STRATUS
ENVIRONMENTAL, INC.

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

July 30, 2014
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: **Status Report and Results of Second Quarter 2014 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 Figure 1). 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.***

Gowri S. Kowtha, P.E.
Project Manager

Scott G. Bittinger, P.G.
Project Geologist

PROFESSIONAL GEOLOGIST
Scott G. Bittinger
No. 7477
STATE OF CALIFORNIA

Attachment: Status Report and Results of Second Quarter 2014 Groundwater Monitoring And Sampling Event

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

July 30, 2014

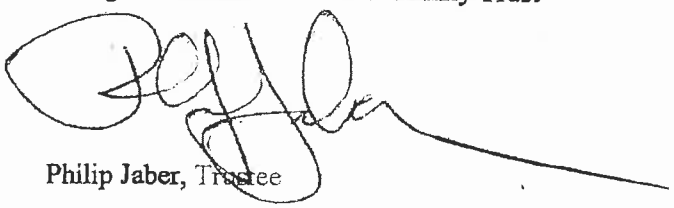
Mr. Mark Detterman
Alameda County Environmental Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

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

## FORMER OLYMPIC STATION
## PROJECT STATUS AND GROUNDWATER MONITORING AND SAMPLING REPORT

| | |
|---|---|
| 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 (Fourth Quarter 2013, First and Second Quarter 2014):**

In June 2013, ACEHD conditionally approved a Corrective Action Plan (CAP) for the site, pending completion of a public comment period. The CAP also included a scope of work to perform additional environmental site assessment activities. After performing the public comment period (predominately during the third quarter 2013), and receiving agency approval, Stratus began implementing tasks outlined in the CAP. With the exception of a groundwater monitoring and sampling event performed in June 2014, the activities described below are associated with CAP implementation.

1. Stratus obtained permits to discharge treated soil vapors and groundwater generated by dual phase extraction (DPE) from the appropriate agencies. A building permit was also obtained from the City of San Lorenzo.

2. Stratus directed the installation of wells EX-4 through EX-7 between February 20 and 21, 2014. Groundwater monitoring wells MW-5A/B and MW-6A/B were installed on May 8, 2014. Each of these wells were also developed. Previously proposed wells MW-7A/B were not installed due to a conflict with an underground utility corridor and access problems at the proposed location (heavy traffic in Grant Avenue).

3. A temporary power pole and electrical panel needed to provide a power supply for the DPE system was installed.

4. Natural gas plumbing needed to provide supplemental fuel for the DPE system was installed.

5. A DPE system was mobilized to the site, and construction/installation activities needed to begin DPE were performed. Above ground lateral conveyance piping was connected to wells EX-1 through EX-7.

6. On June 19, 2014, Stratus conducted semi-annual groundwater monitoring and sampling activities. During this event, wells MW-1 through MW-4, MW-5A/B, MW-6A/B, and EX-1 through EX-7 were gauged for depth to water and evaluated for the presence of free product. Following gauging, these wells were purged and groundwater samples were collected. MW-4 purged dry before three casing volumes were removed. All groundwater samples were forwarded to a state-certified analytical laboratory for chemical analysis. This well sampling event also serves as a 'baseline' well sampling event prior to implementation of DPE, and thus will be useful in the future for gauging remedial progress.

**WORK PROPOSED FOR NEXT PERIOD (Third and Fourth Quarter 2014):**

1. DPE remediation will be performed. Data collected as DPE progresses will be continually evaluated in order to assess the length of time for this remedial work. A minimum of two site visits per month

will be performed in order to verify proper operation of the equipment and collect samples needed to verify permit compliance and assess effectiveness of remedial efforts.

2. A groundwater monitoring and sampling event will be performed during the fourth quarter 2014.

| | |
|---|---|
| Current Phase of Project: | CAP/REM (Start-up) |
| Frequency of Groundwater Monitoring: | All Wells = Semi-Annual ($2^{nd}$ & $4^{th}$) |
| Frequency of Groundwater Monitoring and Sampling: | All Wells = Semi-Annual ($2^{nd}$ & $4^{th}$) |
| Groundwater Sampling Date: | June 19, 2014 |
| Is Free Product (FP) Present on Site: | No |
| Approximate Depth to Groundwater: | 7.20 to 7.86 ft below top of well casing |
| Groundwater Flow Direction: | West-Southwest |
| Groundwater Gradient: | 0.004 ft/ft |

**DISCUSSION:**

Groundwater samples 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. Depth to groundwater measurements and sample analytical results have been uploaded to the State of California's GeoTracker database, and documentation of this data uploading is provided in Appendix D.

At the time of the second quarter 2014 monitoring event, depth-to-water was measured between 7.20 and 7.86 feet below the top of the well casing. Groundwater elevations were within historical fluctuation ranges. Depth-to-water measurements were converted to feet above mean sea level (MSL) and used to construct a groundwater elevation contour map (Figure 2). Groundwater flow beneath the site on June 19, 2014 was to the west-southwest with a calculated gradient of 0.004 ft/ft. Historically, groundwater flow beneath the site has been toward the west-southwest and southwest.

Figure 3 presents a summary of groundwater analytical results for wells with screening intervals between approximately 5 and 10 feet bgs, only a few feet below the static water table interface. Figure 4 presents a summary of groundwater analytical results for the other monitoring wells and extraction wells. The depth and screening interval of each monitoring well may be referenced on Table 1.

GRO and benzene were detected at concentrations of 43,000 micrograms per liter (µg/L) and 3,300 µg/L, respectively, in the MW-6A sample, 21,000 µg/L and 2,000 µg/L, respectively, in the MW-5A sample, and 6,000 mg/L and 260 mg/L, respectively, in the MW-4 well sample. MTBE was detected in the MW-6A sample (77 µg/L) and at well MW-4 (1,600 µg/L).

In general, GRO and BTEX concentrations were significantly lower in the deeper monitoring/extraction well samples than in the samples collected from wells MW-4, MW-5A, and MW-6A. GRO and benzene were reported at maximum levels of 210 µg/L (EX-4) and 25 µg/L (EX-6), respectively, in samples collected from the deeper wells. MTBE was detected in all of the deeper monitoring extraction well samples, at concentrations ranging from 10 µg/L to 230 µg/L.

**FUTURE WORK AND REMEDIAL EFFORTS**

In July 2014, Stratus initiated DPE remedial efforts using wells EX-1 through EX-7 for extraction. Stratus will provide periodic updates to ACEHD regarding the status of these work efforts.

**ATTACHMENTS:**

- Table 1 Well Construction Details
- Table 2 Groundwater Elevation and Analytical Summary
- Figure 1 Site Location Map
- Figure 2 Groundwater Elevation Contour Map, Second Quarter 2014
- Figure 3 Groundwater Analytical Summary, 10' Depth Monitoring Wells, Second Quarter 2014
- Figure 4 Groundwater Analytical Summary, 20' – 26' Depth Monitoring Wells, Second Quarter 2014
- 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

**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) | Grouwater 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 | <1.2 | <12 | <120 | <1.2 | <1.2 |
| | 05/01/07 | 7.24 | 15.71 | 8.47 | -- | <250 | <50 | <50 | <5.0 | <5.0 | <5.0 | <5.0 | 250 | <5.0 | <5.0 | <5.0 | <50 | <500 | <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 | <5.0 | <20 | <500 | <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 | -- | -- | -- | -- | -- | -- | -- |

**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) | Grouwater 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 | 15.17 | 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 | <500 | <5.0 | <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 | 7.43 | | 10.57 | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 13 | -- | -- | -- | -- | -- | -- | -- |

# 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) | Grouwater 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 | 15.13 | 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 | -- | -- | -- | -- | -- | -- | -- |

**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) | Grouwater 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-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 | -- | -- | -- | -- | -- | -- | -- |
| MW-5A | 06/19/14 | 7.53 | 17.94 | 10.41 | -- | -- | -- | 21,000 | 2,000 | <25[2] | 1,400 | 650 | <25[2] | -- | -- | -- | -- | -- | -- | -- |
| MW-5B | 06/19/14 | 7.52 | 17.92 | 10.40 | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 32 | -- | -- | -- | -- | -- | -- | -- |
| MW-6A | 06/19/14 | 7.66 | 18.05 | 10.39 | -- | -- | -- | 43,000 | 3,300 | <50[2] | 2,000 | 3,100 | 77 | -- | -- | -- | -- | -- | -- | -- |
| MW-6B | 06/19/14 | 7.32 | 17.69 | 10.37 | -- | -- | -- | 86 | <0.50 | <0.50 | <0.50 | <0.50 | 82 | -- | -- | -- | -- | -- | -- | -- |

