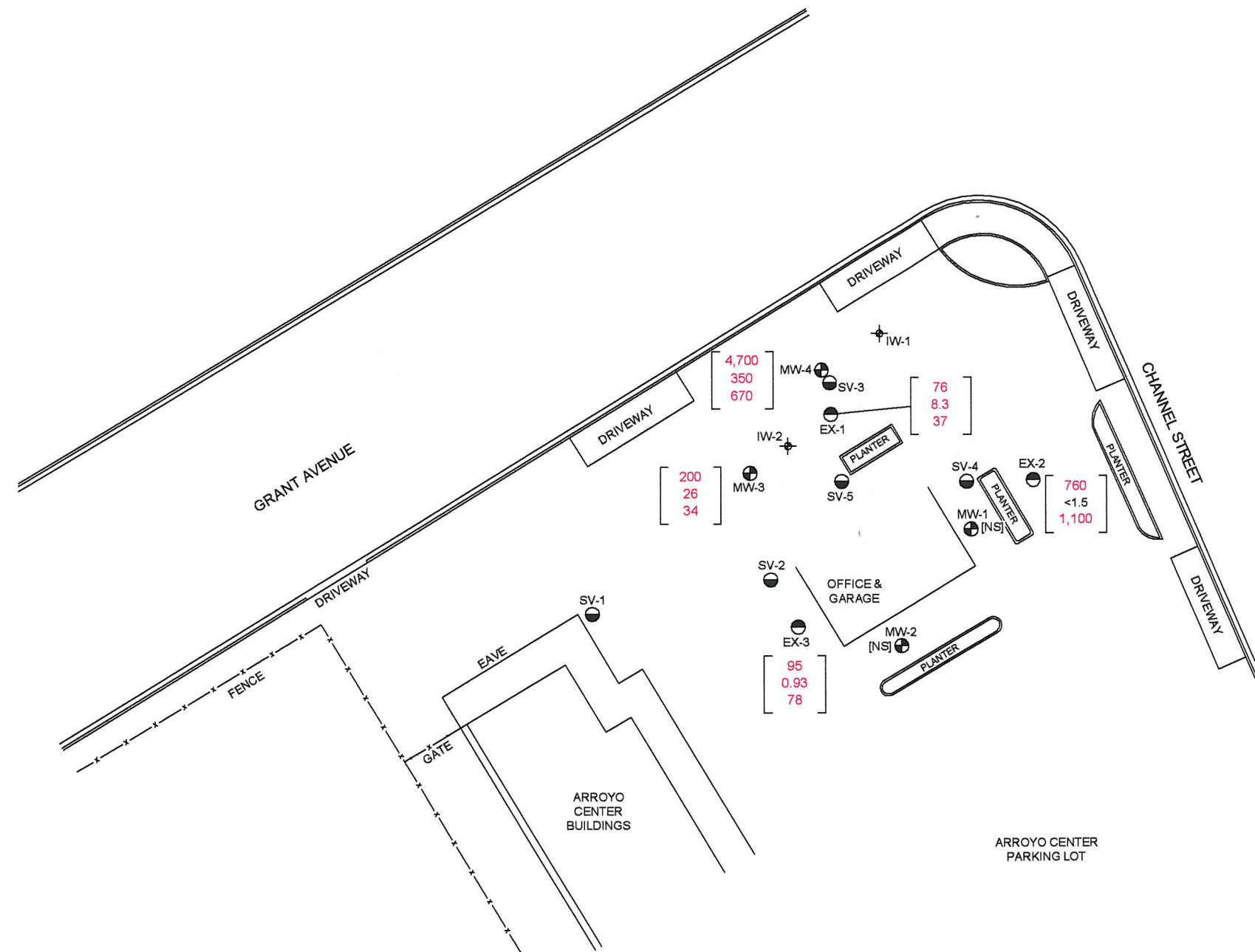


LEGEND

- MW-1 MONITORING WELL LOCATION
- SV-1 VAPOR EXTRACTION WELL LOCATION
- EX-1 EXTRACTION WELL LOCATION
- IW-1 OZONE INJECTION WELL LOCATION

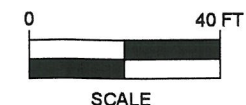
200	GASOLINE RANGE ORGANICS (GRO) CONCENTRATION IN µg/L
26	BENZENE CONCENTRATION IN µg/L
34	METHYL TERTIARY BUTYL ETHER (MTBE) IN µg/L

WELLS SAMPLED ON 8/03/11  
 GRO ANALYZED BY EPA METHOD 8015B  
 MTBE & BENZENE ANALYZED BY EPA METHOD 8260B  
 [NS] = NOT SAMPLED



Olympic Quarterly Figures July 19, 2011 REV JMP

**STRATUS**  
ENVIRONMENTAL, INC.



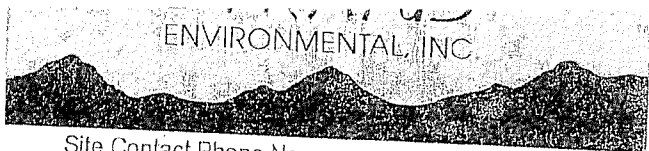
FORMER OLYMPIC SERVICE STATION  
1436 GRANT AVENUE  
SAN LORENZO, CALIFORNIA

GROUNDWATER ANALYTICAL SUMMARY  
2nd QUARTER 2011

FIGURE  
**4**

PROJECT NO.  
2115-1436-01

**APPENDIX A**  
**FIELD DATA SHEETS**



Site Address: 1436 Grant  
 City San Leandro  
 Sampled By VZ/LE

**ORIGINAL**

Site Number: Olympic  
 Project No. 215-1936-01  
 Project PM Jane Carter  
 Date Sampled 6-3-11

Site Contact Phone No.

