

AP – 101

2013 AGWMR

03 / 31 / 2014



Mr. Glenn Von Gonten
New Mexico Oil Conservation Division
1220 St. Francis Dr.
Santa Fe, NM 87505

Subject:
2013 Annual Groundwater Remediation Report
Jal No. 4 Plant
Lea County, New Mexico
NMOCD Abatement Plan Case # AP-101

Dear Mr. Von Gonten:

On behalf of El Paso Natural Gas Company, LLC, ARCADIS U.S., Inc., hereby submits the enclosed 2013 Annual Groundwater Remediation Report Jal No. 4 Plant Lea County, New Mexico (Report). This report details remediation efforts conducted at the site during calendar year 2013.

If you have any questions concerning the Report please call Mr. Joseph Wiley at (713) 420-3475 or myself at (432) 687-5400.

Sincerely,

ARCADIS U.S., Inc.

Hank W. McConnell P.G.
Certified Project Manager

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Our ref:
MT001126.0001

ARCADIS U.S., Inc.
TX Engineering License # F-533

Imagine the result

El Paso Natural Gas Company, LLC

**2013 ANNUAL GROUNDWATER
REMEDIATION REPORT**

Jal No. 4 Plant Lea County, New Mexico
NMOCD Abatement Plan Case # AP-101

March 31, 2014



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Aaron R. Sides
Environmental Scientist

A handwritten signature in black ink, appearing to read "H.W. McConnell", positioned above a horizontal line.

Hank W. McConnell, PG
Certified Project Manager

A handwritten signature in black ink, appearing to read "David B. Vance", positioned above a horizontal line.

David B. Vance
Senior Project Advisor

**2013 Annual Groundwater
Remediation Report**

Jal No 4, Lea County, New
Mexico

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1. Introduction

ARCADIS U.S., Inc. (ARCADIS-US) has been retained by El Paso Natural Gas Company, LLC (EPNG) to compile the 2013 Annual Groundwater Remediation Report for the Jal No. 4 Plant located in Lea County, New Mexico. The remedial activities conducted at the Plant are performed under EPNG's Project Work Plan (dated February 1995). This Plan was approved by the New Mexico Oil Conservation Division (NMOCD) on April 27, 1995, with subsequent revisions approved on August 10, 1995, July 8, 1997, and July 30, 2002. Remediation activities are no longer conducted under the discharge permit GW-107R. The site is now under an abatement plan (AP-101).

The Plant property is comprised of approximately 181 acres of land located west of State Highway 18, approximately 9 miles north of Jal, New Mexico. The Plant property location and topographic features are shown on Figure 1. The Plant property occupies portions of Sections 31 and 32 of Township 23 South, Range 37 East, and Sections 5 and 6 of Township 24 South, Range 37 East in Lea County, New Mexico.

The Plant was constructed by EPNG in 1952 to treat, compress, and transport natural gas to EPNG's main transmission lines. EPNG discontinued their use of the Plant in 1987, leasing portions of the property to Christie Gas Corporation (Christie) that same year. Christie converted the facility to gas storage utilizing two cavern wells located on the eastern end of the property. EPNG eventually sold the Plant to Christie in 1991. In December 2002, Christie sold the Plant to Texas LPG Storage Company (Texas LPG). In March 2007, Texas LPG sold the plant to Western Refining, Inc. (WRI). WRI is the current owner of the Jal No. 4 Plant property.

Historically brine and wastewater at the Plant were managed in eight unlined retention ponds from 1952 to 1981. Beginning 1981, brine at the Plant was managed in 3 synthetic-lined ponds. In 1989, a leak was detected in one of the brine retention ponds and EPNG elected to close 2 of the ponds. In response to the detected leak, the NMOCD requested that EPNG perform a hydrologic study. This request led to 3 groundwater monitoring wells and a limited groundwater study at the site in May 1989. The preliminary study indicated that brine impacted groundwater was present beneath the Plant.

1.1 Program Wells and Sampling Schedule

To assess brine and hydrocarbon impacts to the shallow groundwater system in the Plant area, EPNG has installed eighteen monitoring wells, one piezometer, and three recovery wells on the Plant property and adjoining properties to the east (located hydraulically downgradient). EPNG has designated fifteen monitoring wells (ACW-1 through ACW-15) as program monitoring wells from which groundwater samples are frequently collected and submitted to an analytical laboratory for analysis (ACW-2 was replaced by ACW-2A on December 10, 1990). The locations of these wells are shown on Figure 2.

On April 14, 2003, the NMOCD approved a modification to the groundwater sampling program for the Plant. These modifications established the following sampling program:

- 1st Quarter – sample monitoring wells ACW-13, ACW-14, and ACW-15 and analyze for: benzene, toluene, ethylbenzene, and total xylenes (collectively referred to as BTEX), total dissolved solids (TDS), specific conductance, chloride, and sodium.
- 2nd Quarter – sample monitoring wells ACW-13, ACW-14, and ACW-15 and analyze for: BTEX, TDS, specific conductance, chloride, and sodium.
- 3rd Quarter – sample monitoring wells ACW-13, ACW-14, and ACW-15 and analyze for: BTEX, TDS, specific conductance, chloride, and sodium.
- 4th Quarter – sample all program and non-program (Section 1.2) wells and analyze for: BTEX, TDS, specific conductance, chloride, and sodium.

Program Monitoring Wells

Monitoring Well	Sampled Q1, Q2, Q3, and Q4	Sampled Q4 Only
ACW-1		X
ACW-2A		X
ACW-3		X
ACW-4		X
ACW-5		X
ACW-6		X
ACW-7		X
ACW-8		X
ACW-9		X
ACW-10		X
ACW-11		X
ACW-12		X
ACW-13	X	
ACW-14	X	
ACW-15	X	

Program monitoring wells ACW-3 and ACW-8 were converted to permanent groundwater recovery wells in October 2005. ACW-13, ACW-14, and ACW-15 were sampled during each 2013 quarterly event while ACW-1 through ACW-12 was only sampled during the 2013 4th quarter event.

1.2 Non-program Wells and Sampling Schedule

In addition to the program monitoring wells, EPNG also collects groundwater samples from two non-program monitoring wells (ENSR-1 and ENSR-3), one piezometer (PTP-1), one up gradient water supply well (EPNG-1), and two down gradient active water supply wells (Oxy Supply Well and Doom Supply Well). EPNG-1 is located at the northwest corner of the Plant property. The Oxy Supply Well is located in the approximate center of Section 5 of Township 24 South, Range 37 East and formerly provided potable water to Oxy's Myers Langlie Mattix Unit Water Injection Station. The Oxy Production well and EPNG-1 were not in service in 2013. The Doom Supply Well is a private water supply well that provides water to the residence of Mr. Jimmie J. Doom and is located in the approximate center of the northwest quarter of Section 8 of Township 24 South, Range 37 East. Additionally, three Recovery wells (RW-1, RW-2,

and RW-3) are located within the plant boundary. The locations of all of the wells discussed in this section are shown in Figure 2.

Non-program Wells

Well	Sampled Q1, Q2, Q3, and Q4	Sampled Q4 Only
ENSR-1		X
ENSR-3		X
EPNG-1	Out of service in 2013	X
PTP-1		X
Oxy Supply Well	Out of service in 2013	
Doom Supply Well	X	

No samples were collected from the OXY Supply Well or EPNG-1 during 2013. EPNG-1 was out of service due to an electrical malfunction outside of EPNG operational control. The OXY supply well was reported as out of service in 2012 and was not sampled. Communications with regards to the well's current status and permission for access were not returned. The Doom Supply well was sampled during each 2013 quarterly event while wells ENSR-1, ENSR-3, RW-3, and PTP-1 were sampled only during the 2013 4th quarter event.

Additionally, during 2013, nine site monitoring wells were sampled as a groundwater quality assessment and a study of the potential effectiveness of HydraSleeve™ sampling in assessing groundwater conditions at the site was instituted. A work plan assessing the potential effectiveness of utilizing non-purge technology is presented in Appendix C. This assessment will be finalized after the collection of 2014 groundwater analytical data.

1.3 Depth to Groundwater Measurements

During each quarterly sampling event and prior to disturbing the water columns within each well, the static depths to groundwater within the well casings were measured using an electronic water level indicator. In wells containing down-hole equipment (e.g. pumps) a steel line tape was utilized to collect the fluid levels. All depths to groundwater were measured relative to the surveyed top of casing (TOC) datum so that groundwater elevations could be determined. Table 1 provides a summary of the

depths to groundwater, TOC elevations, and groundwater elevations that have been compiled throughout EPNG's monitoring program.

1.4 Sampling Procedures

The groundwater samples were collected in accordance with EPA methods and quality assurance/quality control guidance. All groundwater monitoring wells were purged thoroughly prior to sample collection using temporary electric submersible pumps. Groundwater produced during purging and sampling operations was contained and discharged to the Plant's lined North Surface Impoundment.

During the 2013 sampling events, the groundwater samples collected from the Doom Supply Well were obtained at the well head from a water spigot.

The groundwater samples were placed directly into laboratory provided containers, labeled for source, requested analytical, and contents, packed on ice and placed under chain-of-custody control for transfer to the analytical laboratory. The results of the 2013 groundwater analyses are summarized in Table 2. Complete copies of the 2013 laboratory analytical reports are included in Appendix D. Appendix A provides a summary of the historical laboratory analytical data.

2. Results of Monitoring Activities

The following sections summarize the field measurements and laboratory analytical results obtained throughout the 2013 sampling program. These data have been compared with historic data to assess any trends that may be apparent. To facilitate these comparisons, 45 trend graphs have been prepared for TDS, chloride, sodium and benzene concentrations observed in the groundwater samples taken from the fifteen program monitoring wells. These graphs are presented in Appendix B.

2.1 Field Measurements

The depth to groundwater measurements (Table 1) indicate depths to groundwater across the Plant are approximately 100 feet below ground surface and static groundwater elevations exhibit little seasonal or historical variability.

Groundwater potentiometric surface maps have been prepared for each of the 2013 sampling events (Figures 3 through 6). The groundwater flow direction is to the

southeast (S46°E) and toward Monument Draw. The hydraulic gradient is approximately 0.0023 feet per foot. The groundwater flow direction and hydraulic gradient at the site have been consistent since 1997. Notable exceptions are those localized areas near the active recovery wells (when operational).

The groundwater recovery system was not operational in 2013. The groundwater level data collected from ACW-4 appears to show drawdown in this area. Historically, this has been attributed to the deeper screened interval in the well and the increased density of the groundwater due to the release of brine. This well, along with all other wells, will be resurveyed to confirm the elevation of the top of casing. This is discussed further in Section 5 Recommendations.

2.2 Inorganic Constituents

The laboratory provided inorganic parameters utilized to assess plume migration at the Plant are: TDS, chloride and sodium. The trends in concentrations over the last 10 years are summarized in the following table. Trends shown in parentheses were those evaluated by a previous consultant in 2012. It is assumed the previous consultant used complete historical data for the trend analysis; therefore, some shifts in trends may be artificial.

Inorganic Concentration Trends

Monitoring Well	Concentration Trends		
	TDS	Chloride	Sodium
ACW-1	↔ (↓)	↑ (↓)	↑ (↓)
ACW-2A	↓ (↓)	↓ (↓)	↓ (↓)
ACW-3(RW)	NS(↔)	NS (↔)	NS (↔)
ACW-4	↑ (↔)	↑ (↔)	↑ (↔)
ACW-5	↑ (↑)	↑ (↑)	↔ (↔)
ACW-6	↓ (↓)	↓ (↓)	↓ (↓)
ACW-7	↓ (↔)	↓ (↔)	↔ (↔)
ACW-8(RW)	NS(↔)	NS (↔)	NS (↔)
ACW-9	↑ (↑)	↑ (↑)	↑ (↑)
ACW-10	↑ (↑)	↑ (↑)	↑ (↔)
ACW-11	↑ (↑)	↑ (↑)	↑ (↔)
ACW-12	↑ (↑)	↑ (↑)	↑ (↔)
ACW-13	↑ (↑)	↑ (↑)	↑ (↔)
ACW-14	↑ (↔)	↑ (↔)	↑ (↔)
ACW-15	↑ (↔)	↑ (↔)	↑ (↔)

Key: ND denotes constituent not detected during the GMP, ↔ denotes no observable trend, ↓ denotes a decreasing trend, ↑ denotes an increasing trend

RW – System Recovery Well

NS – Not Sampled

(↔) (↑) (↓) – consultant observed trends in 2012

Note: Recovery wells ACW-3 and ACW-8 were not sampled in 2012 because they were not in operation during the 4th quarter sampling event and the submersible pumps installed within these wells precluded purging/sampling by other means.

In general, these trends indicate the overall levels of inorganic constituents are decreasing in three wells, increasing in ten wells, and have no observable trends, or are stable, in two wells. The wells and their overall trends for inorganic constituents can be grouped as follows:

Monitoring Wells with Decreasing Overall Inorganic Levels

ACW-2A ACW-6 ACW-7

Monitoring Well with Increasing Overall Inorganic Levels

ACW-1 ACW-4 ACW-5 ACW-9 ACW-10
ACW-11 ACW-12 ACW-13 ACW-14 ACW-15

Monitoring Wells with No Observable Trend in Overall Inorganic Levels

ACW-3 ACW-8

Figure 7 presents an isopleth of the chloride concentrations detected in groundwater during the 2013 sampling program. Within the New Mexico Administrative Code (NMAC) 20.6.2.3103 (B) the State has established Other Standards for Domestic Water Supply that includes a standard of 250 milligrams per liter (mg/L) for chloride in groundwater that contains TDS levels of 10,000 mg/L or less. As can be seen on Figure 7, the highest levels of chloride continue to be observed in the groundwater samples collected from the northeast portion of the Plant property. Recovery wells RW-1 and RW-3 are located in this area.

2.3 Organic Constituents

The laboratory provided organic constituent being utilized to assess plume migration at the Plant is benzene. The NMAC regulation 20.6.2.3103 (A) has established a Human Health Standard of 0.01 mg/L (10 micrograms per liter [$\mu\text{g/L}$]) for benzene in groundwater containing TDS levels of 10,000 mg/L or less. The trends in benzene concentrations over the last 10 years are summarized in the following table. Trends

shown in parentheses were those evaluated by a previous consultant in 2012. It is assumed the previous consultant used complete historical data for the trend analysis; therefore, some shifts in trends may be artificial.

Organic Concentration Trends

Monitor Well	Benzene Concentration Trend
ACW-1	↑ (↔)
ACW-2A	↓ (↓)
ACW-3(RW)	(NS)(↔)
ACW-4	↑ (↔)
ACW-5	↔ (↔)
ACW-6	↓ (↓)
ACW-7	↑ (↑)
ACW-8(RW)	NS(↔)
ACW-9	↑ (↔)
ACW-10	↑ (↑)
ACW-11	↓ (↔)
ACW-12	↑ (↔)
ACW-13	↔ (↔)
ACW-14	↔ (↔)
ACW-15	↔ (↔)

Key: ND denotes constituent not detected during the GMP, ↔ denotes no observable trend, ↓ denotes a decreasing trend, ↑ denotes an increasing trend
RW – System Recovery Well
NS – Not Sampled

(↔) (↑) (↓) – consultant observed trends in 2012

Note: Recovery wells ACW-3 and ACW-8 were not sampled in 2012 because they were not in operation during the 4th quarter sampling event and the submersible pumps installed within these wells precluded purging/sampling by other means.

In general, these trends indicate the overall levels of benzene are decreasing in three wells, increasing in six wells, and have no observable trend, or are stable, in four wells. The wells and their overall trends for benzene levels can be grouped as follows:

Monitoring Wells with Decreasing Overall Organic Levels

ACW-2A ACW-6 ACW-11

Monitoring Well with Increasing Overall Organic Levels

ACW -1 ACW-4 ACW-7 ACW-9 ACW-10 ACW-12

Monitoring Wells with No Observable Trend in Overall Organic Levels

ACW-3 ACW-5 ACW-8 ACW-13 ACW-14 ACW-15

Figure 8 presents an isopleth of the benzene concentrations detected in groundwater during the 2013 sampling program. Benzene was detected in seven on-site and six off-site monitoring/recovery wells. Concentrations of benzene exceeding the New Mexico Water Quality Control Commission (NMWQCC) groundwater standard for benzene of 10 µg/L were observed in the groundwater samples collected from on-site monitoring wells ACW-4 (99.1 µg/L) and ENSR-3 (30.2 µg/L), and off-site monitoring well ACW-7 (34.3 µg/L). Recovery wells RW-1 and RW-3 are located in this area for the purpose of capturing this impacted groundwater. These recovery wells are located hydraulically up-gradient of ACW-7.

3. Groundwater Remediation System

To date, EPNG has installed two groundwater recovery wells to mitigate impacts to the groundwater. These wells are identified as RW-1 and RW-2, and the locations of these wells are shown on Figure 2. Due to chronic scaling problems that occurred within recovery well RW-1, monitoring well ENSR-2 was tested as a recovery well in 2000 and operated intermittently as a replacement well for RW-1 in 2001 and 2002. ENSR-2 was permitted as a stand-alone recovery well on January 27, 2003. In February 2011, EPNG submitted an application to the New Mexico Office of the State Engineer (NMOSE) for a permit to plug and abandon groundwater recovery well ENSR-2, and drill a replacement recovery well (RW-3) because recovery well ENSR-2 was inoperable due to the submersible pump becoming stuck and irretrievable. In August 2011, the NMOSE issued EPNG a permit to plug/abandon recovery well ENSR-2 and drill/install recovery well RW-3 (Permit Number CP-37 POD13). These activities were conducted on May 16-17, 2012. RW-3 is not currently operational. RW-3 is located on Plant property near to RW-1 in an area which is considered the source location of

the brine and hydrocarbon impacts to groundwater. Recovery well RW-2 is located hydraulically downgradient to recovery wells RW-1 and RW-3, and is approximately 780 feet east of the Plant property boundary. Program monitoring wells ACW-8 and ACW-3 was pilot tested as groundwater recovery wells in April and June 2005, respectively. These two wells were permitted and configured as permanent recovery wells in October 2005.

EPNG has installed below-grade pipelines which connect all of the groundwater recovery wells to a Class II water disposal well (Shell State #13 SWD) located immediately north of the Plant in the northwest quarter (NW/4), of the southwest quarter (SW/4), of Section 32, Township 23 South, Range 37 East. This well, identified as the Shell State #13 SWD, was approved for disposal by NMOCD on October 23, 1979 and has a perforated injection interval of 3,866 to 3,982 feet below ground level. This injection well is currently owned and operated by WRI. It should be noted that in May 2012, down hole scale buildup rendered the Shell State #13 SWD injection well unusable and groundwater remediation/recovery activities were halted. The plugging was cleared by a work over in the second quarter of 2013. Investigations have been conducted on the cause of the scaling. The current line of reasoning suggests that scaling of the injection well is due to mixing of recovered groundwater from two endpoints: one has high (microbial inhibiting) TDS, elevated hydrocarbons, and high sulfate; the key feature of the other groundwater type is low to moderate TDS. The blending of the two in the piping and injection system dilutes the TDS, stimulating the production of iron sulfides and biofilm through a reaction between sulfate and hydrocarbons via sulfate reducing microorganisms. Managing the fouling issue can be performed in several ways and an analysis of these options is ongoing. Focusing on the hydrocarbons provides the most feasible options, such as activated carbon filtration, air stripping, as well as others. Also worth consideration is storing recovered groundwater in tanks to allow sulfate reactions to proceed to completion before filtration and injection.

Continuous groundwater recovery began from recovery well RW-1 in October 1999, RW-2 in January 2000, ENSR-2 in August 2000, and ACW-3 and ACW-8 in October 2005. Recovery well RW-3 was drilled/installed in May 2012 but has not been operated. Table 3 provides a summary of the volumes of groundwater pumped from each of these wells in 2012. Groundwater recoveries from recovery wells RW-1, RW-2, ENSR-2, ACW-3 and ACW-8 in calendar year 2013 totaled 0.0 gallons. This total

volume is equivalent to 0.0 acre-feet of water. EPNG is permitted by the New Mexico State Engineers Office to withdraw a total of 125 acre feet per year from the following sources:

- 35 acre feet per year from RW-1, ENSR-2, and RW-3 effective June 1997
- 35 acre feet per year from RW-2 effective June 1997
- 20 acre feet per year from ACW-3 effective October 2005
- 35 acre feet per year from ACW-8 effective October 2005

A summary of the amount of groundwater recovered from each of the wells is presented in Table 3. This table presents the total number of gallons recovered per well per year. In addition, the total amount of water recovered per year is presented in gallons and in acre-feet.

4. Conclusions

Based upon a review of the data presented herein, ARCADIS-US has developed the following conclusions:

- Groundwater in the Plant area occurs within an unconfined groundwater bearing unit with the top of saturation occurring at approximately 100 feet BGL. The base of this groundwater system occurs at approximately 170 feet BGL, resting unconformably on Triassic age sediments.
- The groundwater elevations have shown little fluctuation since EPNG's investigation began in 1989.
- Groundwater flow direction at the Plant is and has been consistently flowing from the northwest to the southeast (S46°E). The hydraulic gradient is approximately 0.0023 feet per foot. The potentiometric surface

shows an area of apparent drawdown within the area of ACW-4, but this is thought to be an error in the top of casing elevation.

- The groundwater beneath a portion of the Plant property has been impacted by chlorides, and to a lesser degree light petroleum hydrocarbons associated with historic site activities. The groundwater analytical data indicates the chloride impacted groundwater has migrated hydraulically downgradient from the Plant property. During 2013, the groundwater samples collected from seven on-site and six off-site monitoring/recovery wells contained levels of chloride that exceed the EPA's Secondary Drinking Water Standard and New Mexico's Domestic Water Supply Standard of 250 mg/L.
- The levels of chloride observed in downgradient monitoring wells ACW-13 (215 mg/L), ACW-14 (154 mg/L) and ACW-15 (170 mg/L) remain below the New Mexico's Domestic Water Supply Standard of 250 mg/L.
- Benzene concentrations detected in the groundwater collected from 3 on-site wells (ACW-4, ENSR-3 and RW-3) exceed the NMWQCC standard of 0.010 mg/L. Benzene impacted groundwater has migrated hydraulically down-gradient from the Plant onto adjacent properties. Benzene concentrations in off-site downgradient wells are below the New Mexico Domestic Water Supply Standard of 0.010 mg/L. with the exception of well ACW-07. Groundwater analytical data suggest natural attenuation mechanisms as well as active groundwater remediation have effectively mitigated further down-gradient migration of the benzene impacted groundwater.

5. Recommendations

Based upon a review of the data contained within this report, the following recommendations are made:

- Restart the groundwater recovery system including RW-3. Remediation efforts should focus on capturing the most highly impacted groundwater. Particular emphasis should be placed upon evaluating vertical variations in brine concentrations which may be present within the groundwater system.
- Due to the apparent anomalous water levels observed in the area of ACW-4, it is recommended all well top of casings be surveyed to confirm an accurate measuring point elevation.
- In an effort to determine the cause of the Shell State #13 SWD scaling, a series of groundwater samples will be collected. The analysis of this water will aid in the determination of the cause of the scale buildup and inform the decision of how to prevent it moving forward.

