

April 16, 2018

Mr. Jack Dickey
NMED Petroleum Storage Tank Bureau
121 Tijeras Avenue NE, Suite 1000
Albuquerque, New Mexico 87102

**RE: 2nd Semi-Annual Groundwater Monitoring Event Report, Barelás Bridge,
Facility #29854; RID #54**

Dear Mr. Dickey,

INTERA Incorporated (INTERA) is submitting the above-referenced report. This report completes the scope of work for deliverable identification number 3943-2. There was no reduction in scope associated with WPID # 3943. Once a deliverable acceptance letter is received the total amount that will be invoiced including NMGRS is **\$5,186.88** for deliverable 3943-2.

INTERA appreciates the opportunity to work with the New Mexico Environment Department. Please contact Ms. Marcillo (505) 428-0066 / emarcillo@intera.com or Mr. Joseph Tracy (505) 246-1600 ext. 1219 / jtracy@intera.com if you have any questions or require further information.

Sincerely,
INTERA Incorporated



Eileen Marcillo
Project Manager/Hydrologist



Joseph J. Tracy
Principal Geologist

2nd SEMI-ANNUAL GROUNDWATER MONITORING REPORT

Barelas Bridge Site, Facility # 29854; Release ID # 54

**800 Bridge Boulevard Southwest
Albuquerque, Bernalillo County, New Mexico**



Prepared for:



New Mexico Environment Department
Petroleum Storage Tank Bureau
121 Tijeras Avenue NE
Albuquerque, New Mexico 87102

Prepared by:



1435 South St. Francis Drive, Unit 103
Santa Fe, New Mexico 87505

April 16, 2018

STATEMENT OF FAMILIARITY

I, the undersigned, am personally familiar with the information submitted in this report and the attached documents and attest that it is true and complete.



Eileen Marcillo
Project Manager
INTERA Incorporated

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/L	microgram(s) per liter
µS/cm	microSiemens per centimeter
AEHD	Albuquerque Environmental Health Department
amsl	above mean sea level
AS/SVE	air sparge/soil vapor extraction
btoc	below top of casing
EDB	1,2-dibromoethane
EPA	U.S. Environmental Protection Agency
ft	foot or feet
GT	Groundwater Technology
HEAL	Hall Environmental Analysis Laboratory
HgCl ₂	mercuric chloride
INTERA	INTERA Incorporated
LBG	Leggette, Brashears & Graham, Inc.
LNAPL	light non-aqueous phase liquid
mL	milliliter
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMWQCC	New Mexico Water Quality Control Commission
PPE	personal protective equipment
PQL	Practical Quantitation Limit
PSE	potentiometric surface elevation
PSTB	Petroleum Storage Tank Bureau
Report	this 2 nd Semi-Annual Groundwater Monitoring Report
RL	reporting limit
Site	Barelas Bridge Site
SSHASP	Site-Specific Health and Safety Plan
UST	underground storage tank
VOC	volatile organic compound

1.0 INTRODUCTION

In accordance with the Work Plan submitted on July 25, 2017, to the New Mexico Environment Department (NMED) Petroleum Storage Tank Bureau (PSTB), INTERA Incorporated (INTERA) is submitting this 2nd *Semi-Annual Groundwater Monitoring Report* (Report) documenting the field activities at the Barelás Bridge Site (Facility #29854; Release ID #54) (Site) in Albuquerque, New Mexico (**Figure 1**). All activities were completed by INTERA in accordance with the requirements set forth in NMED PSTB Regulations (20.5 New Mexico Administrative Code [NMAC]) and in the INTERA Work Plan approved by PSTB on November 28, 2017 (INTERA, 2017). The PSTB deliverable identification number for this groundwater monitoring event and Report is 3943-2.

1.1 Background

The Site is located at 800 Bridge Boulevard SW in Albuquerque, New Mexico. A gasoline service station has occupied the Site since the 1940s. Investigation and remediation activities have been ongoing since 1989, when petroleum hydrocarbon contamination was encountered during the removal of four underground storage tanks (USTs). Excavation to remove contaminated soil occurred in the former UST pit area (August 1989) and within the former gasoline station area (October 1989). During excavation activities within the former station area, an approximately 100- to 150-gallon waste-oil tank was encountered and removed. New USTs were installed at the Site in 1990 (**Figure 2**). Information pertaining to the type of petroleum fuel stored at the Site was not available (LBG, 1990). A brief summary of investigation and remediation activities completed at the Site is presented below.

- Between August 1989 and August 1990, the Albuquerque Environmental Health Department (AEHD) completed an initial hydrogeologic investigation; which included the advancement of 19 soil borings, four of which were converted to monitoring wells (MW-1 to MW-4), and the collection and chemical analyses of soil and groundwater samples (LBG, 1990).
- From October 1990 to December 1990, Leggette, Brashears & Graham, Inc. (LBG), conducted additional hydrogeologic investigation activities, which included the advancement of five soil borings, four of which were converted to monitoring wells (MW-5 to MW-8); the collection and chemical analyses of soil and groundwater samples; and short pumping tests at two monitoring well locations. LBG concluded that the horizontal extent of contamination was delineated; groundwater flow direction was to the south; the southernmost monitoring wells (MW-1, MW-2, and MW-3) did not contain petroleum hydrocarbons in groundwater at concentrations that exceeded New Mexico Water Quality Control Commission (NMWQCC) Standards; and contaminants of concern included

benzene, toluene, ethylbenzene, total xylenes, iron, and manganese (LBG, 1990) (**Figure 2**).

- In August 1992, Groundwater Technology (GT) oversaw the advancement of five soil borings. These borings were completed as multi-purpose wells for use in an air-sparge/soil vapor extraction (AS/SVE) pilot test. Results of the AS/SVE pilot test indicated that an AS/SVE system could effectively remediate the source zone; therefore, GT proposed installing a full-scale system (GT, 1992). Based on existing monitoring wells, it appears that the full-scale AS/SVE system was installed. Documents describing this system and its operation were not reviewed.
- INTERA conducted two semi-annual groundwater monitoring events in December 2014 and May 2015. During both groundwater monitoring events, the estimated groundwater flow direction was to the south-southeast, and the estimated magnitude of the hydraulic gradient was 0.002 ft/ft. Groundwater analytical results indicated that total naphthalenes, and dissolved iron and manganese were present in groundwater at concentrations that exceed NMWQCC Standards (INTERA, 2014; INTERA, 2015).
- INTERA conducted the 1st semi-annual groundwater monitoring event of 2018 in January 2018. The estimated groundwater flow direction and magnitude of the hydraulic gradient was to the south-southeast which was similar to what was observed during previous events (INTERA, 2014; INTERA, 2015). Four of the six groundwater samples had volatile organic compounds (VOCs) detected in groundwater at concentrations above the laboratory reporting limit (RL). Total naphthalenes were detected in groundwater at concentrations above the NMWQCC Standard in monitoring wells MW-8, MW-9 and VP-5 (INTERA, 2018).

1.2 Scope of Work

The scope of work for the 2nd semi-annual groundwater sampling event, as specified in the approved Work Plan (INTERA, 2017), included the following activities:

- Conduct project planning activities.
- Remove caps from all monitoring wells to relieve pressure caused by a fluctuating water table.
- Reattempt to remove the root ball from monitoring well MW-4.
- Gauge fluid levels and total depth at monitoring wells MW-4, MW-7, MW-8, MW-9, VP-2, and VP-5 using an oil-water interface probe.

- Collect groundwater samples from monitoring wells MW-4, MW-7, MW-8, MW-9, VP-2, and VP-5 and analyze the groundwater samples for VOCs by U.S. Environmental Protection Agency (EPA) Method 8260B.
- Prepare a report that summarizes all monitoring activities and the resulting data.

The Site-Specific Health and Safety Plan (SSHASP) was developed and reviewed by INTERA staff prior to the initiation of the project.

1.3 Work Plan Deviations

One work plan deviation occurred during this 2nd semi-annual groundwater monitoring event. INTERA was unable to remove the root ball at monitoring well MW-4. Past removal attempts have been unsuccessful, and a new tool was fabricated to remove the root ball. This tool was unable to retrieve the root ball from the monitoring well; however, there was enough of a water column above the root ball to successfully collect a groundwater sample from monitoring well MW-4 and is considered representative of aquifer conditions. The depth of the monitoring well bottom from as-built records was used to calculate the required purge volume.

1.4 Project Preparation

Upon receipt of authorization to proceed from the NMED PSTB, INTERA performed the following tasks prior to commencing the 2nd semi-annual groundwater monitoring field activities:

- Contacted the NMED PSTB project manager, Mr. Jack Dickey, 96 hours prior to the commencement of planned on-site activities.
- Contacted the current Site owner, Roberts Oil, prior to arriving on Site (see the Access Agreement in **Appendix A**).
- Obtained required field supplies and tested required field equipment.
- Obtained sample containers from Hall Environmental Analysis Laboratory (HEAL).

2.0 FIELD ACTIVITIES

Field activities for this 2nd semi-annual groundwater monitoring event were conducted on March 6, 2018. The SSHASP was reviewed in detail by INTERA field staff and was strictly followed during all Site activities. Work was performed in Occupational Safety and Health Administration Level D personal protective equipment (PPE). Copies of the field notes and field forms are included in **Appendix B**.

2.1 Fluid Level Gauging

Fluid levels were gauged in monitoring wells MW-4, MW-7, MW-8, MW-9, VP-2, and VP-5 on March 6, 2018, using a properly decontaminated oil-water interface probe (**Figure 2**). No light non-aqueous phase liquid (LNAPL) was detected in any of the monitoring wells during gauging. Fluid level measurements are documented in **Table 1**. Historical fluid levels for monitoring wells not monitored during this event and for monitoring wells that were previously plugged and abandoned are included in **Appendix C**. A potentiometric surface map presenting data from March 6, 2018 is provided in **Figure 3**.

2.2 Groundwater Sampling

On March 6, 2018, groundwater samples were collected using dedicated, disposable polyethylene bailers from the following monitoring wells: MW-4, MW-7, MW-8, MW-9, VP-2, and VP-5. Groundwater samples were collected after the monitoring wells had been purged of three casing volumes and water quality parameters (temperature, specific conductivity, and pH) stabilized for three consecutive readings. A record of all water quality parameters recorded during purging and sampling of each monitoring well is documented in the field forms presented in **Appendix B**. Stabilized water quality parameter values recorded at each monitoring well prior to groundwater sample collection are summarized in **Table 2**. Groundwater samples collected for analysis of VOCs were placed in 40-milliliter (mL) glass vials preserved with mercuric chloride (HgCl₂). The groundwater purged from monitoring wells MW-7, MW-8, MW-9, VP-2, and VP-5 were observed to have a petroleum hydrocarbon odor.

After collection, the groundwater samples were labeled and immediately packed in an ice-chilled cooler for transport to HEAL. Proper chain-of-custody procedures were adhered to during groundwater sample collection, transport, and delivery to the laboratory. Laboratory analytical results are summarized in **Table 3**, and the groundwater laboratory analytical report is included in **Appendix D**. Historical groundwater laboratory analytical results for monitoring wells not monitored during this event and for monitoring wells that were previously plugged and abandoned are included in **Appendix C**.

2.3 Project Health and Safety, Quality Assurance, and Investigation-Derived Waste

The INTERA-prepared SSHASP was strictly followed during all Site activities. All field activities were conducted using modified Level D PPE, including safety glasses and steel-toed boots. Nitrile gloves were used to handle all groundwater samples. A safety meeting was conducted prior to the initiation of work, and chemical and physical hazards of the work were reviewed and discussed. Quality assurance practices, which were strictly adhered to, included decontaminating the oil/water interface probe with a Liquinox[®] solution and double-rinsing with de-ionized water between gauging and groundwater sampling activities at each well. Purge water produced from each monitoring well during groundwater sampling was applied to an impermeable surface (asphalt and/or concrete) and allowed to evaporate.

Laboratory data was not qualified with the exception that the percent recovery for the surrogate 1,2-dichloroethane-d4 fell outside the range due to dilution or matrix for the groundwater analysis of the sample collected from monitoring well VP-2. No contamination was noted in the trip blank. Laboratory quality control sample analyses indicated that the data were within method accuracy and precision limits.

3.0 RESULTS

The results of the field activities conducted at the Site are summarized in the following subsections.

3.1 Fluid Level Gauging and Groundwater Flow Direction

Similar to the previous monitoring event in January 2018, LNAPL of measurable thickness (greater than 0.01 feet [ft]) was not observed in any Site monitoring wells. Recorded depth to water measurements ranged from 7.57 feet below top of casing (ft btoc) at monitoring well MW-4 to 8.90 ft btoc at monitoring well MW-8. The potentiometric surface elevations (PSEs) ranged from 4,935.31 ft above mean sea level (amsl) at monitoring well MW-7 to 4,935.75 ft amsl at monitoring well VP-5 (**Table 1**). When compared to the previous groundwater monitoring event conducted in January 2018, groundwater levels have increased on average 0.12 ft.

The PSE across the Site is relatively flat. The estimated groundwater flow direction is to the south-southeast and the estimated magnitude of the calculated hydraulic gradient is 0.002 ft/ft (**Figure 3**). The groundwater head value for MW-4 is excluded from this figure due to an anomaly in the contours, as monitoring well MW-4 had a slightly higher head value. The water level in monitoring well MW-4 is likely affected by the root ball.

3.2 Groundwater Quality Parameters

Groundwater quality parameters were measured and recorded during monitoring well purging until the water quality parameters stabilized. Stabilized temperatures ranged from 13.84 degrees Celsius (°C) or 56.91 degrees Fahrenheit (°F) at monitoring well VP-5 to 15.60°C or 60.08°F at monitoring well MW-9. Stabilized specific conductivity values ranged from 337 microSiemens per centimeter (µS/cm) at monitoring well MW-9 to 564 µS/cm at monitoring well VP-5. Stabilized pH values ranged from 7.37 at monitoring well VP-5 to 7.76 at monitoring well MW-8. Groundwater quality parameter values are provided in the field notes and sampling forms presented in **Appendix B**, and the initial and stabilized groundwater quality parameters are summarized in **Table 2**.

3.3 Groundwater Analytical Results

Three of the six monitoring wells (MW-8, MW-9, and VP-5) had VOCs detected in groundwater at concentrations above the laboratory practical quantitative limit (PQL). Two of these three monitoring wells (MW-8 and VP-5) had VOCs detected in groundwater at concentrations that exceed their respective NMWQCC Standards (**Table 3** and **Figure 4**).

Concentrations of total naphthalenes (sum of naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene) greater than the NMWQCC Standard of 30 micrograms per liter (µg/L) were

detected in the groundwater samples collected from monitoring well MW-8 (45 µg/L) and monitoring well VP-5 (146 µg/L). Monitoring well MW-9 saw a decrease in the total naphthalenes groundwater concentration from 68 µg/L in January 2018 to 26 µg/L in March 2018; this most recent groundwater sample result falls below the NMWQCC Standard for total naphthalenes. Total naphthalenes concentrations and groundwater elevations over time for Site monitoring wells are presented in **Figures 5a, 6a, 7a, 8a, 9a, and 10a**.

Benzene was not detected in groundwater samples collected from any monitoring wells at concentrations that exceed the laboratory PQL. **Figures 5b, 6b, 7b, 8b, 9b, and 10b** illustrate benzene concentrations and groundwater elevations over time for Site monitoring wells.

All other detected regulated VOC constituents were below their respective NMWQCC Standards. The laboratory PQL for 1,2-dibromoethane (EDB) in the analytical laboratory report is greater than the EDB NMWQCC Standard of 0.1 µg/L. Results from the most recent groundwater sampling event (January 2018) as well as the two previous groundwater sampling events (December 2014 and May 2015) where EDB was analyzed via EPA Method 504.1, which has a PQL of 0.010 µg/L, indicated that EDB was not present in collected groundwater samples at concentrations greater than 0.010 µg/L. These historical results suggest that EDB is not present at the Site.

A summary of the analytical data, including which monitoring wells contained contaminants of concern in excess of the NMWQCC Standards, is presented in **Table 3** and **Figure 4**. A copy of the laboratory report is included in **Appendix D**.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The objectives of INTERA's 2nd semi-annual groundwater monitoring event conducted on March 6, 2018, are to provide an evaluation of the Site groundwater flow direction and an assessment of dissolved-phase contaminant concentration trends relative to NMWQCC Standards. Based on the results of the field investigation, INTERA has compiled the following conclusions and recommendations.

4.1 Conclusions

- LNAPL was not observed at any of the Site monitoring wells.
- The water levels at each monitoring well increased on average 0.12 ft compared to the water levels measured during the previous groundwater monitoring event conducted in January 2018.
- The potentiometric surface is relatively flat across the Site. The estimated groundwater flow is to the south-southeast and the estimated magnitude of the hydraulic gradient is 0.002 ft/ft.
- Total naphthalenes were detected in groundwater at concentrations above the NMWQCC Standard in monitoring wells MW-8 and VP-5 (**Table 3** and **Figures 7a** and **10a**). Concentrations in groundwater samples collected from monitoring wells MW-8 and VP-5 continue to show a decreasing trend (**Figure 7a** and **10a**). The groundwater sample collected from monitoring well MW-9 saw a decrease in total naphthalenes this sampling event and is once again below the total naphthalenes NMWQCC Standard. Groundwater samples collected from monitoring well MW-9 historically have had large fluctuations in total naphthalenes concentrations (**Figure 8a**).
- For the second consecutive time, the benzene concentration detected in the groundwater sample collected from monitoring well MW-9 was below the benzene NMWQCC Standard (**Figure 8b** and **Table 3**). Groundwater samples collected from monitoring well MW-9 historically have had large fluctuations in benzene concentrations. Benzene was detected above the NMWQCC Standard during a previous groundwater monitoring event (May 2015).
- The areal extent of the dissolved-phase contaminant plume is defined, except to the northwest.

4.2 Recommendations

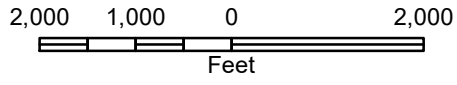
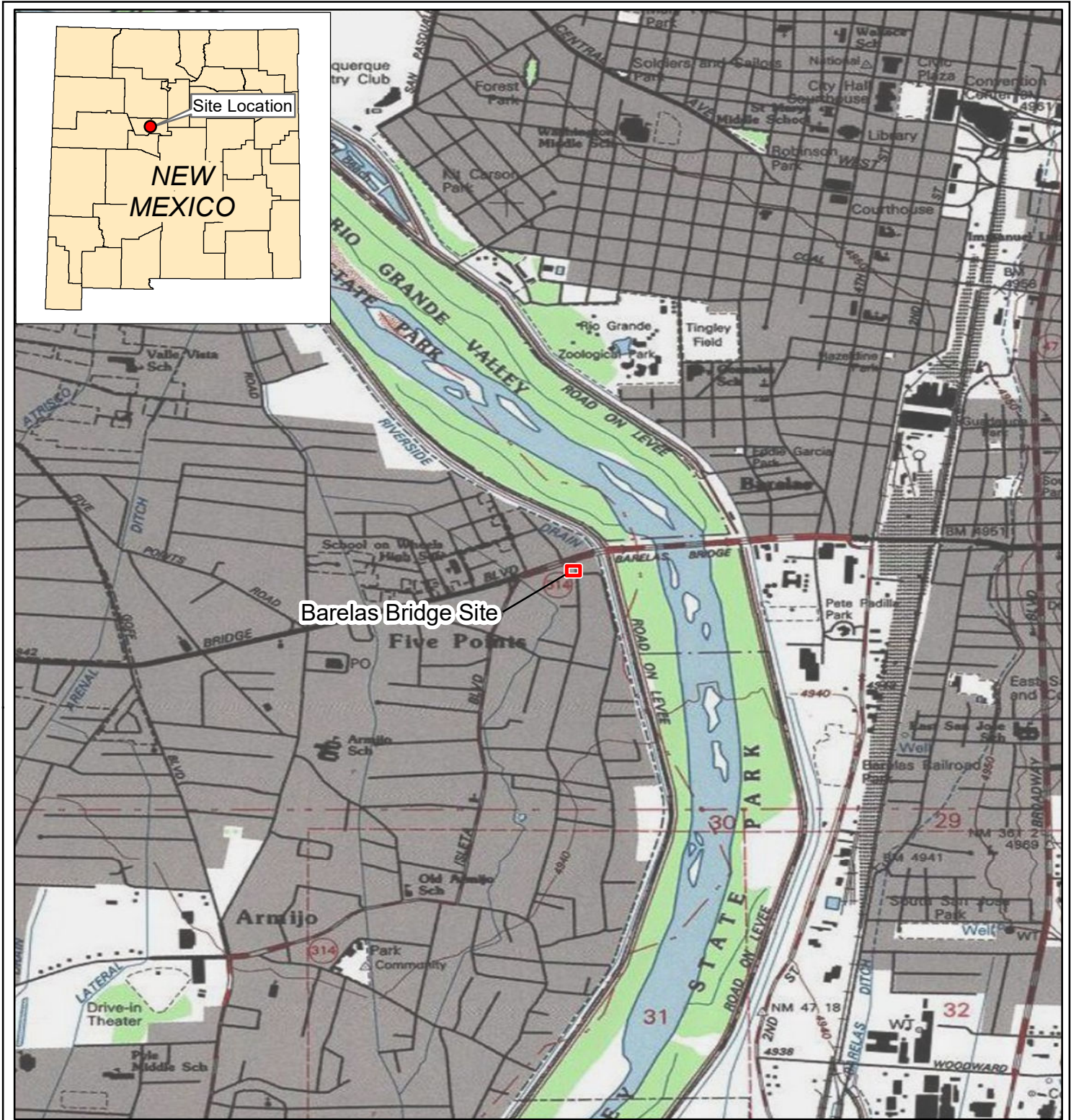
Based on the results of the March 6, 2018 groundwater monitoring event, INTERA makes the following recommendations:

- Continue groundwater monitoring at the Site on a semi-annual basis to assess dissolved-phase contaminant trends. Analytical results of the current sampling event indicate that dissolved-phase petroleum hydrocarbons, particularly total naphthalenes, while with generally decreasing concentrations, continue to be a concern at the Site.
- Confirm the actual screen intervals at monitoring wells VP-2 and VP-5 to verify that these monitoring wells are screened across the water table. INTERA recommends reviewing the AS/SVE remediation system as-builts and other pertinent reports to determine if the screened intervals for these monitoring wells are identified in these reports. If a file review cannot verify that these monitoring wells are screened across the water table, INTERA recommends video logging these monitoring wells to identify the screen intervals.
- Install a monitoring well northwest of monitoring well VP-5 to aid in delineating the areal extent of the dissolved-phase total naphthalenes plume to the northwest.

5.0 REFERENCES

- Groundwater Technology (GT). 1992. *Reclamation Proposal Barelas Bridge GWPA Site, 800 Bridge Blvd., SW, Albuquerque, New Mexico*. December 4.
- INTERA Incorporated. 2014. 1st Semi-Annual Groundwater Monitoring Report, Barelas Bridge Site, Facility # 29854; Release ID # 54. December 23.
- INTERA Incorporated. 2015. 2nd Semi-Annual Groundwater Monitoring Report, Barelas Bridge Site, Facility # 29854; Release ID # 54. June 25.
- INTERA Incorporated. 2017. Work Plan and Cost Estimate for Semi-Annual Groundwater Monitoring, Barelas Bridge, Facility # 29854; Release ID # 54. July 25.
- INTERA Incorporated. 2018. 1st Semi-Annual Groundwater Monitoring Report, Barelas Bridge Site, Facility # 29854; Release ID # 54. February 9.
- Leggette, Brashears & Graham, Inc. (LBG). 1990. *Hydrogeologic Investigation of the 800 Bridge Street Site, Albuquerque, New Mexico*. December.

FIGURES

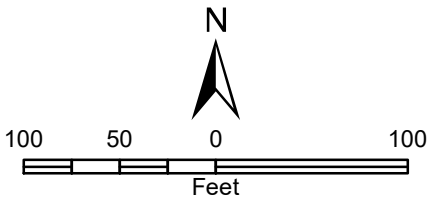


Site Location




Figure 1
Site Location
 2nd Semi-Annual Groundwater
 Monitoring Event, March 6, 2018
 Barelas Bridge
 Albuquerque, New Mexico



Sources:
 Topo – USA Topo Maps, ESRI web data



Legend

-  Monitoring Well Location
-  Plugged and Abandoned or Not Located
-  Former Site Feature

Source(s): Aerial – BERNCO website, dated 2016;
 Well locations – Groundwater Technology, 1992 and Kleinfelder, 2006;
 Site features – Leggette, Brashears & Graham Inc., 1990

Figure 2
Site Plan
 2nd Semi-Annual Groundwater
 Monitoring Event, March 6, 2018
 Barelas Bridge
 Albuquerque, New Mexico

Hydraulic Gradient = 0.002 ft/ft



Legend

- Monitoring Well Location
- Estimated Groundwater Flow Direction
- Groundwater Elevation Contour (ft amsl)
- Former Site Feature

* = MW-04 was not used in groundwater contouring.