Water Level Data				Purge Volume Calculations						Well Purge Method				Sample Record			Field Data
Well ID	Time	Depth to water feet	Top of Screen feet	Total Depth of Well feet	Casing Water Column (A)	Well Diameter (inches)	Multiplier Value (B)	Three Casing Volumes (gallons)	Actual Water Purged (gallons)	No Purge	Bailer	Pump	Other	DTW At Sample Time	Sample I.D.	Sample Time	Dissolved Oxygen (mg/L)
MW-1	0825	7.28		24.20	N/A	2	.5										
-2	0820	6.82		18.50	N/A	2	.5								MW-1	N/A	
-3	0814	6.87		18.85	11.98	2	.5	5.99	6.00						-2	N/A	
↓ -4	0715	6.78		9.30	2.52	4	2	5.04	4.00		X			7.01	-3	0906	1.01
EX-1	0830	6.96		19.80	12.84	4	2	25.68	26.00		X	Dry		7.09	↓ -4	0841	1.26
-2	0827	6.81		18.60	11.79	4	2	23.58	23.50			X		7.07	EX-1	0907	1.56
↓ -3	0816	6.55		19.75	13.20	4	2	26.40	26.50			X		6.81	↓ -2	1000	1.89
												X		6.72	↓ -3	0937	1.15

*SP*

(A) Casing water Column  
 Depth wtr. Depth to Bottom

Multiplier Values  
 2"=0.5 4"=2.0 6"=4.4



Site Address 1436 Grant Ave  
 City San Lorenzo  
 Sampled By: V. Zalutka  
 Signature [Signature]

**ORIGINAL**

Site Number Olympic Jaber  
 Project Number 2115-1436-01  
 Project PM S. Carter  
 DATE 6-3-11

Well ID <u>MW-4</u> <u>sheen</u>					Well ID <u>MW-3</u> <u>Bail</u>				
Purge start time <u>0720</u>			Odor <u>(Y)</u> N		Purge start time <u>0851</u>			Odor <u>(Y)</u> N	
<u>Bail</u>	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time <u>0720</u>	<u>16.7</u>	<u>6.85</u>	<u>395</u>	<u>2</u>	time <u>0851</u>	<u>19.6</u>	<u>7.05</u>	<u>525</u>	<u>2</u>
time <u>0730</u>	<u>18.1</u>	<u>6.88</u>	<u>392</u>	<u>2.5</u>	time <u>0857</u>	<u>19.7</u>	<u>7.18</u>	<u>550</u>	<u>3</u>
time <u>0736</u>		<u>0.19</u>	<u>(4.0)</u>	<u>4.0</u>	time <u>0903</u>	<u>19.7</u>	<u>7.15</u>	<u>555</u>	<u>6</u>
time					time				
purge stop time <u>0736</u>			ORP <u>33</u>		purge stop time <u>0903</u>			ORP <u>81</u>	
Well ID <u>Ex-1</u>					Well ID <u>Ex-3</u>				
Purge start time <u>0856</u>			Odor <u>Y (N)</u>		Purge start time <u>0920</u>			Odor <u>(Y)</u> N	
<u>Pump</u>	Temp C	pH	cond	gallons	<u>Pump</u>	Temp C	pH	cond	gallons
time <u>0856</u>	<u>19.0</u>	<u>7.15</u>	<u>566</u>	<u>2</u>	time <u>0920</u>	<u>20.2</u>	<u>7.23</u>	<u>581</u>	<u>2</u>
time <u>0859</u>	<u>19.4</u>	<u>7.19</u>	<u>577</u>	<u>12.5</u>	time <u>0927</u>	<u>20.8</u>	<u>7.26</u>	<u>586</u>	<u>13.5</u>
time <u>0907</u>	<u>19.5</u>	<u>7.24</u>	<u>568</u>	<u>25</u>	time <u>0937</u>	<u>19.9</u>	<u>7.33</u>	<u>587</u>	<u>26.5</u>
time					time				
purge stop time <u>0903</u>			ORP <u>49</u>		purge stop time <u>0934</u>			ORP <u>43</u>	
Well ID <u>Ex-2</u>					Well ID				
Purge start time <u>0942</u>			Odor <u>Y (N)</u>		Purge start time			Odor <u>Y</u> N	
<u>Pump</u>	Temp C	pH	cond	gallons		Temp C	pH	cond	gallons
time <u>0942</u>	<u>20.9</u>	<u>7.05</u>	<u>549</u>	<u>2</u>	time				
time <u>0948</u>	<u>21.4</u>	<u>7.02</u>	<u>543</u>	<u>12.0</u>	time				
time <u>1000</u>	<u>21.1</u>	<u>6.98</u>	<u>509</u>	<u>23.50</u>	time				
time					time				
purge stop time <u>0955</u>			ORP <u>52</u>		purge stop time			ORP	
Well ID					Well ID				
Purge start time			Odor <u>Y</u> N		Purge start time			Odor <u>Y</u> 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	

