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May 8, 2014

RECEIVED

By Alameda County Environmental Health at 2:36 pm, May 09, 2014

SUBMITTED ELECTRONICALLY

Mr. Mark E. Detterman, P.G., CEG
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

Re: First Semi-Annual 2014 Groundwater Monitoring Report
Former Petroleum Underground Storage Tank (UST) Site
David D. Bohannon Organization Property Located at
575 Paseo Grande - San Lorenzo, CA

Dear Mr. Detterman:

Enclosed for your review is the *First Semi-Annual 2014 Groundwater Monitoring Report* prepared by Stantec Consulting Services Inc. (Stantec) on behalf of David D. Bohannon Organization (Bohannon). The report summarizes recent groundwater monitoring and sampling conducted by Stantec at 575 Paseo Grande in San Lorenzo, California (the Site) in March 2014. The semi-annual groundwater monitoring and sampling event was conducted pursuant to the Alameda County Health Care Services Agency (ACHCSA) letter to Bohannon dated March 4, 2014.

Stantec has been working during the last 60 days to plan and schedule the site investigation activities approved in the ACHCSA March 4, 2014 letter. This work included installation of soil vapor points and collection of soil and groundwater samples which is scheduled to start Friday, May 16th. Field activities will take approximately 45 days, including laboratory analysis. In order to compile, review, and evaluate the data from the investigation, Bohannon is requesting an eight-week extension of the May 16, 2014 report submittal date included in the March 4 letter. We propose to submit the data report by July 16, 2014.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge. If you have any questions regarding the enclosed report, please contact me at (650) 345-8222.

Sincerely,



Robert L. Webster, Chairman

cc: Mr. Chris Maxwell, Stantec Consulting Services Inc.
Mr. Andrew A. Bassak, Manatt, Phelps, and Phillips LLP

**First Semi-Annual 2014
Groundwater Monitoring
Report**

575 Paseo Grande
San Lorenzo, California
PN: 185702534



Prepared for:
David D. Bohannon Organization

Prepared by:
Stantec Consulting Services Inc.
1340 Treat Boulevard Suite 300
Walnut Creek, California 94597

May 8, 2014

FIRST SEMI-ANNUAL 2014 GROUNDWATER MONITORING REPORT

Limitations and Certifications

May 8, 2014

Limitations and Certifications

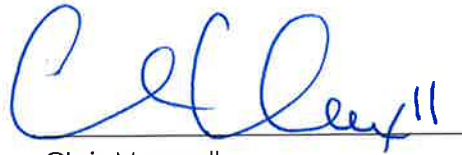
This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of David D. Bohannon Organization for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied are made by Stantec.

Prepared by:



Eva Hey
Senior Geologist

Reviewed by:



Chris Maxwell
Principal Geologist

Information, conclusions, and recommendations provided by Stantec in this document have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:



Chris Maxwell, P.G., #7269
Principal Geologist



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List of Attachments

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Abbreviations and Acronyms

amsl	above mean sea level
Bohannon	David D. Bohannon Organization
BTEX	benzene, toluene, ethylbenzene, and total xylenes
DO	dissolved oxygen
LCS	laboratory control spike
MB	method blank
mL/min	milliliters per minute
MRL	method reporting limit
MS	matrix spike
ORP	oxidation/reduction potential
QA/QC	quality assurance/quality control
RPD	relative percent difference
Stantec	Stantec Consulting Services Inc.
TPHg	total petroleum hydrocarbons as gasoline
µg/L	micrograms per liter
U.S. EPA	United States Environmental Protection Agency

1.0 Introduction

Stantec Consulting Services Inc. (Stantec) presents this groundwater monitoring report for the first semester of 2014 which describes results of groundwater monitoring and sampling conducted on March 26 and 27, 2014, for the property located at 575 Paseo Grande, San Lorenzo, California (the Site; see Figure 1). This sampling event was conducted by Stantec pursuant to a letter from Alameda County Environmental Health to David D. Bohannon Organization (Bohannon), dated March 4, 2014, requesting semi-annual groundwater monitoring and sampling to monitor post-remediation trends at the Site. The scope of work for the first semi-annual event in 2014 included measuring the depth-to-water and collecting groundwater samples in groundwater monitoring wells MW-1 through MW-7 and observation wells POBS-A1, POBS-B1, POBS-B2, and NOBS-B1 (see Figure 2). Well construction details are included in Table 1. Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and total xylenes, (collectively BTEX). Site background information including a summary of previous Site investigations and remedial actions is included in Appendix A of this report.

2.0 Groundwater Monitoring

Site-wide groundwater monitoring and sampling was performed on March 26 and 27, 2014, and consisted of sounding wells for depth-to-water and sampling monitoring wells MW-1 through MW-7 and observation wells POBS-A1, POBS-B1, POBS-B2, and NOBS-B1. Well gauging data is reported on Table 2. Field data sheets are provided in Appendix B. Laboratory analytical data is reported on Table 3 and included in Appendix C. The following summarizes the data collected by Stantec in March 2014.

2.1 WATER LEVEL GAUGING

Prior to purging and sampling, the depth-to-water was measured from the top of each well casing using a water-level indicator graduated to 0.01 foot. Depth-to-groundwater measurements and surveyed wellhead top-of-casing elevations were used to calculate groundwater surface elevations in wells MW-1 through MW-7. Table 2 presents historical monitoring well groundwater elevation data for the Site.

The depth-to-water measured at the Site on March 26, 2014, ranged from 4.58 feet below the top of well casing in MW-3 to 6.7 feet below the top of well casing in MW-1. Corresponding water-table elevations ranged from 24.76 feet above mean sea level (amsl) to 23.01 feet amsl. A potentiometric surface map illustrating the interpreted groundwater surface elevation and flow direction on March 26, 2014, is presented on Figure 3. The hydraulic gradient across the Site was approximately 0.002 feet per foot toward the southwest.

2.2 GROUNDWATER SAMPLING

On March 26 and 27, wells were purged and sampled using a low-flow purging method consisting of dedicated well tubing attached to a variable speed peristaltic pump set to extract groundwater at a rate of approximately 200 milliliters per minute (mL/min). Temperature, conductivity, pH, dissolved oxygen (DO) content, and oxidation/reduction potential (ORP) were monitored using a flow-through cell during purging to confirm stable water conditions prior to sampling. Copies of field data sheets are attached as Appendix B.

Samples were collected from each well using the dedicated tubing to limit the potential for cross-contamination between wells. Samples were placed in laboratory-supplied sample containers, labeled, and stored on ice pending delivery to TestAmerica, a California state accredited laboratory located in Pleasanton, California. The groundwater samples were analyzed for gasoline range organics (C5-C12) and BTEX by United States Environmental Protection Agency (U.S. EPA) Method 8260B.

2.2.1 Quality Assurance/Quality Control Procedures

Analytical data were evaluated for accuracy and precision based on field and laboratory quality assurance and quality control (QA/QC) performance.

Duplicate Sample

One duplicate sample was collected during the first semi-annual 2014 sampling event from observation well MW-4. The analysis of field duplicate samples is a measure of both field and analytical precision. The relative percent difference (RPD) between primary and duplicate sample concentrations for the March 2014 sampling event was less than 5 percent for detected petroleum hydrocarbon analytes.

Holding Times

The laboratory QA/QC includes checking adherence to holding times. Holding times are established by the U.S. EPA and refer to the maximum allowable time to pass between sample collection and analysis by the laboratory. Analyses were performed within the holding times specified by the U.S. EPA.

Control Spikes and Method Blanks

The laboratory control spike (LCS) and matrix spike (MS) recovery results and method blank (MB) results were used to assess accuracy of the analytical data. The analytical program included eight LCS and LCS duplicate pairs, one MS and MS duplicate pair, and four MBs. The spike recovery results were within the prescribed range of acceptable limits for analytical accuracy. The data are included in Appendix C.

3.0 Results

The following presents a discussion of results of the March 2014 groundwater monitoring conducted at the Site.

3.1 GROUNDWATER ANALYTICAL RESULTS

Petroleum hydrocarbon chemical data for the March 2014 event are shown in Table 3 and illustrated on Figure 4. Laboratory analytical reports are included in Appendix C. Historical concentration trends for TPHg and benzene in select groundwater monitoring wells including MW-1, MW-2, MW-3, MW-4, and observation wells POBS-A1, POBS-B1, POBS-B2, and NOBS-B1 are included in Appendix D.

- TPHg and BTEX concentrations continued to be below the laboratory method reporting limits (MRLs) in on-Site monitoring wells MW-1 and MW-3, off-Site monitoring wells MW-5, MW-6, and MW-7, and observation well NOBS-B1.
- Concentrations of TPHg and benzene in on-Site monitoring well MW-2 are consistent with sampling events for 2013 and remain well below historical concentrations. Total xylenes were not detected above the MRLs during the March 2014 sampling of monitoring well MW-2.
- The concentrations of petroleum hydrocarbons in the primary and duplicate samples from off-Site monitoring well MW-4 are similar to or lower than the primary and duplicate sample collected during the December 2013 event.

MW-4 Sample Results*

Analyte	March 2014 Results (µg/L)	December 2013 Results (µg/L)
TPHg	5,500/5,500	6,900/7,700
Benzene	130/130	190/240
Toluene	13/13	17/22
Ethylbenzene	3.9/4.0	3.3/4.2
Total Xylenes	9.8/9.5	16/20

*Results shown are Primary Sample/Duplicate Sample values.

FIRST SEMI-ANNUAL 2014 GROUNDWATER MONITORING REPORT

Results

May 8, 2014

- The concentrations of TPHg, benzene, toluene, and total xylenes in observation well POBS-A1 in March 2014 are lower than those reported in December 2013. The March 2014 TPHg, benzene and toluene concentrations at well POBS-A1 are the lowest observed since first sampled in 2004 (see Table 3).
- The March 2014 concentration of TPHg in observation well POBS-B1 is higher than those reported since May 2012.

4.0 Conclusions

Detectable concentrations observed in March 2014 were within historic ranges for monitoring wells MW-2, MW-4, and NOBS-B1, and below MRLs in monitoring wells MW-1, MW-3, MW-5, MW-6, MW-7, POBS-A1 and POBS-B2. Detectable concentrations observed in monitoring well POBS-B1 were greater than results reported since May 2012, but are significantly lower than historical maximums.

TABLES

First Semi-Annual 2014 Groundwater Monitoring Report

PN: 185702534

May 8, 2014

TABLE 1
Well Construction Details
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Well	Date Installed	Top of Casing Elevation (ft amsl) ¹	Total Depth (ft bgs)	Casing Diameter (inches)	Screen Slot Size (inches)	Screen Length (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)
MW-1	5/10/1996	29.77	15.5	2	0.02	9.75	5.5	15.25
MW-2	5/10/1996	29.54	15.5	2	0.02	9.75	5.5	15.25
MW-3	5/10/1996	29.34	14.5	2	0.02	9.75	4.5	14.25
MW-4	10/2/2000	28.64	15	2	0.02	9	6	15
MW-5	10/2/2000	28.56	15	2	0.02	9	6	15
MW-6	10/2/2000	27.70	15	2	0.02	9	6	15
MW-7	10/2/2000	28.22	15	2	0.02	9	6	15
PIW-A1	5/4/2004	32.46	18	4	0.02	10	8	18
PIW-A2	5/4/2004	32.57	18	4	0.02	10	8	18
PIW-A3	5/4/2004	31.74	18	4	0.02	10	8	18
PIW-A4	5/6/2004	32.35	18	4	0.02	10	8	18
PIW-B1	5/3/2004	32.11	25.5	4	0.02	6	19.5	25.5
PIW-B2	5/3/2004	32.37	26	4	0.02	6	20	26
PIW-B3	5/4/2004	31.91	26	4	0.02	6	20	26
PIW-B4	5/4/2004	32.18	26	4	0.02	6	20	26
POBS-A1	5/6/2004	29.84	18	1	0.02	10	8	18
POBS-B1	5/6/2004	29.95	26	1	0.02	6	20	26
POBS-B2	5/6/2004	29.21	26	2	0.02	6	20	26
NIW-A1	5/5/2004	31.53	18	4	0.02	10	8	18
NIW-A2	5/5/2004	30.80	18	4	0.02	10	8	18
NIW-B1	5/5/2004	29.91	26	4	0.02	6	20	26
NIW-B2	5/5/2004	31.04	26	4	0.02	6	20	26
NOBS-B1	5/7/2004	28.54	26	2	0.02	6	20	26
DP-1	9/30/2005	32.53	20.5	8	0.02	10	4.75	14.75
DP-2	9/29/2005	32.35	20	8	0.02	10	4.25	14.25
DP-3	9/29/2005	32.22	20	8	0.02	10	4.50	14.50
DP-4	9/28/2005	32.07	20	8	0.02	10	4.25	14.25
DP-5	9/28/2005	32.24	20.25	8	0.02	9.75	4.75	14.50
DP-6	9/29/2005	31.66	20.25	8	0.02	10	4.50	14.50
DP-7	9/29/2005	31.34	20.25	8	0.02	10	4.50	14.50

Abbreviations:

ft amsl = feet above mean sea level
ft bgs = feet below ground surface
in = inches
NA = Not Available or Not Known

Notes:

- 1) Top of casing elevations surveyed by Mid Coast Engineers on September 24, 2012; North American Vertical Datum of 1988, NAVD 88.
- 2) Well construction information in Table 1 was updated in September 2012 for GeoTracker® compliance.

TABLE 2
Historical Groundwater Elevations
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Well	Date Sampled	TOC Elevation ¹ (ft amsl)	DTW (ft BTOC)	Groundwater Elevation (ft amsl)
MW-1	05/17/96	27.11	5.65	21.46
	10/08/96		7.47	19.64
	04/01/97		6.27	20.84
	06/12/97		6.90	20.21
	09/10/97		7.48	19.63
	06/08/99		6.44	20.67
	09/13/99		7.56	19.55
	12/21/99		7.41	19.70
	03/17/00		5.35	21.76
	12/05/00		26.98	6.99
	02/28/01	5.71		21.27
	08/22/01	7.39		19.59
	05/22/02	6.25		20.73
	08/29/02	7.23		19.75
	12/02/02	7.13		19.85
	03/04/03	5.77		21.21
	12/18/03	6.37		20.61
	04/13/04	6.13		20.85
	12/02/04	6.93		20.05
	05/27/05	5.90	21.08	
	08/24/06	6.79	20.19	
	01/13/10	6.59	20.39	
	05/03/12	29.77	5.92	21.06
09/18/12	7.32		22.45	
11/15/12	7.08		22.69	
12/11/13	7.04		22.73	
03/26/14		6.76	23.01	
MW-2	05/17/96	26.73	5.56	21.17
	10/08/96		7.15	19.58
	04/01/97		6.61	20.12
	06/12/97		6.76	19.97
	09/10/97		7.19	19.54
	06/08/99		6.45	20.28
	09/13/99		7.46	19.27
	12/21/99		7.26	19.47
	03/17/00		5.56	21.17
	12/05/00		26.73	7.01
	02/28/01	5.81		20.92
	08/22/01	7.42		19.31
	05/22/02	6.40		20.33
	08/29/02	7.26		19.47
	12/02/02	7.02		19.71
	03/04/03	5.91		20.82
	12/18/03	6.47		20.26
	04/13/04	6.28		20.45
	12/02/04	6.80		19.93
	05/27/05	6.11	20.62	
	08/24/06	6.90	19.83	
	01/13/10		6.53	20.20

TABLE 2
Historical Groundwater Elevations
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Well	Date Sampled	TOC Elevation ¹ (ft amsl)	DTW (ft BTOC)	Groundwater Elevation (ft amsl)
MW-2 cont.	05/03/12		6.17	20.56
	09/18/12	29.54	7.37	22.17
	11/15/12		7.12	22.42
	12/11/13		7.01	22.53
	03/26/14		6.75	22.79
MW-3	05/17/96	26.15	4.39	21.76
	10/08/96		6.82	19.33
	04/01/97		5.53	20.62
	06/12/97		6.18	19.97
	09/10/97		6.81	19.34
	06/08/99		5.74	20.41
	09/13/99		6.88	19.27
	12/21/99		6.66	19.49
	03/17/00		4.51	21.64
	12/05/00	26.55	6.84	19.71
	02/28/01		5.44	21.11
	08/22/01		7.29	19.26
	05/22/02		6.22	20.33
	08/29/02		7.26	19.29
	12/02/02		6.85	19.70
	03/04/03		5.72	20.83
	12/18/03		6.15	20.40
	04/13/04		5.97	20.58
	12/02/04		6.64	19.91
	05/27/05		5.74	20.81
	08/23/06		6.69	19.86
	01/13/10		6.08	20.47
	05/03/12		5.72	20.83
09/18/12	29.34	7.18	22.16	
11/15/12		6.90	22.44	
12/11/13		6.77	22.57	
03/26/14		4.58	24.76	
MW-4	12/05/00	25.87	6.28	19.59
	02/28/01		4.99	20.88
	08/22/01		6.73	19.14
	05/22/02		5.50	20.37
	08/29/02		6.55	19.32
	12/02/02		6.28	19.59
	03/04/03		5.28	20.59
	12/18/03		5.85	20.02
	04/13/04		5.50	20.37
	12/02/04		6.05	19.82
	05/27/05		5.46	20.41
	08/24/06		6.15	19.72
	01/13/10		5.78	20.09
	05/03/12		5.38	20.49
	06/08/12		5.87	20.00
09/18/12	28.64	6.65	21.99	

TABLE 2
Historical Groundwater Elevations
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Well	Date Sampled	TOC Elevation ¹ (ft amsl)	DTW (ft BTOC)	Groundwater Elevation (ft amsl)
MW-4 cont.	11/15/12		6.38	22.26
	12/11/13		6.20	22.44
	03/26/14		5.92	22.72
MW-5	12/05/00	25.77	6.25	19.52
	02/28/01		4.95	20.82
	08/22/01		6.69	19.08
	05/22/02		5.50	20.27
	08/29/02		6.54	19.23
	12/02/02		6.37	19.40
	03/04/03		5.41	20.36
	12/18/03		5.65	20.12
	04/13/04		5.37	20.40
	12/02/04		6.03	19.74
	05/27/05		5.46	20.31
	08/24/06		6.17	19.60
	01/13/10		5.72	20.05
	05/03/12		5.52	20.25
	09/18/12	28.56	6.67	21.89
	11/15/12		6.39	22.17
12/11/13		6.29	22.27	
03/26/14		5.90	22.66	
MW-6	12/05/00	24.89	5.68	19.21
	02/28/01		4.35	20.54
	08/22/01		6.15	18.74
	05/22/02		4.91	19.98
	08/29/02		5.96	18.93
	12/02/02		5.70	19.19
	03/04/03		4.69	20.20
	12/18/03		5.05	19.84
	04/13/04		4.87	20.02
	12/02/04		5.42	19.47
	05/27/05		4.75	20.14
	08/24/06		5.57	19.32
	01/13/10		5.17	19.72
	05/03/12		4.82	20.07
	09/18/12	27.70	6.10	21.60
11/15/12		5.79	21.91	
12/11/13		5.61	22.09	
03/26/14		5.49	22.21	
MW-7	12/05/00	25.43	6.43	19.00
	02/28/01		4.76	20.67
	08/22/01		6.95	18.48
	05/22/02		5.55	19.88
	08/29/02		NM	--
	12/02/02		6.43	19.00
	03/04/03		5.10	20.33
	12/18/03		5.65	19.78

TABLE 2
Historical Groundwater Elevations
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Well	Date Sampled	TOC Elevation ¹ (ft amsl)	DTW (ft BTOC)	Groundwater Elevation (ft amsl)
MW-7 cont.	04/13/04	28.22	5.27	20.16
	12/02/04		6.15	19.28
	05/27/05		5.12	20.31
	08/24/06		6.28	19.15
	01/13/10		5.97	19.46
	05/04/12		5.20	20.23
	09/18/12		6.60	21.62
	11/15/12		6.07	22.15
	12/11/13		4.90	23.32
	03/26/14		6.19	22.03

Notes:

DTW = Depth to water

ft amsl = feet above mean sea level

ft BTOC = feet below top of casing

NM = Not measured

TOC = Top of casing

1) Top of casing elevations surveyed by Mid Coast Engineers on September 24, 2012; North American Vertical Datum of 1988, NAVD 88. Previous surveys in May 1996 and December 2000 referenced National Geodetic Vertical Datum, NGVD 29.

