### **RECEIVED**

By Alameda County Environmental Health 3:15 pm, Feb 23, 2017

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, GeoTracker No. T0600102256

Dear Mr. Detterman:

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website.

Sincerely,

George and Frida Jaber 1989 Family Trust

Philip Jaber, Trustee.



February 23, 2017 Project No. 2115-1436-01

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

Re: Fourth Quarter 2016 Groundwater Monitoring and Sampling Event Results Report

Former Olympic Station 1436 Grant Avenue San Lorenzo, California ACEHD Case No. RO0000373, GeoTracker No. T0600102256

Dear Mr. Detterman:

On behalf of Mr. Philip Jaber and the George and Frida Jaber 1989 Family Trust, Stratus Environmental, Inc. (Stratus) is submitting the attached report, for the Former Olympic Station located at 1436 Grant Avenue in San Lorenzo, California (the site, see Figures 1 through 3). If you have any questions or comments concerning this report, please contact Gowri Kowtha at gkowtha@stratusinc.net or (530) 676-6001 or Scott Bittinger at (530) 676-2062.

Sincerely,

STRATUS ENVIRONMENTAL, INC.

Scott G. Bittinger, P.G.

Project Geologist

Gowri S. Kowtha, P.E.

Project Manager

Attachment: Fourth Quarter 2016 Groundwater Monitoring and Sampling Event Results

Report

cc: Mr. Philip Jaber

Mr. Mark Detterman, P.G., ACEHD Fourth Quarter 2016 Groundwater Monitoring and Sampling Event Results Report Former Olympic Station, San Lorenzo, California Page 2

## FORMER OLYMPIC STATION FOURTH QUARTER 2016 GROUNDWATER MONITORING AND SAMPLING EVENT RESULTS REPORT

Facility Address: 1436 Grant Avenue, San Lorenzo, CA

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

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 PERIOD (Fourth Quarter 2016):**

- 1. On October 19, 2016, Stratus conducted the fourth quarter 2016 groundwater monitoring and sampling event, which consisted of gauging and sampling wells MW-1 through MW-4, MW-5A through MW-8A, MW-5B, MW-6B, and EX-1 through EX-7.
- 2. Stratus removed a thermal oxidizer historically used to perform dual phase extraction (DPE) remediation from the property.
- 3. On October 1, 2016, Stratus visited the site in order to conduct additional field reconnaissance work for water wells located west, southwest, and northwest of the site. Groundwater samples were collected from two additional wells (1632 Via Barrett and 1617 Via Lacqua).
- 4. During the fourth quarter 2016 reports were prepared and issued to the owners of property at 15868 Corte Ulisse, 15772 Via Teresa, 1632 Via Barrett, and 1617 Via Lacqua to document findings associated with sampling of water wells on these properties, which occurred between September 24, 2016 and October 1, 2016. Reports for 1587 Via Rancho and 15857 Via Seco were prepared and issued during the previous quarter.
- On October 18, 2016, Stratus directed the advancement of five direct push soil borings (GP-1 through GP-5).
- 6. Stratus prepared and submitted an Additional Site Investigation Report (November 28, 2016).

#### **WORK PROPOSED FOR NEXT PERIOD (First Quarter 2017):**

- 1. Per a request by the ACEHD, Stratus will perform quarterly groundwater monitoring and sampling at the site, using all of the site's monitoring and remediation wells.
- 2. Stratus, ACEHD, and Mr. Jaber are scheduled to meet on February 24, 2017, in order to discuss future work actions for the site.

Mr. Mark Detterman, P.G., ACEHD Fourth Quarter 2016 Groundwater Monitoring and Sampling Event Results Report Former Olympic Station, San Lorenzo, California Page 3

Current Phase of Project:	CAP/REM (Start-up)
Frequency of Groundwater Monitoring:	Quarterly
Frequency of Groundwater Monitoring and Sampling:	Quarterly
Groundwater Sampling Date:	October 19, 2016
Is Free Product (FP) Present on Site:	No
Approximate Depth to Groundwater:	6.50 to 8.17 feet below top of well casing
Groundwater Flow Direction:	Southwest
Groundwater Gradient:	0.01 ft/ft

#### **GROUNDWATER MONITORING AND SAMPLING EVENT:**

An electronic water level sounder was used to gauge depth to water levels in the site's monitoring and extraction wells. Following gauging, purge groundwater samples were collected from the monitoring and extraction wells. Groundwater samples collected from the wells were analyzed at a state-certified analytical laboratory for gasoline range organics (GRO) by EPA Method SW8015B/SW8260B and for benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tert-butyl ether (MTBE) by EPA Method SW8260B. Well construction details are summarized in Table 1, and historical groundwater elevation and analytical data are summarized in Table 2. Field data sheets documenting measurements and observations obtained by Stratus personnel, a description of sampling and analyses procedures utilized, and laboratory analytical reports with chain-of-custody records are included in Appendix A, B, and C, respectively. Documentation of depth to groundwater and analytical data uploading to the State of California's GeoTracker database is provided in Appendix D.

Depth to groundwater ranged from 6.50 to 8.17 feet below the top of the well casing on October 19, 2016. These depth to groundwater measurements have been corrected to elevation mean sea level and used to prepare a groundwater elevation contour map (Figure 4). Southwest groundwater flow was observed on October 19, 2016. West and southwest groundwater flow patterns have typically been observed at the site.

The highest concentrations of fuel contaminants in groundwater have recently been detected in monitoring wells installed to a depth of 10 to 12 feet below ground surface (bgs), approximately 3 to 5 feet below the current groundwater table at the site. Lower concentrations of fuel contaminants are consistently reported in samples collected from the other monitoring/remediation wells, which have been installed to depths ranging from approximately 20 to 26 feet bgs. Figure 5 presents a summary of GRO, benzene, and MTBE concentrations in well samples collected from the shallow monitoring wells (10-12 feet in depth) on October 19, 2016. GRO and was detected in three of the five well samples, at concentrations ranging from 230  $\mu$ g/L to 3,200  $\mu$ g/L. Benzene was detected at wells MW-5A (14  $\mu$ g/L) and MW-6A (920  $\mu$ g/L). MTBE was detected in wells MW-4 (43  $\mu$ g/L), MW-6A (11  $\mu$ g/L), and MW-7A (2.3  $\mu$ g/L). Figure 6 presents a summary of GRO, benzene, and MTBE concentrations in well samples collected from the deeper monitoring wells (20-26 feet in depth) on October 19, 2016. GRO was not detected in any of the deeper well samples and benzene was only reported in the EX-6 sample (0.89  $\mu$ g/L). MTBE was detected in all of the deeper well samples, at concentrations ranging from 4.8  $\mu$ g/L to 120  $\mu$ g/L.

#### DISCUSSION:

During the late third and early fourth quarters of 2016, Stratus completed work at the site intended to evaluate post-DPE remediation concentrations of petroleum hydrocarbons in soil and soil vapor at the site, and attempt to locate undocumented water supply wells west, northwest, and southwest (generally

Mr. Mark Detterman, P.G., ACEHD Fourth Quarter 2016 Groundwater Monitoring and Sampling Event Results Report Former Olympic Station, San Lorenzo, California Page 4

downgradient) of the site. The work activities completed illustrated that DPE was effective in significantly reducing petroleum hydrocarbon impact to soil and soil vapor at the site. Thirteen water wells were located, eight water wells were confirmed to be in use, and more undocumented wells in the neighborhood are likely present. Six water wells were sampled between the dates of July 26, 2016 and October 1, 2016 and three were impacted with MTBE; one well contained MTBE at 57  $\mu$ g/L and the other two wells contained MTBE at 1  $\mu$ g/L or less. Given the presence of impacted water wells, the site does not currently meet established criteria for low threat closure of the environmental case. In February 2017, Stratus, ACEHD, and Mr. Jaber will meet in order to discuss a path forward with the intention of managing the environmental case towards eventual closure.

#### LIMITATIONS:

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

#### ATTACHMENTS:

<ul> <li>Table 1</li> </ul>	Well Construction Detail Summary
<ul><li>Table 2</li></ul>	Groundwater Elevation and Analytical Summary
<ul><li>Figure 1</li></ul>	Site Location Map
<ul> <li>Figure 2</li> </ul>	Site Plan
<ul> <li>Figure 3</li> </ul>	Area Map
<ul> <li>Figure 4</li> </ul>	Groundwater Elevation Contour Map, Fourth Quarter 2016
• Figure 5	Groundwater Analytical Summary, 10-12' Depth Monitoring Wells, Fourth Quarter 2016
• Figure 6	Groundwater Analytical Summary, 20-26' Depth Monitoring Wells, Fourth Quarter 2016
<ul> <li>Appendix A</li> </ul>	Field Data Sheets
<ul> <li>Appendix B</li> </ul>	Sampling and Analyses Procedures
<ul> <li>Appendix C</li> </ul>	Laboratory Analytical Reports and Chain-of-Custody Documentation
<ul> <li>Appendix D</li> </ul>	GeoTracker Electronic Submittal Confirmations

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

Boring/Well	Date	Boring	_	Well	Screen	Slot	Drilling	Consultant
I.D.		-	Diameter			Size	Method	
		(feet)	(inches)	(inches)	(feet bgs)	(inches)		
Groundwater	Monitorin	g 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
MW-7A	12/04/15	12	8	2	4-12	0.020	HSA	Stratus Environmental
MW-8A	12/04/15	12	8	2	4-12	0.020	HSA	Stratus Environmental
Extraction W	ells							
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 Wel	ls							
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
Soil Vapor Sa	mpling Po	ints						
SV-1	02/12/10	5.5	3.25	0.375	5-5.1	0.002	HA	Conestoga-Rovers & Assoc.
SV-2	02/09/10	5.5	3.25	0.375	5-5.1	0.002	HA	Conestoga-Rovers & Assoc.
SV-3	02/09/10	5.5	3.25	0.375	5-5.1	0.002	НА	Conestoga-Rovers & Assoc.
SV-4	02/09/10	5.5	3.25	0.375	5-5.1	0.002	HA	Conestoga-Rovers & Assoc.
SV-5	05/20/11	5.5	3.25	0.375	5-5.1	0.002	НА	Stratus Environmental, Inc.
SV-6	12/04/15	6	2.5	0.25	5.3-5.5	mesh	НА	Stratus Environmental, Inc.
SV-7	12/04/15	6	2.5	0.25	5.3-5.5	mesh	НА	Stratus Environmental, Inc.

Notes:

HSA = Hollow Stem Auger

HA = Hand Auger

Data regarding the construction of wells MW-1 through MW-4 obtained from groundwater monitoring reports prepared by Conestoga-Rovers & Associates

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

Well ID	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (μg/L)	TPHd (μg/L)	GRO (μg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	DIPE (μg/L)	TAME (µg/L)	ETBE (µg/L)		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	.55		< 50	<1,300	18	<13	<13	<13	1,700	22						
	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	777		< 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	-55		< 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	<50 <b>0</b>	< 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	<50 <b>0</b>	< 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		77								44			-			
	08/02/11	7.47		11.13				120	< 0.50	< 0.50	< 0.50	< 0.50	160							
	09/29/11	7.83		10.77	555			-							1.77					
	10/12/11	7.03		11.57																
	11/09/11	7.55		11.05																
	12/12/11	7.81		10.79										3445						
	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			44			==	
	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		1188					
	11/25/14 02/02/15	7.45		11.15	-		=	51	< 0.50	< 0.50	< 0.50	< 0.50	100							
		7.24			-									( <del>***</del>			-			
	04/14/15 07/14/15	7.24		11.36				68	< 0.50	< 0.50	< 0.50	< 0.50	120				775			
		0.52		10.07										-		***				
	10/20/15	8.53		10.07		7.5		330	< 0.50	< 0.50	< 0.50	< 0.50	450							(
	12/17/15													-						
	01/11/16 07/05/16				-															
		7 12		11.40																
	10/19/16	7.12		11.48				<50	<0.50	<0.50	<0.50	<0.50	77						÷-	

			Top of																	
Well ID	Date Collected	Depth to Water (feet)	Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (μg/L)	TPHd (µg/L)	GRO (µg/L)	Benzene (μg/L)	Toluene (μg/L)	Ethyl- benzene (μg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	DIPE (μg/L)	TAME (μg/L)	ETBE (μg/L)		Ethanol (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	77	<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	200		< 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	-											22				
	08/02/11	7.06		10.94		1.77		< 50	< 0.50	< 0.50	< 0.50	< 0.50	46		( <del>**</del> )					
	09/29/11	7.39		10.61	22			< 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	1		Pr. 00	< 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				122			
	02/27/13	6.91		11.09				<50	< 0.50	< 0.50	< 0.50	< 0.50	12			<del></del>				-
	08/26/13	7.61		10.39			-	<50	< 0.50	< 0.50	< 0.50	< 0.50	6.2			22				
	06/19/14	7.73		10.27	-			<50	< 0.50	< 0.50	< 0.50	< 0.50	13			**:				
	11/25/14	7.03		10.97				<50	< 0.50	< 0.50	< 0.50	< 0.50	0.67							
	02/02/15													0.000						
	04/14/15	6.83		11.17				<50	< 0.50	< 0.50	< 0.50	< 0.50	2.1					_		
	07/14/15																		-	-
	10/20/15	8.00		10.00				< 50	< 0.50	< 0.50	< 0.50	< 0.50	1.0		=		77	==		
	12/17/15													-						
	01/11/16																			
	07/05/16			-	-												440	200		
	10/19/16	6.70		11.30				<50	< 0.50	< 0.50	< 0.50	< 0.50	23							