[Signature]

## **APPENDIX B**

### **SAMPLING AND ANALYSES PROCEDURES**

## **SAMPLING AND ANALYSIS PROCEDURES**

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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 typically 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 according 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, nonconformants, 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<sup>®</sup> 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<sup>®</sup> sheeting and plastic caps. The sample is then placed in a Ziploc<sup>®</sup> 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: Steve Carter  
Phone: (530) 676-6008  
Fax: (530) 676-6005  
Date Received : 06/04/11

Job: 2115-1436-01/Former Olympic

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

	Parameter	Concentration	Reporting Limit	Date Extracted	Date Analyzed
Client ID :	<b>MW-3</b>				
Lab ID :	STR11060661-01A	TPH-P (GRO)	200	50 µg/L	06/07/11
Date Sampled	06/03/11 09:06	Methyl tert-butyl ether (MTBE)	34	0.50 µg/L	06/07/11
		Benzene	26	0.50 µg/L	06/07/11
		Toluene	ND	0.50 µg/L	06/07/11
		Ethylbenzene	ND	0.50 µg/L	06/07/11
		m,p-Xylene	ND	0.50 µg/L	06/07/11
		o-Xylene	ND	0.50 µg/L	06/07/11
Client ID :	<b>MW-4</b>				
Lab ID :	STR11060661-02A	TPH-P (GRO)	4,700	500 µg/L	06/07/11
Date Sampled	06/03/11 08:41	Methyl tert-butyl ether (MTBE)	670	2.5 µg/L	06/07/11
		Benzene	350	2.5 µg/L	06/07/11
		Toluene	2.6	2.5 µg/L	06/07/11
		Ethylbenzene	19	2.5 µg/L	06/07/11
		m,p-Xylene	ND	2.5 µg/L	06/07/11
		o-Xylene	ND	2.5 µg/L	06/07/11
Client ID :	<b>EX-1</b>				
Lab ID :	STR11060661-03A	TPH-P (GRO)	76	50 µg/L	06/07/11
Date Sampled	06/03/11 09:07	Methyl tert-butyl ether (MTBE)	37	0.50 µg/L	06/07/11
		Benzene	8.3	0.50 µg/L	06/07/11
		Toluene	ND	0.50 µg/L	06/07/11
		Ethylbenzene	ND	0.50 µg/L	06/07/11
		m,p-Xylene	0.99	0.50 µg/L	06/07/11
		o-Xylene	ND	0.50 µg/L	06/07/11
Client ID :	<b>EX-2</b>				
Lab ID :	STR11060661-04A	TPH-P (GRO)	760	300 µg/L	06/07/11
Date Sampled	06/03/11 10:00	Methyl tert-butyl ether (MTBE)	1,100	1.5 µg/L	06/07/11
		Benzene	ND	1.5 µg/L	06/07/11
		Toluene	ND	1.5 µg/L	06/07/11
		Ethylbenzene	ND	1.5 µg/L	06/07/11
		m,p-Xylene	ND	1.5 µg/L	06/07/11
		o-Xylene	ND	1.5 µg/L	06/07/11
Client ID :	<b>EX-3</b>				
Lab ID :	STR11060661-05A	TPH-P (GRO)	95	50 µg/L	06/07/11
Date Sampled	06/03/11 09:37	Methyl tert-butyl ether (MTBE)	78	0.50 µg/L	06/07/11
		Benzene	0.93	0.50 µg/L	06/07/11
		Toluene	ND	0.50 µg/L	06/07/11
		Ethylbenzene	ND	0.50 µg/L	06/07/11
		m,p-Xylene	ND	0.50 µg/L	06/07/11
		o-Xylene	ND	0.50 µg/L	06/07/11



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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*

*Walter Hinchman*

Roger L. Scholl, Ph.D., Laboratory Director • Randy Gardner, Laboratory Manager • Walter Hinchman, Quality Assurance Officer  
Sacramento, CA • (916) 366-9089 / Las Vegas, NV • (702) 736-7522 / Carson, CA • (714) 386-2901 / [info@alpha-analytical.com](mailto:info@alpha-analytical.com)

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

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.

**6/13/11**

**Report Date**



# Alpha Analytical, Inc.

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

## VOC Sample Preservation Report

**Work Order:** STR11060661

**Job:** 2115-1436-01/Former Olympic

Alpha's Sample ID	Client's Sample ID	Matrix	pH
11060661-01A	MW-3	Aqueous	2
11060661-02A	MW-4	Aqueous	2
11060661-03A	EX-1	Aqueous	2
11060661-04A	EX-2	Aqueous	2
11060661-05A	EX-3	Aqueous	2

**6/13/11**  
**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-Jun-11

## QC Summary Report

Work Order:  
11060661

### Method Blank

Method Blank		Type	Test Code: EPA Method SW8015B/C							
File ID: C:\HPCHEM\MS10\DATA\110607\11060705.D		MBLK	Batch ID: MS10W0607B		Analysis Date: 06/07/2011 10:31					
Sample ID: MBLK MS10W0607B	Units: µg/L		Run ID: MSD_10_110607A		Prep Date: 06/07/2011 10:31					
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	9.17		10		92	70	130			
Surr: 4-Bromofluorobenzene	9.91		10		99	70	130			