# 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) | Grouwater 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 | <0.50 | 14 | -- | -- | -- | -- | -- | -- | -- |
| | 08/26/13 | NM | | NM | Well Covered by Car - No Sample Collected | | | | | | | | | | | | | | | |
| | 06/19/14 | 7.59 | | 10.55 | -- | -- | -- | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 19 | -- | -- | -- | -- | -- | -- | -- |
| 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 | -- | -- | -- | -- | -- | -- | -- |
| 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 | -- | -- | -- | -- | -- | -- | -- |
| EX-4 | 06/19/14 | 7.64 | 18.30 | 10.66 | -- | -- | -- | 210 | 9.5 | <0.50 | 0.55 | 0.74 | 10 | -- | -- | -- | -- | -- | -- | -- |
| EX-5 | 06/19/14 | 7.84 | 18.41 | 10.57 | -- | -- | -- | 110 | 6.0 | <0.50 | <0.50 | <0.50 | 14 | -- | -- | -- | -- | -- | -- | -- |
| EX-6 | 06/19/14 | 7.81 | 18.29 | 10.48 | -- | -- | -- | 190 | 25 | <0.50 | 5.9 | <0.50 | 18 | -- | -- | -- | -- | -- | -- | -- |
| EX-7 | 06/19/14 | 7.44 | 18.06 | 10.62 | -- | -- | -- | 56 | 0.79 | <0.50 | <0.50 | <0.50 | 50 | -- | -- | -- | -- | -- | -- | -- |

# 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) | Grouwater 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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**Legend/Key:**

ft msl = feet above mean sea level
µg/L = micrograms per liter
NM = Not measured
TPH - mo = total petroleum hydrocarbons as motor oil
TPHd = total petroleum hydrocarbons as diesel
GRO = gasoline range organics C6-C12
MTBE - methyl tertiary butyl ether
DIPE = di isopropyl ether
ETBE = ethyl tertiary butyl ether
TAME = tert amyl methyl ether
TBA = tert butyl ether
EDB = 1,2-dibromoethane
1,2-DCA = 1,2-dichloroethane

**Analytical Methods:**
GRO analyzed by EPA Method SW8015B/SW8260B, all other analytes analyzed by SW8260B.

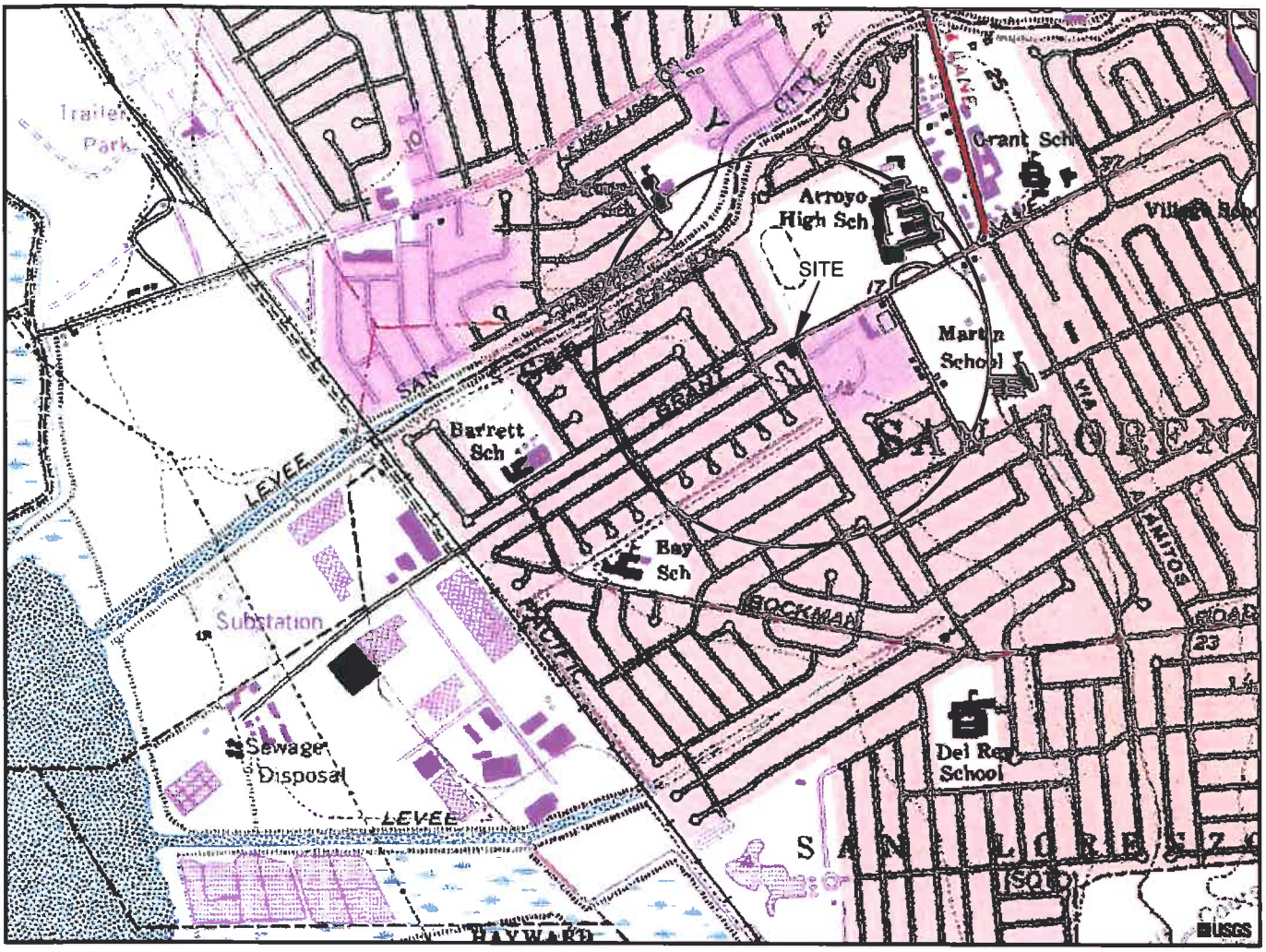
Analytical methods prior to February 2011, are available in various reports on the Alameda County Environmental Health Department files.

* = 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.

Analytical data for samples collected prior to 2011 are obtained from documents available in the Alameda County Environmental Health Department files.

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.




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

QUADRANGLE LOCATION

0 1800 FT

APPROXIMATE SCALE

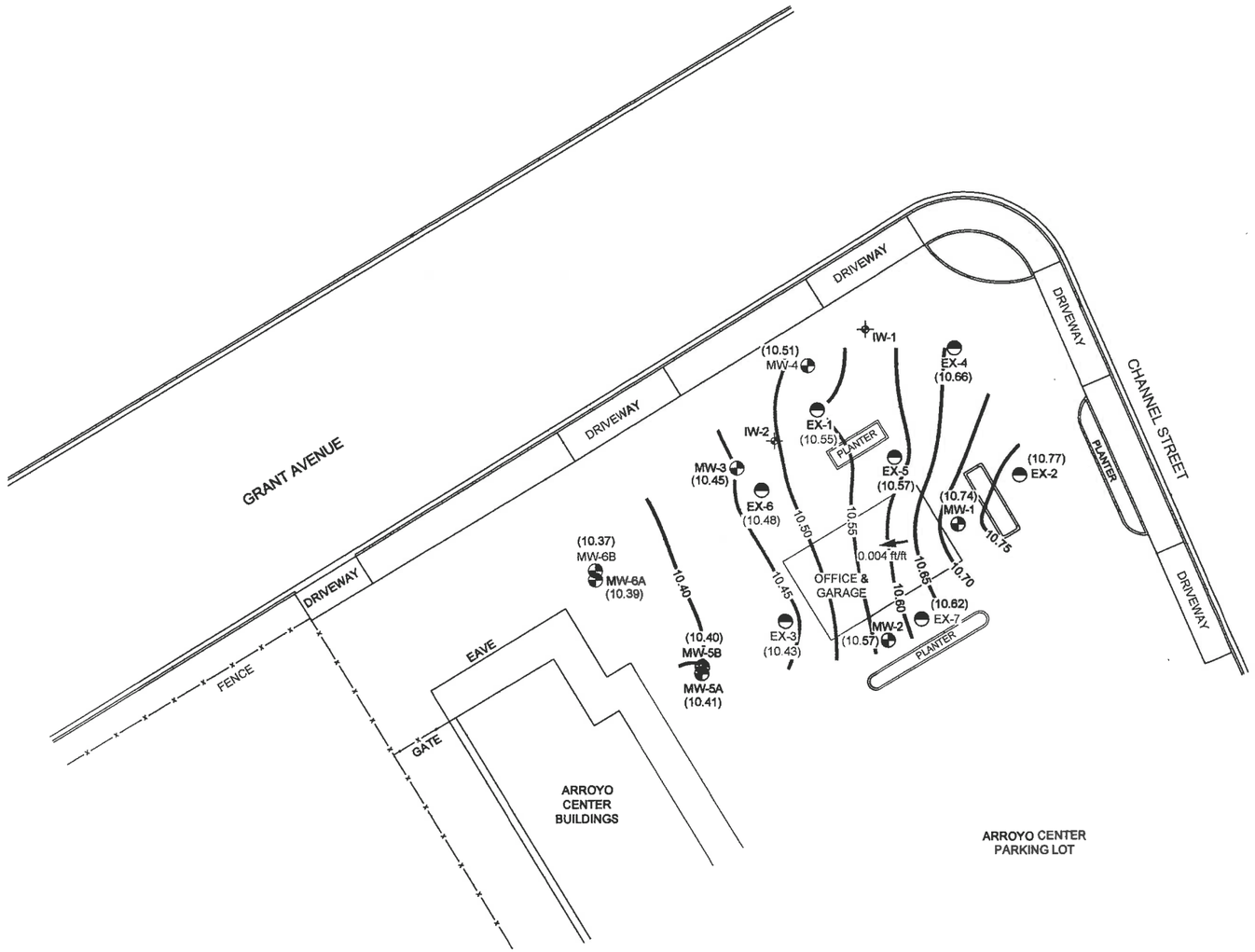
STRATUS
ENVIRONMENTAL, INC.