TABLE 3
Groundwater Analytical Results - March 2014 and Historical
David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, CA

Well	Date Sampled	TPH-G (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	Chromium (mg/L)	Inorganic Lead (mg/L)
Groundwater Monitoring Wells									
MW-1	05/17/96	1,100	<0.5	8.7	7.4	17	--	<10	<50
	10/08/96	120	<0.5	<0.5	2.7	<0.5	--	--	--
	04/01/97	550	<0.5	<0.5	7.6	6.6	--	--	--
	06/12/97	160	<0.5	<0.5	2.9	1.7	--	--	--
	09/10/97	640	2.2	3.8	7.4	16	--	--	--
	06/08/99	<50	<0.5	<0.5	<0.5	<0.5	<10	<10	<20
	09/13/99	<50	<0.5	<0.5	<0.5	1.1	--	--	<5
	12/21/99	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	03/17/00	<50	<0.5	<0.5	<0.5	0.79	<5	--	<5
	12/05/00	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	02/28/01	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	08/22/01	<50	<0.5	<0.5	<0.5	<0.5	<5	--	<5
	05/22/02	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	08/29/02	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	12/02/02	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	03/04/03	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	12/18/03	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	04/13/04	<50	<0.5	<0.5	<0.5	<0.5	<1.0	--	--
	06/18/04	150	1.5	<0.5	2.7	2.4	--	--	--
	05/27/05	<50	1.6	<0.5	<0.5	<0.5	--	--	--
08/24/06	<50	<0.5	<0.5	<0.5	<0.5	<1.0	--	--	
01/13/10	<50	<0.5	<0.5	<0.5	<0.5	<1.0	--	--	
05/03/12	<50	<0.5	<0.5	<0.5	<0.5	<1.0	--	--	
11/15/12	<50	<0.5	<0.5	<0.5	<0.5	<0.5-1.0	--	--	
12/12/13	<50	<0.5	<0.5	<0.5	<0.5	<1.0	--	--	
03/26/14	<50	<0.5	<0.5	<0.5	<0.5	<1.0	--	--	
MW-2	05/17/96	23,000	900	330	650	1,500	--	<10	<50
	10/08/96	8,400	530	<50	400	360	--	--	--
	04/01/97	7,600	470	64	210	250	--	--	--
	06/12/97	8,200	440	52	190	190	--	--	--
	09/10/97	8,500	390	51	220	240	--	--	--
	06/08/99	2,100	240	8	33	40	<10	<10	33
	09/13/99	1,300	120	<5	<5	15	--	--	--
	12/21/99	1,400	110	5.6	11	17	--	--	<5
	03/17/00	1,200	180	19	28	31	<50	--	<5
	12/05/00	800	75	1.8	11	14	--	--	--
	02/28/01	1,200	120	7.1	19	27	--	--	--
	08/22/01	990	75	3.5	8.9	8.1	<5	--	<5
	05/22/02	1,700	230	12	12	25	--	--	--
	08/29/02	1,000	66	2.6	12	12	--	--	--
	12/02/02	1,100	76	8.7	11	17	--	--	--
	03/04/03	1,100	130	4.5	22	24	--	--	--
	12/18/03	910	55	4.1	3.3	3.7	--	--	--
	04/13/04	2,700	350	15	18	24	--	--	--
	10/05/04	2,000	120	5.5	<2.5	8.3	--	--	--
	05/27/05	5,700	450	53	240	71	--	--	--
08/24/06	1,400	90	4.7	16	21	--	--	--	
01/13/10	130 ^J	1.2	<0.5	<0.5	<1.0	--	--	--	
05/03/12	350	22	<0.5	2.1	<1.0	--	--	--	
09/18/12	410	4.7	<0.5	<0.5	<1.0	--	--	--	
11/15/12	350	3.2	<0.5	<0.5	<0.5	<0.5-1.0	--	--	
12/12/13	410	20	1.1	<0.5	<1.0	--	--	--	
03/27/14	450	32	1.1	1.2	<1.0	--	--	--	

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David D. Bohannon Organization
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Well	Date Sampled	TPH-G (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	Chromium (mg/L)	Inorganic Lead (mg/L)
MW-3	05/17/96	6,700	140	45	210	180	--	<10	<50
	10/08/96	1,800	2,700	240	910	970	--	--	--
	04/01/97	27,000	520	50	520	450	--	--	--
	06/12/97	29,000	2,700	160	940	500	--	--	--
	09/10/97	290,000	1,800	3,200	2,800	6,900	--	--	--
	06/08/99	1,700	320	6.4	15	<0.5	<10	<10	24
	09/13/99	5,400	1,000	<20	<20	<20	--	--	--
	12/21/99	8,800	1,400	63	17	23	--	--	<5
	03/17/00	1,500	190	<5	7.6	<5	<50	--	<5
	12/05/00	5,400	790	20	7.4	10	--	--	--
	02/28/01	3,600	850	15	25	10	--	--	--
	08/22/01	8,100	1,600	28	44	17	<50	--	<5
	05/22/02	5,400	1,000	32	13	21	--	--	--
	08/29/02	6,700	1,700	55	49	38	--	--	--
	12/02/02	5,700	650	17	37	33	--	--	--
	03/04/03	5,000	650	18	42	27	--	--	--
	12/18/03	5,200	910	25	20	21	--	--	--
	04/13/04	3,900	1,200	19	<5.0	<10	--	--	--
	06/18/04	4,300	1,600	40	81	26	--	--	--
	08/27/04	6,900	2,100	59	220	<50	--	--	--
	10/05/04	9,800	2,500	52	160	38	--	--	--
	12/02/04	8,300	2,400	41	200	29	--	--	--
	12/14/04	15,000	3,600	140	560	210	--	--	--
	05/27/05	5,500	840	36	210	41	--	--	--
	08/23/06	1,700	190	5.3	51	<10	--	--	--
	01/13/10	<50	2	<0.5	<0.5	<1.0	--	--	--
05/03/12	<50	<0.5	<0.5	<0.5	<1.0	--	--	--	
09/18/12	480/440	110/100	2.6/2.4	0.66/0.62	1.2/1.1	--	--	--	
11/16/12	66	2.0	<0.5	<0.5	<0.5-1.0	--	--	--	
12/12/13	110	7.0	<0.5	<0.5	<1.0	--	--	--	
03/27/14	<50	<0.5	<0.5	<0.5	<1.0	--	--	--	
MW-4	12/05/00	3,900	320	13	41	31	--	--	<5
	02/28/01	3,400	250	14	44	22	--	--	<5
	08/22/01	4,800	260	12	27	9	<50	--	<5
	05/22/02	5,100	320	29	74	50	--	--	--
	08/29/02	3,700	260	<5	30	28	--	--	--
	12/02/02	5,100	250	8.9	26	22	--	--	--
	03/04/03	4,500	170	18	63	47	--	--	--
	12/18/03	2,900	160	8.3	8	<5	--	--	--
	04/13/04	7,400	290	29	110	100	--	--	--
	06/18/04	2,700	140	12	36	16	--	--	--
	08/27/04	460	19	1.2	1.1	1.5	--	--	--
	10/05/04	460	19	<1.0	<1.0	<1.0	--	--	--
	12/02/04	2,800	120	5.4	8.3	5.3	--	--	--
	05/27/05	7,300	350	37	100	50	--	--	--
	08/24/06	2,400	59	8.2	19	14	--	--	--
	01/14/10	400 ^J	1.6	<0.5	<0.5	<1.0	--	--	--
	05/03/12	6,800	190	26	15	25	--	--	--
	06/08/12	3,400	83	11	7.1	11	<0.50	--	--
	09/18/12	1,400	25	4.2	1.2	3.6	--	--	--
	11/15/12	4,000	69	6.4	<2.5	<2.5-5.0	--	--	--
12/11/13	6,900	190	17	3.3	16	--	--	--	
DUP	12/11/13	7,700	240	22	4.2	20	--	--	--
DUP	03/26/14	5,500	130	13	3.9	9.8	--	--	--
DUP	03/26/14	5,500	130	13	4.0	9.5	--	--	--

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David D. Bohannon Organization
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Well	Date Sampled	TPH-G (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	Chromium (mg/L)	Inorganic Lead (mg/L)
MW-5	12/05/00	<50	<0.5	<0.5	<0.5	<0.5	--	--	<5
	02/28/01	<50	<0.5	<0.5	<0.5	<0.5	--	--	<5
	08/22/01	<50	<0.5	<0.5	<0.5	<0.5	<5	--	<5
	05/22/02	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	08/29/02	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	12/02/02	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	03/04/03	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	12/18/03	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	04/13/04	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	12/02/05	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	05/27/05	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	08/24/06	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	01/14/10	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	05/03/12	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	11/15/12	<50	<0.5	<0.5	<0.5	<0.5	<0.5-1.0	--	--
12/11/13	<50	<0.5	<0.5	<0.5	<0.5	<1.0	--	--	
03/26/14	<50	<0.5	<0.5	<0.5	<0.5	<1.0	--	--	
MW-6	12/05/00	<50	<0.5	<0.5	<0.5	<0.5	--	--	<5
	02/28/01	<50	<0.5	<0.5	<0.5	<0.5	--	--	<5
	08/22/01	<50	<0.5	<0.5	<0.5	<0.5	<5	--	<5
	05/22/02	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	08/29/02	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	12/02/02	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	03/04/03	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	12/18/03	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	04/13/04	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	12/02/04	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	05/27/05	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	08/24/06	<50	<0.5	<0.5	<0.5	<0.5	<1.0	--	--
	01/13/10	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	05/03/12	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	11/15/12	<50	<0.5	<0.5	<0.5	<0.5	<0.5-1.0	--	--
12/11/13	<50	<0.5	<0.5	<0.5	<0.5	<1.0	--	--	
03/26/14	<50	<0.5	<0.5	<0.5	<0.5	<1.0	--	--	
MW-7	12/05/00	<50	<0.5	<0.5	<0.5	1.5	--	--	<5
	02/28/01	<50	<0.5	<0.5	<0.5	6.7	--	--	<5
	08/22/01	<50	<0.5	<0.5	<0.5	<0.5	<5	--	<5
	05/22/02	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	12/02/02	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	03/04/03	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	12/18/03	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	04/13/04	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	12/02/04	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	05/27/05	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
	08/24/06	<50	<0.5	<0.5	<0.5	<0.5	<1.0	--	--
	01/13/10	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	05/04/12	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	11/15/12	<50	<0.5	<0.5	<0.5	<0.5	<0.5-1.0	--	--
	12/11/13	<50	<0.5	<0.5	<0.5	<0.5	<1.0	--	--
03/26/14	<50	<0.5	<0.5	<0.5	<0.5	<1.0	--	--	

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Well	Date Sampled	TPH-G (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Total Xylenes (mg/L)	MTBE (mg/L)	Chromium (mg/L)	Inorganic Lead (mg/L)
<i>Peroxide Treatment Area - A Zone Injection Wells</i>									
PIW-A1	05/13/04	6,800	460	50	31	300	--	--	--
	06/18/04	240	10	2.1	4	11	--	--	--
	08/27/04	220	14	1.2	2	5	--	--	--
	10/05/04	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	12/02/04	640	63	12.0	15	29	--	--	--
PIW-A2	05/13/04	20,000	1,500	460	760	2,600	--	--	--
	06/18/04	2,800	150	14	6.5	90	--	--	--
	08/27/04	500	34	3	4.4	12	--	--	--
	12/02/04	350	6.1	1.2	2.4	5.4	--	--	--
PIW-A3	12/14/04	1,500	220	28	55	99	--	--	--
<i>Peroxide Treatment Area - B Zone Injection Wells</i>									
PIW-B1	05/13/04	1,900	28	<5.0	11	51	--	--	--
	06/18/04	270	22	1	2.2	2.7	--	--	--
	08/27/04	230	11	0.85	1.7	4.3	--	--	--
	12/02/02	66	<0.5	<0.5	<0.5	<1.0	--	--	--
PIW-B3	05/13/04	3,300	420	17	7.8	44	--	--	--
	06/18/04	180	1.2	<0.5	<0.5	2.4	--	--	--
	08/27/04	230	20.0	0.93	3.3	2.9	--	--	--
	12/02/04	64	0.75	<0.5	<0.5	<1.0	--	--	--
<i>Peroxide Treatment Area - A Zone Observation Wells</i>									
POBS-A1	05/13/04	16,000	2,200	220	480	980	--	--	--
	06/18/04	11,000	2,200	150	120	820	--	--	--
	08/27/04	23,000	2,900	140	180	470	--	--	--
	10/05/04	13,000	2,400	83	130	94	--	--	--
	12/02/04	17,000	3,500	240	210	730	--	--	--
	12/14/04	13,000	2,700	200	220	510	--	--	--
	05/27/05	9,600	1,200	62	110	180	--	--	--
	08/24/06	8,500	1,700	58	120	100	--	--	--
	01/13/10	7,300 ^J	1,100	29	53	42	--	--	--
	05/04/12	540	110	2.0	1.4	<1.0	--	--	--
	09/18/12	2,600	1,100	27	8.3	18	--	--	--
	11/16/12	4,700/4,700	1,600/1,700	36/35	6.6/6.3	28.1/27.1	--	--	--
	12/12/13	2,600	1,200	28	<5.0	15	--	--	--
	03/27/14	510	40	1.3	0.72	2.3	--	--	--
<i>Peroxide Treatment Area - B Zone Observation Wells</i>									
POBS-B1	05/13/04	11,000	250	71	160	590	--	--	--
	06/18/04	3,500	9.8	<0.5	0.8	13	--	--	--
	08/27/04	500	1.4	<0.5	<0.5	<1.0	--	--	--
	12/02/04	190	2.6	<0.5	<0.5	<1.0	--	--	--
	05/27/05	68	17.0	<0.5	1.6	0.52	--	--	--
	08/24/06	50	1.1	<0.5	<0.5	<1.0	--	--	--
	05/04/12	<50	0.80	<0.5	<0.5	<1.0	--	--	--
	09/18/12	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	11/16/12	<50	<0.5	<0.5	<0.5	<0.5-1.0	--	--	--
	12/12/13	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	03/27/14	390	63	1.5	0.72	<1.0	--	--	--

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Peroxide Treatment Area - B Zone Observation Wells (continued)									
POBS-B2	05/13/04	4,500	150	23	11	120	--	--	--
	06/18/04	97	7.4	0.8	1.6	1.7	--	--	--
	08/27/04	240	36.0	1.6	6.7	4.2	--	--	--
	12/02/04	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	05/27/05	97	33.0	0.56	1.3	0.74	--	--	--
	08/24/06	57	<0.5	<0.5	<0.5	<1.0	--	--	--
	05/03/12	83	8.8	<0.5	<0.5	<1.0	--	--	--
	09/18/12	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	11/16/12	<50	<0.5	<0.5	<0.5	<0.5-1.0	--	--	--
	12/12/13	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
03/27/14	<50	6.0	<0.5	<0.5	<1.0	--	--	--	
Nitrate Injection Area - A Zone Injection Wells									
NIW-A1	05/13/04	9,300	1,800	59	250	96	--	--	--
	06/18/04	3,100	340	22	93	55	--	--	--
	08/27/04	250	13	1.4	6	5.7	--	--	--
	10/05/04	1,700	150	<5.0	24	12	--	--	--
	12/02/04	1,400	28	6.2	10	23	--	--	--
	05/27/05	14,000	1,300	61.0	680	300	--	--	--
NIW-A2	05/13/04	970	18	<2.5	<2.5	4	--	--	--
	06/18/04	200	6.4	1.7	2.1	3.5	--	--	--
	08/27/04	<500	6.3	<5.0	<5.0	<10	--	--	--
	12/02/04	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	05/27/05	550	14.0	0.7	1.8	0.93	--	--	--
Nitrate Injection Area - B Zone Injection Wells									
NIW-B1	05/13/04	170	6.5	1.1	2.4	8.0	--	--	--
	06/18/04	160	2.9	0.7	2.6	2.5	--	--	--
	08/27/04	110	6.9	<0.5	1.4	2.0	--	--	--
	12/02/04	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
NIW-B2	05/13/04	260	8.9	1.5	4	8.4	--	--	--
	06/18/04	120	1.0	<0.5	1.1	<1.0	--	--	--
	08/27/04	120	4.4	<0.5	1.1	1.6	--	--	--
	12/02/04	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
Nitrate Injection Area - Observation Wells									
NOBS-B1	05/13/04	120	4.6	0.8	2.3	5.4	--	--	--
	06/18/04	88	1.9	0.7	1.7	<1.0	--	--	--
	08/27/04	180	5.5	0.53	0.99	1.6	--	--	--
	12/02/04	<50	2.0	<0.5	<0.5	<1.0	--	--	--
	08/24/06	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	05/03/12	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	09/18/12	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	11/15/12	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	12/11/13	<50	<0.5	<0.5	<0.5	<1.0	--	--	--
	03/26/14	<50	<0.5	<0.5	<0.5	<1.0	--	--	--

Abbreviations:

mg/L = micrograms per liter
 MTBE = methyl tert-butyl ether
 TPH-G = Total Petroleum Hydrocarbons, Gasoline Range
 -- = water sample not analyzed for specified constituents
 DUP = Duplicate

Notes:

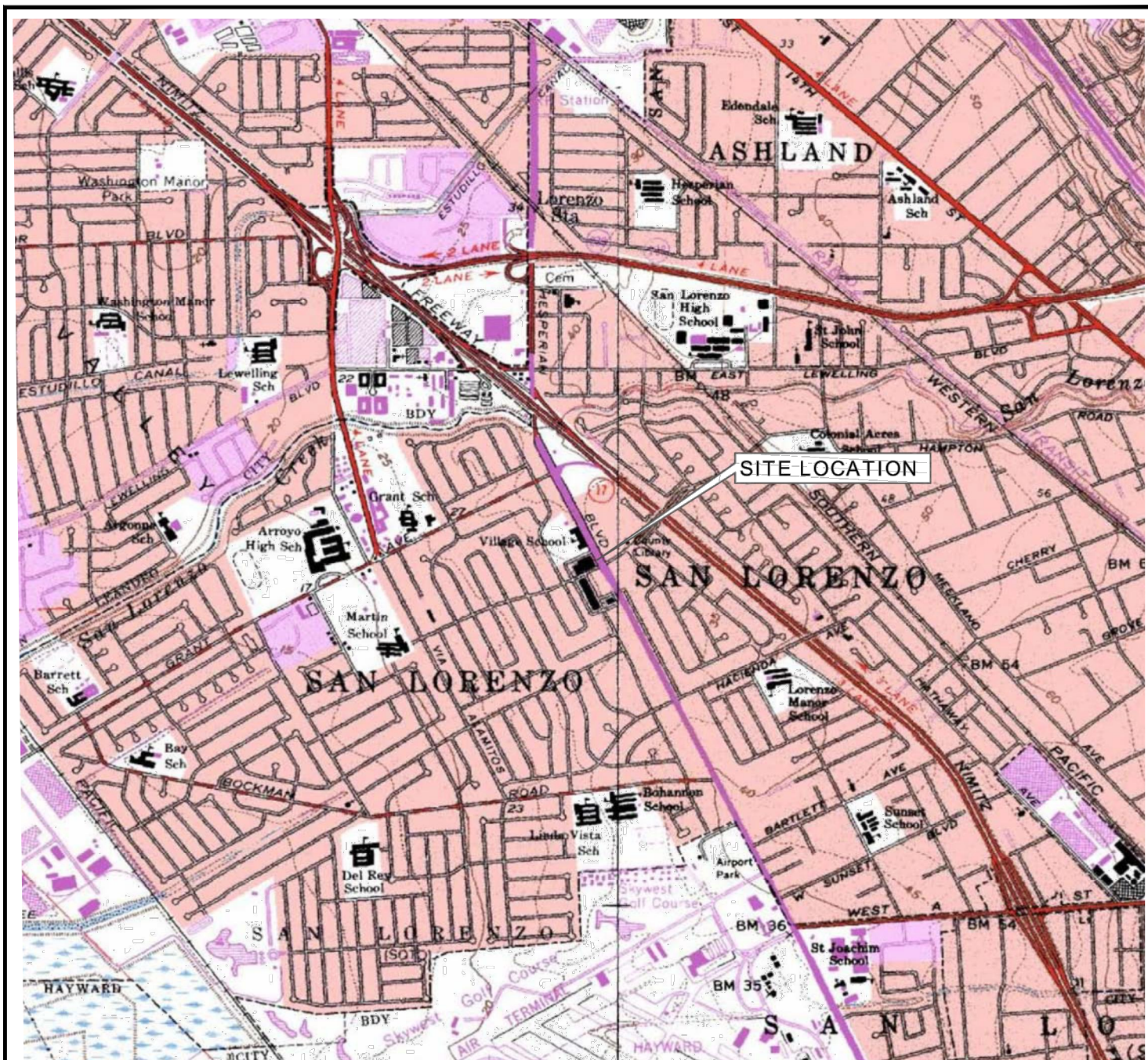
Bold indicates detected concentration.
 J = the chromatograph for this sample does not match the chromatographic pattern of the specified standard