Tables

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ACW-01	110 to 130	3300.87	02/19/97	106.65	3194.22
			05/07/97	105.59	3195.28
			08/19/97	105.61	3195.26
			10/21/97	105.71	3195.16
			02/24/98	105.62	3195.25
			05/12/98	105.59	3195.28
			08/11/98	105.61	3195.26
			10/20/98	105.67	3195.20
			02/23/99	105.72	3195.15
			05/11/99	105.66	3195.21
			08/11/99	105.68	3195.19
			10/18/99	105.73	3195.14
			02/22/00	105.81	3195.06
			05/09/00	105.90	3194.97
			08/07/00	105.99	3194.88
			10/26/00	106.10	3194.77
			02/20/01	106.19	3194.68
			05/01/01	105.90	3194.97
			08/01/01	105.89	3194.98
			10/22/01	106.05	3194.82
			02/20/02	106.30	3194.57
			04/29/02	106.30	3194.57
			09/24/02	106.04	3194.83
			11/03/02	106.30	3194.57
			03/31/03	106.22	3194.65
			05/20/03	106.41	3194.46
			08/18/03	106.39	3194.48
			11/04/03	106.19	3194.68
			02/25/04	106.19	3194.68
			05/13/04	106.15	3194.72
			08/25/04	106.46	3194.41
			11/09/04	106.57	3194.30
			05/25/05	106.38	3194.49
			08/23/05	106.52	3194.35
			12/12/05	106.56	3194.31
			02/14/06	106.72	3194.15
			05/09/06	106.87	3194.00
			08/23/06	106.89	3193.98
			12/14/06	106.45	3194.42
			03/05/07	106.61	3194.26
			05/16/07	106.58	3194.29
			08/23/07	106.50	3194.37
			11/12/07	106.77	3194.10
			02/20/08	106.50	3194.37
			06/10/08	106.65	3194.22
			08/08/08	106.69	3194.18
			11/17/08	106.64	3194.23
			03/04/09	106.91	3193.96
			05/18/09	106.94	3193.93
			08/27/09	106.90	3193.97
			02/24/10	106.55	3194.32
			06/28/10	106.51	3194.36
			09/20/10	106.49	3194.38
			12/06/10	106.47	3194.40

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ACW-01 (con't)			02/16/11	106.43	3194.44
			05/10/11	106.49	3194.38
			08/16/11	106.35	3194.52
			11/09/11	106.34	3194.53
			02/13/12	106.12	3194.75
			05/07/12	106.20	3194.67
			08/13/12	106.10	3194.77
			11/08/12	106.01	3194.86
			03/01/13	105.85	3195.02
			06/26/13	105.99	3194.88
			10/02/13	105.96	3194.91
ACW-2A	98 to 118	3300.88	12/13/13	105.83	3195.04
			05/12/99	106.00	3194.88
			10/18/99	106.09	3194.79
			05/08/00	107.27	3193.61
			10/26/00	107.51	3193.37
			05/02/01	106.31	3194.57
			10/22/01	106.85	3194.03
			04/30/02	106.82	3194.06
			09/24/02	106.55	3194.33
			11/03/02	107.00	3193.88
			03/31/03	107.04	3193.84
			05/20/03	106.87	3194.01
			08/18/03	107.74	3193.14
			11/04/03	106.57	3194.31
			02/25/04	106.53	3194.35
			05/13/04	106.46	3194.42
			08/25/04	107.67	3193.21
			11/09/04	107.77	3193.11
			02/15/05	107.50	3193.38
			05/25/05	107.47	3193.41
			08/23/05	108.25	3192.63
			12/12/05	107.54	3193.34
			02/14/06	108.75	3192.13
			05/09/06	108.63	3192.25
			08/23/06	107.91	3192.97
			12/14/06	107.18	3193.70
			03/05/07	108.06	3192.82
			05/16/07	108.03	3192.85
			08/23/07	107.18	3193.70
			11/12/07	108.37	3192.51
			02/20/08	108.05	3192.83
			06/10/08	108.26	3192.62
			08/08/08	108.32	3192.56
			11/17/08	108.28	3192.60
			02/27/09	108.28	3192.60
			03/04/09	108.65	3192.23
			05/18/09	108.70	3192.18
			08/27/09	108.28	3192.60
			02/24/10	107.68	3193.20
			06/28/10	107.45	3193.43
			09/20/10	107.87	3193.01
			12/06/10	107.97	3192.91
			02/16/11	107.05	3193.83
			05/10/11	106.70	3194.18
			08/16/11	107.61	3193.27
			11/09/11	107.48	3193.40

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ACW-02A (con't)			02/13/12	106.61	3194.27
			05/07/12	106.64	3194.24
			08/13/12	103.38	3197.50
			11/08/12	106.32	3194.56
			03/01/13	106.33	3194.55
			06/26/13	106.28	3194.60
			10/02/13	106.26	3194.62
ACW-03	112 to 132	3300.34	12/13/13	106.21	3194.67
			05/08/00	105.98	3194.36
			10/26/00	106.21	3194.13
			05/01/01	105.94	3194.40
			10/23/01	106.15	3194.19
			04/30/02	106.30	3194.04
			09/24/02	106.13	3194.21
			11/03/02	106.44	3193.90
			03/31/03	106.31	3194.03
			05/20/03	106.42	3193.92
			08/18/03	106.53	3193.81
			11/03/03	106.19	3194.15
			02/25/04	106.18	3194.16
			05/13/04	106.12	3194.22
			08/25/04	106.61	3193.73
			11/09/04	106.69	3193.65
			02/15/05	106.53	3193.81
			05/23/05	106.68	3193.66
			08/23/05	pumping	NM
			12/12/05	pumping	NM
			02/14/06	pumping	NM
			05/09/06	pumping	NM
			08/23/06	pumping	NM
			12/11/06	pumping	NM
			03/05/07	pumping	NM
			05/16/07	pumping	NM
			08/23/07	pumping	NM
			11/12/07	pumping	NM
			02/20/08	pumping	NM
			06/10/08	pumping	NM
			08/08/08	pumping	NM
			11/18/08	pumping	NM
			03/04/09	pumping	NM
			05/18/09	pumping	NM
			08/27/09	pumping	NM
			02/24/10	pumping	NM
			06/28/10	pumping	NM
			09/20/10	pumping	NM
			12/06/10	pumping	NM
			02/16/11	pumping	NM
			05/10/11	pumping	NM
			08/16/11	pumping	NM
			11/09/11	pumping	NM
			02/13/12	106.52	3193.82
			05/07/12	pumping	NM
			08/13/12	pumping	NM
			11/05/12	140.00	3160.34
			03/01/13	NM	NM
			06/26/13	95.59	3204.75
			10/02/13	NM	NM
			12/13/13	NM	NM

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ACW-04	154 to 169	3299.48	05/08/00	113.57	3185.91
			10/26/00	113.25	3186.23
			05/02/01	106.00	3193.48
			10/22/01	107.99	3191.49
			04/30/02	107.88	3191.60
			09/24/02	107.71	3191.77
			11/02/02	107.90	3191.58
			03/31/03	107.90	3191.58
			05/20/03	107.76	3191.72
			08/18/03	113.13	3186.35
			11/04/03	107.34	3192.14
			02/25/04	107.18	3192.30
			05/13/04	107.07	3192.41
			08/25/04	110.90	3188.58
			11/09/04	110.51	3188.97
			02/15/05	109.64	3189.84
			05/25/05	109.40	3190.08
			08/23/05	112.98	3186.50
			12/12/05	107.43	3192.05
			02/14/06	113.71	3185.77
			05/09/06	112.42	3187.06
			08/23/06	107.80	3191.68
			12/11/06	107.16	3192.32
			03/05/07	113.32	3186.16
			05/16/07	113.30	3186.18
			08/23/07	107.16	3192.32
			11/12/07	113.48	3186.00
			02/20/08	112.34	3187.14
			06/10/08	112.15	3187.33
			08/08/08	112.09	3187.39
			11/17/08	111.38	3188.10
			03/04/09	112.30	3187.18
			05/18/09	112.21	3187.27
			08/27/09	109.86	3189.62
			02/24/10	108.71	3190.77
			06/28/10	107.62	3191.86
			09/20/10	110.23	3189.25
			12/06/10	110.77	3188.71
			02/16/11	107.45	3192.03
			05/10/11	107.06	3192.42
			08/16/11	110.02	3189.46
			11/09/11	109.80	3189.68
			02/13/12	106.80	3192.68
			05/07/12	106.88	3192.60
			08/13/12	106.53	3192.95
			11/08/12	106.46	3193.02
			03/01/13	107.99	3191.49
			06/26/13	108.13	3191.35
			10/02/13	108.01	3191.47
			12/13/13	107.95	3191.53

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ACW-05	105 to 115	3294.75	02/19/97	103.08	3191.67
			05/07/97	103.06	3191.69
			08/19/97	103.07	3191.68
			10/22/97	103.06	3191.69
			02/24/98	103.10	3191.65
			05/13/98	103.10	3191.65
			08/11/98	103.15	3191.60
			10/21/98	103.22	3191.53
			02/23/99	103.26	3191.49
			05/13/99	103.17	3191.58
			08/11/99	103.17	3191.58
			10/21/99	103.25	3191.50
			02/22/00	103.30	3191.45
			05/10/00	103.32	3191.43
			08/07/00	103.40	3191.35
			10/26/00	103.50	3191.25
			02/20/01	103.62	3191.13
			05/06/01	103.57	3191.18
			08/01/01	103.46	3191.29
			10/24/01	103.70	3191.05
			02/20/02	103.70	3191.05
			04/30/02	103.70	3191.05
			09/24/02	103.57	3191.18
			11/06/02	103.81	3190.94
			03/31/03	103.72	3191.03
			05/20/03	103.85	3190.90
			08/18/03	103.79	3190.96
			11/05/03	103.70	3191.05
			02/25/04	103.77	3190.98
			05/13/04	103.73	3191.02
			08/25/04	103.88	3190.87
			11/12/04	103.97	3190.78
			02/15/05	103.88	3190.87
			05/25/05	103.93	3190.82
			08/23/05	103.92	3190.83
			12/13/05	103.90	3190.85
			02/14/06	103.99	3190.76
			05/09/06	103.98	3190.77
			08/23/06	104.15	3190.60
			12/12/06	104.11	3190.64
			03/07/07	104.11	3190.64
			05/16/07	104.09	3190.66
			08/23/07	104.18	3190.57
			11/14/07	104.11	3190.64
			02/20/08	103.97	3190.78
			06/10/08	104.17	3190.58
			08/08/08	104.19	3190.56
			11/18/08	104.12	3190.63
			03/04/09	104.25	3190.50
			05/18/09	104.24	3190.51
			08/27/09	102.30	3192.45
			02/18/10	104.16	3190.59
			06/28/10	104.16	3190.59
			09/20/10	104.20	3190.55
			12/06/10	104.18	3190.57

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ACW-05 (con't)			02/16/11	104.24	3190.51
			05/10/11	104.00	3190.75
			08/16/11	104.04	3190.71
			11/09/11	104.05	3190.70
			02/13/12	103.95	3190.80
			05/07/12	104.05	3190.70
			08/13/12	103.85	3190.90
			11/07/12	103.75	3191.00
			03/01/13	103.62	3191.13
			06/26/13	103.68	3191.07
			10/02/13	103.63	3191.12
ACW-06	110 to 120	3300.53	12/13/13	103.57	3191.18
			02/19/97	107.53	3193.00
			05/08/97	107.50	3193.03
			08/18/97	107.51	3193.02
			10/22/97	107.57	3192.96
			02/24/98	107.54	3192.99
			05/13/98	107.55	3192.98
			08/11/98	107.57	3192.96
			10/21/98	107.70	3192.83
			02/23/99	107.68	3192.85
			05/13/99	107.62	3192.91
			08/11/99	107.60	3192.93
			10/21/99	107.68	3192.85
			02/22/00	107.72	3192.81
			05/10/00	107.75	3192.78
			08/07/00	107.84	3192.69
			10/26/00	107.90	3192.63
			02/20/01	108.00	3192.53
			05/06/01	107.95	3192.58
			08/01/01	107.87	3192.66
			10/24/01	108.09	3192.44
			02/20/02	108.07	3192.46
			04/29/02	108.08	3192.45
			09/24/02	107.94	3192.59
			11/04/02	108.16	3192.37
			03/31/03	108.08	3192.45
			05/20/03	108.20	3192.33
			08/18/03	108.08	3192.45
			11/05/03	108.15	3192.38
			02/25/04	108.12	3192.41
			05/13/04	108.09	3192.44
			08/25/04	108.24	3192.29
			11/12/04	108.28	3192.25
			02/15/05	108.24	3192.29
			05/25/05	108.26	3192.27
			08/23/05	108.27	3192.26
			12/13/05	108.30	3192.23
			02/14/06	108.41	3192.12
			05/09/06	108.47	3192.06
			08/23/06	108.62	3191.91
			12/12/06	108.43	3192.10
			03/07/07	108.45	3192.08
			05/16/07	108.41	3192.12
			08/23/07	108.45	3192.08
			11/13/07	108.50	3192.03
			02/20/08	108.35	3192.18
ACW-06 (con't)	110 to 120	3300.53	06/10/08	108.30	3192.23
			08/08/08	108.53	3192.00
			11/18/08	108.51	3192.02

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ACW-06 (con't)			03/04/09	108.61	3191.92
			05/18/09	108.63	3191.90
			08/27/09	108.64	3191.89
			02/18/10	108.44	3192.09
			06/28/10	108.43	3192.10
			09/20/10	108.44	3192.09
			12/06/10	108.37	3192.16
			02/16/11	108.40	3192.13
			05/10/11	108.23	3192.30
			08/16/11	108.26	3192.27
			11/09/11	108.27	3192.26
			02/13/12	108.10	3192.43
			05/07/12	108.18	3192.35
			08/13/12	108.02	3192.51
			11/07/12	107.96	3192.57
			03/01/13	107.84	3192.69
			06/26/13	107.42	3193.11
ACW-07	105 to 115	3295.36	10/02/13	107.84	3192.69
			12/13/13	107.81	3192.72
			05/12/99	102.62	3192.74
			10/21/99	102.75	3192.61
			05/10/00	102.92	3192.44
			10/26/00	103.20	3192.16
			05/06/01	103.08	3192.28
			10/24/01	103.35	3192.01
			04/30/02	103.35	3192.01
			09/24/02	103.21	3192.15
			11/05/02	103.45	3191.91
			03/31/03	103.36	3192.00
			05/20/03	103.47	3191.89
			08/18/03	103.42	3191.94
			11/05/03	103.25	3192.11
			02/25/04	103.28	3192.08
			05/13/04	103.21	3192.15
			08/25/04	103.57	3191.79
			11/12/04	103.71	3191.65
			02/15/05	103.55	3191.81
			05/24/05	103.65	3191.71
			08/23/05	103.70	3191.66
			12/12/05	103.82	3191.54
			02/14/06	103.92	3191.44
			05/09/06	104.00	3191.36
			08/23/06	104.11	3191.25
			12/12/06	103.91	3191.45
			03/07/07	104.02	3191.34
			05/16/07	104.00	3191.36
			08/23/07	104.00	3191.36
			11/13/07	103.92	3191.44
			02/20/08	103.71	3191.65
			06/10/08	104.04	3191.32
			08/08/08	104.11	3191.25
			11/18/08	104.03	3191.33
			03/04/09	104.22	3191.14
			05/18/09	104.24	3191.12
			08/27/09	104.23	3191.13
			02/19/10	103.89	3191.47
			06/28/10	103.88	3191.48
			09/20/10	104.00	3191.36
			12/06/10	103.94	3191.42

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ACW-07 (con't)			02/16/11	103.91	3191.45
			05/10/11	103.57	3191.79
			08/16/11	103.73	3191.63
			11/09/11	103.63	3191.73
			02/13/12	103.47	3191.89
			05/07/12	103.59	3191.77
			08/13/12	103.26	3192.10
			11/07/12	103.15	3192.21
			03/01/13	102.93	3192.43
			06/26/13	103.08	3192.28
			10/02/13	102.95	3192.41
			12/13/13	102.91	3192.45
ACW-08	140 to 173	3297.27	05/11/99	104.17	3193.10
			10/18/99	104.29	3192.98
			05/09/00	104.40	3192.87
			10/26/00	104.64	3192.63
			05/01/01	104.48	3192.79
			10/24/01	104.60	3192.67
			04/29/02	104.81	3192.46
			09/24/02	104.51	3192.76
			11/04/02	104.72	3192.55
			03/31/03	104.71	3192.56
			05/20/03	104.85	3192.42
			08/18/03	104.82	3192.45
			11/03/03	104.62	3192.65
			02/25/04	104.70	3192.57
			05/13/04	104.62	3192.65
			08/25/04	104.92	3192.35
			11/09/04	104.97	3192.30
			02/15/05	104.91	3192.36
			05/24/05	pumping	NM
			08/23/05	pumping	NM
			12/12/05	pumping	NM
			02/14/06	pumping	NM
			05/09/06	pumping	NM
			08/23/06	pumping	NM
			12/11/06	pumping	NM
			03/06/07	pumping	NM
			05/16/07	pumping	NM
			08/23/07	pumping	NM
			11/12/07	pumping	NM
			02/20/08	pumping	NM
			06/10/08	pumping	NM
			08/08/08	pumping	NM
			11/18/08	pumping	NM
			03/04/09	pumping	NM
			05/18/09	pumping	NM
			08/27/09	pumping	NM
			02/24/10	pumping	NM
			06/28/10	pumping	NM
			09/20/10	pumping	NM
			12/06/10	pumping	NM
			02/16/11	pumping	NM
			05/10/11	pumping	NM
			08/16/11	pumping	NM
			11/09/11	pumping	NM
			02/13/12	pumping	NM
			05/07/12	pumping	NM
			08/13/12	pumping	NM
			11/05/12	164.45	3132.82

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ACW-08 (cont.)	140 to 173	3297.27	03/01/13	NM	NM
			06/26/13	104.20	3193.07
			10/02/13	94.16	3203.11
			12/13/13		3297.27
ACW-09	140 to 160	3302.47	02/19/97	110.24	3192.23
			05/08/97	110.25	3192.22
			08/19/97	110.26	3192.21
			10/23/97	110.28	3192.19
			02/24/98	110.29	3192.18
			05/13/98	110.30	3192.17
			08/11/98	110.32	3192.15
			10/21/98	110.40	3192.07
			02/23/99	110.54	3191.93
			05/13/99	110.45	3192.02
			08/11/99	110.45	3192.02
			10/22/99	110.50	3191.97
			02/22/00	111.18	3191.29
			05/12/00	111.89	3190.58
			08/07/00	111.22	3191.25
			10/26/00	112.20	3190.27
			02/20/01	112.41	3190.06
			05/04/01	110.85	3191.62
			08/01/01	110.70	3191.77
			10/25/01	112.17	3190.30
			02/20/02	111.98	3190.49
			05/01/02	111.29	3191.18
			09/24/02	111.08	3191.39
			11/06/02	112.11	3190.36
			03/31/03	111.56	3190.91
			05/20/03	111.90	3190.57
			08/18/03	111.17	3191.30
			11/06/03	110.99	3191.48
			02/25/04	111.01	3191.46
			05/13/04	110.99	3191.48
			08/25/04	112.52	3189.95
			11/10/04	112.42	3190.05
			02/15/05	112.16	3190.31
			05/25/05	112.49	3189.98
			08/23/05	111.81	3190.66
			12/14/05	112.46	3190.01
			02/14/06	111.38	3191.09
			05/09/06	111.36	3191.11
			08/23/06	112.58	3189.89
			12/13/06	112.22	3190.25
			03/07/07	112.89	3189.58
			05/16/07	112.85	3189.62
			08/23/07	112.12	3190.35
			11/15/07	111.43	3191.04
			02/20/08	111.27	3191.20
			06/10/08	111.84	3190.63
			08/08/08	112.03	3190.44
			11/19/08	112.90	3189.57
			03/04/09	112.34	3190.13
			05/18/09	112.24	3190.23
			08/27/09	112.92	3189.55
			02/24/10	112.11	3190.36
			06/28/10	112.80	3189.67
			09/20/10	112.60	3189.87
			12/06/10	112.03	3190.44

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ACW-09 (con't)			02/16/11	111.71	3190.76
			05/10/11	110.37	3192.10
			08/16/11	112.19	3190.28
			11/09/11	111.80	3190.67
			02/13/12	112.08	3190.39
			05/07/12	112.33	3190.14
			08/13/12	111.09	3191.38
			11/07/12	111.01	3191.46
			03/01/13	110.73	3191.74
			06/26/13	110.93	3191.54
			10/02/13	110.81	3191.66
ACW-10	140 to 160	3297.57	12/13/13	110.72	3191.75
			02/19/97	106.31	3191.26
			05/08/97	106.32	3191.25
			08/19/97	106.33	3191.24
			10/23/97	106.35	3191.22
			02/24/98	106.38	3191.19
			05/14/98	106.38	3191.19
			08/11/98	106.41	3191.16
			10/22/98	106.54	3191.03
			02/23/99	106.52	3191.05
			05/14/99	106.45	3191.12
			08/11/99	106.47	3191.10
			10/22/99	106.52	3191.05
			02/22/00	106.39	3191.18
			05/12/00	106.63	3190.94
			08/07/00	106.77	3190.80
			10/26/00	106.89	3190.68
			02/20/01	106.99	3190.58
			05/06/01	106.82	3190.75
			08/01/01	106.76	3190.81
			10/25/01	107.01	3190.56
			02/20/02	107.08	3190.49
			05/01/02	107.05	3190.52
			09/24/02	106.91	3190.66
			11/08/02	107.09	3190.48
			03/31/03	107.07	3190.50
			05/20/03	107.17	3190.40
			08/18/03	107.09	3190.48
			11/06/03	107.08	3190.49
			02/25/04	107.02	3190.55
			05/13/04	106.98	3190.59
			08/25/04	107.21	3190.36
			11/11/04	107.32	3190.25
			02/15/05	107.20	3190.37
			05/25/05	107.28	3190.29
			08/23/05	107.23	3190.34
			12/14/05	107.36	3190.21
			02/14/06	107.21	3190.36
			05/09/06	107.20	3190.37
			08/23/06	107.37	3190.20
			12/13/06	107.35	3190.22
			03/08/07	107.38	3190.19
			05/16/07	107.37	3190.20
			08/23/07	107.47	3190.10
			11/14/07	107.32	3190.25
			02/20/08	107.18	3190.39
			06/10/08	107.42	3190.15
			08/08/08	107.44	3190.13

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ACW-10 (con't)			11/19/08	107.40	3190.17
			03/04/09	107.51	3190.06
			05/18/09	107.50	3190.07
			08/27/09	107.56	3190.01
			02/19/10	107.42	3190.15
			06/28/10	107.44	3190.13
			09/20/10	107.46	3190.11
			12/06/10	107.42	3190.15
			02/16/11	107.51	3190.06
			05/10/11	107.30	3190.27
			08/16/11	107.32	3190.25
			11/09/11	107.30	3190.27
			02/13/12	107.24	3190.33
			05/07/12	107.34	3190.23
			08/13/12	107.08	3190.49
			11/06/12	107.00	3190.57
			03/01/13	106.83	3190.74
			06/26/13	106.96	3190.61
ACW-11	140 to 160	3299.33	10/02/13	106.83	3190.74
			12/13/13	106.78	3190.79
			02/19/97	106.01	3193.32
			05/06/97	105.95	3193.38
			08/19/97	106.00	3193.33
			10/21/97	106.02	3193.31
			10/20/98	106.17	3193.16
			05/12/98	106.00	3193.33
			08/11/98	106.07	3193.26
			10/20/98	106.17	3193.16
			02/23/99	106.20	3193.13
			05/12/99	106.07	3193.26
			08/11/99	106.15	3193.18
			10/20/99	106.16	3193.17
			02/22/00	106.27	3193.06
			05/09/00	106.31	3193.02
			08/07/00	106.54	3192.79
			10/26/00	106.65	3192.68
			02/20/01	106.70	3192.63
			05/01/01	106.45	3192.88
			08/01/01	106.40	3192.93
			10/23/01	106.57	3192.76
			02/20/02	106.79	3192.54
			04/29/02	106.78	3192.55
			09/24/02	106.60	3192.73
			11/06/02	106.80	3192.53
			03/31/03	106.75	3192.58
			05/20/03	106.92	3192.41
			08/18/03	106.85	3192.48
			11/04/03	106.72	3192.61
			02/25/04	106.76	3192.57
			05/13/04	106.69	3192.64
			08/25/04	106.93	3192.40
			11/10/04	106.92	3192.41
			02/15/05	106.91	3192.42
			05/23/05	107.01	3192.32
			08/23/05	107.11	3192.22
			12/13/05	107.20	3192.13
			02/14/06	107.39	3191.94
			05/09/06	107.40	3191.93
			08/23/06	107.44	3191.89
			12/13/06	107.32	3192.01