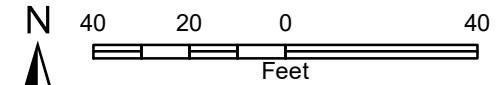
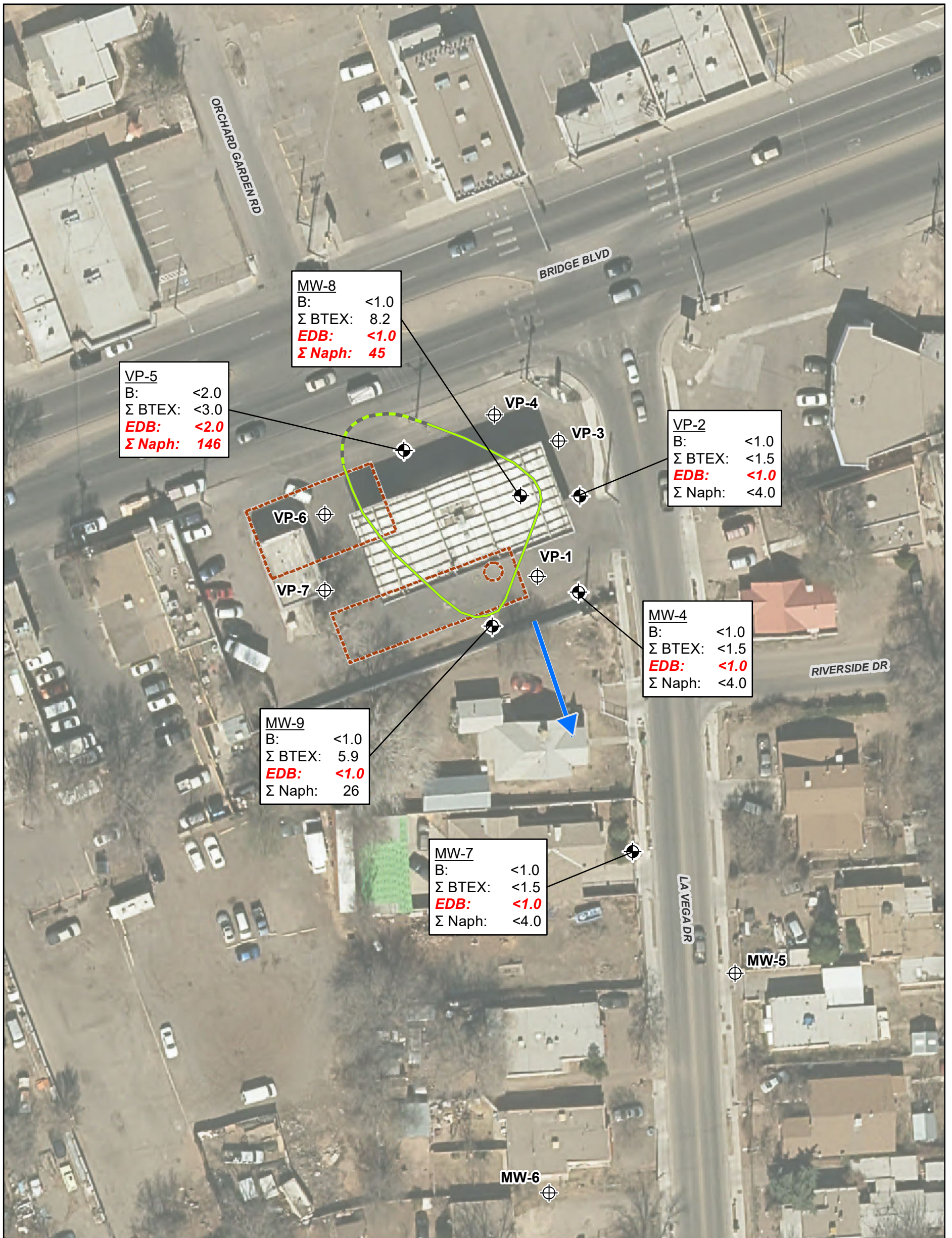


Figure 3
Potentiometric Surface Map,
March 6, 2018
 2nd Semi-Annual Groundwater
 Monitoring Event, March 6, 2018
 Barelas Bridge
 Albuquerque, New Mexico

Source(s): Aerial – BERNCO website, dated 2016;
 Well locations – Groundwater Technology, 1992 and Kleinfelder, 2006;
 Site features – Leggette, Brashears & Graham Inc., 1990

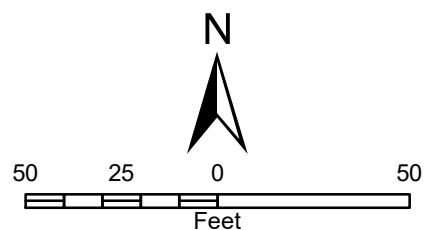




Legend

- Monitoring Well Location
- Plugged and Abandoned or Not Located
- Estimated Extent of Actionable Dissolved-Phase Contamination (dashed where inferred)
- Former Site Feature
- Estimated Groundwater Flow Direction

B = Benzene
 Σ BTEX = Benzene + Toluene + Ethylbenzene + Total Xylenes
 EDB = 1,2-dibromoethane
 Σ Naph = Naphthalene + 1,Methylnaphthalene + 2, Methylnaphthalene



Well ID
 VOC contaminant results in µg/L (micrograms per liter),
Red/Bold/Italic indicates value or laboratory reporting limit in excess of the NMWQCC standards.

Figure 4
 Distribution of Contaminants in Groundwater, March 6, 2018
 2nd Semi-Annual Groundwater Monitoring Event, March 6, 2018
 Barelas Bridge
 Albuquerque, New Mexico

Source(s): Aerial – BERNCO website, dated 2016;
 Well locations – Groundwater Technology, 1992 and Kleinfelder, 2006;
 Site features – Leggette, Brashears & Graham Inc., 1990

Figure 5a: Total Naphthalenes Concentration and Groundwater Potentiometric Surface Elevation vs. Time – MW-4

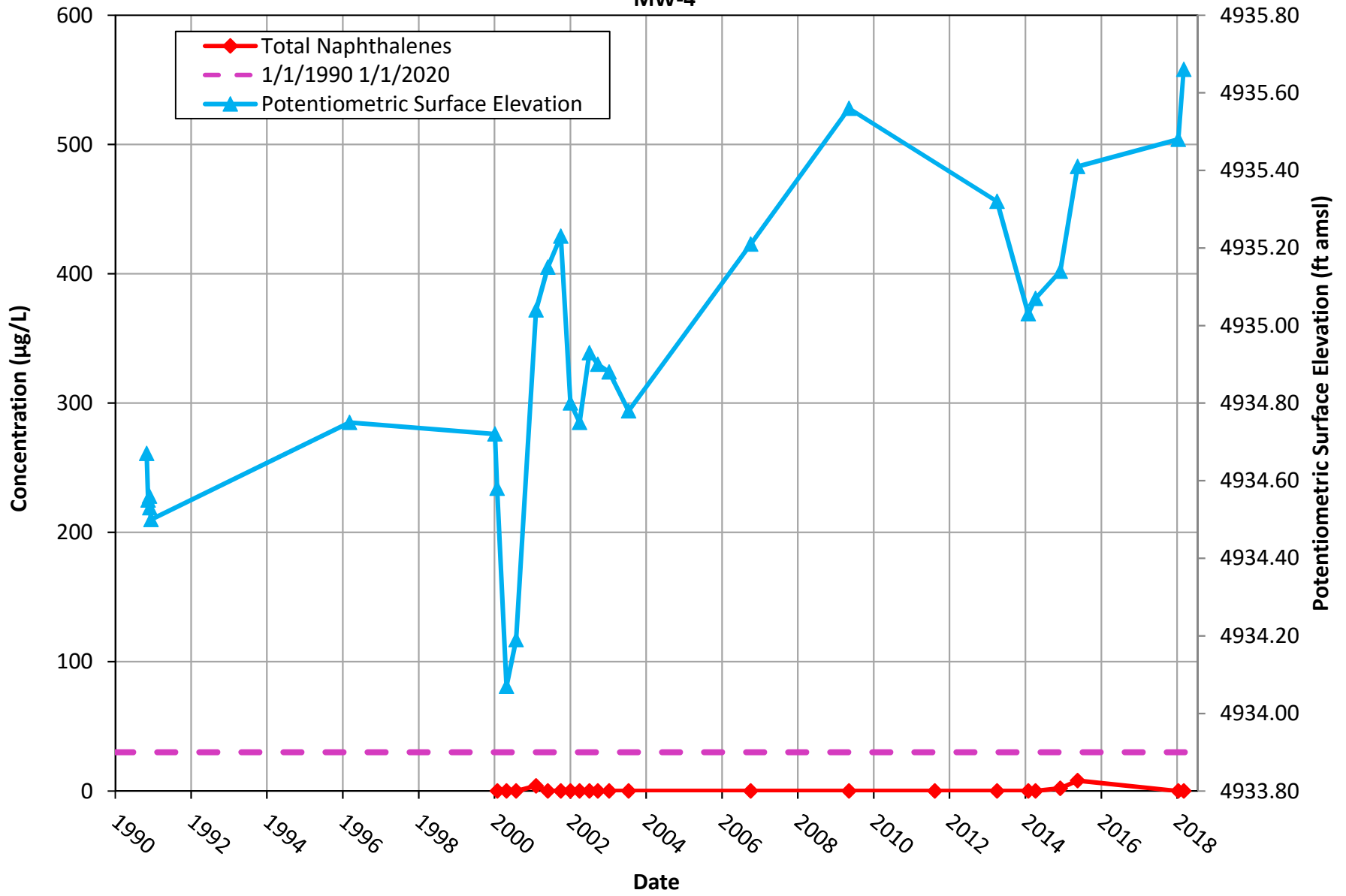


Figure 5b: Benzene Concentration and Groundwater Potentiometric Surface Elevation vs. Time – MW-4

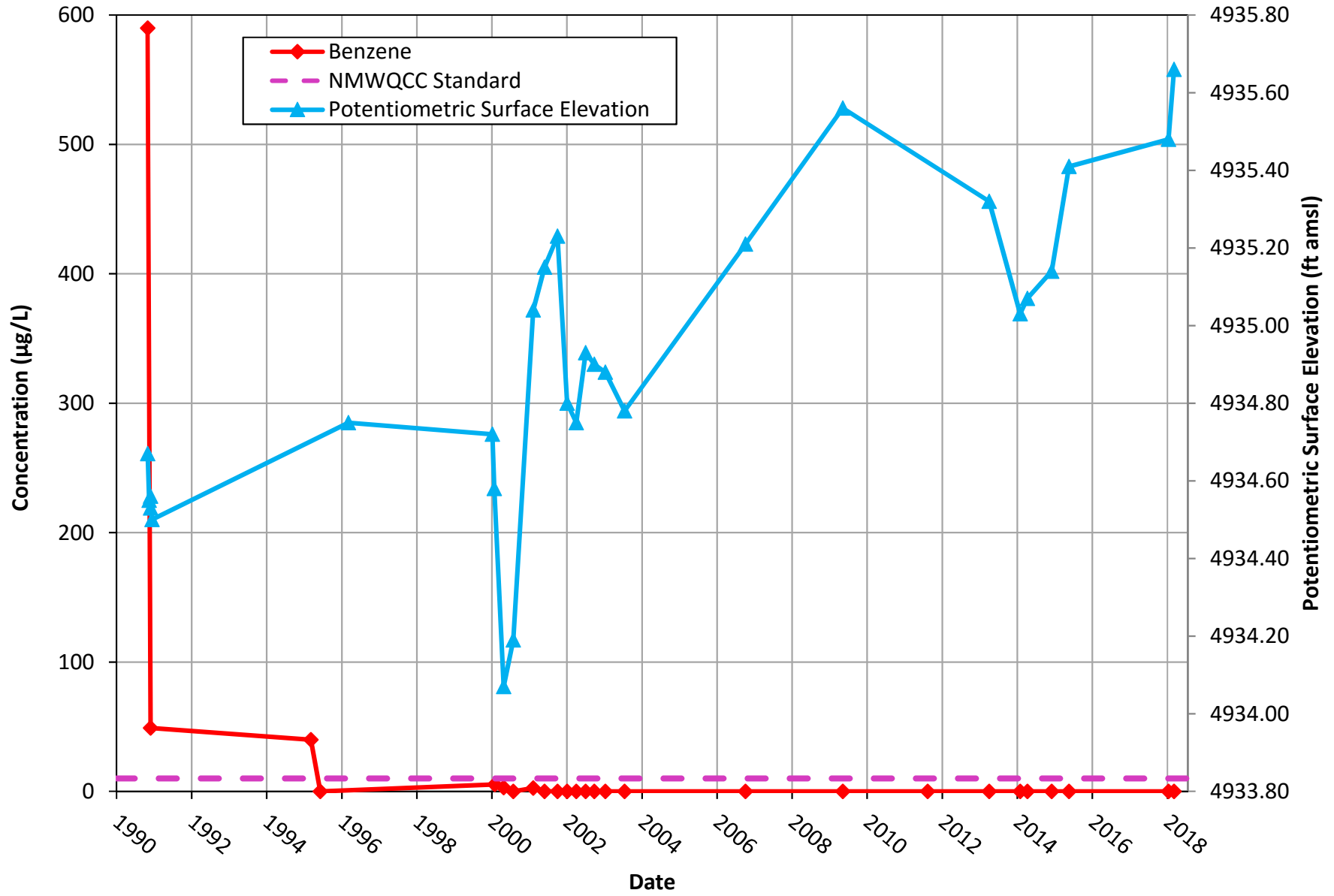


Figure 6a: Total Naphthalenes Concentration and Groundwater Potentiometric Surface Elevation vs. Time – MW-7

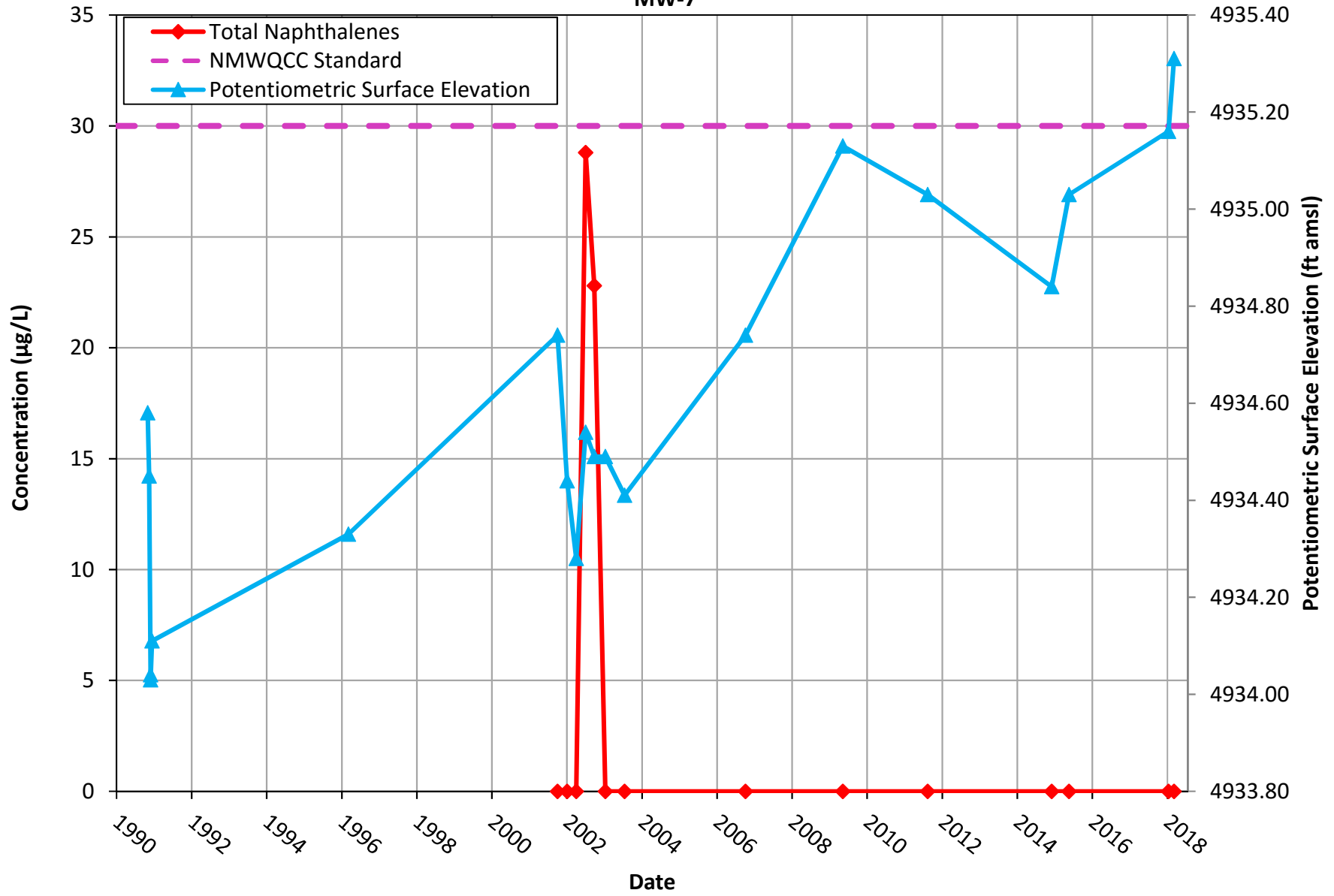


Figure 6b: Benzene Concentration and Groundwater Potentiometric Surface Elevation vs. Time – MW-7

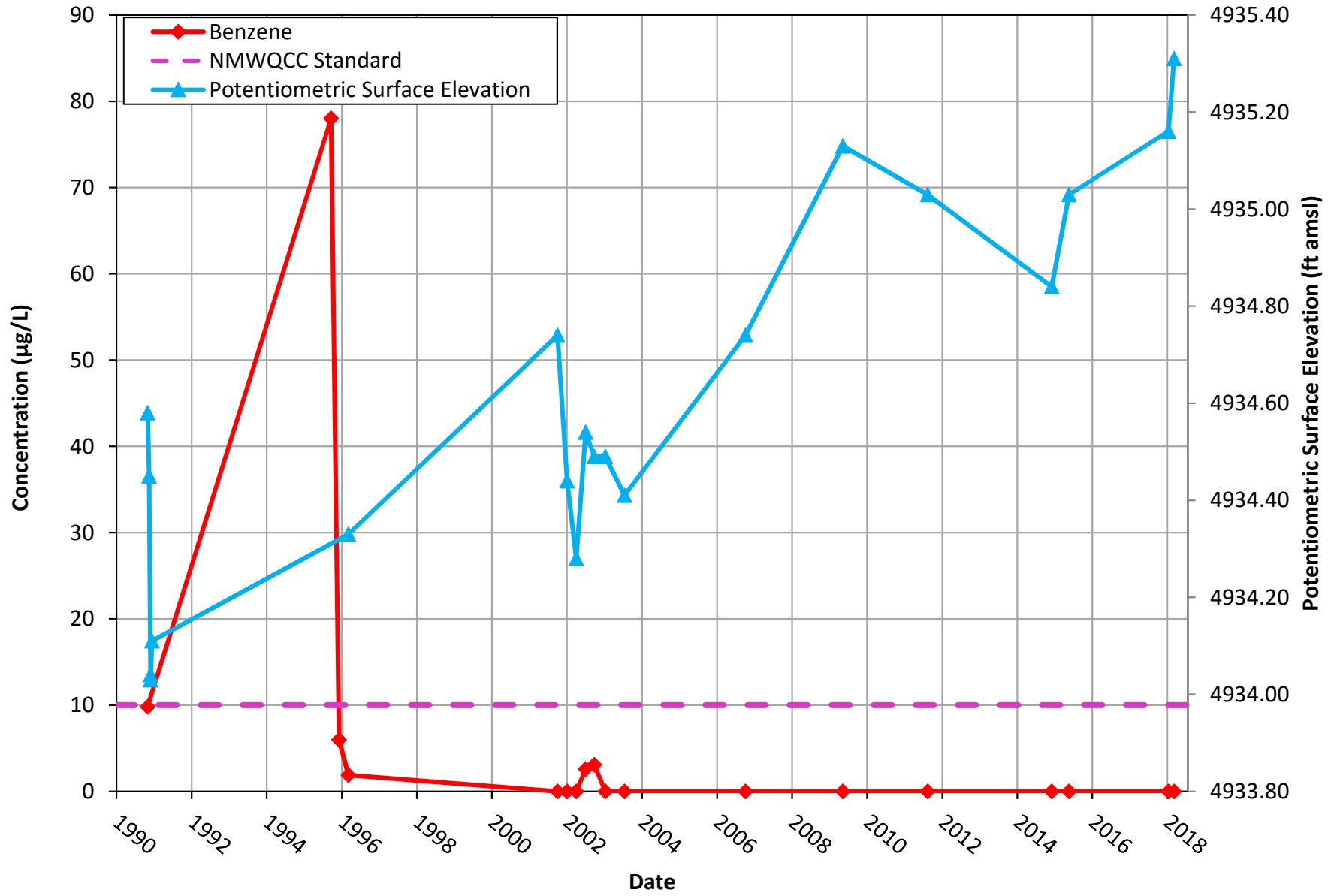


Figure 7a: Total Naphthalenes Concentration and Groundwater Potentiometric Surface Elevation vs. Time – MW-8

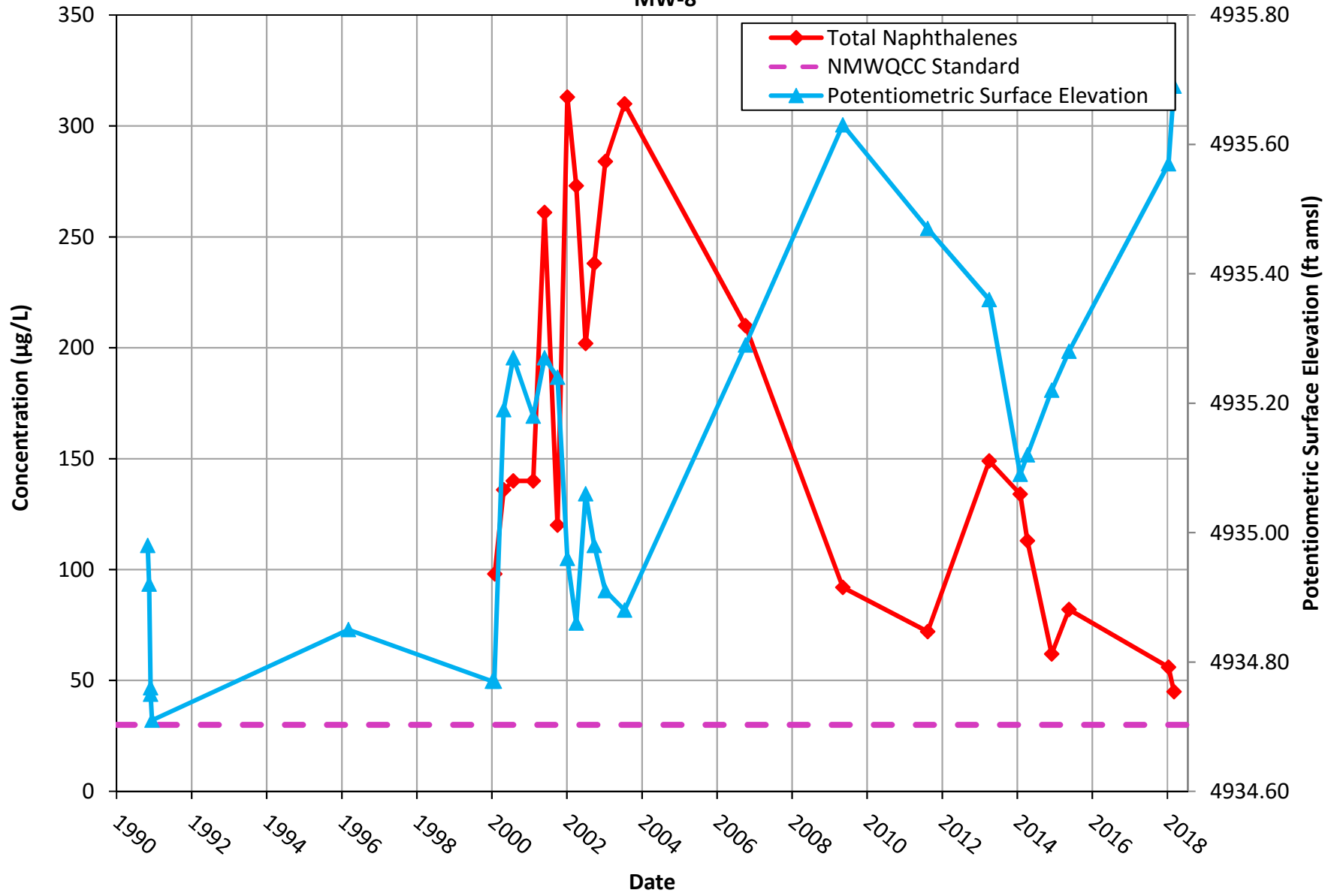


Figure 7b: Benzene Concentration and Groundwater Potentiometric Surface Elevation vs. Time – MW-8