FORMER OLYMPIC SERVICE STATION
1436 GRANT AVENUE
SAN LORENZO, CALIFORNIA

SITE LOCATION MAP

FIGURE
1

PROJECT NO.
2115-1436-01




LEGEND

- MW-1 MONITORING WELL LOCATION
- EX-1 EXTRACTION WELL LOCATION
- IW-1 OZONE INJECTION WELL LOCATION
- (10.74) GROUNDWATER ELEVATION IN FEET RELATIVE TO MSL
- 10.50 GROUNDWATER ELEVATION CONTOUR IN FEET RELATIVE TO MSL
- INFERRED GROUNDWATER FLOW DIRECTION

WELLS MEASURED ON 6/19/14
MSL = MEAN SEA LEVEL
(NM) = NOT MEASURED

BASED ON SURVEY PREPARED BY MORROW SURVEYING 6/15/11

STRATUS ENVIRONMENTAL, INC.

PATH NAME: Olympic\Quarterly
DRAFTER INITIALS: JMP
DATE LAST REVISED: July 14, 2014
FILENAME: Olympic Quarterly Figures

0 40 FT
SCALE

FORMER OLYMPIC SERVICE STATION
1436 GRANT AVENUE
SAN LORENZO, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP
2nd QUARTER 2014

FIGURE
2

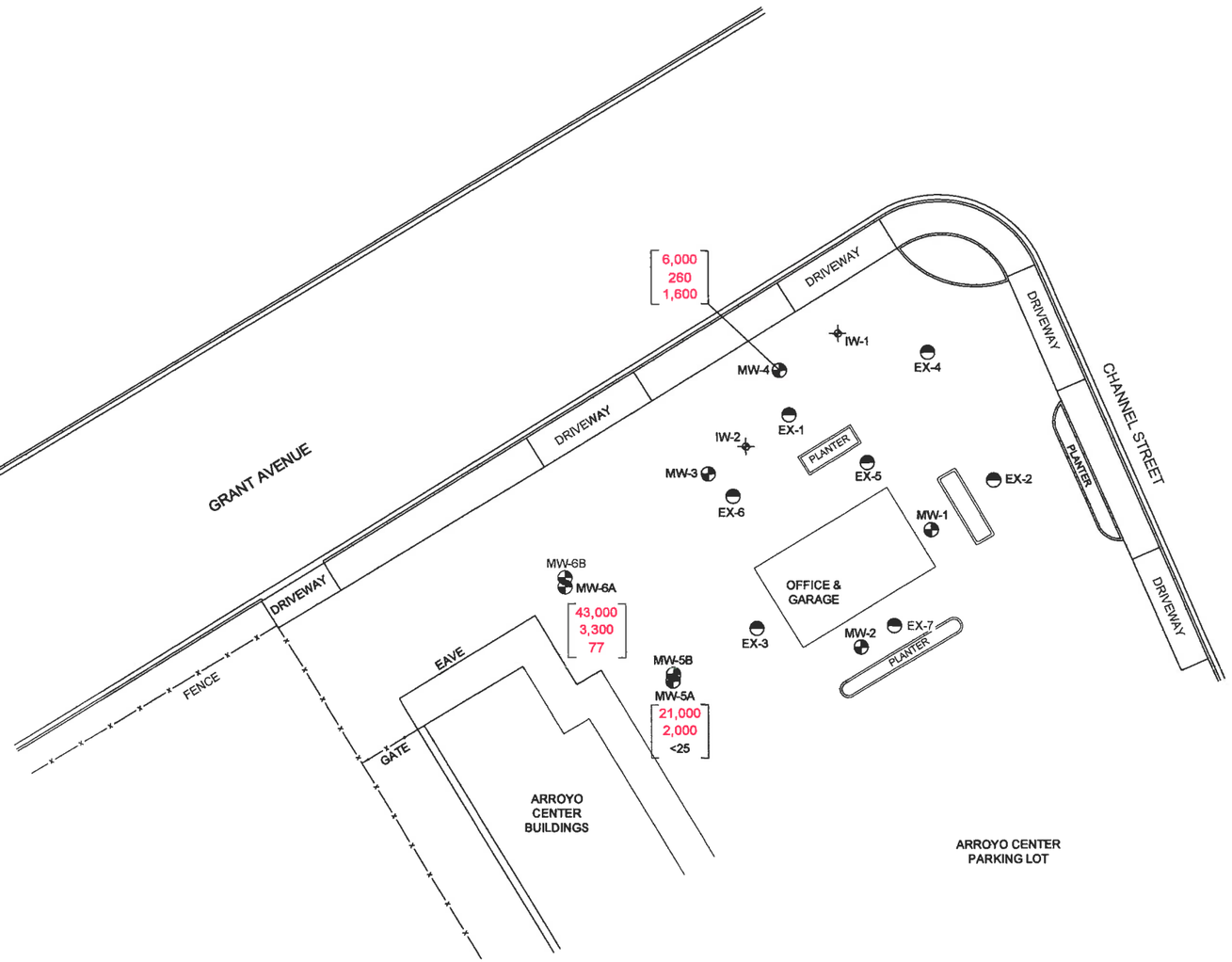
PROJECT NO.
2115-1436-01

LEGEND

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

[ 6,000 / 260 / 1,600 ] GASOLINE RANGE ORGANICS (GRO) CONCENTRATION IN µg/L / BENZENE CONCENTRATION IN µg/L / METHYL TERTIARY BUTYL ETHER (MTBE) IN µg/L

WELLS SAMPLED ON 6/19/14
GRO ANALYZED BY EPA METHOD SW8015B/SW8260B
MTBE & BENZENE ANALYZED BY EPA METHOD SW8260B




BASED ON SURVEY PREPARED BY MORROW SURVEYING 6/15/11

STRATUS ENVIRONMENTAL, INC.