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ACW-11 (con't)			03/07/07	107.44	3191.89
			05/16/07	107.42	3191.91
			08/23/07	107.47	3191.86
			11/13/07	107.36	3191.97
			02/20/08	107.12	3192.21
			06/10/08	107.42	3191.91
			08/08/08	107.47	3191.86
			11/18/08	107.43	3191.90
			03/04/09	107.58	3191.75
			05/18/09	107.58	3191.75
			08/27/09	107.54	3191.79
			02/25/10	107.17	3192.16
			06/28/10	107.22	3192.11
			09/20/10	107.35	3191.98
			12/06/10	107.31	3192.02
			02/16/11	107.42	3191.91
			05/10/11	107.02	3192.31
			08/16/11	107.04	3192.29
			11/09/11	107.00	3192.33
			02/13/12	106.89	3192.44
			05/07/12	107.00	3192.33
			08/13/12	106.64	3192.69
			11/07/12	106.57	3192.76
			03/01/13	106.38	3192.95
			06/26/13	106.52	3192.81
			10/02/13	106.49	3192.84
			12/13/13	106.48	3192.85
ACW-12	150 to 170	3299.56	02/19/97	109.32	3190.24
			05/08/97	109.32	3190.24
			08/20/97	99.29	3200.27
			10/23/97	109.39	3190.17
			02/24/98	109.38	3190.18
			05/14/98	109.35	3190.21
			08/11/98	109.40	3190.16
			10/22/98	109.51	3190.05
			02/23/99	109.54	3190.02
			05/14/99	109.44	3190.12
			08/11/99	109.54	3190.02
			10/22/99	109.52	3190.04
			02/22/00	109.50	3190.06
			05/11/00	109.57	3189.99
			08/07/00	109.65	3189.91
			10/26/00	109.78	3189.78
			02/20/01	109.90	3189.66
			05/03/01	109.75	3189.81
			08/01/01	109.76	3189.80
			10/25/01	109.99	3189.57
			02/20/02	109.97	3189.59
			05/01/02	109.98	3189.58
			09/24/02	109.77	3189.79
			11/07/02	109.91	3189.65
			03/31/03	109.99	3189.57
			05/20/03	110.13	3189.43
			08/18/03	110.03	3189.53
			11/06/03	110.02	3189.54
			02/25/04	110.00	3189.56
			05/13/04	109.98	3189.58
			08/25/04	110.13	3189.43
			11/11/04	110.20	3189.36

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ACW-12 (con't)			02/15/05	110.12	3189.44
			05/25/05	110.17	3189.39
			08/23/05	110.13	3189.43
			12/14/05	110.21	3189.35
			02/14/06	110.11	3189.45
			05/09/06	110.08	3189.48
			08/23/06	110.25	3189.31
			12/12/06	110.17	3189.39
			03/08/07	110.28	3189.28
			05/16/07	110.25	3189.31
			08/23/07	110.36	3189.20
			11/14/07	110.31	3189.25
			02/20/08	110.11	3189.45
			06/10/08	110.33	3189.23
			08/08/08	110.35	3189.21
			11/19/08	110.34	3189.22
			03/04/09	110.36	3189.20
			05/18/09	110.39	3189.17
			08/27/09	110.43	3189.13
			02/24/10	110.34	3189.22
			06/28/10	110.40	3189.16
			09/20/10	110.38	3189.18
			12/06/10	110.35	3189.21
			02/16/11	110.47	3189.09
			05/10/11	110.31	3189.25
			08/16/11	110.30	3189.26
			11/09/11	110.30	3189.26
			02/13/12	110.25	3189.31
			05/07/12	110.33	3189.23
			08/13/12	110.13	3189.43
			11/06/12	110.04	3189.52
			03/01/13	109.85	3189.71
			06/26/13	110.02	3189.54
			10/02/13	109.89	3189.67
			12/13/13	109.83	3189.73
ACW-13	153 to 173	3289.46	02/20/97	99.28	3190.18
			05/08/97	99.29	3190.17
			08/20/97	99.29	3190.17
			10/23/97	99.27	3190.19
			02/24/98	99.31	3190.15
			05/14/98	99.31	3190.15
			08/11/98	99.36	3190.10
			10/22/98	99.40	3190.06
			02/23/99	99.45	3190.01
			05/14/99	99.38	3190.08
			08/11/99	99.44	3190.02
			10/22/99	99.44	3190.02
			02/23/00	99.48	3189.98
			05/11/00	99.47	3189.99
			08/07/00	99.53	3189.93
			10/26/00	99.50	3189.96
			02/20/01	99.65	3189.81
			05/06/01	99.62	3189.84
			08/01/01	99.61	3189.85
			10/25/01	99.61	3189.85
			02/20/02	99.72	3189.74
			05/01/02	99.73	3189.73
			09/24/02	99.61	3189.85
			11/07/02	99.80	3189.66

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ACW-13 (con't)			03/28/03	99.79	3189.67
			05/19/03	99.83	3189.63
			08/19/03	99.83	3189.63
			11/06/03	99.86	3189.60
			02/26/04	99.84	3189.62
			05/12/04	99.81	3189.65
			08/24/04	99.87	3189.59
			11/11/04	99.94	3189.52
			02/14/05	99.84	3189.62
			05/24/05	99.83	3189.63
			08/22/05	99.84	3189.62
			12/15/05	99.90	3189.56
			02/13/06	99.83	3189.63
			05/08/06	99.86	3189.60
			08/22/06	100.03	3189.43
			12/11/06	99.99	3189.47
			03/08/07	99.95	3189.51
			05/15/07	100.02	3189.44
			08/22/07	100.02	3189.44
			11/15/07	100.01	3189.45
			02/19/08	99.94	3189.52
			06/09/08	100.04	3189.42
			08/09/08	100.02	3189.44
			11/20/08	100.10	3189.36
			03/03/09	100.04	3189.42
			05/19/09	100.04	3189.42
			08/27/09	100.98	3188.48
			02/19/10	100.04	3189.42
			06/28/10	100.09	3189.37
			09/20/10	100.07	3189.39
			12/06/10	100.01	3189.45
			02/16/11	100.10	3189.36
			05/10/11	100.03	3189.43
			08/16/11	99.97	3189.49
			11/09/11	100.00	3189.46
			02/13/12	99.97	3189.49
			05/07/12	99.95	3189.51
			08/13/12	99.89	3189.57
			11/06/12	99.85	3189.61
			03/01/13	99.70	3189.76
			06/26/13	99.83	3189.63
			10/02/13	99.78	3189.68
			12/13/13	100.25	3,189.21
ACW-14	157 to 177	3291.18	02/19/97	NM	NM
			05/06/97	NM	NM
			08/20/97	100.41	3190.77
			10/22/97	100.38	3190.80
			02/24/98	100.47	3190.71
			05/13/98	100.42	3190.76
			08/11/98	100.47	3190.71
			10/21/98	100.54	3190.64
			02/23/99	100.57	3190.61
			05/13/99	100.49	3190.69
			08/09/99	100.49	3190.69
			10/21/99	100.55	3190.63
			02/22/00	100.56	3190.62
			05/10/00	100.52	3190.66
			08/07/00	100.61	3190.57
			10/26/00	100.62	3190.56

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ACW-14 (con't)			02/20/01	100.75	3190.43
			05/03/01	100.72	3190.46
			08/01/01	100.75	3190.43
			10/24/01	100.75	3190.43
			02/19/02	100.80	3190.38
			04/30/02	100.80	3190.38
			09/24/02	100.71	3190.47
			11/04/02	100.80	3190.38
			03/26/03	100.89	3190.29
			05/20/03	100.97	3190.21
			08/20/03	100.95	3190.23
			11/05/03	100.96	3190.22
			02/26/04	100.94	3190.24
			05/12/04	100.86	3190.32
			08/24/04	100.93	3190.25
			11/12/04	100.99	3190.19
			02/14/05	100.94	3190.24
			05/24/05	100.93	3190.25
			08/22/05	100.94	3190.24
			12/14/05	101.01	3190.17
			02/13/06	100.91	3190.27
			05/09/06	101.05	3190.13
			08/22/06	101.15	3190.03
			12/11/06	101.06	3190.12
			03/07/07	101.06	3190.12
			05/15/07	101.11	3190.07
			08/22/07	101.12	3190.06
			11/14/07	101.15	3190.03
			02/19/08	101.02	3190.16
			06/09/08	101.04	3190.14
			08/09/08	101.13	3190.05
			11/19/08	101.14	3190.04
			03/03/09	101.12	3190.06
			05/19/09	101.15	3190.03
			08/27/09	101.22	3189.96
			02/18/10	101.13	3190.05
			06/28/10	101.15	3190.03
			09/20/10	101.14	3190.04
			12/06/10	101.13	3190.05
			02/16/11	101.16	3190.02
			05/10/11	101.05	3190.13
			08/16/11	100.99	3190.19
			11/09/11	101.04	3190.14
			02/13/12	100.98	3190.20
			05/07/12	101.00	3190.18
			08/13/12	100.95	3190.23
			11/07/12	100.87	3190.31
			03/01/13	100.73	3190.45
			06/26/13	100.84	3190.34
			10/02/13	101.19	3189.99
			12/13/13	101.16	3,190.02

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ACW-15	150 to 170	3290.54	10/23/99	102.39	3188.15
			02/23/00	102.41	3188.13
			05/11/00	102.42	3188.12
			08/07/00	102.45	3188.09
			10/26/00	102.42	3188.12
			02/20/01	102.55	3187.99
			05/06/01	102.51	3188.03
			08/01/01	102.58	3187.96
			10/25/01	102.56	3187.98
			02/19/02	102.57	3187.97
			05/02/02	102.65	3187.89
			09/24/02	102.55	3187.99
			11/07/02	102.68	3187.86
			03/28/03	102.74	3187.80
			05/19/03	102.72	3187.82
			08/19/03	102.75	3187.79
			11/07/03	102.78	3187.76
			02/26/04	102.75	3187.79
			05/12/04	102.76	3187.78
			08/24/04	102.78	3187.76
			11/11/04	102.75	3187.79
			02/14/05	102.75	3187.79
			05/24/05	102.75	3187.79
			08/22/05	102.76	3187.78
			12/13/05	102.78	3187.76
			02/13/06	102.76	3187.78
			05/08/06	102.79	3187.75
			08/22/06	102.91	3187.63
			12/11/06	102.89	3187.65
			03/08/07	102.79	3187.75
			05/15/07	102.87	3187.67
			08/22/07	102.91	3187.63
			11/15/07	102.83	3187.71
			02/19/08	102.84	3187.70
			06/09/08	102.93	3187.61
			08/09/08	102.89	3187.65
			11/19/08	102.95	3187.59
			03/03/09	103.05	3187.49
			05/19/09	102.89	3187.65
			08/27/09	102.95	3187.59
			02/17/10	102.92	3187.62
			06/28/10	103.00	3187.54
			09/20/10	102.99	3187.55
			12/06/10	102.92	3187.62
			02/16/11	102.99	3187.55
			05/10/11	102.51	3188.03
			08/16/11	102.89	3187.65
			11/09/11	102.91	3187.63
			02/13/12	102.87	3187.67
			05/07/12	102.95	3187.59
			08/13/12	102.86	3187.68
			11/05/12	102.82	3187.72
			03/01/13	102.64	3187.90
			06/26/13	102.80	3187.74
			10/02/13	102.67	3187.87
			12/13/13	102.62	3187.92

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ENSR-1	123 to 148	3305.40	02/25/04	108.63	3,196.77
			05/13/04	108.60	3,196.80
			08/25/04	108.57	3,196.83
			11/10/04	108.40	3,197.00
			12/13/05	108.33	3,197.07
			02/14/06	108.45	3,196.95
			05/09/06	108.61	3,196.79
			08/23/06	108.71	3,196.69
			12/15/06	108.50	3,196.90
			03/06/07	108.52	3,196.88
			05/16/07	108.52	3,196.88
			08/23/07	108.61	3,196.79
			11/13/07	108.54	3,196.86
			02/20/08	108.42	3,196.98
			06/10/08	108.58	3,196.82
			08/08/08	108.63	3,196.77
			11/18/08	108.75	3,196.65
			03/04/09	108.75	3,196.65
			05/18/09	108.82	3,196.58
			08/27/09	108.78	3,196.62
			02/25/10	108.38	3,197.02
			06/28/10	108.35	3,197.05
			09/20/10	108.39	3,197.01
			12/06/10	108.44	3,196.96
			02/16/11	108.49	3,196.91
			05/10/11	108.24	3,197.16
			08/16/11	108.02	3,197.38
			11/09/11	108.15	3,197.25
			02/13/12	108.25	3,197.15
			05/07/12	108.45	3,196.95
			08/13/12	108.33	3,197.07
			11/07/12	108.34	3,197.06
			03/01/13	108.29	3,197.11
			06/26/13	108.43	3,196.97
			10/02/13	108.28	3,197.12
			12/13/13	108.19	3,197.21
ENSR-3	123 to 148	3303.80	02/25/04	108.11	3,195.69
			05/13/04	108.07	3,195.73
			08/25/04	108.14	3,195.66
			11/10/04	108.10	3,195.70
			12/12/05	108.21	3,195.59
			02/14/06	108.26	3,195.54
			05/09/06	108.41	3,195.39
			08/23/06	108.52	3,195.28
			12/14/06	108.18	3,195.62
			03/06/07	108.35	3,195.45
			05/16/07	108.34	3,195.46
			08/23/07	108.31	3,195.49
			11/12/07	108.26	3,195.54
			02/20/08	108.08	3,195.72
			06/10/08	108.31	3,195.49
			08/08/08	108.38	3,195.42
			11/17/08	108.31	3,195.49
			03/04/09	108.54	3,195.26
			05/18/09	108.61	3,195.19
			08/27/09	108.57	3,195.23
			02/25/10	108.12	3,195.68
			06/28/10	108.12	3,195.68
			09/20/10	108.20	3,195.60
			12/06/10	108.18	3,195.62

Table 1
Summary of Depth to Groundwater Measurements,
Jal No. 4 Plant, Lea County, New Mexico

Monitor Well	Screened Interval (Feet-BGL)	Top of Casing Elevation (Feet-AMSL)	Depth to Groundwater Measurement Date	Depth to Groundwater (Feet-TOC)	Groundwater Elevation (Feet-AMSL)
ENSR-3 (con't)			02/16/11	108.30	3,195.50
			05/10/11	109.99	3,193.81
			08/16/11	107.93	3,195.87
			11/09/11	107.93	3,195.87
			02/13/12	107.93	3,195.87
			05/07/12	108.04	3,195.76
			08/13/12	107.84	3,195.96
			11/07/12	107.85	3,195.95
			03/01/13	107.76	3,196.04
			06/26/13	107.92	3,195.88
			10/02/13	107.78	3,196.02
PTP-1	110 to 130	3304.41	12/13/13	107.70	3,196.10
			02/25/04	108.67	3,195.74
			05/13/04	108.65	3,195.76
			08/25/04	108.72	3,195.69
			11/10/04	108.60	3,195.81
			12/12/05	108.68	3,195.73
			02/14/06	108.83	3,195.58
			05/09/06	108.97	3,195.44
			08/23/06	109.06	3,195.35
			12/14/06	108.78	3,195.63
			03/06/07	108.91	3,195.50
			05/16/07	108.91	3,195.50
			08/23/07	108.87	3,195.54
			11/12/07	108.83	3,195.58
			02/20/08	108.64	3,195.77
			06/10/08	108.85	3,195.56
			08/08/08	108.93	3,195.48
			11/17/08	108.86	3,195.55
			03/04/09	109.09	3,195.32
			05/18/09	109.15	3,195.26
			08/27/09	109.13	3,195.28
			02/25/10	108.69	3,195.72
			06/28/10	108.68	3,195.73
			09/20/10	108.78	3,195.63
			12/06/10	108.76	3,195.65
			02/16/11	108.84	3,195.57
			05/10/11	108.58	3,195.83
			08/16/11	108.50	3,195.91
			11/09/11	108.52	3,195.89
			02/13/12	108.49	3,195.92
			05/07/12	108.61	3,195.80
			08/13/12	108.40	3,196.01
			11/07/12	106.43	3,197.98
			03/01/13	108.33	3,196.08
			06/26/13	108.49	3,195.92
			10/02/13	108.36	3,196.05
			12/13/13	108.30	3,196.11

Notes:

1. TOC : Measured from top of casing.
2. AMSL : Above mean sea level.
3. NM : No measurement taken.
4. BGL: Below ground level.

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
ACW-01		3/5/1993					14350	8505	4045	
		9/15/1993					10360	6016	2915	
		11/10/1993					11780	7340	3683	
		4/20/1994					16520	8430	5400	
		10/27/1994					14630	8440	3700	
		5/16/1995	< 5.000	< 10	< 5.00	< 15.00	14000	8200	4100	2600
		6/27/1995	4.600	4.6	< 2.50	140.00	1400.0	8400.0	6700.0	3200.0
		8/29/1995	6.000	< 10	< 5.00	< 15.00	21000	12000	3300	2400
		2/6/1996	6.100	3.0	1.90	2.80	16000.0	9700.0	5200.0	4300.0
		2/6/1996	5.600	2.7	3.00	< 7.50	16170.0	9440.0	5770.0	3900.0
		5/8/1996	6.300	2.0	< 1.00	< 3.00	14620.0	8190.0	4130.0	3070.0
		8/13/1996	3.500	1.2	< 1.00	< 2.00	12000.0	7400.0	3500.0	2400.0
		11/5/1996	5.600	2.5	< 1.00	1.30	11000.0	7200.0	3700.0	3000.0
		5/6/1997	14.000	15	< 5.00	5.70	14800	8800	5200	
		11/21/1997	6.100	4.8	< 0.50	2.40	20800.0	12000.0	7800.0	3900.0
	D	11/21/1997	6.700	5.7	< 0.50	2.10	20700.0	12000.0	7500.0	4000.0
		5/12/1998	6.800	11.0	4.40	3.40	16000.0	9600.0	5200.0	
		10/20/1998	7.000	4	< 2.00 Jm	< 2.00 Jm	20300	12900	6100	3800
		5/11/1999					16900	8500	5400	
		10/19/1999	7.500	3.6	< 2.00	< 4.00	14800.0	7800.0	5500.0	3100.0
		5/9/2000					19300	11300	7000	
		10/26/2000	< 2.000	< 2	< 2.00	8.30	15500	9900	5500	2600
		5/1/2001					14200	7640	5300	
		10/22/2001	< 2.000	< 2	< 2.00	11.00	12400	6580	4400	3000
		4/29/2002					12400	6730	4800	
		11/3/2002	< 5.000	< 5	< 5.00	< 15.00	6400	4000	1900	1500
		11/4/2003	2.200	< 2.0	< 2.00	< 6.00	5530.0	1510.0	2480.0	958.0
		11/9/2004	< 1.000	1.7	< 1.00	< 2.00	5780	5140	2570	696
		12/12/2005	< 10.000	< 10	< 10.00	< 30.00	7650	3500	1770	1240
		3/5/2007	1.100	< 1.0	< 1.00	< 1.00	5860.0	5340.0	2780.0	569.0
		11/12/2007	1.200	< 1.0	< 1.00	< 1.00	5850.0	4500.0	2040.0	563.0
		11/17/2008	4.200	1.8	< 1.00	< 1.00	7600.0	4150.0	2010.0	597.0
		2/24/2010	< 1.000	< 1	< 1.00	< 1.00	8540	3980	1480	577
		12/7/2010	0.360 J	0.26 J	< 1.00	< 1.00	4900	4620	1770	676
		11/10/2011	< 1.000	< 1	< 1.00	< 3.00	5810	3820	1630	632
		11/8/2012	3.500	0.6 J	< 1.00	< 3.00	8820.0	5600.0	2790.0	1200.0
		1/13/2014	3.000	0.5 J	0.28 J	0.44 J	9900.0	4560.0	2980.0	1450.0
ACW-02A		5/6/1997	140.000	100	< 50.00	< 100.00	26800	17000	11000	
		10/20/1997	89.000	100	13.00	26.00	24400	16000	8600	6000
		5/11/1998	120.000	210	20.00	33.00	26000	16000	8200	
		10/19/1998	180.000	340	38.00	72.00	25200	20200	7800	6400
		5/12/1999					24400	12000	7400	
		10/18/1999	17.000 PM	42 PM	8.10 P	14.00 PM	24000	13000	7600	6100
		5/8/2000					21500	13600	7200	
		10/26/2000	35.000	78	16.00	32.00	19100	12800	6500	3600
		5/2/2001					18500	10900	5400	
		10/22/2001	39.000	34	30.00	57.00	19900	12100	4600	5200
		4/30/2002					22300	14000	6300	
		11/3/2002	61.000	32	35.00	47.00	19000	8800	8900	5800

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
ACW-02A (cont.)	D	11/4/2003	45.600 P	17.9 P	24.80 P	41.30 P	18530	9050	4740	4160
		11/4/2003	44.600 P	18.5 P	23.40 P	37.70 P		9280	4560	4280
		11/9/2004	47.900	17.1	15.00	28.40	13730.0	11300.0	4290.0	3950.0
		12/12/2005	22.900	12.2 J	< 20.00	< 60.00	23500.0	13200.0	5520.0	5570.0
		3/5/2007	44.000	14	30.00	42.00	18650	11900	5760	4270
		11/12/2007	120.000	4	66.00	61.00	19420	11900	5950	4570
		11/17/2008	16.000	2	6.10	8.70	21100	12700	7400	4040
		2/24/2010	35.000	11	18.00	17.50	17600	9640	6700	3780
		12/7/2010	30.000	14	18.00	21.30	27500	10600	6280	3660
		11/9/2011	16.800	1.1	3.20	3.50	15300.0	9420.0	4560.0	3070.0
		11/8/2012	5.800	0.6 J	2.30	2.00 J	11400.0	6920.0	4160.0	2740.0
		1/10/2014	3.760	0.7 J	1.14	1.16 J	12600.0	7380.0	3390.0	2890.0
ACW-03		5/6/1997	350.000	22	110.00	43.00	18500	11000	6900	
		10/20/1997	160.000	8	69.00	32.00	23000	13000	7800	
		5/11/1998	130.000	21	41.00	19.00	24000	15000	8500	
		10/19/1998					20800	12400	7700	
		5/12/1999					19600	10100	6600	
		10/19/1999					18900	9120	6900	
		5/8/2000					19400	11900	7600	
		10/26/2000					17500	11900	7400	
		5/1/2001					19200	9900	9500	
		10/23/2001					18800	10600	7100	
		4/30/2002					18500	10600	6000	
		11/3/2002	37.000	< 10	28.00	< 30.00	13000	13000	4700	4200
		11/3/2003	7.700	4.0	8.30	2.90 J	11080.0	8310.0	4070.0	2830.0
		11/9/2004	13.700	5.4	7.00	6.60	12290.0	8580.0	4980.0	2800.0
		5/23/2005	5.500	1.1 J	3.60	2.90 J	16570.0	11567.0	5600.0	4331.0
		12/14/2005	103.000	34	23.70	19.30	21100	12600	6500	4720
		3/5/2007	61.000	34	17.00	15.60	18800	11600	6970	3840
		11/12/2007	34.000	17	3.50	6.40	18620	11200	6210	3970
		11/18/2008	41.000	32	16.00	16.80	16980	10500	6150	3400
		2/24/2010	46.000	25	21.00	26.30	1000	10600	5940	4140
		12/7/2010	100.000	130	20.00	32.30	2750	13000	7950	4250
ACW-04		5/6/1997	29.000	12	< 5.00	< 10.00	48500	25000	21000	
		10/20/1997	170.000	150	< 5.00	110.00	172000	94000	58000	33000
		5/12/1998	190.000	170	60.00	100.00	160000	99000	74000	
		10/19/1998	190.000	140	49.00	90.00	121000	83100	56000	37000
		5/12/1999					131000	84800	45000	
		10/19/1999	240.000	160	44.00	81.00	95000	46300	44000	42000
		5/8/2000					106000	72300	47000	
		10/26/2000	63.000	17	41.00	190.00	25600	16300	10000	3600
		5/2/2001					29600	17400	12000	
		10/22/2001	12.000	3	32.00	100.00	35300	21400	13000	7300
		4/30/2002					35600	24500	15000	
		11/3/2002	84.000	17	27.00	45.00	33000	24000	11000	8400
		11/4/2003	44.800	5.5	15.00	26.50	22400.0	20900.0	14200.0	7300.0
		11/9/2004	189.000 R	42.9	69.80	101.00	54400	19700	10800	22000
		12/12/2005	96.600	55.7	76.10	136.00	25100.0	13900.0	5520.0	5490.0
		3/5/2007	110.000	6	61.00	97.00	21100	14200	8600	5030