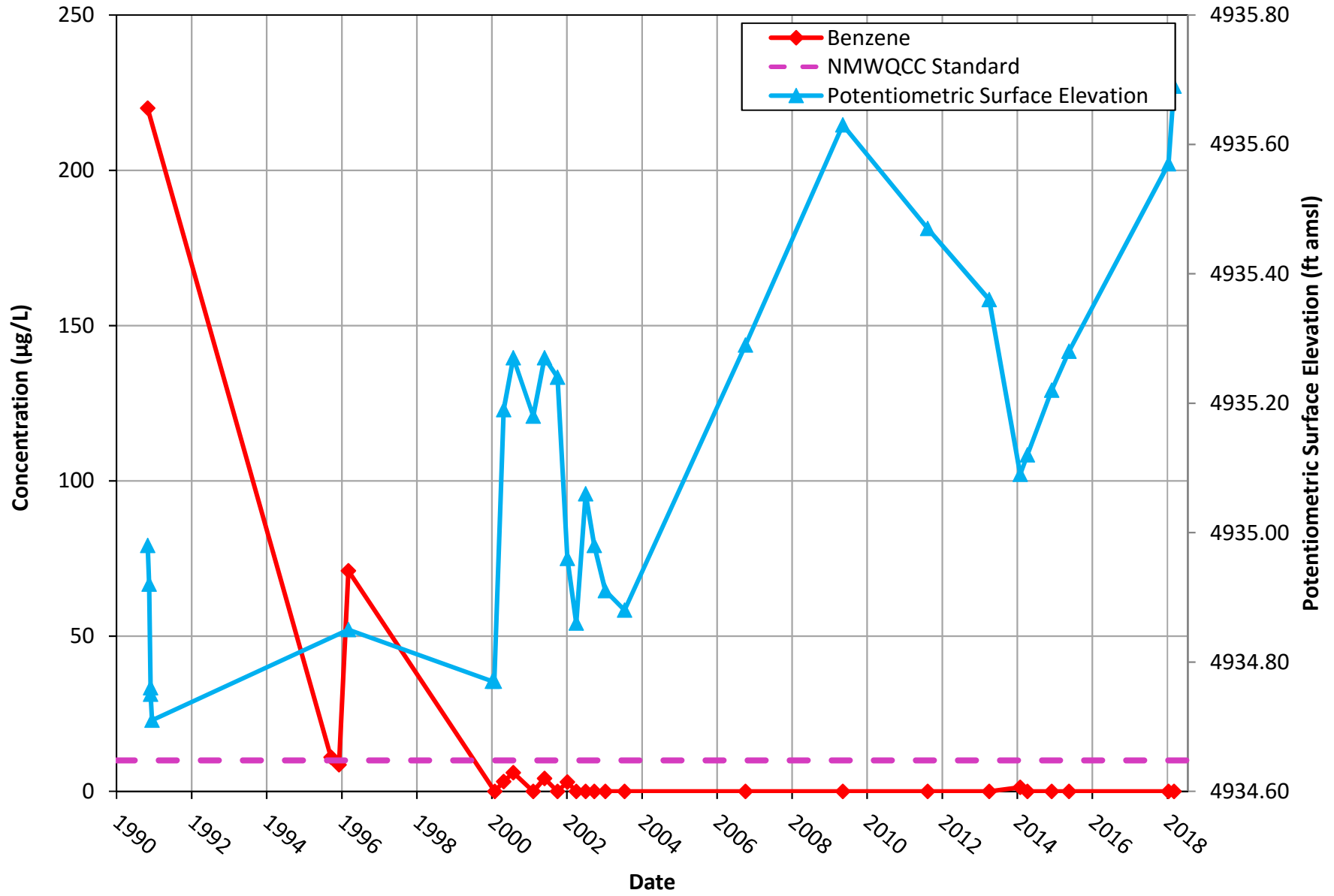


Figure 8a: Total Naphthalenes Concentration and Groundwater Potentiometric Surface Elevation vs. Time – MW-9

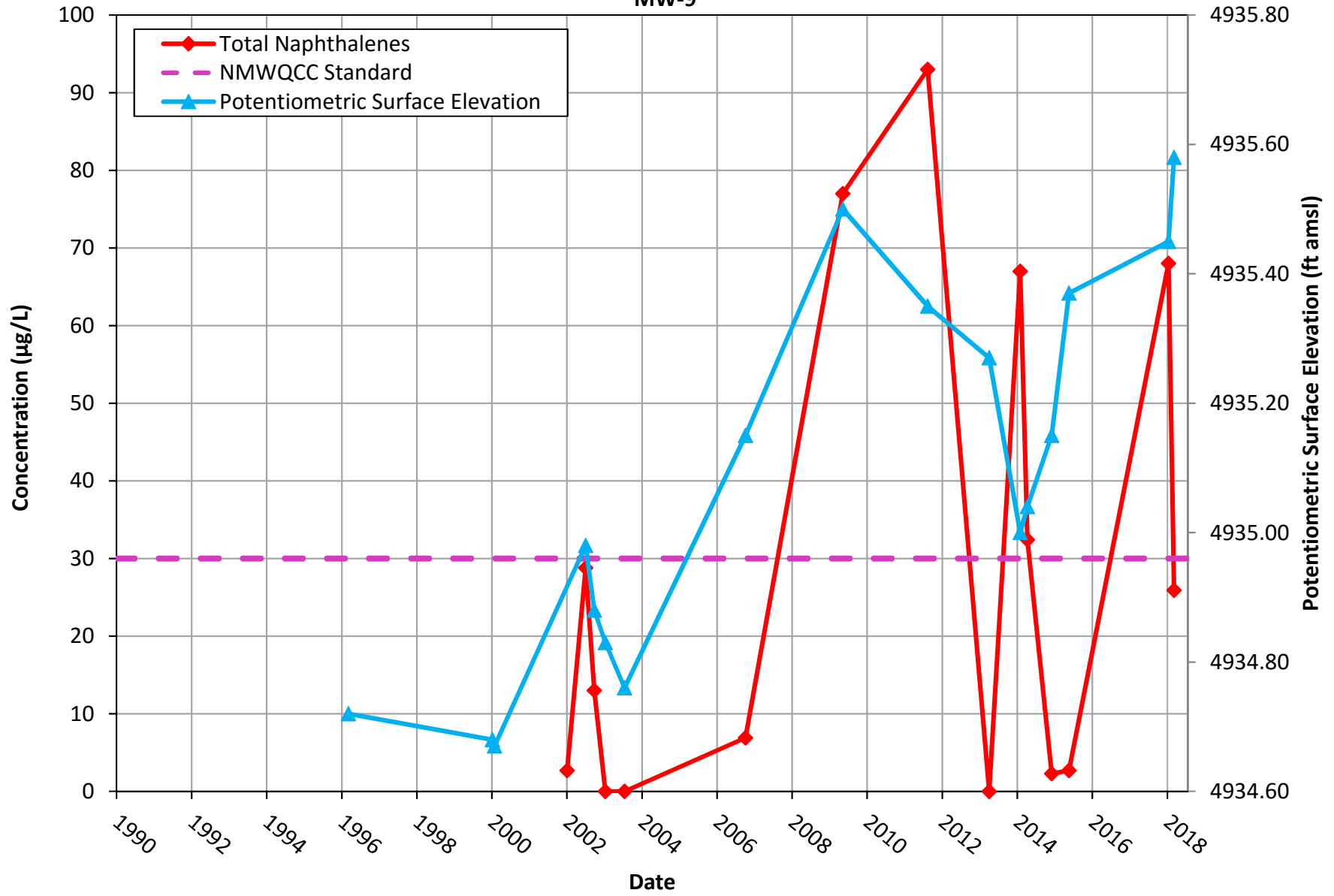


Figure 8b: Benzene Concentration and Groundwater Potentiometric Surface Elevation vs. Time – MW-9

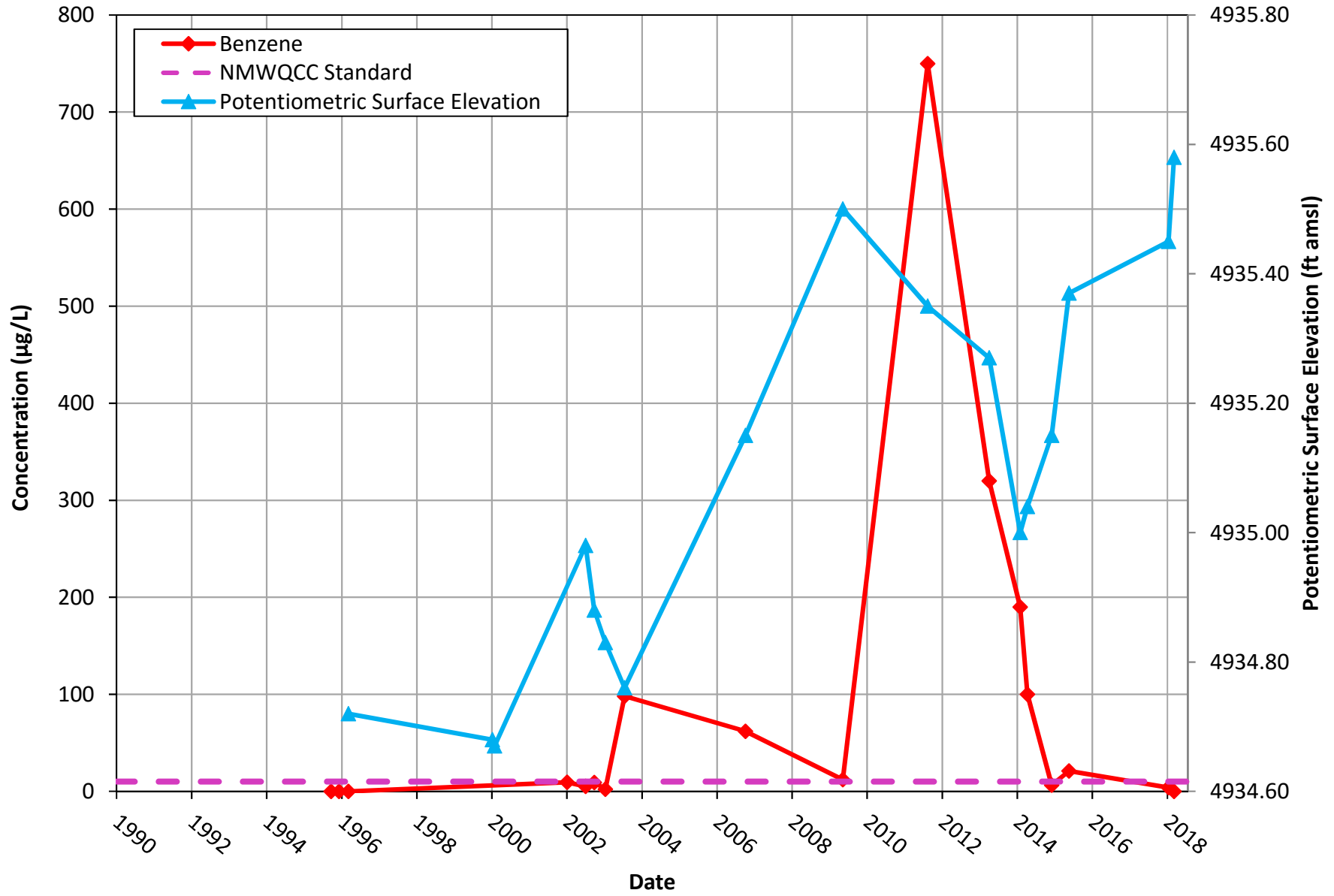


Figure 9a: Total Naphthalenes Concentration and Groundwater Potentiometric Surface Elevation vs. Time – VP-2

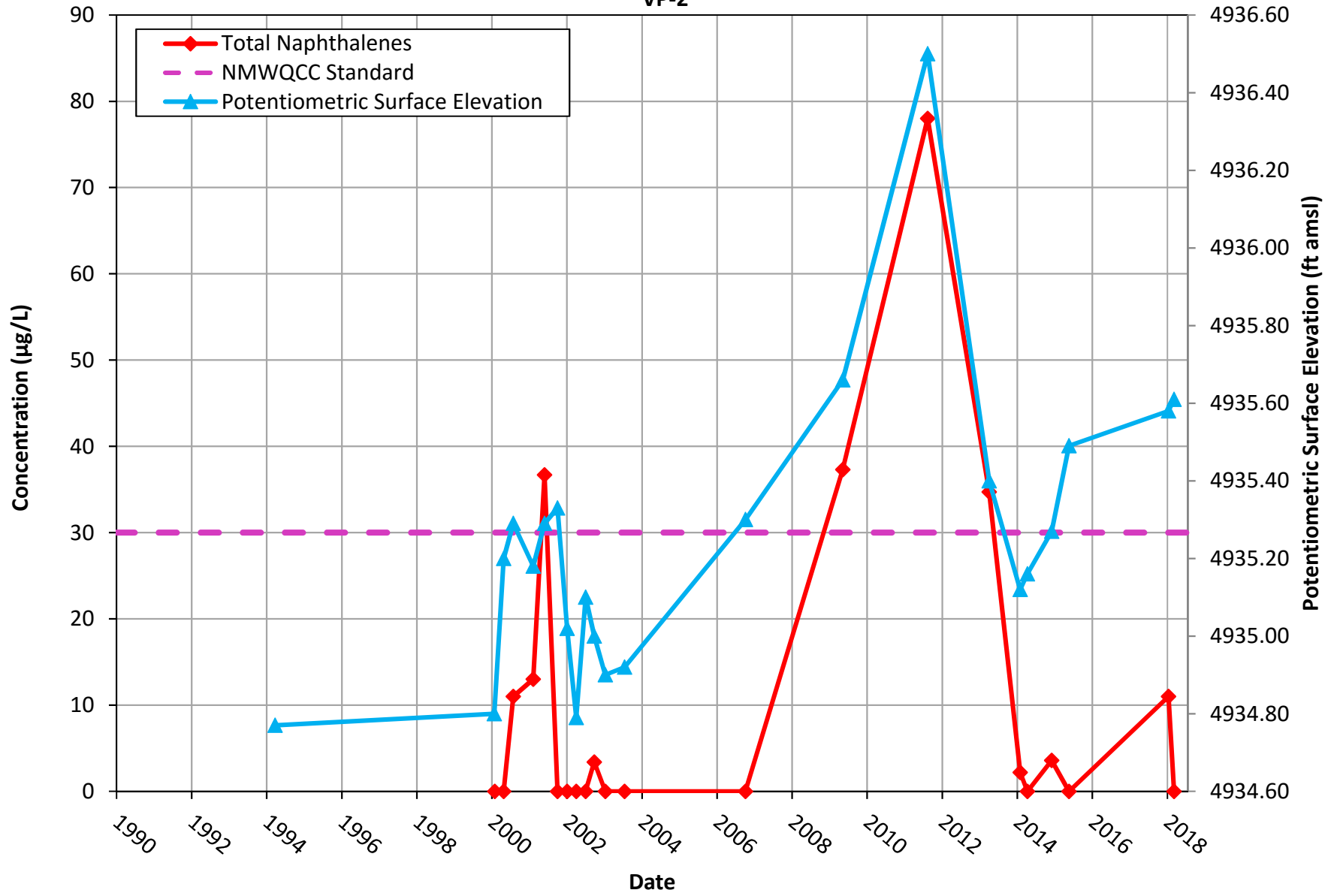


Figure 9b: Benzene Concentration and Groundwater Potentiometric Surface Elevation vs. Time – VP-2

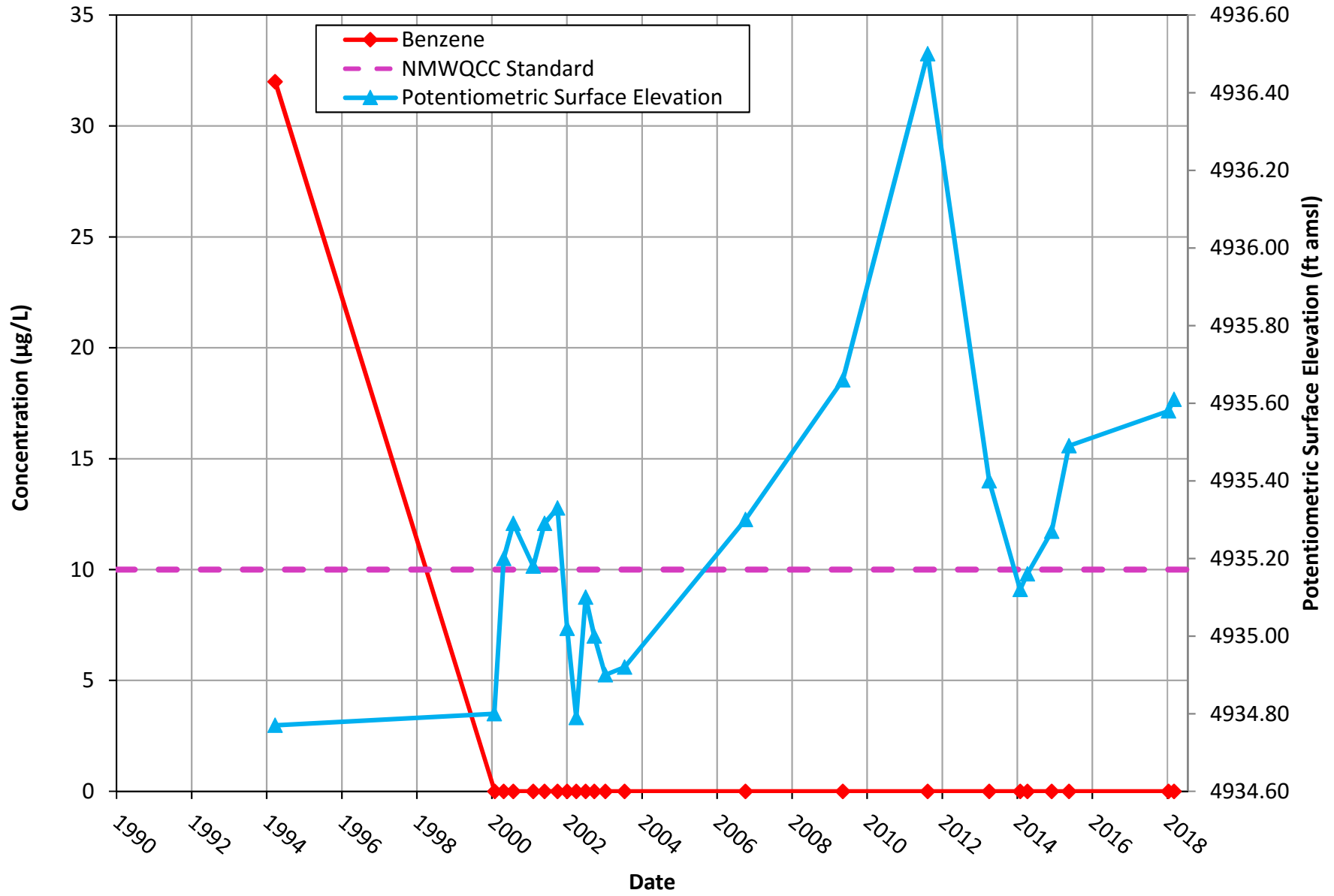


Figure 10a: Total Naphthalenes Concentration and Groundwater Potentiometric Surface Elevation vs. Time – VP-5

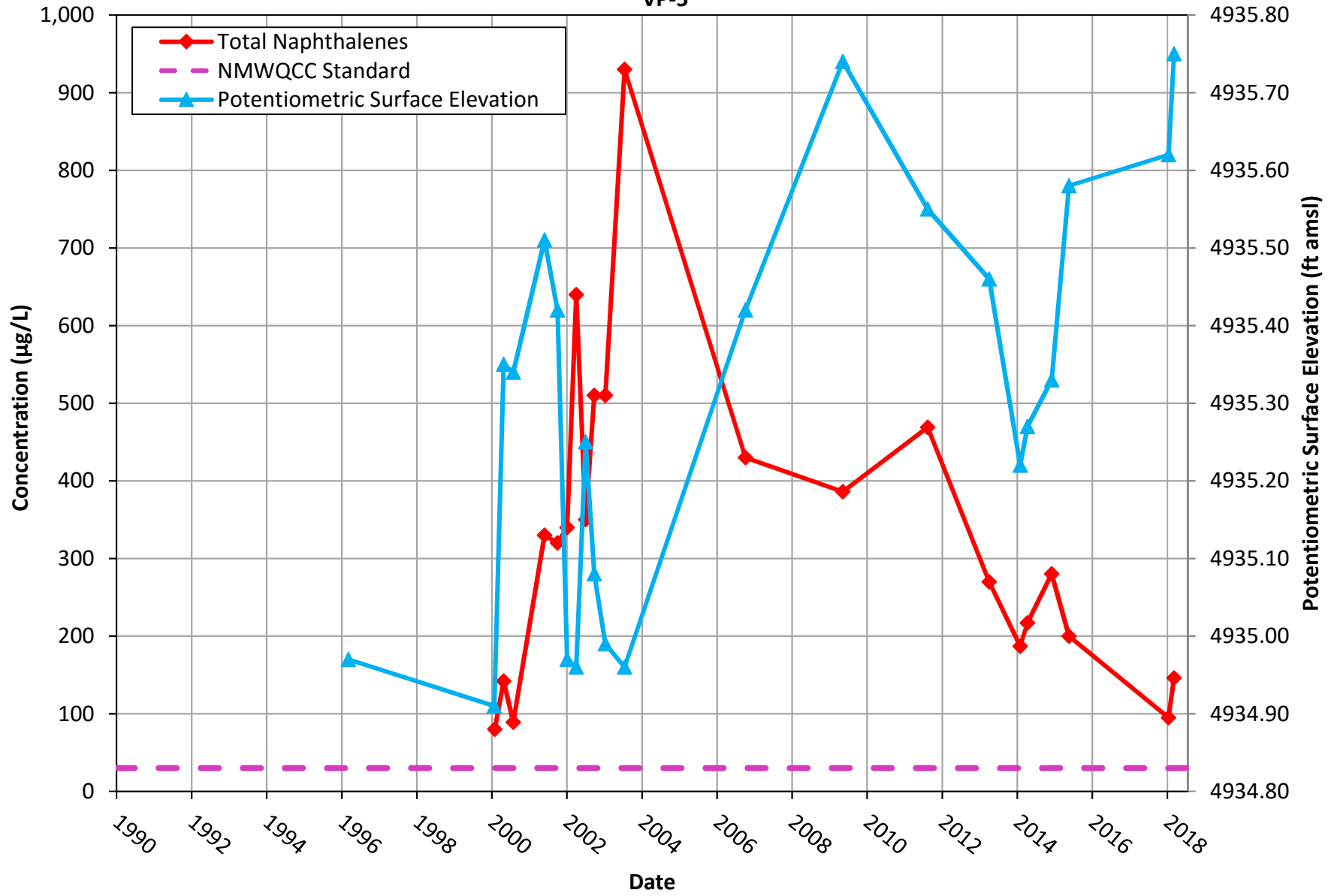
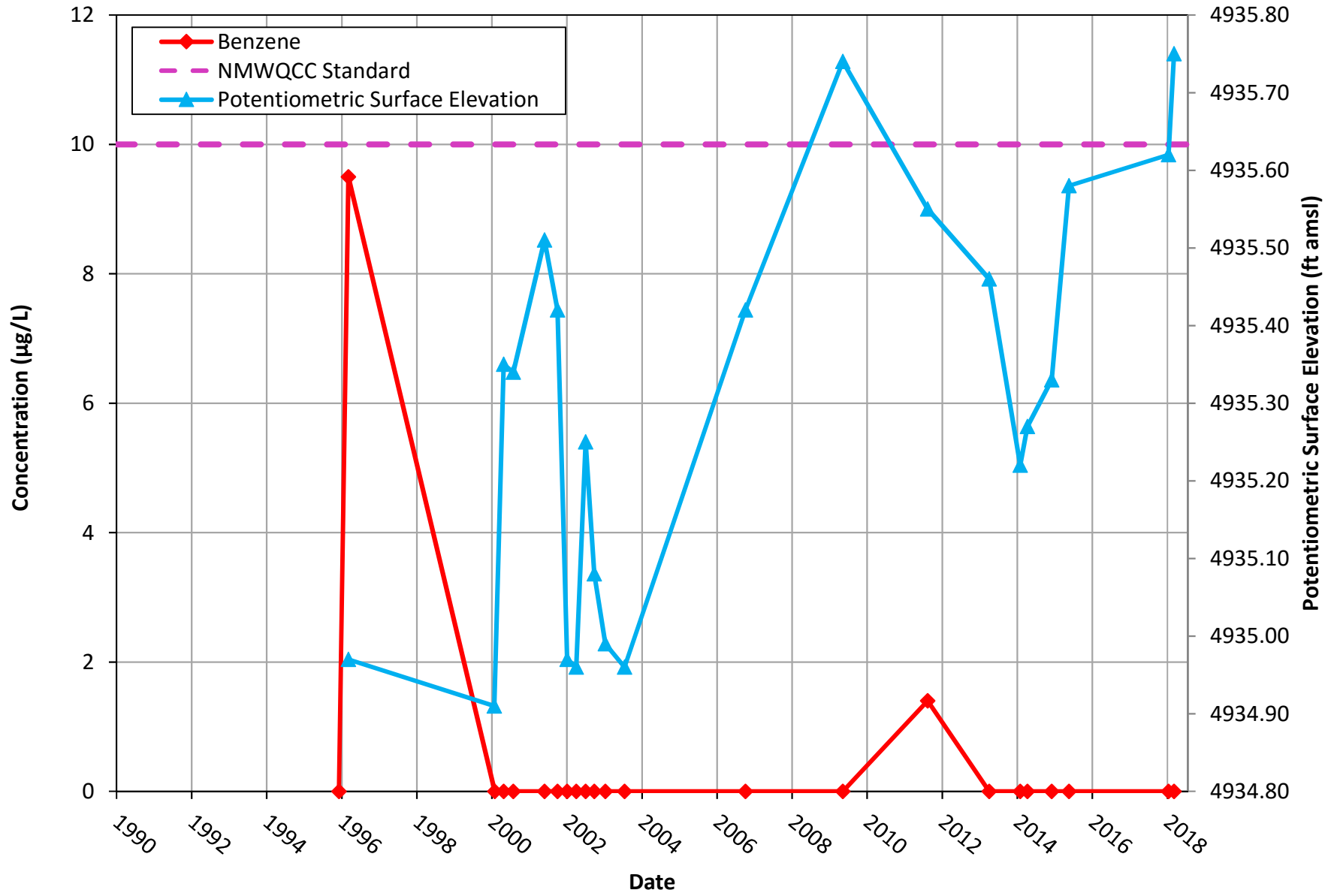