PATH NAME: Olympic\Quarterly
DRAFTER INITIALS: JMP
DATE LAST REVISED: July 14, 2014
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
2nd QUARTER 2014

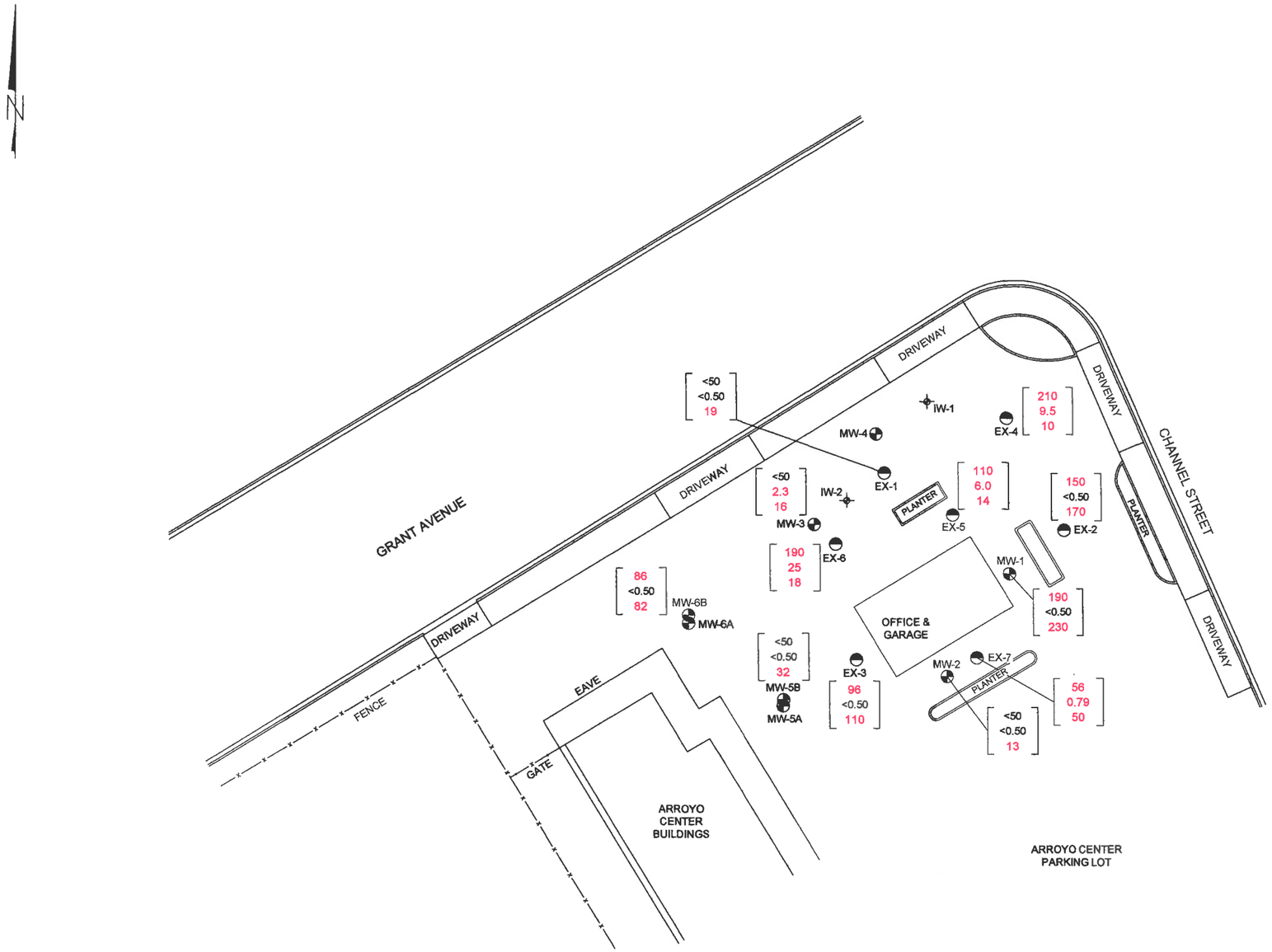
FIGURE
3
PROJECT NO.
2115-1436-01

LEGEND

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

[ 190 / <0.50 / 230 ] GASOLINE RANGE ORGANICS (GRO) CONCENTRATION IN µg/L
BENZENE CONCENTRATION IN µg/L
METHYL TERTIARY BUTYL ETHER (MTBE) IN µg/L

WELLS SAMPLED ON 6/19/14
GRO ANALYZED BY EPA METHOD SW8015B/SW8260B
MTBE & BENZENE ANALYZED BY EPA METHOD SW8260B




BASED ON SURVEY PREPARED BY MORROW SURVEYING 6/15/11

STRATUS ENVIRONMENTAL, INC.

PATH NAME: Olympic\Quarterly
DRAFTER INITIALS: JMP
DATE LAST REVISED: July 14, 2014
FILENAME: Olympic Quarterly Figures

0 40 FT
SCALE

FORMER OLYMPIC SERVICE STATION
1436 GRANT AVENUE
SAN LORENZO, CALIFORNIA
GROUNDWATER ANALYTICAL SUMMARY
20' - 26' DEPTH MONITORING WELLS
2nd QUARTER 2014

FIGURE
4
PROJECT NO.
2115-1436-01

# APPENDIX A

# FIELD DATA SHEETS

STRATUS ENVIRONMENTAL, INC.

Site Address 1436 Grant Avenue
City San Lorenzo
Sampled by: Carl Schulze
Signature

Site Number Olympic Jaber
Project Number 2115-1436-01
Project PM S. Bittinger
DATE 06/19/14

| Water Level Data | | | | | Purge Volume Calculations | | | | | Purge Method | | | | Sample Record | | | Field Data |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Well ID | Time | Depth to Product (feet) | Depth to Water (feet) | Total Depth (feet) | Water column (feet) | Diameter (inches) | Multiplier | 3 casing volumes (gallons) | Actual water purged (gallons) | No Purge | Bailer | Pump | other | DTW at sample time (feet) | Sample I.D | Sample Time | DO (mg/L) |
| MW-1 | 1310 | | 7.86 | 24.20 | 16.34 | 2" | 0.5 | 8.17 | 8.5 | | x | | | 7.90 | MW-1 | 1659 | 1.34 |
| MW-2 | 1318 | | 7.73 | 18.85 | 11.42 | 2" | 0.5 | 5.71 | 6 | | x | | | 7.43 | MW-2 | 1817 | 1.91 |
| MW-3 | 1258 | | 7.50 | 18.19 | 10.69 | 2" | 0.6 | 5.35 | 5.5 | | x | | | 7.58 | MW-3 | 1500 | 0.93 |
| MW-4 | | | 7.48 | 9.31 | 1.83 | 4" | 2 | 3.66 | 2 | | x | | dry | 7.79 | MW-4 | 1441 | 1.48 |
| MW-5A | 1328 | | 7.53 | 9.61 | 2.08 | 2" | 0.5 | 1.04 | 1 | | x | | | 8.41 | MW-5A | 2029 | 1.93 |
| MW-5B | 1332 | | 8.52 | 19.42 | 11.90 | 2" | 0.5 | 5.95 | 6 | | x | | | 7.52 | MW-5B | 2022 | 2.17 |
| MW-6A | 1341 | | 7.86 | 9.85 | 2.19 | 2" | 0.5 | 1.00 | 1 | | x | | | 8.08 | MW-6A | 1955 | 1.70 |
| MW-6B | 1349 | | 7.32 | 19.76 | 12.44 | 2" | 0.5 | 6.22 | 6.5 | | x | | | 7.32 | MW-6B | 1949 | 1.81 |
| EX-1 | 1350 | | 7.59 | 19.80 | 12.21 | 4" | 2.0 | 24.42 | 24 | | x | | | 7.85 | EX-1 | 1417 | 1.74 |
| EX-2 | 1306 | | 7.37 | 19.30 | 11.93 | 4" | 2.0 | 23.86 | 24 | | x | | | 7.39 | EX-2 | 1729 | 1.20 |
| EX-3 | 1336 | | 7.20 | 19.80 | 12.60 | 4" | 2.0 | 25.20 | 25 | | x | | | 7.43 | EX-3 | 1918 | 2.45 |
| EX-4 | 1300 | | 7.64 | 18.26 | 10.62 | 4" | 2.0 | 21.24 | 21 | | x | | | 9.21 | EX-4 | 1848 | 1.55 |
| EX-5 | 1302 | | 7.84 | 18.97 | 11.13 | 4" | 2.0 | 22.26 | 22 | | x | | | 9.03 | EX-5 | 1634 | 1.59 |
| EX-6 | 1252 | | 7.81 | 19.07 | 11.26 | 4" | 2.0 | 22.52 | 23 | | x | | | 7.82 | EX-6 | 2058 | 1.58 |
| EX-7 | 1314 | | 7.44 | 19.48 | 12.04 | 4" | 2.0 | 24.08 | 24 | | x | | | 8.50 | EX-7 | 1757 | 1.22 |
| | | | | | | | | | | | | | | | | | |
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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 06/13/14
Conductivity ↓
DO

T:\Forms

STRATUS ENVIRONMENTAL INC.