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
ACW-04 (cont.)	D	3/5/2007	88.000	6	47.00	74.00		13200	7730	4750
		11/12/2007	71.000	12	34.00	60.00	30700	15000	8670	5420
		11/17/2008	19.000	3	12.00	21.10	25200	12200	8120	3870
		2/24/2010	18.000	2	6.70	11.30	69700	16500	9730	6160
		12/7/2010	86.000	8	24.00	40.00	27000	36400	28000	12500
		11/10/2011	14.100	1.7	7.70	13.10	35000.0	21300.0	14200.0	7710.0
		11/8/2012	191.000	17	61.50	97.80	98500	84800	66400	29800
		1/10/2014	99.100	3	34.80	54.00	123000	88600	58000	31400
ACW-05		3/10/1993					10400	6110	2544	
		6/17/1993					4480	323	1228	
		9/16/1993					4140	3064	650	
		11/9/1993					4390	3202	720	
		4/21/1994					4131	3300	800	
		10/28/1994					4500	3112	550	
		1/31/1995					4050	2848	499	
		5/16/1995	< 5.000	< 10	< 5.00	< 15.00	3900	2800	530	540
		6/27/1995	< 2.500	< 2.5	< 2.50	< 5.00	3800	2800	460	530
		8/30/1995	< 5.000	< 10	< 5.00	< 15.00	3900	2700	510	550
		2/6/1996	< 1.000	< 1	< 1.00	< 2.00	3800	2200	510	580
		2/6/1996	< 2.500	< 2.5	< 2.50	< 7.50	3090	2745	506	580
		5/8/1996	< 1.000	< 1	< 1.00	< 3.00	3650	2460	519	506
		8/13/1996	< 1.000	1.2	< 1.00	< 2.00	3400	2500	500	520
		11/6/1996	1.100	1.4	1.20	< 2.00	3300.0	2300.0	500.0	520.0
		5/7/1997	0.840	1.20	0.93	< 1.00	3020.00	2000.00	430.00	
		10/22/1997	0.900	1.6	0.80	1.90	3160.0	2000.0	470.0	480.0
		5/13/1998	0.790	1.50	* 0.77	* 12.00	3100.00	2800.00	570.00	
		10/21/1998					2930	1910	440	
		5/13/1999					3190	1960	450	
		10/21/1999	< 2.000	2.7	< 2.00	< 4.00	3250	1890	1000	540
		5/10/2000					3180	1960	750	
		11/2/2000	< 5.000	< 5	< 5.00	< 10.00	2650	1920	860	450
		5/6/2001					3030	1920	540	
		10/24/2001					3120	1860	590	
		4/30/2002					3110	1900	570	
		11/6/2002	< 1.000	< 1	< 1.00	< 3.00	3000	2200	560	490
		11/5/2003	1.200 J	1.1 J	1.30 J	< 6.00	3000	1040	613	421
		11/12/2004	0.420 J	< 1	0.51 J	< 2.00	3450	2540	708	411
		12/13/2005	< 2.000	< 2	1.10 J	< 6.00	3820	2640	771	394
		12/13/2005	< 2.000	< 2	1.20 J	< 6.00		2510	675	388
	D	3/7/2007	< 1.000	< 1	< 1.00	1.20	4170	3440	978	376
		11/14/2007	< 1.000	< 1	< 1.00	< 1.00	4260	3240	1070	422
		11/18/2008	< 1.000	< 1	1.00	< 1.00	4930	3530	1340	432
		2/18/2010					5430	3120	1070	381
		12/7/2010	0.140 J	< 1	< 1.00	< 1.00	5632	6200	1400	542
		11/9/2011	< 1.000	< 1	< 1.00	< 3.00	4860	3400	1070	399
		11/7/2012	1.000	< 1.0	< 1.00	< 3.00	6360.0	4400.0	1710.0	741.0
		1/8/2014	1.800	0.3	< 0.20	0.29 J	7320.0	4730.0	2080.0	894.0
ACW-06		6/18/1993					8220	5027	2108	
		9/16/1993					11130	6656	2737	

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
ACW-06 (cont.)		11/8/1993					8540	5646	2154	
		4/21/1994					11080	6930	3600	
		10/28/1994					11988	6910	2100	
		1/31/1995					11530	6755	2873	
		5/16/1995	< 5.000	< 10	< 5.00	< 15.00	10000	6400	2800	2200
		6/27/1995	14.000	< 3	< 2.50	< 5.00	10000	8600	3500	3000
		8/29/1995	7.000	< 10	< 5.00	< 15.00	12000	7100	3000	2500
		2/6/1996	6.600	3.2	< 1.00	< 2.00	11000.0	6600.0	2600.0	2700.0
		2/6/1996	< 2.500	< 2.5	< 2.50	< 7.50	10320	5630	3180	2400
		5/8/1996	4.080	1.58	< 1.00	< 3.00	10620.00	6460.00	2880.00	2380.00
		8/14/1996	4.200	2.6	< 2.00	< 2.00	11000.0	7100.0	2900.0	2900.0
		11/6/1996	4.500	1.5	< 1.00	< 2.00	12000.0	7700.0	3400.0	2800.0
		11/6/1996	4.600	1.5	< 1.00	< 2.00	12000.0	7700.0	3600.0	2400.0
		5/8/1997	8.200	2.8	2.60	2.70	8450.0	5500.0	2300.0	
		10/22/1997	10.000	4	1.40	1.20	10200	6500	2900	2200
	D	10/22/1997	9.500	3.1	1.20	1.20	10700.0	6200.0	2900.0	2200.0
		5/13/1998	15.000	12	< 0.50	3.80	12000	10000	3300	
		10/21/1998	11.000	6	3.00	3.00	11600	6530	3000	2640
		5/13/1999					11200	6620	2900	
		10/21/1999	< 20.000	< 20	< 20.00	< 40.00	11500	6170	2800	2900
		5/10/2000					10300	6290	3600	
		11/2/2000	< 5.000	< 5	< 5.00	< 10.00	8520	4350	3100	710
		5/6/2001					9020	5240	2600	
		10/24/2001	5.600	< 2.0	< 2.00	18.00	8350.0	4730.0	2400.0	1900.0
		4/29/2002					8910	4800	2400	
		11/5/2002	18.000	< 10	< 10.00	< 30.00	7300	4400	1800	2100
		11/5/2003	8.900	2.9	2.20	3.00 J	6960.0	2180.0	1490.0	1440.0
		11/12/2004	< 10.000	< 10	< 10.00	< 20.00	5970	3430	1060	1190
	D	11/12/2004	< 10.000	< 10	< 10.00	< 20.00		3490	1230	1260
		12/13/2005	< 20.000	< 20	< 20.00	< 60.00	5910	3340	1160	1420
		3/7/2007	7.000	< 1	1.50	2.00	4860	3160	1120	1140
		11/13/2007	7.600	< 1.0	2.10	2.20	4530.0	3060.0	1080.0	1130.0
		11/18/2008	4.500	< 1.0	1.40	1.40	5300.0	2950.0	1380.0	1070.0
		2/18/2010	4.100	< 1.0	< 1.00	< 1.00	4880.0	2560.0	1090.0	933.0
		12/6/2010	3.700	0.6 J	0.33 J	< 1.00	4863.0	2780.0	1500.0	1100.0
		11/9/2011	2.200	0.4 J	0.32 J	< 3.00	4190.0	2490.0	864.0	801.0
		11/7/2012	0.760 J	< 1	< 1.00	< 3.00	4920	2860	1100	1080
		1/9/2014	0.585 J	< 0.3	< 0.20	< 0.23	5060	2820	1130	1090
ACW-07		5/7/1997	7.300	2.5	3.10	1.70	13200.0	8100.0	3600.0	
		10/22/1997	6.400	3.4	3.00	3.00	13800.0	7500.0	4400.0	2500.0
		5/13/1998	7.000	3.2	2.10	* 1.70	14000.0	11000.0	4300.0	
		10/21/1998	8.000	3	* 2.00	< 2.00	14000	8290	4400	3100
		5/12/1999					14300	7420	4900	
		10/21/1999	7.200	5.3	2.40	< 4.00	14700.0	8010.0	4800.0	3300.0
		5/10/2000					14900	8900	7100	
		11/2/2000	< 5.000	< 5	< 5.00	< 10.00	12500	8400	5100	710
		5/6/2001					16400	8980	6800	
	D	5/6/2001					16300	9640	6500	
		10/24/2001	7.400	< 2.0	< 2.00	2.40	17400.0	9180.0	8500.0	3600.0

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
ACW-07 (cont.)		4/30/2002					17400	9120	6400	
		11/5/2002	12.000	1	2.40	< 3.00	14000	8900	5200	3600
		11/5/2003	19.300	1.3 J	4.70	2.40 J	13750.0	2050.0	5650.0	3180.0
		11/12/2004	14.000	0.5 J	3.20	1.30	14290.0	10400.0	5610.0	3140.0
		5/24/2005	17.800	< 2.0	3.70	3.10 J	16460.0	11667.0	5515.0	3707.0
		12/13/2005	16.400	< 10.0	5.10 J	< 30.00	16690.0	9900.0	4940.0	3600.0
		5/9/2006	18.100	< 2.0	4.70	< 6.00	16220.0	5300.0	6030.0	2720.0
		8/23/2006	14.600	< 2.0	4.30	< 6.00	16020.0	< 9940.0 R H	5890.0	3170.0
		3/7/2007	17.000	< 1	6.10	1.50	15580	9980	5810	3450
		11/13/2007	21.000	< 1	7.00	1.30	15080	9620	5660	3410
		11/18/2008	16.000	< 1	7.90	1.00	15390	9380	5820	3180
		2/19/2010	4.700	< 1.0	7.60	1.10	1570.0	7720.0	5090.0	2350.0
		12/6/2010	15.000	11	0.28 J	< 1.00	1632	9610	6470	3230
		12/6/2010	15.000	11	0.29 J	< 1.00		10300	7190	3210
		11/9/2011	0.620 J	< 1	5.90	< 3.00	12300	7360	3520	2040
		11/7/2012	36.300	< 1.0	14.20	< 3.00	13900.0	8580.0	4990.0	2070.0
		1/9/2014	31.300	< 0.3	5.74	0.30 J	14800.0	8490.0	4470.0	3220.0
ACW-08		5/6/1997	99.000	10	4.10	3.90	89200	50000	29000	
		11/21/1997	36.000	4	2.00	14.00	49200	29000	17000	9300
		5/12/1998	37.000	5	2.90	1.60	48000	28000	34000	
		10/20/1998	140.000	13	6.00	6.00	44200	28700	24000	11000
		5/11/1999					52500	29800	21000	
		10/19/1999	32.000	6	3.70	< 4.00	36400	17700	15000	12000
		5/9/2000					62900	41800	32000	
		10/26/2000	15.000	< 2	2.10	10.00	36300	26000	17000	3600
		5/1/2001					51300	28200	25000	
		10/23/2001	41.000	5	3.10	< 2.00	33400	20000	11000	11000
		4/29/2002					69400	53400	30000	
		11/4/2002	10.000	2	1.20	< 3.00	11000	6200	3900	3000
		11/3/2003	7.000	< 2.0	< 2.00	< 6.00	12330.0	8670.0	5350.0	2850.0
		11/9/2004	25.300	2.1	1.60	1.20 J	16200.0	10100.0	6280.0	2420.0
		5/23/2005	80.000	13	< 5.00	< 5.00	61480			
		5/23/2005	81.900	13.0	4.00	6.00	61480.0	41700.0	22100.0	14600.0
		12/14/2005	98.400	11.1	19.40	8.20	50100.0	29000.0	14200.0	12400.0
		3/6/2007	100.000	110	870.00	102.00	32800	19400	11300	7080
		11/12/2007	86.000	36	200.00	65.00	34500	21700	12700	7610
	D	11/12/2007	85.000	36	200.00	63.00		22000	12700	7580
		11/18/2008	67.000	28	290.00	65.00	32700	21100	16300	6510
		2/24/2010	66.000	26	180.00	54.70	24700	28600	17400	9890
		12/7/2010	82.000	37	530.00	117.00	28000	20500	14400	7850
		11/10/2011	55.200	15.4	239.00	43.20	47300.0	30700.0	17100.0	9300.0

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
ACW-09		6/17/1993					5900	4435	2288	
		9/14/1993					3100	2119	915	
		11/9/1993					3670	2300	1184	
		4/22/1994					3900	2508	1150	
		12/1/1994					5450	3510	1650	
		1/31/1995					7110	4240	2083	
		5/17/1995	< 5.000	22	< 5.00	< 15.00	11000	6800	5600	910
		6/28/1995	< 2.500	< 2.5	< 2.50	< 5.00	9100	6200	3500	1000
		8/30/1995	< 5.000	< 10	< 5.00	< 15.00	7150	4500	2500	880
		2/7/1996	1.800	< 1.0	< 1.00	< 2.00	7500.0	5400.0	2400.0	810.0
		2/7/1996	< 2.500	< 2.5	< 2.50	< 7.50	7450	4620	2300	810
		5/8/1996	< 1.000	< 1	< 1.00	< 3.00	7530	4210	2210	687
		8/14/1996	1.400	1.6	< 1.00	< 2.00	4400.0	3600.0	1200.0	730.0
		11/7/1996	2.300	2.2	< 1.00	< 2.00	4200.0	3100.0	1200.0	510.0
		2/19/1997	1.300	4.0	10.00	4.20	4110.0	2500.0	1260.0	
		5/8/1997	2.600	2.6	1.40	1.70	2800.0	2100.0	830.0	
		10/23/1997	< 0.500	< 0.5	< 0.50	< 1.00	3380	1600	880	320
		5/13/1998	< 0.500	< 0.5	< 0.50	< 1.00	5100	4500	1600	
		10/21/1998	6.000	< 2	< 2.00	< 2.00	13200	8980	4100	1400
		5/13/1999					11100	6400	3400	
		10/22/1999	< 2.000	< 2	< 2.00	< 2.00	8580	5950	2900	990
		5/12/2000					7830	4810	2500	
	D	5/12/2000					7960	4930	3100	
		11/3/2000	< 2.000	< 2	< 2.00	< 4.00	7630	5860	3000	670
	D	11/3/2000	< 2.000	< 2	< 2.00	< 4.00	7620	11200	2900	630
		5/6/2001					8300	4640	2800	
		10/25/2001	< 2.000	< 2	< 2.00	2.00	7820	4390	4000	1200
	D	10/25/2001	< 2.000	< 2	< 2.00	< 6.00	7700	4400	3700	1300
		5/1/2002					8160	3800	2900	
	D	5/1/2002					7070	3760	2500	
		11/6/2002	1.100	< 1.0	< 1.00	< 3.00	7800.0	3700.0	1800.0	1400.0
		11/6/2003	< 2.000	< 2	< 2.00	< 6.00	5280	3830	1820	1430
		11/10/2004	0.820 J	< 1	< 1.00	< 2.00	8540	4680	2150	1220
		12/14/2005	< 2.000	< 2	< 2.00	< 6.00	5970	3100	1350	941
		3/7/2007	< 1.000	< 1	< 1.00	< 1.00	6060	4420	2210	935
		11/15/2007	< 1.000	< 1	< 1.00	< 1.00	5900	2870	1290	796
		11/19/2008	< 1.000	< 1	< 1.00	< 1.00	5540	2990	1480	751
		2/24/2010	1.000	< 1	< 1.00	< 1.00	14300	8340	4190	2800
		12/9/2010	0.170 J	0.29 J	< 1.00	< 1.00	15730	48000	3050	1710
		11/9/2011	0.320 J	< 1	< 1.00	< 3.00	14600	8880	4110	2660
		11/7/2012	7.500	< 1.0	< 1.00	< 3.00	16100.0	11200.0	5480.0	3120.0
		1/13/2014	3.860	< 0.3	< 0.20	< 0.23	18600.0	8480.0	5960.0	3300.0
ACW-10		6/18/1993					1061	701	1027	
		9/14/1993					1349	1190	421	
		11/9/1993					1800	1238	420	
		4/22/1994					2440	1638	700	
		10/28/1994					2592	1694	600	
		2/1/1995					2660	1426	619	
		5/17/1995	< 5.000	< 10	< 5.00	< 15.00	3900	2300	1600	170

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
ACW-10 (cont.)		6/28/1995	< 2.500	< 2.5	< 2.50	< 5.00	3100	2300	1900	160
		8/30/1995	< 5.000	< 10	< 5.00	< 15.00	3100	2200	790	150
		2/7/1996	3.900	< 1.0	< 1.00	< 2.00	3200.0	2300.0	850.0	190.0
		2/7/1996	4.300	< 2.5	< 2.50	< 7.50	3100.0	2100.0	829.0	190.0
		5/8/1996	1.220	< 1.00	< 1.00	< 3.00	2322.00	1290.00	603.00	127.00
		8/14/1996	< 1.000	< 1	< 1.00	< 2.00	2400	1900	560	140
		11/7/1996	1.200	1.5	< 1.00	< 2.00	250.0	1800.0	610.0	150.0
		5/8/1997	1.300	1.0	< 0.50	< 1.00	1880.0	1500.0	480.0	
		10/23/1997	1.140	1.17	< 0.50	0.58	2870.00	1500.00	670.00	140.00
		5/14/1998					2400	1200	540	
		10/22/1998	< 2.000	< 2	< 2.00	< 6.00	2900	1960	800	180
		5/13/1999					2810	1660	730	
		10/22/1999	< 2.000	< 2	< 2.00	< 6.00	2470	1720	660	170
		5/11/2000					3620	2430	1400	
		11/6/2000	< 2.000	< 2	< 2.00	< 4.00	3100	2840	980	330
		5/6/2001					3660	2360	1000	
		10/25/2001	< 2.000	< 2	< 2.00	< 6.00	3350	2270	930	180
		5/1/2002					3440	1970	1000	
		11/8/2002	< 1.000	< 1	< 1.00	< 3.00	2600	2000	740	270
		11/6/2003	< 2.000	< 2	< 2.00	< 6.00	2580	2160	795	182
		11/11/2004	0.510 J	< 1	< 1.00	< 2.00	2670	1990	720	176
		12/14/2005	< 2.000	< 2	< 2.00	< 6.00	3000	1640	638	162
		3/8/2007	< 1.000	< 1	< 1.00	< 1.00	2860	2240	793	202
		11/14/2007	< 1.000	< 1	< 1.00	< 1.00	2810	2070	802	187
		11/19/2008	< 1.000	< 1	< 1.00	< 1.00	2890	2090	767	175
		2/19/2010	< 1.000	< 1	< 1.00	< 1.00	5780	2360	1020	180
	D	2/19/2010	< 1.000	< 1	< 1.00	< 1.00		2380	1030	176
		12/8/2010	0.890 J	< 1	< 1.00	< 1.00	6517	5400	1200	264
		11/9/2011	0.390 J	< 1	< 1.00	< 3.00	4700	3250	1270	215
		11/6/2012	1.800	< 1.0	< 1.00	< 3.00	4760.0	3370.0	1490.0	331.0
		1/10/2014	2.980	< 0.3	< 0.20	< 0.23	6800.0	4290.0	2020.0	490.0
ACW-11		6/19/1993					25000	18670	9737	
		9/15/1993					10570	6820	3437	
		11/9/1993					10160	6592	3620	
		4/21/1994					16290	9520	6400	
		10/27/1994					20060	13280	6200	
		10/27/1994					20550	12900	6600	
		2/1/1995					32200	19880	11582	
		5/17/1995	< 5.000	< 10	< 5.00	< 15.00	12000	7200	4400	1200
		6/27/1995	5.100	< 2.5	< 2.50	< 5.00	11000.0	7000.0	6500.0	980.0
		8/29/1995	8.000	< 10	< 5.00	< 15.00	10000	6000	3400	880
		2/7/1996	6.900	< 1.0	< 1.00	< 2.00	11000.0	7400.0	3400.0	1500.0
		2/7/1996	7.600	< 2.5	< 2.50	< 7.50	11030.0	6740.0	3770.0	1400.0
		5/8/1996	6.760	< 1.00	< 1.00	< 3.00	9840.00	5080.00	3120.00	1160.00
		8/13/1996	7.900	2.2	< 1.00	< 2.00	12000.0	10000.0	4200.0	1700.0
		11/5/1996	32.000	2	< 1.00	1.20	29	25000	13000	5100
		5/6/1997	21.000	5	3.10	3.50	10200	6700	3600	
		11/21/1997	28.000	3	< 0.50	2.80	27900	16000	9800	2700
		5/12/1998	70.000	8	1.30	4.30	36000	22000	13000	

Table 2
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Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
ACW-11 (cont.)		10/20/1998	51.000	< 2	< 2.00	< 2.00	42500	29600	17000	5100
		5/12/1999					19800	11100	7200	
		10/20/1999	14.000	5	< 2.00	< 4.00	19300	13600	7800	2300
		5/9/2000					31500	21000	18000	
		11/1/2000	16.000	< 2	< 2.00	< 4.00	25700	21900	10000	4440
		5/1/2001					32800	20000	15000	
		10/23/2001	59.000	< 2	< 2.00	< 2.00	47800	32900	17000	9500
		4/29/2002					34200	25500	15000	
		11/6/2002	13.000	< 1	< 1.00	< 3.00	11000	9700	4600	3000
		11/4/2003	2.700	< 2.0	< 2.00	< 6.00	7950.0	3470.0	4520.0	1740.0
		11/10/2004	19.300	< 1.0	0.53 J	< 2.00	21200.0	18300.0	7950.0	2270.0
		5/23/2005	22.200	< 2.0	< 2.00	< 6.00	22200.0	17700.0	8339.0	4022.0
		12/13/2005	18.700	< 2.0	< 2.00	< 6.00	27000.0	10400.0	4580.0	2240.0
		3/6/2007	11.000	< 1	< 1.00	< 1.00	18500	14500	8880	1930
		11/13/2007	3.200	< 1.0	< 1.00	< 1.00	13260.0	11300.0	6540.0	1860.0
		11/18/2008	< 1.000	< 1	< 1.00	< 1.00	12540	10100	5570	1950
		2/25/2010	1.500	< 1.0	< 1.00	< 1.00	50300.0	11700.0	6450.0	2120.0
		12/9/2010	< 1.000	2.9	< 1.00	< 1.00	22500	48300	21000	8430
		11/10/2011	0.890 J	< 1	< 1.00	< 3.00	13000	10100	4070	1290
		11/7/2012	5.500	< 1.0	< 1.00	< 3.00	45600.0	39600.0	21200.0	9160.0
		1/13/2014	4.460	< 0.3	< 0.20	< 0.23	52200.0	29700.0	22500.0	9880.0
ACW-12		2/19/1997	< 0.500	< 0.5	1.50	< 1.00	1610	950	380	
	D	2/19/1997	2.900	< 0.5	< 0.50	< 1.00	1630.0	960.0	390.0	
		5/8/1997	3.000	1	< 0.50	< 1.00	1240	900	290	
		8/20/1997	1.200	< 0.5	< 0.50	< 1.00	1120.0	740.0	260.0	100.0
	D	8/20/1997	1.400	< 0.5	< 0.50	< 1.00	1150.0	740.0	280.0	100.0
		10/23/1997	1.400	0.6	< 0.50	< 1.00	1810.0	850.0	380.0	120.0
		2/24/1998	7.300	< 0.5	< 0.50	< 1.00	2050.0	1200.0	470.0	120.0
	D	2/24/1998	6.700	< 0.5	< 0.50	< 1.00	2090.0	1220.0	490.0	120.0
		6/1/1998	< 0.500	1.2	< 0.50	< 1.00	2000	1500		130
	D	6/1/1998	4.400	2.5	6.10	2.50	2300.0	1700.0	540.0	130.0
		8/11/1998	2.000	< 2	< 2.00	< 6.00	1790	1240	440	130
	D	8/11/1998	2.000	< 2	< 2.00	< 6.00	2020	1300	520	130
		10/22/1998	6.000	< 2	< 2.00	< 6.00	2280	1520	610	140
	D	10/22/1998	6.000	< 2	< 2.00	< 6.00	2310	1690	600	130
		2/23/1999	6.000	< 2	< 2.00	< 6.00	2020	1240	500	160
	D	2/23/1999	5.000	< 2	< 2.00	< 6.00	2050	1280	480	160
		5/14/1999	4.000	< 2	< 2.00	< 6.00	2390	1440	500	150
	D	5/14/1999	4.000	< 2	< 2.00	< 6.00	2350	1410	590	140
		8/11/1999	5.300	< 2.0	< 2.00	< 6.00	2650.0	1750.0	750.0	160.0
	D	8/11/1999	2.400	< 2.0	< 2.00	< 6.00	2630.0	1880.0	810.0	160.0
		10/22/1999	4.700	< 2.0	< 2.00	< 6.00	2180.0	1620.0	650.0	140.0
	D	10/22/1999	4.400	< 2.0	< 2.00	< 6.00	2170.0	1390.0	560.0	140.0
		2/22/2000	< 2.000	< 2	< 2.00	< 2.00	1950	1260	680	130
		5/11/2000	< 5.000	< 5	< 5.00	< 10.00	1590	989	470	120
		8/7/2000	< 2.000	< 2	< 2.00	< 4.00	1800	1270	460	110
		11/3/2000	< 2.000	< 2	< 2.00	< 4.00	2520	1780	890	280
		2/20/2001	< 2.000	< 2	< 2.00	< 4.00	2230	1210	670	170
		5/3/2001	2.400	< 2.0	< 2.00	< 2.00	2100.0	1060.0	570.0	150.0