Figure 10b: Benzene Concentration and Groundwater Potentiometric Surface Elevation vs. Time – VP-5



TABLES

TABLE 1
Fluid Level Measurements
 2nd Semi-Annual Groundwater Monitoring Report
 Barelas Bridge Site, Facility # 29854; Release ID # 54
 Albuquerque, Bernalillo County, New Mexico

Well ID	Date	Screen Interval (ft bgs)	Top of Casing Elevation (ft amsl)	Depth to Water (ft btoc)	Total Depth (ft btoc)	Potentiometric Surface Elevation (ft amsl) ¹
MW-4	2/8/1990	3.5-18.5	4943.86	---	23.5	---
	10/31/1990	3.5-18.5	4943.86	---	---	4934.67
	11/14/1990	3.5-18.5	4943.86	---	---	4934.55
	11/28/1990	3.5-18.5	4943.86	---	---	4934.56
	11/29/1990	3.5-18.5	4943.86	---	---	4934.53
	12/12/1990	3.5-18.5	4943.86	---	---	4934.50
	12/4/1992	3.5-18.5	4943.23	---	23.5	---
	3/7/1996	3.5-18.5	4943.23	8.48	16.48	4934.75
	1/6/2000	3.5-18.5	4943.23	8.51	16.48	4934.72
	1/26/2000	3.5-18.5	4943.23	8.65	16.48	4934.58
	4/26/2000	3.5-18.5	4943.23	9.16	16.48	4934.07
	7/27/2000	3.5-18.5	4943.23	9.04	16.48	4934.19
	2/6/2001	3.5-18.5	4943.23	8.19	16.48	4935.04
	5/29/2001	3.5-18.5	4943.23	8.08	16.48	4935.15
	10/1/2001	3.5-18.5	4943.23	8.00	16.5	4935.23
	1/3/2002	3.5-18.5	4943.23	8.43	16.5	4934.80
	4/1/2002	3.5-18.5	4943.23	8.48	16.5	4934.75
	7/3/2002	3.5-18.5	4943.23	8.30	16.5	4934.93
	9/24/2002	3.5-18.5	4943.23	8.33	16.5	4934.90
	1/10/2003	3.5-18.5	4943.23	8.4	16.5	4934.88
	7/17/2003	3.5-18.5	4943.23	8.5	16.5	4934.78
	10/4/2006	3.5-18.5	4943.23	8.02	20.62	4935.21
	5/8/2009	3.5-18.5	4943.23	7.67	---	4935.56
	4/2/2013	3.5-18.5	4943.23	7.91	---	4935.32
	1/30/2014	3.5-18.5	4943.23	8.20	---	4935.03
4/9/2014	3.5-18.5	4943.23	8.16	---	4935.07	
12/2/2014	3.5-18.5	4943.23	8.09	10.60*	4935.14	
5/19/2015	3.5-18.5	4943.23	7.82	10.60*	4935.41	
1/12/2018	3.5-18.5	4943.23	7.75	10.60*	4935.48	
3/6/2018	3.5-18.5	4943.23	7.57	23.5**	4935.66	
MW-7	10/18/1990	7-22	4942.94	---	22	---
	10/31/1990	7-22	4942.94	---	---	4934.58
	11/14/1990	7-22	4942.94	---	---	4934.45
	11/28/1990	7-22	4942.94	---	---	4934.04
	11/29/1990	7-22	4942.94	---	---	4934.03
	12/12/1990	7-22	4942.94	---	---	4934.11
	3/7/1996	7-22	4942.94	8.61	21.45	4934.33
	10/2/2001	7-22	4942.94	8.20	21.45	4934.74
	1/3/2002	7-22	4942.94	8.50	21.45	4934.44
	4/1/2002	7-22	4942.94	8.66	21.45	4934.28

TABLE 1
Fluid Level Measurements
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 Albuquerque, Bernalillo County, New Mexico

Well ID	Date	Screen Interval (ft bgs)	Top of Casing Elevation (ft amsl)	Depth to Water (ft btoc)	Total Depth (ft btoc)	Potentiometric Surface Elevation (ft amsl) ¹
MW-7	7/3/2002	7-22	4942.94	8.40	21.45	4934.54
	9/24/2002	7-22	4942.94	8.45	21.45	4934.49
	1/10/2003	7-22	4942.94	8.45	21.45	4934.49
	7/17/2003	7-22	4942.94	8.53	21.45	4934.41
	10/4/2006	7-22	4942.94	8.20	21.60	4934.74
	5/8/2009	7-22	4942.94	7.81	21.3	4935.13
	8/13/2011	7-22	4942.94	7.91	21.3	4935.03
	12/2/2014	7-22	4942.94	8.10	21.66	4934.84
	5/19/2015	7-22	4942.94	7.91	21.66	4935.03
	1/12/2018	7-22	4942.94	7.78	21.66	4935.16
3/6/2018	7-22	4942.94	7.63	21.55	4935.31	
MW-8	10/18/1990	8-13	4944.57	---	13	---
	10/31/1990	8-13	4944.57	---	---	4934.98
	11/14/1990	8-13	4944.57	---	---	4934.92
	11/28/1990	8-13	4944.57	---	---	4934.76
	11/29/1990	8-13	4944.57	---	---	4934.75
	12/12/1990	8-13	4944.57	---	---	4934.71
	3/7/1996	8-13	4944.59	9.74	13.16	4934.85
	1/6/2000	8-13	4944.59	9.82	13.16	4934.77
	1/26/2000	8-13	4944.59	9.82	13.16	4934.77
	4/26/2000	8-13	4944.59	9.4	13.16	4935.19
	7/27/2000	8-13	4944.59	9.32	13.16	4935.27
	2/6/2001	8-13	4944.59	9.41	13.16	4935.18
	5/29/2001	8-13	4944.59	9.32	13.16	4935.27
	10/2/2001	8-13	4944.59	9.35	13.16	4935.24
	1/4/2002	8-13	4944.59	9.63	13.16	4934.96
	4/1/2002	8-13	4944.59	9.73	13.16	4934.86
	7/3/2002	8-13	4944.59	9.53	13.16	4935.06
	9/24/2002	8-13	4944.59	9.61	13.16	4934.98
	1/10/2003	8-13	4944.59	9.68	13.16	4934.91
	7/17/2003	8-13	4944.59	9.71	13.16	4934.88
	10/4/2006	8-13	4944.59	9.30	13.13	4935.29
	5/8/2009	8-13	4944.59	8.96	12.8	4935.63
	8/13/2011	8-13	4944.59	9.12	12.8	4935.47
	4/2/2013	8-13	4944.59	9.23	12.8	4935.36
	1/30/2014	8-13	4944.59	9.5	12.8	4935.09
4/9/2014	8-13	4944.59	9.47	12.8	4935.12	
12/2/2014	8-13	4944.59	9.37	13.32	4935.22	
5/19/2015	8-13	4944.59	9.31	13.32	4935.28	
1/12/2018	8-13	4944.59	9.02	13.32	4935.57	
3/6/2018	8-13	4944.59	8.90	13.29	4935.69	

TABLE 1
Fluid Level Measurements
 2nd Semi-Annual Groundwater Monitoring Report
 Barelas Bridge Site, Facility # 29854; Release ID # 54
 Albuquerque, Bernalillo County, New Mexico

Well ID	Date	Screen Interval (ft bgs)	Top of Casing Elevation (ft amsl)	Depth to Water (ft btoc)	Total Depth (ft btoc)	Potentiometric Surface Elevation (ft amsl) ¹
MW-9	8/20/1992	5-20	4943.98	---	20.0	---
	3/7/1996	5-20	4943.98	9.26	19.43	4934.72
	1/6/2000	5-20	4943.98	9.30	19.43	4934.68
	1/28/2000	5-20	4943.98	9.31	19.43	4934.67
	7/3/2002	5-20	4943.98	9.00	19.43	4934.98
	9/24/2002	5-20	4943.98	9.10	19.43	4934.88
	1/10/2003	5-20	4943.98	9.15	19.43	4934.83
	7/17/2003	5-20	4943.98	9.22	19.43	4934.76
	10/4/2006	5-20	4943.98	8.83	19.41	4935.15
	5/8/2009	5-20	4943.98	8.48	19.20	4935.5
	8/13/2011	5-20	4943.98	8.63	19.20	4935.35
	4/2/2013	5-20	4943.98	8.71	19.20	4935.27
	1/30/2014	5-20	4943.98	8.98	19.20	4935
	4/9/2014	5-20	4943.98	8.94	19.20	4935.04
	12/2/2014	5-20	4943.98	8.83	19.28	4935.15
	5/19/2015	5-20	4943.98	8.61	19.28	4935.37
	1/12/2018	5-20	4943.98	8.53	19.28	4935.45
	3/6/2018	5-20	4943.98	8.40	19.27	4935.58
VP-2	3/24/1994	---	4943.73	8.96	NA	4934.77
	1/26/2000	---	4943.73	8.93	NA	4934.80
	4/26/2000	---	4943.73	8.53	NA	4935.20
	7/27/2000	---	4943.73	8.44	12.57	4935.29
	2/6/2001	---	4943.73	8.55	12.57	4935.18
	5/29/2001	---	4943.73	8.44	12.57	4935.29
	10/1/2001	---	4943.73	8.40	12.65	4935.33
	1/3/2002	---	4943.73	8.71	12.57	4935.02
	4/1/2002	---	4943.73	8.94	12.57	4934.79
	7/3/2002	---	4943.73	8.63	12.57	4935.10
	9/24/2002	---	4943.73	8.73	12.57	4935.00
	1/10/2003	---	4943.73	8.83	12.57	4934.90
	7/17/2003	---	4943.73	8.81	12.57	4934.92
	10/4/2006	---	4943.73	8.43	12.72	4935.30
	5/8/2009	---	4943.73	8.07	12.50	4935.66
	8/13/2011	---	4943.73	7.23	12.50	4936.5
	4/2/2013	---	4943.73	8.33	12.50	4935.4
	1/30/2014	---	4943.73	8.61	12.50	4935.12
	4/9/2014	---	4943.73	8.57	12.50	4935.16
	12/2/2014	---	4943.73	8.46	12.80	4935.27
5/19/2015	---	4943.73	8.24	12.80	4935.49	
1/12/2018	---	4943.73	8.15	12.80	4935.58	
3/6/2018	---	4943.73	8.12	12.79	4935.61	

TABLE 1
Fluid Level Measurements
 2nd Semi-Annual Groundwater Monitoring Report
 Barelas Bridge Site, Facility # 29854; Release ID # 54
 Albuquerque, Bernalillo County, New Mexico

Well ID	Date	Screen Interval (ft bgs)	Top of Casing Elevation (ft amsl)	Depth to Water (ft btoc)	Total Depth (ft btoc)	Potentiometric Surface Elevation (ft amsl) ¹
VP-5	3/7/1996	---	4943.52	8.55	NA	4934.97
	1/26/2000	---	4943.52	8.61	NA	4934.91
	4/26/2000	---	4943.52	8.17	NA	4935.35
	7/27/2000	---	4943.52	8.18	12.17	4935.34
	5/29/2001	---	4943.52	8.01	12.17	4935.51
	10/2/2001	---	4943.52	8.10	12.05	4935.42
	1/3/2002	---	4943.52	8.55	12.17	4934.97
	4/1/2002	---	4943.52	8.56	12.17	4934.96
	7/3/2002	---	4943.52	8.27	12.17	4935.25
	9/24/2002	---	4943.52	8.44	12.17	4935.08
	1/10/2003	---	4943.52	8.53	12.17	4934.99
	7/17/2003	---	4943.52	8.56	12.17	4934.96
	10/4/2006	---	4943.52	8.10	12.12	4935.42
	5/8/2009	---	4943.52	7.78	11.90	4935.74
	8/13/2011	---	4943.52	7.97	11.90	4935.55
	4/2/2013	---	4943.52	8.06	11.90	4935.46
	1/30/2014	---	4943.52	8.30	11.90	4935.22
	4/9/2014	---	4943.52	8.25	11.90	4935.27
	12/2/2014	---	4943.52	8.19	12.42	4935.33
	5/19/2015	---	4943.52	7.94	12.42	4935.58
1/12/2018	---	4943.52	7.90	12.42	4935.62	
3/6/2018	---	4943.52	7.77	12.42	4935.75	

Notes:

¹ = Value calculated from: Potentiometric Surface Elevation = Top of Casing Elevation - Depth to Water

amsl = above mean sea level

bgs = below ground surface

btoc = below top of casing

ft = feet

* Root ball obstruction in well

** From As-Built. Used this value to calculate purge volume.

TABLE 2
Groundwater Quality Parameters
 2nd Semi-Annual Groundwater Monitoring Report
 Barelas Bridge Site, Facility # 29854; Release ID # 54
 Albuquerque, Bernalillo County, New Mexico

Well ID	Date	Parameter Monitoring Time	DTW (ft btoc)	Temperature		Specific Conductivity (µS/cm)	pH	DO (mg/L)	ORP (mV)
				°C	°F				
MW-4	12/2/2014	Initial	8.09	17.10	62.78	429	7.62	35.09	-37.5
		Final	8.12	18.48	65.26	486	7.21	3.27	-141.2
	5/19/2015	Initial	7.82	17.51	63.52	373	7.47	0.35	-99.0
		Final	7.87	17.02	62.64	409	7.38	0.08	-91.0
	1/12/2018	Initial	7.75	13.30	55.94	381	7.28	-	-
		Final	7.75	13.82	56.88	389	7.44	-	-
	3/6/2018	Initial	7.57	14.42	57.96	334	7.57	-	-
		Final		14.71	58.48	366	7.43	-	-
MW-7	12/2/2014	Initial	8.11	17.39	63.30	435	7.54	6.56	-202.0
		Final	8.14	17.68	63.82	452	7.62	2.09	-174.4
	5/19/2015	Initial	7.95	18.26	64.87	350	7.84	3.82	-114.2
		Final	7.91	16.75	62.15	333	7.86	3.64	-115.9
	1/12/2018	Initial	7.78	15.08	59.14	439	6.79	-	-
		Final	7.78	16.37	61.47	407	7.63	-	-
	3/6/2018	Initial	7.63	14.97	58.95	337	7.78	-	-
		Final		15.11	59.20	340	7.60	-	-
MW-8	12/2/2014	Initial	9.37	18.35	65.03	534	7.71	10.24	-157.5
		Final	9.40	18.98	66.16	605	7.47	3.93	-262.3
	5/19/2015	Initial	9.31	15.61	60.10	376	7.62	5.32	-54.1
		Final	9.22	15.11	59.20	423	7.66	4.88	-178.9
	1/12/2018	Initial	9.02	15.67	60.21	445	7.83	-	-
		Final	9.02	17.01	62.62	471	7.82	-	-
	3/6/2018	Initial	8.90	15.74	60.33	425	7.83	-	-
		Final		15.31	59.56	408	7.76	-	-
MW-9	12/2/2014	Initial	8.83	17.91	64.24	439	7.42	8.72	-149.2
		Final	8.85	17.93	64.27	431	7.36	3.03	-230.4
	5/19/2015	Initial	8.60	16.95	62.51	425	6.97	0.24	-158.9
		Final	8.62	16.21	61.18	340	7.35	0.05	-199.3
	1/12/2018	Initial	8.53	15.03	59.05	451	6.97	-	-
		Final	8.53	16.78	62.20	399	7.46	-	-
	3/6/2018	Initial	8.40	15.11	59.20	339	7.79	-	-
		Final		15.60	60.08	337	7.60	-	-

TABLE 2
Groundwater Quality Parameters
 2nd Semi-Annual Groundwater Monitoring Report
 Barelás Bridge Site, Facility # 29854; Release ID # 54
 Albuquerque, Bernalillo County, New Mexico

Well ID	Date	Parameter Monitoring Time	DTW (ft btoc)	Temperature		Specific Conductivity ($\mu\text{S}/\text{cm}$)	pH	DO (mg/L)	ORP (mV)
				$^{\circ}\text{C}$	$^{\circ}\text{F}$				
VP-2	12/2/2014	Initial	8.48	18.73	65.71	508	2.71	6.32	199.3
		Final	8.55	18.96	66.13	509	5.99	2.35	-120.7
	5/19/2015	Initial	8.23	17.35	63.23	344	6.91	0.24	-14.3
		Final	8.30	16.94	62.49	347	7.31	0.06	-98.6
	1/12/2018	Initial	8.15	15.24	59.43	388	6.96	-	-
		Final	8.15	16.32	61.38	399	7.49	-	-
	3/6/2018	Initial	8.12	15.26	59.47	345	7.78	-	-
		Final		15.11	59.20	338	7.42	-	-
VP-5	12/2/2014	Initial	8.20	17.87	64.17	817	6.90	3.96	-130.2
		Final	8.29	18.31	64.96	735	7.23	3.52	-200.5
	5/19/2015	Initial	7.94	17.63	63.73	621	7.11	0.22	-137.4
		Final	8.02	17.49	63.48	688	7.36	0.00	-257.8
	1/12/2018	Initial	7.90	14.66	58.39	577	7.24	-	-
		Final	7.90	15.39	59.70	507	7.49	-	-
	3/6/2018	Initial	7.77	13.72	56.70	631	7.41	-	-
		Final		13.84	56.91	564	7.37	-	-

Notes:

$^{\circ}\text{C}$ = degrees Celsius

$^{\circ}\text{F}$ = degrees Fahrenheit

$\mu\text{S}/\text{cm}$ = microSiemens per centimeter

btoc = below top of casing

DO = dissolved oxygen

DTW= Depth to water

ft = feet

mg/L = milligrams per liter

mV = millivolts

ORP = oxidation reduction potential

TABLE 3
Laboratory Analytical Results - Groundwater
 2nd Semi-Annual Groundwater Monitoring Report
 Barelás Bridge Site, Facility # 29854; Release ID # 54
 Albuquerque, Bernalillo County, New Mexico

Sample ID	Date	Organics ¹									Inorganics ⁵		
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX ²	MTBE	EDB ³	EDC	Total Naphthalenes ⁴	Dissolved Iron	Dissolved Manganese	Dissolved Lead
		Concentration (µg/L)									Concentration (mg/L)		
NMWQCC Standard		10	750	750	620	NE	100*	0.1	10	30	1.0	0.2	0.05
MW-4	10/30/1990	590	35.3	518	1,871	3,015	-	-	-	-	-	-	-
	11/29/1990	49	1.0	8.4	14	72	-	-	-	-	-	-	-
	3/7/1995	40	1.0	54	<2.0	95.0	NA	NA	NA	NA	-	-	-
	6/6/1995	<0.5	<1.0	<1.0	<2.0	<4.5	NA	NA	NA	NA	-	-	-
	1/30/2000	5.4	<1.0	<1.0	2.6	8.0	<1.0	<1.0	<1.0	<2.0	-	-	-
	4/26/2000	2.9	<1.0	<1.0	<1.0	2.9	<1.0	<1.0	<1.0	<2.0	-	-	-
	7/27/2000	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<2.0	-	-	-
	2/6/2001	2.5	<1.0	<1.0	1.5	4.0	<1.0	<1.0	<1.0	3.9	1.19	1.76	<0.005
	5/29/2001	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<6.0	0.17	1.97	<0.005
	10/1/2001	<1.0	<1.0	<1.0	<3.0	<6.0	<1.0	<1.0	<1.0	<15.0	-	-	-
	1/3/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<10	-	-	-
	4/1/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<10	-	-	-
	7/3/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<10	-	-	-
	9/24/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<10	-	-	-
	1/10/2003	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<10	-	-	-
	7/17/2003	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	0.010	<1.0	<10	-	-	-
	10/4/2006	<1.0	<1.0	<1.0	<3.0	<3.0	<1.5	-	-	<10	-	-	-
	5/8/2009	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	-	-	<10	-	-	-
	8/13/2011	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	-	-	<4.0	-	-	-
	4/2/2013	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	-	-	<4.0	-	-	-
1/30/2014	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	-	-	<4.0	-	-	-	
4/9/2014	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	-	-	<4.0	-	-	-	
12/2/2014	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<0.010	<1.0	2.1	0.60	0.78	<0.0050	
5/19/2015	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<0.010	<1.0	8.1	0.71	0.74	<0.0050	
1/12/2018	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<1.0	<1.0	<4.0	-	-	-	
3/6/2018	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<1.0	<1.0	<4.0	-	-	-	

TABLE 3
Laboratory Analytical Results - Groundwater
 2nd Semi-Annual Groundwater Monitoring Report
 Barelás Bridge Site, Facility # 29854; Release ID # 54
 Albuquerque, Bernalillo County, New Mexico

Sample ID	Date	Organics ¹									Inorganics ⁵		
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX ²	MTBE	EDB ³	EDC	Total Naphthalenes ⁴	Dissolved Iron	Dissolved Manganese	Dissolved Lead
		Concentration (µg/L)									Concentration (mg/L)		
NMWQCC Standard		10	750	750	620	NE	100*	0.1	10	30	1.0	0.2	0.05
MW-7	10/30/1990	9.8	3	20.8	4.9	38.5	-	-	-	-	-	-	-
	9/20/1995	78	2.1	9.9	8.7	98.7	NA	NA	NA	NA	-	-	-
	12/5/1995	6.0	1.2	2.2	<2.0	9.4	NA	NA	NA	NA	-	-	-
	3/7/1996	1.9	<1.0	<1.0	<2.0	1.9	NA	NA	NA	NA	-	-	-
	10/2/2001	<1.0	<1.0	<1.0	3.3	3.3	<1.0	<1.0	<1.0	<15	-	-	-
	1/3/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<10	-	-	-
	4/1/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<10	-	-	-
	7/3/2002	2.6	<1.0	<1.0	3.0	5.6	<1.0	<1.0	<1.0	28.8	-	-	-
	9/24/2002	3.1	<1.0	<1.0	1.7	4.8	<1.0	<1.0	<1.0	22.8	-	-	-
	1/10/2003	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<10	-	-	-
	7/17/2003	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	0.010	<1.0	<10	-	-	-
	10/4/2006	<1.0	<1.0	<1.0	<3.0	<3.0	<1.5	-	-	<10	-	-	-
	5/8/2009	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	-	-	<10	-	-	-
	8/13/2011	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	-	-	<4.0	-	-	-
	12/2/2014	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<0.010	<1.0	<4.0	0.33	0.69	<0.0050
5/19/2015	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<0.010	<1.0	<4.0	0.29	0.61	<0.0050	
1/12/2018	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<1.0	<1.0	<4.0	-	-	-	
3/6/2018	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<1.0	<1.0	<4.0	-	-	-	
MW-8	10/30/1990	220	120	960	1,140	-	-	-	-	-	-	-	-
	9/20/1995	11	19	190	74	294.0	NA	NA	NA	NA	-	-	-
	12/5/1995	8.6	8.3	49	18	83.9	NA	NA	NA	NA	-	-	-
	3/7/1996	71	24	400	150	645.0	NA	NA	NA	NA	-	-	-
	1/30/2000	<10	<10	150.0	5.7	155.7	<10	<10	<10	98	-	-	-
	4/26/2000	3.2	2.2	<1.0	35	40.4	<1.0	<1.0	<1.0	136	-	-	-
	7/27/2000	6.0	5.2	150	61	222.2	<1.0	<1.0	<1.0	140	-	-	-

TABLE 3
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 Barelás Bridge Site, Facility # 29854; Release ID # 54
 Albuquerque, Bernalillo County, New Mexico