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

Well ID	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (μg/L)	TPHd (μg/L)	GRO (μg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	DIPE (µg/L)	TAME (μg/L)			Ethanol (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			20				
	07/19/00	7.24		7.17			270**	2,700*	420	<2.5	160	< 2.5	99							
	10/25/00	7.52		6.89		757	150	710*	180	<2.5	24	<2.5	71						27	
	02/16/07	5.90		8.51	(1 <del>44</del> )	-											-			
	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	722		<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		22	< 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	(77)		<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		777					
	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	(88)			<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				7.7			
	02/27/13	6.90		11.05				<50	< 0.50	< 0.50	< 0.50	< 0.50	18			22			-	
	08/26/13	7.72		10.23			100	<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		44-					
	11/25/14	7.11		10.84				<50	< 0.50	< 0.50	< 0.50	< 0.50	20			-	***			
	02/02/15													1000						
	04/14/15	6.85		11.10		100		<50	< 0.50	< 0.50	< 0.50	< 0.50	43							
	07/14/15	0 1 1													-	120		-		
	10/20/15	8.11		9.84	(**)			<50	< 0.50	< 0.50	< 0.50	< 0.50	39						**	
	12/17/15																			_
	01/11/16										-				155					-
	07/05/16 10/19/16	6.71		11.24	122		-				<b></b>					22			-	
	10/19/10	6.71		11.24	(***)			<50	<0.50	<0.50	<0.50	<0.50	23					<b></b>		!

Well ID	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (μg/L)	TPHd (µg/L)	GRO (µg/L)	Benzene (µg/L)	Toluene (μg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	DIPE (μg/L)	TAME (μg/L)	ETBE (µg/L)		Ethanol (µg/L)		DC'A
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		100	22				
	02/04/11	6.71		8.44				4,800[1]	350	7.1	23	<2.5	440	1						
	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		FF.		4,700	290	<2.5[2]	12	<2.5[2]	970				1227	122		
	09/29/11	7.37		10.62	- <u>144</u> 7			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	( <del>***</del> )			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	22	<del>-</del>					
	03/15/12	6.15		11.84				8,300	530	<5.0[2]	120	72	3,700							
	08/28/12	7.40		10.59	( <del></del> )	-	1044	2,400	250	<4.0[2]	14	<4.0[2]	1,400		<del></del> -		.77			
	02/27/13	6.85		11.14	(55)	.77		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	1997	-		-			
	06/19/14	7.48		10.51				6,000	260	<4.0[2]	8.8	<4.0[2]	1,600				122	-		
	11/25/14	7.00		10.99			-	2,900	72	<5.0[2]	<5.0[2]	<5.0[2]	4,500							
	02/02/15				-										22				-77	
	04/14/15	7.00		10.99			-	460	33	<1.0[4]	<1.0[4]	<1.0[4]	730	ee:						
	07/14/15																			
	10/20/15	8.07		9.92				1,100	14	<2.0[2]	2.0	<2.0[2]	1,400			-				
	12/17/15					***							-							
	01/11/16					55								-				_		
	07/05/16	1888				24									7.5					
	10/19/16	8.17		9.82		.57		< 50	< 0.50	< 0.50	< 0.50	< 0.50	43	0.440					-	

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY

Well ID	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (μg/L)		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)		Ethanol (μg/L)		1,2- DCA (μg/L)
MW-5A	06/19/14	7.53	17.94	10.41		-	-	21,000	2,000	<25[2]	1,400	650	<25[2]							
	09/19/14	8.61		9.33				18,000	1,900	11	1,200	839.9	<5[2]							
	11/25/14	7.47		10.47	1707			14,000	1,500	<10[2]	1,100	570	<10[2]							
	02/02/15	6.90		11.04				10,000	970	<20[2]	480	180	<20[2]						_	
	04/14/15	6.81		11.13		200		12,000	1,600	5.2	940	270	7.0	_						
	07/14/15	7.85		10.09	120			2,800	390	<2.0[2]	130	40	13		40				-	
	10/20/15	8.21		9.73				1,300	310	<1.5[2]	55	4.5	13						_	-
	12/17/15																		_	
	01/11/16	6.20		11.74				1,100	230	<1.0[2]	42	<1.0[2]	<1.0[2]							
	07/05/16	7.18		10.76				660	120	< 0.50	23	0.79	1.8	_		22				
	10/19/16	6.66		11.28		-		230	14	< 0.50	3.4	< 0.50	< 0.50							
MW-5B	06/19/14	7.52	17.92	10.40				<50	< 0.50	< 0.50	< 0.50	< 0.50	32							
	11/25/14	7.18		10.74		~-		< 50	< 0.50	< 0.50	< 0.50	< 0.50	10	-						
	02/02/15						-													
	04/14/15	6.88		11.04				< 50	< 0.50	< 0.50	< 0.50	< 0.50	2.1	_						
	07/14/15																			-
	10/20/15	8.10		9.82				<50	< 0.50	< 0.50	< 0.50	< 0.50	1 7							
	12/17/15				-4															
	01/11/16																			
	07/05/16													-22						
	10/19/16	6.75		11.17				<50	< 0.50	< 0.50	< 0.50	< 0.50	82				-3.00			

TABLE 2
GROUNDWATER ELEVATION AND ANALYTICAL SUMMARY

MW-6A 06/19/14 7.66 18.05 10.39 43,000 3,300 <50[2] 2,000 3,100 77 20/19/14 8.80 9.25 28,000 3,400 19 2,000 1,900 45 11/25/14 7.56 10.49 23,000 2,800 16 1,500 1,730 160 20/12/15 7.13 10.92 14,000 1,100 <20[2] 490 350 35 04/14/15 6.98 11.07 12,000 2,100 <10[2] 880 190 61 07/14/15 8.00 10.05 4,400 930 <5.0[2] 200 263 99 10/20/15 8.34 9.71 5,700 1,300 <10[2] 170 380 110 12/17/15 1,700 480 <2.0[2] <0.00 2,0		Well ID	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (μg/L)	TPHd (µg/L)	GRO (μg/L)	Benzene (µg/L)	Toluene (μg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	DIPE (μg/L)		ETBE (μg/L)		Ethanol (μg/L)		1,2- DCA (μg/L)
09/19/14	1	MW-6A	06/19/14	7.66	18.05	10.39		). <del></del>		43,000	3,300	<50[2]	2,000	3,100	77		-					
11/25/14 7.56	i		09/19/14	8.80		9.25				28,000					45							
02/02/15 7.13 10.92 14,000 1,100 <20[2] 490 350 35 04/14/15 6.98 11.07 12,000 2,100 <10[2] 880 190 61 10/14/15 8.00 10.05 4,400 930 <5.0[2] 200 263 99 10/20/15 8.34 9.71 5,700 1,300 <10[2] 170 380 110 12/21/17/15			11/25/14	7.56		10.49				23,000		16	-									
04/14/15 6.98 11.07 12,000 2,100 <10[2] 880 190 61 10/14/15 8.00 10.05 4,400 930 <5.0[2] 200 263 99 10/14/15 8.34 9.71 5,700 1,300 <10[2] 170 380 110 12/17/15 12/17/15 1.700 480 <2.0[2] 200 263 99 1.700 1,300 <10[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 200 263 99 1.700 480 <10[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 170 380 4.700 4.700 480 4.700 4.			02/02/15	7.13		10.92				14,000	1,100	<20[2]		-	35					-		
07/14/15 8.00 10.05 4,400 930 <5.0[2] 200 263 99 10/20/15 8.34 9.71 5,700 1,300 <10[2] 170 380 110 12/17/15 1,700 480 <2.0[2] 170 380 110 1.700 480 <2.0[2] 2.0[2] 52.7 43 1,700 480 <2.0[2] 2.0[2] 52.7 43 1,700 480 <2.0[2] 2.0[2] 52.7 43 1,700 480 <2.0[2] 2.0[2] 52.7 43 1,700 480 <2.0[2] 2.0[2] 52.7 43 1,700 480 <2.0[2] 2.0[2] 52.7 43 1,700 480 <2.0[2] 2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2] 52.7 43 1,700 480 <2.0[2]			04/14/15	6.98		11.07		-	-		2,100		880	190	61							
10/20/15 8.34 9.71 5,700 1,300 <10[2] 170 380 110 12/17/15 1.700 480 <2.0[2] 52.7 43 1.700 480 <2.0[2] 52.7 43 1.700 480 <2.0[2] 52.7 43 1.700 480 <2.0[2] 52.7 43 1.700 480 <2.0[2] 52.7 43 1.700 480 <2.0[2] 52.7 43 1.700 480 1.700 1.700 480			07/14/15	8.00		10.05	22			4,400	930		200	263	99						1945	
12/17/15 1,700 480 <2.0[2] <2.0[2] 52.7 43 07/05/16 7.21 10.84 1,500 280 1.3 5.9 79 4.3 10/19/16 6.93 11.12 3,200 920 <10[1] 78 <10[1] 11			10/20/15	8.34		9.71				5,700	1,300		170	380	110							
07/05/16 7.21 10.84 1,500 280 1.3 5.9 79 4.3 10/19/16 6.93 11.12 3,200 920 <10[1] 78 <10[1] 11 11/125/14 6.98 10.71 <50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50 <1.50			12/17/15				_											**				
07/05/16 7.21 10.84 1,500 280 1.3 5.9 79 4.3 10/19/16 6.93 11.12 3,200 920 <10[1] 78 <10[1] 11 11.500 280 1.3 5.9 79 4.3 3,200 920 <10[1] 78 <10[1] 11 11.500 280 1.3 5.9 79 4.3 11.500 280 1.3 5.9 79 4.3 11.500 280 1.3 5.9 79 4.3 11.500 280 1.3 5.9 79 4.3 11.500 280 1.3 5.9 79 4.3 11.500 280 1.3 5.9 79 4.3 11.500 280 1.3 5.9 79 4.3 11.500 280 1.3 5.9 79 4.3 11.500 280 1.3 5.9 79 4.3 11.500 280 1.3 5.9 79 4.3 11.500 280 1.3 5.9 79 4.3 11.500 280 1.3 5.9 79 4.3			01/11/16	6.13		11.92		-		1,700	480	<2.0[2]	<2.0[2]	52.7	43							
MW-6B 06/19/14 7.32 17.69 10.37 86 <0.50 <0.50 <0.50 <0.50 82 02/02/15 <50 <0.50 <0.50 <0.50 <0.50 <0.50 51 04/14/15 6.68 11.01 85 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 150 10/14/15 10/20/15 7.91 9.78 <100 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50			07/05/16	7.21		10.84	277			1,500	280				4.3	42						
11/25/14 6.98 10.71 <50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 51 0.00 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.5			10/19/16	6.93		11.12				3,200	920	<10[1]	78	<10[1]	11		-		-			
11/25/14 6.98 10.71 <50 <0.50 <0.50 <0.50 <0.50 <0.50 51 02/02/15 <50 <0.50 <0.50 <0.50 <0.50 51 04/14/15 6.68 11.01 85 <0.50 <0.50 <0.50 <0.50 <0.50 150 07/14/15 10/20/15 7.91 9.78 <100 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 40 07/14/15 01/11/16	1	MW-6B	06/19/14	7.32	17.69	10.37				86	<0.50	< 0.50	< 0.50	< 0.50	82							
04/14/15 6.68 11.01 85 <0.50 <0.50 <0.50 <0.50 150 07/14/15 10/20/15 7.91 9.78 <100 <0.50 <0.50 <0.50 <0.50 <0.50 40 12/17/15	1		11/25/14	6.98		10.71				< 50	< 0.50	< 0.50	< 0.50		51		-					
07/14/15 <100 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <0.50 <			02/02/15	**													**					
10/20/15 7.91 9.78 <100 <0.50 <0.50 <0.50 <0.50 40 12/17/15			04/14/15	6.68		11.01	-		×-	85	< 0.50	< 0.50	< 0.50	< 0.50	150							
12/17/15			07/14/15																			
01/11/16			10/20/15	7.91		9.78		***		<100	< 0.50	< 0.50	< 0.50	< 0.50	40							
07/05/16			12/17/15				122															
40/10/16			01/11/16				( <del></del>											-				
10/19/16 655 11.14			07/05/16													42					-	
30 0.50 0.50 0.50 120			10/19/16	6.55		11.14	r <del></del> :			<50	< 0.50	< 0.50	< 0.50	< 0.50	120							