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
ACW-12 (cont.)	D	5/3/2001	2.100	< 2.0	< 2.00	< 2.00	2120.0	1150.0	510.0	150.0
		8/1/2001	< 2.000	< 2	< 2.00	Jc < 2.00	2080	1290	490	140
		10/25/2001	< 2.000	< 2	< 2.00	< 6.00	1890	1220	1400	120
		2/20/2002					2200	1370	720	140
	R	2/20/2002	< 2.000	H < 2	H < 2.00	H < 2.00				
		5/1/2002	2.600	< 2.0	< 2.00	< 2.00	2030.0	1180.0	490.0	130.0
	D	5/1/2002	< 2.000	< 2	< 2.00	< 2.00	1900	1100	440	110
		11/7/2002	3.700	< 1.0	< 1.00	< 3.00	1800.0	1300.0	450.0	150.0
		11/6/2003	1.000	J < 2	< 2.00	< 6.00	1605	1220	410	126
		11/11/2004	1.800	< 1.0	< 1.00	< 2.00	2270.0	1300.0	449.0	137.0
		12/14/2005	< 2.000	< 2	< 2.00	< 6.00	2090	1130	393	131
		3/8/2007	< 1.000	< 1	< 1.00	< 1.00	1980	1650	529	134
		11/14/2007	< 1.000	< 1	< 1.00	< 1.00	1920	1460	451	134
		11/19/2008	< 1.000	< 1	< 1.00	< 1.00	2300	1570	460	126
		2/24/2010	2.600	< 1.0	< 1.00	< 1.00	4760.0	3680.0	1130.0	244.0
		12/8/2010	1.600	< 1.0	< 1.00	< 1.00	4953.0	5420.0	1270.0	263.0
		11/9/2011	2.500	< 1.0	< 1.00	< 3.00	4500.0	3300.0	1210.0	236.0
		11/6/2012	4.400	< 1.0	< 1.00	< 3.00	4650.0	3340.0	1380.0	198.0
		1/10/2014	3.630	< 0.3	< 0.20	< 0.23	5170.0	3430.0	1290.0	266.0
ACW-13		2/20/1997	< 0.500	< 0.5	1.50	< 1.00	681	440	53	
		5/8/1997	0.610	0.58	< 0.50	< 1.00	643.00	460.00	57.00	
	D	5/8/1997	0.650	0.62	< 0.50	< 1.00	630.00	460.00	52.00	
		8/20/1997	< 0.500	< 0.5	< 0.50	< 1.00	654	440	55	79
		10/23/1997	0.590	0.76	< 0.50	< 1.00	728.00	400.00	50.00	84.00
		2/24/1998	< 0.500	< 0.5	< 0.50	< 1.00	727	450	59	87
		6/1/1998	< 0.500	< 0.5	< 0.50	< 1.00	700	450		85
		8/11/1998	< 2.000	< 2	< 2.00	< 6.00	679	467	48	85
		10/22/1998	< 2.000	< 2	< 2.00	< 6.00	686	439	47	87
		2/23/1999	< 2.000	< 2	< 2.00	< 6.00	792	493	74	110
		5/14/1999	< 2.000	< 2	< 2.00	< 6.00	693	403	45	86
		8/11/1999	< 2.000	< 2	< 2.00	< 6.00	676	359	41	86
		10/22/1999	< 2.000	< 2	< 2.00	< 6.00	674	436	48	89
		2/23/2000	< 2.000	< 2	< 2.00	< 2.00	697	479	53	82
		5/11/2000	< 5.000	< 5	< 5.00	< 10.00	697	459	47	88
		8/8/2000	< 2.000	< 2	< 2.00	< 4.00	676	363	41	82
	D	8/8/2000	< 2.000	< 2	< 2.00	< 4.00	662	381	44	84
		11/6/2000	< 2.000	< 2	< 2.00	< 4.00	1330	947	360	210
		2/20/2001	< 2.000	< 2	< 2.00	< 4.00	893	518	110	130
		5/7/2001	< 2.000	< 2	< 2.00	< 2.00	685	444	57	88
		8/1/2001	< 2.000	< 2	< 2.00	Jc < 2.00	694	402	42	86
	D	8/1/2001	< 2.000	< 2	< 2.00	Jc < 2.00	690	439	45	80
		10/25/2001	< 2.000	< 2	< 2.00	< 6.00	690	422	42	78
		2/20/2002	< 2.000	2.1	< 2.00	< 2.00	680	389	44	78
	R	2/20/2002	< 2.000	H < 2	H < 2.00	H < 2.00				
		5/1/2002	< 2.000	< 2	< 2.00	< 2.00	760	407	54	78
		9/25/2002	< 2.000	< 2	< 2.00	< 4.00	807	643	50	80
	D	9/25/2002	< 2.000	< 2	< 2.00	< 4.00	789	603	130	83
		11/7/2002	< 1.000	< 1	< 1.00	< 3.00	740	450	45	96
		3/28/2003	< 2.000	< 2	< 2.00	< 6.00	772	502	46.8	57

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
ACW-13 (cont.)		5/19/2003	< 2.000	< 2	< 2.00	< 6.00	747	502	47	69.8
		8/19/2003	< 2.000	< 2	< 2.00	< 6.00	661	460	41.7	78.6
		11/6/2003	< 2.000	< 2	< 2.00	< 6.00	759	490	43.8	77.4
		2/26/2004	< 2.000	< 2	< 2.00	< 6.00	724	476	43	80.5
		5/12/2004	< 2.000	< 2	< 2.00	< 6.00	759	492	41.7	76.5
		8/24/2004	< 2.000	< 2	< 2.00	< 6.00	660	496	45	77.7
		11/11/2004	0.500 J	< 1	< 1.00	< 2.00	987	558	50	79.1
		2/14/2005	< 2.000	< 2	< 2.00	< 6.00	1036	520	61	78.3
		5/24/2005	< 2.000	< 2	< 2.00	< 6.00	811	447	32	69.6
		8/22/2005	< 2.000	< 2	< 2.00	< 6.00	884	513	71	84.6
		12/15/2005	< 2.000	< 2	< 2.00	< 6.00	917	551	172	82.9
	D	12/15/2005	< 2.000	< 2	< 2.00	< 6.00		548	88	79.2
		2/13/2006	< 2.000	< 2	< 2.00	< 6.00	906	551	93	80.5
		5/8/2006	< 2.000	< 2	< 2.00	< 6.00	922	508	98	63.4
	D	5/8/2006	< 2.000	< 2	< 2.00	< 6.00		505	94	70.1
		8/22/2006	< 2.000	< 2	< 2.00	< 6.00	967	568	100	79.8
		3/8/2007	< 1.000	< 1	< 1.00	< 1.00	971	586	119	91.6
		5/15/2007	< 1.000	< 1	< 1.00	< 1.00	1025	651	127	84.4
		8/22/2007	< 1.000	< 1	< 1.00	< 1.00	1085	690	121	81.2
		11/15/2007	< 1.000	< 1	< 1.00	< 1.00	1012	855	130	86.5
		2/19/2008	< 1.000	< 1	< 1.00	< 1.00	1070	691	123	83.9
		6/9/2008	< 1.000	< 1	< 1.00	< 1.00	1100	639	122	88.7
	D	6/9/2008	< 1.000	< 1	< 1.00	< 1.00		631	122	86.8
		8/13/2008	< 1.000	< 1	< 1.00	< 1.00	1110	688	131	74.7
		11/20/2008	< 1.000	< 1	< 1.00	< 1.00	1155	1290	135	89.1
		3/3/2009	< 1.000	< 1	< 1.00	< 1.00	1109	666	97.8	89.6
	D	3/3/2009	< 1.000	< 1	< 1.00	< 1.00		631	97.8	88.8
		5/19/2009	< 1.000	< 1	< 1.00	< 1.00	1088	668	134	87.5
		8/27/2009	< 1.000	< 1	< 1.00	< 1.00	1115	706	126	86.7
		2/19/2010	< 1.000	< 1	< 1.00	< 1.00	1000	662	169	88.5
		6/28/2010	< 1.000	< 1	< 1.00	< 1.00	949	1050	148	97.8
	D	6/28/2010	< 1.000	< 1	< 1.00	< 1.00		1060	145	92.2
		9/20/2010	< 1.000	0.41 J	< 1.00	< 1.00	1062	783	158	95.4
	D	9/21/2010	< 2.000	0.27 J	< 1.00	< 1.00		732	166	93.5
		12/7/2010	< 1.000	< 1	< 1.00	< 1.00	1019	880	161	99.2
		2/16/2011	< 1.000	< 1	< 1.00	< 1.00	1020	888	194	100
		5/10/2011	< 1.000	< 2	< 2.00	< 6.00	1019	682	192	98.5
	D	5/10/2011	< 2.000	< 2	< 2.00	< 6.00		714	198	101
		8/17/2011	< 1.000	< 1	< 1.00	< 3.00	1020	707	200	99.1
		11/9/2011	< 1.000	< 1	< 1.00	< 3.00	1140	709	200	89.6
		2/13/2012	< 1.000	< 1	< 1.00	< 3.00	1170	663	189	96
		5/8/2012	< 1.000	< 1	< 1.00	< 3.00	1150	663	186	98.4
		8/13/2012	< 1.000	< 1	< 1.00	< 3.00	1250	714	234	102
		11/6/2012	< 1.000	< 1	< 1.00	< 3.00	1230	760	228	111
		3/1/2013	< 1.000	< 1	< 1.00	< 3.00	1100	713	191	116
		6/28/2013	< 0.140	< 0.3	< 0.200	< 0.30	796	767	216	108
		10/2/2013	< 0.140	< 0.3	< 0.140	< 0.30	739	789	202	105
		1/9/2014	< 0.140	< 0.3	< 0.14	< 0.30	1230	715	215	104
ACW-14		2/20/1997	< 0.500	< 0.5	< 0.50	< 1.00	830	570	86	

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
ACW-14 (cont.)		5/7/1997	0.880	1.10	0.52	< 1.00	746.00	480.00	72.00	
		8/20/1997	< 0.500	< 0.5	< 0.50	< 1.00	691	460	80	81
		10/22/1997	< 0.500	1.2	< 0.50	1.50	747	440	71	81
		2/24/1998	< 0.500	< 0.5	< 0.50	0.58 J	755	470	40	87
		5/13/1998	0.750	< 0.50	< 0.50	< 1.00	880.00	530.00	58.00	97.00
		8/11/1998	< 2.000	< 2	< 2.00	< 6.00	730	496	160	90
		10/21/1998	< 2.000	< 2	< 2.00	< 6.00	771	466	71	97
		2/23/1999	< 2.000	< 2	< 2.00	< 6.00	859	524	88	110
		5/13/1999	< 2.000	< 2	< 2.00	< 6.00	764	500	62	95
		8/9/1999	< 2.000	< 2	< 2.00	< 6.00	791	471	58	91
		10/21/1999	< 2.000	< 2	< 2.00	< 6.00	753	469	68	98
		2/22/2000	< 2.000	< 2	< 2.00	< 2.00	738	499	53	97
		5/10/2000	< 5.000	< 5	< 5.00	< 10.00	761	485	61	110
		8/7/2000	< 2.000	< 2	< 2.00	< 4.00	750	439	65	95
		11/1/2000	< 2.000	< 2	< 2.00	< 4.00	1630	1090	420	300
		2/21/2001	< 2.000	< 2	< 2.00	< 4.00	883	517	100	110
		5/3/2001	< 2.000	< 2	< 2.00	< 2.00	809	499	89	100
		8/2/2001	< 2.000	< 2	< 2.00	< 2.00	771	476	70	89
		10/24/2001	< 2.000	< 2	< 2.00	< 6.00	761	449	71	82
		2/19/2002	< 2.000	3.1	< 2.00	7.10	759	427	65	82
	R	2/19/2002	< 2.000	H < 2	H < 2.00	H < 2.00				
		4/30/2002	< 2.000	< 2	< 2.00	< 4.00	844	505	74	90
		9/25/2002	< 2.000	< 2	< 2.00	< 4.00	749	482	58	81
		11/4/2002	2.000	< 1.0	< 1.00	< 3.00	840.0	670.0	76.0	97.0
	D	11/4/2002	1.800	< 1.0	< 1.00	< 3.00	830.0	550.0	73.0	99.0
		3/26/2003	< 2.000	< 2	< 2.00	< 6.00	768	508	55.3	62.2
		5/20/2003	< 2.000	< 2	< 2.00	< 6.00	822	570	67	77.8
	D	5/20/2003	< 2.000	< 2	< 2.00	< 6.00	822	534	71	75.6
		8/20/2003	< 2.000	< 2	< 2.00	< 6.00	746	494	58.7	88.4
	D	8/20/2003	< 2.000	< 2	< 2.00	< 6.00		494	62.1	88.9
		11/5/2003	1.800 J	< 2	< 2.00	< 6.00	825	550	67.1	87.5
		2/26/2004	< 2.000	< 2	< 2.00	< 6.00	752	512	52	89.8
	D	2/26/2004	< 2.000	< 2	< 2.00	< 6.00		500	51	89.1
		5/12/2004	< 2.000	< 2	< 2.00	< 6.00	786	490	57.1	87.3
		8/24/2004	< 2.000	< 2	< 2.00	< 6.00	747	520	54	85.5
		11/12/2004	< 1.000	< 1	< 1.00	< 2.00	926	572	55	88.7
		2/14/2005	< 2.000	< 2	< 2.00	< 6.00	1081	520	54	88
	D	2/14/2005	< 2.000	< 2	< 2.00	< 6.00		528	60	82.9
		5/24/2005	< 2.000	< 2	< 2.00	< 6.00	820	508	64	82
		8/22/2005	< 2.000	< 2	< 2.00	< 6.00	846	526	58	87.4
		12/14/2005	< 2.000	< 2	< 2.00	< 6.00	869	539	53	92.1
		2/13/2006	< 2.000	< 2	< 2.00	< 6.00	854	512	59	80.5
	D	2/13/2006	< 2.000	< 2	< 2.00	< 6.00		512	60	81.2
		5/9/2006	< 2.000	< 2	< 2.00	< 6.00	826	474	64	74.8
		8/22/2006	< 2.000	< 2	< 2.00	< 6.00	846	988 R H	50	80.2
	D	8/22/2006	< 2.000	< 2	< 2.00	< 6.00		492	52	82.5
		3/7/2007	< 1.000	< 1	< 1.00	< 1.00	807	531	55.5	85.7
	D	3/7/2007	< 1.000	< 1	< 1.00	< 1.00		513	54.3	89.3
		5/15/2007	< 1.000	< 1	< 1.00	< 1.00	868	558	61.7	86.5

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
ACW-14 (cont.)		8/22/2007	< 1.000	< 1	< 1.00	< 1.00	886	549	61.5	80.2
	D	8/22/2007	< 1.000	< 1	< 1.00	< 1.00		598	64.4	77.3
		11/14/2007	< 1.000	< 1	< 1.00	< 1.00	865	547	60.1	88
	D	11/14/2007	< 1.000	< 1	< 1.00	< 1.00		526	60.8	85.5
		2/19/2008	< 1.000	< 1	< 1.00	< 1.00	866	543	57.1	77.1
	D	2/19/2008	< 1.000	< 1	< 1.00	< 1.00		574	56.2	84.3
		6/9/2008	< 1.000	< 1	< 1.00	< 1.00	890	590	62.6	85.6
		8/13/2008	< 1.000	< 1	< 1.00	< 1.00	900	611	69.4	76.2
	D	8/13/2008	< 1.000	< 1	< 1.00	< 1.00		505	69.1	69.7
		11/19/2008	< 1.000	< 1	< 1.00	< 1.00	910	546	70.5	82.9
	D	11/19/2008	< 1.000	< 1	< 1.00	< 1.00		537	68.9	80.9
		3/3/2009	< 1.000	< 1	< 1.00	< 1.00	922	519	51.8	87.2
		5/19/2009	< 1.000	< 1	< 1.00	< 1.00	1100	561	64.3	97.9
		8/27/2009	< 1.000	< 1	< 1.00	< 1.00	988	603	62.3	86
		2/18/2010	< 1.000	< 1	< 1.00	< 1.00	1030	524	82	91.6
		6/29/2010	< 1.000	< 1	< 1.00	< 1.00	794	< 10	62.8	93.4
		9/21/2010	< 1.000	0.26 J	< 1.00	< 1.00	1000	705	98.4	95.1
		12/7/2010	< 1.000	< 1	< 1.00	< 1.00	1070	600	83.4	98.8
		2/16/2011	< 1.000	< 1	< 1.00	< 1.00	987	853	162	105
		5/11/2011	< 2.000	< 2	< 2.00	< 6.00	1033	605	145	105
		8/17/2011	< 1.000	< 1	< 1.00	< 3.00	925	663	154	101
		11/9/2011	< 1.000	< 1	< 1.00	< 3.00	840	544	74	90.4
		2/14/2012	< 1.000	< 1	< 1.00	< 3.00	1000	589	119	97.8
	D	2/14/2012	< 1.000	< 1	< 1.00	< 3.00	994	601	120	97.4
		5/8/2012	< 1.000	< 1	< 1.00	< 3.00	1140	646	168	112
	D	5/8/2012	< 1.000	< 1	< 1.00	< 3.00	1140	665	166	108
		8/13/2012	< 1.000	< 1	< 1.00	< 3.00	1100	674	161	110
	D	8/13/2012	< 1.000	< 1	< 1.00	< 3.00	1060	615	143	111
		11/7/2012	< 1.000	< 1	< 1.00	< 3.00	1190	723	185	117
	D	11/7/2012	< 1.000	< 1	< 1.00	< 3.00	1220	748	198	115
		3/1/2013	< 1.000	< 1	< 1.00	< 3.00	1070	623	159	102
		6/28/2013	< 0.140	< 0.3	< 0.20	< 3.00	426	416	31.3	72.3
		10/5/2013	< 0.140	< 0.3	< 0.20	< 3.00	804	815	221	117
		1/9/2014	< 0.140	< 0.3	< 0.20	< 0.20	1110	660	154	116
ACW-15		10/23/1999	3.200	5.3	< 2.00	< 4.00	1010.0	587.0	180.0	130.0
		2/23/2000	< 2.000	< 2	< 2.00	< 2.00	665	402	42	81
	D	2/23/2000	< 2.000	< 2	< 2.00	< 2.00	660	394	42	82
		5/11/2000	< 5.000	< 5	< 5.00	< 10.00	654	431	49	76
		8/8/2000	< 2.000	< 2	< 2.00	< 4.00	605	340	35	77
		11/2/2000	< 5.000	< 5	< 5.00	< 10.00	1380	876	360	250
		2/20/2001	< 2.000	< 2	< 2.00	< 4.00	725	423	64	100
	D	2/20/2001	< 2.000	< 2	< 2.00	< 4.00	727	413	65	96
		5/7/2001	< 2.000	< 2	< 2.00	< 6.00	629	416	52	80
	D	5/7/2001	< 2.000	< 2	< 2.00	< 6.00	628	396	46	81
		8/2/2001	< 2.000	< 2	< 2.00	< 2.00	627	397	82	76
		10/25/2001	< 2.000	< 2	< 2.00	< 6.00	627	393	56	72
		2/19/2002	< 2.000	3.4	2.00	11.00	629	369	27	74
	R	2/19/2002	< 2.000 H	< 2 H	< 2.00 H	< 2.00 H				
	D	2/19/2002	< 2.000	< 2	< 2.00	7.00	628	355	31	49

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l	
ACW-15 (cont.)	R	2/19/2002	< 2.000	H	< 2.00	H	< 2.00	H			
		5/2/2002	< 2.000		< 2		< 2.00		670	404	30
		9/25/2002	< 2.000		< 2		< 2.00		777	552	130
		11/8/2002	< 1.000		< 1		< 1.00		640	380	30
	D	11/8/2002	< 1.000		< 1		< 1.00		620	410	29
		3/28/2003	< 2.000		< 2		< 2.00		700	472	31.4
		5/19/2003	< 2.000		< 2		< 2.00		651	442	30
		8/19/2003	< 2.000		< 2		< 2.00		650	438	29.1
		11/7/2003	< 2.000		< 2		< 2.00		644	436	26.1
		2/26/2004	< 2.000		< 2		< 2.00		600	410	27
		5/12/2004	< 2.000		< 2		< 2.00		655	436	27.1
		8/24/2004	< 2.000		< 2		< 2.00		587	382	26
		11/11/2004	< 1.000		< 1		< 1.00		760	468	29
		2/14/2005	< 2.000		< 2		< 2.00		937	444	30
		5/24/2005	< 2.000		< 2		< 2.00		655	513	61
	D	5/24/2005	< 2.000		< 2		< 2.00			458	34
		8/22/2005	< 2.000		< 2		< 2.00		743	456	31
		12/14/2005	< 2.000		< 2		< 2.00		754	452	32
		2/13/2006	< 2.000		< 2		< 2.00		730	444	39
		5/8/2006	< 2.000		< 2		< 2.00		721	377	33
		8/22/2006	< 2.000		< 2		< 2.00		708	414	41
		3/8/2007	< 1.000		< 1		< 1.00		716	457	44.1
		5/15/2007	< 1.000		< 1		< 1.00		794	514	43.4
		8/22/2007	< 1.000		< 1		< 1.00		799	47	1.05
		11/15/2007	< 1.000		< 1		< 1.00		752	520	50
		2/19/2008	< 1.000		< 1		< 1.00		844	542	62.2
		6/9/2008	< 1.000		< 1		< 1.00		840	538	56.1
		8/13/2008	< 1.000		< 1		< 1.00		848	588	62.1
		11/19/2008	< 1.000		< 1		< 1.00		828	481	47.1
		3/3/2009	< 1.000		< 1		< 1.00		857	491	50.3
		5/19/2009	< 1.000		< 1		< 1.00		825	493	55.6
	D	5/19/2009	< 1.000		< 1		< 1.00			482	65.1
		8/27/2009	< 1.000		< 1		< 1.00		840	515	59.9
	D	8/27/2009	< 1.000		< 1		< 1.00			502	45.6
		2/17/2010							839	337	30.9
		6/28/2010	< 1.000		< 1		< 1.00		837	671	48.8
		9/20/2010	< 1.000		0.33 J		< 1.00		878	476	30.3
		12/9/2010	< 1.000		0.6 J		< 1.00		9300	5500	72
	D	2/16/2011	< 1.000		< 1		< 1.00		857	710	135
		2/16/2011	< 1.000		< 1		< 1.00		849	679	134
		5/10/2011	< 2.000		< 2		< 2.00		897	571	124
		8/17/2011	< 1.000		< 1		< 1.00		589	440	36.8
	D	8/17/2011	< 1.000		< 1		< 1.00		595	428	39.8
		11/9/2011	< 1.000		< 1		< 1.00		711	462	48.6
		2/13/2012	< 1.000		< 1		< 1.00		939	539	124
		5/8/2012	< 1.000		< 1		< 1.00		718	386	47.1
		8/14/2012	< 1.000		< 1		< 1.00		999	531	146
		11/5/2012	< 1.000		< 1		< 1.00		1010	615	154
	3/1/2013	< 1.000		< 1		< 1.00		992	649	160	