Sample ID	Date	Organics ¹									Inorganics ⁵		
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX ²	MTBE	EDB ³	EDC	Total Naphthalenes ⁴	Dissolved Iron	Dissolved Manganese	Dissolved Lead
		Concentration (µg/L)									Concentration (mg/L)		
NMWQCC Standard		10	750	750	620	NE	100*	0.1	10	30	1.0	0.2	0.05
MW-8	2/6/2001	<10	<10	130	43	173	<10	<10	<10	140	0.68	0.38	<0.005
	5/29/2001	4.2	2.6	110	57	173.8	<2.0	<2.0	<2.0	261	1.12	0.36	<0.005
	10/2/2001	<10	<10	90	51	141	<10	<10	<10	120	-	-	-
	1/4/2002	3.0	3.2	35	50	91.2	<2.0	<2.0	<2.0	313	-	-	-
	4/1/2002	<5.0	<5.0	100	43	143	<5.0	<5.0	<5.0	273	-	-	-
	7/3/2002	<5.0	<5.0	86	40	126	<5.0	<5.0	<5.0	202	-	-	-
	9/24/2002	<5.0	<5.0	58	29	87	<5.0	<5.0	<5.0	238	-	-	-
	1/10/2003	<2.0	<2.0	57	38	95	<2.0	<2.0	<2.0	284	-	-	-
	7/17/2003	<5.0	<5.0	66	38	104	<5.0	0.010	<5.0	310	-	-	-
	10/4/2006	<2.0	<2.0	34	18	52	<3.0	-	-	210	-	-	-
	5/8/2009	<1.0	<1.0	24	8.0	32	<1.0	-	-	92	-	-	-
	8/13/2011	<10	<10	32	<15	32	<10	-	-	72	-	-	-
	4/2/2013	<5.0	<5.0	31	10	41	<5.0	-	-	149	-	-	-
	1/30/2014	1.3	1.4	33	8.2	44	<1.0	-	-	134	-	-	-
	4/9/2014	<1.0	1.2	32	7.3	41	<1.0	-	-	113	-	-	-
	12/2/2014	<5.0	<5.0	17	<7.5	17	<5.0	<0.010	<5.0	62	0.076	0.34	<0.0050
5/19/2015	<1.0	<1.0	22	4.4	26	<1.0	<0.010	<1.0	82	0.073	0.28	<0.0050	
1/12/2018	<1.0	<1.0	7.9	2.4	10.0	<1.0	<1.0	<1.0	56	-	-	-	
3/6/2018	<1.0	<1.0	6.4	1.8	8.2	<1.0	<1.0	<1.0	45	-	-	-	
MW-9	9/20/1995	<0.5	<1.0	<1.0	<2.0	<4.5	NA	NA	NA	NA	-	-	-
	12/5/1995	<0.5	<1.0	<1.0	14	14	NA	NA	NA	NA	-	-	-
	3/7/1996	<0.5	<1.0	<1.0	3.7	3.7	NA	NA	NA	NA	-	-	-
	1/3/2002	9.4	6.9	59	51	126.3	<1.0	<1.0	<1.0	2.7	-	-	-
	7/3/2002	5.1	1.9	16	18	41.0	<1.0	<1.0	<1.0	28.8	-	-	-
	9/24/2002	9.2	<1.0	25	20	54.2	1.7	<1.0	<1.0	13	-	-	-

TABLE 3
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Sample ID	Date	Organics ¹									Inorganics ⁵		
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX ²	MTBE	EDB ³	EDC	Total Naphthalenes ⁴	Dissolved Iron	Dissolved Manganese	Dissolved Lead
		Concentration (µg/L)									Concentration (mg/L)		
NMWQCC Standard		10	750	750	620	NE	100*	0.1	10	30	1.0	0.2	0.05
MW-9	1/10/2003	2.2	<1.0	<1.0	<1.0	2.2	2.2	<1.0	<1.0	<10	-	-	-
	7/17/2003	98	9.9	2.4	10	120.3	7.1	0.010	<1.0	<10	-	-	-
	10/4/2006	62	44	11	42	159	<1.5	-	-	6.9	-	-	-
	5/8/2009	12	7.1	45	68	132	<1.0	-	-	77	-	-	-
	8/13/2011	750	150	270	880	2,050	12	-	-	93	-	-	-
	4/2/2013	320	34	<10	150	504	<10	-	-	<40	-	-	-
	1/30/2014	190	59	200	340	789	<2.0	-	-	67	-	-	-
	4/9/2014	100	49	72	110	331	<1.0	-	-	32.4	-	-	-
	12/2/2014	6.4	<1.0	14	5.5	26	<1.0	<0.010	<1.0	2.3	0.31	0.81	<0.0050
	5/19/2015	21	3.0	18	18	60	<1.0	<0.010	<1.0	2.7	0.22	0.70	<0.0050
1/12/2018	4.0	1.4	11	11	27.0	<1.0	<1.0	<1.0	68	-	-	-	
3/6/2018	<1.0	<1.0	2.1	3.8	5.9	<1.0	<1.0	<1.0	26	-	-	-	
VP-2	3/24/1994	32	20	94	150	296	NA	NA	NA	NA	-	-	-
	1/30/2000	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<2.0	-	-	-
	4/26/2000	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<2.0	-	-	-
	7/27/2000	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	11	-	-	-
	2/6/2001	<1.0	<1.0	<1.0	2.0	2.0	<1.0	<1.0	<1.0	13	0.70	0.92	<0.005
	5/29/2001	<1.0	<1.0	1.2	4.9	6.1	<1.0	<1.0	<1.0	36.7	0.83	1.21	<0.005
	10/1/2001	<1.0	<1.0	<1.0	<3.0	<6.0	<1.0	<1.0	<1.0	<15	-	-	-
	1/3/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<10	-	-	-
	4/1/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<10	-	-	-
	7/3/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<10	-	-	-
	9/24/2002	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	3.4	-	-	-
	1/10/2003	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0	<10	-	-	-
	7/17/2003	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	0.010	<1.0	<10	-	-
10/4/2006	<1.0	<1.0	<1.0	<3.0	<3.0	<1.5	-	-	<10	-	-	-	

TABLE 3
Laboratory Analytical Results - Groundwater
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 Albuquerque, Bernalillo County, New Mexico

Sample ID	Date	Organics ¹									Inorganics ⁵		
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX ²	MTBE	EDB ³	EDC	Total Naphthalenes ⁴	Dissolved Iron	Dissolved Manganese	Dissolved Lead
		Concentration (µg/L)									Concentration (mg/L)		
NMWQCC Standard		10	750	750	620	NE	100*	0.1	10	30	1.0	0.2	0.05
VP-2	5/8/2009	<1.0	<1.0	1.3	1.6	2.9	<1.0	-	-	37.3	-	-	-
	8/13/2011	<1.0	<1.0	2.1	2.4	4.5	<1.0	-	-	78	-	-	-
	4/2/2013	<2.0	<2.0	<2.0	<3.0	<3.0	<2.0	-	-	34.7	-	-	-
	1/30/2014	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	-	-	2.2	-	-	-
	4/9/2014	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	-	-	<4.0	-	-	-
	12/2/2014	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<0.010	<1.0	3.6	0.11	0.59	<0.0050
	5/19/2015	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<0.010	<1.0	<4.0	0.070	0.46	<0.0050
	1/12/2018	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<1.0	<1.0	11	-	-	-
3/6/2018	<1.0	<1.0	<1.0	<1.5	<1.5	<1.0	<1.0	<1.0	<4.0	-	-	-	
VP-5	12/5/1995	<0.5	<1.0	<1.0	<2.0	<4.5	NA	NA	NA	NA	-	-	-
	3/7/1996	9.5	<1.0	99	81	189.5	NA	NA	NA	NA	-	-	-
	1/30/2000	<5.0	<5.0	20	10	30.0	<5.0	<5.0	<5.0	80	-	-	-
	4/26/2000	<1.0	1.4	14	7.1	22.5	<1.0	<1.0	<1.0	142	-	-	-
	7/27/2000	<1.0	1.8	20	12	33.8	<1.0	<1.0	<1.0	89	-	-	-
	5/29/2001	<1.0	1.2	21	17	39.2	<1.0	<1.0	<1.0	330	3.42	0.53	<0.005
	10/2/2001	<5.0	<5.0	44	35	79	<5.0	<5.0	<5.0	320	-	-	-
	1/3/2002	<5.0	<5.0	50	31	81	<5.0	<5.0	<5.0	340	-	-	-
	4/1/2002	<1.0	<1.0	100	44	144	<1.0	<1.0	<1.0	640	-	-	-
	7/3/2002	<5.0	<5.0	32	19	51	<5.0	<5.0	<5.0	350	-	-	-
	9/24/2002	<5.0	<5.0	34	18	52	<5.0	<5.0	<5.0	510	-	-	-
	1/10/2003	<5.0	<5.0	61	27	88	<5.0	<5.0	<5.0	510	-	-	-
	7/17/2003	<5.0	<5.0	110	54	164	<5.0	0.010	<5.0	930	-	-	-
	10/4/2006	<10	<10	21	<30	21.0	<15	-	-	430	-	-	-
5/8/2009	<5.0	<5.0	7.1	<7.5	7.1	<5.0	-	-	386	-	-	-	
8/13/2011	1.4	1.8	12	2.4	17.6	<1.0	-	-	469	-	-	-	

TABLE 3
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Sample ID	Date	Organics ¹									Inorganics ⁵		
		Benzene	Toluene	Ethylbenzene	Total Xylenes	BTEX ²	MTBE	EDB ³	EDC	Total Naphthalenes ⁴	Dissolved Iron	Dissolved Manganese	Dissolved Lead
		Concentration (µg/L)									Concentration (mg/L)		
NMWQCC Standard		10	750	750	620	NE	100*	0.1	10	30	1.0	0.2	0.05
VP-5	4/2/2013	<2.0	<2.0	7.7	<3.0	7.7	<2.0	-	-	270	-	-	-
	1/30/2014	<1.0	1.0	3.0	<1.5	4.0	<1.0	-	-	187	-	-	-
	4/9/2014	<1.0	1.2	4.5	<1.5	5.7	<1.0	-	-	217	-	-	-
	12/2/2014	<5.0	<10	<10	<15	<15	<10	<0.010	<5.0	280	1.0	0.12	<0.0050
	5/19/2015	<5.0	<5.0	<5.0	<7.5	<7.5	<5.0	<0.010	<5.0	200	1.2	0.12	0.0061
	1/12/2018	<2.0	<2.0	<2.0	<3.0	<3.0	<2.0	<2.0	<2.0	95	-	-	-
	3/6/2018	<2.0	<2.0	<2.0	<3.0	<3.0	<2.0	<2.0	<2.0	146	-	-	-

Notes:

* = New Mexico Environment Department--Petroleum Storage Tank Bureau Action Level

- = Not Tested or Not Applicable

Bolding indicates values or RLs in excess of the NMWQCC Standard or Petroleum Storage Tank Bureau Action Level.

¹ = Analyzed by U.S. EPA Method 8260B.

² = Total BTEX includes sum of benzene, toluene, ethylbenzene, and total xylenes. RL for BTEX = highest RL for individual compounds; when summing detections, values listed as "<" RL are assumed to be 0.

³ = Analyzed by U.S. EPA Method 504.1 or 8260B.

⁴ = Total naphthalenes includes the sum of naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene. RL for Total Naphthalenes = highest RL for individual compounds; when summing detections, values listed as "<" RL are assumed to be 0.

⁵ = Analyzed by U.S. EPA Method 6010.B.

BTEX = benzene, toluene, ethyl benzene, and total xylenes

EDB = 1,2-dibromoethane

EDC = 1,2-dichloroethane

EPA = U.S. Environmental Protection Agency

µg/L = microgram(s) per liter

mg/L = milligrams per liter

MTBE = methyl tertiary-butyl ether

NE = None Established

NMWQCC = New Mexico Water Quality Control Commission

NMWQCC Standard = Groundwater Standards as defined by the State of New Mexico Water Quality Control Commission (NMWQCC, 2002)

RL = Laboratory reporting limit

APPENDIX A
Access Agreement

5052462600

CONSENT FOR ACCESS TO PROPERTY

Name of Property Owner: Roberts Oil Co
Location of Property: 800 Bridge SW, Albuquerque, New Mexico

This is my consent to the New Mexico Environment Department (Department) and its authorized officers, employees, contractors, and representatives for access to the above-described Property for the following purposes:

- Collect groundwater samples from Site monitoring wells as part of groundwater monitoring activities.

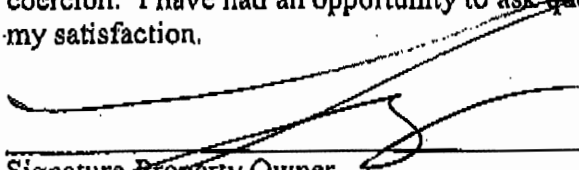
The Department or its representative will provide the Property Owner written or oral notice prior to each entrance onto Property. This notice shall be given to:

Roberts Oil Co
408 Arizona Street SE
Albuquerque
New Mexico
87108
505.262.1607

Property Owner may observe activities on the Property, consistent with Occupational Health and Safety Regulations (see 29 CFR § 1910.120) and may split all samples collected at the Property. Property Owner is responsible for the provision of all equipment and accessories and for laboratory costs necessary to split samples.

Installations on the Property will be placed to minimize interference with the movement of vehicles and regular activities on the Property. Following completion of the project, the Department or its representative will properly abandon all wells, remove equipment, all materials, trash, fencing, and other associated items. The Department or its representative will otherwise return the property as close as possible to the pre-entrance condition.

This permission is given by me voluntarily with knowledge of my right to refuse and without coercion. I have had an opportunity to ask questions and all my questions have been answered to my satisfaction.



Signature Property Owner

11-21-14
Date

APPENDIX B

Field Notes and Groundwater Sampling Forms

PROJECT NAME: Barela's Bridge WELL NO.: MW-8
PROJECT NO.: _____ DATE: 3/6/18 FIELD CREW: Brian Archuleta

WATER LEVEL AND WATER COLUMN HEIGHT

TIME	DEPTH TO BOTTOM OF WELL (DTB) (ft btoc)	DEPTH TO WATER (DTW) (ft btoc)	Water Column Height (DTB-DTW) (ft)
0938	13.29	8.90	4.39

ft btoc: feet below top of casing from designated measuring point

PURGE VOLUME

Well Casing Diameter (inches)	Volume/Linear Foot (see conversion table below)	1 Well Volume (gal)	2 Well Volumes (gal)	3 Well Volumes (gal)
2	0.17	0.7463		2.2389

VOLUME/LINEAR FOOT (gal/ft) (Use well casing ID)

1" = 0.04	1.5" = 0.09	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.5	8" = 2.6	10" = 4.1
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1 well casing volume = Volume/Linear Foot x Water Column Height

METHOD OF PURGING: 2" Bailer + YSI-556
METHOD OF SAMPLING: 2" Bailer + VOC Tips

WATER LEVEL/WATER QUALITY INSTRUMENTS USED

INSTRUMENT	SERIAL NO.	TIME CALIBRATION PERFORMED	TECH	COMMENTS
Heron H.OIL		—		OWI
YSI-556		1100	BA	WQM

WATER QUALITY READINGS DURING PURGING

TIME	TEMP (°C)	pH	SP. COND. (µS/cm)	TURB. (NTU) ^{OP}	Total Volume Purged (gal)	Comments (color/odor)
1135	15.74	7.83	425	-206.9	φ	Mostly clear to slightly murky. Light to moderate petrorodor.
1137	15.60	7.70	405		0.6	
1139	15.53	7.75	419		1.0	
1141	15.42	7.73	419		1.5	
1142	15.32	7.73	427		2.2	
1143	15.31	7.76	408		3.0	"
1150	sampled					

*If measured.

Stabilization = Temp ±1°C; pH ±0.2 units; Sp. Cond. ±10%; Turb. ±10%

WATER QUALITY READINGS DURING PURGING (continued)

TIME	TEMP (°C)	pH	SP. COND. (µS/cm)	TURB. (NTU)*	Total Volume Purged (gal)	Comments (color/odor)

*If measured.
Stabilization = Temp ±1°C; pH ±0.2 units; Sp. Cond. ±10%; Turb. ±10%

GROUNDWATER SAMPLING DATA

GROUNDWATER SAMPLE ID: MW-8 DUPLICATE SAMPLE ID: /

Time	Bottle Type	Analytical Method	# of Bottles	Volume	Preservative
1150	VOA	8260B	3	40mL	HgCl ₂
TOTAL:					

Sampler: Brian Archuleta BAJ
(Printed Name) (Signature)

PROJECT NAME: Bavela's Bridge WELL NO.: VP-2
PROJECT NO.: _____ DATE: 3/6/18 FIELD CREW: Brian Archuleta

WATER LEVEL AND WATER COLUMN HEIGHT

TIME	DEPTH TO BOTTOM OF WELL (DTB) (ft btoc)	DEPTH TO WATER (DTW) (ft btoc)	Water Column Height (DTB-DTW) (ft)
0945	12.79	8.12	4.67

ft btoc: feet below top of casing from designated measuring point

PURGE VOLUME

Well Casing Diameter (inches)	Volume/Linear Foot (see conversion table below)	1 Well Volume (gal)	2 Well Volumes (gal)	3 Well Volumes (gal)
2	0.17	0.7939		2.3817

VOLUME/LINEAR FOOT (gal/ft) (Use well casing ID)

1" = 0.04	1.5" = 0.09	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.5	8" = 2.6	10" = 4.1
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1 well casing volume = Volume/Linear Foot x Water Column Height

METHOD OF PURGING: 2" Bailor + YSI-556
METHOD OF SAMPLING: 2" Bailor + VOC Tip

WATER LEVEL/WATER QUALITY INSTRUMENTS USED

INSTRUMENT	SERIAL NO.	TIME CALIBRATION PERFORMED	TECH	COMMENTS
Heron H101L				OWI
YSI-556		1100	BA	WQM

WATER QUALITY READINGS DURING PURGING

TIME	TEMP (°C)	pH	SP. COND. (µS/cm)	TURB. (NTU)*	Total Volume Purged (gal)	Comments (color/odor)
1211	15.26	7.78	345		0	Clear to murky Trace petro odor
1213	15.23	7.45	342		0.75	Light Brown Murky
1215	15.16	7.41	340		1.75	"
1216	15.14	7.40	338		2.5	
1217	15.11	7.42	338		3.0	Brown murky Trace Petro odor
1220	Sampled					

*If measured.

Stabilization = Temp ±1°C; pH ±0.2 units; Sp. Cond. ±10%; Turb. ±10%

WATER QUALITY READINGS DURING PURGING (continued)

TIME	TEMP (°C)	pH	SP. COND. (µS/cm)	TURB. (NTU)*	Total Volume Purged (gal)	Comments (color/odor)

*If measured.

Stabilization = Temp ±1°C; pH ±0.2 units; Sp. Cond. ±10%; Turb. ±10%

GROUNDWATER SAMPLING DATA

GROUNDWATER SAMPLE ID: AAA ^{VP-2} ~~VP-2~~ DUPLICATE SAMPLE ID:

Time	Bottle Type	Analytical Method	# of Bottles	Volume	Preservative
1220	VOA	8260	3	40mL	HgCl ₂
TOTAL:					

Sampler: Brian Archulita B A
 (Printed Name) (Signature)

PROJECT NAME: Bavela's Bridge WELL NO.: VP-5
PROJECT NO.: _____ DATE: 3/6/18 FIELD CREW: Brian Archuleta

WATER LEVEL AND WATER COLUMN HEIGHT

TIME	DEPTH TO BOTTOM OF WELL (DTB) (ft btoc)	DEPTH TO WATER (DTW) (ft btoc)	Water Column Height (DTB-DTW) (ft)
10 30	12.42	7.77	4.65

ft btoc: feet below top of casing from designated measuring point

PURGE VOLUME

Well Casing Diameter (inches)	Volume/Linear Foot (see conversion table below)	1 Well Volume (gal)	2 Well Volumes (gal)	3 Well Volumes (gal)
2	0.17	0.7905		2.3715

VOLUME/LINEAR FOOT (gal/ft) (Use well casing ID)

1" = 0.04	1.5" = 0.09	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.5	8" = 2.6	10" = 4.1
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1 well casing volume = Volume/Linear Foot x Water Column Height

METHOD OF PURGING: Bailer 2" + YSI-556
METHOD OF SAMPLING: Bailer + VOC tips.

WATER LEVEL/WATER QUALITY INSTRUMENTS USED

INSTRUMENT	SERIAL NO.	TIME CALIBRATION PERFORMED	TECH	COMMENTS
H. O. IL			1	OWI
YSI-556		1100	BA	WQM

WATER QUALITY READINGS DURING PURGING

TIME	TEMP (°C)	pH	SP. COND. (µS/cm)	TURB. (NTU)*	Total Volume Purged (gal)	Comments (color/odor)
1239	13.72	7.41	631		φ	Clear with light gray mucky.
	13.64	7.37				
1240	13.64	7.37	624		0.75	
1241	13.79	7.41	574		1.5	Clearish to light smokey gray w/ light petro odor
1243	13.79	7.37	578		2.2	
1244	13.84	7.37	564		2.7	
						"
1250	Sampled.					"

*If measured.

Stabilization = Temp ±1°C; pH ±0.2 units; Sp. Cond. ±10%; Turb. ±10%

WATER QUALITY READINGS DURING PURGING (continued)

TIME	TEMP (°C)	pH	SP. COND. (µS/cm)	TURB. (NTU)*	Total Volume Purged (gal)	Comments (color/odor)

*If measured.
 Stabilization = Temp ±1°C; pH ±0.2 units; Sp. Cond. ±10%; Turb. ±10%

GROUNDWATER SAMPLING DATA

GROUNDWATER SAMPLE ID: VP-5 DUPLICATE SAMPLE ID: ✓

Time	Bottle Type	Analytical Method	# of Bottles	Volume	Preservative
1250	VOA	8260B	3	40mL	HgCl2
TOTAL:					

Sampler: Brian Archuleta BA
 (Printed Name) (Signature)

PROJECT NAME: Bavela's Bridge WELL NO.: MW-9
PROJECT NO.: _____ DATE: _____ FIELD CREW: Brian Archuleta

WATER LEVEL AND WATER COLUMN HEIGHT

TIME	DEPTH TO BOTTOM OF WELL (DTB) (ft btoc)	DEPTH TO WATER (DTW) (ft btoc)	Water Column Height (DTB-DTW) (ft)
10 20	19.27	8.40	10.87

ft btoc: feet below top of casing from designated measuring point

PURGE VOLUME

Well Casing Diameter (inches)	Volume/Linear Foot (see conversion table below)	1 Well Volume (gal)	2 Well Volumes (gal)	3 Well Volumes (gal)
2	0.17	1.8479		5.5437

VOLUME/LINEAR FOOT (gal/ft) (Use well casing ID)

1" = 0.04	1.5" = 0.09	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.5	8" = 2.6	10" = 4.1
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1 well casing volume = Volume/Linear Foot x Water Column Height

METHOD OF PURGING: 2" Bailor + YSI-556

METHOD OF SAMPLING: 2" Bailor / Voc tips

WATER LEVEL/WATER QUALITY INSTRUMENTS USED

INSTRUMENT	SERIAL NO.	TIME CALIBRATION PERFORMED	TECH	COMMENTS
Heron H.OIL				OWI
YSI-556		1100	BA.	WQM

WATER QUALITY READINGS DURING PURGING

TIME	TEMP (°C)	pH	SP. COND. (µS/cm)	TURB. (NTU)*	Total Volume Purged (gal)	Comments (color/odor)
1310	15.11	7.79	339		0	Clear to slightly
1312	15.13	7.41	336		1.0	murky.
1316	15.39	7.36	337		2.0	
1319	15.43	7.46	336		3.0	light murky brown
1323	15.38	7.57	340		4.0	
1326	15.35	7.60	338		5.0	murky brown.
1328	15.60	7.60	337		6.0	Trace petro odor.
1335	Sampled					

*If measured.

Stabilization = Temp ±1°C; pH ±0.2 units; Sp. Cond. ±10%; Turb. ±10%

WATER QUALITY READINGS DURING PURGING (continued)

TIME	TEMP (°C)	pH	SP. COND. (μS/cm)	TURB. (NTU)*	Total Volume Purged (gal)	Comments (color/odor)

*If measured.
 Stabilization = Temp ±1°C; pH ±0.2 units; Sp. Cond. ±10%; Turb. ±10%

GROUNDWATER SAMPLING DATA

GROUNDWATER SAMPLE ID: MW-9 DUPLICATE SAMPLE ID: /

Time	Bottle Type	Analytical Method	# of Bottles	Volume	Preservative
1335	VDA	8260-B	3	40mL	HgCl2
TOTAL:					

Sampler: Brian Archuleta BA
 (Printed Name) (Signature)

PROJECT NAME: Barelas Bridge WELL NO.: MW-4
PROJECT NO.: _____ DATE: 3/6/18 FIELD CREW: Brian Archuleta

WATER LEVEL AND WATER COLUMN HEIGHT

TIME	DEPTH TO BOTTOM OF WELL (DTB) (ft btoc)	DEPTH TO WATER (DTW) (ft btoc)	Water Column Height (DTB-DTW) (ft)
10:00	23.5 * from 25' butt	7.57	15.93

ft btoc: feet below top of casing from designated measuring point

PURGE VOLUME

Well Casing Diameter (inches)	Volume/Linear Foot (see conversion table below)	1 Well Volume (gal)	2 Well Volumes (gal)	3 Well Volumes (gal)
2	0.17	2.7081		8.1243

VOLUME/LINEAR FOOT (gal/ft) (Use well casing ID)

1" = 0.04	1.5" = 0.09	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.5	8" = 2.6	10" = 4.1
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1 well casing volume = Volume/Linear Foot x Water Column Height

METHOD OF PURGING: 2" Bailor + YSI-556
METHOD OF SAMPLING: 2" Bailor, VOC Tips

WATER LEVEL/WATER QUALITY INSTRUMENTS USED

INSTRUMENT	SERIAL NO.	TIME CALIBRATION PERFORMED	TECH	COMMENTS
Heron H.OIL		11:00	BA	OWI
YSI-556		11:00	BA	WQM

WATER QUALITY READINGS DURING PURGING

TIME	TEMP (°C)	pH	SP. COND. (µS/cm)	TURB. (NTU)*	Total Volume Purged (gal)	Comments (color/odor)
1400	14.42	7.57	334		0	Brown with grassy material.
1408	14.41	7.65	329		1.25	
1412	14.60	7.69	331		2.2	light murky brown
1415	14.57	7.67	337		3.25	
1420	14.73	7.71	342		4.25	
1428	14.65	7.67	354		6.0	mostly clean to
1433	14.78	7.58	362		7.5	slightly murky.
1439	14.71	7.43	366		8.5	"
1445	Sampled					

*If measured.