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

Site Number: Olympic Jaber
Project Number: 2115-1436-01
Project PM: S. bittinger
DATE: 06/19/14

**Well ID EX-1**

Purge start time | Odor Y (N)

| | Temp C | pH | cond | gallons |
|---|---|---|---|---|
| time 1359 | 20.9 | 8.35 | 867 | 0 |
| time 1404 | 19.8 | 8.27 | 862 | 8 |
| time 1408 | 20.0 | 8.21 | 855 | 16 |
| time 1417 | 20.3 | 8.24 | 835 | 24 |

purge stop time | DO: 1.74 | ORP 31

**Well ID MW-3**

Purge start time | Odor (Y) N

| | Temp C | pH | cond | gallons |
|---|---|---|---|---|
| time 1445 | 22.3 | 8.06 | 724 | 0 |
| time 1448 | 20.4 | 8.10 | 754 | 2 |
| time 1451 | 20.2 | 8.10 | 760 | 4 |
| time 1500 | 20.9 | 8.13 | 760 | 5.5 |

purge stop time | DO: 0.93 | ORP -106

**Well ID MW-1**

Purge start time | Odor Y (N)

| | Temp C | pH | cond | gallons |
|---|---|---|---|---|
| time 1643 | 21.1 | 8.25 | 758 | 0 |
| time 1647 | 20.2 | 8.20 | 757 | 3 |
| time 1651 | 20.1 | 8.16 | 755 | 6 |
| time 1659 | 20.4 | 8.21 | 745 | 8.5 |

purge stop time | DO: 1.34 | ORP 81

**Well ID EX-7**

Purge start time | Odor Y (N)

| | Temp C | pH | cond | gallons |
|---|---|---|---|---|
| time 1737 | 20.9 | 8.12 | 737 | 0 |
| time 1742 | 20.3 | 8.07 | 753 | 8 |
| time 1746 | 20.1 | 8.04 | 755 | 16 |
| time 1757 | 19.8 | 8.15 | 739 | 24 |

purge stop time | DO: 1.22 | ORP 105

**Well ID MW-4**

Purge start time | Odor (Y) N

| | Temp C | pH | cond | gallons |
|---|---|---|---|---|
| 1' | | | | |
| time 1430 | 21.9 | 8.13 | 707 | 0 |
| time 1441 | 21.2 | 8.34 | 671 | by 2 |
| time | | | | 4 |
| time | | | | |

purge stop time | DO: 1.48 | ORP -124

**Well ID EX-5**

Purge start time | Odor Y (N)

| | Temp C | pH | cond | gallons |
|---|---|---|---|---|
| time 1614 | 20.8 | 8.28 | 748 | 0 |
| time 1619 | 19.6 | 8.25 | 749 | 7 |
| time 1623 | 19.6 | 8.20 | 744 | 14 |
| time 1634 | 20.0 | 8.26 | 738 | 22 |

purge stop time | DO: 1.59 | ORP 57

**Well ID EX-2**

Purge start time | Odor Y N

| | Temp C | pH | cond | gallons |
|---|---|---|---|---|
| time 1708 | 22.0 | 8.09 | 745 | 0 |
| time 1711 | 20.8 | 8.00 | 745 | 8 |
| time 1715 | 20.7 | 7.99 | 741 | 16 |
| time 1724 | 20.5 | 8.02 | 733 | 24 |

purge stop time | DO: 1.20 | ORP 58

**Well ID MW-2**

Purge start time | Odor Y (N)

| | Temp C | pH | cond | gallons |
|---|---|---|---|---|
| time 1805 | 20.2 | 8.21 | 748 | 0 |
| time 1808 | 19.8 | 8.16 | 761 | 2 |
| time 1810 | 20.0 | 8.14 | 757 | 4 |
| time 1817 | 19.9 | 8.20 | 751 | 6 |

purge stop time | DO: 1.91 | ORP 139

STRATUS ENVIRONMENTAL, INC.

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

Site Number Olympic Tabor
Project Number 2115-1436-01
Project PM S. Bitfinger
DATE 06/19/14

**Well ID EX-4**

Purge start time | Odor Y (N)

| | Temp C | pH | cond | gallons |
|---|---|---|---|---|
| time 1830 | 20.6 | 8.20 | 776 | 0 |
| time 1835 | 20.2 | 8.12 | 792 | 7 |
| time 1840 | N/A | N/A | N/A | 14 |
| time 1848 | 19.8 | 8.26 | 768 | 24 |

purge stop time DO: 1.55 | ORP 137

**Well ID EX-3**

Purge start time | Odor Y (N)

| | Temp C | pH | cond | gallons |
|---|---|---|---|---|
| time 1901 | 20.8 | 8.29 | 771 | 0 |
| time 1904 | 19.9 | 8.23 | 783 | 8 |
| time 1908 | 19.8 | 8.18 | 786 | 16 |
| time 1918 | 19.3 | 8.21 | 775 | 25 |

purge stop time DO: 2.45 | ORP 146

**Well ID MW-6A**

Purge start time | Odor (Y) N

| | Temp C | pH | cond | gallons |
|---|---|---|---|---|
| time 1928 | 21.1 | 7.90 | 1137 | 0 |
| time 1930 | 21.1 | 7.89 | 1140 | 0.5 |
| time 1955 | 20.3 | 7.85 | 1103 | 1 |
| time | | | | |

purge stop time DO: 1.70 | ORP -102

**Well ID MW-6B**

Purge start time | Odor Y (N)

| | Temp C | pH | cond | gallons |
|---|---|---|---|---|
| time 1934 | 21.2 | 8.21 | 811 | 0 |
| time 1938 | 19.9 | 8.19 | 814 | 2 |
| time 1941 | 19.7 | 8.15 | 810 | 4 |
| time 1949 | 19.5 | 8.18 | 800 | 6.5 |

purge stop time DO: 1.81 | ORP 43

**Well ID MW-5A**

Purge start time | Odor (Y) N

| | Temp C | pH | cond | gallons |
|---|---|---|---|---|
| time 2001 | 20.3 | 7.93 | 1098 | 0 |
| time 2003 | 20.4 | 7.91 | 1105 | 0.5 |
| time 2029 | 19.8 | 7.83 | 1114 | 1 |
| time | | | | |

purge stop time DO: 1.93 | ORP -83

**Well ID MW-5B**

Purge start time | Odor Y (N)

| | Temp C | pH | cond | gallons |
|---|---|---|---|---|
| time 2008 | 20.5 | 8.26 | 771 | 0 |
| time 2012 | 19.7 | 8.26 | 762 | 2 |
| time 2014 | 19.6 | 8.24 | 762 | 4 |
| time 2022 | 19.0 | 8.20 | 762 | 6 |

purge stop time DO: 2.17 | ORP 10

**Well ID EX-6**

Purge start time | Odor Y N

| | Temp C | pH | cond | gallons |
|---|---|---|---|---|
| time 2039 | 18.7 | 8.20 | 824 | 0 |
| time 2044 | 19.3 | 8.10 | 826 | 8 |
| time 2048 | 19.2 | 8.08 | 811 | 16 |
| time 2058 | 18.3 | 8.14 | 794 | 23 |

purge stop time DO: 1.58 | ORP 111

**Well ID**

Purge start time | Odor Y N

| | Temp C | pH | cond | gallons |
|---|---|---|---|---|
| time | | | | |
| time | | | | |
| time | | | | |
| time | | | | |

purge stop time | ORP

# APPENDIX B

# SAMPLING AND ANALYSES PROCEDURES

# 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, nonconforments, 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 : 06/25/14