Well ID	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (μg/L)	TPHd (µg/L)	GRO (μg/L)	Benzene (µg/L)	Toluene (μg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	DIPE (μg/L)	TAME (μg/L)	ETBE (µg/L)		Ethanol (μg/L)	1,2- DCA (μg/L)
MW-7A	12/17/15	8.04	17.65	9.61		655		350	<0.50	< 0.50	1.2	< 0.50	37		200				
	01/11/16	6.42		11.23	(44)			470	< 0.50	< 0.50	4.6	< 0.50	20						 
	07/05/16	7.21		10.44	-			440	< 0.50	< 0.50	11	< 0.50	4.8						
	10/19/16	7.15		10.50				370	< 0.50	< 0.50	12	< 0.50	2.3						 
MW-8A	12/17/15	7.25	18.08	10.83				210	< 0.50	<0.50	< 0.50	< 0.50	0.63				927		 
	01/11/16	7.02		11.06	75			< 50	< 0.50	< 0.50	< 0.50	< 0.50	0.65						 
	07/05/16	8.80		9.28				<50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50						 
	10/19/16	8.09		9.99				<50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50						 11

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

Well ID	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (μg/L)		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)		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 C	Covered by C	ar - No San	nple Colle	cted						ļ
	06/19/14	7.59		10.55				<50	< 0.50	< 0.50	< 0.50	< 0.50	19		_					
	11/25/14	6.95		11.19				< 50	< 0.50	< 0.50	< 0.50	< 0.50	15							
	02/02/15			<del></del>																
	04/14/15	NM		NM			-	64	1.5	< 0.50	< 0.50	< 0.50	49			22			22	
	07/14/15	0.05													-					
	10/20/15	8.25		9.89		777		67	4.3	< 0.50	1.2	< 0.50	36							
	12/17/15																			
	01/11/16							-						-						
	07/05/16					177									-	77			**	/
	10/19/16	6.92		11.22			-	<50	<0.50	<0.50	< 0.50	< 0.50	4.8	-	1986					
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	44		-								122					
	10/12/11	6.65		11.49										-		=				
	11/09/11	7.08		11.06												=				
1	12/12/11	7.35		10.79	-	3		590	5.6	<1.0[2]	<1.0[2]	<1.0[2]	920			-				
	03/15/12	6.58		11.56	2/22		<u> </u>	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	(	( <del>**</del>		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	. 22						
	06/19/14	7.37		10.77				150	< 0.50	< 0.50	< 0.50	< 0.50	170							
	11/25/14	7.02		11.12	-			72	< 0.50	< 0.50	< 0.50	< 0.50	130				-			
	02/02/15						_								-					
	04/14/15	6.77		11.37	-	***		70	< 0.50	< 0.50	< 0.50	< 0.50	120		-					
	07/14/15				**											-				
	10/20/15	8.03		10.11				<50	< 0.50	< 0.50	< 0.50	< 0.50	37				-	-		
	12/17/15					**										, <del>1</del>				
	01/11/16				**												200			
	07/05/16															_				
	10/19/16	6.72		11.42				<50	< 0.50	< 0.50	< 0.50	< 0.50	30			_				

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

	Well ID	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (μg/L)	TPHd (µg/L)	GRO (µg/L)	Benzene (µg/L)	Toluene (μg/L)	Ethyl- benzene (µg/L)	Total Xylenes (µg/L)	MTBE (μg/L)	DIPE (μg/L)	TAME (μg/L)	ETBE (μg/L)		Ethanol (μg/L)	EDB (μg/L)	1,2- DCA (μg/L)
	EX-3	06/03/11	6.55	17.63	11.08	75			95	0.93	< 0.50	< 0.50	< 0.50	78				223			
1		08/02/11	6.82		10.81				130	1.5	< 0.50	< 0.50	< 0.50	150		~~	17.7				
		09/29/11	7.15		10.48																
ł		10/12/11	6.37		11.26	7.7											122				
		11/19/11	6.89		10.74	-										77					
ļ		12/12/11	7.12		10.51		1227		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							
1		08/28/12	7.15		10.48		-		100	< 0.50	< 0.50	< 0.50	< 0.50	190				_			
		02/27/13	6.63		11.00				84	< 0.50	< 0.50	< 0.50	< 0.50	93							
		08/26/13	7.41		10.22				120	< 0.50	< 0.50	< 0.50	< 0.50	120			-			~-	
		06/19/14	7.20		10.43				96	< 0.50	< 0.50	< 0.50	< 0.50	110							
		11/25/14	6.85		10.78				< 50	< 0.50	< 0.50	< 0.50	< 0.50	6.9		-		24			
		02/02/15				155									_		922				
		04/14/15	6.57		11.06				< 50	< 0.50	< 0.50	< 0.50	< 0.50	13						(30000)	
		07/14/15																			
		10/20/15	7.83		9.80	77			< 50	< 0.50	< 0.50	< 0.50	< 0.50	1.7		500.7					
		12/17/15																			
		01/11/16															***			-	
		07/05/16													22	-					
		10/19/16	6.50		11.13		***	-	<50	< 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							
		11/25/14	7.21		11.09	(	-		<50	< 0.50	< 0.50	< 0.50	< 0.50	8.5	_		**			194	
		02/02/15				-										-					
		04/14/15	7.00		11.30				<50	< 0.50	< 0.50	< 0.50	< 0.50	1.1		-					
		07/14/15																		-	
		10/20/15	8.29		10.01				<50	< 0.50	< 0.50	< 0.50	< 0.50	4.2		144	**				
		12/17/15	22			-															
		01/11/16				***														-	
		07/05/16					-										**				
		10/19/16	6.92		11.38				<50	< 0.50	< 0.50	< 0.50	< 0.50	5.2			-			-	
	EX-5	06/19/14	7.84	18.41	10.57	144			110	6.0	< 0.50	< 0.50	< 0.50	14							
		11/25/14	7.42		10.99			7.7	< 50	< 0.50	< 0.50	< 0.50	< 0.50	40		42					
		02/02/15					***										-	-			
		04/14/15	NM		NM		-		< 50	< 0.50	< 0.50	< 0.50	< 0.50	15						144	
		07/14/15					1775										_			_	
		10/20/15	8.49		9.92				< 50	< 0.50	< 0.50	< 0.50	< 0.50	8.9							
		12/17/15						_													
		01/11/16					-														_
		07/05/16																			_
		10/19/16	7.09		11.32				<50	< 0.50	< 0.50	< 0.50	< 0.50	12						-	

Well ID	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (μg/L)	TPHd (μg/L)	GRO (μg/L)	Benzene (μg/L)	Toluene (μg/L)	Ethyl- benzene (µg/L)	Total Xylenes (μg/L)			TAME (μg/L)			Ethanol (μg/L)		1,2- DCA (μg/L)
EX-6	06/19/14	7.81	18.29	10.48				190	25	< 0.50	5.9	< 0.50	18							
	11/25/14	7.44		10.85				250	36	< 0.50	7.1	< 0.50	160							
	02/02/15																			
	04/14/15	7.17		11.12				180	25	< 0.50	3.1	< 0.50	110							
	07/14/15					144	-													
	10/20/15	8.45		9.84				180	10	< 0.50	< 0.50	< 0.50	210							
	12/17/15																			
	01/11/16																			
	07/05/16						-													
	10/19/16	7.02		11.27				<50	0.89	< 0.50	< 0.50	< 0.50	57					=		
EX-7	06/19/14	7.44	18.06	10.62				56	0.79	< 0.50	< 0.50	< 0.50	50				-			
	11/25/14	7.04		11.02				< 50	< 0.50	< 0.50	< 0.50	< 0.50	3.3							
	02/02/15																			
	04/14/15	6.81		11.25				< 50	< 0.50	< 0.50	< 0.50	< 0.50	24							
	07/14/15														22				-	
	10/20/15	8.13		9.93				< 50	< 0.50	< 0.50	< 0.50	< 0.50	5.2							
	12/17/15				-22															
	01/11/16													_	22					
	07/05/16					-														
	10/19/16	6.75		11.31	-			<50	< 0.50	< 0.50	< 0.50	< 0.50	24			44				

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

Well ID	Date Collected	Depth to Water (feet)	Top of Casing Elevation (ft msl)	Groundwater Elevation (ft msl)	Oil & Grease (µg/L)	TPHmo (μg/L)		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)		TBA (μg/L)	Ethanol (μg/L)	EDB (µg/L)	1,2- DCA (μg/L)
DOMESTIC WELLS																				
1587 Via Rancho	07/26/16		ATT					<50	< 0.50	< 0.50	< 0.50	<0.50	57			1				
15857 Via Seco	09/06/16							<50	< 0.50	< 0.50	<0.50	< 0.50	0.68							
15868 Corte Ulisse	09/24/16					-		<50	< 0.50	<0.50	< 0.50	< 0.50	< 0.50				-			
15772 Via Theresa	09/24/16			==				<50	<0.50	< 0.50	< 0.50	< 0.50	< 0.50						_	
1632 Via Barrett	10/01/16							<50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50							
1617 Via Lacqua	10/01/16		1440		-		***	<50	<0.50	< 0.50	<0.50	< 0.50	1.0			-				
Legend/Key: ft msl = feet above mean sea	laval		TOLL	tal netroleum hydroor	1			·	LEDE 4.1											

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.

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

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

-- = No sample collected

[1] Weakly modified or unmodified gasoline is significant.

[2] = Reporting Limits were increased due to high concentrations of target analytes.

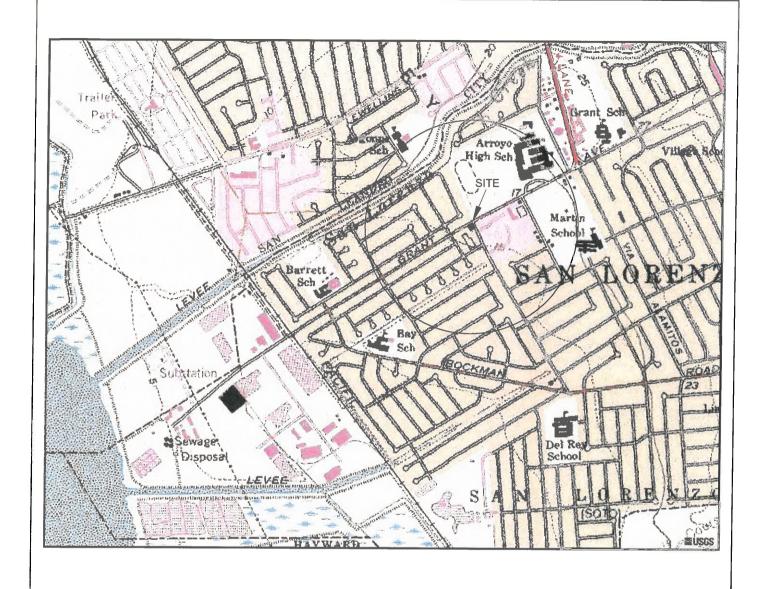
\*\*\* = Hydrocarbon reported does not match the pattern of the diesel standard.

= 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.

[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.

[4] = Repoting Limits were increased due to sample foaming.