Stabilization = Temp ±1°C; pH ±0.2 units; Sp. Cond. ±10%; Turb. ±10%

WATER QUALITY READINGS DURING PURGING (continued)

TIME	TEMP (°C)	pH	SP. COND. (μS/cm)	TURB. (NTU)*	Total Volume Purged (gal)	Comments (color/odor)

*If measured.
 Stabilization = Temp ±1°C; pH ±0.2 units; Sp. Cond. ±10%; Turb. ±10%

GROUNDWATER SAMPLING DATA

GROUNDWATER SAMPLE ID: MW-4 DUPLICATE SAMPLE ID:

Time	Bottle Type	Analytical Method	# of Bottles	Volume	Preservative
1445	VOR	8260-B	3	40mL	Hg Cl ₂
TOTAL:					

Sampler: Brian Archuleta BA
 (Printed Name) (Signature)

PROJECT NAME: Barela's Bridge WELL NO.: MW-7
PROJECT NO.: _____ DATE: 3/6/18 FIELD CREW: Brian Archuleta

WATER LEVEL AND WATER COLUMN HEIGHT

TIME	DEPTH TO BOTTOM OF WELL (DTB) (ft btoc)	DEPTH TO WATER (DTW) (ft btoc)	Water Column Height (DTB-DTW) (ft)
1040	21.55	7.63	15.93 13.92

ft btoc: feet below top of casing from designated measuring point

PURGE VOLUME

Well Casing Diameter (inches)	Volume/Linear Foot (see conversion table below)	1 Well Volume (gal)	2 Well Volumes (gal)	3 Well Volumes (gal)
2	0.17	2.708 2.3664		8.1243 7.0992

VOLUME/LINEAR FOOT (gal/ft) (Use well casing ID)

1" = 0.04	1.5" = 0.09	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.5	8" = 2.6	10" = 4.1
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1 well casing volume = Volume/Linear Foot x Water Column Height

METHOD OF PURGING: 2" Bailor + YSI-556
METHOD OF SAMPLING: 2" Bailor + VOC Tips

WATER LEVEL/WATER QUALITY INSTRUMENTS USED

INSTRUMENT	SERIAL NO.	TIME CALIBRATION PERFORMED	TECH	COMMENTS
Heron H.OIL				OVI
YSI-556		1100	BA	WQM

WATER QUALITY READINGS DURING PURGING

TIME	TEMP (°C)	pH	SP. COND. (µS/cm)	TURB. (NTU)*	Total Volume Purged (gal)	Comments (color/odor)
1503	14.97	7.78	337			Mostly clear. Trace petro odor.
1506	14.84	7.63	361		1.25	
1509	14.85	7.57	361		2.5	slightly murky.
1513	15.05	7.58	345		4.0	
1515	15.16	7.59	351		5.0	mostly clear to
1519	14.99	7.61	345		6.25	slightly murky.
1522	15.11	7.60	340		7.25	slightly murky.
1525	Sampled					

*If measured.

Stabilization = Temp ±1°C; pH ±0.2 units; Sp. Cond. ±10%; Turb. ±10%

WATER QUALITY READINGS DURING PURGING (continued)

TIME	TEMP (°C)	pH	SP. COND. (µS/cm)	TURB. (NTU)*	Total Volume Purged (gal)	Comments (color/odor)

*If measured.
 Stabilization = Temp ±1°C; pH ±0.2 units; Sp. Cond. ±10%; Turb. ±10%

GROUNDWATER SAMPLING DATA

GROUNDWATER SAMPLE ID: MW-7 DUPLICATE SAMPLE ID: _____

Time	Bottle Type	Analytical Method	# of Bottles	Volume	Preservative
1525	VVA	8260-B	3	40mL	HgCl ₂
TOTAL:					

Sampler: Brian Archuleta BS ca
 (Printed Name) (Signature)

3/6/18 2nd Semiannual GWS BA

0950 B. Archuleta on-site to perform groundwater sampling on up to 6 MWs. Sampling for VOCs under the 8260 method using 2" disposable bailers.

Water quality meter = YSI-556
OWI: Haver H.OIL Interface

0955 Notify service station employees of my plans.

1000 Start locating MWs and removing caps/plugs to allow to equilibrate.

Well ID	Time	DTP	DTW	TD	Note
MW-8	0938		8.90	13.29	
MW-7	1040		7.63	21.55	
MW-4	1000		7.57	9.38*	See next page. Hard to open lid.
MW-9	1020		8.40	19.27	
VP-2	0945		8.12	12.79	
VP-5	1030		7.77	12.42	

MBW

3/6/18 2nd GWS Semiannual BA

mw4* - Could not reach well bottom. Kept hanging up on top of "root ball" (?) at 9.38' BTOC.

Tried using root ball removal pipe with metal hook without success. The string cut one time and the device fell down the well. Had to fish out. I don't want to chance losing the tool down the well again. I will use the well's designed TD as a TD to calculate purge volume and still bail and sample well. 23'5" = TD.

1047 Done gauging.
Calibrate YSI-556
Prepare for groundwater sampling.

1115 Service store manager asked me to sign a store "Log" sign-in sheet.

3/6/18 2nd Semi Annual GWS BA

1127 Begin sampling. See field forms for more details.

AP-ID	Time	Temp °C	pH	Sp. Cond	OFF DO ^{note}
MW-8	1143	15.31	7.76	408	

clear to slightly murky, mod petro odor.

1150 Sampled. purged 3.0 gallons.

note: mw-8 in center of fuel bay

island. Congested / traffic

~~VP-1~~

VP-2 Final Parameters

Time	Temp	pH	Sp. Cond.	Note
1143	15.11°C	7.42	338 $\mu\text{S}/\text{cm}$	murky Brown w/ Trace H.C. odor.
1220	Sampled. purged 3.0 gallons			

VP-5 Final Parameters.

Time	Temp	pH	Sp. Cond.	Note
1244	13.84°C	7.37	564 $\mu\text{S}/\text{cm}$	clean to light purged 2.7 gallons murky gray.
1250	Sampled.			

3/6/18 2nd Semiannual GWS BA

MW-9 Final Parameters

Time	Temp	pH	Sp. Cond	Purge Volume
1328	15.60°C	7.60	337 $\mu\text{S}/\text{cm}$	6.0 gallons

murky brown w/ trace H.C. odor.

1335 Sampled.

MW-4 Sort of difficult to get the 2" bailer down to water level. Had to drop fast through upper "tight" zone. Then bailer hits roofball about 2' below water level. I'll use 23.5' as a well TD to calculate purge volume.

Final Parameters

Time	Temp	pH	Sp. Cond	Purge Volume
1439	14.71°C	7.43	366 $\mu\text{S}/\text{cm}$	8.5 gallons

mostly clean to slightly murky.

1445 Sampled

~~1445~~ Sampled MW-7 Final Parameters

Time	Temp	pH	Sp. Cond	purge volume
1522	15.11°C	7.60	340 $\mu\text{S}/\text{cm}$	7.25 gallons

slightly murky.

1525 Sampled

3/6/18

2nd semiannual GWM BA

1530

Finished sampling all
6 wells. Start decontaminating
and packing up equipment.

1545

B. A. off-site

- Head to H.E.A.L. to drop
off samples then to office
to return equipment.

BA

3/6/18

APPENDIX C
Historical Fluid Levels and
Groundwater Chemistry Data

TABLE 1

NEW MEXICO ENVIRONMENTAL IMPROVEMENT DIVISION
800 BRIDGE STREET S.W. SITE
GROUND-WATER LEVELS

DATE	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8
10/31/90	4933.50	4933.35	4933.37	4934.67	4934.28	4934.15	4934.58	4934.98
11/14/90	4933.31	4933.15	4933.13	4934.55	4934.09	4934.02	4934.45	4934.92
11/28/90	4933.08	4932.91	4932.93	4934.56	4933.62	4933.54	4934.04	4934.76
11/29/90	4933.05	4932.94	4932.91	4934.53	4933.60	4933.53	4934.03	4934.75
12/12/90	4933.04	4932.92	4932.89	4934.50	4933.58	4933.51	4934.11	4934.71

TABLE 2

NEW MEXICO ENVIRONMENTAL IMPROVEMENT DIVISION
 RECORDS OF WATER QUALITY
 COLLECTED BY LEGGETTE, BRASHEARS & GRAHAM, INC.
 800 BRIDGE SITE

DATE	SAMPLE NO.	PPB	PPB	PPB	PPB	PPB	PPM
		BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLENES	MTBE	TVH
10/5/90	TAP WATER 140 LaVega	U	U	U	U		U
10/5/90	TAP WATER 152 LeVega	U	U	U	U		U
10/11/90	TRIP BLANK	U	U	U	1.6	U	U
10/15/90	AH-1	2	1.8	U	U	U	U
10/15/90	AH-2	2600*	1400*	1900*	14000*	U	73.6
10/15/90	AH-3	1.5	0.6	1.4	0.8	U	1
10/15/90	AH-4	23*	18	150	22	U	15.7
10/15/90	TRIP BLANK	U	U	0.7	3	U	U
10/16/90	AH-5	23*	0.8	0.7	10	U	1
10/30/90	MW-1	2.6	0.5	U	1.7		U
10/30/90	MW-2	U	0.2	U	1		U
10/30/90	MW-3	U	0.4	U	1.3		U
10/30/90	MW-4	590*	35.3	518.4	1871.1*		5
10/30/90	MW-5	U	0.5	U	1.5		U
10/30/90	MW-6	10.7*	33.3	32.7	175.5		4
10/30/90	MW-7	9.8	3	20.8	4.9		1
10/30/90	MW-8	220*	120	960*	1140*		9
10/30/90	FIELD BLANK	U	0.5	U	0.8		U
10/30/90	TRIP BLANK	U	0.7	U	1.5		U
10/31/90	TAP WATER 153 LaVega	U	0.6	U	2		U
11/27/90	TRIP BLANK	U	U	U	U		
11/28/90	MW-2	U	1.1	U	0.6		0.7
11/29/90	MW-4	49	1	8.4	14		0.9
NMEID Action Levels		10	750	750	620	100	

* Concentration is above NMEID action level

U = Undetected

ppb = Parts per billion

ppm = Parts per million

TVH = Total volatile hydrocarbons

TABLE 3

**NEW MEXICO ENVIRONMENTAL IMPROVEMENT DIVISION
RECORDS OF WATER QUALITY SAMPLES
COLLECTED BY ALBUQUERQUE ENVIRONMENTAL HEALTHY DEPARTMENT
800 BRIDGE STREET SW**

SAMPLE DATE	LOCATION	PPB	PPB	PPB	PPB	PPM	PPM	PPM	PPM
		BENZENE	TOLUENE	ETHYL- BENZENE	TOTAL XYLENES	IRON	MANGANESE	LEAD	ZINC
8/8/89	NW 800 BRDG	10*	190	0	2				
8/8/89	NE 800 BRDG	70*	220	68	44				
8/8/89	SW 800 BRDG	U	250	U	U				
8/8/89	SE 800 BRDG	500*	120	930*	370				
	A-1	1	U	U	U				
9/12/89	A-2	5700*	4100*	29000*	20700*	10.2*	1.78*	0.011	0.082
9/12/89	A-3	2.6	4.1	25	18.9	U	1.12*	U	0.02
9/12/89	A-4	U	U	U	U				
9/13/89	A-5	10000*	7000*	14500*	40500*				
9/13/89	A-6	1650*	160	1620*	930*				
9/26/89	A-7	3900*	7500*	9700*	30500*	12.5*	1.55*	0.026	0.052
9/26/89	A-8	160*	490	2100*	9500*	7.5*	0.601*	0.029	0.051
9/27/89	A-9	26*	5	8.8	7.4	0.568	1.14*	U	0.019
10/11/89	A-11	7700*	2800*	5700*	19000*	12.2*	1.35*	0.018	0.071
10/11/89	A-12	U	U	U	U	0.423	0.36*	U	0.013
10/10/89	A-13	2000*	U	U	U	6.96*	0.992*	0.012	0.034
11/8/89	A-14	U	U	U	U	0.859	0.451*	U	0.018
11/8/89	A-15	300*	U	U	U	2.45*	1.08*	0.003	0.021
11/8/89	A-16	U	U	U	U	0.289	0.41	U	U
2/19/90	MW-1	4.8	7.2	U	U				
2/19/90	MW-2	5.7	7.2	U	U				
2/19/90	MW-3	U	2.6	U	U				
2/19/90	MW-4	190*	25	280	865*				
9/13/89	145 LA VEGA	U	U	U	U				
8/10/89	183 RIVERSIDE	U	U	U	U				
8/11/89	183 RIVERSIDE	U	U	U	U				
10/4/89	154 LA VEGA	U	U	U	U				
10/4/89	152 LA VEGA	U	U	U	U				
10/16/89	153 LA VEGA	U	U	U	U				

NMEID Action Levels 10 750 750 620 1 0.2 0.05 10

* Concentration is above NMEID Action Level

U = Undetected

Ppb = Parts per billion

Ppm = Parts per million

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WESTERN TECHNOLOGIES INC.

GROUND WATER ELEVATION DATA
 TABLE 1

MONITOR WELL NUMBER	DATE	CASING RIM ELEVATION (FEET)	DEPTH TO BOTTOM (FEET)	BOTTOM OF CASING ELEVATION (FEET)	DEPTH TO GROUND WATER (FEET)	DEPTH TO PRODUCT (FEET)	PRODUCT THICKNESS (FEET)	WATER COLUMN THICKNESS (FEET)	POTENTIOMETRIC SURFACE ELEVATION (FEET)
MW-1	01/06/00	4942.99	8.24	4934.75	Dry	NA	NA	Dry	Dry
MW-2	05/30/03 01/06/00	Plugged and Abandoned 4942.47	5.94	4936.53	Dry	NA	NA	Dry	Dry
MW-3	05/30/03 01/26/00 01/06/00 03/07/96	Appears to be plugged and abandoned before May 2003		4921.56	8.65 8.59 8.51	NA NA NA	NA NA NA	11.82 11.88 11.96	4933.38 4933.44 4933.52
MW-4	07/17/03 01/10/03 09/24/02 07/03/02 04/01/02 01/03/02 10/01/01 05/29/01 02/06/01 07/27/00 04/26/00 01/26/00 01/06/00 03/07/96	4943.23	16.50	4926.73	8.45 8.35 8.33 8.30 8.48 8.43 8.00 8.08 8.19 9.04 9.16 8.65 8.51 8.48	NA NA NA NA NA NA NA NA NA NA NA NA NA NA	NA NA NA NA NA NA NA NA NA NA NA NA NA NA	8.05 8.15 8.17 8.20 8.02 8.07 8.50 8.40 8.29 7.44 7.32 7.83 7.97 8.00	4934.78 4934.88 4934.90 4934.93 4934.75 4934.80 4935.23 4935.15 4935.04 4934.19 4934.07 4934.58 4934.72 4934.75
MW-5	05/30/03 01/26/00 01/06/00 03/07/96	Plugged and Abandoned 4942.18	21.48	4920.70	8.23 8.14 8.07	NA NA NA	NA NA NA	13.25 13.34 13.41	4933.95 4934.04 4934.11

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WESTERN TECHNOLOGIES INC.

GROUND WATER ELEVATION DATA
 TABLE 1

MONITOR WELL NUMBER	DATE	CASING RIM ELEVATION (FEET)	DEPTH TO BOTTOM (FEET)	BOTTOM OF CASING ELEVATION (FEET)	DEPTH TO GROUND WATER (FEET)	DEPTH TO PRODUCT (FEET)	PRODUCT THICKNESS (FEET)	WATER COLUMN THICKNESS (FEET)	POTENTIOMETRIC SURFACE ELEVATION (FEET)
MW-6	05/30/03	Plugged and Abandoned							
	01/26/00	4944.59	13.16	4931.43	8.36	NA	NA	4.80	4936.23
	01/06/00	4944.59	13.16	4931.43	9.37	NA	NA	3.79	4935.22
	03/07/96	4944.59	13.16	4931.43	9.22	NA	NA	3.94	4935.37
MW-7	07/17/03	4942.94	21.45	4921.49	8.53	NA	NA	12.92	4934.41
	01/10/03	4942.94	21.45	4921.49	8.45	NA	NA	13.00	4934.49
	09/24/02	4942.94	21.45	4921.49	8.45	NA	NA	13.00	4934.49
	07/03/02	4942.94	21.45	4921.49	8.40	NA	NA	13.05	4934.54
	04/01/02	4942.94	21.45	4921.49	8.66	NA	NA	12.79	4934.28
	01/03/02	4942.94	21.45	4921.49	8.50	NA	NA	12.95	4934.44
	10/02/01	4942.94	21.45	4921.49	8.20	NA	NA	13.25	4934.74
	03/07/96	4942.94	21.45	4921.49	8.61	NA	NA	12.84	4934.33
MW-8	07/17/03	4944.59	13.16	4931.43	9.71	NA	NA	3.45	4934.88
	01/10/03	4944.59	13.16	4931.43	9.68	NA	NA	3.48	4934.91
	09/24/02	4944.59	13.16	4931.43	9.61	NA	NA	3.55	4934.98
	07/03/02	4944.59	13.16	4931.43	9.53	NA	NA	3.63	4935.06
	04/01/02	4944.59	13.16	4931.43	9.73	NA	NA	3.43	4934.86
	01/04/02	4944.59	13.16	4931.43	9.63	NA	NA	3.53	4934.96
	10/02/01	4944.59	13.16	4931.43	9.35	NA	NA	3.81	4935.24
	05/29/01	4944.59	13.16	4931.43	9.32	NA	NA	3.84	4935.27
	02/06/01	4944.59	13.16	4931.43	9.41	NA	NA	3.75	4935.18
	07/27/00	4944.59	13.16	4931.43	9.32	NA	NA	3.84	4935.27
	04/26/00	4944.59	13.16	4931.43	9.40	NA	NA	3.76	4935.19
	01/26/00	4944.59	13.16	4931.43	9.82	NA	NA	3.34	4934.77
	01/06/00	4944.59	13.16	4931.43	9.82	NA	NA	3.34	4934.77
	03/07/96	4944.59	13.16	4931.43	9.74	NA	NA	3.42	4934.85

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WESTERN TECHNOLOGIES INC.

GROUND WATER ELEVATION DATA
 TABLE 1

MONITOR WELL NUMBER	DATE	CASING RIM ELEVATION (FEET)	DEPTH TO BOTTOM (FEET)	BOTTOM OF CASING ELEVATION (FEET)	DEPTH TO GROUND WATER (FEET)	DEPTH TO PRODUCT (FEET)	PRODUCT THICKNESS (FEET)	WATER COLUMN THICKNESS (FEET)	POTENTIOMETRIC SURFACE ELEVATION (FEET)
MW-9	07/17/03	4943.98	19.43	4924.55	9.22	NA	NA	10.21	4934.76
	01/10/03	4943.98	19.43	4924.55	9.15	NA	NA	10.28	4934.83
	09/24/02	4943.98	19.43	4924.55	9.10	NA	NA	10.33	4934.88
	07/03/02	4943.98	19.43	4924.55	9.00	NA	NA	10.43	4934.98
	01/26/00	4943.98	19.43	4924.55	9.31	NA	NA	10.12	4934.67
	01/06/00	4943.98	19.43	4924.55	9.30	NA	NA	10.13	4934.68
	03/07/96	4943.98	19.43	4924.55	9.26	NA	NA	10.17	4934.72
VP-1	05/30/03	Plugged and Abandoned							
	04/01/02	4943.75	13.95	4929.79	8.65	NA	NA	5.30	4935.10
	01/03/02	4943.75	13.95	4929.79	8.50	NA	NA	5.45	4935.25
	10/01/01	4943.75	13.96	4929.79	8.10	NA	NA	5.86	4935.65
	05/29/01	4943.75	13.96	4929.79	8.17	NA	NA	5.79	4935.58
	02/06/01	4943.75	13.96	4929.79	8.29	NA	NA	5.67	4935.46
	07/27/00	4943.75	13.96	4929.79	8.28	NA	NA	5.68	4935.47
	04/26/00	4943.75	13.96	4929.79	8.28	NA	NA	NA	4935.47
	01/26/00	4943.75	13.96	4929.79	NM	NA	NA	NA	NA
	01/06/00	4943.75	13.96	4929.79	8.64	NA	NA	5.32	4935.11
	01/10/96	4943.75	13.96	4929.79	8.57	NA	NA	5.39	4935.18
VP-2	07/17/03	4943.73	12.57	4931.16	8.81	NA	NA	3.76	4934.92
	01/10/03	4943.73	12.57	4931.16	8.83	NA	NA	3.74	4934.90
	09/24/02	4943.73	12.57	4931.16	8.73	NA	NA	3.84	4935.00
	07/03/02	4943.73	12.57	4931.16	8.63	NA	NA	3.94	4935.10
	04/01/02	4943.73	12.57	4931.16	8.94	NA	NA	3.63	4934.79
	01/03/02	4943.73	12.57	4931.16	8.71	NA	NA	3.86	4935.02
	10/01/01	4943.73	12.65	4931.08	8.40	NA	NA	4.25	4935.33
	05/29/01	4943.73	12.57	4931.16	8.44	8.33	0.11	4.13	4935.38
	02/06/01	4943.73	12.57	4931.16	8.55	NA	NA	4.02	4935.18
	07/27/00	4943.73	12.57	4931.16	8.44	NA	NA	4.13	4935.29
	04/26/00	4943.73	NA	NA	8.53	NA	NA	NA	4935.20
	01/26/00	4943.73	NA	NA	8.93	NA	NA	NA	4934.80
	03/24/94	4943.73	NA	NA	8.96	NA	NA	NA	4934.77

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WESTERN TECHNOLOGIES INC.