### Laboratory Control Spike

Laboratory Control Spike		Type	Test Code: EPA Method SW8015B/C							
File ID: C:\HPCHEM\MS10\DATA\110607\11060706.D		LCS	Batch ID: MS10W0607B		Analysis Date: 06/07/2011 10:53					
Sample ID: GLCS MS10W0607B	Units: µg/L		Run ID: MSD_10_110607A		Prep Date: 06/07/2011 10:53					
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	411	50	400		103	70	130			
Surr: 1,2-Dichloroethane-d4	10.2		10		102	70	130			
Surr: Toluene-d8	9.59		10		96	70	130			
Surr: 4-Bromofluorobenzene	9.65		10		97	70	130			

### Sample Matrix Spike

Sample Matrix Spike		Type	Test Code: EPA Method SW8015B/C							
File ID: C:\HPCHEM\MS10\DATA\110607\11060709.D		MS	Batch ID: MS10W0607B		Analysis Date: 06/07/2011 12:05					
Sample ID: 11060661-01AGS	Units: µg/L		Run ID: MSD_10_110607A		Prep Date: 06/07/2011 12:05					
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2120	250	2000	199.7	96	51	144			
Surr: 1,2-Dichloroethane-d4	44.3		50		89	70	130			
Surr: Toluene-d8	50.1		50		100	70	130			
Surr: 4-Bromofluorobenzene	47.9		50		96	70	130			

### Sample Matrix Spike Duplicate

Sample Matrix Spike Duplicate		Type	Test Code: EPA Method SW8015B/C							
File ID: C:\HPCHEM\MS10\DATA\110607\11060710.D		MSD	Batch ID: MS10W0607B		Analysis Date: 06/07/2011 12:27					
Sample ID: 11060661-01AGSD	Units: µg/L		Run ID: MSD_10_110607A		Prep Date: 06/07/2011 12:27					
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
TPH-P (GRO)	2080	250	2000	199.7	94	51	144	2121	1.7(29)	
Surr: 1,2-Dichloroethane-d4	45		50		90	70	130			
Surr: Toluene-d8	50.4		50		101	70	130			
Surr: 4-Bromofluorobenzene	48.2		50		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.

Reported in micrograms per Liter, per client request.



# Alpha Analytical, Inc.

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

## QC Summary Report

Work Order:  
11060661

### Method Blank

File ID: C:\HPCHEM\MS10\DATA\110607\11060705.D

Type **MBLK** Test Code: **EPA Method SW8260B**

Batch ID: **MS10W0607A**

Analysis Date: **06/07/2011 10:31**

Sample ID: **MBLK MS10W0607A**

Units: **µg/L**

Run ID: **MSD\_10\_110607A**

Prep Date: **06/07/2011 10:31**

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	9.17		10		92	70	130			
Surr: 4-Bromofluorobenzene	9.91		10		99	70	130			

### Laboratory Control Spike

File ID: C:\HPCHEM\MS10\DATA\110607\11060703.D

Type **LCS** Test Code: **EPA Method SW8260B**

Batch ID: **MS10W0607A**

Analysis Date: **06/07/2011 09:47**

Sample ID: **LCS MS10W0607A**

Units: **µg/L**

Run ID: **MSD\_10\_110607A**

Prep Date: **06/07/2011 09:47**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	9.08	0.5	10		91	65	140			
Benzene	9.27	0.5	10		93	70	130			
Toluene	8.56	0.5	10		86	80	120			
Ethylbenzene	8.48	0.5	10		85	80	120			
m,p-Xylene	8.6	0.5	10		86	70	130			
o-Xylene	8.66	0.5	10		87	70	130			
Surr: 1,2-Dichloroethane-d4	11		10		110	70	130			
Surr: Toluene-d8	9.72		10		97	70	130			
Surr: 4-Bromofluorobenzene	9.49		10		95	70	130			

### Sample Matrix Spike

File ID: C:\HPCHEM\MS10\DATA\110607\11060707.D

Type **MS** Test Code: **EPA Method SW8260B**

Batch ID: **MS10W0607A**

Analysis Date: **06/07/2011 11:23**

Sample ID: **11060661-01AMS**

Units: **µg/L**

Run ID: **MSD\_10\_110607A**

Prep Date: **06/07/2011 11:23**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	70.6	1.3	50	34.2	73	47	150			
Benzene	58.9	1.3	50	26.25	65	59	138			
Toluene	44	1.3	50	0	88	68	130			
Ethylbenzene	42.3	1.3	50	0	85	68	130			
m,p-Xylene	43.3	1.3	50	0	87	68	131			
o-Xylene	43	1.3	50	0	86	70	130			
Surr: 1,2-Dichloroethane-d4	46.1		50		92	70	130			
Surr: Toluene-d8	52.1		50		104	70	130			
Surr: 4-Bromofluorobenzene	48		50		96	70	130			

### Sample Matrix Spike Duplicate

File ID: C:\HPCHEM\MS10\DATA\110607\11060708.D

Type **MSD** Test Code: **EPA Method SW8260B**

Batch ID: **MS10W0607A**

Analysis Date: **06/07/2011 11:44**

Sample ID: **11060661-01AMSD**

Units: **µg/L**

Run ID: **MSD\_10\_110607A**

Prep Date: **06/07/2011 11:44**

Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRefVal	%RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	84	1.3	50	34.2	100	47	150	70.59	17.3(40)	
Benzene	67.7	1.3	50	26.25	83	59	138	58.93	13.9(21)	
Toluene	48.3	1.3	50	0	97	68	130	43.96	9.5(20)	
Ethylbenzene	46.7	1.3	50	0	93	68	130	42.31	9.9(20)	
m,p-Xylene	47.8	1.3	50	0	96	68	131	43.25	10.0(20)	
o-Xylene	47.7	1.3	50	0	95	70	130	43.02	10.3(20)	
Surr: 1,2-Dichloroethane-d4	44.2		50		88	70	130			
Surr: Toluene-d8	51.1		50		102	70	130			
Surr: 4-Bromofluorobenzene	47.4		50		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.