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



QUADRANGLE LOCATION



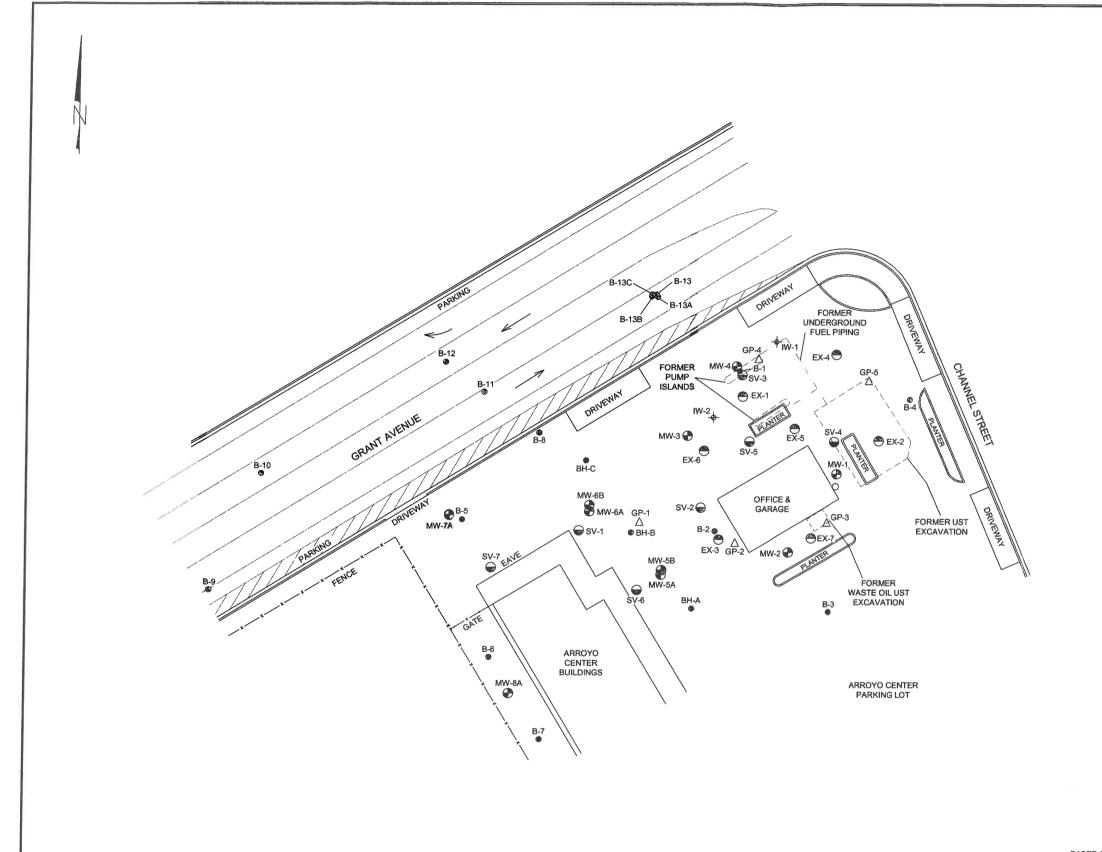
APPROXIMATE SCALE



FORMER OLYMPIC SERVICE STATION 1436 GRANT AVENUE SAN LORENZO, CALIFORNIA

SITE LOCATION MAP

FIGURE



₩W-1 MONITORING WELL LOCATION
 SV-1 SOIL VAPOR PROBE LOCATION
 EX-1 EXTRACTION WELL LOCATION
 IW-1 OZONE INJECTION WELL LOCATION

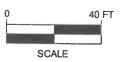
B-1 SOIL BORING LOCATION

 $\triangle$  GP-1 APPROXIMATE SOIL BORING LOCATION

BASED ON SURVEY PREPARED BY MORROW SURVEYING ON 6/15/11 & UPDATED IN JUNE 2014 & DECEMBER 2015.

STRATUS ENVIRONMENTAL, INC.

PATH NAME: Olympic
DRAFTER INITIALS: DMG
DATE LAST REVISED: November 1, 2016
FILENAME: Olympic Siteplan



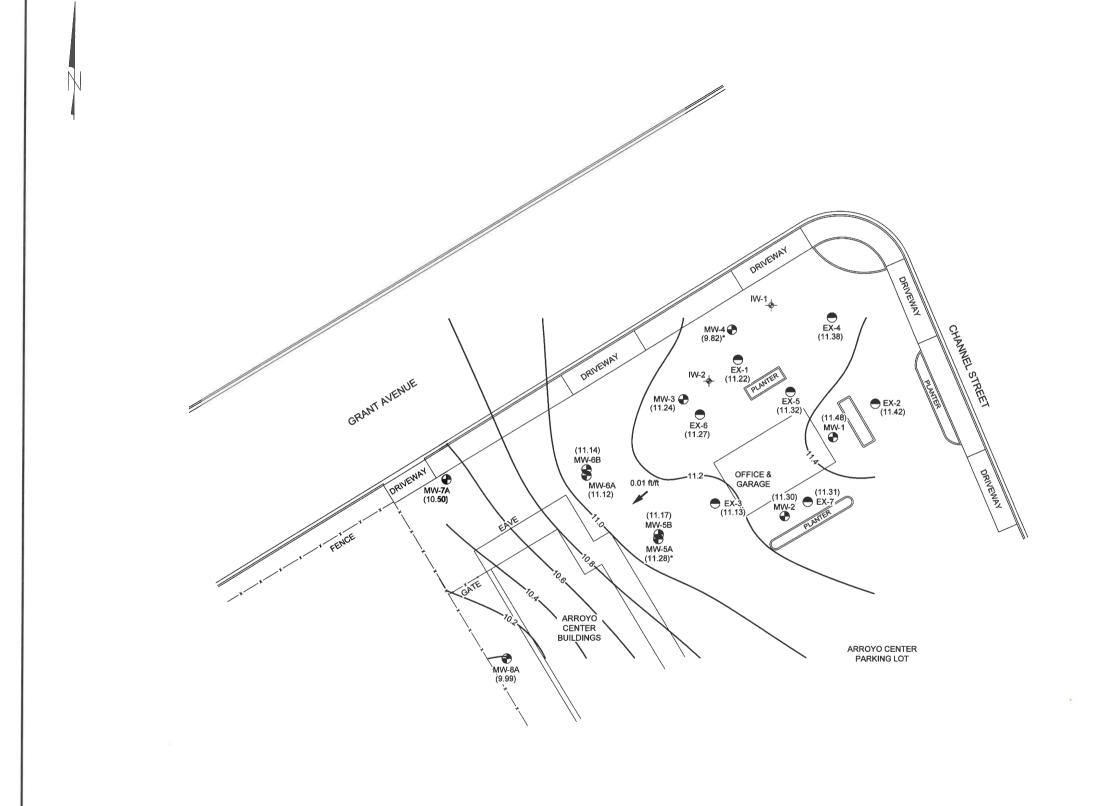
FORMER OLYMPIC SERVICE STATION 1436 GRANT AVENUE SAN LORENZO, CALIFORNIA

SITE PLAN

FIGURE

2
ROJECT N





→ MW-1 MONITORING WELL LOCATION

EX-1 EXTRACTION WELL LOCATION

+ IW-1 OZONE INJECTION WELL LOCATION

(11.13) GROUNDWATER ELEVATION IN FEET RELATIVE TO MSL

-10.2 - GROUNDWATER ELEVATION CONTOUR IN FEET RELATIVE TO MSL

→ INFERRED GROUNDWATER FLOW DIRECTION

WELLS MEASURED ON 10/19/16

MSL = MEAN SEA LEVEL

\* NOT USED FOR CONTOURING

NOTE: THE DPE SYSTEM WAS INACTIVE AT THE TIME OF WELL GAUGING.

BASED ON SURVEY PREPARED BY MORROW SURVEYING ON 6/15/11 & UPDATED IN JUNE 2014 & DECEMBER 2015.

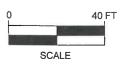
STRATUS ENVIRONMENTAL, INC.

PATH NAME: Olympic\Quarterly

DRAFTER INITIALS: DMG

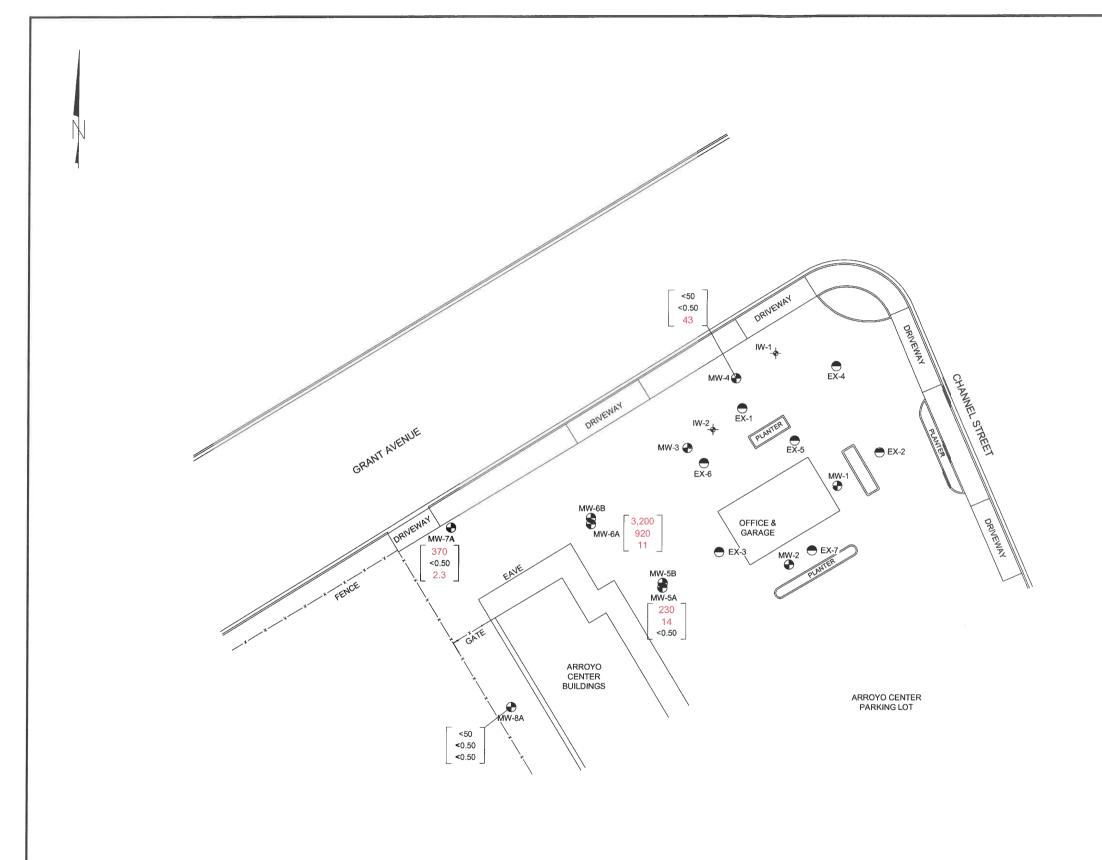
DATE LAST REVISED: November 04, 2016

FILENAME: Olympic Quarterly Figures



FORMER OLYMPIC SERVICE STATION 1436 GRANT AVENUE SAN LORENZO, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP 4th QUARTER 2016 FIGURE



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

GASOLINE RANGE ORGANICS (GRO) CONCENTRATION IN µg/L BENZENE CONCENTRATION IN μg/L

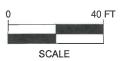
METHYL TERTIARY BUTYL ETHER (MTBE) IN μg/L

WELLS SAMPLED ON 10/19/16 GRO ANALYZED BY EPA METHOD SW8015B/SW8260B MTBE & BENZENE ANALYZED BY EPA METHOD SW8260B

BASED ON SURVEY PREPARED BY MORROW SURVEYING ON 6/15/11 & UPDATED IN JUNE 2014 & DECEMBER 2015.

ENVIRONMENTAL, INC.

PATH NAME: Olympic\Quarterly DRAFTER INITIALS: DMG DATE LAST REVISED: November 04, 2016 FILENAME: Olympic Quarterly Figures

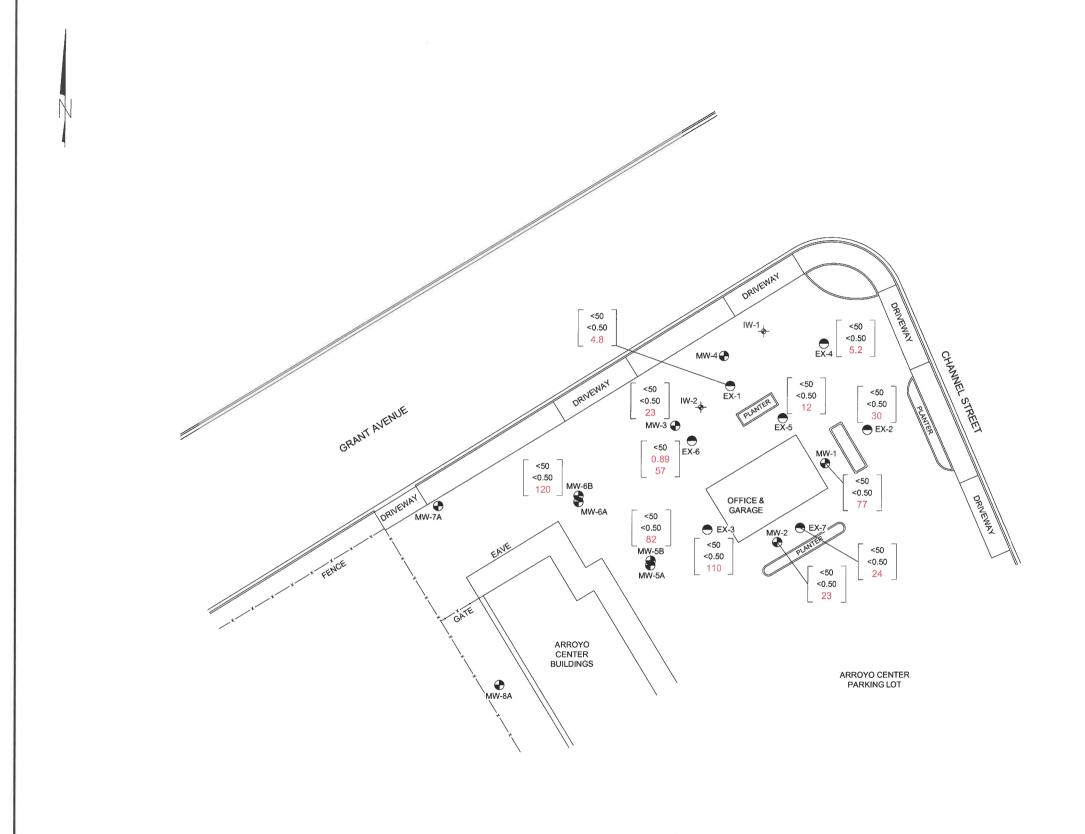


FORMER OLYMPIC SERVICE STATION 1436 GRANT AVENUE SAN LORENZO, CALIFORNIA

GROUNDWATER ANALYTICAL SUMMARY 10' - 12' DEPTH MONITORING WELLS 4th QUARTER 2016

**FIGURE** 

5



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

< 0.50

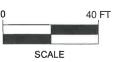
GASOLINE RANGE ORGANICS (GRO) CONCENTRATION IN µg/L BENZENE CONCENTRATION IN μg/L METHYL TERTIARY BUTYL ETHER (MTBE) IN μg/L

WELLS SAMPLED ON 10/19/16 GRO ANALYZED BY EPA METHOD SW8015B/SW8260B MTBE & BENZENE ANALYZED BY EPA METHOD SW8260B

BASED ON SURVEY PREPARED BY MORROW SURVEYING ON 6/15/11 & UPDATED IN JUNE 2014 & DECEMBER 2015.