GROUND WATER ELEVATION DATA
 TABLE 1

MONITOR WELL NUMBER	DATE	CASING RIM ELEVATION (FEET)	DEPTH TO BOTTOM (FEET)	BOTTOM OF CASING ELEVATION (FEET)	DEPTH TO GROUND WATER (FEET)	DEPTH TO PRODUCT (FEET)	PRODUCT THICKNESS (FEET)	WATER COLUMN THICKNESS (FEET)	POTENTIOMETRIC SURFACE ELEVATION (FEET)
VP-3	05/30/03	Plugged and Abandoned							
	01/26/00	4943.73	13.16	4930.57	8.85	NA	NA	4.31	4934.88
	01/06/00	4943.73	13.16	4930.57	8.84	NA	NA	4.32	4934.89
	02/09/95	4943.73	13.16	4930.57	8.93	NA	NA	4.23	4934.80
VP-4	05/30/03	Plugged and Abandoned							
	01/26/00	4943.72	12.73	4930.99	8.54	NA	NA	4.19	4935.18
	01/06/00	4943.72	12.73	4930.99	8.53	NA	NA	4.20	4935.19
	03/07/96	4943.72	12.73	4930.99	8.46	NA	NA	4.27	4935.26
VP-5	07/17/03	4943.52	12.17	4931.35	8.55	NA	NA	3.62	4934.97
	01/10/03	4943.52	12.17	4931.35	8.53	NA	NA	3.64	4934.99
	09/24/02	4943.52	12.17	4931.35	8.44	NA	NA	3.73	4935.08
	07/03/02	4943.52	12.17	4931.35	8.27	NA	NA	3.90	4935.25
	04/01/02	4943.52	12.17	4931.35	8.56	NA	NA	3.61	4934.96
	01/03/02	4943.52	12.17	4931.35	8.55	NA	NA	3.62	4934.97
	10/02/01	4943.52	12.05	4931.47	8.10	NA	NA	3.95	4935.42
	05/29/01	4943.52	12.17	4931.35	8.01	NA	NA	4.16	4935.51
	07/27/00	4943.52	12.17	4931.35	8.18	NA	NA	3.99	4935.34
	04/26/00	4943.52	NA	NA	8.17	NA	NA	NM	4935.35
	01/26/00	4943.52	NA	NA	8.61	NA	NA	NM	4934.91
	03/07/96	4943.52	NA	NA	8.55	NA	NA	NM	4934.97



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GROUND WATER ELEVATION DATA

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MONITOR WELL NUMBER	DATE	CASING RIM ELEVATION (FEET)	DEPTH TO BOTTOM (FEET)	BOTTOM OF CASING ELEVATION (FEET)	DEPTH TO GROUND WATER (FEET)	DEPTH TO PRODUCT (FEET)	PRODUCT THICKNESS (FEET)	WATER COLUMN THICKNESS (FEET)	POTENTIOMETRIC SURFACE ELEVATION (FEET)
VP-6	05/30/03	Plugged and Abandoned							
	01/10/03	4943.53	12.55	4930.98	9.10	NA	NA	3.45	4934.43
	09/24/02	4943.53	12.55	4930.98	9.06	NA	NA	3.49	4934.47
	07/03/02	4943.53	12.55	4930.98	8.99	NA	NA	3.56	4934.54
	04/01/02	4943.53	12.55	4930.98	9.20	NA	NA	3.35	4934.33
	01/03/02	4943.53	12.55	4930.98	9.05	NA	NA	3.50	4934.48
	10/02/01	4943.53	12.33	4931.20	8.75	NA	NA	3.58	4934.78
	05/29/01	4943.53	12.60	4930.93	8.73	NA	NA	3.87	4934.80
	02/06/01	4943.53	12.60	4930.93	8.81	NA	NA	3.79	4934.72
	07/27/00	4943.53	12.60	4930.93	8.81	NA	NA	3.79	4934.72
	04/26/00	4943.53	12.60	4930.93	8.80	NA	NA	3.80	4934.73
	01/26/00	4943.53	12.60	4930.93	9.23	NA	NA	3.37	4934.30
	01/06/00	4943.53	12.60	4930.93	9.23	NA	NA	3.37	4934.30
	03/07/96	4943.53	12.60	4930.93	9.20	NA	NA	3.40	4934.33
VP-7	05/30/03	Plugged and Abandoned							
	01/26/00	4943.52	12.82	4930.70	9.52	NA	NA	3.30	4934.00
	01/06/00	4943.52	12.82	4930.70	9.52	NA	NA	3.30	4934.00
	03/07/96	4943.52	12.82	4930.70	9.45	NA	NA	3.37	4934.07
PR-2	05/30/03	Plugged and Abandoned							
	01/06/00	4944.09	9.18	4934.91	Dry	NA	NA	Dry	Dry
PR-3	05/30/03	Plugged and Abandoned							
	01/06/00	4944.22	8.73	4935.49	Dry	NA	NA	Dry	Dry

NM = Not Measured

NA = Not Applicable

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WESTERN TECHNOLOGIES INC.
 SUMMARY OF WATER SAMPLE ANALYTICAL TEST RESULTS

TABLE 3

NMWQCC Regulatory Limits		*NAPHTHALENE (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENE (PPB)	**TOTAL BTEX (PPB)	MTBE (PPB)	EDB (PPB)	EDC (PPB)
MONITOR WELL		30	10	750	750	620		100	0.1	10
DATE										
MW-1	06/06/95	N/A	<0.5	<1.0	<1.0	<2.0	<4.5	NA	NA	NA
	03/07/95	N/A	<0.5	<1.0	<1.0	<1.0	<4.5	NA	NA	NA
MW-2	09/20/95	N/A	<0.5	<1.0	<1.0	<2.0	<4.5	NA	NA	NA
	09/08/94	N/A	<0.5	<1.0	<1.0	<2.0	<4.5	NA	NA	NA
MW-3	01/30/00	<2.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	12/01/94	N/A	<0.5	<1.0	<1.0	<2.0	<4.0	NA	NA	NA
	06/02/94	N/A	11	<1.0	1.3	<2.0	12.3	NA	NA	NA
MW-4	07/17/03	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	0.010	<1.0
	01/10/03	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	09/24/02	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	07/03/02	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	04/01/02	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	01/03/02	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	10/01/01	<15.0	<1.0	<1.0	<1.0	<3.0	<6.0	<1.0	<1.0	<1.0
	05/29/01	<6.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	02/06/01	3.9	2.5	<1.0	<1.0	1.5	4.0	<1.0	<1.0	<1.0
	07/27/00	<2.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	04/26/00	<2.0	2.9	<1.0	<1.0	<1.0	2.9	<1.0	<1.0	<1.0
	01/30/00	<2.0	5.4	<1.0	<1.0	2.6	8.0	<1.0	<1.0	<1.0
	06/06/95	N/A	<0.5	<1.0	<1.0	<2.0	<4.5	NA	NA	NA
	03/07/95	N/A	40	1.0	54	<2.0	95.0	NA	NA	NA

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 SUMMARY OF WATER SAMPLE ANALYTICAL TEST RESULTS

TABLE 3

		*NAPHTHALENE (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENE (PPB)	**TOTAL BTEX (PPB)	MTBE (PPB)	EDB (PPB)	EDC (PPB)
NMWQCC Regulatory Limits		30	10	750	750	620		100	0.1	10
MONITOR WELL	DATE									
MW-5	01/30/00	<2.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	12/05/95	N/A	<0.5	<1.0	<1.0	<2.0	<4.5	NA	NA	NA
	09/20/95	N/A	<0.5	<1.0	<1.0	<2.0	<4.5	NA	NA	NA
MW-6	01/30/00	<2.0	<1.0	8.3	18	54	80.3	<1.0	<1.0	<1.0
	03/07/96	N/A	1.7	1.4	2.0	4.2	9.3	NA	NA	NA
	12/05/95	N/A	1.2	4.2	2.8	12.0	20.2	NA	NA	NA
	12/01/94	N/A	29	26	36	130	221	NA	NA	NA
MW-7	07/17/03	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	0.010	<1.0
	01/10/03	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	09/24/02	22.8	3.1	< 1.0	< 1.0	1.7	4.8	<1.0	<1.0	<1.0
	07/03/02	28.8	2.6	< 1.0	< 1.0	3.0	5.6	<1.0	<1.0	<1.0
	04/01/02	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	01/03/02	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	10/02/01	<15.0	<1.0	<1.0	<1.0	3.3	3.3	<1.0	<1.0	<1.0
	03/07/96	N/A	1.9	<1.0	<1.0	<2.0	1.9	NA	NA	NA
	12/05/95	N/A	6.0	1.2	2.2	<2.0	9.4	NA	NA	NA
	09/20/95	N/A	78	2.1	9.9	8.7	98.7	NA	NA	NA



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WESTERN TECHNOLOGIES INC.
 SUMMARY OF WATER SAMPLE ANALYTICAL TEST RESULTS

TABLE 3

		*NAPHTHALENE (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENE (PPB)	**TOTAL BTEX (PPB)	MTBE (PPB)	EDB (PPB)	EDC (PPB)
NMWQCC Regulatory Limits		30	10	750	750	620		100	0.1	10
MONITOR WELL	DATE									
MW-8	07/17/03	310	<5.0	<5.0	66	38	104	<5.0	0.010	<5.0
	01/10/03	284	<2.0	<2.0	57	38	95	<2.0	<2.0	<2.0
	09/24/02	238	<5.0	<5.0	58	29	87	<5.0	<5.0	<5.0
	07/03/02	202	<5.0	<5.0	86	40	126	<5.0	<5.0	<5.0
	04/01/02	273	<5.0	<5.0	100	43	143	<5.0	<5.0	<5.0
	01/04/02	313	3.0	3.2	35	50	91.2	<2.0	<2.0	<2.0
	10/02/01	120	<10	<10	90	51	141	<10	<10	<10
	05/29/01	261	4.2	2.6	110	57	173.8	<2.0	<2.0	<2.0
	02/06/01	140	<10	<10	130	43	173.0	<10	<10	<10
	07/27/00	140	6.0	5.2	150	61	222.2	<1.0	<1.0	<1.0
	04/26/00	136	3.2	2.2	<1.0	35.0	40.4	<1.0	<1.0	<1.0
	01/30/00	98	<10	<10	150.0	5.7	155.7	<10	<10	<10
	03/07/96	N/A	71	24	400	150	645.0	NA	NA	NA
	12/05/95	N/A	8.6	8.3	49	18	83.9	NA	NA	NA
09/20/95	N/A	11	19	190	74	294.0	NA	NA	NA	
MW-9	07/17/03	<10.0	98	9.9	2.4	10	120.3	7.1	0.010	<1.0
	01/10/03	<10.0	2.2	<1.0	<1.0	<1.0	2.2	2.2	<1.0	<1.0
	09/24/02	13	9.2	<1.0	25	20	54.2	1.7	<1.0	<1.0
	07/03/02	28.8	5.1	1.9	16	18	41.0	<1.0	<1.0	<1.0
	01/30/00	2.7	9.4	6.9	59	51	126.3	<1.0	<1.0	<1.0
	03/07/96	N/A	<0.5	<1.0	<1.0	3.7	3.7	NA	NA	NA
	12/05/95	N/A	<0.5	<1.0	<1.0	14.0	14.0	NA	NA	NA
	09/20/95	N/A	<0.5	<1.0	<1.0	<2.0	<4.5	NA	NA	NA

Barelas Bridge
 800 Bridge Blvd, SW
 Albuquerque, New Mexico
 PSTB Facility #4608001 / 29854

WESTERN TECHNOLOGIES INC.
 SUMMARY OF WATER SAMPLE ANALYTICAL TEST RESULTS

TABLE 3

		*NAPHTHALENE (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENE (PPB)	**TOTAL BTEX (PPB)	MTBE (PPB)	EDB (PPB)	EDC (PPB)
NMWQCC Regulatory Limits		30	10	750	750	620		100	0.1	10
MONITOR WELL	DATE									
VP-1	04/01/02	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	01/03/02	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	10/01/01	<15.0	<1.0	<1.0	<1.0	<3.0	<6.0	<1.0	<1.0	<1.0
	05/29/01	<6.0	1.9	<1.0	<1.0	2.0	3.9	<1.0	<1.0	<1.0
	02/06/01	<2.0	1.8	<1.0	<1.0	1.6	3.4	<1.0	<1.0	<1.0
	07/27/00	<2.0	3.5	<1.0	<1.0	1.4	4.9	<1.0	<1.0	<1.0
	04/26/00	<2.0	3.4	<1.0	<1.0	2.4	5.8	<1.0	<1.0	<1.0
	01/30/00	<2.0	1.3	<1.0	<1.0	<1.0	1.3	<1.0	<1.0	<1.0
	03/07/96	N/A	<0.5	1.4	<1.0	<2.0	1.4	NA	NA	NA
	12/05/95	N/A	<0.5	1.2	1.0	<2.0	2.2	NA	NA	NA
	09/20/95	N/A	<0.5	<1.0	4.3	<2.0	4.3	NA	NA	NA
VP-2	07/17/03	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	0.010	<1.0
	01/10/03	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	09/24/02	3.4	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	07/03/02	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	04/01/02	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	01/03/02	<10.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	10/01/01	<15.0	<1.0	<1.0	<1.0	<3.0	<6.0	<1.0	<1.0	<1.0
	05/29/01	36.7	<1.0	<1.0	1.2	4.9	6.1	<1.0	<1.0	<1.0
	02/06/01	13	<1.0	<1.0	<1.0	2.0	2.0	<1.0	<1.0	<1.0
	07/27/00	11	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	04/26/00	<2.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	01/30/00	<2.0	<1.0	<1.0	<1.0	<1.0	<4.0	<1.0	<1.0	<1.0
	03/24/94	N/A	32	20	94	150	296	NA	NA	NA

Barelas Bridge
 800 Bridge Blvd, SW
 Albuquerque, New Mexico
 PSTB Facility #4608001 / 29854

WESTERN TECHNOLOGIES INC.
 SUMMARY OF WATER SAMPLE ANALYTICAL TEST RESULTS

TABLE 3

		*NAPHTHALENE (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENE (PPB)	**TOTAL BTEX (PPB)	MTBE (PPB)	EDB (PPB)	EDC (PPB)
NMWQCC Regulatory Limits		30	10	750	750	620		100	0.1	10
MONITOR WELL	DATE									
VP-3	01/30/00	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0
	06/16/93	N/A	110	7.3	180	74	371.3	NA	NA	NA
VP-4	01/30/00	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0
	03/07/96	N/A	1.7	< 1.0	< 1.0	< 1.0	1.7	NA	NA	NA
	09/20/95	N/A	< 0.5	< 1.0	4.3	< 2.0	4.3	NA	NA	NA
VP-5	07/17/03	930	< 5.0	< 5.0	110	54	164	< 5.0	0.010	< 5.0
	01/10/03	510	< 5.0	< 5.0	61	27	88	< 5.0	< 5.0	< 5.0
	09/24/02	510	< 5.0	< 5.0	34	18	52	< 5.0	< 5.0	< 5.0
	07/03/02	350	< 5.0	< 5.0	32	19	51	< 5.0	< 5.0	< 5.0
	04/01/02	640	< 1.0	< 1.0	100	44	144	< 1.0	< 1.0	< 1.0
	01/03/02	340	< 5.0	< 5.0	50	31	81	< 5.0	< 5.0	< 5.0
	10/02/01	320	< 5.0	< 5.0	44	35	79	< 5.0	< 5.0	< 5.0
	05/29/01	330	< 1.0	1.2	21	17	39.2	< 1.0	< 1.0	< 1.0
	07/27/00	89	< 1.0	1.8	20	12	33.8	< 1.0	< 1.0	< 1.0
	04/26/00	142	< 1.0	1.4	14	7.1	22.5	< 1.0	< 1.0	< 1.0
	01/30/00	80	< 5.0	< 5.0	20	10	30.0	< 5.0	< 5.0	< 5.0
	03/07/96	N/A	9.5	< 1.0	99	81	189.5	NA	NA	NA
	12/05/95	N/A	< 0.5	< 1.0	< 1.0	< 2.0	< 4.5	NA	NA	NA

Barelas Bridge
 800 Bridge Blvd, SW
 Albuquerque, New Mexico
 PSTB Facility #4608001 / 29854

WESTERN TECHNOLOGIES INC.
 SUMMARY OF WATER SAMPLE ANALYTICAL TEST RESULTS

TABLE 3

		*NAPHTHALENE (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYLBENZENE (PPB)	XYLENE (PPB)	**TOTAL BTEX (PPB)	MTBE (PPB)	EDB (PPB)	EDC (PPB)
NMWQCC Regulatory Limits		30	10	750	750	620		100	0.1	10
MONITOR WELL	DATE									
VP-6	01/10/03	< 10.0	< 1.0	< 1.0	< 1.0	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0
	09/24/02	< 10.0	< 1.0	< 1.0	< 1.0	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0
	07/03/02	< 10.0	< 1.0	< 1.0	< 1.0	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0
	04/01/02	< 10.0	< 1.0	< 1.0	< 1.0	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0
	01/03/02	< 10.0	< 1.0	< 1.0	< 1.0	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0
	10/02/01	< 15.0	< 1.0	< 1.0	< 1.0	< 3.0	< 6.0	< 1.0	< 1.0	< 1.0
	05/29/01	< 6.0	< 1.0	< 1.0	< 1.0	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0
	02/06/01	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0
	07/27/00	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0
	04/26/00	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0
	01/30/00	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0
	03/07/95	N/A	0.8	< 1.0	< 1.0	2.1	2.9	NA	NA	NA
09/07/94	N/A	0.8	1.3	< 1.0	< 2.0	2.1	NA	NA	NA	
VP-7	01/30/00	< 2.0	< 1.0	< 1.0	< 1.0	< 1.0	< 4.0	< 1.0	< 1.0	< 1.0
	12/05/95	N/A	< 0.5	< 1.0	< 1.0	< 2.0	< 4.5	NA	NA	NA
	06/06/95	N/A	< 0.5	< 1.0	< 1.0	< 2.0	< 4.5	NA	NA	NA

**Total BTEX = total benzene, toluene, ethylbenzene, and xylenes

NMWQCC = New Mexico Water Quality Control Commission

MTBE = Methyl-tert-butyl ether

EDB = 1,2-Dibromethane

EDC = 1,2-Dichloroethane

* Naphthalene = naphthalene only by EPA Method 8310 for 01/30/00 and 04/26/00

* Naphthalene = naphthalene, 1-methylnaphthalene, 2-methylnaphthalene by EPA Method 8260 Extended beginning 07/27/00

PPB = parts per billion

N/A = Not Available

N/S = Not sampled due to presence of sheen.

<0.010* = EDB by EPA Method 504.1



Barelas Bridge
 800 Bridge Blvd, SW
 Albuquerque, New Mexico
 USTB Facility #4608001 / 29854

WESTERN TECHNOLOGIES INC.
 SUMMARY OF DISSOLVED METALS EPA METHOD 6010
 ANALYTICAL TEST RESULTS
 TABLE 6

MONITOR WELL	DATE	LEAD (Mg/L)	IRON (Mg/L)	MANGANESE (Mg/L)
NMWQCC Regulatory Limits		0.050*	1.0**	0.2**
MW-4	05/29/01	<0.005	0.17	1.97
	02/06/01	<0.005	1.19	1.76
MW-8	05/29/01	<0.005	1.12	0.39
	02/06/01	<0.005	0.68	0.38
VP-1	05/29/01	<0.005	1.72	1.67
	02/06/01	<0.005	2.07	1.07
VP-2	05/29/01	<0.005	0.83	1.21
	02/06/01	<0.005	0.70	0.92
VP-5	05/29/01	<0.005	3.42	0.53
VP-6	05/29/01	<0.005	0.67	0.62
	02/06/01	<0.005	0.52	0.45

NMWQCC = New Mexico Water Quality Control Commission

* = NMWQCC Regulations 20.6.2.3103.A. Human Health Standards

** = NMWQCC Regulations 20.6.2.3103.B. Other Standards for Domestic Water Supply



**NEW MEXICO ENVIRONMENT DEPARTMENT
BARELAS BRIDGE SITE
ALBUQUERQUE, NEW MEXICO
APRIL 2014**

**Table 1
Summary of Groundwater Elevation Data
(All data reported in feet)**

Well No.	Monitoring Date	Top of Casing Elevation	Depth to Bottom	Depth to Water	Groundwater Elevation
MW-4	10/4/2006	4943.23	7.5	8.02	4935.21
	5/8/2009			7.67	4935.56
	8/13/2011			NM	NM
	4/2/2013			7.91	4935.32
	1/30/2014			8.20	4935.03
	4/9/2014			8.16	4935.07
MW-7	10/4/2006	4942.94	21.3	8.20	4934.74
	5/8/2009			7.81	4935.13
	8/13/2011			7.91	4935.03
	4/2/2013			7.99	4934.95
MW-8	10/4/2006	4944.59	12.8	9.30	4935.29
	5/8/2009			8.96	4935.63
	8/13/2011			9.12	4935.47
	4/2/2013			9.23	4935.36
	1/30/2014			9.50	4935.09
	4/9/2014			9.47	4935.12
MW-9	10/4/2006	4943.98	19.2	8.83	4935.15
	5/8/2009			8.48	4935.50
	8/13/2011			8.63	4935.35
	4/2/2013			8.71	4935.27
	1/30/2014			8.98	4935.00
	4/9/2014			8.94	4935.04
VP-2	10/4/2006	4943.73	12.5	8.43	4935.30
	5/8/2009			8.07	4935.66
	8/13/2011			7.23	4936.50
	4/2/2013			8.33	4935.40
	1/30/2014			8.61	4935.12
	4/9/2014			8.57	4935.16
VP-5	10/4/2006	4943.52	11.9	8.10	4935.42
	5/8/2009			7.78	4935.74
	8/13/2011			7.97	4935.55
	4/2/2013			8.06	4935.46
	1/30/2014			8.30	4935.22
	4/9/2014			8.25	4935.27

2006-2009 Data provided by the NMED
NM = Not measured (tree roots obstructing inner well)

**NEW MEXICO ENVIRONMENT DEPARTMENT
BARELAS BRIDGE SITE
ALBUQUERQUE, NEW MEXICO
APRIL 2014**

**Table 2
Summary of Groundwater Chemistry Data
(Concentrations in micrograms per liter [µg/l or ppb])**

Well No.	Sample Date	Benzene	Toulene	Ethylbenzene	Total Xylenes	MTBE	NAPH
MW-4	10/4/2006	<1.0	<1.0	<1.0	<3.0	<1.5	<10
	5/8/2009	<1.0	<1.0	<1.0	<1.5	<1.0	<10
	8/13/2011	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	4/2/2013	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	1/30/2014	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
	4/9/2014	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
MW-7	10/4/2006	<1.0	<1.0	<1.0	<3.0	<1.5	<10
	5/8/2009	<1.0	<1.0	<1.0	<1.5	<1.0	<10
	8/13/2011	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0
MW-8	10/4/2006	<2.0	<2.0	34	18	<3.0	210
	5/8/2009	<1.0	<1.0	24	8.0	<1.0	92
	8/13/2011	<10	<10	32	<15	<10	72
	4/2/2013	<5.0	<5.0	31	10	<5.0	149
	1/30/2014	1.3	1.4	33	8.2	<1.0	134
	4/9/2014	<1.0	1.2	32	7.3	<1.0	113
MW-9	10/4/2006	62	44	11	42	<1.5	6.9
	5/8/2009	12	7.1	45	68	<1.0	77
	8/13/2011	750	150	270	880	12	93
	4/2/2013	320	34	<10	150	<10	<40
	1/30/2014	190	59	200	340	<2.0	67
	4/9/2014	100	49	72	110	<1.0	32.4
VP-2	10/4/2006	<1.0	<1.0	<1.0	<3.0	<1.5	<10
	5/8/2009	<1.0	<1.0	1.3	1.6	<1.0	37.3
	8/13/2011	<1.0	<1.0	2.1	2.4	<1.0	78
	4/2/2013	<2.0	<2.0	<2.0	<3.0	<2.0	34.7
	1/30/2014	<1.0	<1.0	<1.0	<1.5	<1.0	2.2
	4/9/2014	<1.0	<1.0	<1.0	<1.5	<1.0	<4.0

**NEW MEXICO ENVIRONMENT DEPARTMENT
BARELAS BRIDGE SITE
ALBUQUERQUE, NEW MEXICO
APRIL 2014**

**Table 2
Summary of Groundwater Chemistry Data
(Concentrations in micrograms per liter [µg/l or ppb])**

Well No.	Sample Date	Benzene	Toulene	Ethylbenzene	Total Xylenes	MTBE	NAPH
VP-5	10/4/2006	<10	<10	21	<30	<15	430
	5/8/2009	<5.0	<5.0	7.1	<7.5	<5.0	386
	8/13/2011	1.4	1.8	12	2.4	<1.0	469
	4/2/2013	<2.0	<2.0	7.7	<3.0	<2.0	270
	1/30/2014	<1.0	1.0	3.0	<1.5	<1.0	187
	4/9/2014	<1.0	1.2	4.5	<1.5	<1.0	217
NMWQCC/NMEIB Standard		10	750	750	620	100	30

2006-2009 Data provided by the NMED

NMWQCC: New Mexico Water Quality Control Commission

NMEIB: New Mexico Environmental Improvement Board

MTBE: Methyl t-butyl ether

NAPH: Total Naphthalenes

Analysis by EPA Test Method 8260.

Shaded cells represent concentrations exceeding applicable standard for most recent event.

**SUMMARY OF WELL COMPLETION INFORMATION
BARELAS BRIDGE GWPA SITE
800 BRIDGE BLVD., S.W.
ALBUQUERQUE, NEW MEXICO**

WELL ID	DATE INSTALLED	MP OR TOC ELEV. (FTAMSL)	TOTAL DEPTH OF WELL (FT)	WELL DIAMETER/ CONSTRUCTION	SCREENED INTERVAL/ SLOT SIZE	SCREEN LENGTH (FT)	STATUS/ COMMENTS
MW-1	02/07/90	4942.94	17	2" PVC	2'-17'/0.020"	15	
MW-2	02/07/90	4942.36	23	2" PVC	3'-18'/0.020"	15	
MW-3	02/07/90	4941.97	22.5	2" PVC	2.5'- 17.5'/0.020"	15	
MW-4	02/08/90	4943.86	23.5	2" PVC	3.5'- 18.5'/0.020"	15	
MW-5	10/16/90	4942.09	21.5	2" PVC	7'-22'/0.010"	15	
MW-6	10/16/90	4943.18	22	2" PVC	7'-22'/0.010"	15	
MW-7	10/18/90	4942.94	22	2" PVC	7'-22'/0.010"	15	
MW-8	10/18/90	4944.57	13	2" STEEL	8'-13'/0.010"	5	
MW-9	08/20/92	--	20.0	2" PVC	5'-20'/0.020"	15	
VP-1	08/19/92	--	14.5	4" PVC	9.5'- 14.5'/0.020" 4.5'- 9.5'/0.040"	10	Vapor extraction well
AS-1	08/19/92	--	22.2	2" PVC	20'- 22'/0.010"	2	Air sparge well
PR-2	08/18/92	--	9	2" PVC	3'-5'/0.020" 7'-9'/0.020"	2'/2'	Nested vadose monitor probe
PR-3	08/18/92	--	9.3	2" PVC	3'-5'/0.020" 7'-9'/0.020"	2'/2'	Nested vadose monitor probe

APPENDIX D
Laboratory Analytical Report – Groundwater



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 09, 2018

Eileen Marcillo

Intera, Inc.

6000 Uptown Boulevard, NE Suite 220

Albuquerque, NM 87110

TEL: (505) 246-1600

FAX (505) 246-2600

RE: Barelas Bridge

OrderNo.: 1803330

Dear Eileen Marcillo:

Hall Environmental Analysis Laboratory received 7 sample(s) on 3/6/2018 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a white background.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803330

Date Reported: 3/9/2018

CLIENT: Intera, Inc.

Client Sample ID: MW-8

Project: Barelás Bridge

Collection Date: 3/6/2018 11:50:00 AM

Lab ID: 1803330-001

Matrix: AQUEOUS

Received Date: 3/6/2018 4:18:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Toluene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Ethylbenzene	6.4	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Naphthalene	19	2.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1-Methylnaphthalene	12	4.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
2-Methylnaphthalene	14	4.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Acetone	ND	10		µg/L	1	3/7/2018 7:47:00 PM	R49630
Bromobenzene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Bromodichloromethane	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Bromoform	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Bromomethane	ND	3.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
2-Butanone	ND	10		µg/L	1	3/7/2018 7:47:00 PM	R49630
Carbon disulfide	ND	10		µg/L	1	3/7/2018 7:47:00 PM	R49630
Carbon Tetrachloride	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Chlorobenzene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Chloroethane	ND	2.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Chloroform	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Chloromethane	ND	3.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
2-Chlorotoluene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
4-Chlorotoluene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
cis-1,2-DCE	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Dibromochloromethane	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Dibromomethane	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,1-Dichloroethane	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,1-Dichloroethene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,2-Dichloropropane	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,3-Dichloropropane	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
2,2-Dichloropropane	ND	2.0		µg/L	1	3/7/2018 7:47:00 PM	R49630

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803330

Date Reported: 3/9/2018

CLIENT: Intera, Inc.