# 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 : STR11060661**  
**Report Due By : 5:00 PM On : 13-Jun-11**

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

Report Attention	Phone Number	E-Mail Address
Steve Carter	(530) 676-6008 x	scarter@stratusinc.net

EDD Required : Yes

Sampled by : Levi/Vince

PO :  
 Client's COC # : 55614 Job : 2115-1436-01/Former Olympic  
 QC Level : S3 = Final Rpt, MBLK, LCS, MS/MSD With Surrogates

Cooler Temp	Samples Received	Date Printed
0 °C	04-Jun-11	06-Jun-11

Alpha Sample ID	Client Sample ID	Collection Matrix	Date	No. of Bottles			Requested Tests						Sample Remarks		
				Alpha	Sub	TAT	TPHP_W	VOC_W							
STR11060661-01A	MW-3	AQ	06/03/11 09:06	5	0	5	GAS-C	BTXEM_C							
STR11060661-02A	MW-4	AQ	06/03/11 08:41	5	0	5	GAS-C	BTXEM_C							
STR11060661-03A	EX-1	AQ	06/03/11 09:07	5	0	5	GAS-C	BTXEM_C							
STR11060661-04A	EX-2	AQ	06/03/11 10:00	5	0	5	GAS-C	BTXEM_C							
STR11060661-05A	EX-3	AQ	06/03/11 09:37	5	0	5	GAS-C	BTXEM_C							


Comments: Security seals intact. Frozen ice. Saturday delivery. Samples received 6/4/11 kept cold and secure until login on 6/6/11. :

Signature	Print Name	Company	Date/Time
	Cheryl Gamble	Alpha Analytical, Inc.	6/6/11 10:13

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 Name Stratus Env.  
 Attn: \_\_\_\_\_  
 Address 3330 Cameron Park Dr. #550  
 City, State, Zip Cameron Park, CA 95682  
 Phone Number 676 6004 Fax 676 6005



**Alpha Analytical, Inc.**  
 255 Glendale Avenue, Suite 21  
 Sparks, Nevada 89431-5778  
 Phone (775) 355-1044  
 Fax (775) 355-0406

**Samples Collected From Which State?**  
 AZ \_\_\_\_\_ CA  NV \_\_\_\_\_ WA \_\_\_\_\_ DOD Site \_\_\_\_\_  
 ID \_\_\_\_\_ OR \_\_\_\_\_ OTHER \_\_\_\_\_ Page # 1 of 1

Consultant / Client Name				Job #	Job Name	Analyses Required						Data Validation Level: III or IV					
Former Olympic				2115-1436-01	Former Olympic	GRO-8015M BTEX-8260B MTBE-8260B						EDD / EDF? YES _____ NO _____					
Address				Report Attention / Project Manager								REMARKS					
1436 Grant Ave				Name: Steve Carter													
City, State, Zip				Name:	Email:							Global ID # <u>T0600102256</u>					
San Lorenzo, CA.				Email: SCarter@stratusinc.net													
Time Sampled	Date Sampled	Matrix* See Key Below	P.O. #	Lab ID Number	Office (Use Only)	Sample Description	TAT	Field Filtered	# Containers**								
0906	4/3	AQ		STR11060661-01A		MW - 3	STD	N/A	5V	X	X	X					
0841						-02A ↓ -4	↓	↓	↓	↓	↓	↓					
0907						-03A EX -1	↓	↓	↓	↓	↓	↓					
1000						-04A ↓ -2	↓	↓	↓	↓	↓	↓					
0937						-05A ↓ -3	↓	↓	↓	↓	↓	↓					
FOR LAB USE ONLY																	

**ADDITIONAL INSTRUCTIONS:**

I, (field sampler), attest to the validity and authenticity of this sample. 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. Sampled By: Levi / Vince

Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date: <u>6-3-11</u>	Time: <u>1500</u>
<u>[Signature]</u>	<u>[Signature]</u>	Date: <u>6/6/11</u>	Time: <u>09:56</u>
Relinquished by: (Signature/Affiliation)	Received by: (Signature/Affiliation)	Date:	Time:
<u>[Signature]</u>	<u>[Signature]</u> / Alpha		

\*Key: AQ - Aqueous SO - Soil WA - Waste OT - Other AR - Air \*\*: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other  
 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.

**APPENDIX D**

**GEOTRACKER ELECTRONIC SUBMITTAL  
CONFIRMATIONS**

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STATE WATER RESOURCES CONTROL BOARD  
**GEOTRACKER ESI**

UPLOADING A GEO\_WELL FILE

**SUCCESS**

Processing is complete. No errors were found!  
Your file has been successfully submitted!