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
ACW-15 (cont.)		6/28/2013	< 0.140	< 0.3	< 0.20	< 0.23	675	613	160	93.7
		10/3/2013	< 0.140	< 0.3	< 0.20	< 0.23	691	720	189	92.9
		1/10/2014	< 0.140	< 0.3	< 0.20	< 0.23	1080	613	170	99.6
RW-01		11/3/2000	130.000	40	73.00	120.00	62000	43900	32000	22000
		11/9/2004	114.000 R	24.1	70.30	62.10	67670	39900	23700	12400
		12/15/2005	136.000	21	90.50	91.80	48800	32600	13600	11500
		3/5/2007	93.000	25	59.00	71.00	47800	30400	22500	10800
		11/12/2007	110.000	47	69.00	81.00	44900	29700	16800	10600
		11/17/2008	57.000	39	37.00	52.00	38400	26600	17700	8530
		2/19/2010	120.000	100	56.00	84.00	34600	35000	22600	11600
		12/7/2010	86.000	69	46.00	71.00	27500	28600	20800	9880
	D	12/7/2010	94.000	70	50.00	76.00		34000	21900	10500
		11/9/2011	73.600	53.5	33.40	53.00	4100.0	26100.0	16200.0	8750.0
	D	11/9/2011	76.800	56.2	35.00	55.60	40100.0	26400.0	17300.0	8860.0
RW-02		11/3/2000	< 5.000	< 5	< 5.00	< 10.00	7340	5660	2800	680
		10/25/2001					8380	5050	2400	
		11/6/2002	1.500	< 1.0	< 1.00	< 3.00	8700.0	5800.0	3500.0	1400.0
		11/10/2004	2.100	0.5 J	< 1.00	< 2.00	5870.0	7000.0	2850.0	1220.0
		12/14/2005	1.900 J	< 2	< 2.00	< 6.00	8450	5060	2280	1100
		3/6/2007	4.200	< 1.0	< 1.00	< 1.00	10320.0	7200.0	3950.0	1510.0
		11/19/2008	< 1.000	< 1	< 1.00	< 1.00	13830	10800	5850	1910
		2/24/2010	4.000	< 1	< 1.00	< 1.00	21700	5780	2510	1170
		12/9/2010	< 1.000	< 1	< 1.00	< 1.00	11340	8620	3840	1590
		11/9/2011	5.400	< 1.0	< 1.00	< 3.00	10100.0	6140.0	2990.0	1450.0
	D	11/9/2011	6.200	< 1.0	< 1.00	< 3.00	10100.0	6640.0	3030.0	1360.0
RW-03		11/8/2012	91.400	60.6	22.80	39.80	88400.0	74000.0	58200.0	27200.0
ENSR-01		5/7/1997	7.300	3.7	2.40	2.00	8620.0	5200.0	3200.0	
		10/21/1997	13.000	6	4.20	5.60	13800	7600	4400	
		5/12/1998	13.000	5	4.00	4.40	12000	6700	3600	
		10/20/1998					12400	7590	4200	
		5/11/1999					14700	8450	5500	
		10/20/1999					12400	6290	4100	
		5/9/2000					12800	7420	6200	
		10/27/2000					10200	6690	3800	
	D	10/27/2000					10600	7140	4000	
		5/2/2001					19200	10200	7600	
		10/23/2001					15300	8050	5100	
	D	10/23/2001					11400	6070	3600	
		4/29/2002					9480	4770	3800	
		11/4/2002	18.000	< 10	< 10.00	< 30.00	12000	7600	4500	1900
		11/4/2003	13.100	1.2 J	3.10	3.10 J	6510.0	2260.0	2600.0	2710.0
		11/10/2004	10.800	1.1	2.80	2.00	5800.0	3900.0	1920.0	881.0
	D	11/10/2004	11.400 R	1.3	2.40	1.70 J		3150	1420	823
		12/13/2005	9.900	< 2.0	2.20	< 6.00	5530.0	2740.0	1120.0	969.0
		3/6/2007	7.400	< 1.0	2.50	2.40	4860.0	4010.0	2230.0	882.0
		11/13/2007	11.000	< 1	3.70	1.90	7430	2830	1230	1040
		11/18/2008	6.200	< 1.0	2.20	1.30	7690.0	3270.0	1680.0	1140.0
		2/25/2010	4.100	< 1.0	1.10	< 1.00	13890.0	3760.0	1640.0	1330.0
	D	2/25/2010	4.200	< 1.0	1.20	< 1.00		3760.0	1630.0	1240.0

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
ENSR-01 (cont.)		12/9/2010	12.000	1	0.90 J	1.20 J	22500	9210	4620	2310
	D	12/9/2010	12.000	0 J	< 1.00	< 1.00		7670	4690	2370
		11/10/2011	6.900	0.6 J	2.10	2.00 J	10600.0	5680.0	3120.0	1840.0
	D	11/10/2011	6.900	0.7 J	1.90	1.90 J	11800.0	6520.0	3500.0	2010.0
		11/7/2012	8.200	< 1.0	1.70	1.00 J	11800.0	7480.0	3940.0	2300.0
		1/13/2014	7.860	< 0.3	1.56	1.06 J	13600.0	6240.0	4410.0	2420.0
ENSR-02		5/6/1997	250.000	230	110.00	190.00	50000	27000	17000	
		10/20/1997	130.000	160	77.00	120.00	57900	30000	17000	
		5/12/1998					38000	21000	13000	
		10/19/1998					44800	30000	18000	
		5/11/1999					49100	31200	18000	
		10/19/1999					28900	16600	9400	
		5/9/2000					42900	26700	18000	
		10/29/2001					42000	25100	13000	
		11/9/2004	72.100 R	28.4	18.10	93.80	35500	22500	12900	7840
		12/14/2005	49.400	53.4	21.50	32.90	34400.0	20600.0	10400.0	7810.0
		3/5/2007	10.000	12	4.50	7.30	33300	22100	12400	7840
		11/17/2008	72.000	96	38.00	70.00	39200	24200	18200	8190
	D	11/17/2008	73.000	99	39.00	72.00		24000	15500	7260
		2/19/2010	30.000	30	13.00	22.80	33600	15400	9560	5260
		12/8/2010	28.000	38	9.10	16.50	11000	15300	8500	5780
		11/10/2011	5.100	8.1	1.60	3.00	16300.0	9620.0	7100.0	3340.0
ENSR-03		5/7/1997	7.600	3.3	2.90	3.00	2050.0	1500.0	650.0	
	D	5/7/1997	6.800	3.1	2.80	2.90	1990.0	1400.0	480.0	
		10/21/1997	5.000	3	3.00	4.10	2230	1300	580	
		5/12/1998	9.500	3.4	1.90	2.70	2400.0	1400.0	610.0	
	D	5/12/1998	14.000	4	2.30	4.40	2200	1300	550	
		10/20/1998					2260	1580	590	
	D	10/20/1998					2240	1290	540	
		5/11/1999					2490	1370	500	
	D	5/11/1999					2480	1380	610	
		10/20/1999					2390	1630	600	
	D	10/20/1999					2390	1560	590	
		5/9/2000					2360	1580	710	
	D	5/9/2000					2410	1580	710	
		10/27/2000					2410	1870	640	
		5/2/2001					2480	1240	610	
	D	5/2/2001					2490	1270	680	
		10/23/2001					2480	1300	620	
		4/29/2002					2500	1350	580	
	D	4/29/2002					2370	1390	490	
		11/4/2002	7.100	< 5.0	22.00	25.00	2100.0	1400.0	520.0	190.0
		11/3/2003	9.300	< 2.0	11.20	11.40	2020.0	1460.0	471.0	174.0
		11/10/2004	12.000	0.4 J	3.80	3.40	2310.0	1810.0	561.0	168.0
		5/23/2005	13.000	< 2.0	2.40	< 6.00	2330.0	1510.0	523.0	180.1
		12/12/2005	11.600	< 2.0	3.20	2.70 J	2450.0	1240.0	564.0	191.0
	D	12/12/2005	11.900	< 2.0	3.30	2.70 J		1240.0	558.0	176.0
		3/6/2007	6.700	< 1.0	17.00	18.00	2150.0	1460.0	536.0	158.0
		11/12/2007	11.000	< 1	22.00	22.00	2360	1630	477	150

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
ENSR-03 (cont.)		11/17/2008	5.500	< 1.0	12.00	13.00	2100.0	1390.0	422.0	126.0
		2/25/2010	2.900	< 1.0	8.20	5.60	2390.0	1550.0	364.0	150.0
		12/8/2010	19.000	1 J	14.00	19.49	8000	2060	552	177
		11/10/2011	4.200	< 1.0	4.10	2.90 J	1990.0	1150.0	393.0	1630.0
		11/7/2012	43.200	< 1.0	3.80	6.20	2280.0	1320.0	476.0	173.0
		1/10/2014	30.200	< 0.3	1.90	7.14	2370.0	1430.0	495.0	173.0
Oxy Supply		5/13/1998	< 0.500	< 0.5	< 0.50	< 1.00	800	480	120	65
		8/11/1998	< 2.000	< 2	< 2.00	< 6.00	762	604	120	67
		10/20/1998	< 2.000	< 2	< 2.00	< 6.00	734	488	100	
		2/23/1999	< 2.000	< 2	< 2.00	< 2.00	810	407	120	82
		5/13/1999	< 2.000	< 2	< 2.00	< 2.00	808	468	120	71
		8/11/1999	< 2.000	< 2	< 2.00	< 2.00	831	466	140	72
		10/22/1999	< 2.000	< 2	< 2.00	< 4.00	788	490	130	73
		2/23/2000	< 2.000	< 2	< 2.00	< 6.00	630	392	38	71
		5/11/2000	< 5.000	< 5	< 5.00	< 10.00	835	504	120	72
		8/7/2000	< 2.000	< 2	< 2.00	< 4.00	802	433	120	68
		11/2/2000	< 2.000	< 2	< 2.00	< 4.00	662	475	120	71
		2/20/2001	< 2.000	< 2	< 2.00	< 4.00	805	442	130	68
		5/7/2001	< 2.000	< 2	< 2.00	< 2.00	781	481	140	65
		8/1/2001	< 2.000	< 2	< 2.00 Jc	< 2.00	807	532	120	66
		10/25/2001	< 2.000	< 2	< 2.00	< 2.00	822	500	120	64
		9/25/2002	< 2.000	< 2	< 2.00	< 4.00	827	552	34	60
		11/6/2002	< 1.000	< 1	< 1.00	< 3.00	820	580	140	73
		3/26/2003	< 2.000	< 2	< 2.00	< 6.00	870	556	162	52.7
		5/19/2003	< 2.000	< 2	< 2.00	< 6.00	863	544	190	61.4
		8/19/2003	< 2.000	< 2	< 2.00	< 6.00	786	500	126	64.2
		11/3/2003	< 2.000	< 2	< 2.00	< 6.00	822	572	154	61.8
		2/25/2004	< 2.000	< 2	< 2.00	< 6.00	830	548	136	69.8
		5/13/2004	< 2.000	< 2	< 2.00	< 6.00	851	922	157	70
	D	5/13/2004	< 2.000	< 2	< 2.00	< 6.00		568	162	66.6
		8/25/2004	< 2.000	< 2	< 2.00	< 6.00	849	654	193	71.8
	D	8/25/2004	< 2.000	< 2	< 2.00	< 6.00		650	200	73.3
		11/11/2004	< 1.000	< 1	< 1.00	< 2.00	984	588	135	65.6
		2/15/2005	< 2.000	< 2	< 2.00	< 6.00	1226	397	29	64.2
		5/25/2005	< 2.000	< 2	< 2.00	< 6.00	935	611	147	63.1
		8/23/2005	< 2.000 H	< 2 H	< 2.00 H	< 6.00 H	1190	650	217	83.6
		12/15/2005	< 2.000	< 2	< 2.00	< 6.00	1238	696	228	85.3
		2/14/2006	< 2.000	< 2	< 2.00	< 6.00	1198	635	213	75.8
		5/8/2006	< 2.000	< 2	< 2.00	< 6.00	1098	513	171	71.4
		8/23/2006	< 2.000	< 2	< 2.00	< 6.00	980	556 R H	168	66
		3/8/2007	< 1.000	< 1	< 1.00	< 1.00	1036	730	199	73.8
	D	3/8/2007	< 1.000	< 1	< 1.00	< 1.00		702	199	74.5
		5/16/2007	< 1.000	< 1	< 1.00	< 1.00	1094	699	202	73.1
	D	5/16/2007	< 1.000	< 1	< 1.00	< 1.00		730	201	75.4
		8/23/2007	< 1.000	< 1	< 1.00	< 1.00	1159	701	186	67.8
		11/15/2007	< 1.000	< 1	< 1.00	< 1.00	1059	796	188	70.8
EPNG-01		5/8/1997	0.560	0.55	< 0.50	< 1.00	718.00			
		10/23/1997	< 0.500	< 0.5	< 0.50	< 1.00	890	470	91	
		5/14/1998					850	500	67	

Table 2
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Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
EPNG-01 (cont.)	D	5/14/1998	< 0.500	< 0.5	< 0.50	< 1.00	860	520	67	
		10/22/1998	< 2.000	< 2	< 2.00	< 6.00	994	659	56	
		5/14/1999					846	469	70	
		10/23/1999	< 2.000	< 2	< 2.00	< 6.00	891	540	2.5	
		10/27/2000					850	603	94	
		10/29/2001					890	523	65	
		11/8/2002	< 1.000	< 1	< 1.00	< 3.00	940	600	60	91
		11/7/2003	< 2.000	< 2	< 2.00	< 6.00	733	600	62	80.9
		11/12/2004	< 1.000	< 1	< 1.00	< 2.00	963	516	68	87.7
		12/15/2005	< 2.000	< 2	< 2.00	< 6.00	1103	674	52	62.4
		3/9/2007	< 1.000	< 1	< 1.00	< 1.00	747	485	58	79.6
		11/16/2007	< 1.000	< 1	< 1.00	< 1.00	738	851	52.3	70.2
	D	11/16/2007	< 1.000	< 1	< 1.00	< 1.00		670	52.2	71
		11/20/2008	< 1.000	< 1	< 1.00	< 1.00	1118	674	70.7	76.1
	D	11/20/2008	< 1.000	< 1	< 1.00	< 1.00		670	70.6	75.5
		2/24/2010	< 1.000	< 1	< 1.00	< 1.00	1060	420	63.2	88.7
		12/9/2010	0.300 J	1.6	3.20	2.93	2300	980	73.6	87.4
		11/10/2011	0.600 J	< 1	< 1.00	< 3.00	962	573	60.8	80.4
		11/7/2012	< 1.000	< 1	< 1.00	< 3.00	982	607	65.3	97.2
	D	11/7/2012	< 1.000	< 1	< 1.00	< 3.00	1010	617	68.4	95.8
Doom Supply		2/24/1998	< 0.500	< 0.5	< 0.50	< 1.00	634	410	38	64
		5/13/1998	< 0.500	< 0.5	< 0.50	< 1.00	640	410	30	
		8/10/1998	< 2.000	< 2	< 2.00	< 6.00	629	450	34	71
		10/20/1998	< 2.000	< 2	< 2.00	< 6.00	636	464	35	69
		2/23/1999	< 2.000	< 2	< 2.00	< 2.00	627	364	31	72
		5/13/1999	< 2.000	< 2	< 2.00	< 2.00	630	381	34	72
		8/11/1999	< 2.000	< 2	< 2.00	< 2.00	629	372	30	73
		10/21/1999	< 2.000	< 2	< 2.00	< 4.00	617	400	32	77
		2/23/2000	< 2.000	< 2	< 2.00	< 6.00	814	506	130	69
		5/10/2000	< 5.000	< 5	< 5.00	< 10.00	619	417	31	72
		8/14/2000	< 5.000	< 5	< 5.00	< 10.00	597	400	28	4.2
		11/2/2000	< 2.000	< 2	< 2.00	< 4.00	530	375	32	79
		2/20/2001	< 2.000	< 2	< 2.00	< 4.00	619	372	33	67
		5/3/2001	< 2.000	< 2	< 2.00	< 2.00	615	419	30	73
		8/1/2001	< 2.000	< 2	< 2.00 Jc	< 2.00	618	374	28	66
		10/29/2001	< 2.000	< 2	< 2.00	< 6.00	622	396	28	64
		2/20/2002	< 2.000	19	3.90	24.00	620	373	31	65
	R	2/20/2002	< 2.000 H	< 2 H	< 2.00 H	< 2.00 H				
		3/27/2002	< 2.000	< 2	< 2.00	< 2.00				
		5/2/2002	< 2.000	< 2	< 2.00	< 2.00	624	351	30	65
		9/25/2002	< 2.000	< 2	< 2.00	< 4.00	626	411	68	63
		11/5/2002	< 1.000	< 1	< 1.00	< 3.00	620	470	29	70
		3/26/2003	< 2.000	< 2	< 2.00	< 6.00	585	386	30	50.7
		5/20/2003	< 2.000	< 2	< 2.00	< 6.00	602	410	36	62.6
		8/20/2003	< 2.000	< 2	< 2.00	< 6.00	561	366	30.8	65.5
		11/6/2003	< 2.000	< 2	< 2.00	< 6.00	5.88	406	28.3	64.8
	D	11/6/2003	< 2.000	< 2	< 2.00	< 6.00		398	28.5	62.7
		2/25/2004	< 2.000	< 2	< 2.00	< 6.00	583	388	28	67.1
		5/13/2004	< 2.000	< 2	< 2.00	< 6.00	609	396	2.6	62.7

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
Doom (cont.)		8/25/2004	< 2.000	< 2	< 2.00	< 6.00	567	390	43	63.8
		11/15/2004	< 2.000	< 2	< 2.00	< 6.00	602	404	28	61.8
		2/15/2005	< 2.000	< 2	< 2.00	< 6.00	784	659	84	73.5
		5/25/2005	< 2.000	< 2	< 2.00	< 6.00	619	403	29	58.3
		8/23/2005	< 2.000 H	< 2 H	< 2.00 H	< 6.00 H	652	384	29	65.5
	D	8/23/2005	< 2.000 H	< 2 H	< 2.00 H	< 6.00 H		384	29	66
		12/15/2005	< 2.000	< 2	< 2.00	< 6.00	641	408	29	68.7
		2/14/2006	< 2.000	< 2	< 2.00	< 6.00	645	384	28	59.8
		5/9/2006	< 2.000	< 2	< 2.00	< 6.00	635	316	30	56.6
		8/23/2006	< 2.000	< 2	< 2.00	< 6.00	641	374	31	62.4
		3/6/2007	< 1.000	< 1	< 1.00	< 1.00	631	415	32.2	65.8
		5/16/2007	< 1.000	< 1	< 1.00	< 1.00	699	446	33.7	62.6
		8/23/2007	< 1.000	< 1	< 1.00	< 1.00	723	426	31.1	58.8
		11/15/2007	< 1.000	< 1	< 1.00	< 1.00	619	447	31.3	62.7
		2/20/2008	< 1.000	< 1	< 1.00	< 1.00	700	417	31	65.5
		6/10/2008	< 1.000	< 1	< 1.00	< 1.00	669	451	34.5	67
		8/12/2008	< 1.000	< 1	< 1.00	< 1.00	760	461	34.3	56.5
		11/18/2008	< 1.000	< 1	< 1.00	< 1.00	735	390	34.5	61.3
		3/4/2009	< 1.000	< 1	< 1.00	< 1.00	641	485	28.6	64.6
		8/26/2009	2.300	< 1.0	< 1.00	< 1.00	721.0	426.0	31.5	64.7
		9/17/2009	< 1.000	< 1	< 1.00	< 1.00				
		2/19/2010	< 1.000	< 1	< 1.00	< 1.00	765	409	36	57.4
		6/28/2010	< 1.000	< 1	< 1.00	< 1.00	642	215	well	65.6
		9/21/2010	< 1.000	0.28 J	< 1.00	< 1.00	661	449	30	64.2
		12/8/2010	< 1.000	< 1	< 1.00	< 1.00	8490	930	32.9	67.9
		2/16/2011	< 1.000	< 1	< 1.00	< 1.00	614	457	32.6	65.8
		5/11/2011	< 2.000	< 2	< 2.00	< 6.00	1159	395	30.4	62.1
		8/17/2011	< 1.000	< 1	< 1.00	< 3.00	569	569	30.2	65.4
		11/10/2011	< 1.000	< 1	< 1.00	< 3.00	635	250	28.6	60.2
		2/14/2012	< 1.000	< 1	< 1.00	< 3.00	637	373	30	63.5
		5/8/2012	< 1.000	< 1	< 1.00	< 3.00	646	347	33.1	67.1
		8/13/2012	< 1.000	< 1	< 1.00	< 3.00	650	374	30.9	65.6
		11/5/2012	< 1.000	< 1	< 1.00	< 3.00	636	409	35.5	60.4
		3/5/2013	< 1.000	< 1	< 1.00	< 3.00	627	408	30.9	68.8
		6/28/2013	< 1.000	< 1	< 1.00	< 3.00	426	416	31.3	72.3
		10/5/2013	< 1.000	< 1	< 1.00	< 3.00	387	443	29.1	68.3
PTP-01		5/7/1997	38.000	1	22.00	8.40	2420	1500	490	
		10/21/1997	7.900	< 0.5	18.00	3.10	2250.0	1400.0	470.0	
		5/12/1998	62.000	2	21.00	13.00	2300	1400	480	
		10/20/1998					2090	1410	380	
		5/11/1999					2250	1240	330	
		10/20/1999					2300	1630	460	
		5/9/2000					2210	1400	510	
		10/27/2000					2050	1570	530	
		5/2/2001					2370	1240	520	
		10/23/2001					2370	1280	550	
		4/29/2002					2390	1400	500	
		11/4/2002	50.000	< 10	15.00	24.00	2000	690	480	170
		11/3/2003	21.800	< 2.0	13.50	8.80	2130.0	1380.0	469.0	190.0

Table 2
Summary of Laboratory Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	Total Xylene, µg/l	Specific Conductance, umho/cm	Total Dissolved Solids, mg/L	Chloride, mg/l	Sodium, mg/l
PTP-01 (cont.)		11/10/2004	13.600	< 1.0	18.70	9.60	2300.0	1560.0	496.0	167.0
		12/12/2005	13.700	1.6 J	22.50	26.40	2360.0	1140.0	442.0	192.0
		3/6/2007	19.000	< 1	15.00	34.50	2150	1280	397	222
		11/12/2007	19.000	< 1	20.00	31.30	2200	1380	348	197
		11/17/2008	11.000	< 1	24.00	26.20	2110	1250	351	145
		2/25/2010	4.300	< 1.0	19.00	14.00	2050.0	1120.0	265.0	183.0
		12/8/2010	2.600	1.0 J	19.00	9.10	7000.0	15200.0	336.0	176.0
		11/10/2011	3.100	< 1.0	13.50	15.70	2050.0	992.0	349.0	165.0
		11/8/2012	< 1.000	< 1	4.60	< 3.00	1820	1110	331	140
		1/10/2014	1.200	< 0.3	1.40	8.09	1890	1050	278	174
		11/9/2004	80.700	14.0	25.60	25.10		20300.0	11300.0	6010.0
		12/15/2005	84.400	20.4	40.50	40.40	36800.0	23800.0	7850.0	8620.0
Injection Well		3/6/2007	53.000	32	130.00	36.10	29400	19200	13900	6690
		11/16/2007	80.000	36	68.00	62.00	37900	26900	15600	9260
		11/20/2008	52.000	38	82.00	39.70	23600	17300	10500	5250
		2/19/2010	22.000	13	23.00	15.60	19600	11000	7440	3700
		12/8/2010	72.000	53	90.00	59.00	19000	22900	14300	7240
		11/8/2011								

1. < : Denotes a sample value of less than the laboratory reporting limit.

2. --- : No analysis performed.

3. Jm : Estimated value--possible matrix effect.

4. Jc: This concentration may be biased because the continuing calibration verification (CCV) standard did not meet QC requirements for this analyte.

ies meet method requirements and analytical results are in control.

5. * : Method blank had detectable levels of this compound.

6. 1.2/<0.05 : NEL Lab result/Montgomery Watson Lab result.

7. P : Denotes sample was received with a pH greater than 2.

8. H: Sample was analyzed outside the EPA technical holding time.

9. R : Denotes a reanalyzed sample.

10. J : Indicates an estimated value.

11. PM: indicates ICP-AES method

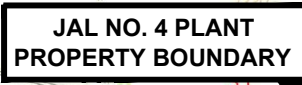
12. 1.00 (404) : Result in parenthesis is from a re-analysis conducted outside the EPA technical holding time.