STRATUS ENVIRONMENTAL, INC.

PATH NAME: Olympic\Quarterly DRAFTER INITIALS: DMG DATE LAST REVISED: November 04, 2016 FILENAME: Olympic Quarterly Figures



FORMER OLYMPIC SERVICE STATION 1436 GRANT AVENUE SAN LORENZO, CALIFORNIA

GROUNDWATER ANALYTICAL SUMMARY 20' - 26' DEPTH MONITORING WELLS 4th QUARTER 2016

**FIGURE** 

6

# APPENDIX A FIELD DATA SHEETS



Site Address	1436	Grant	Ane
City	SAN	Lorenza	
Sampled by:			
Signature	HIC	-(	

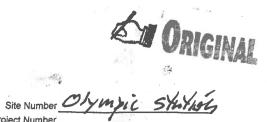
Site Number	Former	Olympie	5444104
Project Number		6	194
Project PM	Switt	15 Y	A
DATE	10-1	9-10	UMGINA

	Wa	iter Level D	ata			Purae V	olume Calc	ulations			D	10.0					-
		Donth to	D- # :			30	- anic oarc	uidil0115	A advant		rurge	Metho	a		ample Reco	ord	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	Sample I.D	Sample Time	DO (mg/L)
186-1	0720		7.12	24.19	17.07	Z	・ナ	8	(gallotis)		X			(feet)	land .	MYY	12 4/2
mu-z	0642		6.20	18.85	12.15	3	.9	6	6		X			1 0	mu 1	0735	2.00
mu-3	0449		6471	18-20	11.49	Z	. 9	6	6		Z			7.83	mu z	0717	1.52
m 12 -4	062)		8.17	9.35	1.18	4	2.0	2	2		X				mn 3	0605	1.96
	2540		6.66	9.22	3.16	z	٠, ٣	1	1		X			8.38		0/138	1.72
	0423			944	12-69	2	. 9	6	7.		<u>^</u>			7.13	mw 514	0450	1.20
	0424		6.93	9.85	2.96	Z	.5	1			X			6.94	muss	0447	1.89
mw6B	0425		6.55	19.80	13.25	2	.5	-	6		/					0514	1.60
MW 7A	0520		7.15	16.45	4.80	3	15	2_	2		X				mwlb	0512	1.89
mush	0521		8.09	12.00	3.96	2	.5	2	2		X			10.12		0545	1.48
	084/		6.92	19.50	1288	ч	2-0				×			9.98	MKEH		1483
EX·Z	0738		6.72	19.30	12.98	4	2.0	26	26						1-x5	0880	1.73
EX-3	0641		6.50	19.80	13.30	4	2.0		25		X				と大山	0755	1.87
EX-4	0823		692	18.27	11.35	4	2.0	26	26		X				EX 13	0781	1-20
EX.5	0759		7.09	1897	11.88	4	2.0	Z3	73		Х				际人人	0403	2.14
	0550			15.07	12.05	4	2-0	24	24		X.			7.79	大人	0818	1.45
EX·7	09 09		6.75	1948	12.33			24	24		X				EX-6	0623	1.54
				1140	3415/	7	2.0	25	ZJ		X			6.93	ス・人	0930	1,47
		I							1								

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
рH	19-14-16
Conductivity	
DO	





Site Address 43 Grant Aut
City 941 Laren 20
Sampled By
Signature

Site Number
Project Number
Project PM
DATE
Weather Conditions

Well ID M. A	- 64	Comme	ents:			Z Well ID	シメノラ	Com	ments:	Y .	>.
Purge start tin	ne	Shee	n Y C	Odo	r (F)	N Purge sta		Shee	1	Od Od	lor (Y) N
	Temp	C pH	cond		gallo	ns	Te	mp C p	H coi	nd	gallons
time (3)	21.4	(6.8)	7 1599	1.	8	time Ob	17 8	1/2 7:	3/ 148	54	183
time 737	- 22.4	6.8	71584	4	2	time(0(49	1 2/1	4 71	34 123	4	12
time						time 69				3	26
time 063%	ì		,			time 072					
purge stop time		DO	1.72	ORP	-2.4	purge stop		DC	1.70	ORF	~27.3
Well ID Malas	2	Commer	nts:		6	Well ID M	WI	Comm			8
Purge start time	•	Sheen	YN	Odor	Y			Shee	en Y	N) Odo	<del>-</del>
	Temp C	1 -	cond		gallons		Tem	рС рН	cond	1	gallons
ime 0795	8.5	7.24	1517		19	time 072	3 30.	2 7.2	6/53	/	82
meg 788	29.5	726	1518		3	time 972	6 20:	2 7.3		,	4
mag 7/2	20.8	2.32	1503		6	time 073	0				8
me () 7(7						time 073			1		
urge stop time		DO [	52	ORP~	23,8	purge stop tir	ne	DO	2,00	ORP-	-25/
rell ID EX-Z		Comments	s:		25	Well ID EX	1.5	Comme			24
urge start time		Sheen	YN	Odor	Y/N	Purge start tir	ne	Sheen	YN	Odor	YW
	Temp C	рН	cond	_	gallons		Temp	C pH	cond		gallons
	29.4	2.35	1470		8	time (981)	2 205	2 7,27	7/473		8
	21.4	7.34			12	time St	201	5 7.35	1514		14
e 0 9 4 7 3	21,5	7.38	14gz		25	timegg/Z	-20-7	7.43	1506		24
0759						timer 9518					
ge stop time			5 Z	ORP{	19.9	purge stop time	9	DO [	le 5	ORP	Zlorlo
गाव ह्य-न	1	Comments:	40		24	Well ID	-1	Comment	s:		26
ge start time		Sheen	YO	Odor	Y	Purge start time	9	Sheen	O W	Odor	(Y) N
	Temp C	pН	cond		gallons		Temp C	рН	cond		gallons
. 2 . 1		7.31	1235		8	ime/845	21.6	7.34	1488		87
		1.0	527			me/8#	21.7	7.43	1552		12
	2.0	7.34 1	341		2 9 ti	me/8'5"	20.9	7.41	1517		26
9903					ti	me9400					
e stop time		DOZ. (	-	ORP -Z	900 p	urge stop time		DO /	73	ORP 😓	30.00





Site Address 1436 Grant Han Sampled By

Signature(

Site Number Project Number Project PM DATE

Weather Conditions Well ID MIN 5 F Comments: Well ID PM W 6 Comments: Y (D) Purge start time Sheen Odor N Purge start time Sheen Ki N Odor Temp C pH gallons cond Temp C рH cond gallons D 1095 21.5 フスス 479.4 B 2202 7.31 22.5 7.36 21.3 7.33 3 time 21,4 time A 4 50 time 1944 purge stop time DO 1 20 ORP - 23,4 purge stop time DO 1,59 26.8 ORP ~ Well ID MAN 614 Comments: Well ID MU/ (1) /3 Comments: ろ Purge start time Sheen (9) Odor N. Purge start time Sheen Y N TY Odor Ν Temp C рΗ cond gallons Temp C pН cond gallons 9 time/)ゲルプ 23,4 7,38 1542 23,4 times 45 3 15911 time timeの りりり 220/ 10 timer) 514 time 9912 purge stop time DO LVAL ORP ~ (9,3 purge stop time ORP ~ 31,8 DO 39 Well ID MW SA Comments: Well ID MW ZA Comments: Purge start time B Sheen Odor Purge start time R Y Sheen Υ Odor Ν Temp C pH cond gailons Temp C pH cond gallons time ハガスラ 7.00 time 053/ 21% 2.50 12 **でし**フ 1350 8 7.09 time/75725 2209 2.50 time9533 2 21.8 Z time time time/)539 time /9545 DO 1.83 purge stop time ORP~15.4 DO 1,48 ORP -26.8 purge stop time Well ID MIN Comments: Well ID & V V6 Comments: 24 Purge start time Y (1) 18) Sheen Odor N Y (N Purge start time Sheen D Odor N Temp C рΗ gallons cond Temp C pН cond gallons 7.75 934.7 2 220 7,15 19 7,21 1306 21.4 1.210 12 21.5 24 time 6623 purge stop time 00/.96 ORP-13. 4 1.5 ORP - 18-7 purge stop time DO





Site Address 43 Grant Aut
City 240 Lann 20
Sampled By
Signature

Site Number

Project Number

Project PM

DATE

Weather Conditions

				-								
Well ID	.7	Commen	ts:		2.	Well ID		Comme	ents:			
Purge start tin	ne	Sheen	Y	Odor	YB	Purge start til	me	Sheen	, Y	N Odor	Υ	
	Temp C	рН	cond		gallons		Temp	С рН	cond		ga	llor
time 0915	2600		1487		B	time						
time/97D	20.4	7.23	1548		12	time						
time# 425	21.0	7.32	1516		25	time						
time <i>() 430</i>						time						
purge stop time	е	DO [	ر47	ORP⊷	10.2	purge stop tim	е	DO		ORP		
Well ID		Comments	3:			Well ID		Commer	nts:			_
Purge start time	e	Sheen	Y N	Odor	Y N	Purge start tim	ie	Sheen	Y N	Odor	Υ	N
·	Temp C	pН	cond		gailons		Temp C	pH	cond		gall	ons
time						time						
time			,			time						
time						time						
time						time						
ourge stop time		DO		ORP		purge stop time	)	DO		ORP		
Well ID		Comments:				Well ID		Comment	ts:			
ourge start time		Sheen	Y N	Odor	YN	Purge start time		Sheen	Y N	Odor	Υ	N
	Temp C	pН	cond		gallons		Temp C	рН	cond		gallo	ns
me						time						
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me						time						
me						time						
urge stop time		DO		ORP		purge stop time		DO		ORP		
Vell ID		Comments:				Well ID		Comments	s:			
urge start time		Sheen	Y N	Odor	YŅ	Purge start time		Sheen	Y N	Odor	Υ	N
	Temp C	ρН	cond		gallons		Temp C	рН	cond		gallon	s
ne					t	ime						
ne					t	ime						
ne .					ti	me						
ne					ti	me						
rge stop time		DO		ORP	р	urge stop time		DO		ORP		

Company;	Billing Information:
Attn:	
Address:	
City, State, Zip:	
Phone Number:	Fax:



#### Alpha Analytical, Inc.

Main Laboratory: 255 Glendale Ave, Suite 21 Sparks, NV 89431

#### Satellite Service Centers:

Northern CA; 9891 Horn Road, Suite C, Rancho Cordova, CA 95827 Southern CA: 1007 E. Domínguez St., Suite O, Carson, CA 90746 Northern NV; 1250 Lamoille Hwy., #310, Elko, NV 89801