<b><u>Submittal Type:</u></b>	GEO_WELL
<b><u>Submittal Title:</u></b>	GeoWell 6-3-11
<b><u>Facility Global ID:</u></b>	T0600102256
<b><u>Facility Name:</u></b>	OLYMPIC STATION
<b><u>File Name:</u></b>	GEO_WELL.zip
<b><u>Organization Name:</u></b>	Stratus Environmental, Inc.
<b><u>Username:</u></b>	STRATUS NOCAL
<b><u>IP Address:</u></b>	12.186.106.98
<b><u>Submittal Date/Time:</u></b>	7/8/2011 8:53:44 AM
<b><u>Confirmation Number:</u></b>	3478123486

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STATE WATER RESOURCES CONTROL BOARD  
**GEOTRACKER ESI**

UPLOADING A EDF FILE

**SUCCESS**

Processing is complete. No errors were found!  
Your file has been successfully submitted!

<b><u>Submittal Type:</u></b>	EDF - Monitoring Report - Quarterly
<b><u>Submittal Title:</u></b>	Analytical 6-3-11
<b><u>Facility Global ID:</u></b>	T0600102256
<b><u>Facility Name:</u></b>	OLYMPIC STATION
<b><u>File Name:</u></b>	11060661_EDF.zip
<b><u>Organization Name:</u></b>	Stratus Environmental, Inc.
<b><u>Username:</u></b>	STRATUS NOCAL
<b><u>IP Address:</u></b>	12.186.106.98
<b><u>Submittal Date/Time:</u></b>	7/8/2011 8:57:14 AM
<b><u>Confirmation Number:</u></b>	4425477027

[VIEW QC REPORT](#)

[VIEW DETECTIONS REPORT](#)

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**APPENDIX E**

**HISTORICAL GROUNDWATER ANALYTICAL DATA**



TABLE 2

GROUNDWATER ANALYTICAL DATA  
 ENCINAL PROPERTIES  
 FORMER OLYMPIAN SERVICE STATION  
 1436 GRANT AVENUE  
 SAN LORENZO, CALIFORNIA

Well ID	Date	DTW	GWE	Oil & Grease	TPH <sub>mo</sub>	TPH <sub>d</sub>	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Xylenes	MTBF	SVOCs & HVOCs	DIPE	TAME	ETBE	TBA	Ethanol	EDB	1,2- DCA	Notes	
TOC	Sampled	(ft)	(ft above msl)																			
(ft above msl)					Concentrations in micrograms per liter (µg/L)																	
ESL: Groundwater is not a current or potential drinking water resource				NE	NE	210	210	46	130	43	100	1800	-	NE	NE	NE	18,000	NE	NE	200		
<i>Grab Groundwater Samples</i>																						
Pit Water	9/13/1998	--	--	--	--	2,100	3,600	350	130	39	380	17,000	--	--	--	--	--	--	--	--	--	
BH-A	4/30/2002	17/8	--	--	<100	<100	180	<0.50	<0.50	8.8	<0.50	82	--	<0.50	<0.50	<0.50	<5.0	--	--	--	--	
BH-B	4/30/2002	16/8	--	--	<100	<200	2,300	120	11	60	150	2,000	--	<5.0	<5.0	<5.0	<5.0	--	--	--	--	
BH-C	4/30/2002	16/8	--	--	<100	<150	1,200	57	0.72	43	87	240	--	<0.50	1.0	<0.50	<5.0	--	--	--	--	
B-1-gw	2/25/2008	3/3.95	--	--	--	260,000	4,600	330	<5.0	33	<5.0	370	--	<5.0	<5.0	<5.0	<20	<500	<5.0	<5.0	*	
B-2-gw	2/25/2008	7.5/6.95	--	--	--	1,900	540	12	<2.5	<2.5	<2.5	220	--	<2.5	<2.5	<2.5	<10	<250	<2.5	<2.5	*	