13. ** : Doom Supply was resampled on 9/17/2009

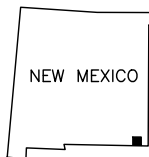
Table 3
Annual Groundwater Recovery Volumes
Jal No. 4 Plant, Lea County, New Mexico

Year	RW-1 (gallons)	RW-2 (gallons)	ENSR-2 (gallons)	ACW-3 (gallons)	ACW-8 (gallons)	Total (gallons)	Total (acre- feet)
1999	319,280	0	0	0	0	319,280	1
2000	1,575,510	3,967,385	780,240	0	0	6,323,135	19.4
2001	0	1,672,990	566,126	0	0	2,239,116	6.9
2002	267,869	2,919,520	1,675,670	0	0	4,863,059	14.92
2003	501,640	1,598,630	1,629,400	0	0	3,729,670	11.45
2004	1,241,510	2,029,620	1,130,850	0	0	4,401,980	13.51
2005	2,333,140	3,493,310	2,241,812	704,320	1,141,993	9,914,575	30.43
2006	2,367,970	1,205,100	2,151,020	1,725,100	2,293,637	9,742,827	29.9
2007	2,629,732	2,178,570	1,523,379	1,022,737	2,151,891	9,506,309	29.17
2008	3,204,015	2,245,830	338,730	941,069	2,800,513	9,530,157	29.25
2009	2,506,620	2,532,290	1,582,660	1,775,300	1,445,460	9,842,330	30.21
2010	1,687,110	2,109,680	792,970	1,530,130	1,292,650	7,412,540	22.75
2011	1,500,210	1,715,830	10,000	759,000	1,203,220	5,188,260	15.92
2012	422,700	1,112,130	0	93,140	208,200	1,836,170	5.63
2013	0	0	0	0	0	0	0
Cumulative Total	20,557,306	28,780.89	14,422,857	8,550,796	12,537,564	84,849,408	260.44

Figures

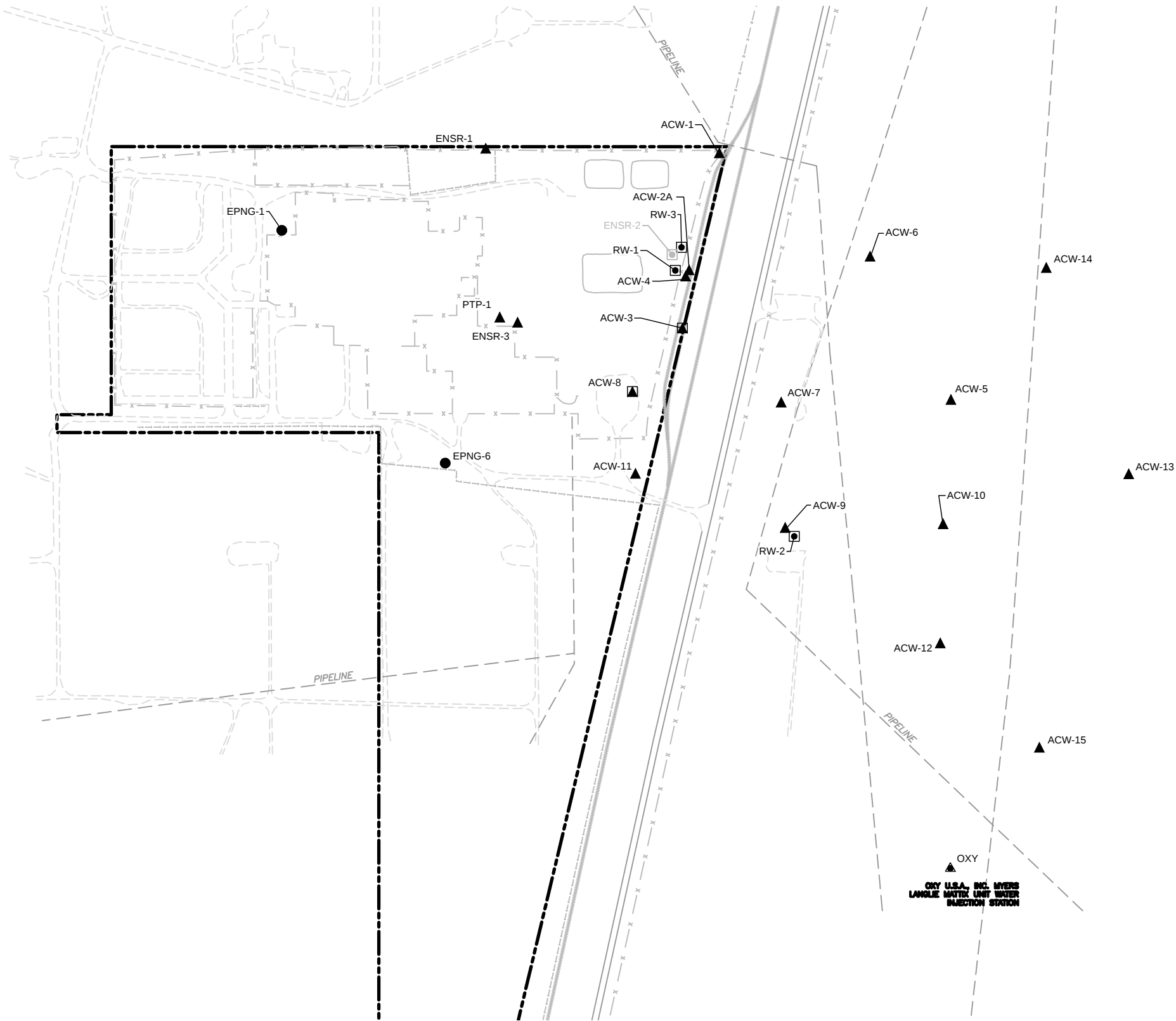


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NM_Rattlesnake Canyon_192030_1969_24000_geo.jpg



SITE LOCATION MAP



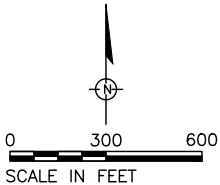


LEGEND

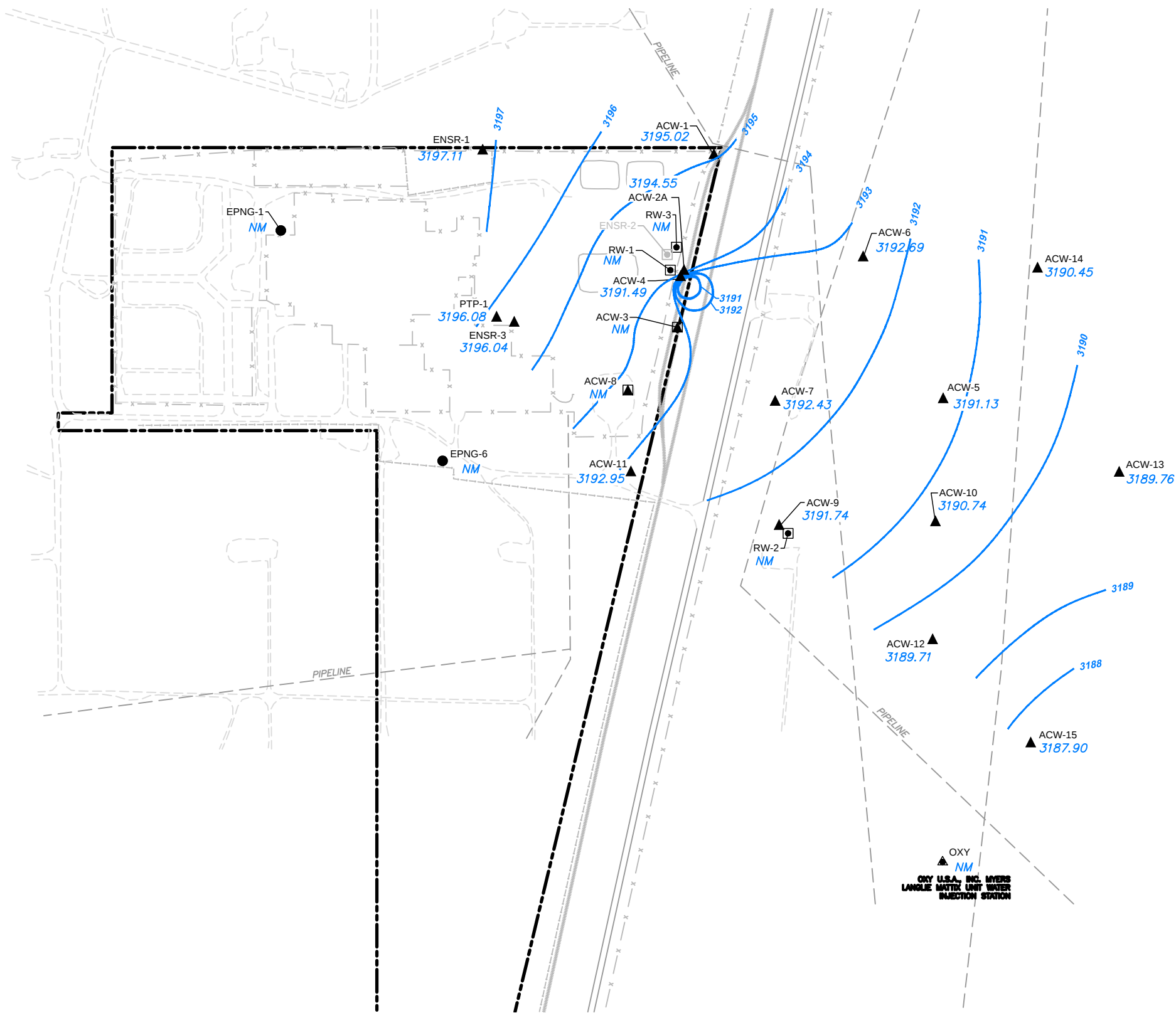
- | | |
|-----------|---|
| ▲ ACW-5 | GROUNDWATER MONITOR WELL |
| ◼ RW-2 | GROUNDWATER RECOVERY WELL |
| ● EPNG-1 | WATER SUPPLY WELL |
| ▲ OXY | WATER SUPPLY WELL |
| ◼ ACW-8 | GROUNDWATER MONITOR WELL CONVERTED TO GROUNDWATER RECOVERY WELL |
| ◼ ENSR-2 | PLUGGED/ABANDONED MAY 2012 |
| --- | PLANT PROPERTY BOUNDARY |
| - x - x - | FENCE |
| - - - - - | SECONDARY ROAD |
| ===== | RAILROAD TRACK |
| - - - - - | PIPELINE |
| ◻ | IMPOUNDMENT |

NOTES

- 1) JAL #4 PLANT PROPERTY IS LOCATED WITHIN SECTIONS 31 AND 32 OF TOWNSHIP 23 SOUTH, RANGE 37 EAST, AND SECTIONS 5 AND 6 OF TOWNSHIP 24 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO.
- 2) SITE BASE AREA DIGITIZED FROM 11/04/76 AERIAL PHOTOGRAPH WITH PLANT PROPERTY BOUNDARY, WELLS INSERTED FROM VARIOUS OTHER SOURCES, AND DRAWING FILES PROVIDED BY SAIC ENERGY, ENVIRONMENT & INFRASTRUCTURE, LLC OF TULSA, OKLAHOMA.
- 3) RECOVERY SYSTEM WAS NOT OPERATED IN 2013.



EL PASO NATURAL GAS COMPANY JAL #4 GAS PLANT - LEA COUNTY, NEW MEXICO 2013 ANNUAL GROUNDWATER REMEDATION REPORT	
SITE LAYOUT	
	FIGURE 2

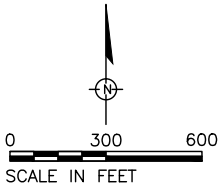


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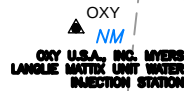
- ▲ ACW-5 3191.13 GROUNDWATER MONITOR WELL AND GROUNDWATER ELEVATION WITHIN UPPERMOST GROUNDWATER SYSTEM, ON MARCH, 2013, FEET AMSL
- EPNG-1 WATER SUPPLY WELL
- ◻ RW-2 GROUNDWATER RECOVERY WELL
- ▲ OXY WATER SUPPLY WELL
- ▲ ACW-8 NM GROUNDWATER MONITOR WELL CONVERTED TO GROUNDWATER RECOVERY WELL
- ◻ ENSR-2 PLUGGED/ABANDONED MAY 2012
- NM NOT MEASURED FOR GROUNDWATER ELEVATION
- DIRECTION OF GROUNDWATER FLOW
- 3192 — CONTOUR OF GROUNDWATER ELEVATION WITHIN UPPERMOST GROUNDWATER SYSTEM ON MARCH 1, 2013 – FEET AMSL
- PLANT PROPERTY BOUNDARY
- x - FENCE
- ... SECONDARY ROAD
- RAILROAD TRACK
- - - PIPELINE
- ◻ IMPOUNDMENT

NOTES

- 1) JAL #4 PLANT PROPERTY IS LOCATED WITHIN SECTIONS 31 AND 32 OF TOWNSHIP 23 SOUTH, RANGE 37 EAST, AND SECTIONS 5 AND 6 OF TOWNSHIP 24 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO.
- 2) SITE BASE AREA DIGITIZED FROM 11/04/76 AERIAL PHOTOGRAPH WITH PLANT PROPERTY BOUNDARY, WELLS INSERTED FROM VARIOUS OTHER SOURCES, AND DRAWING FILES PROVIDED BY SAIC ENERGY, ENVIRONMENT & INFRASTRUCTURE, LLC OF TULSA, OKLAHOMA.
- 3) RECOVERY SYSTEM WAS NOT OPERATED IN 2013.



EL PASO NATURAL GAS COMPANY JAL #4 GAS PLANT - LEA COUNTY, NEW MEXICO 2013 ANNUAL GROUNDWATER REMEDATION REPORT	
GROUNDWATER POTENTIOMETRIC SURFACE OF UPPERMOST GROUNDWATER SYSTEM - 1st QUARTER 2013	
	FIGURE 3



▲ ACW-15 3187.74	GROUNDWATER MONITOR WELL AND GROUNDWATER ELEVATION WITHIN UPPERMOST GROUNDWATER SYSTEM, ON JUNE, 2013, FEET AMSL
● EPNG-1	WATER SUPPLY WELL
◻ RW-2	GROUNDWATER RECOVERY WELL
▲ OXY	WATER SUPPLY WELL
▲ ACW-8 NM	GROUNDWATER MONITOR WELL CONVERTED TO GROUNDWATER RECOVERY WELL
◻ ENSR-2	PLUGGED/ABANDONED MAY 2012
NM	NOT MEASURED FOR GROUNDWATER ELEVATION

3192 CONTOUR OF GROUNDWATER ELEVATION
WITHIN UPPERMOST GROUNDWATER
SYSTEM ON JUNE 26, 2013 - FEET
AMSL

— x — x — FENCE

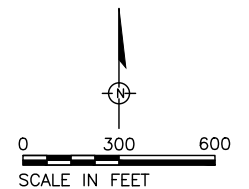
===== SECONDARY ROAD

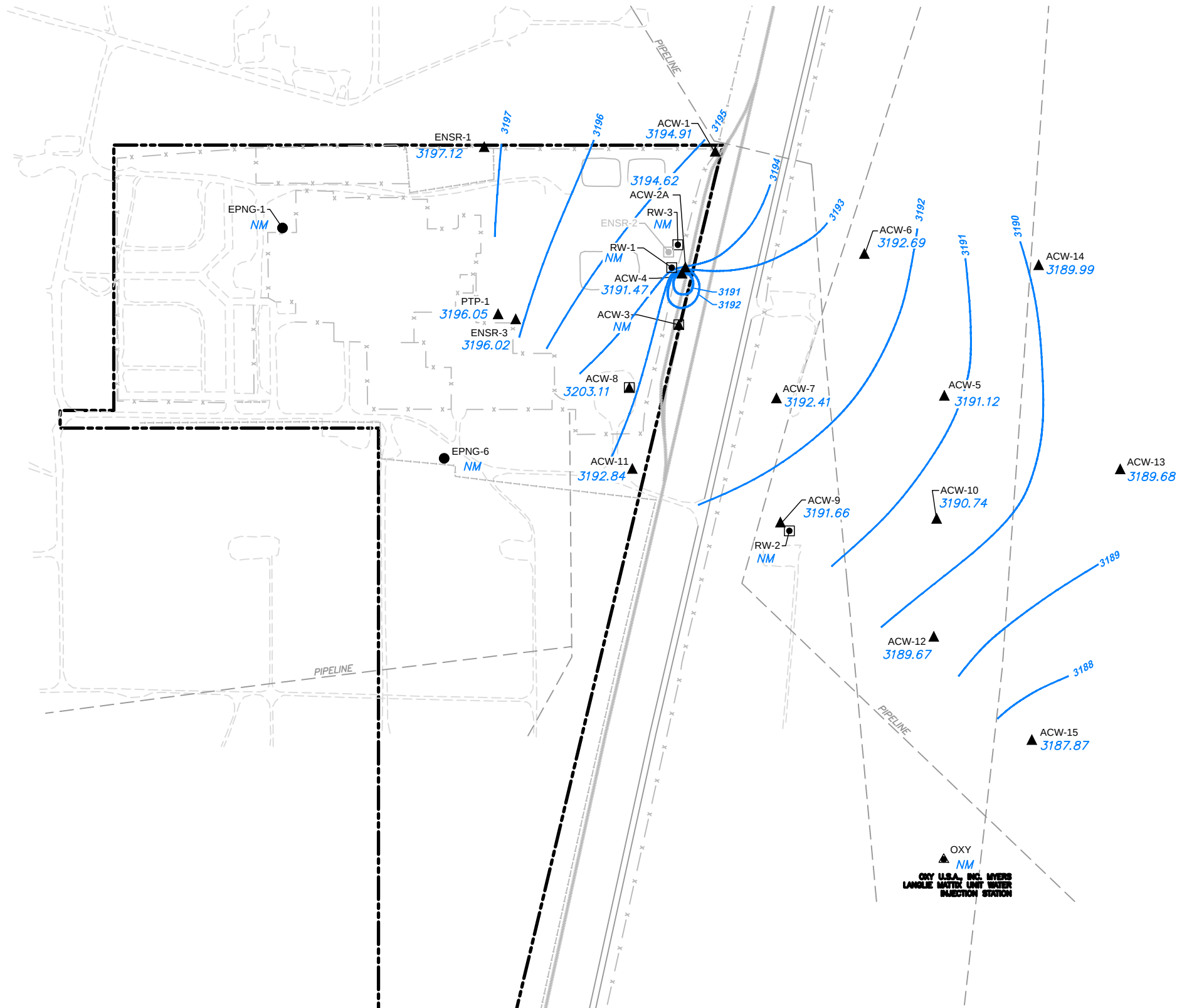
 RAILROAD TRACK

— — — — PIPELINE

IMPOUNDMENT

- 1) JAL #4 PLANT PROPERTY IS LOCATED WITHIN SECTIONS 31 AND 32 OF TOWNSHIP 23 SOUTH, RANGE 37 EAST, AND SECTIONS 5 AND 6 OF TOWNSHIP 24 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO.
- 2) SITE BASE AREA DIGITIZED FROM 11/04/76 AERIAL PHOTOGRAPH WITH PLANT PROPERTY BOUNDARY, WELLS INSERTED FROM VARIOUS OTHER SOURCES, AND DRAWING FILES PROVIDED BY SAIC ENERGY, ENVIRONMENT & INFRASTRUCTURE, LLC OF TULSA, OKLAHOMA.
- 3) RECOVERY SYSTEM WAS NOT OPERATED IN 2013.



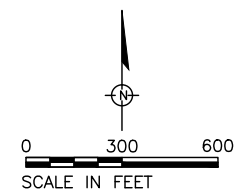


LEGEND

- ▲ ACW-15
3187.87 GROUNDWATER MONITOR WELL AND GROUNDWATER ELEVATION WITHIN UPPERMOST GROUNDWATER SYSTEM, ON OCTOBER, 2013, FEET AMSL
- EPNG-1 WATER SUPPLY WELL
- RW-2 GROUNDWATER RECOVERY WELL
- ▲ OXY WATER SUPPLY WELL
- ACW-8
NM GROUNDWATER MONITOR WELL CONVERTED TO GROUNDWATER RECOVERY WELL
- ENSR-2 PLUGGED/ABANDONED MAY 2012
- NM NOT MEASURED FOR GROUNDWATER ELEVATION
- ← DIRECTION OF GROUNDWATER FLOW
- 3192* CONTOUR OF GROUNDWATER ELEVATION WITHIN UPPERMOST GROUNDWATER SYSTEM ON OCTOBER 2, 2013 – FEET AMSL
- • — • — PLANT PROPERTY BOUNDARY
- x — x — FENCE
- — — — — SECONDARY ROAD
- — — — — RAILROAD TRACK
- — — — — PIPELINE
- — — — — IMPOUNDMENT

NOTES

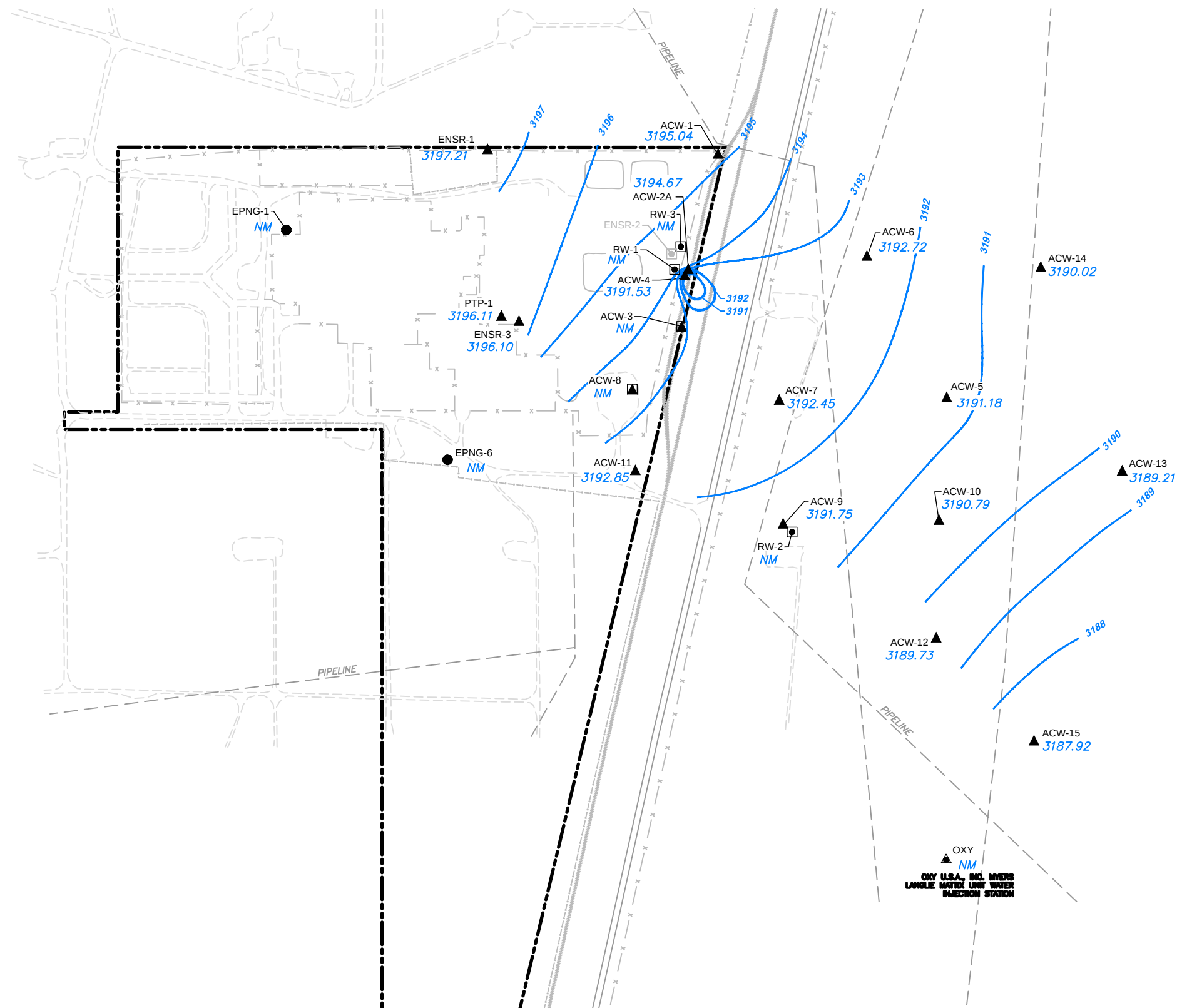
- 1) JAL #4 PLANT PROPERTY IS LOCATED WITHIN SECTIONS 31 AND 32 OF TOWNSHIP 23 SOUTH, RANGE 37 EAST, AND SECTIONS 5 AND 6 OF TOWNSHIP 24 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO.
- 2) SITE BASE AREA DIGITIZED FROM 11/04/76 AERIAL PHOTOGRAPH WITH PLANT PROPERTY BOUNDARY, WELLS INSERTED FROM VARIOUS OTHER SOURCES, AND DRAWING FILES PROVIDED BY SAIC ENERGY, ENVIRONMENT & INFRASTRUCTURE, LLC OF TULSA, OKLAHOMA.
- 3) RECOVERY SYSTEM WAS NOT OPERATED IN 2013.