Client Sample ID: MW-8

Project: Barelás Bridge

Collection Date: 3/6/2018 11:50:00 AM

Lab ID: 1803330-001

Matrix: AQUEOUS

Received Date: 3/6/2018 4:18:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Hexachlorobutadiene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
2-Hexanone	ND	10		µg/L	1	3/7/2018 7:47:00 PM	R49630
Isopropylbenzene	7.1	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
4-Isopropyltoluene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
4-Methyl-2-pentanone	ND	10		µg/L	1	3/7/2018 7:47:00 PM	R49630
Methylene Chloride	ND	3.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
n-Butylbenzene	ND	3.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
n-Propylbenzene	13	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
sec-Butylbenzene	1.8	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Styrene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
tert-Butylbenzene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
trans-1,2-DCE	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Trichlorofluoromethane	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Vinyl chloride	ND	1.0		µg/L	1	3/7/2018 7:47:00 PM	R49630
Xylenes, Total	1.8	1.5		µg/L	1	3/7/2018 7:47:00 PM	R49630
Surr: 1,2-Dichloroethane-d4	73.9	70-130		%Rec	1	3/7/2018 7:47:00 PM	R49630
Surr: 4-Bromofluorobenzene	82.4	70-130		%Rec	1	3/7/2018 7:47:00 PM	R49630
Surr: Dibromofluoromethane	81.0	70-130		%Rec	1	3/7/2018 7:47:00 PM	R49630
Surr: Toluene-d8	85.4	70-130		%Rec	1	3/7/2018 7:47:00 PM	R49630

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803330

Date Reported: 3/9/2018

CLIENT: Intera, Inc.

Client Sample ID: VP-2

Project: Barelás Bridge

Collection Date: 3/6/2018 12:20:00 PM

Lab ID: 1803330-002

Matrix: AQUEOUS

Received Date: 3/6/2018 4:18:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Toluene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Ethylbenzene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Naphthalene	ND	2.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1-Methylnaphthalene	ND	4.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
2-Methylnaphthalene	ND	4.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Acetone	ND	10		µg/L	1	3/7/2018 8:11:00 PM	R49630
Bromobenzene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Bromodichloromethane	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Bromoform	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Bromomethane	ND	3.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
2-Butanone	ND	10		µg/L	1	3/7/2018 8:11:00 PM	R49630
Carbon disulfide	ND	10		µg/L	1	3/7/2018 8:11:00 PM	R49630
Carbon Tetrachloride	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Chlorobenzene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Chloroethane	ND	2.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Chloroform	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Chloromethane	ND	3.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
2-Chlorotoluene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
4-Chlorotoluene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
cis-1,2-DCE	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Dibromochloromethane	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Dibromomethane	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,1-Dichloroethane	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,1-Dichloroethene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,2-Dichloropropane	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,3-Dichloropropane	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
2,2-Dichloropropane	ND	2.0		µg/L	1	3/7/2018 8:11:00 PM	R49630

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803330

Date Reported: 3/9/2018

CLIENT: Intera, Inc.

Client Sample ID: VP-2

Project: Barelás Bridge

Collection Date: 3/6/2018 12:20:00 PM

Lab ID: 1803330-002

Matrix: AQUEOUS

Received Date: 3/6/2018 4:18:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Hexachlorobutadiene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
2-Hexanone	ND	10		µg/L	1	3/7/2018 8:11:00 PM	R49630
Isopropylbenzene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
4-Isopropyltoluene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
4-Methyl-2-pentanone	ND	10		µg/L	1	3/7/2018 8:11:00 PM	R49630
Methylene Chloride	ND	3.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
n-Butylbenzene	ND	3.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
n-Propylbenzene	1.5	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
sec-Butylbenzene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Styrene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
tert-Butylbenzene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
trans-1,2-DCE	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Trichlorofluoromethane	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Vinyl chloride	ND	1.0		µg/L	1	3/7/2018 8:11:00 PM	R49630
Xylenes, Total	ND	1.5		µg/L	1	3/7/2018 8:11:00 PM	R49630
Surr: 1,2-Dichloroethane-d4	69.4	70-130	S	%Rec	1	3/7/2018 8:11:00 PM	R49630
Surr: 4-Bromofluorobenzene	76.4	70-130		%Rec	1	3/7/2018 8:11:00 PM	R49630
Surr: Dibromofluoromethane	77.8	70-130		%Rec	1	3/7/2018 8:11:00 PM	R49630
Surr: Toluene-d8	88.9	70-130		%Rec	1	3/7/2018 8:11:00 PM	R49630

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803330

Date Reported: 3/9/2018

CLIENT: Intera, Inc.

Client Sample ID: VP-5

Project: Barelás Bridge

Collection Date: 3/6/2018 12:50:00 PM

Lab ID: 1803330-003

Matrix: AQUEOUS

Received Date: 3/6/2018 4:18:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Toluene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Ethylbenzene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Methyl tert-butyl ether (MTBE)	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,2,4-Trimethylbenzene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,3,5-Trimethylbenzene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,2-Dichloroethane (EDC)	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,2-Dibromoethane (EDB)	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Naphthalene	4.1	4.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1-Methylnaphthalene	58	8.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
2-Methylnaphthalene	84	8.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Acetone	ND	20		µg/L	2	3/7/2018 8:35:00 PM	R49630
Bromobenzene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Bromodichloromethane	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Bromoform	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Bromomethane	ND	6.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
2-Butanone	ND	20		µg/L	2	3/7/2018 8:35:00 PM	R49630
Carbon disulfide	ND	20		µg/L	2	3/7/2018 8:35:00 PM	R49630
Carbon Tetrachloride	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Chlorobenzene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Chloroethane	ND	4.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Chloroform	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Chloromethane	ND	6.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
2-Chlorotoluene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
4-Chlorotoluene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
cis-1,2-DCE	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
cis-1,3-Dichloropropene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,2-Dibromo-3-chloropropane	ND	4.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Dibromochloromethane	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Dibromomethane	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,2-Dichlorobenzene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,3-Dichlorobenzene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,4-Dichlorobenzene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Dichlorodifluoromethane	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,1-Dichloroethane	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,1-Dichloroethene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,2-Dichloropropane	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,3-Dichloropropane	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
2,2-Dichloropropane	ND	4.0		µg/L	2	3/7/2018 8:35:00 PM	R49630

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803330

Date Reported: 3/9/2018

CLIENT: Intera, Inc.

Client Sample ID: VP-5

Project: Barelás Bridge

Collection Date: 3/6/2018 12:50:00 PM

Lab ID: 1803330-003

Matrix: AQUEOUS

Received Date: 3/6/2018 4:18:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Hexachlorobutadiene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
2-Hexanone	ND	20		µg/L	2	3/7/2018 8:35:00 PM	R49630
Isopropylbenzene	18	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
4-Isopropyltoluene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
4-Methyl-2-pentanone	ND	20		µg/L	2	3/7/2018 8:35:00 PM	R49630
Methylene Chloride	ND	6.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
n-Butylbenzene	7.7	6.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
n-Propylbenzene	59	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
sec-Butylbenzene	5.0	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Styrene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
tert-Butylbenzene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,1,1,2-Tetrachloroethane	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,1,2,2-Tetrachloroethane	ND	4.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Tetrachloroethene (PCE)	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
trans-1,2-DCE	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
trans-1,3-Dichloropropene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,2,3-Trichlorobenzene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,2,4-Trichlorobenzene	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,1,1-Trichloroethane	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,1,2-Trichloroethane	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Trichloroethene (TCE)	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Trichlorofluoromethane	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
1,2,3-Trichloropropane	ND	4.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Vinyl chloride	ND	2.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Xylenes, Total	ND	3.0		µg/L	2	3/7/2018 8:35:00 PM	R49630
Surr: 1,2-Dichloroethane-d4	71.4	70-130		%Rec	2	3/7/2018 8:35:00 PM	R49630
Surr: 4-Bromofluorobenzene	85.8	70-130		%Rec	2	3/7/2018 8:35:00 PM	R49630
Surr: Dibromofluoromethane	79.1	70-130		%Rec	2	3/7/2018 8:35:00 PM	R49630
Surr: Toluene-d8	85.6	70-130		%Rec	2	3/7/2018 8:35:00 PM	R49630

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803330

Date Reported: 3/9/2018

CLIENT: Intera, Inc.

Client Sample ID: MW-9

Project: Barelás Bridge

Collection Date: 3/6/2018 1:35:00 PM

Lab ID: 1803330-004

Matrix: AQUEOUS

Received Date: 3/6/2018 4:18:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Toluene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Ethylbenzene	2.1	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Naphthalene	11	2.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1-Methylnaphthalene	7.0	4.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
2-Methylnaphthalene	7.9	4.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Acetone	ND	10		µg/L	1	3/7/2018 8:59:00 PM	R49630
Bromobenzene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Bromodichloromethane	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Bromoform	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Bromomethane	ND	3.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
2-Butanone	ND	10		µg/L	1	3/7/2018 8:59:00 PM	R49630
Carbon disulfide	ND	10		µg/L	1	3/7/2018 8:59:00 PM	R49630
Carbon Tetrachloride	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Chlorobenzene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Chloroethane	ND	2.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Chloroform	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Chloromethane	ND	3.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
2-Chlorotoluene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
4-Chlorotoluene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
cis-1,2-DCE	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Dibromochloromethane	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Dibromomethane	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,1-Dichloroethane	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,1-Dichloroethene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,2-Dichloropropane	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,3-Dichloropropane	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
2,2-Dichloropropane	ND	2.0		µg/L	1	3/7/2018 8:59:00 PM	R49630

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803330

Date Reported: 3/9/2018

CLIENT: Intera, Inc.

Client Sample ID: MW-9

Project: Barelás Bridge

Collection Date: 3/6/2018 1:35:00 PM

Lab ID: 1803330-004

Matrix: AQUEOUS

Received Date: 3/6/2018 4:18:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Hexachlorobutadiene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
2-Hexanone	ND	10		µg/L	1	3/7/2018 8:59:00 PM	R49630
Isopropylbenzene	2.7	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
4-Isopropyltoluene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
4-Methyl-2-pentanone	ND	10		µg/L	1	3/7/2018 8:59:00 PM	R49630
Methylene Chloride	ND	3.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
n-Butylbenzene	ND	3.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
n-Propylbenzene	6.6	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
sec-Butylbenzene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Styrene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
tert-Butylbenzene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
trans-1,2-DCE	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Trichlorofluoromethane	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Vinyl chloride	ND	1.0		µg/L	1	3/7/2018 8:59:00 PM	R49630
Xylenes, Total	3.8	1.5		µg/L	1	3/7/2018 8:59:00 PM	R49630
Surr: 1,2-Dichloroethane-d4	73.5	70-130		%Rec	1	3/7/2018 8:59:00 PM	R49630
Surr: 4-Bromofluorobenzene	75.4	70-130		%Rec	1	3/7/2018 8:59:00 PM	R49630
Surr: Dibromofluoromethane	79.8	70-130		%Rec	1	3/7/2018 8:59:00 PM	R49630
Surr: Toluene-d8	88.0	70-130		%Rec	1	3/7/2018 8:59:00 PM	R49630

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803330

Date Reported: 3/9/2018

CLIENT: Intera, Inc.

Client Sample ID: MW-4

Project: Barelás Bridge

Collection Date: 3/6/2018 2:45:00 PM

Lab ID: 1803330-005

Matrix: AQUEOUS

Received Date: 3/6/2018 4:18:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Toluene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Ethylbenzene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Naphthalene	ND	2.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1-Methylnaphthalene	ND	4.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
2-Methylnaphthalene	ND	4.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Acetone	ND	10		µg/L	1	3/7/2018 9:23:00 PM	R49630
Bromobenzene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Bromodichloromethane	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Bromoform	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Bromomethane	ND	3.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
2-Butanone	ND	10		µg/L	1	3/7/2018 9:23:00 PM	R49630
Carbon disulfide	ND	10		µg/L	1	3/7/2018 9:23:00 PM	R49630
Carbon Tetrachloride	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Chlorobenzene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Chloroethane	ND	2.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Chloroform	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Chloromethane	ND	3.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
2-Chlorotoluene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
4-Chlorotoluene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
cis-1,2-DCE	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Dibromochloromethane	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Dibromomethane	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,1-Dichloroethane	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,1-Dichloroethene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,2-Dichloropropane	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,3-Dichloropropane	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
2,2-Dichloropropane	ND	2.0		µg/L	1	3/7/2018 9:23:00 PM	R49630

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803330

Date Reported: 3/9/2018

CLIENT: Intera, Inc.

Client Sample ID: MW-4

Project: Barelás Bridge

Collection Date: 3/6/2018 2:45:00 PM

Lab ID: 1803330-005

Matrix: AQUEOUS

Received Date: 3/6/2018 4:18:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Hexachlorobutadiene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
2-Hexanone	ND	10		µg/L	1	3/7/2018 9:23:00 PM	R49630
Isopropylbenzene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
4-Isopropyltoluene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
4-Methyl-2-pentanone	ND	10		µg/L	1	3/7/2018 9:23:00 PM	R49630
Methylene Chloride	ND	3.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
n-Butylbenzene	ND	3.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
n-Propylbenzene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
sec-Butylbenzene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Styrene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
tert-Butylbenzene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
trans-1,2-DCE	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Trichlorofluoromethane	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Vinyl chloride	ND	1.0		µg/L	1	3/7/2018 9:23:00 PM	R49630
Xylenes, Total	ND	1.5		µg/L	1	3/7/2018 9:23:00 PM	R49630
Surr: 1,2-Dichloroethane-d4	73.2	70-130		%Rec	1	3/7/2018 9:23:00 PM	R49630
Surr: 4-Bromofluorobenzene	75.8	70-130		%Rec	1	3/7/2018 9:23:00 PM	R49630
Surr: Dibromofluoromethane	76.7	70-130		%Rec	1	3/7/2018 9:23:00 PM	R49630
Surr: Toluene-d8	87.8	70-130		%Rec	1	3/7/2018 9:23:00 PM	R49630

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803330

Date Reported: 3/9/2018

CLIENT: Intera, Inc.

Client Sample ID: MW-7

Project: Barelás Bridge

Collection Date: 3/6/2018 3:25:00 PM

Lab ID: 1803330-006

Matrix: AQUEOUS

Received Date: 3/6/2018 4:18:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Toluene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Ethylbenzene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Naphthalene	ND	2.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1-Methylnaphthalene	ND	4.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
2-Methylnaphthalene	ND	4.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Acetone	ND	10		µg/L	1	3/7/2018 9:47:00 PM	R49630
Bromobenzene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Bromodichloromethane	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Bromoform	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Bromomethane	ND	3.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
2-Butanone	ND	10		µg/L	1	3/7/2018 9:47:00 PM	R49630
Carbon disulfide	ND	10		µg/L	1	3/7/2018 9:47:00 PM	R49630
Carbon Tetrachloride	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Chlorobenzene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Chloroethane	ND	2.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Chloroform	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Chloromethane	ND	3.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
2-Chlorotoluene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
4-Chlorotoluene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
cis-1,2-DCE	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Dibromochloromethane	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Dibromomethane	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,1-Dichloroethane	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,1-Dichloroethene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,2-Dichloropropane	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,3-Dichloropropane	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
2,2-Dichloropropane	ND	2.0		µg/L	1	3/7/2018 9:47:00 PM	R49630

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803330

Date Reported: 3/9/2018

CLIENT: Intera, Inc.

Client Sample ID: MW-7

Project: Barelás Bridge

Collection Date: 3/6/2018 3:25:00 PM

Lab ID: 1803330-006

Matrix: AQUEOUS

Received Date: 3/6/2018 4:18:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Hexachlorobutadiene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
2-Hexanone	ND	10		µg/L	1	3/7/2018 9:47:00 PM	R49630
Isopropylbenzene	1.2	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
4-Isopropyltoluene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
4-Methyl-2-pentanone	ND	10		µg/L	1	3/7/2018 9:47:00 PM	R49630
Methylene Chloride	ND	3.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
n-Butylbenzene	ND	3.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
n-Propylbenzene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
sec-Butylbenzene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Styrene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
tert-Butylbenzene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
trans-1,2-DCE	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Trichlorofluoromethane	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Vinyl chloride	ND	1.0		µg/L	1	3/7/2018 9:47:00 PM	R49630
Xylenes, Total	ND	1.5		µg/L	1	3/7/2018 9:47:00 PM	R49630
Surr: 1,2-Dichloroethane-d4	73.5	70-130		%Rec	1	3/7/2018 9:47:00 PM	R49630
Surr: 4-Bromofluorobenzene	75.4	70-130		%Rec	1	3/7/2018 9:47:00 PM	R49630
Surr: Dibromofluoromethane	82.0	70-130		%Rec	1	3/7/2018 9:47:00 PM	R49630
Surr: Toluene-d8	87.5	70-130		%Rec	1	3/7/2018 9:47:00 PM	R49630

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803330

Date Reported: 3/9/2018

CLIENT: Intera, Inc.

Client Sample ID: TRIP BLANK

Project: Barelás Bridge

Collection Date:

Lab ID: 1803330-007

Matrix: TRIP BLANK

Received Date: 3/6/2018 4:18:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
Benzene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Toluene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Ethylbenzene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Naphthalene	ND	2.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1-Methylnaphthalene	ND	4.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
2-Methylnaphthalene	ND	4.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Acetone	ND	10		µg/L	1	3/7/2018 10:11:00 PM	R49630
Bromobenzene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Bromodichloromethane	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Bromoform	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Bromomethane	ND	3.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
2-Butanone	ND	10		µg/L	1	3/7/2018 10:11:00 PM	R49630
Carbon disulfide	ND	10		µg/L	1	3/7/2018 10:11:00 PM	R49630
Carbon Tetrachloride	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Chlorobenzene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Chloroethane	ND	2.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Chloroform	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Chloromethane	ND	3.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
2-Chlorotoluene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
4-Chlorotoluene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
cis-1,2-DCE	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Dibromochloromethane	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Dibromomethane	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,2-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,3-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,4-Dichlorobenzene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Dichlorodifluoromethane	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,1-Dichloroethane	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,1-Dichloroethene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,2-Dichloropropane	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,3-Dichloropropane	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
2,2-Dichloropropane	ND	2.0		µg/L	1	3/7/2018 10:11:00 PM	R49630

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1803330

Date Reported: 3/9/2018

CLIENT: Intera, Inc.

Client Sample ID: TRIP BLANK

Project: Barelás Bridge

Collection Date:

Lab ID: 1803330-007

Matrix: TRIP BLANK

Received Date: 3/6/2018 4:18:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: RAA
1,1-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Hexachlorobutadiene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
2-Hexanone	ND	10		µg/L	1	3/7/2018 10:11:00 PM	R49630
Isopropylbenzene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
4-Isopropyltoluene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
4-Methyl-2-pentanone	ND	10		µg/L	1	3/7/2018 10:11:00 PM	R49630
Methylene Chloride	ND	3.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
n-Butylbenzene	ND	3.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
n-Propylbenzene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
sec-Butylbenzene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Styrene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
tert-Butylbenzene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
trans-1,2-DCE	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,1,1-Trichloroethane	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,1,2-Trichloroethane	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Trichloroethene (TCE)	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Trichlorofluoromethane	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
1,2,3-Trichloropropane	ND	2.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Vinyl chloride	ND	1.0		µg/L	1	3/7/2018 10:11:00 PM	R49630
Xylenes, Total	ND	1.5		µg/L	1	3/7/2018 10:11:00 PM	R49630
Surr: 1,2-Dichloroethane-d4	71.2	70-130		%Rec	1	3/7/2018 10:11:00 PM	R49630
Surr: 4-Bromofluorobenzene	74.0	70-130		%Rec	1	3/7/2018 10:11:00 PM	R49630
Surr: Dibromofluoromethane	77.3	70-130		%Rec	1	3/7/2018 10:11:00 PM	R49630
Surr: Toluene-d8	88.5	70-130		%Rec	1	3/7/2018 10:11:00 PM	R49630

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	PQL Practical Quantitative Limit	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803330

09-Mar-18

Client: Intera, Inc.
Project: Barelas Bridge

Sample ID	100NG LCS	SampType:	LCS	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	LCSW	Batch ID:	R49630	RunNo:	49630					
Prep Date:		Analysis Date:	3/7/2018	SeqNo:	1604322	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	18	1.0	20.00	0	90.6	70	130			
Toluene	21	1.0	20.00	0	107	70	130			
Chlorobenzene	22	1.0	20.00	0	112	70	130			
1,1-Dichloroethene	23	1.0	20.00	0	115	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	88.9	70	130			
Surr: 1,2-Dichloroethane-d4	6.9		10.00		68.7	70	130			S
Surr: 4-Bromofluorobenzene	7.3		10.00		72.7	70	130			
Surr: Dibromofluoromethane	8.2		10.00		82.0	70	130			
Surr: Toluene-d8	8.9		10.00		88.7	70	130			

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R49630	RunNo:	49630					
Prep Date:		Analysis Date:	3/7/2018	SeqNo:	1604323	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803330

09-Mar-18

Client: Intera, Inc.
Project: Barelas Bridge

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	R49630	RunNo:	49630					
Prep Date:		Analysis Date:	3/7/2018	SeqNo:	1604323	Units:	µg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1803330

09-Mar-18

Client: Intera, Inc.
Project: Barelas Bridge

Sample ID	rb	SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID:	PBW	Batch ID: R49630		RunNo: 49630						
Prep Date:		Analysis Date: 3/7/2018		SeqNo: 1604323		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	7.9		10.00		78.9	70	130			
Surr: 4-Bromofluorobenzene	7.6		10.00		75.5	70	130			
Surr: Dibromofluoromethane	8.4		10.00		84.1	70	130			
Surr: Toluene-d8	8.9		10.00		88.7	70	130			

Qualifiers:

- | | |
|---|---|
| * Value exceeds Maximum Contaminant Level. | B Analyte detected in the associated Method Blank |
| D Sample Diluted Due to Matrix | E Value above quantitation range |
| H Holding times for preparation or analysis exceeded | J Analyte detected below quantitation limits |
| ND Not Detected at the Reporting Limit | P Sample pH Not In Range |
| PQL Practical Quantitative Limit | RL Reporting Detection Limit |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |



Sample Log-In Check List

Client Name: INT Work Order Number: 1803330 RcptNo: 1

Received By: Erin Melendrez 3/6/2018 4:18:00 PM *UMG*
 Completed By: Erin Melendrez 3/7/2018 8:20:00 AM *UMG*
 Reviewed By: *DPS 3/7/18*
MW 3/7/18

Chain of Custody

1. Is Chain of Custody complete? Yes No Not Present
 2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes No NA
 4. Were all samples received at a temperature of >0° C to 6.0°C Yes No NA
Samples were collected the same day and chilled.
 5. Sample(s) in proper container(s)? Yes No
 6. Sufficient sample volume for indicated test(s)? Yes No
 7. Are samples (except VOA and ONG) properly preserved? Yes No
 8. Was preservative added to bottles? Yes No NA
 9. VOA vials have zero headspace? Yes No No VOA Vials
 10. Were any sample containers received broken? Yes No
 11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
 12. Are matrices correctly identified on Chain of Custody? Yes No
 13. Is it clear what analyses were requested? Yes No
 14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: _____
 (<2 or >12 unless noted)
 Adjusted? _____
 Checked by: _____

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes No NA

Person Notified: _____ Date: _____
 By Whom: _____ Via: eMail Phone Fax In Person
 Regarding: _____
 Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	10.7	Good	Not Present			

Chain-of-Custody Record

Client: INTERA

Mailing Address: 1435 S. St Francis Dr
Unit 103

Phone #: 505 428-0066

email or Fax#: emarcillo@intera.com

QA/QC Package:
 Standard Level 4 (Full Validation)

Accreditation
 NELAP Other _____

EDD (Type) Excav

Turn-Around Time:
 Standard Rush

Project Name:
Barclay's Bridge

Project #:

Project Manager:
Eileen Marcillo

Sampler: Brian Archuleta

On Ice: Yes No

Sample Temperature: 10.7



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com
 4901 Hawkins NE - Albuquerque, NM 87109
 Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MFO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO ₂ , NO ₃ , PO ₄ , SO ₄)	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
						1803330												
3/6/18	1150	Aq	8260B MW-8	3 VOA	HgCl ₂	-001										X		
3/6/18	1220	Aq	826 VP-2	3 VOA	HgCl ₂	-002										X		
3/6/18	1250	Aq	VP-5	3 VOA	HgCl ₂	-003										X		
3/6/18	1355	Aq	MW-9	3 VOA	HgCl ₂	-004										X		
3/6/18	1445	Aq	MW-4	3 VOA	HgCl ₂	-005										X		
3/6/18	1525	Aq	MW-7	3 VOA	HgCl ₂	-006										X		
			Trip Blank			-007												
			03/07/18															

Date: <u>3/6/18</u>	Time: <u>1618</u>	Relinquished by: <u>[Signature]</u>	Received by: <u>[Signature]</u>	Date: <u>3/6/18</u>	Time: <u>1618</u>
Date:	Time:	Relinquished by:	Received by:	Date:	Time:

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. The services are not of the possibility. Any sub-contracted data will be clearly related on the analytical report.