B-3-gw	2/26/2008	8/NA	--	--	--	<50	<50	<0.5	<0.5	<0.5	<0.5	4.0	--	<0.5	<0.5	<0.5	<2.0	<50	<0.5	<0.5	*	
B-4-gw	2/25/2008	7.5/7.80	--	--	--	6,800	7,300	150	<50	150	<50	2,700	--	<50	<50	<50	1,700	<5,000	<50	<50	*	
B-5-gw	2/26/2008	8/6.40	--	--	--	250	320	<10	<10	13	<10	630	--	<10	<10	<10	<40	<1,000	<10	<10	*	
B-6-gw	2/26/2008	8/6.95	--	--	--	120	<50	<5.0	<5.0	<5.0	<5.0	240	--	<5.0	<5.0	<5.0	<20	<500	<5.0	<5.0	*	
B-7-gw	2/26/2008	8/6.55	--	--	--	84	<50	<0.5	<0.5	<0.5	<0.5	27	--	<0.5	<0.5	<0.5	<2.0	<50	<0.5	<0.5	*	
B-8-gw	2/25/2008	8/6.10	--	--	--	1,000	930	37	<2.5	64	23	160	--	<2.5	<2.5	<2.5	<10	<250	<2.5	<2.5	*	
B-9	2/11/2010	6.33	--	--	--	<50	<50	<2.5	<2.5	<2.5	<2.5	160	--	<2.5	<2.5	<2.5	<10	<250	<2.5	<2.5	*	
B-10	2/11/2010	6.89	--	--	--	<50	<50	<0.5	<0.5	<0.5	<0.5	5.1	--	<0.5	<0.5	<0.5	<2.0	<50	<0.5	<0.5	*	
B-11	2/10/2010	5.20	--	--	--	3,700	130	0.69	<0.5	<0.5	<0.5	25	--	<0.5	<0.5	<0.5	<2.0	<50	<0.5	<0.5	*	
B-12	2/11/2010	6.65	--	--	--	<50	<50	<0.5	<0.5	<0.5	<0.5	1.2	--	<0.5	<0.5	<0.5	<2.0	<50	<0.5	<0.5	*	
B-13C	2/12/2010	8.97	--	--	--	3,400	2,300	<2.5	<2.5	<2.5	<2.5	92	--	<2.5	<2.5	<2.5	92	<250	<2.5	<2.5	*	
<i>Quarterly Groundwater Samples</i>																						
MW-1	10/6/1999	8.35	6.65	--	--	84	3,900	<25	<25	<25	<25	3,500	--	--	--	--	--	--	--	--	--	*
15.00	1/13/2000	7.90	7.10	--	--	<50	<1,300	18	<13	<13	<13	1,700	--	--	--	--	--	--	--	--	--	*
	4/12/2000	7.08	7.92	--	--	56	<1,000	66	<10	<10	<10	1,600	--	--	--	--	--	--	--	--	--	*
	7/19/2000	7.66	7.34	--	--	52	<1,000	<10	<10	<10	<10	1,200	--	--	--	--	--	--	--	--	--	*
	10/25/2000	7.91	7.09	--	--	76	4,100	120	<25	<25	<25	6,100	--	--	--	--	--	--	--	--	--	*
	2/16/2007	6.32	8.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*
	3/1/2007	5.88	9.12	--	--	<250	<50	<50	<1.2	<1.2	<1.2	78	--	<1.2	<1.2	<1.2	<12	<120	<1.2	<1.2	*	
15.71	5/1/2007	7.24	8.47	--	--	<250	<50	<50	<5.0	<5.0	<5.0	250	--	<5.0	<5.0	<5.0	<50	<500	<5.0	<5.0	*	
	8/1/2007	7.77	7.94	--	--	<50	<50	<25	<25	<25	<25	520	--	<25	<25	<25	<250	<2500	<25	<25	*	
	11/1/2007	7.71	8.00	--	--	<50	<50	<12	<12	<12	<12	460	--	<12	<12	<12	<120	<1,200	<12	<12	*	
	2/1/2008	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	*	
	5/2/2008	7.52	8.19	--	--	<250	<50	<50	<5.0	<5.0	<5.0	240	--	<5.0	<5.0	<5.0	<20	<500	<5.0	<5.0	*	
	8/1/2008	8.02	7.69	--	--	<50	<50	<10	<10	<10	<10	500	--	<10	<10	<10	<40	<1,000	<10	<10	*	
	11/4/2008	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	*	
	8/11/2009	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	-	
	2/3/2010	6.14	9.57	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	39	--	--	--	--	--	--	--	--	-	
	5/18/2010	7.09	8.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-	