FIGURES

First Semi-Annual 2014 Groundwater Monitoring Report

PN: 185702534

May 8, 2014



CALIFORNIA




SCALE IN MILE



SCALE IN FEET

Image courtesy of the U.S. Geological Survey and Microsoft TerraService OpenGIS Map Server

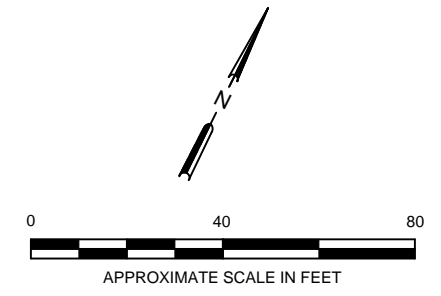
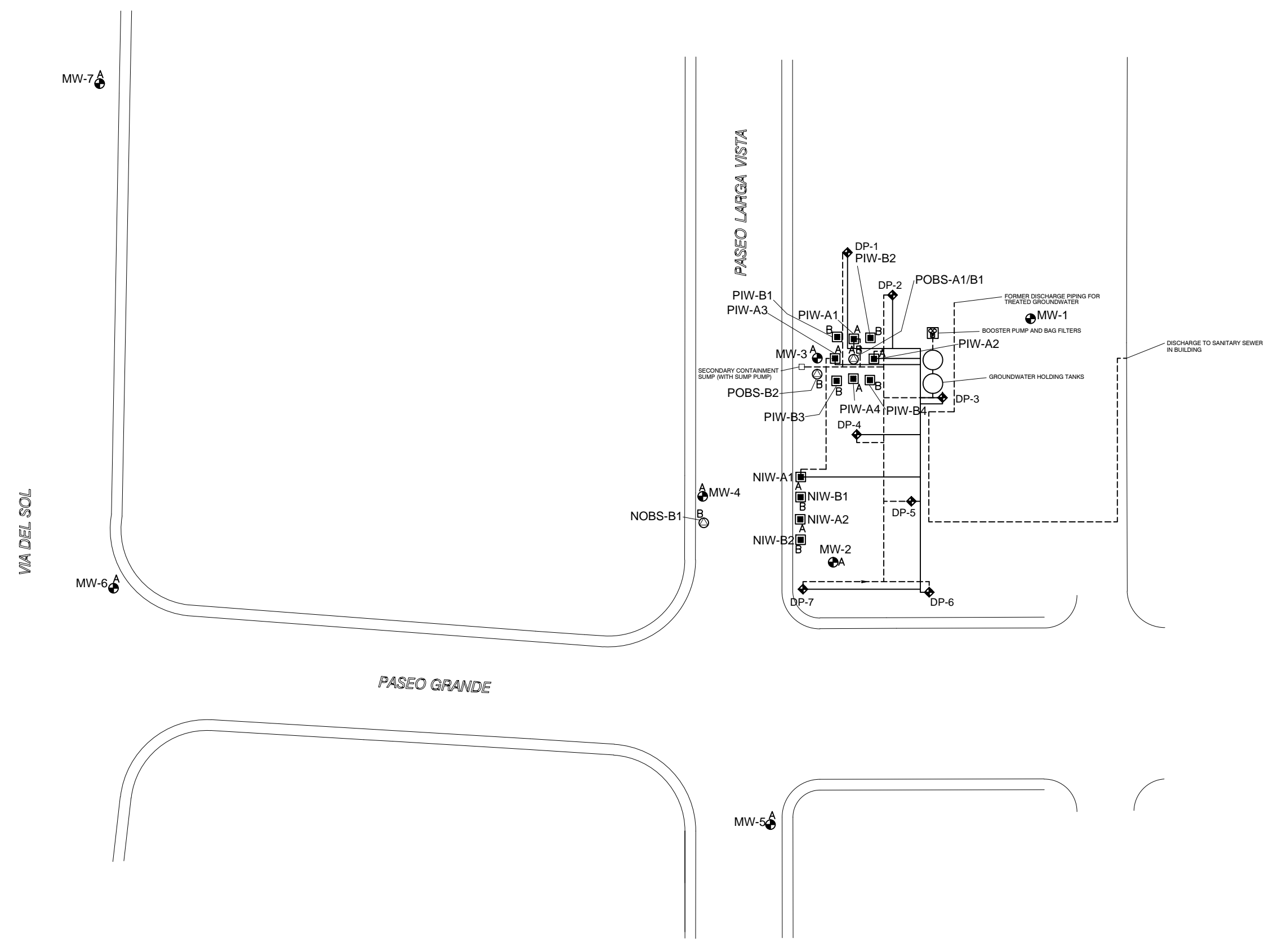
	FOR: DAVID D. BOHANNON ORGANIZATION 575 PASEO GRANDE SAN LORENZO, CALIFORNIA		FIGURE: 1	
	JOB NUMBER: 185702534.200.0003	DRAWN BY: JMA/STA	CHECKED BY: EH	APPROVED BY: CRM


LEGEND

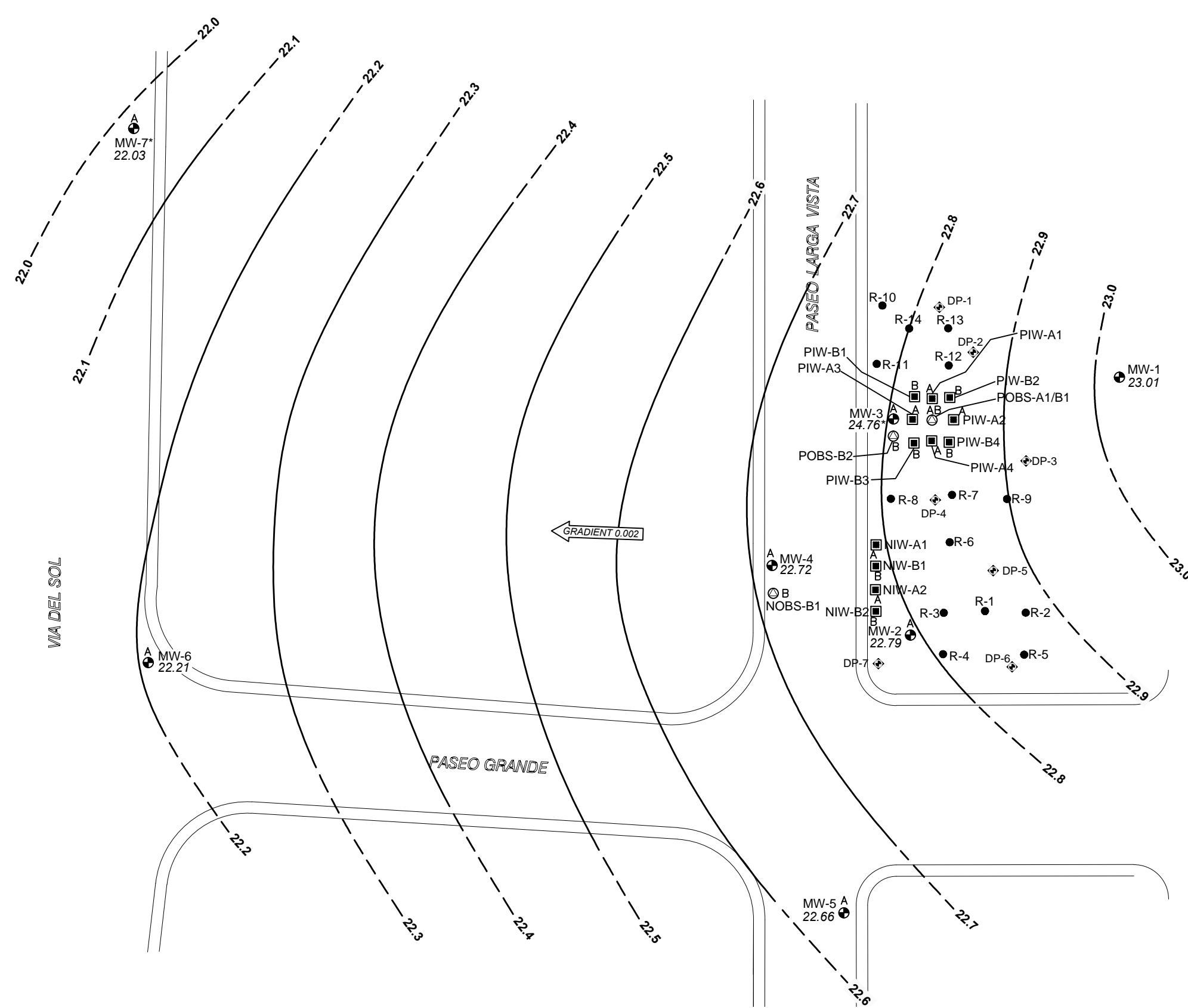
- GROUNDWATER EXTRACTION PIPING (ABOVEGROUND)
- SOIL VAPOR EXTRACTION PIPING (ABOVEGROUND)
- MW-1 MONITORING WELL
- PIW-B3 INJECTION WELL
- ◆ DP-1 DUAL PHASE EXTRACTION WELL (8" PVC - BY STANTEC, 2005)
- ⊙ NOBS-B1 OBSERVATION WELL

WELL DESIGNATION

- A = INDICATES WELL IN THE A-ZONE
- B = INDICATES WELL IN THE B-ZONE



	FOR: DAVID D. BOHANNON ORGANIZATION		SITE PLAN		FIGURE: 2
	575 PASEO GRANDE SAN LORENZO, CALIFORNIA		JOB NUMBER: 185702534.200.0003	DRAWN BY: JMA/STA	CHECKED BY: EH
					DATE: 04/16/14



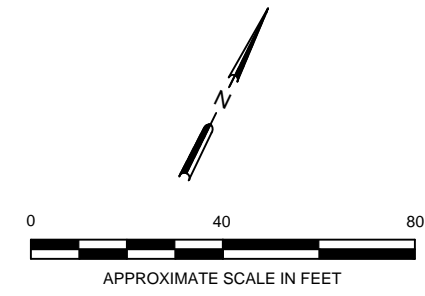
- LEGEND**
- MW-6 MONITORING WELL
 - PIW-B3 INJECTION WELL
 - ◆ DP-1 DUAL PHASE EXTRACTION WELL (8" PVC - BY SECOR, 2005)
 - ⊙ NOBS-B1 OBSERVATION WELL
 - R-1 SOIL BORING - BY SECOR (ABANDONED JULY, 2005)
 - 22.5 — GROUNDWATER SURFACE ELEVATION CONTOUR (DASHED WHERE INFERRED)
 - 23.01 GROUNDWATER ELEVATION (FEET ABOVE MSL)
 - ← 0.002 FV/Ft HYDRAULIC GRADIENT

WELL DESIGNATION

A = INDICATES WELL IN THE A-ZONE
 B = INDICATES WELL IN THE B-ZONE

NOTES

1) AN ASTERISK (*) INDICATES THAT THE GROUNDWATER ELEVATION IS INCONSISTENT WITH THE TRENDS FOR THE SITE AND WAS NOT USED FOR CONTOURING.



	FOR: DAVID D. BOHANNON ORGANIZATION	GROUNDWATER POTENTIOMETRIC SURFACE MAP MARCH 26, 2014		FIGURE: 3	
	575 PASEO GRANDE SAN LORENZO, CALIFORNIA			JOB NUMBER: 185702534.200.0003	DRAWN BY: JMA/STA

LEGEND

- MW-6 MONITORING WELL
- PIW-B3 INJECTION WELL
- ◆ DP-1 DUAL PHASE EXTRACTION WELL (8" PVC - BY SECOR, 2005)
- ⊙ NOBS-B1 OBSERVATION WELL
- R-1 SOIL BORING - BY SECOR (ABANDONED JULY, 2005)

WELL DESIGNATION

- A = INDICATES WELL IN THE A-ZONE
- B = INDICATES WELL IN THE B-ZONE

TPH-G TOTAL PETROLEUM HYDROCARBONS AS GASOLINE

MW-7	MW-7 ^A
TPH-G	<50
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Total Xylenes	<1.0

MW-3	
TPH-G	<50
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Total Xylenes	<1.0

POBS-B2	
TPH-G	<50
Benzene	6.0
Toluene	<0.5
Ethylbenzene	<0.5
Total Xylenes	<1.0

MW-4	
TPH-G	5,500
Benzene	130
Toluene	13
Ethylbenzene	3.9
Total Xylenes	9.8

DUP	
TPH-G	5,500
Benzene	130
Toluene	13
Ethylbenzene	4.0
Total Xylenes	9.5

NOBS-B1	
TPH-G	<50
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Total Xylenes	<1.0

MW-5	MW-5 ^A
TPH-G	<50
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Total Xylenes	<1.0

MW-1	
TPH-G	<50
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Total Xylenes	<1.0

POBS-A1	
TPH-G	510
Benzene	40
Toluene	1.3
Ethylbenzene	0.72
Total Xylenes	2.3

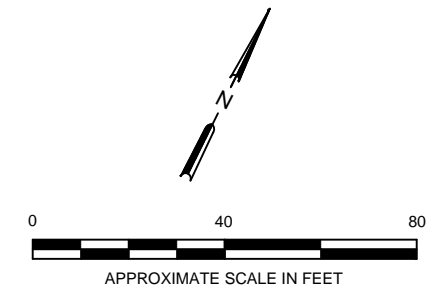
POBS-B1	
TPH-G	390
Benzene	63
Toluene	1.5
Ethylbenzene	0.72
Total Xylenes	<1.0

MW-2	
TPH-G	450
Benzene	32
Toluene	1.1
Ethylbenzene	1.2
Total Xylenes	<1.0

VIA DEL SOL

PASEO LARGA VISTA

PASEO GRANDE



	FOR: DAVID D. BOHANNON ORGANIZATION	PETROLEUM HYDROCARBON CONCENTRATIONS IN GROUNDWATER MARCH 26 AND 27, 2014		SHEET: 4
	575 PASEO GRANDE SAN LORENZO, CALIFORNIA	JOB NUMBER: 185702534.200.0003	DRAWN BY: JMA/STA	CHECKED BY: EH
				DATE: 04/16/14

APPENDIX A

Summary of Previous Site Investigations and Remedial Actions

First Semi-Annual 2014 Groundwater Monitoring Report

PN: 185702534
May 8, 2014

APPENDIX A
Summary of Previous Site Investigations and Remedial Actions

David D. Bohannon Organization
575 Paseo Grande, San Lorenzo, California

Over the last 25 years, the Site has been used as an asphalt-paved parking area located in a C1 commercial zone. The Site was a gasoline station prior to 1969. Little information is known about the Site history related to its use as a gasoline service station. In anticipation of property redevelopment, investigation activities were conducted in March 1995 to determine if former underground service station equipment remained on-Site. The work was conducted by Twining Laboratories, Inc. as documented in their letter report dated April 15, 1995. The investigation included a magnetometer survey followed by an exploratory excavation. In summary, the work conducted identified underground gasoline service station equipment which included what appeared to be the former tank pit, approximately 110 feet of fuel delivery system piping, and a grease sump and/or hydraulic lift pit in an area which may have been the former service garage. Field evidence and one soil sample indicated the potential for soil contamination along the piping runs, around the grease sump, and around the inferred location of the former tank pit. Characterization of the magnitude and extent of potential soil contamination were not performed during the initial activities.

In June 1995, SECOR International Incorporated (SECOR) conducted additional activities at the Site which included removal of the former underground storage tank (UST) system piping and the former grease sump, and characterization soil sampling along the pipelines and around the former grease sump and former tank pit areas. This work was summarized in SECOR's document entitled, "*Preliminary Characterization Report*," to ACEH dated June 29, 1995 (SECOR, 1995). The characterization data from this investigation indicated that there were two areas of concern at the Site: 1) the former grease sump area; and 2) the former gasoline distribution system area. SECOR subsequently conducted excavation activities in these two areas. The soil excavated from the former sump area was transported off-Site for disposal. The soil generated from the UST excavation was treated by means of aeration and later transported off-Site for disposal. Three groundwater monitoring wells (MW-1, MW-2, and MW-3) were installed during the investigation activities to evaluate the degree to which the groundwater had been affected. The results of the soil characterization and groundwater monitoring activities are reported in SECOR's documents entitled, "*Report of Interim Remedial Actions*" (RIRA; SECOR, 1996), dated June 4, 1996, and "*Fourth Quarter 1996 Monitoring and Sampling Report*," dated November 26, 1996.

In June 1999, a utility trench survey was conducted around the Site, and a passive soil vapor survey was performed downgradient from the Site. The results of the utility trench and passive soil vapor surveys are documented in SECOR's document entitled, "*Third Quarter Groundwater Monitoring Results and Plume Definition Investigation Report*," dated October 22, 1999 (3Q99 GWM Report, SECOR, 1999).

On December 5, 2000, four additional groundwater monitoring wells (MW-4 through MW-7) were installed at the Site. Soil and groundwater sampling was conducted to evaluate possible off-Site migration of petroleum-related constituents originating from the Site, and to collect data to direct further subsurface investigations and/or remediation at the Site, if necessary. The work was

APPENDIX A SUMMARY OF PREVIOUS SITE INVESTIGATIONS AND REMEDIAL ACTIONS

conducted in general accordance with SECOR's documents entitled, "*Work Plan for Additional Groundwater Monitoring Well Installation*," dated October 22, 1999, and "*Addendum to the Work Plan for Additional Groundwater Monitoring Well Installation*," dated December 2, 1999. The Work Plan was approved with comments in correspondence from the ACEH in a letter dated November 4, 1999. Historically, two of the on-Site wells (MW-2 and MW-3) and one well immediately downgradient to the west (MW-4) contain elevated concentrations of petroleum hydrocarbons. Wells further off-Site to the west (MW-6 and MW-7) and south (MW-5) typically do not contain detectable levels of petroleum hydrocarbons, with exception of MW-7, which reported low concentrations of total xylenes (up to 6.7 micrograms per liter [$\mu\text{g/L}$]) in the first two sampling events (December 2000 and February 2001). The well has since been non-detect for all constituents.

In January 2003, SECOR performed an additional limited subsurface investigation as described in the document entitled, "*Remedial Action Work Plan*," dated October 25, 2002, and submitted to ACEH. The Work Plan was approved by ACEH in a letter dated October 28, 2002. Based on field observations, soil boring logs, and laboratory analytical results, SECOR concluded that: 1) perched groundwater was encountered within fill materials at approximately 5 to 8 feet below ground surface (bgs); 2) water-bearing zones were encountered in silt and sand at depths of 13- to 15-feet bgs (A zone), in sand from 16- to 19-feet bgs (B zone), and in silty sand at 22.5 feet bgs (C zone); and 3) soil sample analytical results suggest that the majority of chemical impact exists in silty clay from approximately 8- to 13.5-feet bgs within and adjacent to the former gasoline UST and pump island excavation. The findings of the investigation were presented in the document entitled, "*Limited Subsurface Investigation Report and Work Plan for Additional Soil and Groundwater Assessment*," dated February 19, 2003, and prepared by SECOR (SECOR, 2003a).