Phone: 775-355-1044

Fax: 775-355-0406 Phone: 916-366-9089

Phone: 714-386-2901

	Pronmental	Northern NV: 1250 Lamoille Hwy., #310, Elko, NV 89801 Southern NV: 6255 McLeod Ave, Suite 24, Las Vegas, NV 89120	Phone: 775-388-7043 Phone: 702-281-4848 Page # of of
Consultant/ Client Info: Company: Address: City, State, Zip: Company: Address City, State, Zip: Company: Address AR	Job and Purchase Order Info:  Job # Job Name: P.O. #:  KS NV OR WA DOD Site	Phone #:	QC Deliverable Info:  EDD Required? Yes / No EDF Required? Yes /  Global ID:  Data Validation Packages: III or IV
		Analysis Requested	Remarks
Time Sampled (HHMM) Sampled (MM/DD) Lab ID Number (For Lab Use Only)  33 Lab ID Number (For Lab Use Only)	Sample Description  MW-1  MW-2  MW-3  MW-3  MW-5  MW-5  MW-5  MW-5  MW-5  MW-5  MW-6  MW-6  MW-6  MW-8	TAT # COUNTINGER (See Key Below)  TAT # COUNTINGER (See Key Below)	
ADDITIONAL INSTRUCTIONS:  I (field sampler) attest to the validity and authenticity of this sample(s). I am Sampled By:	aware that tampering with or intentionally mislabeli	ing the sample location, date or time of collection is considered fraud and may be g	grounds for legal action. NAC 445.0636 (c) (2).
Relinguished by (Signature/Affiliation).  Date:	Time; Re	eceived by: (Signature/Affiliation):	Date; Time;
Relinguished by: (Signature/Affiliation):  Date:	Time: Re	eceived by: (Signature/Affiliation):	Date: Time:
Relinquished by: (Signature/Affiliation): Date:	Time: Re	eceived by: (Signature/Affiliation):	Date: Time:
	gements are made. Hazardous samples will be returned	B - Brass L - Liter O - Orbo OT - Other P - Plastic S-S d to client or disposed of at client expense. The report for the analysis of the above same	Soil Jar T - Tedlar V - VOA  nples is applicable only to those samples

	Billing Information:	
Company:	24049	
Attn:		
Address:		
City, State, Zip:		
Phone Number:	Fax	_



#### Alpha Analytical, Inc.

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Phone: 714-386-2901

						/	onmenta		Souther	n NV: 6255	McLeod Av	e, Suite 24	Las Vega	as, NV 8912	20			75-388-704 02-281-484			Page #	2	_ of <u>C</u>
Company: Address: City, State,	Zip:	nsultant/ C	lient Info:	AR	Joh #	Form	Purchase Or		Storker Other	Phone	ddress:	Attention Sc.	n/Project	Manager			G	DD Requin	ed? Ye	TOL		EDF Requ	julired? Yes / I
														Analy	sis Request	ed							Remarks
Time Sampled (HHMM) 700 755 700 1 903 806 6023 930	Date Sampled (MM/DD)	Matrix* (See Key Below)	Lab ID Number (For Lab Us	se Only)	A A A A A A A A A A A A A A	2	ample Descripti	on	SYC	3 3 3	Yes No.	1	1	が変える人ーして									
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ADDITION	AL INSTRUC	TIONS:	A STATE OF THE STA																				
I (field sam Sampled B Relinquiste	d by (Signal	to the validity	and authenticity of this sample	Date:	aware that ta	Tin	ne	Rec	ceived by: (Si	gnature/Affi	liation):	e of collec	ction is co	nsidered fr	aud and ma	y be groun	ds for le	egal action		445.0636 (		Time:	
				Date		Tim	ne:	Rec	eived by. (Si	gnature/Affi	iation):							Da	ite:			Time:	
Relinquishe	d by: (Signat	ure/Affiliation):		Date:		Tim	ne:	Rec	eived by: (Si	gnature/Affi	iation):							Da	ite:			Time:	
NOTE: Sc.	anles err d'		* Key: AQ - Aqueous	OT -	Other	So-Soil	WA - W	aste **E	B - Brass	L - Liter	0-0	Orbo	OT - Oth	er P-	Plastic	S-Soil I	or .	T - Tod-		/ \/04		-	- 1
received by	the laborator	arded 60 days y with this CO	s after sample receipt unless oth C. The liability of the laboratory is	er arrange s limited to	ments are ma the amount p	de Hazai	rdous samples report.	will be returned	to client or d	sposed of a	t client expe	ense. The	report for	the analysis	of the above	e samples i	s applic	able only to	those s	/ - VOA samples		***	

# 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<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



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: 10/20/16

Job:

Former Olympic Station

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

		Parameter	Concentration	Reporting	Date	Date
				Limit	Extracted	Analyzed
Client ID:	MW-1					
Lab ID :	STR16102003-01A	TPH-P (GRO)	ND	50 μg/L	10/25/16 00:56	10/25/16 00:56
Date Sampled	10/19/16 07:35	Methyl tert-butyl ether (MTBE)	77	0.50 μg/L	10/25/16 00:56	10/25/16 00:56
		Benzene	ND	0.50 μg/L	10/25/16 00:56	10/25/16 00:56
		Toluene	ND	0.50 μg/L	10/25/16 00:56	10/25/16 00:56
		Ethylbenzene	ND	0.50 μg/L	10/25/16 00:56	10/25/16 00:56
		m,p-Xylene	ND	0.50 μg/L	10/25/16 00:56	10/25/16 00:56
		o-Xylene	ND	0.50 μg/L	10/25/16 00:56	10/25/16 00:56
lient ID:	MW-2					
ab ID:	STR16102003-02A	TPH-P (GRO)	ND	50 μg/L	10/25/16 01:22	10/25/16 01:22
ate Sampled	10/19/16 07:17	Methyl tert-butyl ether (MTBE)	23	0.50 μg/L	10/25/16 01:22	10/25/16 01:22
		Benzene	ND	0.50 μg/L	10/25/16 01:22	10/25/16 01:22
		Toluene	ND	0.50 μg/L	10/25/16 01:22	10/25/16 01:22
		Ethylbenzene	ND	0.50 μg/L	10/25/16 01:22	10/25/16 01:22
		m,p-Xylene	ND	0.50 μg/L	10/25/16 01:22	10/25/16 01:22
		o-Xylene	ND	0.50 μg/L	10/25/16 01:22	10/25/16 01:22
lient ID:	MW-3					
ab ID:	STR16102003-03A	TPH-P (GRO)	ND	50 μg/L	10/25/16 01:48	10/25/16 01:48
ate Sampled	10/19/16 06:05	Methyl tert-butyl ether (MTBE)	23	0.50 μg/L	10/25/16 01:48	10/25/16 01:48
		Benzene	ND	0.50 μg/L	10/25/16 01:48	10/25/16 01:48
		Toluene	ND	0.50 μg/L	10/25/16 01:48	10/25/16 01:48
		Ethylbenzene	ND	0.50 μg/L	10/25/16 01:48	10/25/16 01:48
		m,p-Xylene	ND	0.50 µg/L	10/25/16 01:48	10/25/16 01:48
		o-Xylene	ND	0.50 μg/L	10/25/16 01:48	10/25/16 01:48
lient ID:	MW-4					
ab ID :	STR16102003-04A	TPH-P (GRO)	- ND	50 μg/L	10/25/16 02:13	10/25/16 02:13
ate Sampled	10/19/16 06:38	Methyl tert-butyl ether (MTBE)	43	0.50 μg/L	10/25/16 02:13	10/25/16 02:13
		Benzene	ND	0.50 μg/L	10/25/16 02:13	10/25/16 02:13
		Toluene	ND	0.50 μg/L	10/25/16 02:13	10/25/16 02:13
		Ethylbenzene	ND	0.50 µg/L	10/25/16 02:13	10/25/16 02:13
		m,p-Xylene	ND	0.50 μg/L	10/25/16 02:13	10/25/16 02:13
		o-Xylene	ND	0.50 μg/L	10/25/16 02:13	10/25/16 02:13
lient ID:	MW-5A					
ab ID:	STR16102003-05A	TPH-P (GRO)	230	50 μg/L	10/25/16 02:39	10/25/16 02:39
ate Sampled	10/19/16 04:50	Methyl tert-butyl ether (MTBE)	ND	0.50 μg/L	10/25/16 02:39	10/25/16 02:39
		Benzene	14	0.50 μg/L	10/25/16 02:39	10/25/16 02:39
		Toluene	ND	0.50 μg/L	10/25/16 02:39	10/25/16 02:39
		Ethylbenzene	3.4	0.50 μg/L	10/25/16 02:39	10/25/16 02:39
		m,p-Xylene	ND	0.50 μg/L	10/25/16 02:39	10/25/16 02:39
		o-Xylene	ND	0.50 μg/L	10/25/16 02:39	10/25/16 02:39



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Client ID:	MW-5B						
Lab ID:	STR16102003-06A	TPH-P (GRO)	ND		50 μg/L	10/25/16 03:04	10/25/16 03:04
	10/19/16 04:47	Methyl tert-butyl ether (MTBE)	82		0.50 μg/L	10/25/16 03:04	10/25/16 03:04
Dute Sampled	10/15/10 0 1.77	Benzene	ND		0.50 μg/L	10/25/16 03:04	10/25/16 03:04
		Toluene	ND		0.50 μg/L	10/25/16 03:04	10/25/16 03:04
		Ethylbenzene	ND		0,50 μg/L	10/25/16 03:04	10/25/16 03:04
		m,p-Xylene	ND		0.50 μg/L	10/25/16 03:04	10/25/16 03:04
		o-Xylene	ND		0.50 μg/L	10/25/16 03:04	10/25/16 03:04
Client ID:	MW-6A	0 11,10110					
Lab ID:	STR16102003-07A	TPH-P (GRO)	3,200		2,000 μg/L	10/25/16 07:46	10/25/16 07:46
	10/19/16 05:14	Methyl tert-butyl ether (MTBE)	11		10 μg/L	10/25/16 07:46	10/25/16 07:46
•		Benzene	920		10 μg/L	10/25/16 07:46	10/25/16 07:46
		Toluene	ND	V	10 μg/L	10/25/16 07:46	10/25/16 07:46
		Ethylbenzene	78		10 μg/L	10/25/16 07:46	10/25/16 07:46
		m,p-Xylene	ND	٧	10 μg/L	10/25/16 07:46	10/25/16 07:46
		o-Xylene	ND	V	10 μg/L	10/25/16 07:46	10/25/16 07:46
Client ID:	MW-6B	•			, 0		
Lab ID:	STR16102003-08A	TPH-P (GRO)	ND		50 μg/L	10/25/16 03:30	10/25/16 03:30
Date Sampled	10/19/16 05:12	Methyl tert-butyl ether (MTBE)	120		0.50 μg/L	10/25/16 03:30	10/25/16 03:30
•		Benzene	ND		0.50 μg/L	10/25/16 03:30	10/25/16 03:30
		Toluene	ND		0.50 μg/L	10/25/16 03:30	10/25/16 03:30
		Ethylbenzene	ND		0.50 μg/L	10/25/16 03:30	10/25/16 03:30
		m,p-Xylene	ND		0.50 μg/L	10/25/16 03:30	10/25/16 03:30
		o-Xylene	ND		0.50 μg/L	10/25/16 03:30	10/25/16 03:30
Client ID:	MW-7A	•			. •		
Lab ID:	STR16102003-09A	TPH-P (GRO)	370		50 μg/L	10/25/16 03:56	10/25/16 03:56
Date Sampled	10/19/16 05:45	Methyl tert-butyl ether (MTBE)	2.3		0.50 μg/L	10/25/16 03:56	10/25/16 03:56
		Benzene	ND		0.50 μg/L	10/25/16 03:56	10/25/16 03:56
		Toluene	ND		0.50 μg/L	10/25/16 03:56	10/25/16 03:56
		Ethylbenzene	12		0.50 μg/L	10/25/16 03:56	10/25/16 03:56
		m,p-Xylene	ND		0.50 μg/L	10/25/16 03:56	10/25/16 03:56
		o-Xylene	ND		0.50 μg/L	10/25/16 03:56	10/25/16 03:56
Client ID:	MW-8A						
Lab ID:	STR16102003-10A	TPH-P (GRO)	ND		50 μg/L	10/25/16 04:21	10/25/16 04:21
Date Sampled	10/19/16 05:39	Methyl tert-butyl ether (MTBE)	ND		0.50 μg/L	10/25/16 04:21	10/25/16 04:21
		Benzene	ND		0.50 μg/L	10/25/16 04:21	10/25/16 04:21
		Toluene	ND		0.50 μg/L	10/25/16 04:21	10/25/16 04:21
		Ethylbenzene	ND		0.50 μg/L	10/25/16 04:21	10/25/16 04:21
		m,p-Xylene	ND		0.50 μg/L	10/25/16 04:21	10/25/16 04:21
		o-Xylene	ND		0.50 μg/L	10/25/16 04:21	10/25/16 04:21
Client ID:	EX-1						
Lab ID:	STR16102003-11A	TPH-P (GRO)	ND		50 μg/L	10/25/16 04:47	10/25/16 04:47
Date Sampled	10/19/16 09:00	Methyl tert-butyl ether (MTBE)	4.8		0.50 μg/L	10/25/16 04:47	10/25/16 04:47
		Benzene	ND		0.50 μg/L	10/25/16 04:47	10/25/16 04:47
		Toluene	ND		0.50 µg/L	10/25/16 04:47	10/25/16 04:47
		Ethylbenzene	ND		0.50 μg/L	10/25/16 04:47	10/25/16 04:47
		m,p-Xylene	ND		0.50 µg/L	10/25/16 04:47	10/25/16 04:47
		o-Xylene	ND ,		0.50 μg/L	10/25/16 04:47	10/25/16 04:47
Client ID:	EX-2						
Lab ID:	STR16102003-12A	TPH-P (GRO)	ND		50 μg/L	10/25/16 05:12	10/25/16 05:12
Date Sampled	10/19/16 07:55	Methyl tert-butyl ether (MTBE)	30		0.50 μg/L	10/25/16 05:12	10/25/16 05:12
		Benzene	ND		0.50 μg/L	10/25/16 05:12	10/25/16 05:12
		Toluene	ND		0.50 μg/L	10/25/16 05:12	10/25/16 05:12
		Ethylbenzene	ND		0.50 μg/L	10/25/16 05:12	10/25/16 05:12
		m,p-Xylene	ND		0.50 μg/L	10/25/16 05:12	10/25/16 05:12
		o-Xylene	ND		0.50 μg/L	10/25/16 05:12	10/25/16 05:12