TABLE 2  
 GROUNDWATER ANALYTICAL DATA  
 ENCINAL PROPERTIES  
 FORMER OLYMPIAN SERVICE STATION  
 1436 GRANT AVENUE  
 SAN LORENZO, CALIFORNIA

Well ID TOC (ft above msl)	Date Sampled	DTW (ft)	GWE (ft above msl)	Oil & Grease	TPH <sub>m</sub>	TPH <sub>d</sub>	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	SVOCs & HVOCs						Notes		
					Concentrations in micrograms per liter (µg/L)																
ESL: Groundwater is not a current or potential drinking water resource				NE	NE	210	210	46	130	43	100	1800	--	NE	NE	NE	18,000	NE	NE	200	
	8/5/2010	7.65	8.06	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	350	--	--	--	--	--	--	--	--	--
MW-2 14.46	10/6/1999	7.87	6.59	<1,000	<500	<50	70	<0.5	<0.5	<0.5	<0.5	11	ND	--	--	--	--	--	--	--	*
	1/13/2000	7.46	7.00	<1,000	<500	<50	<50	<0.5	<0.5	<0.5	<0.5	6.2	ND	--	--	--	--	--	--	--	
	4/12/2000	6.67	7.79	1.100	<500	<50	<50	<0.5	<0.5	<0.5	<0.5	39	--	--	--	--	--	--	--	--	
	7/19/2000	7.23	7.23	1.300	<500	<50	<1,000	<10	<10	<10	<10	990	--	--	--	--	--	--	--	--	
	10/25/2000	7.52	6.94	--	<500	<50	370	<2.5	<2.5	<2.5	<2.5	690	--	--	--	--	--	--	--	--	
	2/16/2007	5.89	8.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/1/2007	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	*
15.17	5/1/2007	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	*
	8/1/2007	7.35	7.82	--	--	<50	<50	<5.0	<5.0	<5.0	<5.0	130	--	<5.0	<5.0	<5.0	<50	<500	<5.0	<5.0	*
	11/1/2007	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	
	2/1/2008	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	*
	5/2/2008	7.12	8.05	--	--	<50	<50	<2.5	<2.5	<2.5	<2.5	83.0	--	<2.5	<2.5	<2.5	<10	<250	<2.5	<2.5	
	8/1/2008	7.59	7.58	--	--	<50	<50	<1.0	<1.0	<1.0	<1.0	52	--	<1.0	<1.0	<1.0	<40	<100	<1.0	<1.0	*
MW-2 cont.	11/4/2008	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	*
	8/11/2009	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	
	2/3/2010	5.75	9.42	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	0.86	--	<0.5	<0.5	<0.5	<2.0	<50	<0.5	<0.5	
	5/18/2010	6.67	8.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	8/5/2010	7.25	7.92	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	57	--	--	--	--	--	--	--	--	
MW-3 14.41	10/6/1999	7.90	6.51	--	--	300	3,900	900	89	160	560	790	--	--	--	--	--	--	--	--	
	1/13/2000	7.50	6.91	--	--	210	740	110	4.8	35	18	290	--	--	--	--	--	--	--	--	
	4/12/2000	6.61	7.80	--	--	640	2,200	650	9.7	180	24	140	--	--	--	--	--	--	--	--	
	7/19/2000	7.24	7.17	--	--	270	2,700	420	<2.5	160	<2.5	99	--	--	--	--	--	--	--	--	*
	10/25/2000	7.52	6.89	--	--	150	710	180	<2.5	24	<2.5	71	--	--	--	--	--	--	--	--	*
	2/15/2007	5.90	8.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/1/2007	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	*
15.13	5/1/2007	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	*
	8/1/2007	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	*
	11/1/2007	7.35	7.78	--	--	<50	77	<2.5	<2.5	<2.5	<2.5	68	--	<2.5	<2.5	<2.5	<10	<250	<2.5	<2.5	*
	2/1/2008	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	
	5/2/2008	7.15	7.98	--	--	<50	68	2.3	<1.7	<1.7	<1.7	86	--	<1.7	<1.7	<1.7	7.20	<170	<1.7	<1.7	
	8/1/2008	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	*
	11/4/2008	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	
	8/11/2009	7.72	7.41	--	--	<50	110	33	<0.5	<0.5	<0.5	28	--	<0.5	<0.5	<0.5	<2.0	<50	<0.5	<0.5	*
	2/3/2010	5.72	9.41	--	--	--	<50	0.55	<0.5	<0.5	<0.5	25	--	--	--	--	--	--	--	--	
	5/18/2010	6.73	8.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

TABLE 2

GROUNDWATER ANALYTICAL DATA  
 ENCINAL PROPERTIES  
 FORMER OLYMPIAN SERVICE STATION  
 1436 GRANT AVENUE  
 SAN LORENZO, CALIFORNIA

Well ID	Date	DTW	GWE	Oil & Grease	TPH <sub>mo</sub>	TPH <sub>d</sub>	TPH <sub>g</sub>	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	SVOCs & HVOCs					Notes			
TOC	Sampled	(ft)	(ft above msl)										DIPE	TAME	ETBE	TBA	Ethanol	EDB	1,2-DCA		
(ft above msl)				Concentrations in micrograms per liter (µg/L)																	
ESL: Groundwater is not a current or potential drinking water resource				NE	NE	210	210	46	130	43	100	1500	-	NE	NE	NE	18,000	NE	NE	200	
	8/5/2010	7.31	7.82	--	--	--	450	110	2.2	0.76	0.64	32	--	--	--	--	--	--	--	*	
MW-4	5/18/2010	6.68	8.47	--	--	--	13,000	520	36	170	12	1,200	--	--	--	--	--	--	--	*	
15.15	8/5/2010	7.25	7.90	--	--	--	9,200	780	13	230	4.3	1,800	--	--	--	--	--	--	--	*	

Abbreviations / Notes

\* = San Francisco Bay Regional Water Quality Control Board ESL for groundwater where groundwater is not a current or potential drinking water resource

NE = Not Evaluated

TOC = Top of casing

DTW = Depth to water

GWE = Groundwater elevation in feet above mean sea level

ft above msl = feet above mean sea level

I7/S = Depth to first encountered groundwater/depth of static groundwater

<n = Not detected above laboratory reporting limit

-- = Not sampled, not analyzed, not available

ND = Not detected above laboratory reporting limit

Oil and grease by EPA Method 5520 E&F

TPH<sub>d</sub> = Total Petroleum Hydrocarbons as diesel range by EPA Method 8015

TPH<sub>g</sub> = Total Petroleum Hydrocarbons as gasoline range by EPA Method 8015

TPH<sub>mo</sub> = Total Petroleum Hydrocarbons as motor oil by EPA Method 8015

Benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020

MTBE = Methyl tertiary butyl ether by EPA Method 8260

Di-isopropyl ether (DIPE), tertiary-amy1 methyl ether (TAME), ethyl tertiary-butyl ether (ETBE), tertiary-butyl alcohol (TBA) by EPA Method 8260B

SVOCs = Semi-volatile organic compounds by EPA Method 8270, refer to corresponding analytical laboratory report for a full list of compounds

HVOCs = Halogenated volatile organic compound by EPA Method 8010, refer to corresponding analytical laboratory report for a full list of compounds

1,2 DCA = 1,2 dichloroethane

EDB = 1,2-dibromoethane

\* = See Analytical Laboratory Report for laboratory sample description and TPH chromatogram interpretation.

TOC elevations were surveyed on March 8, 2007 by Virgil Chavez Land Surveying. Prior to this date, TOC elevation were relative to a project datum determined by Aqua Science Engineers, Inc. in 1998.