At the request of ACEH, a sensitive receptor survey was performed for the Site. The survey consisted of identifying the locations and depths of subsurface utilities near the Site and reviewing data provided by the California Department of Water Resources (DWR) for potential groundwater production wells. The survey results are presented in SECOR's document entitled, "*Sensitive Receptor Survey and Conduit Study*," dated June 30, 2003 (Receptor Study; SECOR, 2003b). The report indicates that no groundwater production wells are likely to be affected by hydrocarbons in the soil and groundwater at the Site.

Chemical Injection and Dual-Phase Extraction (DPE) Pilot Testing

The October 2002 *Remedial Action Workplan* (RAW) proposed nitrate injections to stimulate biological degradation of hydrocarbons in the groundwater. Based on the data collected in January 2003, additional remediation of soil was also recommended. An addendum to the RAW was submitted by SECOR in December 2003 proposing hydrogen peroxide injections for chemical oxidation of soils in addition to nitrate injections. The RAW addendum was approved by ACEH in a letter to Bohannon dated December 15, 2003.

In May 2004, EFI Global began the pilot groundwater remediation program. Four wells were installed on-Site for the purposes of injecting nitrate solution into groundwater upgradient of well

APPENDIX A
SUMMARY OF PREVIOUS SITE INVESTIGATIONS AND REMEDIAL ACTIONS

MW-4 (NIW-A1, NIW-A2, NIW-B1, and NIW-B2). Eight wells were installed on-Site for injection of peroxide solution into soil and groundwater upgradient of well MW-3 (PIW-A1 to PIW-A4 and PIW-B1 to PIW-B4). Four wells were installed to observe the effects of the injection program (NOBS-B1, POBS-A1, POBS-B1, and POBS-B2).

Injection and observation well installations were completed during May 2004 in accordance with the approved RAW, and initial chemical injections were completed during May/June 2004. Soil boring logs for these wells are provided in Appendix A. The well installation activities were described in the document entitled, *"Semi-Annual (First Half 2004) Groundwater Monitoring and Pilot Remedial Progress Report,"* prepared by EFI Global (EFI Global, 2004b).

Additional injections were completed in July 2004 (Phase Two) and October 2004 (Phase Three). Progress groundwater sampling for Phases Two and Three was conducted in August 2004 and December 2004, respectively. Following Phase Three injections, EFI Global conducted a single-day DPE test (February 2005) and a five-day DPE test (April 2005) in the area of the former gasoline UST. The results of the Phase Three progress sampling (December 2004) and single-day DPE test (February 2005) are reported in the document entitled, *"Semi-Annual (Second Half 2004) Groundwater Monitoring and Pilot Remedial Progress Report,"* (EFI Global, 2005).

Site-wide groundwater monitoring was conducted in May 2005. In June 2005, SECOR advanced 14 soil borings at locations intended to provide additional delineation of the target area for full-scale DPE system implementation. SECOR obtained an operation permit from the Bay Area Air Quality Management District (BAAQMD) in July 2005 and installed seven additional remediation wells in September 2005. SECOR conducted additional Site-wide groundwater monitoring during August 2006. The results of the five-day DPE test (April 2005) and subsequent groundwater monitoring activities are presented in SECOR's document entitled, *"Groundwater Monitoring and Remediation Progress Report,"* dated April 23, 2007 (SECOR, 2007).

Full-Scale DPE Operations and Remedial Progress Sampling

During December 2008, additional DPE system infrastructure was added and full-scale DPE system operation commenced during January/February 2009. Full-scale DPE operations consisted of soil vapor and groundwater extraction and treatment from 11 Site extraction wells and former chemical injection wells. Full-scale DPE operated through December 2009 at which point remedial progress groundwater monitoring was conducted during January 2010. DPE system operations and results of remedial progress groundwater monitoring are described in the Stantec's document entitled, *"Report of Dual-Phase Extraction System Operations, Soil Vapor Sampling, and Risk Analysis,"* (DPE Report; Stantec, 2011). The results of groundwater monitoring and DPE system performance data indicated that the DPE system significantly reduced concentrations of total petroleum hydrocarbons in the gasoline range (TPHg) and benzene, toluene, ethylbenzene and total xylenes (BTEX) in monitoring wells downgradient of the Site below historical concentrations and to near the laboratory reporting limit (LRL) concentrations in monitoring wells immediately downgradient of the former UST on-Site. DPE system treatment equipment was removed from the

APPENDIX A SUMMARY OF PREVIOUS SITE INVESTIGATIONS AND REMEDIAL ACTIONS

Site in December 2009; however, all wells used for extraction and aboveground conveyance piping remain on-Site.

Soil vapor sample well installation and subsequent soil vapor sampling was conducted at four locations on-Site during March and April 2011. The purpose of the soil vapor sampling was to evaluate the potential for vapors associated with residual petroleum hydrocarbons in soil and/or groundwater to be present at concentrations that could pose a risk to conceptual future occupants of a Site building (if the Site was to be redeveloped with commercial and/or residential structures). Results from the soil vapor sampling indicated that concentrations of petroleum hydrocarbons present in shallow soil vapor at the Site were below available screening criteria such as California Environmental Protection Agency (Cal-EPA) California Human Health Screening Levels (CHHSLs) and Environmental Screening Levels (ESLs) published by the California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region. A Site-specific vapor intrusion risk analysis was performed using the Johnson & Ettinger (J&E) model and the concentrations of all chemicals detected in soil vapor at the Site were inputted into the model. The J&E model results indicated that residual concentrations of chemicals in shallow soil vapor at the Site do not pose a risk to human health considering commercial/industrial or residential land uses. A detailed description of soil vapor sampling and results of the risk analysis are included in the DPE Report (Stantec, 2011).

At the request of ACEH, Stantec performed additional groundwater monitoring during the second and third quarters of 2012 to monitor petroleum hydrocarbon concentrations in Site monitoring wells after the completion of full-scale DPE system operations. The monitoring results are reported in the documents entitled, "*Second Quarter 2012 (Semi-Annual) Groundwater Monitoring Report*," dated July 27, 2012 (Stantec, 2012a) and the "*Third Quarter 2012 Groundwater Monitoring Report*," dated December 21, 2012 (Stantec, 2012b). Monitoring results for the second and third quarters of 2012 showed concentrations of petroleum hydrocarbons downgradient of the Site in monitoring wells MW-5, MW-6, and MW-7 remain below laboratory MRLs and concentrations in on-Site monitoring wells MW-1 and MW-2 remain stable or near the laboratory MRLs. Groundwater in POBS-A1 within the former UST area showed a rebound in TPHg and BTEX concentrations during the third quarter 2012; however, concentrations in well MW-3 located immediately downgradient of POBS-A1 were near the MRLs.

ACEH issued a *Request for Site Conceptual Model and Data Gap Work Plan* letter on August 31, 2012. The August 31, 2012 letter requested GeoTracker compliance documentation and a Site Conceptual Model and Data Gap Work Plan (ACEH, 2012). In response, Bohannon submitted documentation of GeoTracker compliance in May 2012 and submitted the *Site Conceptual Model and Work Plan (SCM-WP)* to ACEH on December 21, 2012. The *Fourth Quarter 2012 Groundwater Monitoring Report* was submitted February 19, 2013 (Stantec, 2013).

Based on review of the SCM-WP and the fourth quarter groundwater monitoring results, ACEH requested an addendum to the work plan to address technical comments in a letter dated November 18, 2013 (ACEH, 2013).

APPENDIX A
SUMMARY OF PREVIOUS SITE INVESTIGATIONS AND REMEDIAL ACTIONS

Representatives of Bohannon and Stantec met with ACEH on January 8, 2014 to discuss the proposed scope of work for the SCM-WP. The *Updated Work Plan to Evaluate Post-Remediation Site Conditions* (Work Plan) was submitted to ACEH on January 17, 2014 (Stantec, 2014), and approved by the ACEH in a letter dated March 4, 2014 (ACEH, 2014).

The 2014 Work Plan proposed the following scope of work:

- Installation of 10 shallow soil vapor wells to a depth of five (5) feet below ground surface (bgs).
- Analysis of soil vapor samples for VOCs, naphthalene, oxygen, nitrogen, methane, and carbon dioxide.
- Advancement of 10 soil borings on-site to a depth of 10 feet bgs with collection of one sample from the 0-5 foot interval and one sample from the 5-10 foot interval.
- Advancement of 13 off-site soil borings to a depth of 15 feet bgs to delineate the depth of groundwater for collection of discrete depth groundwater samples with collection of soil samples from 5-, 10-, and 15-foot bgs.
- Analysis of all soil samples for TPHg and BTEX, and select samples for naphthalene.
- Collection of 13 HydroPunch™ grab-groundwater samples from the shallow water bearing zone (i.e., the upper 15 feet of sediment).
- Analysis of groundwater samples for TPHg and BTEX.

Implementation of the 2014 Work Plan is scheduled to begin during second quarter 2014.

References

- Alameda County Health Care Services Agency, Environmental Health Services (ACEH), 2012. Request for Site Conceptual Model and Data Gap Work Plan, Fuel Leak Case No. RO0000167 and GeoTracker Global ID TO600102098, Bohannon Development Property, 575 Paseo Grande, San Lorenzo, California. August 3, 2012.
- ACEH, 2013. Request for Work Plan Addendum, Fuel Leak Case No. RO0000167 and GeoTracker Global ID TO600102098, Bohannon Development Property, 575 Paseo Grande, San Lorenzo, California. November 18, 2013.
- ACEH, 2014. Approval of Work Plan Addendum, Fuel Leak Case No. RO0000167 and GeoTracker Global ID TO600102098, Bohannon Development Property, 575 Paseo Grande, San Lorenzo, California. March 4, 2014.
- EFI Global, 2004a. Semi-Annual (Second Half 2003) Groundwater Monitoring Report, 575 Paseo Grande, San Lorenzo, California. June 21, 2004.
- EFI Global, 2004b. Semi-Annual (First Half 2004) Groundwater Monitoring and Pilot Remedial Progress Report, 575 Paseo Grande, San Lorenzo, California. August 2004.
- EFI Global, 2005. Semi-Annual (Second Half 2004) Groundwater Monitoring and Pilot Remedial Progress Report, 575 Paseo Grande, San Lorenzo, California. April 2005.
- Regional Water Quality Control Board (RWQCB), 2008. Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater. California Regional Water Quality Control Board, San Francisco Bay Region. Interim Final - November 2007, Revised May 2008.
- SECOR International Incorporated (SECOR), 1995. Preliminary Characterization Report, Former Gasoline Service Station Property at the Northeast Corner of Paseo Grande and Paseo Largavista, San Lorenzo, California. June 29, 1995.
- SECOR, 1996. Report of Interim Remedial Actions, Former Gasoline Service Station, 575 Paseo Grande, San Lorenzo, California. June 4, 1996.
- SECOR, 1999. Third Quarter 1999 Groundwater Monitoring Results and Plume Definition Investigation Report, 575 Paseo Grande, San Lorenzo, California. October 22, 1999.

APPENDIX A
SUMMARY OF PREVIOUS SITE INVESTIGATIONS AND REMEDIAL ACTIONS

SECOR, 2003a. Limited Subsurface Investigation Report and Work Plan for Additional Soil and Groundwater Assessment, David D. Bohannon Organization Property, 575 Paseo Grande, San Lorenzo, California. February 19, 2003.

SECOR, 2003b. Sensitive Receptor Survey and Conduit Study, The Bohannon Development Company Property, 575 Paseo Grande, San Lorenzo, California. June 30, 2003.

Stantec Consulting Corporation (Stantec), 2011. Report of Dual-Phase Extraction System Operations, Soil Vapor Sampling, and Risk Analysis, David D. Bohannon Organization. November 22, 2011.

Stantec, 2012a. Second Quarter 2012 (Semi-Annual) Groundwater Monitoring Report, David D. Bohannon Organization, 575 Paseo Grande, San Lorenzo, California. July 27, 2012.

Stantec, 2012b. Third Quarter 2012 Groundwater Monitoring Report, David D. Bohannon Organization, 575 Paseo Grande, San Lorenzo, California. December 21, 2012.

Stantec, 2012c. Site Conceptual Model and Work Plan to Evaluate Post-Remediation Site Conditions, David D. Bohannon Organization, 575 Paseo Grande, San Lorenzo, California. December 21, 2012.

Stantec, 2013. Fourth Quarter 2012 Groundwater Monitoring Report, David D. Bohannon Organization, 575 Paseo Grande, San Lorenzo, California. February 19, 2013.

Stantec, 2014. Updated Work Plan to Evaluate Post-Remediation Site Conditions, Former Petroleum Underground Storage Tank (UST) Site, David D. Bohannon Organization Property Located at 575 Paseo Grande - San Lorenzo, CA. January 17, 2014.

APPENDIX B
Field Data Sheets for the March 2014
Groundwater Monitoring Event
First Semi-Annual 2014 Groundwater Monitoring Report

PN: 185702534
May 8, 2014

Stantec

HYDROLOGIC DATA SHEET

Date: 3-26-14

Project: Bohannon

Technician: C. Melancon

Project #: 185702534

TOC = Top of Well Casing Elevation
 DTP = Depth to Free Product (FP or NAPL) Below TOC
 DTW = Depth to Groundwater Below TOC
 DTB = Depth to Bottom of Well Casing Below TOC

DIA = Well Casing Diameter
 ELEV = Groundwater Elevation
 DUP = Duplicate

WELL OR LOCATION	TIME	MEASUREMENT			COMMENTS
		DTW	DTB	Dia	
MW-1	925	6.76		2	
MW-2	930	6.75		2	
MW-3	935	4.58*		2	*abnormally high - due to rain?
MW-4	915	5.92		2	
MW-5	910	5.90		2	
MW-6 *	905	5.49		2	
MW-7	900	6.19		2	
POBS-A1	945	6.93		1	
POBS-B1	950	7.02		1	
POBS-B2	940	6.12	25.9	2	
NOBS-B1	920	5.83		2	
* Note: MW-6 is by storm drain and may have local recharge influence due to current rains.					
Drum inventory: 5 - total					
3 - purge water, labels - 1997, 2001, 2014					
1 - used bag filters					
1 - soil sludge from bag filters					

Groundwater Sampling Data Sheet

Project #: 185702534	Task No:	Project Name: Bohannon
Site Location: San Lorenzo		Date: 3/26/14
Well ID: MW-1	Sampler(s): C. Meloycoy	
Screen Interval (ft): 5-15	Depth to Water (DTW) (ft): 6.55	Sample DTW (ft): 6.55
Tube/Pump Depth (ft): 10	Depth to Bottom (DTB) (ft):	Measurements Referenced to: TOC
	Well Diameter (inch): 2	OVM (ppm) = —

CALCULATIONS:

Length of the water column: _____ ft - _____ ft = _____ ft
DTB DTW Water Col

80% of the water level: _____ ft + (_____ ft X 0.2) = _____ ft
DTW Water Col Recharge water level

Estimated Purge Volume (EPV): = _____ ft X _____ X $\frac{3}{4}$ = _____ Gallons
Water col gal/in. ft. Casing Volumes

- (X) Low-Flow/Micro Purging
 () Purge at least 3 well volumes

Well Diameter.	I.D	gal/linear ft.
1.25	1.38	0.08
2	2.067	0.17
3	3.068	0.38
4	4.026	0.66
6	6.065	1.5
8	7.981	2.6
10	10.02	4.12
12	11.938	5.81

Purging Equipment:

- () _____ Bailer
 () Disposable Bailer
 () Electric Submersible Pump
 (X) Peristaltic Pump
 () Other: _____

Sampling Equipment:

- () _____ Bailer
 (X) Pump Discharge
 () Disposable Bailer
 () Peristaltic Pump & Dedicated Tubing
 () Other: _____

Type of Water Quality Kit Used:

- (X) YSI 556
 () Myron L
 () Horriba
 () Hanna
 () Other: _____

Begin Purge at **1400**

Time (24 hrs)	Volume (G/L)	Temp. (°C/°F)	DTW	Specific Conductivity (µS/cm)	pH (units)	Color	Odor	DO (mg/L)	Redox Potential (mV)
(every 3-5 min)		(± 10%)		(± 10%)	(± 0.2)			(± 10%)	(± 20%)
1405	1.5	20.2	6.63	1127	6.45	Clear	None	0.59	-61.2
1410	2.5	20.2	6.55	1106	6.47	"	"	0.51	-53.1
1415	3.5	20.2	6.55	1097	6.47	"	"	0.49	-41.2
1420	4.5	20.2	6.55	1091	6.48	"	"	0.50	-37.8
1425	5.5	20.2	6.55	1086	6.48	"	"	0.51	-34.2
1430	6.5	20.2	6.55	1084	6.48	"	"	0.52	-33.8

Liters / Gallons Purged: 6.5	Pump Rate in L or G /min: 200
Sampling Time: 1430	Duplicate Sample ID: _____ Sample Time: _____
Sample Analyzed For: SEE WORK ORDER	Duplicate Sample Analyzed For: SEE WORK ORDER
(√) Analyte(s): _____ Preservative: _____ Bottles: _____	(√) Analyte(s): _____ Preservative: _____ Bottles: _____
(X) TPH-g, BTEX, MTBE HCl 3 X 40 mL VOAs	() TOC H ₂ SO ₄ 2 X 40 mL Amber VOAs
() TPH-d & TPH-mo HCl 2 x 0.5 L Ambers	() Methane HCl 3 X 40 mL VOAs
() NO ₂ , NO ₃ & SO ₄ None 1 X 500 mL Poly	() Naphthalene, Phenol None 2 x 1 L Ambers
() Total Manganese HNO ₃ 1 X 250 mL Poly	() Alkalinity, TDS None 1 X 500 mL Poly
() Dissolved Iron Field-filtered, HNO ₃ 1 X 250 mL Poly	() Phosphorus, TKN H ₂ SO ₄ 1 x 500 mL Poly
() Ferrous Iron HCl 2 X Amber VOAs	() VOCs HCl 3 X 40 mL VOAs
() SVOCs None 2 x 1 L Ambers	() Other: _____

Notes:

Groundwater Sampling Data Sheet

Project #: <u>185702534</u>	Task No:	Project Name: Bohannon
Site Location: San Lorenzo		Date: <u>3/27/14</u>
Well ID: <u>MW-2</u>	Sampler(s): <u>C. Melaycon</u>	
Screen Interval (ft): <u>5-15</u>	Depth to Water (DTW) (ft): <u>6.25</u>	Sample DTW (ft): <u>6.54</u>
Tube/Pump Depth (ft): <u>10'</u>	Depth to Bottom (DTB) (ft):	Measurements Referenced to: TOC
	Well Diameter (inch): <u>2</u>	OVM (ppm) = <u>-</u>

CALCULATIONS:

Length of the water column: _____ ft - _____ ft = _____ ft
DTB DTW Water Col

80% of the water level: _____ ft + (_____ ft X 0.2) = _____ ft
DTW Water Col Recharge water level

Estimated Purge Volume (EPV): = _____ ft X _____ X $\frac{3}{}$ = _____ Gallons
Water col gal/lin. ft. Casing Volumes

- (X) Low-Flow/Micro Purging
 () Purge at least 3 well volumes

Volume of Schedule 40 PVC Pipe		
Well Diameter.	I.D	gal/linear ft.
1.25	1.38	0.08
2	2.067	0.17
3	3.068	0.38
4	4.026	0.66
6	6.065	1.5
8	7.981	2.6
10	10.02	4.12
12	11.938	5.81

Purging Equipment:

- () _____ Bailer
 () Disposable Bailer
 () Electric Submersible Pump
 (X) Peristaltic Pump
 () Other: _____

Sampling Equipment:

- () _____ Bailer
 (X) Pump Discharge
 () Disposable Bailer
 () Peristaltic Pump & Dedicated Tubing
 () Other: _____

Type of Water Quality Kit Used:

- (X) YSI 556
 () Myron L
 () Horriba
 () Hanna
 () Other: _____

Begin Purge at 1045

Time (24 hrs)	Volume (G/L)	Temp. (C/F)	DTW	Specific Conductivity (µS/cm)	pH (units)	Color	Odor	DO (mg/L)	Redox Potential (mV)
(every 3-5 min)		(± 10%)		(± 10%)	(± 0.2)			(± 10%)	(± 20%)
<u>1050</u>	<u>1.5</u>	<u>19.50</u>	<u>6.58</u>	<u>1486</u>	<u>6.92</u>	<u>clear</u>	<u>Mod.</u>	<u>2.89</u>	<u>-113.7</u>
<u>1055</u>	<u>2.5</u>	<u>19.66</u>	<u>6.55</u>	<u>1487</u>	<u>6.87</u>	<u>"</u>	<u>"</u>	<u>0.83</u>	<u>-124.6</u>
<u>1100</u>	<u>3.5</u>	<u>19.75</u>	<u>6.54</u>	<u>1476</u>	<u>6.87</u>	<u>"</u>	<u>"</u>	<u>0.87</u>	<u>-128.5</u>
<u>1105</u>	<u>4.5</u>	<u>19.73</u>	<u>6.54</u>	<u>1464</u>	<u>6.87</u>	<u>"</u>	<u>"</u>	<u>0.47</u>	<u>-117.9</u>
<u>1110</u>	<u>5.5</u>	<u>19.71</u>	<u>6.54</u>	<u>1461</u>	<u>6.87</u>	<u>"</u>	<u>"</u>	<u>0.58</u>	<u>-103.3</u>
<u>1115</u>	<u>6.5</u>	<u>19.72</u>	<u>6.54</u>	<u>1460</u>	<u>6.87</u>	<u>"</u>	<u>"</u>	<u>0.39</u>	<u>-116.9</u>

Liters / Gallons Purged: <u>6.5</u>	Pump Rate in L or G /min: <u>200</u>
Sampling Time: <u>1120</u>	Duplicate Sample ID: _____ Sample Time: _____
Sample Analyzed For: SEE WORK ORDER	Duplicate Sample Analyzed For: SEE WORK ORDER
(√) Analyte(s): _____ Preservative: _____ Bottles: _____	(√) Analyte(s): _____ Preservative: _____ Bottles: _____
(X) TPH-g, BTEX, MTBE HCl 3 X 40 mL VOAs	() TOC H ₂ SO ₄ 2 X 40 mL Amber VOAs
() TPH-d & TPH-mo HCl 2 x 0.5 L Ambers	() Methane HCl 3 X 40 mL VOAs
() NO ₂ , NO ₃ & SO ₄ None 1 X 500 mL Poly	() Naphthalene, Phenol None 2 x 1 L Ambers
() Total Manganese HNO ₃ 1 X 250 mL Poly	() Alkalinity, TDS None 1 X 500 mL Poly
() Dissolved Iron Field-filtered, HNO ₃ 1 X 250 mL Poly	() Phosphorus, TKN H ₂ SO ₄ 1 x 500 mL Poly
() Ferrous Iron HCl 2 X Amber VOAs	() VOCs HCl 3 X 40 mL VOAs
() SVOCs None 2 x 1 L Ambers	() Other: _____

Notes:

Groundwater Sampling Data Sheet

Project #: 185702534	Task No:	Project Name: Bohannon	Date: 3/27/14
Site Location: San Lorenzo		Sampler(s): C. Melancon	
Well ID: MW-3	Depth to Water (DTW) (ft): 4.58	Sample DTW (ft): 6.43	
Screen Interval (ft): 5-15	Depth to Bottom (DTB) (ft):	Measurements Referenced to: TOC	
Tube/Pump Depth (ft): 10'	Well Diameter (inch): 2	OVM (ppm) = —	

CALCULATIONS:

Length of the water column: _____ ft - _____ ft = _____ ft
DTB DTW Water Col

80% of the water level: _____ ft + (_____ ft X 0.2) = _____ ft
DTW Water Col Recharge water level

Estimated Purge Volume (EPV): = _____ ft X _____ X $\frac{3}{1}$ = _____ Gallons
Water col gal/in. ft. Casing Volumes

- (X) Low-Flow/Micro Purging
 () Purge at least 3 well volumes

Well Diameter.	I.D	gal/linear ft.
1.25	1.38	0.08
2	2.067	0.17
3	3.068	0.38
4	4.026	0.66
6	6.065	1.5
8	7.981	2.6
10	10.02	4.12
12	11.938	5.81

Purging Equipment:

- () Bailer
 () Disposable Bailer
 () Electric Submersible Pump
 (X) Peristaltic Pump
 () Other: _____

Sampling Equipment:

- () Bailer
 (X) Pump Discharge
 () Disposable Bailer
 () Peristaltic Pump & Dedicated Tubing
 () Other: _____

Type of Water Quality Kit Used:

- (X) YSI 556
 () Myron L
 () Horriba
 () Hanna
 () Other: _____

Begin Purge at **805**

Time (24 hrs)	Volume (G/L)	Temp. (°C/°F)	DTW	Specific Conductivity (µS/cm)	pH (units)	Color	Odor	DO (mg/L)	Redox Potential (mV)
(every 3-5 min)		(± 10%)		(± 10%)	(± 0.2)			(± 10%)	(± 20%)
810	1.5	17.21	6.25	531	7.01	Clear	None	2.71	403.5
815	2.5	17.34	6.43	547	7.01	"	"	2.47	393.3
820	3.0	17.26	6.41	549	6.99	"	"	2.38	384.1
825	3.5	17.12	6.43	553	6.98	"	"	1.87	362.6
830	4.0	17.09	6.43	558	6.97	"	"	2.05	346.4
835	4.5	17.03	6.43	558	6.96	"	"	2.20	332.9
840	5.0	17.06	6.43	559	6.96	"	"	2.25	330.1

Liters / Gallons Purged: 5.0	Pump Rate in L or G/min: 100																																																
Sampling Time: 840	Duplicate Sample ID: _____ Sample Time: _____																																																
Sample Analyzed For: SEE WORK ORDER																																																	
Duplicate Sample Analyzed For: SEE WORK ORDER																																																	
<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">(√) Analyte(s):</th> <th style="text-align: left;">Preservative:</th> <th style="text-align: left;">Bottles:</th> </tr> <tr> <td><input checked="" type="checkbox"/> (X) TPH-g, BTEX, MTBE</td> <td>HCl</td> <td>3 X 40 mL VOAs</td> </tr> <tr> <td><input type="checkbox"/> () TPH-d & TPH-mo</td> <td>HCl</td> <td>2 x 0.5 L Ambers</td> </tr> <tr> <td><input type="checkbox"/> () NO₂, NO₃ & SO₄</td> <td>None</td> <td>1 X 500 mL Poly</td> </tr> <tr> <td><input type="checkbox"/> () Total Manganese</td> <td>HNO₃</td> <td>1 X 250 mL Poly</td> </tr> <tr> <td><input type="checkbox"/> () Dissolved Iron</td> <td>Field-filtered, HNO₃</td> <td>1 X 250 mL Poly</td> </tr> <tr> <td><input type="checkbox"/> () Ferrous Iron</td> <td>HCl</td> <td>2 X Amber VOAs</td> </tr> <tr> <td><input type="checkbox"/> () SVOCs</td> <td>None</td> <td>2 x 1 L Ambers</td> </tr> </table>	(√) Analyte(s):	Preservative:	Bottles:	<input checked="" type="checkbox"/> (X) TPH-g, BTEX, MTBE	HCl	3 X 40 mL VOAs	<input type="checkbox"/> () TPH-d & TPH-mo	HCl	2 x 0.5 L Ambers	<input type="checkbox"/> () NO ₂ , NO ₃ & SO ₄	None	1 X 500 mL Poly	<input type="checkbox"/> () Total Manganese	HNO ₃	1 X 250 mL Poly	<input type="checkbox"/> () Dissolved Iron	Field-filtered, HNO ₃	1 X 250 mL Poly	<input type="checkbox"/> () Ferrous Iron	HCl	2 X Amber VOAs	<input type="checkbox"/> () SVOCs	None	2 x 1 L Ambers	<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">(√) Analyte(s):</th> <th style="text-align: left;">Preservative:</th> <th style="text-align: left;">Bottles:</th> </tr> <tr> <td><input type="checkbox"/> () TOC</td> <td>H₂SO₄</td> <td>2 X 40 mL Amber VOAs</td> </tr> <tr> <td><input type="checkbox"/> () Methane</td> <td>HCl</td> <td>3 X 40 mL VOAs</td> </tr> <tr> <td><input type="checkbox"/> () Naphthalene, Phenol</td> <td>None</td> <td>2 x 1 L Ambers</td> </tr> <tr> <td><input type="checkbox"/> () Alkalinity, TDS</td> <td>None</td> <td>1 X 500 mL Poly</td> </tr> <tr> <td><input type="checkbox"/> () Phosphorus, TKN</td> <td>H₂SO₄</td> <td>1 x 500 mL Poly</td> </tr> <tr> <td><input type="checkbox"/> () VOCs</td> <td>HCl</td> <td>3 X 40 mL VOAs</td> </tr> <tr> <td><input type="checkbox"/> () Other: _____</td> <td></td> <td></td> </tr> </table>	(√) Analyte(s):	Preservative:	Bottles:	<input type="checkbox"/> () TOC	H ₂ SO ₄	2 X 40 mL Amber VOAs	<input type="checkbox"/> () Methane	HCl	3 X 40 mL VOAs	<input type="checkbox"/> () Naphthalene, Phenol	None	2 x 1 L Ambers	<input type="checkbox"/> () Alkalinity, TDS	None	1 X 500 mL Poly	<input type="checkbox"/> () Phosphorus, TKN	H ₂ SO ₄	1 x 500 mL Poly	<input type="checkbox"/> () VOCs	HCl	3 X 40 mL VOAs	<input type="checkbox"/> () Other: _____		
(√) Analyte(s):	Preservative:	Bottles:																																															
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<input type="checkbox"/> () Dissolved Iron	Field-filtered, HNO ₃	1 X 250 mL Poly																																															
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<input type="checkbox"/> () Naphthalene, Phenol	None	2 x 1 L Ambers																																															
<input type="checkbox"/> () Alkalinity, TDS	None	1 X 500 mL Poly																																															
<input type="checkbox"/> () Phosphorus, TKN	H ₂ SO ₄	1 x 500 mL Poly																																															
<input type="checkbox"/> () VOCs	HCl	3 X 40 mL VOAs																																															
<input type="checkbox"/> () Other: _____																																																	

Notes:

Groundwater Sampling Data Sheet

Project #: <u>185702534</u>	Task No:	Project Name: <u>Bohannon</u>
Site Location: <u>San Lorenzo</u>		Date: <u>3/26/14</u>
Well ID: <u>NW-4</u>	Sampler(s): <u>C. Melgacón</u>	
Screen Interval (ft): <u>5-15</u>	Depth to Water (DTW) (ft): <u>5.92</u>	Sample DTW (ft): <u>5.54</u>
Tube/Pump Depth (ft): <u>10</u>	Depth to Bottom (DTB) (ft):	Measurements Referenced to: <u>TOC</u>
	Well Diameter (inch): <u>2</u>	OVM (ppm) = <u>-</u>

CALCULATIONS:

Length of the water column: _____ ft - _____ ft = _____ ft
DTB DTW Water Col

80% of the water level: _____ ft + (_____ ft X 0.2) = _____ ft
DTW Water Col Recharge water level

Estimated Purge Volume (EPV): = _____ ft X _____ gal/in. ft. X 3 = _____ Gallons
Water col Casing Volumes

- (X) Low-Flow/Micro Purging
 () Purge at least 3 well volumes

Volume of Schedule 40 PVC Pipe		
Well Diameter.	I.D	gal/linear ft.
1.25	1.38	0.08
2	2.067	0.17
3	3.068	0.38
4	4.026	0.66
6	6.065	1.5
8	7.981	2.6
10	10.02	4.12
12	11.938	5.81

Purging Equipment:

- () _____ Bailer
 () Disposable Bailer
 () Electric Submersible Pump
 (X) Peristaltic Pump
 () Other: _____

Sampling Equipment:

- () _____ Bailer
 (X) Pump Discharge
 () Disposable Bailer
 () Peristaltic Pump & Dedicated Tubing
 () Other: _____

Type of Water Quality Kit Used:

- (X) YSI 556
 () Myron L
 () Horriba
 () Hanna
 () Other: _____

Begin Purge at 1220

Time (24 hrs)	Volume (G/L)	Temp. (°C/°F)	DTW	Specific Conductivity (µS/cm)	pH (units)	Color	Odor	DO (mg/L)	Redox Potential (mV)
(every 3-5 min)		(± 10%)		(± 10%)	(± 0.2)			(± 10%)	(± 20%)
<u>1225</u>	<u>1.5</u>	<u>18.4</u>	<u>5.62</u>	<u>864</u>	<u>6.66</u>	<u>clear</u>	<u>Mod.</u>	<u>0.57</u>	<u>-101.3</u>
<u>1230</u>	<u>2.5</u>	<u>18.7</u>	<u>5.55</u>	<u>877</u>	<u>6.61</u>	<u>"</u>	<u>"</u>	<u>0.49</u>	<u>-105.2</u>
<u>1235</u>	<u>3.5</u>	<u>18.9</u>	<u>5.54</u>	<u>883</u>	<u>6.59</u>	<u>"</u>	<u>"</u>	<u>0.42</u>	<u>-106.7</u>
<u>1240</u>	<u>4.5</u>	<u>19.0</u>	<u>5.54</u>	<u>884</u>	<u>6.48</u>	<u>"</u>	<u>"</u>	<u>0.39</u>	<u>-107.1</u>
<u>1245</u>	<u>5.5</u>	<u>19.1</u>	<u>5.54</u>	<u>885</u>	<u>6.46</u>	<u>"</u>	<u>"</u>	<u>0.36</u>	<u>-107.9</u>
<u>1250</u>	<u>6.5</u>	<u>19.0</u>	<u>5.54</u>	<u>885</u>	<u>6.45</u>	<u>"</u>	<u>"</u>	<u>0.35</u>	<u>-108.1</u>

Liters / Gallons Purged: <u>6.5</u>	Pump Rate in L or G/min: <u>200</u>
Sampling Time: <u>1250</u>	Duplicate Sample ID: <u>DUP</u> Sample Time: _____
Sample Analyzed For: SEE WORK ORDER	
(√) Analyte(s): Preservative: Bottles: (X) TPH-g, BTEX, MTBE HCl 3 X 40 mL VOAs () TPH-d & TPH-mo HCl 2 x 0.5 L Ambers () NO ₂ , NO ₃ & SO ₄ None 1 X 500 mL Poly () Total Manganese HNO ₃ 1 X 250 mL Poly () Dissolved Iron Field-filtered, HNO ₃ 1 X 250 mL Poly () Ferrous Iron HCl 2 X Amber VOAs () SVOCs None 2 x 1 L Ambers	Duplicate Sample Analyzed For: SEE WORK ORDER (√) Analyte(s): Preservative: Bottles: () TOC H ₂ SO ₄ 2 X 40 mL Amber VOAs () Methane HCl 3 X 40 mL VOAs () Naphthalene, Phenol None 2 x 1 L Ambers () Alkalinity, TDS None 1 X 500 mL Poly () Phosphorus, TKN H ₂ SO ₄ 1 x 500 mL Poly () VOCs HCl 3 X 40 mL VOAs () Other: _____

Notes:

Groundwater Sampling Data Sheet

Project #: <u>185702534</u>	Task No: _____	Project Name: <u>Bohannon</u>
Site Location: <u>San Lorenzo</u>		Date: <u>3/26/14</u>
Well ID: <u>MW-5</u>	Depth to Water (DTW) (ft): <u>5.98</u>	Sample DTW (ft): <u>5.98</u>
Screen Interval (ft): <u>5-15</u>	Depth to Bottom (DTB) (ft): _____	Measurements Referenced to: <u>TOC</u>
Tube/Pump Depth (ft): <u>10</u>	Well Diameter (inch): <u>2</u>	OVM (ppm) = _____

CALCULATIONS:

Length of the water column: _____ ft - _____ ft = _____ ft
DTB DTW Water Col

80% of the water level: _____ ft + (_____ ft X 0.2) = _____ ft
DTW Water Col Recharge water level

Estimated Purge Volume (EPV): = _____ ft X _____ X $\frac{3}{\text{Casing Volumes}}$ = _____ Gallons
Water col gal/in. ft.

- (X) Low-Flow/Micro Purging
 () Purge at least 3 well volumes

Volume of Schedule 40 PVC Pipe		
Well Diameter	I.D	gal/linear ft.
1.25	1.38	0.08
2	2.067	0.17
3	3.068	0.38
4	4.026	0.66
6	6.065	1.5
8	7.981	2.6
10	10.02	4.12
12	11.938	5.81

Purging Equipment:

- () _____ Bailer
 () Disposable Bailer
 () Electric Submersible Pump
 (X) Peristaltic Pump
 () Other: _____

Sampling Equipment:

- () _____ Bailer
 (X) Pump Discharge
 () Disposable Bailer
 () Peristaltic Pump & Dedicated Tubing
 () Other: _____

Type of Water Quality Kit Used:

- (X) YSI 556
 () Myron L
 () Horriba
 () Hanna
 () Other: _____

Begin Purge at 1130

Time (24 hrs)	Volume (G/L)	Temp. (C/F)	DTW	Specific Conductivity (µS/cm)	pH (units)	Color	Odor	DO (mg/L)	Redox Potential (mV)
(every 3-5 min)		(± 10%)		(± 10%)	(± 0.2)			(± 10%)	(± 20%)
<u>1135</u>	<u>1.5</u>	<u>17.8</u>	<u>6.02</u>	<u>725</u>	<u>7.09</u>	<u>clear</u>	<u>none</u>	<u>2.98</u>	<u>59.3</u>
<u>1140</u>	<u>2.5</u>	<u>18.1</u>	<u>5.97</u>	<u>728</u>	<u>7.07</u>	<u>"</u>	<u>"</u>	<u>1.13</u>	<u>53.1</u>
<u>1145</u>	<u>3.5</u>	<u>18.0</u>	<u>5.98</u>	<u>730</u>	<u>7.05</u>	<u>"</u>	<u>"</u>	<u>0.91</u>	<u>41.3</u>
<u>1150</u>	<u>4.5</u>	<u>18.2</u>	<u>5.98</u>	<u>732</u>	<u>7.04</u>	<u>"</u>	<u>"</u>	<u>0.73</u>	<u>36.5</u>
<u>1155</u>	<u>5.5</u>	<u>18.2</u>	<u>5.98</u>	<u>733</u>	<u>7.03</u>	<u>"</u>	<u>"</u>	<u>0.61</u>	<u>35.9</u>
<u>1200</u>	<u>6.5</u>	<u>18.3</u>	<u>5.98</u>	<u>732</u>	<u>7.03</u>	<u>"</u>	<u>"</u>	<u>0.59</u>	<u>35.7</u>

Liters / Gallons Purged: <u>6.5</u>	Pump Rate in L or G/min: <u>200</u>																																																
Sampling Time: <u>1200</u>	Duplicate Sample ID: _____ Sample Time: _____																																																
Sample Analyzed For: SEE WORK ORDER	Duplicate Sample Analyzed For: SEE WORK ORDER																																																
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Notes:

Groundwater Sampling Data Sheet

Project #: <u>185702534</u> Task No:	Project Name: Bohannon	Date: <u>3/26/14</u>
Site Location: San Lorenzo		
Sampler(s): <u>C. Melancon</u>		
Well ID: <u>MW-6</u>	Depth to Water (DTW) (ft): <u>5.49</u>	Sample DTW (ft): <u>5.52</u>
Screen Interval (ft): <u>5-15</u>	Depth to Bottom (DTB) (ft):	Measurements Referenced to: TOC
Tube/Pump Depth (ft): <u>10</u>	Well Diameter (inch): <u>2</u>	OVM (ppm) = <u>—</u>

CALCULATIONS:

Length of the water column: _____ ft - _____ ft = _____ ft
DTB DTW Water Col

80% of the water level: _____ ft + (_____ ft X 0.2) = _____ ft
DTW Water Col Recharge water level

Estimated Purge Volume (EPV): = _____ ft X _____ X 3 = _____ Gallons
Water col gal/lin. ft. Casing Volumes