Job: 2115-1436-01/ Olympic

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-1** | | | | | | |
| Lab ID : | STR14062546-01A | TPH-P (GRO) | 190 | | 50 µg/L | 07/01/14 | 07/01/14 |
| Date Sampled | 06/19/14 16:59 | Methyl tert-butyl ether (MTBE) | 230 | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Benzene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Toluene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Ethylbenzene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | m,p-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | o-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| Client ID : | **MW-2** | | | | | | |
| Lab ID : | STR14062546-02A | TPH-P (GRO) | ND | | 50 µg/L | 07/01/14 | 07/01/14 |
| Date Sampled | 06/19/14 18:17 | Methyl tert-butyl ether (MTBE) | 13 | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Benzene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Toluene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Ethylbenzene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | m,p-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | o-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| Client ID : | **MW-3** | | | | | | |
| Lab ID : | STR14062546-03A | TPH-P (GRO) | ND | | 50 µg/L | 07/01/14 | 07/01/14 |
| Date Sampled | 06/19/14 15:00 | Methyl tert-butyl ether (MTBE) | 16 | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Benzene | 2.3 | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Toluene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Ethylbenzene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | m,p-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | o-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| Client ID : | **MW-4** | | | | | | |
| Lab ID : | STR14062546-04A | TPH-P (GRO) | 6,000 | | 800 µg/L | 07/01/14 | 07/01/14 |
| Date Sampled | 06/19/14 14:41 | Methyl tert-butyl ether (MTBE) | 1,600 | | 4.0 µg/L | 07/01/14 | 07/01/14 |
| | | Benzene | 260 | | 4.0 µg/L | 07/01/14 | 07/01/14 |
| | | Toluene | ND | V | 4.0 µg/L | 07/01/14 | 07/01/14 |
| | | Ethylbenzene | 8.8 | | 4.0 µg/L | 07/01/14 | 07/01/14 |
| | | m,p-Xylene | ND | V | 4.0 µg/L | 07/01/14 | 07/01/14 |
| | | o-Xylene | ND | V | 4.0 µg/L | 07/01/14 | 07/01/14 |
| Client ID : | **MW-5A** | | | | | | |
| Lab ID : | STR14062546-05A | TPH-P (GRO) | 21,000 | | 5,000 µg/L | 07/01/14 | 07/01/14 |
| Date Sampled | 06/19/14 20:29 | Methyl tert-butyl ether (MTBE) | ND | V | 25 µg/L | 07/01/14 | 07/01/14 |
| | | Benzene | 2,000 | | 25 µg/L | 07/01/14 | 07/01/14 |
| | | Toluene | ND | V | 25 µg/L | 07/01/14 | 07/01/14 |
| | | Ethylbenzene | 1,400 | | 25 µg/L | 07/01/14 | 07/01/14 |
| | | m,p-Xylene | 650 | | 25 µg/L | 07/01/14 | 07/01/14 |
| | | o-Xylene | ND | V | 25 µg/L | 07/01/14 | 07/01/14 |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Client ID : | **MW-5B** | | | | | | |
| Lab ID : | STR14062546-06A | TPH-P (GRO) | ND | | 50 µg/L | 07/01/14 | 07/01/14 |
| Date Sampled | 06/19/14 20:22 | Methyl tert-butyl ether (MTBE) | 32 | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Benzene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Toluene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Ethylbenzene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | m,p-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | o-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| Client ID : | **MW-6A** | | | | | | |
| Lab ID : | STR14062546-07A | TPH-P (GRO) | 43,000 | | 10,000 µg/L | 07/01/14 | 07/01/14 |
| Date Sampled | 06/19/14 19:55 | Methyl tert-butyl ether (MTBE) | 77 | | 50 µg/L | 07/01/14 | 07/01/14 |
| | | Benzene | 3,300 | | 50 µg/L | 07/01/14 | 07/01/14 |
| | | Toluene | ND | V | 50 µg/L | 07/01/14 | 07/01/14 |
| | | Ethylbenzene | 2,000 | | 50 µg/L | 07/01/14 | 07/01/14 |
| | | m,p-Xylene | 1,800 | | 50 µg/L | 07/01/14 | 07/01/14 |
| | | o-Xylene | 1,300 | | 50 µg/L | 07/01/14 | 07/01/14 |
| Client ID : | **MW-6B** | | | | | | |
| Lab ID : | STR14062546-08A | TPH-P (GRO) | 86 | | 50 µg/L | 07/01/14 | 07/01/14 |
| Date Sampled | 06/19/14 19:49 | Methyl tert-butyl ether (MTBE) | 82 | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Benzene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Toluene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Ethylbenzene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | m,p-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | o-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| Client ID : | **EX-1** | | | | | | |
| Lab ID : | STR14062546-09A | TPH-P (GRO) | ND | | 50 µg/L | 07/01/14 | 07/01/14 |
| Date Sampled | 06/19/14 14:17 | Methyl tert-butyl ether (MTBE) | 19 | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Benzene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Toluene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Ethylbenzene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | m,p-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | o-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| Client ID : | **EX-2** | | | | | | |
| Lab ID : | STR14062546-10A | TPH-P (GRO) | 150 | | 100 µg/L | 07/01/14 | 07/01/14 |
| Date Sampled | 06/19/14 17:24 | Methyl tert-butyl ether (MTBE) | 170 | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Benzene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Toluene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Ethylbenzene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | m,p-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | o-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| Client ID : | **EX-3** | | | | | | |
| Lab ID : | STR14062546-11A | TPH-P (GRO) | 96 | | 50 µg/L | 07/01/14 | 07/01/14 |
| Date Sampled | 06/19/14 19:18 | Methyl tert-butyl ether (MTBE) | 110 | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Benzene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Toluene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Ethylbenzene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | m,p-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | o-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| Client ID : | **EX-4** | | | | | | |
| Lab ID : | STR14062546-12A | TPH-P (GRO) | 210 | | 50 µg/L | 07/01/14 | 07/01/14 |
| Date Sampled | 06/19/14 18:48 | Methyl tert-butyl ether (MTBE) | 10 | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Benzene | 9.5 | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Toluene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Ethylbenzene | 0.55 | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | m,p-Xylene | 0.74 | | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | o-Xylene | ND | | 0.50 µg/L | 07/01/14 | 07/01/14 |

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| | | | | | | |
|---|---|---|---|---|---|---|
| Client ID : | **EX-5** | | | | | |
| Lab ID : | STR14062546-13A | TPH-P (GRO) | 110 | 50 µg/L | 07/01/14 | 07/01/14 |
| Date Sampled | 06/19/14 16:34 | Methyl tert-butyl ether (MTBE) | 14 | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Benzene | 6.0 | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Toluene | ND | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Ethylbenzene | ND | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | m,p-Xylene | ND | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | o-Xylene | ND | 0.50 µg/L | 07/01/14 | 07/01/14 |
| Client ID : | **EX-6** | | | | | |
| Lab ID : | STR14062546-14A | TPH-P (GRO) | 190 | 50 µg/L | 07/01/14 | 07/01/14 |
| Date Sampled | 06/19/14 20:58 | Methyl tert-butyl ether (MTBE) | 18 | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Benzene | 25 | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Toluene | ND | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Ethylbenzene | 5.9 | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | m,p-Xylene | ND | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | o-Xylene | ND | 0.50 µg/L | 07/01/14 | 07/01/14 |
| Client ID : | **EX-7** | | | | | |
| Lab ID : | STR14062546-15A | TPH-P (GRO) | 56 | 50 µg/L | 07/01/14 | 07/01/14 |
| Date Sampled | 06/19/14 17:57 | Methyl tert-butyl ether (MTBE) | 50 | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Benzene | 0.79 | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Toluene | ND | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | Ethylbenzene | ND | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | m,p-Xylene | ND | 0.50 µg/L | 07/01/14 | 07/01/14 |
| | | o-Xylene | ND | 0.50 µg/L | 07/01/14 | 07/01/14 |

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 L. Scholl, Ph.D., Laboratory Director • • Randy Gardner, Laboratory Manager • • Walter Hinchman, Quality Assurance Officer
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 an 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.

7/2/14

**Report Date**

# *Alpha Analytical, Inc.*

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## VOC Sample Preservation Report

**Work Order:** STR14062546 **Job:** 2115-1436-01/ Olympic

| Alpha's Sample ID | Client's Sample ID | Matrix | pH |
|---|---|---|---|
| 14062546-01A | MW-1 | Aqueous | 2 |
| 14062546-02A | MW-2 | Aqueous | 2 |
| 14062546-03A | MW-3 | Aqueous | 2 |
| 14062546-04A | MW-4 | Aqueous | 2 |
| 14062546-05A | MW-5A | Aqueous | 2 |
| 14062546-06A | MW-5B | Aqueous | 2 |
| 14062546-07A | MW-6A | Aqueous | 2 |
| 14062546-08A | MW-6B | Aqueous | 2 |
| 14062546-09A | EX-1 | Aqueous | 2 |
| 14062546-10A | EX-2 | Aqueous | 2 |
| 14062546-11A | EX-3 | Aqueous | 2 |
| 14062546-12A | EX-4 | Aqueous | 2 |
| 14062546-13A | EX-5 | Aqueous | 2 |
| 14062546-14A | EX-6 | Aqueous | 2 |
| 14062546-15A | EX-7 | Aqueous | 2 |

**7/2/14**

**Report Date**

# Alpha Analytical, Inc.

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**Date:** 02-Jul-14

## QC Summary Report

**Work Order:** 14062546

### Method Blank

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

File ID: **14070105.D** Batch ID: **MS15W0701B** Analysis Date: **07/01/2014 11:56**

Sample ID: **MBLK MS15W0701B** Units : µg/L Run ID: **MSD_15_140701A** Prep Date: **07/01/2014 11:56**

| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRefVal | %RPD(Limit) | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| TPH-P (GRO) | ND | 50 | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 8.86 | | 10 | | 89 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10.5 | | 10 | | 105 | 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: **14070104.D** Batch ID: **MS15W0701B** Analysis Date: **07/01/2014 11:30**