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Client ID:	EX-3						
Lab ID:	STR16102003-13A	TPH-P (GRO)	ND		50 μg/L	10/25/16 05:38	10/25/16 05:38
Date Sampled	10/19/16 07:01	Methyl tert-butyl ether (MTBE)	110		0.50 μg/L	10/25/16 05:38	10/25/16 05:38
		Benzene	ND		0.50 μg/L	10/25/16 05:38	10/25/16 05:38
		Toluene	ND		0.50 μg/L	10/25/16 05:38	10/25/16 05:38
		Ethylbenzene	ND		0.50 μg/L	10/25/16 05:38	10/25/16 05:38
		m,p-Xylene	ND		0.50 μg/L	10/25/16 05:38	10/25/16 05:38
		o-Xylene	ND		0.50 μg/L	10/25/16 05:38	10/25/16 05:38
Client ID:	EX-4						
Lab ID:	STR16102003-14A	TPH-P (GRO)	ND		50 μg/L	10/25/16 06:03	10/25/16 06:03
Date Sampled	10/19/16 09:03	Methyl tert-butyl ether (MTBE)	5.2		0.50 μg/L	10/25/16 06:03	10/25/16 06:03
		Benzene	ND	8	0.50 μg/L	10/25/16 06:03	10/25/16 06:03
		Toluene	ND		0.50 µg/L	10/25/16 06:03	10/25/16 06:03
		Ethylbenzene	ND		0.50 µg/L	10/25/16 06:03	10/25/16 06:03
		m,p-Xylene	ND		0.50 µg/L	10/25/16 06:03	10/25/16 06:03
		o-Xylene	ND		0.50 μg/L	10/25/16 06:03	10/25/16 06:03
Client ID:	EX-5	•				, and the same of	
Lab ID:	STR16102003-15A	TPH-P (GRO)	ND		50 μg/L	10/25/16 06:29	10/25/16 06:29
Date Sampled	10/19/16 08:18	Methyl tert-butyl ether (MTBE)	12		0.50 μg/L	10/25/16 06:29	10/25/16 06:29
•		Benzene	ND		0.50 μg/L	10/25/16 06:29	10/25/16 06:29
		Toluene	ND		0.50 μg/L	10/25/16 06:29	10/25/16 06:29
		Ethylbenzene	ND		0.50 μg/L	10/25/16 06:29	10/25/16 06:29
		m,p-Xylene	ND		0.50 μg/L	10/25/16 06:29	10/25/16 06:29
		o-Xylene	ND		0.50 μg/L	10/25/16 06:29	10/25/16 06:29
Client ID:	EX-6					10,10,10	10.20110 00125
Lab ID:	STR16102003-16A	TPH-P (GRO)	ND		50 μg/L	10/25/16 06:55	10/25/16 06:55
Date Sampled	10/19/16 06:23	Methyl tert-butyl ether (MTBE)	57		0.50 μg/L	10/25/16 06:55	10/25/16 06:55
•		Benzene	0.89		0.50 µg/L	10/25/16 06:55	10/25/16 06:55
		Toluene	ND		0.50 μg/L	10/25/16 06:55	10/25/16 06:55
		Ethylbenzene	ND		0.50 μg/L	10/25/16 06:55	10/25/16 06:55
		m,p-Xylene	ND		0.50 μg/L	10/25/16 06:55	10/25/16 06:55
		o-Xylene	ND		0.50 μg/L	10/25/16 06:55	10/25/16 06:55
Client ID:	EX-7	•	- 1		, , , ,		
Lab ID:	STR16102003-17A	TPH-P (GRO)	ND		50 μg/L	10/25/16 07:20	10/25/16 07:20
Date Sampled	10/19/16 09:30	Methyl tert-butyl ether (MTBE)	24		0.50 μg/L	10/25/16 07:20	10/25/16 07:20
•		Benzene	ND		0.50 μg/L	10/25/16 07:20	10/25/16 07:20
		Toluene	ND		0.50 μg/L	10/25/16 07:20	10/25/16 07:20
		Ethylbenzene	ND		0.50 μg/L	10/25/16 07:20	10/25/16 07:20
		m,p-Xylene	ND		0.50 μg/L	10/25/16 07:20	10/25/16 07:20
		o-Xylene	ND		0.50 μg/L	10/25/16 07:20	10/25/16 07:20
		- ·					

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.

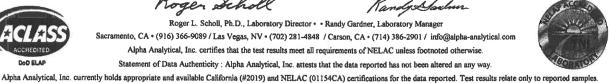


Roger Scholl

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

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

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



**Report Date** 



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## **VOC Sample Preservation Report**

Work Order: STR16102003

Job:

Former Olympic Station

Alpha's Sample ID	Client's Sample ID	Matrix	pH	
16102003-01A	MW-1	Aqueous	2	
16102003-02A	MW-2	Aqueous	2	
16102003-03A	MW-3	Aqueous	2	
16102003-04A	MW-4	Aqueous	2	
16102003-05A	MW-5A	Aqueous	2	
16102003-06A	MW-5B	Aqueous	2	
16102003-07A	MW-6A	Aqueous	2	
16102003-08A	MW-6B	Aqueous	2	
16102003-09A	MW-7A	Aqueous	2	
16102003-10A	MW-8A	Aqueous	2	
16102003-11A	EX-1	Aqueous	2	
16102003-12A	EX-2	Aqueous	2	
16102003-13A	EX-3	Aqueous	2	
16102003-14A	EX-4	Aqueous	2	
16102003-15A	EX-5	Aqueous	2	
16102003-16A	EX-6	Aqueous	2	
16102003-17A	EX-7	Aqueous	2	



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Date: 27-Oct-16	(	QC S	ummar	y Report				<b>Work Ord</b> 1610200	
Method Blank File ID: 46		Type N		est Code: EPA			15B/C / SW8260E Analysis Date	10/25/2016 00:31	
Sample ID: MBLK MS08W1024B	Units : µg/L		Run ID: MA	ANUAL_1610	24J		Prep Date:	10/25/2016 00:31	
Analyte	Result	PQL	SpkVal	SpkRefVal %	6REC	LCL(ME)	UCL(ME) RPDRef	Val %RPD(Limit)	Qual
TPH-P (GRO) Surr: 1,2-Dichloroethane-d4	ND 13	50	10		130	70	130		
Surr: Toluene-d8 Surr: 4-Bromofluorobenzene	11 8.38		10 10		110 84	70 70	130 130		
Laboratory Control Spike		Type L	CS Te	est Code: EP/	A Meth	od SW80	15B/C / SW8260B		
File ID: 44				atch ID: MS08		\$B	Analysis Date:	10/24/2016 23:14	
Sample ID: GLCS MS08W1024B	Units : µg/L			ANUAL_1610			Prep Date:	10/24/2016 23:14	
Analyte	Result	PQL	SpkVal	SpkRefVal %	6REC	LCL(ME)	UCL(ME) RPDRef	Val %RPD(Limit)	Qual
TPH-P (GRO) Surr: 1,2-Dichloroethane-d4 Surr: Toluene-d8 Surr: 4-Bromofluorobenzene	433 9.96 9.29 9.97	50	400 10 10 10	!	108 99.6 93 99.7	70 70 70 70	130 130 130 130		
Sample Matrix Spike		Type N					15B/C / SW8260B		_
File ID: 40		. , , , ,		atch ID: MS08				10/25/2016 08:11	
Sample ID: 16102003-01AGS	Units : µg/L			ANUAL_1610			Prep Date:	10/25/2016 08:11	
Analyte	Result	PQL		_		LCL(ME)	UCL(ME) RPDRef	Val %RPD(Limit)	Qual
TPH-P (GRO) Surr: 1,2-Dichloroethane-d4 Surr: Toluene-d8 Surr: 4-Bromofluorobenzene	1230 58.6 50.1 43	250	2000 50 50 50		61 117 100 86	46 70 70 70	167 130 130 130		
Sample Matrix Spike Duplicate		Type M	SD Te	st Code: EPA	Meth	od SW80	15B/C / SW8260B		
File ID: 41			Ba	itch ID: MS08	W1024	8	Analysis Date:	10/25/2016 08:37	
Sample ID: 16102003-01AGSD	Units : µg/L		Run ID: MA	ANUAL_16102	24J		Prep Date:	10/25/2016 08:37	
Analyte	Result	PQL	SpkVal	SpkRefVal %	REC L	_CL(ME)	UCL(ME) RPDRef	Val %RPD(Limit)	Qual
TPH-P (GRO) Surr: 1,2-Dichloroethane-d4 Surr: Toluene-d8 Surr: 4-Bromofluorobenzene	1770 55.2 46.8 47.8	250	2000 50 50 50		88 110 94 96	54 70 70 70	143 1227 130 130 130	7 36.0(23)	R5

#### Comments:

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

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

Gasoline Range Organics (GRO) C4-C13

Reported in micrograms per Liter, per client request.



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Date: 27-Oci-16	(	QC Su	mmar	y Repor	rt				Work Ord 1610200	
Method Blank	, · · · · · · · · · · · · · · · · · · ·	Type MB	LK T	est Code: E	PA Met	thod SW8	260B			
File ID: 7			В	atch ID: MS	08W10	24A	Anal	ysis Date:	10/25/2016 00:31	
Sample ID: MBLK MS08W1024A	Units : µg/L	R	un ID: M	ANUAL_161	1024J		Prep	Date:	10/25/2016 00:31	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME	RPDRef	Val %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	ND	0.5				, , , , , , , , , , , , , , , , , , , ,	3		, , , , , , , , , , , , , , , , , , , ,	
Benzene	ND	0.5								
Toluene	ND	0.5								
Ethylbenzene m,p-Xylene	ND ND	0.5 0.5								
o-Xylene	ND	0.5								
Surr: 1,2-Dichloroethane-d4	13	0.0	10		130	70	130			
Surr: Toluene-d8	11		10		110	70	130			
Surr: 4-Bromofluorobenzene	8.38		10		84	70	130			
Laboratory Control Spike		Type LCS	5 T	est Code: El	PA Met	hod SW82	260B			
File ID: 6			В	atch ID: MS	08W10	24A	Analy	ysis Date:	10/24/2016 22:23	
Sample ID: LCS MS08W1024A	Units: µg/L	R	un ID: M	ANUAL_161	1024J		Prep	Date:	10/24/2016 22:23	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef\	/al %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	10.2	0.5	10		102	63	137			_
Benzene	10.2	0.5	10		102	70	130			
Toluene	9.75	0.5	10		98	70	130			
Ethylbenzene m,p-Xylene	9.35 9.3	0.5	10		94 93	70 65	130 139			
o-Xylene	9.3 9.46	0.5 0.5	10 10		93 95	70	139			
Surr: 1,2-Dichloroethane-d4	10.8	90.5	10		108	70	130			
Surr: Toluene-d8	9.36		10		94	70	130			
Surr: 4-Bromofluorobenzene	9.25		10		93	70	130		41 1	
Sample Matrix Spike		Type MS	To	est Code: El	PA Met	hod SW82	:60B			
File ID: 3			Ва	atch ID: MS0	)8W102	24A	Analy	sis Date:	10/25/2016 09:02	
Sample ID: 16102003-01AMS	Units: µg/L		un ID: Ma	ANUAL_161	024J		Prep	Date:	10/25/2016 09:02	
Analyte	Result	PQL	SpkVal	SpkRefVal	%REC	LCL(ME)	UCL(ME)	RPDRef\	/al %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	130	1.3	50	76.65	106	56	140			
Benzene	51.1	1.3	50	0	102	67	134			
Toluene	61.6	1.3	50	0	123	38	130			
Ethylbenzene m,p-Xylene	51.2 59.5	1.3 1.3	50 50	0	102 119	70 65	130 139			
o-Xylene	54.4	1.3	50	0	109	69	130			
Surr: 1,2-Dichloroethane-d4	56	1.0	50	•	112	70	130			
Surr: Toluene-d8	43.6		50		87	70	130			
Surr: 4-Bromofluorobenzene	41.7		50		83	70	130			
Sample Matrix Spike Duplicate		Type MSI	) Te	est Code: EF	A Met	hod SW82	60B			
File ID: 4				atch ID: MS0		24A			10/25/2016 09:28	
Sample ID: 16102003-01AMSD	Units : µg/L			ANUAL_161		101000	Prep		10/25/2016 09:28	
Analyte	Result	PQL							/al %RPD(Limit)	Qual
Methyl tert-butyl ether (MTBE)	132	1.3	50	76.65	112	56 ❖	140	129.6		
Benzene Toluene	49.8 40.1	1.3	50	0	99.5 98	67	134	51.11		DE
Ethylbenzene	49.1	1.3	50	0		38 70	130	61.63	. ,	R5
m,p-Xylene	43 41.2	1.3 1.3	50 50	0	86 82	70 65	130 139	51.21 59.5		R5
o-Xylene	45.5	1.3	50	0	91	69	139	54.44		170
Surr: 1.2-Dichloroethane-d4	45.5 56.2	1.3	50 50	0	112	70	130	54.44	17.9(20)	
Surr: Toluene-d8	44.9		50		90	70	130			
Surr: 4-Bromofluorobenzene	45.3		50		91	70	130			