- (X) Low-Flow/Micro Purging
 () Purge at least 3 well volumes

Volume of Schedule 40 PVC Pipe		
Well Diameter.	I.D	gal/linear ft.
1.25	1.38	0.08
2	2.067	0.17
3	3.068	0.38
4	4.026	0.66
6	6.065	1.5
8	7.981	2.6
10	10.02	4.12
12	11.938	5.81

Purging Equipment:

- () _____ Bailer
 () Disposable Bailer
 () Electric Submersible Pump
 (X) Peristaltic Pump
 () Other: _____

Sampling Equipment:

- () _____ Bailer
 (X) Pump Discharge
 () Disposable Bailer
 () Peristaltic Pump & Dedicated Tubing
 () Other: _____

Type of Water Quality Kit Used:

- (X) YSI 556
 () Myron L
 () Horriba
 () Hanna
 () Other: _____

Begin Purge at 1050

Time (24 hrs)	Volume (G/L)	Temp. (C/F)	DTW	Specific Conductivity (µS/cm)	pH (units)	Color	Odor	DO (mg/L)	Redox Potential (mV)
(every 3-5 min)		(± 10%)		(± 10%)	(± 0.2)			(± 10%)	(± 20%)
<u>1055</u>	<u>1.5</u>	<u>17.5</u>	<u>5.51</u>	<u>801</u>	<u>7.76</u>	<u>clear</u>	<u>none</u>	<u>5.01</u>	<u>69.5</u>
<u>1100</u>	<u>2.5</u>	<u>17.9</u>	<u>5.52</u>	<u>794</u>	<u>7.69</u>	<u>"</u>	<u>"</u>	<u>2.11</u>	<u>63.7</u>
<u>1105</u>	<u>3.5</u>	<u>18.1</u>	<u>5.52</u>	<u>787</u>	<u>7.51</u>	<u>"</u>	<u>"</u>	<u>1.23</u>	<u>58.1</u>
<u>1110</u>	<u>4.5</u>	<u>18.2</u>	<u>"</u>	<u>784</u>	<u>7.43</u>	<u>"</u>	<u>"</u>	<u>1.09</u>	<u>57.4</u>
<u>1115</u>	<u>5.5</u>	<u>18.1</u>	<u>"</u>	<u>783</u>	<u>7.40</u>	<u>"</u>	<u>"</u>	<u>0.98</u>	<u>56.3</u>
<u>1120</u>	<u>6.5</u>	<u>18.2</u>	<u>"</u>	<u>783</u>	<u>7.38</u>	<u>"</u>	<u>"</u>	<u>0.95</u>	<u>56.5</u>

Liters / Gallons Purged: <u>6.5</u>	Pump Rate in L or G /min: <u>200</u>																																																
Sampling Time: <u>1120</u>	Duplicate Sample ID: _____ Sample Time: _____																																																
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Notes:

Groundwater Sampling Data Sheet

Project #: <u>185702534</u>	Task No:	Project Name: Bohannon	Date: <u>3/26/14</u>
Site Location: San Lorenzo		Sampler(s): <u>C. Melaney</u>	
Well ID: <u>MW-7</u>	Depth to Water (DTW) (ft): <u>6.19</u>	Sample DTW (ft): <u>6.21</u>	
Screen Interval (ft): <u>5-15</u>	Depth to Bottom (DTB) (ft):	Measurements Referenced to: TOC	
Tube/Pump Depth (ft): <u>10</u>	Well Diameter (inch): <u>2</u>	OVM (ppm) = <u>-</u>	

CALCULATIONS:

Length of the water column: _____ ft - _____ ft = _____ ft
DTB DTW Water Col

80% of the water level: _____ ft + (_____ ft X 0.2) = _____ ft
DTW Water Col Recharge water level

Estimated Purge Volume (EPV): = _____ ft X _____ X $\frac{3}{1}$ = _____ Gallons
Water col gal/in. ft. Casing Volumes

- (X) Low-Flow/Micro Purging
 () Purge at least 3 well volumes

Volume of Schedule 40 PVC Pipe		
Well Diameter.	I.D	gal/linear ft.
1.25	1.38	0.08
2	2.067	0.17
3	3.068	0.38
4	4.026	0.66
6	6.065	1.5
8	7.981	2.6
10	10.02	4.12
12	11.938	5.81

Purging Equipment:

- () _____ Bailer
 () Disposable Bailer
 () Electric Submergible Pump
 (X) Peristaltic Pump
 () Other: _____

Sampling Equipment:

- () _____ Bailer
 (X) Pump Discharge
 () Disposable Bailer
 () Peristaltic Pump & Dedicated Tubing
 () Other: _____

Type of Water Quality Kit Used:

- (X) YSI 556
 () Myron L
 () Horriba
 () Hanna
 () Other: _____

Begin Purge at 1010

Time (24 hrs)	Volume (G/L)	Temp. (°C/°F)	DTW	Specific Conductivity (µS/cm)	pH (units)	Color	Odor	DO (mg/L)	Redox Potential (mV)
(every 3-5 min)		(± 10%)		(± 10%)	(± 0.2)			(± 10%)	(± 20%)
<u>1015</u>	<u>1.5</u>	<u>13.30</u>	<u>6.24</u>	<u>135</u>	<u>8.91</u>	<u>clear</u>	<u>none</u>	<u>10.85</u>	<u>792.4</u>
<u>1020</u>	<u>2.5</u>	<u>14.1</u>	<u>6.21</u>	<u>121</u>	<u>8.72</u>	<u>"</u>	<u>"</u>	<u>6.35</u>	<u>58.9</u>
<u>1025</u>	<u>3.5</u>	<u>14.97</u>	<u>"</u>	<u>117</u>	<u>8.65</u>	<u>"</u>	<u>"</u>	<u>5.09</u>	<u>43.7</u>
<u>1030</u>	<u>4.5</u>	<u>15.01</u>	<u>"</u>	<u>112</u>	<u>8.52</u>	<u>"</u>	<u>"</u>	<u>4.11</u>	<u>37.8</u>
<u>1035</u>	<u>5.5</u>	<u>15.05</u>	<u>"</u>	<u>109</u>	<u>8.53</u>	<u>"</u>	<u>"</u>	<u>3.97</u>	<u>38.7</u>

Liters / Gallons Purged: <u>5.5</u>	Pump Rate in L or G /min: <u>200</u>
Sampling Time: <u>1040</u>	Duplicate Sample ID: _____ Sample Time: _____
Sample Analyzed For: SEE WORK ORDER	
(√) Analyte(s): Preservative: Bottles: (X) TPH-g, BTEX, MTBE HCl 3 X 40 mL VOAs () TPH-d & TPH-mo HCl 2 x 0.5 L Ambers () NO ₂ , NO ₃ & SO ₄ None 1 X 500 mL Poly () Total Manganese HNO ₃ 1 X 250 mL Poly () Dissolved Iron Field-filtered, HNO ₃ 1 X 250 mL Poly () Ferrous Iron HCl 2 X Amber VOAs () SVOCs None 2 x 1 L Ambers	Duplicate Sample Analyzed For: SEE WORK ORDER (√) Analyte(s): Preservative: Bottles: () TOC H ₂ SO ₄ 2 X 40 mL Amber VOAs () Methane HCl 3 X 40 mL VOAs () Naphthalene, Phenol None 2 x 1 L Ambers () Alkalinity, TDS None 1 X 500 mL Poly () Phosphorus, TKN H ₂ SO ₄ 1 x 500 mL Poly () VOCs HCl 3 X 40 mL VOAs () Other: _____

Notes: TB-1 (1000)

Groundwater Sampling Data Sheet

Project #: <u>185702534</u>	Task No: _____	Project Name: <u>Bohannon</u>
Site Location: <u>San Lorenzo</u>		Date: <u>3/27/14</u>
Sampler(s): <u>C. Melancon</u>		
Well ID: <u>POBS-A1</u>	Depth to Water (DTW) (ft): <u>6.73</u>	Sample DTW (ft): <u>6.95</u>
Screen Interval (ft): _____	Depth to Bottom (DTB) (ft): _____	Measurements Referenced to: <u>TOC</u>
Tube/Pump Depth (ft): <u>5.0 ft TO</u>	Well Diameter (inch): <u>1</u>	OVM (ppm) = <u>—</u>

CALCULATIONS:

Length of the water column: _____ ft - _____ ft = _____ ft
DTB DTW Water Col

80% of the water level: _____ ft + (_____ ft X 0.2) = _____ ft
DTW Water Col Recharge water level

Estimated Purge Volume (EPV): = _____ ft X _____ X 3 = _____ Gallons
Water col gal/in. ft. Casing Volumes

- (X) Low-Flow/Micro Purging
 () Purge at least 3 well volumes

Well Diameter	I.D	gal/linear ft.
1.25	1.38	0.08
2	2.067	0.17
3	3.068	0.38
4	4.026	0.66
6	6.065	1.5
8	7.981	2.6
10	10.02	4.12
12	11.938	5.81

Purging Equipment:

- () _____ Bailer
 () Disposable Bailer
 () Electric Submersible Pump
 (X) Peristaltic Pump
 () Other: _____

Sampling Equipment:

- () _____ Bailer
 (X) Pump Discharge
 () Disposable Bailer
 () Peristaltic Pump & Dedicated Tubing
 () Other: _____

Type of Water Quality Kit Used:

- (X) YSI 556
 () Myron L
 () Horriba
 () Hanna
 () Other: _____

Begin Purge at 925

Time (24 hrs)	Volume (G/L)	Temp. (C/F)	DTW	Specific Conductivity (µS/cm)	pH (units)	Color	Odor	DO (mg/L)	Redox Potential (mV)
(every 3-5 min)		(± 10%)		(± 10%)	(± 0.2)			(± 10%)	(± 20%)
<u>930</u>	<u>1.5</u>	<u>18.42</u>	<u>6.83</u>	<u>866</u>	<u>6.91</u>	<u>Clear</u>	<u>Faint</u>	<u>1.89</u>	<u>174.5</u>
<u>935</u>	<u>2.5</u>	<u>18.53</u>	<u>7.01</u>	<u>882</u>	<u>6.80</u>	<u>"</u>	<u>"</u>	<u>1.37</u>	<u>129.7</u>
<u>940</u>	<u>3.0</u>	<u>18.87</u>	<u>6.95</u>	<u>892</u>	<u>6.80</u>	<u>"</u>	<u>"</u>	<u>1.10</u>	<u>88.3</u>
<u>945</u>	<u>3.5</u>	<u>19.04</u>	<u>6.95</u>	<u>905</u>	<u>6.81</u>	<u>"</u>	<u>"</u>	<u>0.66</u>	<u>91.1</u>
<u>950</u>	<u>4.0</u>	<u>19.13</u>	<u>6.95</u>	<u>910</u>	<u>6.80</u>	<u>"</u>	<u>"</u>	<u>0.69</u>	<u>70.5</u>
<u>955</u>	<u>4.5</u>	<u>19.17</u>	<u>6.95</u>	<u>914</u>	<u>6.80</u>	<u>"</u>	<u>"</u>	<u>0.71</u>	<u>61.9</u>
<u>1000</u>	<u>5.0</u>	<u>19.19</u>	<u>6.95</u>	<u>916</u>	<u>6.80</u>	<u>"</u>	<u>"</u>	<u>0.68</u>	<u>63.1</u>

Liters / Gallons Purged: <u>5.0</u>	Pump Rate in L or G /min: <u>100</u>																																																
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() Methane	HCl	3 X 40 mL VOAs																																															
() Naphthalene, Phenol	None	2 x 1 L Ambers																																															
() Alkalinity, TDS	None	1 X 500 mL Poly																																															
() Phosphorus, TKN	H ₂ SO ₄	1 x 500 mL Poly																																															
() VOCs	HCl	3 X 40 mL VOAs																																															
() Other _____																																																	

Notes:

Groundwater Sampling Data Sheet

Project #: <u>185702534</u>	Task No:	Project Name: Bohannon	Date: <u>3/27/14</u>
Site Location: San Lorenzo		Sampler(s): <u>C. Melancon</u>	
Well ID: <u>POBS-B1</u>	Depth to Water (DTW) (ft): <u>6.57</u>	Sample DTW (ft): <u>6.87</u>	
Screen Interval (ft):	Depth to Bottom (DTB) (ft):	Measurements Referenced to: TOC	
Tube/Pump Depth (ft): <u>9' off TD</u>	Well Diameter (inch): <u>1</u>	OVM (ppm) = <u>—</u>	

CALCULATIONS:

Length of the water column: _____ ft - _____ ft = _____ ft
DTB DTW Water Col

80% of the water level: _____ ft + (_____ ft X 0.2) = _____ ft
DTW Water Col Recharge water level

Estimated Purge Volume (EPV): = _____ ft X _____ X 3 = _____ Gallons
Water col gal/in. ft. Casing Volumes

- (X) Low-Flow/Micro Purging
 () Purge at least 3 well volumes

Well Diameter.	I.D	gal/linear ft.
1.25	1.38	0.08
2	2.067	0.17
3	3.068	0.38
4	4.026	0.66
6	6.065	1.5
8	7.981	2.6
10	10.02	4.12
12	11.938	5.81

Purging Equipment:

- () _____ Bailer
 () Disposable Bailer
 () Electric Submergible Pump
 (X) Peristaltic Pump
 () Other: _____

Sampling Equipment:

- () _____ Bailer
 (X) Pump Discharge
 () Disposable Bailer
 () Peristaltic Pump & Dedicated Tubing
 () Other: _____

Type of Water Quality Kit Used:

- (X) YSI 556
 () Myron L
 () Horriba
 () Hanna
 () Other: _____

Begin Purge at 1005

Time (24 hrs)	Volume (G/L)	Temp. (°C/°F)	DTW	Specific Conductivity (µS/cm)	pH (units)	Color	Odor	DO (mg/L)	Redox Potential (mV)
(every 3-5 min)		(± 10%)		(± 10%)	(± 0.2)			(± 10%)	(± 20%)
<u>1010</u>	<u>1.5</u>	<u>19.47</u>	<u>7.03</u>	<u>1259</u>	<u>6.90</u>	<u>Clear</u>	<u>None</u>	<u>1.51</u>	<u>168.4</u>
<u>1015</u>	<u>2.5</u>	<u>19.89</u>	<u>6.87</u>	<u>1351</u>	<u>6.87</u>	<u>"</u>	<u>"</u>	<u>1.28</u>	<u>180.7</u>
<u>1020</u>	<u>3.5</u>	<u>19.92</u>	<u>6.87</u>	<u>1364</u>	<u>6.86</u>	<u>"</u>	<u>"</u>	<u>1.09</u>	<u>185.3</u>
<u>1025</u>	<u>4.5</u>	<u>19.87</u>	<u>6.87</u>	<u>1366</u>	<u>6.86</u>	<u>"</u>	<u>"</u>	<u>0.61</u>	<u>186.6</u>
<u>1030</u>	<u>5.5</u>	<u>19.90</u>	<u>6.87</u>	<u>1365</u>	<u>6.86</u>	<u>"</u>	<u>"</u>	<u>0.66</u>	<u>184.3</u>
<u>1035</u>	<u>6.5</u>	<u>19.89</u>	<u>6.87</u>	<u>1366</u>	<u>6.86</u>	<u>"</u>	<u>"</u>	<u>0.68</u>	<u>183.5</u>

Liters / Gallons Purged: <u>6.5</u>	Pump Rate in L or G/min: <u>200</u>
Sampling Time: <u>1040</u>	Duplicate Sample ID: _____ Sample Time: _____
Sample Analyzed For: SEE WORK ORDER	Duplicate Sample Analyzed For: SEE WORK ORDER
(√) Analyte(s): _____ Preservative: _____ Bottles: _____	(√) Analyte(s): _____ Preservative: _____ Bottles: _____
(X) TPH-g, BTEX, MTBE HCl 3 X 40 mL VOAs	() TOC H ₂ SO ₄ 2 X 40 mL Amber VOAs
() TPH-d & TPH-mo HCl 2 x 0.5 L Ambers	() Methane HCl 3 X 40 mL VOAs
() NO ₂ , NO ₃ & SO ₄ None 1 X 500 mL Poly	() Naphthalene, Phenol None 2 x 1 L Ambers
() Total Manganese HNO ₃ 1 X 250 mL Poly	() Alkalinity, TDS None 1 X 500 mL Poly
() Dissolved Iron Field-filtered, HNO ₃ 1 X 250 mL Poly	() Phosphorus, TKN H ₂ SO ₄ 1 x 500 mL Poly
() Ferrous Iron HCl 2 X Amber VOAs	() VOCs HCl 3 X 40 mL VOAs
() SVOCs None 2 x 1 L Ambers	() Other: _____

Notes:

Groundwater Sampling Data Sheet

Project #: <u>185702534</u>	Task No:	Project Name: Bohannon	Date: <u>3/27/14</u>
Site Location: San Lorenzo		Sampler(s): <u>C. Melancon</u>	
Well ID: <u>POBS-B-2</u>	Depth to Water (DTW) (ft): <u>6.12</u>	Sample DTW (ft): <u>7.26</u>	
Screen Interval (ft):	Depth to Bottom (DTB) (ft):	Measurements Referenced to: TOC	
Tube/Pump Depth (ft): <u>5' off TD</u>	Well Diameter (inch): <u>2</u>	OVM (ppm) = <u>—</u>	

CALCULATIONS:

Length of the water column: _____ ft - _____ ft = _____ ft
DTB DTW Water Col

80% of the water level: _____ ft + (_____ ft X 0.2) = _____ ft
DTW Water Col Recharge water level

Estimated Purge Volume (EPV): = _____ ft X _____ gal/in. ft. X 3 = _____ Gallons
Water col Casing Volumes

- (X) Low-Flow/Micro Purging
 () Purge at least 3 well volumes

Well Diameter.	I.D	gal/linear ft.
1.25	1.38	0.08
2	2.067	0.17
3	3.068	0.38
4	4.026	0.66
6	6.065	1.5
8	7.981	2.6
10	10.02	4.12
12	11.938	5.81

Purging Equipment:

- () _____ Bailer
 () Disposable Bailer
 () Electric Submersible Pump
 (X) Peristaltic Pump
 () Other: _____

Sampling Equipment:

- () _____ Bailer
 (X) Pump Discharge
 () Disposable Bailer
 () Peristaltic Pump & Dedicated Tubing
 () Other: _____

Type of Water Quality Kit Used:

- (X) YSI 556
 () Myron L
 () Horriba
 () Hanna
 () Other: _____

Begin Purge at 850

Time (24 hrs)	Volume (G/L)	Temp. (C/F)	DTW	Specific Conductivity (µS/cm)	pH (units)	Color	Odor	DO (mg/L)	Redox Potential (mV)
(every 3-5 min)		(± 10%)		(± 10%)	(± 0.2)			(± 10%)	(± 20%)
<u>855</u>	<u>1.5</u>	<u>17.54</u>	<u>7.57</u>	<u>172</u>	<u>7.20</u>	<u>Clear</u>	<u>None</u>	<u>5.82</u>	<u>339.5</u>
<u>900</u>	<u>2.5</u>	<u>17.93</u>	<u>7.78</u>	<u>481</u>	<u>6.96</u>	<u>"</u>	<u>"</u>	<u>2.95</u>	<u>347.6</u>
<u>905</u>	<u>3.0</u>	<u>16.76</u>	<u>7.45</u>	<u>682</u>	<u>6.94</u>	<u>"</u>	<u>"</u>	<u>1.94</u>	<u>340.1</u>
<u>910</u>	<u>3.5</u>	<u>16.78</u>	<u>7.27</u>	<u>767</u>	<u>6.91</u>	<u>"</u>	<u>Fa:yt</u>	<u>0.67</u>	<u>334.3</u>
<u>915</u>	<u>4.0</u>	<u>17.01</u>	<u>7.26</u>	<u>784</u>	<u>6.92</u>	<u>"</u>	<u>"</u>	<u>0.65</u>	<u>330.7</u>
<u>920</u>	<u>4.5</u>	<u>17.11</u>	<u>7.26</u>	<u>789</u>	<u>6.92</u>	<u>"</u>	<u>"</u>	<u>0.62</u>	<u>330.1</u>