Sample ID: **GLCS MS15W0701B** Units : µg/L Run ID: **MSD_15_140701A** Prep Date: **07/01/2014 11:30**

| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRefVal | %RPD(Limit) | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| TPH-P (GRO) | 399 | 50 | 400 | | 99.8 | 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 | 10.7 | | 10 | | 107 | 70 | 130 | | | |

### Sample Matrix Spike

Type **MS** Test Code: **EPA Method SW8015B/C / SW8260B**

File ID: **14070115.D** Batch ID: **MS15W0701B** Analysis Date: **07/01/2014 15:27**

Sample ID: **14062546-11AGS** Units : µg/L Run ID: **MSD_15_140701A** Prep Date: **07/01/2014 15:27**

| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRefVal | %RPD(Limit) | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| TPH-P (GRO) | 2600 | 250 | 2000 | 95.76 | 125 | 54 | 143 | | | |
| Surr: 1,2-Dichloroethane-d4 | 47.6 | | 50 | | 95 | 70 | 130 | | | |
| Surr: Toluene-d8 | 51 | | 50 | | 102 | 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: **14070116.D** Batch ID: **MS15W0701B** Analysis Date: **07/01/2014 15:48**

Sample ID: **14062546-11AGSD** Units : µg/L Run ID: **MSD_15_140701A** Prep Date: **07/01/2014 15:48**

| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRefVal | %RPD(Limit) | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| TPH-P (GRO) | 2510 | 250 | 2000 | 95.76 | 121 | 54 | 143 | 2601 | 3.7(23) | |
| Surr: 1,2-Dichloroethane-d4 | 46.1 | | 50 | | 92 | 70 | 130 | | | |
| Surr: Toluene-d8 | 52 | | 50 | | 104 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 52.8 | | 50 | | 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.

Reported in micrograms per Liter, per client request.

# Alpha Analytical, Inc.

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**Date:** 02-Jul-14

## QC Summary Report

**Work Order:** 14062546

### Method Blank

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

File ID: **14070105.D** Batch ID: **MS15W0701A** Analysis Date: **07/01/2014 11:56**

Sample ID: **MBLK MS15W0701A** Units : µg/L Run ID: **MSD_15_140701A** Prep Date: **07/01/2014 11:56**

| 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 | 8.86 | | 10 | | 89 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10.5 | | 10 | | 105 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10.4 | | 10 | | 104 | 70 | 130 | | | |

### Laboratory Control Spike

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

File ID: **14070103.D** Batch ID: **MS15W0701A** Analysis Date: **07/01/2014 10:51**

Sample ID: **LCS MS15W0701A** Units : µg/L Run ID: **MSD_15_140701A** Prep Date: **07/01/2014 10:51**

| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRefVal | %RPD(Limit) | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | 7.34 | 0.5 | 10 | | 73 | 63 | 137 | | | |
| Benzene | 9.47 | 0.5 | 10 | | 95 | 70 | 130 | | | |
| Toluene | 10.1 | 0.5 | 10 | | 101 | 80 | 120 | | | |
| Ethylbenzene | 10.2 | 0.5 | 10 | | 102 | 80 | 120 | | | |
| m,p-Xylene | 10.5 | 0.5 | 10 | | 105 | 65 | 139 | | | |
| o-Xylene | 10.8 | 0.5 | 10 | | 108 | 70 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 8.85 | | 10 | | 89 | 70 | 130 | | | |
| Surr: Toluene-d8 | 10.4 | | 10 | | 104 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 10.7 | | 10 | | 107 | 70 | 130 | | | |

### Sample Matrix Spike

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

File ID: **14070113.D** Batch ID: **MS15W0701A** Analysis Date: **07/01/2014 14:44**

Sample ID: **14062546-11AMS** Units : µg/L Run ID: **MSD_15_140701A** Prep Date: **07/01/2014 14:44**

| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRefVal | %RPD(Limit) | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | 137 | 1.3 | 50 | 108 | 58 | 56 | 140 | | | |
| Benzene | 41.9 | 1.3 | 50 | 0 | 84 | 67 | 134 | | | |
| Toluene | 43.8 | 1.3 | 50 | 0 | 88 | 38 | 130 | | | |
| Ethylbenzene | 44.1 | 1.3 | 50 | 0 | 88 | 70 | 130 | | | |
| m,p-Xylene | 45.6 | 1.3 | 50 | 0 | 91 | 65 | 139 | | | |
| o-Xylene | 48 | 1.3 | 50 | 0 | 96 | 69 | 130 | | | |
| Surr: 1,2-Dichloroethane-d4 | 47.8 | | 50 | | 96 | 70 | 130 | | | |
| Surr: Toluene-d8 | 51.5 | | 50 | | 103 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 51.4 | | 50 | | 103 | 70 | 130 | | | |

### Sample Matrix Spike Duplicate

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

File ID: **14070114.D** Batch ID: **MS15W0701A** Analysis Date: **07/01/2014 15:06**

Sample ID: **14062546-11AMSD** Units : µg/L Run ID: **MSD_15_140701A** Prep Date: **07/01/2014 15:06**

| Analyte | Result | PQL | SpkVal | SpkRefVal | %REC | LCL(ME) | UCL(ME) | RPDRefVal | %RPD(Limit) | Qual |
|---|---|---|---|---|---|---|---|---|---|---|
| Methyl tert-butyl ether (MTBE) | 131 | 1.3 | 50 | 108 | 47 | 56 | 140 | 136.8 | 4.0(40) | M2 |
| Benzene | 42.2 | 1.3 | 50 | 0 | 84 | 67 | 134 | 41.9 | 0.6(21) | |
| Toluene | 43.3 | 1.3 | 50 | 0 | 87 | 38 | 130 | 43.82 | 1.3(20) | |
| Ethylbenzene | 43.5 | 1.3 | 50 | 0 | 87 | 70 | 130 | 44.09 | 1.4(20) | |
| m,p-Xylene | 45 | 1.3 | 50 | 0 | 90 | 65 | 139 | 45.64 | 1.4(20) | |
| o-Xylene | 47.3 | 1.3 | 50 | 0 | 95 | 69 | 130 | 47.95 | 1.4(20) | |
| Surr: 1,2-Dichloroethane-d4 | 47.5 | | 50 | | 95 | 70 | 130 | | | |
| Surr: Toluene-d8 | 50.9 | | 50 | | 102 | 70 | 130 | | | |
| Surr: 4-Bromofluorobenzene | 51.9 | | 50 | | 104 | 70 | 130 | | | |

# *Alpha Analytical, Inc.*

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**Date:** *02-Jul-14*

## QC Summary Report

**Work Order:** 14062546

**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.

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

Billing Information :

# 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 : STR14062546**

**Report Due By : 5:00 PM On : 02-Jul-14**

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

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

PO :

Client's COC # : 13592, 13593 Job : 2115-1436-01/ Olympic

EDD Required : Yes

Sampled by : Carl Schulze

| Cooler Temp | Samples Received | Date Printed |
|---|---|---|
| 3 °C | 25-Jun-14 | 25-Jun-14 |

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

| Alpha Sample ID | Client Sample ID | Matrix | Collection Date | No. of Bottles Alpha | Sub | TAT | Requested Tests TPH/P_W | VOC_W | | | | | | | Sample Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STR14062546-01A | MW-1 | AQ | 06/19/14 16:59 | 4 | 0 | 5 | GAS-C | BTXE/M_C | | | | | | | |
| STR14062546-02A | MW-2 | AQ | 06/19/14 18:17 | 4 | 0 | 5 | GAS-C | BTXE/M_C | | | | | | | |
| STR14062546-03A | MW-3 | AQ | 06/19/14 15:00 | 4 | 0 | 5 | GAS-C | BTXE/M_C | | | | | | | |
| STR14062546-04A | MW-4 | AQ | 06/19/14 14:41 | 4 | 0 | 5 | GAS-C | BTXE/M_C | | | | | | | |
| STR14062546-05A | MW-5A | AQ | 06/19/14 20:29 | 4 | 0 | 5 | GAS-C | BTXE/M_C | | | | | | | |
| STR14062546-06A | MW-5B | AQ | 06/19/14 20:22 | 4 | 0 | 5 | GAS-C | BTXE/M_C | | | | | | | |
| STR14062546-07A | MW-6A | AQ | 06/19/14 19:55 | 4 | 0 | 5 | GAS-C | BTXE/M_C | | | | | | | |
| STR14062546-08A | MW-6B | AQ | 06/19/14 19:49 | 4 | 0 | 5 | GAS-C | BTXE/M_C | | | | | | | |
| STR14062546-09A | EX-1 | AQ | 06/19/14 14:17 | 4 | 0 | 5 | GAS-C | BTXE/M_C | | | | | | | |
| STR14062546-10A | EX-2 | AQ | 06/19/14 17:24 | 4 | 0 | 5 | GAS-C | BTXE/M_C | | | | | | | |