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Date: 27-Oct-16

## QC Summary Report

Work Order: 16102003

#### Comments:

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

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

Billing Information:

Suite 550

Client:

PO:

### CHAIN-OF-CUSTODY RECORD

### Alpha Analytical, Inc.

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

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

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

EDD Required: Yes

Sampled by : C. HILL

WorkOrder: STR16102003

Report Due By: 5:00 PM On: 27-Oct-16

Cooler Temp 0°C

Samples Received 20-Oct-16

**Date Printed** 20-Oct-16

Page: 1 of 2

Client's COC #: 6189, 6190

Stratus Environmental

3330 Cameron Park Drive

Cameron Park, CA 95682-8861

Job: Former Olympic Station

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

									Request	ed Tests			
Alpha	Client	Co	llection	No. of	Bottles	•	TPH/P_W	VOC_W			]		
Sample ID	Sample ID	Matrix	Date	Alpha	Sub	TAT							Sample Remarks
STR16102003-01A	MVV-1		0/19/16 07:35	3	0	5	GAS-C	BTEX/M_C					
STR16102003-02A	MW-2		0/19/16 07:17	3	0	5	GAS-C	BTEX/M_C					
STR16102003-03A	MW-3	1	0/19/16 06:05	3	0	5	GA\$-C	BTEX/M_C					
STR16102003-04A	MW-4	1	0/19/16 06:38	3	0	5	GAS-C	BTEX/M_C					
STR16102003-05A	MW-5A	1	0/19/16 04:50	3	0	5	GAS-C	BTEX/M_C					
STR16102003-06A	MW-5B		0/19/16 04:47	3	0	5	GAS-C	BTEX/M_C					
STR16102003-07A	MW-6A		0/19/16 05:14	3	0	5	GAS-C	BTEX/M_C					
STR16102003-08A	MW-6B		0/19/16 05:12	3	0	5	GAS-C	BTEX/M_C					
STR16102003-09A	MW-7A		0/19/16 05:45	3	0	5	GAS-C	BTEX/M_C					
STR16102003-10A	MW-8A		0/19/16 05:39	3	0	5	GAS-C	BTEX/M_C					

Comments:

Security seals intact. Frozen ice.:

	Signature	Print Name	Company	Date/Time
Logged in by:	A Takua	Meghanc	Alpha Analytical, Inc.	10/20/16 1005
		<u> </u>		

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

Billing Information:

Suite 550

Client:

PO:

## **CHAIN-OF-CUSTODY RECORD**

### Alpha Analytical, Inc.

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

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

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

EDD Required: Yes

0°C

Sampled by : C. HILL

WorkOrder: STR16102003

Report Due By: 5:00 PM On: 27-Oct-16

Cooler Temp

Samples Received 20-Oct-16

**Date Printed** 20-Oct-16

Page: 2 of 2

Client's COC #: 6189, 6190

Stratus Environmental

3330 Cameron Park Drive

Cameron Park, CA 95682-8861

Job: Former Olympic Station

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

								Reque	sted Tests	3			
Alpha	Client	Collection	No. o	f Bottles	\$	TPH/P_W	VOC_W				T	T	
Sample ID	Sample ID	Matrix Date	Alpha	Sub	TAT								Sample Remarks
STR16102003-11A	EX-1	AQ 10/19/16 09:00	3	0	5	GAS-C	BTEX/M_C						
STR16102003-12A	EX-2	AQ 10/19/16 07:55	3	0	5	GAS-C	BTEX/M_C						
STR16102003-13A	EX-3	AQ 10/19/16 07:01	3	0	5	GAS-C	BTEX/M_C						
STR16102003-14A	EX-4	AQ 10/19/16 09:03	3	0	5	GAS-C	BTEX/M_C						
STR16102003-15A	EX-5	AQ 10/19/16 08:18	3	0	5	GAS-C	BTEX/M_C						
STR16102003-16A	EX-6	AQ 10/19/16 06:23	3	0	5	GA\$-C	BTEX/M_C						
STR16102003-17A	EX-7	AQ 10/19/16 09:30	3	0	5	GAS-C	BTEX/M_C						

Comments:

Security seals intact. Frozen ice.:

**Print Name** Company Date/Time Alpha Analytical, Inc. Logged in by:

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

Company: Attn:	Billing Information:	
Address:		
City, State, Zip:		
Phone Number:	Fax:	



Main Laboratory: 255 Glendale Ave, Suite 21 Sparks, NV 89431

#### Satellite Service Centers:

Northern CA: 9891 Hom Road, Suite C, Rancho Cordova, CA 95827 Southern CA: 1007 E. Dominguez St., Suite O, Carson, CA 90746 Northern NV: 1250 Lamoille Hwy., #310, Elko, NV 89801

Fax: 775-355-0406

Phone: 775-355-1044

Phone: 916-366-9089

Phone: 714-386-2901

Phone: 775-388-7043

	oument	Southern NV: 6255 McLeod Ave, Suite 24, Las Vegas, NV 89120	Phone: 702-281-4848 Page # of
Consultant/ Client Info:  Company: Address: City, State, Zip:  Samples Collected from which State? (circle one)	Job and Purchase Order Info:  Job #  Job Name: P.O. #:  AR CA KS NV OR WA DOD SI	Report Attention/Project/Manager:    Delign   Name:	QC Deliverable Info:  EDD Required? Yes / No EDF Required? Yes / No  Global ID: TOLOGIOZ Z56  Data Validation Packages: III or IV
	3-01 MW-1 02 MW-2 03 MW-3 05 MW-5 A 05 MW-5 B 08 MW-6 B 09 MW-7 A 10 MW-8 A	TAT 3 Yes No X X X X X X X X X X X X X X X X X X	
Sampled By: Relinguished by: (Signature/Affiliation): Relinguished by: (Signature/Affiliation):	101910   1235	Received by: (Signature/Affiliation):  Received by: (Signature/Affiliation):	Date: 10/20/16 Time: 1235 Date: 10/20/16 Time: 0950 Date: Time:
* Key: AQ - Aqueous  NOTE: Samples are discarded 60 days after sample receipt unless of received by the laboratory with this COC. The liability of the laboratory	ther arrangements are made. Hazardous samples will be returne	*B - Brass L - Liter O - Orbo OT - Other P - Plastic ed to client or disposed of at client expense. The report for the analysis of the above	S-Soil Jar T - Tedlar V - VOA samples is applicable only to those samples

Company:	Billion Information:	ona Ana
Attn: Address:		A.
City, State, Zip: Phone Number:	Fax:	Environ



Main Laboratory: 255 Glendale Ave, Suite 21 Sparks, NV 89431

#### Satellite Service Centers:

Northern CA: 9891 Horn Road, Suite C, Rancho Cordova, CA 95827 Southern CA: 1007 E. Dominguez St., Suite O, Carson, CA 90746 Northern NV: 1250 Lamoille Hwy., #310, Elko, NV 89801

Phone: 775-355-1044

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Phone: 916-366-9089

Phone: 714-386-2901

Phone: 775-388-7043

						-411	ICIX		Southern I	NV: 6255 M	cLeod Ave	e, Suite 24,	Las Vega	s, NV 8912	20	P	hone: 7	02-281-484	8	,	aye #		OI	
	Co	sultant/ (	Plent Info:		Job	er Info:		Report Attention/Project Manager:									QC I							
Company:	-6	Consultant/ Client Info:						N.	Name: SLA VI					E	EDD Required? Yes / No EDF Required? You						s./No			
Address: City, State,	Zip:				Job Name: Former Olympa				> premus	Email Ad Phone #								Global ID:	TOLON			Inzz56		
-		lected from which State? (circle one) AR			(A) KS NV OR WA D			DOD Site	Other	Cell #:	•							Data Validation Packages:			IBI	or	IV	
							A STATE OF				9			Analy	sis Reque	sted						R	marks	
Time Sampled (HHMM) 900 755 701 903 866 603 930	Date Sampled (MM/DD)	Matrix* (See Key Below)  ALL  PILL	Lab ID Number (For Lab	Use Only) 123 - 117 13 14 15 16	以以以以以以以以以以以以以以以以以以以以以以以以以以以以以以以以以以以以以以以	2	Description		SYD STD	S & M * Containers** (See Key Below)	Yes No.	7	X \ \ X BEE	SATAR - LX										
ADDITION	AL INSTRUC	TIONS:																						
<u> </u>			······································																					
I (field sam		to the vallet	ty and authenticity of this sai	mple(s). I am av	rare that tamp	ering with o	or Intention	ally mislabelin	ng the sample	location, e	late or tim	e of collec	ction is co	nsidered fi	raud and i	nay be grou	mds for	legal action	ı. NAC 4	45.0636 (	c) (2).			
Relinquis	d by Kolgna	ure Affiliatio	Starker	Date/	alla	Time:	フッグ	Rec	eived by: (Sig	nature/Affil	ation):		_		•			Da	ate:		,	Time:		
Relinquished by: (Signature/Affillation): Date:					01910 1235				Eitmerano								101916 1235							
					Time:				Received by: (Signature/Affiliation):								Date: 10/20/16 Time: 0950							
Relinquished by: (Signature/Affiliation): Date:						Rec	Received by: (Signature/Affiliation):									Da	ite:			Time:	,			
			* Key: AQ - Aqueous			-Soil	WA - Wa		3 - Brass	L - Liter	0-	Orbo	OT - Oth	er P	- Plastic	S-Soil	Jar	T - Tedla	ır V	- VOA				
NOTE: Sar received by	nples are dis	carded 60 da	ays after sample receipt unless	other arrangem	ants are made.	Hazardous	s samples w	rill be returned	to client or dis	posed of at	client exp	ense. The	report for	the analysi	s of the at	ove sample	s is appli	cable only to	those se	amples		<del>'</del>		

## **APPENDIX D**

# GEOTRACKER ELECTRONIC SUBMITTAL CONFIRMATIONS

#### 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!

Submittal Type:

**GEO\_WELL** 

**Report Title:** 

4th Quarter 2016 Groundwater Monitoring Geo\_Well

Facility Global ID:

T0600102256

**Facility Name:** 

**OLYMPIC STATION** 

File Name:

**GEO\_WELL.zip** 

**Organization Name:** 

Stratus Environmental, Inc.

<u>Username:</u>

**STRATUS NOCAL** 

**IP Address:** 

50.192.223.97

**Submittal Date/Time:** 

11/2/2016 11:20:43 AM

**Confirmation Number:** 

4917777717

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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!

**Submittal Type:** 

**EDF** 

Report Title:

4th Quarter 2016 Groundwater Monitoring Analytical

Results

Report Type:

**Monitoring Report - Quarterly** 

**Facility Global ID:** 

T0600102256

**Facility Name:** 

**OLYMPIC STATION** 

**File Name:** 

16102003\_EDF.zip

**Organization Name:** 

Stratus Environmental, Inc.

<u>Username:</u>

**STRATUS NOCAL** 

**IP Address:** 

50.192.223.97

Submittal Date/Time:

2/23/2017 10:54:47 AM

Confirmation

Number:

6545618414

**VIEW QC REPORT** 

**VIEW DETECTIONS REPORT** 

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