Liters/ Gallons Purged: <u>4.5</u>	Pump Rate in L or G/min: <u>100</u>																																																
Sampling Time: <u>920</u>	Duplicate Sample ID: _____ Sample Time: _____																																																
Sample Analyzed For: SEE WORK ORDER																																																	
<table style="width: 100%; border-collapse: collapse;"> <tr> <th>(√) Analyte(s):</th> <th>Preservative:</th> <th>Bottles:</th> </tr> <tr> <td>(X) TPH-g, BTEX, MTBE</td> <td>HCl</td> <td>3 X 40 mL VOAs</td> </tr> <tr> <td>() TPH-d & TPH-mo</td> <td>HCl</td> <td>2 x 0.5 L Ambers</td> </tr> <tr> <td>() NO₂, NO₃ & SO₄</td> <td>None</td> <td>1 X 500 mL Poly</td> </tr> <tr> <td>() Total Manganese</td> <td>HNO₃</td> <td>1 X 250 mL Poly</td> </tr> <tr> <td>() Dissolved Iron</td> <td>Field-filtered, HNO₃</td> <td>1 X 250 mL Poly</td> </tr> <tr> <td>() Ferrous Iron</td> <td>HCl</td> <td>2 X Amber VOAs</td> </tr> <tr> <td>() SVOCs</td> <td>None</td> <td>2 x 1 L Ambers</td> </tr> </table>	(√) Analyte(s):	Preservative:	Bottles:	(X) TPH-g, BTEX, MTBE	HCl	3 X 40 mL VOAs	() TPH-d & TPH-mo	HCl	2 x 0.5 L Ambers	() NO ₂ , NO ₃ & SO ₄	None	1 X 500 mL Poly	() Total Manganese	HNO ₃	1 X 250 mL Poly	() Dissolved Iron	Field-filtered, HNO ₃	1 X 250 mL Poly	() Ferrous Iron	HCl	2 X Amber VOAs	() SVOCs	None	2 x 1 L Ambers	<table style="width: 100%; border-collapse: collapse;"> <tr> <th>(√) Analyte(s):</th> <th>Preservative:</th> <th>Bottles:</th> </tr> <tr> <td>() TOC</td> <td>H₂SO₄</td> <td>2 X 40 mL Amber VOAs</td> </tr> <tr> <td>() Methane</td> <td>HCl</td> <td>3 X 40 mL VOAs</td> </tr> <tr> <td>() Naphthalene, Phenol</td> <td>None</td> <td>2 x 1 L Ambers</td> </tr> <tr> <td>() Alkalinity, TDS</td> <td>None</td> <td>1 X 500 mL Poly</td> </tr> <tr> <td>() Phosphorus, TKN</td> <td>H₂SO₄</td> <td>1 x 500 mL Poly</td> </tr> <tr> <td>() VOCs</td> <td>HCl</td> <td>3 X 40 mL VOAs</td> </tr> <tr> <td>() Other: _____</td> <td></td> <td></td> </tr> </table>	(√) Analyte(s):	Preservative:	Bottles:	() TOC	H ₂ SO ₄	2 X 40 mL Amber VOAs	() Methane	HCl	3 X 40 mL VOAs	() Naphthalene, Phenol	None	2 x 1 L Ambers	() Alkalinity, TDS	None	1 X 500 mL Poly	() Phosphorus, TKN	H ₂ SO ₄	1 x 500 mL Poly	() VOCs	HCl	3 X 40 mL VOAs	() Other: _____		
(√) Analyte(s):	Preservative:	Bottles:																																															
(X) TPH-g, BTEX, MTBE	HCl	3 X 40 mL VOAs																																															
() TPH-d & TPH-mo	HCl	2 x 0.5 L Ambers																																															
() NO ₂ , NO ₃ & SO ₄	None	1 X 500 mL Poly																																															
() Total Manganese	HNO ₃	1 X 250 mL Poly																																															
() Dissolved Iron	Field-filtered, HNO ₃	1 X 250 mL Poly																																															
() Ferrous Iron	HCl	2 X Amber VOAs																																															
() SVOCs	None	2 x 1 L Ambers																																															
(√) Analyte(s):	Preservative:	Bottles:																																															
() TOC	H ₂ SO ₄	2 X 40 mL Amber VOAs																																															
() Methane	HCl	3 X 40 mL VOAs																																															
() Naphthalene, Phenol	None	2 x 1 L Ambers																																															
() Alkalinity, TDS	None	1 X 500 mL Poly																																															
() Phosphorus, TKN	H ₂ SO ₄	1 x 500 mL Poly																																															
() VOCs	HCl	3 X 40 mL VOAs																																															
() Other: _____																																																	

Notes:

Groundwater Sampling Data Sheet

Project #: <u>185702534</u>	Task No: _____	Project Name: <u>Bohannon</u>
Site Location: <u>San Lorenzo</u>		Date: <u>3/26/14</u>
Well ID: <u>NOB5-B1</u>		Sampler(s): <u>C. Melancon</u>
Screen Interval (ft): _____	Depth to Water (DTW) (ft): <u>5.83</u>	Sample DTW (ft): <u>5.32</u>
Tube/Pump Depth (ft): <u>5' off 70</u>	Depth to Bottom (DTB) (ft): _____	Measurements Referenced to: TOC
Well Diameter (inch): <u>2</u>		OVM (ppm) = <u>—</u>

CALCULATIONS:

Length of the water column: _____ ft - _____ ft = _____ ft
DTB DTW Water Col

80% of the water level: _____ ft + (_____ ft X 0.2) = _____ ft
DTW Water Col Recharge water level

Estimated Purge Volume (EPV): = _____ ft X _____ gal/in. ft. X 3 = _____ Gallons
Water col Casing Volumes

- (X) Low-Flow/Micro Purging
 () Purge at least 3 well volumes

Well Diameter.	I.D	gal/linear ft.
1.25	1.38	0.08
2	2.067	0.17
3	3.068	0.38
4	4.026	0.66
6	6.065	1.5
8	7.981	2.6
10	10.02	4.12
12	11.938	5.81

Purging Equipment:

- () _____ Bailer
 () Disposable Bailer
 () Electric Submersible Pump
 (X) Peristaltic Pump
 () Other: _____

Sampling Equipment:

- () _____ Bailer
 (X) Pump Discharge
 () Disposable Bailer
 () Peristaltic Pump & Dedicated Tubing
 () Other: _____

Type of Water Quality Kit Used:

- (X) YSI 556
 () Myron L
 () Horriba
 () Hanna
 () Other: _____

Begin Purge at _____

Time (24 hrs)	Volume (G/L)	Temp. (°C/°F)	DTW	Specific Conductivity (µS/cm)	pH (units)	Color	Odor	DO (mg/L)	Redox Potential (mV)
(every 3-5 min)		(± 10%)		(± 10%)	(± 0.2)			(± 10%)	(± 20%)
<u>1300</u>	<u>1.5</u>	<u>19.9</u>	<u>5.35</u>	<u>9.08</u>	<u>6.40</u>	<u>Clear</u>	<u>None</u>	<u>1.07</u>	<u>90.7</u>
<u>1305</u>	<u>2.5</u>	<u>20.0</u>	<u>5.32</u>	<u>9.09</u>	<u>6.40</u>	<u>"</u>	<u>"</u>	<u>1.01</u>	<u>81.2</u>
<u>1310</u>	<u>3.5</u>	<u>19.9</u>	<u>5.32</u>	<u>9.10</u>	<u>6.41</u>	<u>"</u>	<u>"</u>	<u>0.91</u>	<u>69.8</u>
<u>1315</u>	<u>4.5</u>	<u>19.9</u>	<u>5.32</u>	<u>9.12</u>	<u>6.41</u>	<u>"</u>	<u>"</u>	<u>0.51</u>	<u>60.3</u>
<u>1320</u>	<u>5.5</u>	<u>19.8</u>	<u>5.32</u>	<u>9.11</u>	<u>6.41</u>	<u>"</u>	<u>"</u>	<u>0.49</u>	<u>59.1</u>
<u>1325</u>	<u>6.5</u>	<u>19.8</u>	<u>5.32</u>	<u>9.12</u>	<u>6.41</u>	<u>"</u>	<u>"</u>	<u>0.45</u>	<u>58.2</u>

Liters / Gallons Purged: <u>6.5</u>	Pump Rate in L or G /min: <u>200</u>
Sampling Time: <u>1330</u>	Duplicate Sample ID: _____ Sample Time: _____
Sample Analyzed For: SEE WORK ORDER	
(√) Analyte(s): _____ Preservative: _____ Bottles: _____	(√) Analyte(s): _____ Preservative: _____ Bottles: _____
(X) TPH-g, BTEX, MTBE HCl 3 X 40 mL VOAs	() TOC H ₂ SO ₄ 2 X 40 mL Amber VOAs
() TPH-d & TPH-mo HCl 2 x 0.5 L Ambers	() Methane HCl 3 X 40 mL VOAs
() NO ₂ , NO ₃ & SO ₄ None 1 X 500 mL Poly	() Naphthalene, Phenol None 2 x 1 L Ambers
() Total Manganese HNO ₃ 1 X 250 mL Poly	() Alkalinity, TDS None 1 X 500 mL Poly
() Dissolved Iron Field-filtered, HNO ₃ 1 X 250 mL Poly	() Phosphorus, TKN H ₂ SO ₄ 1 x 500 mL Poly
() Ferrous Iron HCl 2 X Amber VOAs	() VOCs HCl 3 X 40 mL VOAs
() SVOCs None 2 x 1 L Ambers	() Other: _____

Notes:

APPENDIX C
Laboratory Analytical Report of Chain-
of-Custody for the March 2014
Groundwater Monitoring Event
First Semi-Annual 2014 Groundwater Monitoring Report

PN: 185702534
May 8, 2014

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pleasanton

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925)484-1919

TestAmerica Job ID: 720-56377-1

Client Project/Site: Bohannon San Lorenzo

For:

Stantec Consulting Corp.

3017 Kilgore Road

Suite 100

Rancho Cordova, California 95670

Attn: Brian Westhoff



Authorized for release by:

4/3/2014 2:27:40 PM

Afsaneh Salimpour, Senior Project Manager

(925)484-1919

afsaneh.salimpour@testamericainc.com

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results through

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Job ID: 720-56377-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-56377-1

Comments

No additional comments.

Receipt

The samples were received on 3/27/2014 11:55 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1° C.

GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

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Detection Summary

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: MW-7

Lab Sample ID: 720-56377-1

No Detections.

Client Sample ID: TB-1

Lab Sample ID: 720-56377-2

No Detections.

Client Sample ID: MW-6

Lab Sample ID: 720-56377-3

No Detections.

Client Sample ID: MW-5

Lab Sample ID: 720-56377-4

No Detections.

Client Sample ID: MW-4

Lab Sample ID: 720-56377-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzene	130		2.5		ug/L	5			8260B/CA_LUFT MS	Total/NA
Ethylbenzene	3.9		2.5		ug/L	5			8260B/CA_LUFT MS	Total/NA
Toluene	13		2.5		ug/L	5			8260B/CA_LUFT MS	Total/NA
Xylenes, Total	9.8		5.0		ug/L	5			8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	5500		250		ug/L	5			8260B/CA_LUFT MS	Total/NA

Client Sample ID: NOBS-B1

Lab Sample ID: 720-56377-6

No Detections.

Client Sample ID: MW-1

Lab Sample ID: 720-56377-7

No Detections.

Client Sample ID: DUP

Lab Sample ID: 720-56377-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Benzene	130		2.5		ug/L	5			8260B/CA_LUFT MS	Total/NA
Ethylbenzene	4.0		2.5		ug/L	5			8260B/CA_LUFT MS	Total/NA
Toluene	13		2.5		ug/L	5			8260B/CA_LUFT MS	Total/NA
Xylenes, Total	9.5		5.0		ug/L	5			8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	5500		250		ug/L	5			8260B/CA_LUFT MS	Total/NA

Client Sample ID: MW-3

Lab Sample ID: 720-56377-9

No Detections.

Client Sample ID: POBS-B2

Lab Sample ID: 720-56377-10

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Detection Summary

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: POBS-B2 (Continued)

Lab Sample ID: 720-56377-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.0		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: POBS-A1

Lab Sample ID: 720-56377-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	40		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	0.72		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Toluene	1.3		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	2.3		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	510		50		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: POBS-B1

Lab Sample ID: 720-56377-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	63		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	0.72		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Toluene	1.5		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	390		50		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: MW-2

Lab Sample ID: 720-56377-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	32		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	1.2		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Toluene	1.1		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C5-C12	450		50		ug/L	1		8260B/CA_LUFT MS	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Pleasanton

Client Sample Results

Client: Stantec Consulting Corp.
 Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: MW-7
Date Collected: 03/26/14 10:40
Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-1
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/28/14 02:28	1
Ethylbenzene	ND		0.50		ug/L			03/28/14 02:28	1
Toluene	ND		0.50		ug/L			03/28/14 02:28	1
Xylenes, Total	ND		1.0		ug/L			03/28/14 02:28	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			03/28/14 02:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		67 - 130		03/28/14 02:28	1
4-Bromofluorobenzene	98		67 - 130		03/31/14 22:31	1
1,2-Dichloroethane-d4 (Surr)	92		72 - 130		03/28/14 02:28	1
1,2-Dichloroethane-d4 (Surr)	88		72 - 130		03/31/14 22:31	1
Toluene-d8 (Surr)	101		70 - 130		03/28/14 02:28	1
Toluene-d8 (Surr)	100		70 - 130		03/31/14 22:31	1



Client Sample Results

Client: Stantec Consulting Corp.
 Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: TB-1

Lab Sample ID: 720-56377-2

Date Collected: 03/26/14 10:00

Matrix: Water

Date Received: 03/27/14 11:55

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/28/14 11:49	1
Ethylbenzene	ND		0.50		ug/L			03/28/14 11:49	1
Toluene	ND		0.50		ug/L			03/28/14 11:49	1
Xylenes, Total	ND		1.0		ug/L			03/28/14 11:49	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			03/28/14 11:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		67 - 130		03/28/14 11:49	1
1,2-Dichloroethane-d4 (Surr)	88		72 - 130		03/28/14 11:49	1
Toluene-d8 (Surr)	99		70 - 130		03/28/14 11:49	1

Client Sample Results

Client: Stantec Consulting Corp.
 Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: MW-6
Date Collected: 03/26/14 11:20
Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-3
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/28/14 02:58	1
Ethylbenzene	ND		0.50		ug/L			03/28/14 02:58	1
Toluene	ND		0.50		ug/L			03/28/14 02:58	1
Xylenes, Total	ND		1.0		ug/L			03/28/14 02:58	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			03/28/14 02:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		67 - 130		03/28/14 02:58	1
1,2-Dichloroethane-d4 (Surr)	93		72 - 130		03/28/14 02:58	1
Toluene-d8 (Surr)	101		70 - 130		03/28/14 02:58	1

Client Sample Results

Client: Stantec Consulting Corp.
 Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: MW-5
Date Collected: 03/26/14 12:00
Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-4
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/28/14 03:27	1
Ethylbenzene	ND		0.50		ug/L			03/28/14 03:27	1
Toluene	ND		0.50		ug/L			03/28/14 03:27	1
Xylenes, Total	ND		1.0		ug/L			03/28/14 03:27	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			03/28/14 03:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		67 - 130		03/28/14 03:27	1
1,2-Dichloroethane-d4 (Surr)	91		72 - 130		03/28/14 03:27	1
Toluene-d8 (Surr)	100		70 - 130		03/28/14 03:27	1



Client Sample Results

Client: Stantec Consulting Corp.
 Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: MW-4
Date Collected: 03/26/14 12:50
Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-5
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	130		2.5		ug/L			03/28/14 05:25	5
Ethylbenzene	3.9		2.5		ug/L			03/28/14 05:25	5
Toluene	13		2.5		ug/L			03/28/14 05:25	5
Xylenes, Total	9.8		5.0		ug/L			03/28/14 05:25	5
Gasoline Range Organics (GRO) -C5-C12	5500		250		ug/L			03/28/14 05:25	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	106		67 - 130					03/28/14 05:25	5
1,2-Dichloroethane-d4 (Surr)	100		72 - 130					03/28/14 05:25	5
Toluene-d8 (Surr)	105		70 - 130					03/28/14 05:25	5



Client Sample Results

Client: Stantec Consulting Corp.
 Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: NOBS-B1

Lab Sample ID: 720-56377-6

Date Collected: 03/26/14 13:30

Matrix: Water

Date Received: 03/27/14 11:55

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/28/14 03:57	1
Ethylbenzene	ND		0.50		ug/L			03/28/14 03:57	1
Toluene	ND		0.50		ug/L			03/28/14 03:57	1
Xylenes, Total	ND		1.0		ug/L			03/28/14 03:57	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			03/28/14 03:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		67 - 130		03/28/14 03:57	1
1,2-Dichloroethane-d4 (Surr)	95		72 - 130		03/28/14 03:57	1
Toluene-d8 (Surr)	101		70 - 130		03/28/14 03:57	1

Client Sample Results

Client: Stantec Consulting Corp.
 Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: MW-1

Lab Sample ID: 720-56377-7

Date Collected: 03/26/14 14:30

Matrix: Water

Date Received: 03/27/14 11:55

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/28/14 04:26	1
Ethylbenzene	ND		0.50		ug/L			03/28/14 04:26	1
Toluene	ND		0.50		ug/L			03/28/14 04:26	1
Xylenes, Total	ND		1.0		ug/L			03/28/14 04:26	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			03/28/14 04:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		67 - 130		03/28/14 04:26	1
1,2-Dichloroethane-d4 (Surr)	97		72 - 130		03/28/14 04:26	1
Toluene-d8 (Surr)	99		70 - 130		03/28/14 04:26	1

Client Sample Results

Client: Stantec Consulting Corp.
 Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: DUP

Lab Sample ID: 720-56377-8

Date Collected: 03/26/14 00:00

Matrix: Water

Date Received: 03/27/14 11:55

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	130		2.5		ug/L			03/28/14 05:54	5
Ethylbenzene	4.0		2.5		ug/L			03/28/14 05:54	5
Toluene	13		2.5		ug/L			03/28/14 05:54	5
Xylenes, Total	9.5		5.0		ug/L			03/28/14 05:54	5
Gasoline Range Organics (GRO) -C5-C12	5500		250		ug/L			03/28/14 05:54	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	101		67 - 130		03/28/14 05:54	5
1,2-Dichloroethane-d4 (Surr)	101		72 - 130		03/28/14 05:54	5
Toluene-d8 (Surr)	106		70 - 130		03/28/14 05:54	5

Client Sample Results

Client: Stantec Consulting Corp.
 Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: MW-3
Date Collected: 03/27/14 08:40
Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-9
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/28/14 04:55	1
Ethylbenzene	ND		0.50		ug/L			03/28/14 04:55	1
Toluene	ND		0.50		ug/L			03/28/14 04:55	1
Xylenes, Total	ND		1.0		ug/L			03/28/14 04:55	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			03/28/14 04:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		67 - 130		03/28/14 04:55	1
1,2-Dichloroethane-d4 (Surr)	96		72 - 130		03/28/14 04:55	1
Toluene-d8 (Surr)	102		70 - 130		03/28/14 04:55	1

Client Sample Results

Client: Stantec Consulting Corp.
 Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: POBS-B2

Lab Sample ID: 720-56377-10

Date Collected: 03/27/14 09:20

Matrix: Water

Date Received: 03/27/14 11:55

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	6.0		0.50		ug/L			03/28/14 14:24	1
Ethylbenzene	ND		0.50		ug/L			03/28/14 14:24	1
Toluene	ND		0.50		ug/L			03/28/14 14:24	1
Xylenes, Total	ND		1.0		ug/L			03/28/14 14:24	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			03/28/14 14:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	99		67 - 130		03/28/14 14:24	1
1,2-Dichloroethane-d4 (Surr)	88		72 - 130		03/28/14 14:24	1
Toluene-d8 (Surr)	97		70 - 130		03/28/14 14:24	1

Client Sample Results

Client: Stantec Consulting Corp.
 Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: POBS-A1