Comments: Security seals intact. Frozen ice. ;

| | Signature | Print Name | Company | Date/Time |
|---|---|---|---|---|
| Logged in by: | | | Alpha Analytical, Inc. | 10/25/14 1214 |

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 :

# CHAIN-OF-CUSTODY RECORD

CA

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

**WorkOrder : STR14062546**

**Report Due By : 5:00 PM On : 02-Jul-14**

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

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

EDD Required : **Yes**

Sampled by : Carl Schulze

PO :

Client's COC # : 13592, 13593 Job : 2115-1436-01/ Olympic

| Cooler Temp | Samples Received | Date Printed |
|---|---|---|
| 3 °C | 25-Jun-14 | 25-Jun-14 |

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

| Alpha Sample ID | Client Sample ID | Matrix | Collection Date | No. of Bottles Alpha | Sub | TAT | Requested Tests TPH/P_W | VOC_W | | | | | | | Sample Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STR14062546-11A | EX-3 | AQ | 06/19/14 19:18 | 4 | 0 | 5 | GAS-C | BTXE/M_C | | | | | | | |
| STR14062546-12A | EX-4 | AQ | 06/19/14 18:48 | 4 | 0 | 5 | GAS-C | BTXE/M_C | | | | | | | |
| STR14062546-13A | EX-5 | AQ | 06/19/14 16:34 | 4 | 0 | 5 | GAS-C | BTXE/M_C | | | | | | | |
| STR14062546-14A | EX-6 | AQ | 06/19/14 20:58 | 4 | 0 | 5 | GAS-C | BTXE/M_C | | | | | | | |
| STR14062546-15A | EX-7 | AQ | 06/19/14 17:57 | 4 | 0 | 5 | GAS-C | BTXE/M_C | | | | | | | |

**Comments:** Security seals intact. Frozen ice. :

| | Signature | Print Name | Company | Date/Time |
|---|---|---|---|---|
| **Logged in by:** | | ARIADNA CHACON | Alpha Analytical, Inc. | 6/25/14 1215 |

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: Stratus Environmental Inc.
Attn:
Address: 3330 Cameron Park Dr. Ste 550
City, State, Zip: Cameron Park, CA 95682
Phone Number: _____ Fax: _____

**Alpha Analytical, Inc.**
Main Laboratory: 255 Glendale Ave, Suite 21 Sparks, NV 89431
Phone: 775-355-1044
Fax: 775-355-0406

**Satellite Service Centers:**
Northern CA: 9891 Horn Road, Suite C, Rancho Cordova, CA 95827 Phone: 916-366-9089
Southern NV: 6255 McLeod Ave, Suite 24, Las Vegas, NV 89120 Phone: 702-281-4848
Southern CA: 1007 E. Dominguez St., Suite O, Carson, CA 90746 Phone: 714-388-2901

13592

Page # 1 of 2

**Consultant/ Client Info:**
Company: Olympic
Address: 1436 Grant Ave.
City, State, Zip: San Lorenzo, CA

**Job and Purchase Order Info:**
Job #: 2115 - 1436 - 01
Job Name:
P.O. #:

**Report Attention/Project Manager:**
Name: Tina Scott, Gittinger
Email Address:
Phone #:
Cell #:

**QC Deliverable Info:**
EDD Required? Yes / No
EDF Required? (Yes) / No
Global ID: T0600102256
Data Validation Level: III or IV

Samples Collected from which State? (circle one) AZ (CA) NV WA ID OR DOD Sits Other

| Time Sampled (HHMM) | Date Sampled (MM/DD) | Matrix* (See Key Below) | Lab ID Number (For Lab Use Only) | Sample Description | TAT | Field Filtered? | # Containers** (See Key Below) | Analysis Requested: GRO | BTEX | MTBE | | | | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1659 | 06/19 | AQ | | MW-1 | std | n | 4V | x | x | x | | | | | | | | |
| 1817 | | | | MW-2 | | | | | | | | | | | | | | |
| 1500 | | | | MW-3 | | | | | | | | | | | | | | |
| 1441 | | | | MW-4 | | | | | | | | | | | | | | |
| 2029 | | | | MW-5A | | | | | | | | | | | | | | |
| 2022 | | | | MW-5B | | | | | | | | | | | | | | |
| 1955 | | | | MW-6A | | | | | | | | | | | | | | |
| 1949 | | | | MW-6B | | | | | | | | | | | | | | |
| 1417 | | | | EX-1 | | | | | | | | | | | | | | |
| 1724 | | | | EX-2 | | | | | | | | | | | | | | |
| 1918 | | | | EX-3 | | | | | | | | | | | | | | |
| 1848 | | | | EX-4 | | | | | | | | | | | | | | |

**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 445.0638 (c) (2).

Sampled By: Carl Schulze

| Relinquished by: (Signature/Affiliation) | Date | Time | Received by: (Signature/Affiliation) | Date | Time |
|---|---|---|---|---|---|
| Carl Schulze | 06/24/14 | 1455 | Melissa T | 6-24-14 | 1455 |
| | | | | 06/25/14 | 1203 |
| | | | | | |

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

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.

**Billing Information:**

Company: Stratus Environmental Inc.
Attn:
Address:
City, State, Zip:
Phone Number: Fax:


**Alpha Analytical, Inc.**
Main Laboratory: 255 Glendale Ave, Suite 21 Sparks, NV 89431 Phone: 775-355-1044 Fax: 775-355-0408

**Satellite Service Centers:**
Northern CA: 9891 Horn Road, Suite C, Rancho Cordova, CA 95827 Phone: 916-366-9089
Southern NV: 6255 McLeod Ave, Suite 24, Las Vegas, NV 89120 Phone: 702-281-4848
Southern CA: 1007 E. Dominguez St., Suite O, Carson, CA 90746 Phone: 714-388-2901


13593



**Consultant/ Client Info:**
Company: Olympic
Address:
City, State, Zip:

**Job and Purchase Order Info:**
Job #: 2115-1436-01
Job Name:
P.O. #:

**Report Attention/Project Manager:**
Name: Scott Bittinger
Email Address:
Phone #:
Cell #:

**QC Deliverable Info:**
EDD Required? Yes / No EDF Required? Yes / No
Global ID:
Data Validation Level: III or IV

**Samples Collected from which State? (circle one)** AZ CA NV WA ID OR DOD Site Other

| Time Sampled (HHMM) | Date Sampled (MM/DD) | Matrix* (See Key Below) | Lab ID Number (For Lab Use Only) | Sample Description | TAT | Field Filtered? | # Containers** (See Key Below) | Analysis Requested: GRO | BTEX | MTBE | | | | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1634 | 06/19 | AQ | [redacted] | EX-5 | 5W | N | 4V | X | X | X | | | | | | | | |
| 2058 | ↓ | ↓ | | EX-6 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | | | | | | | | |
| 1757 | ↓ | ↓ | | EX-7 | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | | | | | | | | |
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**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: Carl Schulze

| Relinquished by: (Signature/Affiliation) | Date | Time | Received by: (Signature/Affiliation) | Date | Time |
|---|---|---|---|---|---|
| | 06/25/14 | 1455 | MESSAGE | 6-24-14 | 1455 |
| | Date: | Time: | Received by: (Signature/Affiliation): | Date: 6/25/14 | Time: 1203 |
| Relinquished by: (Signature/Affiliation): | Date: | Time: | Received by: (Signature/Affiliation): | Date: | Time: |

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

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.

# APPENDIX D

# GEOTRACKER ELECTRONIC SUBMITTAL CONFIRMATIONS

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!**

| | |
|---|---|
| **Submittal Type:** | **EDF** |
| **Report Title:** | **2nd quarter 2014 Groundwater monitoring and sampling report** |
| **Report Type:** | **Monitoring Report - Semi-Annually** |
| **Facility Global ID:** | **T0600102256** |
| **Facility Name:** | **OLYMPIC STATION** |
| **File Name:** | **14062546_EDF.zip** |
| **Organization Name:** | **Stratus Environmental, Inc.** |
| **Username:** | **STRATUS NOCAL** |
| **IP Address:** | **50.192.223.97** |
| **Submittal Date/Time:** | **7/31/2014 10:42:46 AM** |
| **Confirmation Number:** | **1585069179** |

VIEW QC REPORT

VIEW DETECTIONS REPORT