Lab Sample ID: 720-56377-11

Date Collected: 03/27/14 10:00

Matrix: Water

Date Received: 03/27/14 11:55

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	40		0.50		ug/L			04/01/14 21:14	1
Ethylbenzene	0.72		0.50		ug/L			04/01/14 21:14	1
Toluene	1.3		0.50		ug/L			04/01/14 21:14	1
Xylenes, Total	2.3		1.0		ug/L			04/01/14 21:14	1
Gasoline Range Organics (GRO) -C5-C12	510		50		ug/L			04/01/14 21:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	105		67 - 130		04/01/14 21:14	1
1,2-Dichloroethane-d4 (Surr)	91		72 - 130		04/01/14 21:14	1
Toluene-d8 (Surr)	101		70 - 130		04/01/14 21:14	1

Client Sample Results

Client: Stantec Consulting Corp.
 Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: POBS-B1

Lab Sample ID: 720-56377-12

Date Collected: 03/27/14 10:40

Matrix: Water

Date Received: 03/27/14 11:55

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	63		0.50		ug/L			03/28/14 13:33	1
Ethylbenzene	0.72		0.50		ug/L			03/28/14 13:33	1
Toluene	1.5		0.50		ug/L			03/28/14 13:33	1
Xylenes, Total	ND		1.0		ug/L			03/28/14 13:33	1
Gasoline Range Organics (GRO) -C5-C12	390		50		ug/L			03/28/14 13:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	95		67 - 130		03/28/14 13:33	1
1,2-Dichloroethane-d4 (Surr)	88		72 - 130		03/28/14 13:33	1
Toluene-d8 (Surr)	99		70 - 130		03/28/14 13:33	1

Client Sample Results

Client: Stantec Consulting Corp.
 Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: MW-2
Date Collected: 03/27/14 11:20
Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-13
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	32		0.50		ug/L			03/28/14 13:58	1
Ethylbenzene	1.2		0.50		ug/L			03/28/14 13:58	1
Toluene	1.1		0.50		ug/L			03/28/14 13:58	1
Xylenes, Total	ND		1.0		ug/L			03/28/14 13:58	1
Gasoline Range Organics (GRO) -C5-C12	450		50		ug/L			03/28/14 13:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	98		67 - 130		03/28/14 13:58	1
1,2-Dichloroethane-d4 (Surr)	89		72 - 130		03/28/14 13:58	1
Toluene-d8 (Surr)	102		70 - 130		03/28/14 13:58	1

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-156119/7
Matrix: Water
Analysis Batch: 156119

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/27/14 19:36	1
Ethylbenzene	ND		0.50		ug/L			03/27/14 19:36	1
Toluene	ND		0.50		ug/L			03/27/14 19:36	1
Xylenes, Total	ND		1.0		ug/L			03/27/14 19:36	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			03/27/14 19:36	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		67 - 130		03/27/14 19:36	1
1,2-Dichloroethane-d4 (Surr)	97		72 - 130		03/27/14 19:36	1
Toluene-d8 (Surr)	101		70 - 130		03/27/14 19:36	1

Lab Sample ID: LCS 720-156119/10
Matrix: Water
Analysis Batch: 156119

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	500	550		ug/L		110	62 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	99		67 - 130
1,2-Dichloroethane-d4 (Surr)	100		72 - 130
Toluene-d8 (Surr)	105		70 - 130

Lab Sample ID: LCS 720-156119/8
Matrix: Water
Analysis Batch: 156119

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	23.3		ug/L		93	79 - 130
Ethylbenzene	25.0	26.7		ug/L		107	80 - 120
Toluene	25.0	25.0		ug/L		100	78 - 120
m-Xylene & p-Xylene	50.0	52.1		ug/L		104	70 - 142
o-Xylene	25.0	27.2		ug/L		109	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	100		67 - 130
1,2-Dichloroethane-d4 (Surr)	94		72 - 130
Toluene-d8 (Surr)	106		70 - 130

Lab Sample ID: LCSD 720-156119/11
Matrix: Water
Analysis Batch: 156119

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12	500	571		ug/L		114	62 - 120	4	20

TestAmerica Pleasanton

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-156119/11
Matrix: Water
Analysis Batch: 156119

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	100		67 - 130
1,2-Dichloroethane-d4 (Surr)	101		72 - 130
Toluene-d8 (Surr)	105		70 - 130

Lab Sample ID: LCSD 720-156119/9
Matrix: Water
Analysis Batch: 156119

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD		Unit	D	%Rec	%Rec.		RPD	Limit
		Result	Qualifier				Limits	RPD		
Benzene	25.0	23.2		ug/L		93	79 - 130	0	20	
Ethylbenzene	25.0	27.4		ug/L		110	80 - 120	3	20	
Toluene	25.0	26.1		ug/L		104	78 - 120	4	20	
m-Xylene & p-Xylene	50.0	53.2		ug/L		106	70 - 142	2	20	
o-Xylene	25.0	27.8		ug/L		111	70 - 130	2	20	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene	102		67 - 130
1,2-Dichloroethane-d4 (Surr)	92		72 - 130
Toluene-d8 (Surr)	102		70 - 130

Lab Sample ID: MB 720-156151/4
Matrix: Water
Analysis Batch: 156151

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		0.50		ug/L		03/28/14 08:47	1	
Ethylbenzene	ND		0.50		ug/L		03/28/14 08:47	1	
Toluene	ND		0.50		ug/L		03/28/14 08:47	1	
Xylenes, Total	ND		1.0		ug/L		03/28/14 08:47	1	
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L		03/28/14 08:47	1	

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene	95		67 - 130		03/28/14 08:47	1
1,2-Dichloroethane-d4 (Surr)	90		72 - 130		03/28/14 08:47	1
Toluene-d8 (Surr)	96		70 - 130		03/28/14 08:47	1

Lab Sample ID: LCS 720-156151/5
Matrix: Water
Analysis Batch: 156151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	RPD
Benzene	25.0	25.2		ug/L		101	79 - 130	
Ethylbenzene	25.0	25.1		ug/L		101	80 - 120	
Toluene	25.0	25.3		ug/L		101	78 - 120	
m-Xylene & p-Xylene	50.0	51.5		ug/L		103	70 - 142	
o-Xylene	25.0	26.1		ug/L		104	70 - 130	

TestAmerica Pleasanton

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-156151/5
Matrix: Water
Analysis Batch: 156151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	87		72 - 130
Toluene-d8 (Surr)	97		70 - 130

Lab Sample ID: LCS 720-156151/7
Matrix: Water
Analysis Batch: 156151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	500	451		ug/L		90	62 - 120

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	98		67 - 130
1,2-Dichloroethane-d4 (Surr)	88		72 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: LCSD 720-156151/6
Matrix: Water
Analysis Batch: 156151

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	25.0	24.7		ug/L		99	79 - 130	2	20
Ethylbenzene	25.0	23.8		ug/L		95	80 - 120	6	20
Toluene	25.0	24.3		ug/L		97	78 - 120	4	20
m-Xylene & p-Xylene	50.0	49.2		ug/L		98	70 - 142	5	20
o-Xylene	25.0	24.7		ug/L		99	70 - 130	5	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	101		67 - 130
1,2-Dichloroethane-d4 (Surr)	90		72 - 130
Toluene-d8 (Surr)	99		70 - 130

Lab Sample ID: LCSD 720-156151/8
Matrix: Water
Analysis Batch: 156151

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Gasoline Range Organics (GRO) -C5-C12	500	446		ug/L		89	62 - 120	1	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene	99		67 - 130
1,2-Dichloroethane-d4 (Surr)	85		72 - 130
Toluene-d8 (Surr)	99		70 - 130

TestAmerica Pleasanton

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-156329/5

Matrix: Water

Analysis Batch: 156329

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			03/31/14 19:03	1
Ethylbenzene	ND		0.50		ug/L			03/31/14 19:03	1
Toluene	ND		0.50		ug/L			03/31/14 19:03	1
Xylenes, Total	ND		1.0		ug/L			03/31/14 19:03	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			03/31/14 19:03	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	97		67 - 130		03/31/14 19:03	1
1,2-Dichloroethane-d4 (Surr)	88		72 - 130		03/31/14 19:03	1
Toluene-d8 (Surr)	97		70 - 130		03/31/14 19:03	1

Lab Sample ID: LCS 720-156329/6

Matrix: Water

Analysis Batch: 156329

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	23.4		ug/L		93	79 - 130
Ethylbenzene	25.0	22.7		ug/L		91	80 - 120
Toluene	25.0	22.8		ug/L		91	78 - 120
m-Xylene & p-Xylene	50.0	46.5		ug/L		93	70 - 142
o-Xylene	25.0	23.5		ug/L		94	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	98		67 - 130
1,2-Dichloroethane-d4 (Surr)	81		72 - 130
Toluene-d8 (Surr)	99		70 - 130

Lab Sample ID: LCS 720-156329/8

Matrix: Water

Analysis Batch: 156329

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	500	413		ug/L		83	62 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	100		67 - 130
1,2-Dichloroethane-d4 (Surr)	87		72 - 130
Toluene-d8 (Surr)	101		70 - 130

Lab Sample ID: LCSD 720-156329/7

Matrix: Water

Analysis Batch: 156329

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	25.0	23.3		ug/L		93	79 - 130	0	20
Ethylbenzene	25.0	22.7		ug/L		91	80 - 120	0	20

TestAmerica Pleasanton

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-156329/7

Matrix: Water

Analysis Batch: 156329

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Toluene	25.0	23.2		ug/L		93	78 - 120	2	20
m-Xylene & p-Xylene	50.0	46.6		ug/L		93	70 - 142	0	20
o-Xylene	25.0	23.7		ug/L		95	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	99		67 - 130
1,2-Dichloroethane-d4 (Surr)	85		72 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: LCSD 720-156329/9

Matrix: Water

Analysis Batch: 156329

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12	500	410		ug/L		82	62 - 120	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene	97		67 - 130
1,2-Dichloroethane-d4 (Surr)	85		72 - 130
Toluene-d8 (Surr)	100		70 - 130

Lab Sample ID: MB 720-156448/4

Matrix: Water

Analysis Batch: 156448

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			04/01/14 18:43	1
Ethylbenzene	ND		0.50		ug/L			04/01/14 18:43	1
Toluene	ND		0.50		ug/L			04/01/14 18:43	1
Xylenes, Total	ND		1.0		ug/L			04/01/14 18:43	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			04/01/14 18:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	92		67 - 130		04/01/14 18:43	1
1,2-Dichloroethane-d4 (Surr)	91		72 - 130		04/01/14 18:43	1
Toluene-d8 (Surr)	95		70 - 130		04/01/14 18:43	1

Lab Sample ID: LCS 720-156448/5

Matrix: Water

Analysis Batch: 156448

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	23.8		ug/L		95	79 - 130
Ethylbenzene	25.0	23.8		ug/L		95	80 - 120
Toluene	25.0	24.4		ug/L		97	78 - 120
m-Xylene & p-Xylene	50.0	50.2		ug/L		100	70 - 142

TestAmerica Pleasanton

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-156448/5

Matrix: Water

Analysis Batch: 156448

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	25.0	25.7		ug/L		103	70 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene	100		67 - 130				
1,2-Dichloroethane-d4 (Surr)	84		72 - 130				
Toluene-d8 (Surr)	100		70 - 130				

Lab Sample ID: LCS 720-156448/7

Matrix: Water

Analysis Batch: 156448

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	500	495		ug/L		99	62 - 120
Surrogate	%Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene	97		67 - 130				
1,2-Dichloroethane-d4 (Surr)	88		72 - 130				
Toluene-d8 (Surr)	99		70 - 130				

Lab Sample ID: LCSD 720-156448/6

Matrix: Water

Analysis Batch: 156448

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	25.0	24.2		ug/L		97	79 - 130	1	20
Ethylbenzene	25.0	24.1		ug/L		96	80 - 120	1	20
Toluene	25.0	24.7		ug/L		99	78 - 120	2	20
m-Xylene & p-Xylene	50.0	50.7		ug/L		101	70 - 142	1	20
o-Xylene	25.0	25.9		ug/L		104	70 - 130	1	20
Surrogate	%Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene	99		67 - 130						
1,2-Dichloroethane-d4 (Surr)	84		72 - 130						
Toluene-d8 (Surr)	102		70 - 130						

Lab Sample ID: LCSD 720-156448/8

Matrix: Water

Analysis Batch: 156448

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Gasoline Range Organics (GRO) -C5-C12	500	518		ug/L		104	62 - 120	5	20
Surrogate	%Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene	98		67 - 130						
1,2-Dichloroethane-d4 (Surr)	89		72 - 130						

TestAmerica Pleasanton

QC Sample Results

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-156448/8

Matrix: Water

Analysis Batch: 156448

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

<i>Surrogate</i>	<i>LCSD %Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>
<i>Toluene-d8 (Surr)</i>	102		70 - 130

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QC Association Summary

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

GC/MS VOA

Analysis Batch: 156119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-56377-1	MW-7	Total/NA	Water	8260B/CA_LUFT MS	
720-56377-3	MW-6	Total/NA	Water	8260B/CA_LUFT MS	
720-56377-4	MW-5	Total/NA	Water	8260B/CA_LUFT MS	
720-56377-5	MW-4	Total/NA	Water	8260B/CA_LUFT MS	
720-56377-6	NOBS-B1	Total/NA	Water	8260B/CA_LUFT MS	
720-56377-7	MW-1	Total/NA	Water	8260B/CA_LUFT MS	
720-56377-8	DUP	Total/NA	Water	8260B/CA_LUFT MS	
720-56377-9	MW-3	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-156119/10	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-156119/8	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-156119/11	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-156119/9	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-156119/7	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 156151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-56377-2	TB-1	Total/NA	Water	8260B/CA_LUFT MS	
720-56377-10	POBS-B2	Total/NA	Water	8260B/CA_LUFT MS	
720-56377-12	POBS-B1	Total/NA	Water	8260B/CA_LUFT MS	
720-56377-13	MW-2	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-156151/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-156151/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-156151/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-156151/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-156151/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 156329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-56377-1	MW-7	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-156329/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-156329/8	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	

TestAmerica Pleasanton

QC Association Summary

Client: Stantec Consulting Corp.
 Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

GC/MS VOA (Continued)

Analysis Batch: 156329 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 720-156329/7	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-156329/9	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-156329/5	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 156448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-56377-11	POBS-A1	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-156448/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-156448/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-156448/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-156448/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-156448/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	



Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: MW-7

Date Collected: 03/26/14 10:40

Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	156119	03/28/14 02:28	PDR	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	156329	03/31/14 22:31	PDR	TAL PLS

Client Sample ID: TB-1

Date Collected: 03/26/14 10:00

Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	156151	03/28/14 11:49	PDR	TAL PLS

Client Sample ID: MW-6

Date Collected: 03/26/14 11:20

Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	156119	03/28/14 02:58	PDR	TAL PLS

Client Sample ID: MW-5

Date Collected: 03/26/14 12:00

Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	156119	03/28/14 03:27	PDR	TAL PLS

Client Sample ID: MW-4

Date Collected: 03/26/14 12:50

Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		5	156119	03/28/14 05:25	PDR	TAL PLS

Client Sample ID: NOBS-B1

Date Collected: 03/26/14 13:30

Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	156119	03/28/14 03:57	PDR	TAL PLS

TestAmerica Pleasanton

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: MW-1

Date Collected: 03/26/14 14:30

Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	156119	03/28/14 04:26	PDR	TAL PLS

Client Sample ID: DUP

Date Collected: 03/26/14 00:00

Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		5	156119	03/28/14 05:54	PDR	TAL PLS

Client Sample ID: MW-3

Date Collected: 03/27/14 08:40

Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	156119	03/28/14 04:55	PDR	TAL PLS

Client Sample ID: POBS-B2

Date Collected: 03/27/14 09:20

Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	156151	03/28/14 14:24	PDR	TAL PLS

Client Sample ID: POBS-A1

Date Collected: 03/27/14 10:00

Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	156448	04/01/14 21:14	LPL	TAL PLS

Client Sample ID: POBS-B1

Date Collected: 03/27/14 10:40

Date Received: 03/27/14 11:55

Lab Sample ID: 720-56377-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	156151	03/28/14 13:33	PDR	TAL PLS

TestAmerica Pleasanton

Lab Chronicle

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Client Sample ID: MW-2

Lab Sample ID: 720-56377-13

Date Collected: 03/27/14 11:20

Matrix: Water

Date Received: 03/27/14 11:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	156151	03/28/14 13:58	PDR	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

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Certification Summary

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Laboratory: TestAmerica Pleasanton

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16

Analysis Method	Prep Method	Matrix	Analyte
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Method Summary

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTM S	8260B / CA LUFT MS	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919



Sample Summary

Client: Stantec Consulting Corp.
Project/Site: Bohannon San Lorenzo

TestAmerica Job ID: 720-56377-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-56377-1	MW-7	Water	03/26/14 10:40	03/27/14 11:55
720-56377-2	TB-1	Water	03/26/14 10:00	03/27/14 11:55
720-56377-3	MW-6	Water	03/26/14 11:20	03/27/14 11:55
720-56377-4	MW-5	Water	03/26/14 12:00	03/27/14 11:55
720-56377-5	MW-4	Water	03/26/14 12:50	03/27/14 11:55
720-56377-6	NOBS-B1	Water	03/26/14 13:30	03/27/14 11:55
720-56377-7	MW-1	Water	03/26/14 14:30	03/27/14 11:55
720-56377-8	DUP	Water	03/26/14 00:00	03/27/14 11:55
720-56377-9	MW-3	Water	03/27/14 08:40	03/27/14 11:55
720-56377-10	POBS-B2	Water	03/27/14 09:20	03/27/14 11:55
720-56377-11	POBS-A1	Water	03/27/14 10:00	03/27/14 11:55
720-56377-12	POBS-B1	Water	03/27/14 10:40	03/27/14 11:55
720-56377-13	MW-2	Water	03/27/14 11:20	03/27/14 11:55



CHAIN OF CUSTODY RECORD

152700

Stantec Rancho Cordova Office
3017 Kilgore Road, Suite 100
Rancho Cordova, CA 95670
TEL: (916) 861-0400 FAX: (916) 861-0430

Stantec Company Contact(s) for Invoice:
Project Manager: Brian Westhoff
email: brian.westhoff@stantec.com

Stantec Project #

DATE: 3-27-14

185702534

PAGE: 1 OF 1

Project Name: **Bohannon**
Address: **575 Paseo Grande, San Lorenzo CA**

Sampler(s) Printed Name:
Charles Melancon
Sampler(s) Signature:

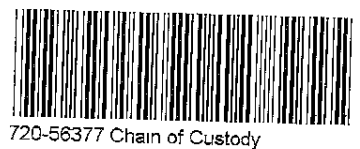
Laboratory: **TestAmerica**
Lab Use Only:

Turn-around Time (Business Days):
10 DAYS 5 DAYS 72 H 48 H 24 H <24 H
 OTHER

REQUESTED ANALYSIS

Special Instructions or Notes: **Temperature Upon Receipt (C):**

LAB USE ONLY	Field Sample Identification	SAMPLING		MAT-RIX	No. of Cont.	Pre-serve	TPH-g/BTEX by 8260B	REQUESTED ANALYSIS										Laboratory Notes				
		DATE	TIME																			
	MW-7	3-26-14	1040	W	3	HCL	X															
	TB-1		1000																			
	MW-6		1120																			
	MW-5		1200																			
	MW-4		1250																			
	NOBS-B1		1330																			
	MW-1		1430																			
	DUP		-																			
	MW-3	3-27-14	840																			
	POBS-B2		920																			
	POBS-A1		1000																			
	POBS-B1		1040																			
	MW-2		1120	↓	↓	↓	↓															



Relinquished by: (Signature)	Date: 3-27-14	Time: 1155	Received by: (Signature)	3-27-14	Time: 1155	3.12
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)		Time:	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)		Time:	

Login Sample Receipt Checklist

Client: Stantec Consulting Corp.

Job Number: 720-56377-1

Login Number: 56377

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Gonzales, Justinn

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



APPENDIX D

Chemical Concentration Trends in Groundwater

First Semi-Annual 2014 Groundwater Monitoring Report

PN: 185702534
May 8, 2014