EL PASO NATURAL GAS COMPANY
JAL #4 GAS PLANT - LEA COUNTY, NEW MEXICO
**2013 ANNUAL GROUNDWATER
REMEDIATION REPORT**

**GROUNDWATER POTENTIOMETRIC
SURFACE OF UPPERMOST
GROUNDWATER SYSTEM -
3rd QUARTER 2013**



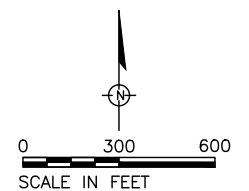


LEGEND

- ▲ ACW-5
3191.18 GROUNDWATER MONITOR WELL AND GROUNDWATER ELEVATION WITHIN UPPERMOST GROUNDWATER SYSTEM, ON DECEMBER, 2013, FEET AMSL
- EPNG-1 WATER SUPPLY WELL
- RW-2 GROUNDWATER RECOVERY WELL
- ▲ OXY WATER SUPPLY WELL
- ACW-8
NM GROUNDWATER MONITOR WELL CONVERTED TO GROUNDWATER RECOVERY WELL
- ENSR-2 PLUGGED/ABANDONED MAY 2012
- NM NOT MEASURED FOR GROUNDWATER ELEVATION
- ← DIRECTION OF GROUNDWATER FLOW
- 3192* CONTOUR OF GROUNDWATER ELEVATION WITHIN UPPERMOST GROUNDWATER SYSTEM ON DECEMBER 13, 2013 – FEET AMSL
- — — PLANT PROPERTY BOUNDARY
- x — x — FENCE
- - - - - SECONDARY ROAD
- — — RAILROAD TRACK
- - - - - PIPELINE
- ◊ IMPOUNDMENT

NOTES

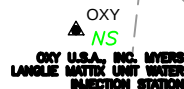
- 1) JAL #4 PLANT PROPERTY IS LOCATED WITHIN SECTIONS 31 AND 32 OF TOWNSHIP 23 SOUTH, RANGE 37 EAST, AND SECTIONS 5 AND 6 OF TOWNSHIP 24 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO.
- 2) SITE BASE AREA DIGITIZED FROM 11/04/76 AERIAL PHOTOGRAPH WITH PLANT PROPERTY BOUNDARY, WELLS INSERTED FROM VARIOUS OTHER SOURCES, AND DRAWING FILES PROVIDED BY SAIC ENERGY, ENVIRONMENT & INFRASTRUCTURE, LLC OF TULSA, OKLAHOMA.
- 3) RECOVERY SYSTEM WAS NOT OPERATED IN 2013.



EL PASO NATURAL GAS COMPANY
JAL #4 GAS PLANT - LEA COUNTY, NEW MEXICO
**2013 ANNUAL GROUNDWATER
REMEDIATION REPORT**

**GROUNDWATER POTENTIOMETRIC
SURFACE OF UPPERMOST
GROUNDWATER SYSTEM -
4th QUARTER 2013**

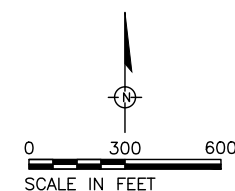




▲ ACW-5
2,080

- | | |
|--|--|
|  ACW-5
2,080 | GROUNDWATER MONITOR WELL AND CONCENTRATION OF CHLORIDE IN GROUNDWATER, mg/L |
|  EPNG-1
NS | WATER SUPPLY WELL AND CONCENTRATION OF CHLORIDE IN GROUNDWATER, mg/L |
|  RW-2
NS | GROUNDWATER RECOVERY WELL AND CONCENTRATION OF CHLORIDE IN GROUNDWATER, mg/L |
|  OXY
NS | WATER SUPPLY WELL AND CONCENTRATION OF CHLORIDE IN GROUNDWATER, mg/L |
|  ACW-11
NS | GROUNDWATER MONITOR WELL CONVERTED TO GROUNDWATER RECOVERY WELL AND CONCENTRATION OF CHLORIDE IN GROUNDWATER, mg/L |
|  ENSR-2
NS | PLUGGED/ABANDON MAY 2012 |
| | NOT SAMPLED |
|  | CONTOUR LINE SHOWING EQUAL CONCENTRATIONS OF CHLORIDE IN GROUNDWATER, mg/L (DASHED WHERE INFERRED) |
|  | PLANT PROPERTY BOUNDARY |
|  | FENCE |
|  | PRIMARY ROAD OR HIGHWAY |
|  | SECONDARY ROAD |
|  | RAILROAD TRACK |
|  | PIPELINE |
|  | IMPOUNDMENT |

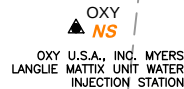
- 1) CHLORIDE CONCENTRATIONS SHOWN ARE THE HIGHEST LEVELS DETECTED IN GROUNDWATER IN EACH WELL DURING THE 2013 MONITORING PROGRAM.
- 2) EPA'S SECONDARY DRINKING WATER STANDARD (SMCL) FOR CHLORIDE IN PUBLIC WATER SUPPLY SYSTEMS IS 250 mg/L.
- 3) NEW MEXICO ENVIRONMENTAL DIVISION HAS ESTABLISHED OTHER STANDARDS FOR DOMESTIC WATER SUPPLY OF 250 mg/L FOR CHLORIDE IN GROUNDWATER CONTAINING TDS LEVELS OF 10,000 mg/L OR LESS.
- 4) JAL #4 PLANT PROPERTY IS LOCATED WITHIN SECTIONS 31 AND 32 OF TOWNSHIP 23 SOUTH, RANGE 37 EAST, AND SECTIONS 5 AND 6 OF TOWNSHIP 24 SOUTH, RANGE 37 EAST, LEA COUNTY, NEW MEXICO.
- 5) SITE BASE AREA DIGITIZED FROM 11/04/76 AERIAL PHOTOGRAPH WITH PLANT PROPERTY BOUNDARY AND WELLS INSERTED FROM VARIOUS OTHER SOURCES.



EL PASO NATURAL GAS COMPANY
JAL #4 GAS PLANT - LEA COUNTY, NEW MEXICO
**2013 ANNUAL GROUNDWATER
REMEDIATION REPORT**

**ISOPLETH OF CHLORIDE
CONCENTRATIONS IN GROUNDWATER
4th QUARTER 2013**

FIGURE
7





Appendix A

Historical Analytical Data

Appendix A
Historical Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Chromium, mg/l	Cobalt, mg/l	Copper, mg/l	Iron, mg/l	Lead, mg/l	Magnesium, mg/l	Manganese, mg/l	Mercury, mg/l	Molybdenum, mg/l	Nickel, mg/l	Potassium, mg/l	Selenium	Silica, mg/l	Silver, mg/l	Sodium, mg/l	Uranium, mg/l	Zinc, mg/l	Alkalinity (as CaCO3), mg/l	Alkalinity - Bicarbonate, mg/l	Alkalinity - Carbonate, mg/l	Alkalinity - Hydroxide, mg/l	Hardness (as CaCO3), mg/l	
ACW-01		3/5/1993																							
		9/15/1993																							
		11/10/1993																							
		4/20/1994																							
		10/27/1994																							
		5/16/1995			< 0.025	0.38			72	0.062				12		33		2600		< 0.02	700				470
		6/27/1995			< 0.0	0.6			92.0	0.1				15.0		35.0		3200.0		< 0.0	710.0				510.0
		8/29/1995			< 0	0			78	0				11		28		2400		< 0	820				590
		2/6/1996			< 0.0	0.6			100.0	0.1				16.0		36.0		4300.0		< 0.0	830.0				620.0
		2/6/1996			< 0.1	0.7			102.0	0.1				17.0		41.0		3900.0		< 0.1	759.0				630.0
		5/8/1996			0.0	0.6			118.0	0.1				18.0		54.0		3070.0		< 0.1	310.0				718.0
		8/13/1996			0.0	0.7			100.0	0.1				8.6		41.0		2400.0		0.0	730.0				690.0
		11/5/1996			< 0.0	0.6			98.0	0.1				11.0		16.0		3000.0		0.0	810.0				610.0
		5/6/1997																							
		11/21/1997			< 0.0	0.6			110.0	0.1				20.0		14.0		3900.0		0.0	680.0				
	D	11/21/1997			< 0.0	0.5			100.0	0.1				20.0		13.0		4000.0		0.0	670.0				
		5/12/1998																							
		10/20/1998			< 0	1			110	0				16		15		3800		< 0	840	840	< 25	< 25	700
		5/11/1999																							
		10/19/1999	< 0.0	< 0.0	< 0.0	1.6	< 0.0		110.0	0.1	< 0.0	0.0	< 0.0	13.0		24.0	< 0.0	3100.0	< 0.0	< 0.1	780.0	780.0	< 25.0	< 25.0	870.0
		5/9/2000																							
		10/26/2000	< 0.01		< 0.005	3.6	< 0.05		82	0.21	< 0.0002			9.5	< 0.1	25	< 0.02	2600		< 0.1	720	720	< 25	< 25	640
		5/1/2001																							
		10/22/2001	< 0.01	< 0.01	< 0.005	2.3	< 0.05		60	0.18	< 0.0002	< 0.01	< 0.04	11	< 0.1	26	< 0.02	3000	< 0.005	< 0.1	600	600	< 25	< 25	450
		4/29/2002																							
		11/3/2002				6.9			120	0.33				18		45		1500			500	500	< 2	< 2	930
		11/4/2003																958.0							
		11/9/2004																696							
		12/12/2005																1240							
		3/5/2007																569.0							
		11/12/2007																563.0							
		11/17/2008																597.0							
		2/24/2010																577							
		12/7/2010																676							
		11/10/2011																632							
		11/8/2012																1200.0							
	1/13/2014																1450.0								
ACW-02A		5/6/1997																							
		10/20/1997			< 0	0		< 1	< 0				12		10		6000		< 0	2200					
		5/11/1998																							
		10/19/1998			< 0	0			1	< 0			12		12		6400		< 0	2400	1500	860	< 25	11	
		5/12/1999																							
		10/18/1999	< 0.005	0.0041	0.0086	0.3	< 0.005		1.1	0.0041	0.00051	0.085	0.041	14		26	< 0.005	6100	0.037	< 0.05	2700	1700	990	< 50	15
		5/8/2000																							
		10/26/2000	0		0	1	< 0		1	0	0			9	< 0	28	< 0	3600		< 0	870	870	< 25	< 25	18
		5/2/2001																							
		10/22/2001	< 0	< 0	< 0	0	< 0		0	0	0	0	< 0	9	< 0	36	< 0	5200	0	< 0	3700	1300	2400	< 125	9
		4/30/2002																							
		11/3/2002				1			< 2	< 0				25		36		5800			3500	1300	2200	< 2	< 13
	D	11/4/2003																4160							
		11/4/2003																4280							
		11/9/2004																3950.0							
		12/12/2005																5570.0							
		3/5/2007																4270							
		11/12/2007																4570							
		11/17/2008																4040							
		2/24/2010																3780							
		12/7/2010																3660							
		11/9/2011																3070.0							
		11/8/2012																2740.0							
		1/10/2014																2890.0							
	ACW-03		5/6/1997																						

Appendix A
Historical Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Chromium, mg/l	Cobalt, mg/l	Copper, mg/l	Iron, mg/l	Lead, mg/l	Magnesium, mg/l	Manganese, mg/l	Mercury, mg/l	Molybdenum, mg/l	Nickel, mg/l	Potassium, mg/l	Selenium	Silica, mg/l	Silver, mg/l	Sodium, mg/l	Uranium, mg/l	Zinc, mg/l	Alkalinity (as CaCO3), mg/l	Alkalinity - Bicarbonate, mg/l	Alkalinity - Carbonate, mg/l	Alkalinity - Hydroxide, mg/l	Hardness (as CaCO3), mg/l	
		10/22/2001	< 0	< 0	< 0	2	< 0	110	1	0	0	< 0	32	< 0	30	< 0	7300	0	< 0	970	970	< 25	< 25	1200	
ACW-04 (cont.)		4/30/2002																							
		11/3/2002				2		150	1				96		37		8400			560	560	< 2	< 2	1700	
		11/4/2003															7300.0								
		11/9/2004															22000								
		12/12/2005															5490.0								
	D	3/5/2007																5030							
		3/5/2007																4750							
		11/12/2007																5420							
		11/17/2008																3870							
		2/24/2010																6160							
12/7/2010																	12500								
11/10/2011																	7710.0								
11/8/2012																	29800								
1/10/2014																	31400								
3/10/1993																									
ACW-05	6/17/1993																								
	9/16/1993																								
	11/9/1993																								
	4/21/1994																								
	10/28/1994																								
	1/31/1995																								
	5/16/1995			< 0.025	0.46	39	0.026						6.6		57		540		< 0.02	320				980	
	6/27/1995			< 0.025	0.34	40	0.02						6.9		56		530		< 0.02	320				240	
	8/30/1995			< 0.025	< 0.1	36	< 0.015						8.7		44		550		< 0.02	310				810	
	2/6/1996			< 0.006	1.5	32	0.026						6.5		64		580		0.015	260				740	
2/6/1996			< 0.1	2	32	0.1						8.1		66		580		< 0.1	284				730		
5/8/1996			0.01	0.2	24	< 0.05						8		35		506		< 0.05	190				515		
8/13/1996			< 0.006	0.024	28	< 0.007						6.3		58		520		0.033	320				620		
11/6/1996			< 0.0	0.3	25.0	0.																			

Appendix A
Historical Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Chromium, mg/l	Cobalt, mg/l	Copper, mg/l	Iron, mg/l	Lead, mg/l	Magnesium, mg/l	Manganese, mg/l	Mercury, mg/l	Molybdenum, mg/l	Nickel, mg/l	Potassium, mg/l	Selenium	Silica, mg/l	Silver, mg/l	Sodium, mg/l	Uranium, mg/l	Zinc, mg/l	Alkalinity (as CaCO3), mg/l	Alkalinity - Bicarbonate, mg/l	Alkalinity - Carbonate, mg/l	Alkalinity - Hydroxide, mg/l	Hardness (as CaCO3), mg/l	
ACW-10		11/19/2008															751								
		2/24/2010															2800								
		12/9/2010															1710								
		11/9/2011															2660								
		11/7/2012															3120.0								
		1/13/2014															3300.0								
		6/18/1993																							
		9/14/1993																							
		11/9/1993																							
		4/22/1994																							
ACW-11		10/28/1994																							
		2/1/1995																							
		5/17/1995			< 0.025	0.12		110	0.037				8		43		170		< 0.02	190				1300	
		6/28/1995			< 0.025	0.28		94	0.029				7.5		46		160		< 0.02	190				1200	
		8/30/1995			< 0.025	< 0.2		95	0.034				52		42		150		< 0.04	180				1100	
		2/7/1996			< 0.0	0.2		110.0	0.0				8.4		36.0		190.0		< 0.0	200.0				1200.0	
		2/7/1996			< 0.1	0.4		107.0	< 0.1				9.4		54.0		190.0		< 0.1	194.0				1240.0	
		5/8/1996			< 0.01	0.10		92.00	< 0.05				8.00		62.00		127.00		< 0.05	137.00				893.00	
		8/14/1996			< 0.006	0.14		71	0.019				7		47		140		0.037	170				810	
		11/7/1996			< 0.0	0.2		70.0	0.0				7.4		20.0		150.0		0.0	170.0				800.0	
		5/8/1997																							
		10/23/1997			< 0.01	0.20		71.00	0.02				6.00		20.00		140.00		< 0.02	200.00					
		5/14/1998																							
		10/22/1998			< 0.0025	0.099		110	0.0068				9		27		180		< 0.05	180	180	< 25	< 25	1200	
		5/13/1999																							
		10/22/1999	< 0.005	< 0.005	< 0.0025	0.26	< 0.005	84	0.02	< 0.0002	< 0.005	< 0.02	7.9		19	< 0.005	170	0.013	< 0.05	160	160	< 25	< 25	1000	
		5/11/2000																							
		11/6/2000	< 0.01		0.0061	0.27	< 0.05	140	0.026	< 0.0002			16	< 0.1	30	< 0.02	330		< 0.1	180	180	< 25	< 25	1800	
		5/6/2001																							
		10/25/2001	< 0.01	< 0.01	< 0.005	0.19	0.068	95	0.021	< 0.0002	< 0.01	< 0.04	9.6	< 0.1	35	< 0.02	180	0.028	< 0.1	160	160	< 25	< 25	1100	
		5/1/2002																							
		11/8/2002				0.22		110	0.016					15		55		270			180	180	< 2	< 2	1200
		11/6/2003																182							
		11/11/2004																176							
		12/14/2005																162							
		3/8/2007																202							
		11/14/2007																187							
		11/19/2008																175							
		2/19/2010																180							
	D	2/19/2010																176							
	12/8/2010																264								
	11/9/2011																215								
	11/6/2012																331.0								
	1/10/2014																490.0								
ACW-12		6/19/1993																							
		9/15/1993																							
		11/9/1993																							
		4/21/1994																							
		10/27/1994																							
		10/27/1994																							
		2/1/1995																							
		5/17/1995			< 0.025	0.36		260	0.23				16		42		1200		< 0.02	230				3300	
		6/27/1995			< 0.0	0.3		270.0	0.2				16.0		45.0		980.0		< 0.0	210.0				2800.0	
		8/29/1995			< 0	0		210	0				16		44		880		< 0	220				2700	
		2/7/1996			< 0.0	0.4		230.0	0.1				26.0		47.0		1500.0		< 0.0	210.0				2600.0	
		2/7/1996			< 0.1	0.5		224.0	0.1				31.0		46.0		1400.0		< 0.1	200.0				2590.0	
		5/8/1996			0.02	0.30		220.00	0.09				29.00		50.00		1160.00		< 0.05	111.00				2110.00	
		8/13/1996			0.0	0.3		190.0	0.1				24.0		47.0		1700.0		0.1	160.0				2100.0	
		11/5/1996			< 0	0		430	0				35		21		5100		0	170				4700	
		5/6/1997																							
		11/21/1997			< 0	0		330	0				27		18		2700		0	170					
		5/12/1998																							
		10/20/1998			< 0	1		520	0				41		22		5100		< 0	180	180	< 25	< 25	5900	

Appendix A
Historical Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	m-Xylene ug/l	p-Xylene ug/l	o-Xylene ug/l	Total Xylene, µg/l	MTBE, µg/l	Gasoline Range Organics, mg/l	Specific Conductance, umho/cm	pH, s.u.	Total Dissolved Solids, mg/L	Chloride, mg/l	Sulfate, mg/l	Temperature °C	Bromide, mg/l	Fluoride, mg/l	Nitrate-N, mg/l	Nitrate as NO3, mg/l	Aluminum, mg/l	Arsenic, mg/l	Barium, mg/l	Boron, mg/l	Cadmium, mg/l	Calcium, mg/l	
ACW-13 (cont.)	D	6/9/2008	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00					631	122													
		8/13/2008	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00			1110	7.3	688	131			20.2										
		11/20/2008	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00			1155	7	1290	135			19										
	D	3/3/2009	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00			1109	7.1	666	97.8			20										
		3/3/2009	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00					631	97.8													
		5/19/2009	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00			1088	7.1	668	134			22										
		8/27/2009	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00			1115	7.1	706	126			21										
		2/19/2010	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00			1000	7.95	662	169			22.3										
		6/28/2010	< 1.000	< 1	< 1.00	< 2	< 2	< 1	< 1.00			949	7.62	1050	148			23										
	D	6/28/2010	< 1.000	< 1	< 1.00	< 2	< 2	< 1	< 1.00					1060	145													
		9/20/2010	< 1.000	0.41 J	< 1.00	< 2	< 2	< 1	< 1.00			1062	7.04	783	158			22.3										
	D	9/21/2010	< 2.000	0.27 J	< 1.00	< 2	< 2	< 1	< 1.00					732	166													
		12/7/2010	< 1.000	< 1	< 1.00	< 2	< 2	< 1	< 1.00			1019	7.5	880	161			20.8										
		2/16/2011	< 1.000	< 1	< 1.00	< 2	< 2	< 1	< 1.00			1020	7.6	888	194			20.9										
		5/10/2011	< 1.000	< 2	< 2.00				< 6.00			1019	7.35	682	192			25.2										
	D	5/10/2011	< 2.000	< 2	< 2.00				< 6.00					714	198													
		8/17/2011	< 1.000	< 1	< 1.00				< 3.00			1020		707	200													
		11/9/2011	< 1.000	< 1	< 1.00				< 3.00			1140		709	200			20.1										
		2/13/2012	< 1.000	< 1	< 1.00				< 3.00			1170	7.71	663	189			20.1										
		5/8/2012	< 1.000	< 1	< 1.00				< 3.00			1150	7.53	663	186			20.3										
	8/13/2012	< 1.000	< 1	< 1.00				< 3.00			1250	6.98	714	234			26.4				</							

Appendix A
Historical Analytical Data,
Jal No. 4 Plant, Lea County, New Mexico

Well	Replicate	Sample Date	Benzene, µg/l	Toluene, µg/l	Ethylbenzene, µg/l	m-Xylene ug/l	p-Xylene ug/l	o-Xylene ug/l	Total Xylene, µg/l	MTBE, µg/l	Gasoline Range Organics, mg/l	Specific Conductance, umho/cm	pH, s.u.	Total Dissolved Solids, mg/L	Chloride, mg/l	Sulfate, mg/l	Temperature °C	Bromide, mg/l	Fluoride, mg/l	Nitrate-N, mg/l	Nitrate as NO3, mg/l	Aluminum, mg/l	Arsenic, mg/l	Barium, mg/l	Boron, mg/l	Cadmium, mg/l	Calcium, mg/l
Doom Supply (cont.)		5/20/2003	< 2.000	< 2	< 2.00				< 6.00			602	7.9 H	410	36												48
		8/20/2003	< 2.000	< 2	< 2.00				< 6.00			561	7.14	366	30.8												43.9
	D	11/6/2003	< 2.000	< 2	< 2.00				< 6.00			5.88	6.7	406	28.3			16									
		11/6/2003	< 2.000	< 2	< 2.00				< 6.00					398	28.5												
		2/25/2004	< 2.000	< 2	< 2.00				< 6.00			583	7.6	388	28			18.2									
		5/13/2004	< 2.000	< 2	< 2.00				< 6.00			609	7.9	396	2.6			23.8									
		8/25/2004	< 2.000	< 2	< 2.00				< 6.00			567	7.2	390	43			23.4									
		11/15/2004	< 2.000	< 2	< 2.00				< 6.00			602	6.9	404	28			17.8									
		2/15/2005	< 2.000	< 2	< 2.00				< 6.00			784	7.3	659	84			19.9									
		5/25/2005	< 2.000	< 2	< 2.00				< 6.00			619	7.1	403	29			23.7									
		8/23/2005	< 2.000	H < 2	H < 2.00	H			< 6.00	H		652	6.9	384	29			23.6									
		8/23/2005	< 2.000	H	< 2	H < 2.00	H		< 6.00	H				384	29												
	12/15/2005	< 2.000	< 2	< 2.00				< 6.00			641	6.9	408	29			16.4										
	2/14/2006	< 2.000	< 2	< 2.00				< 6.00			645	7.2	384	28			17.9										
	5/9/2006	< 2.000	< 2	< 2.00				< 6.00			635	7.3	316	30			22										
	8/23/2006	< 2.000	< 2	< 2.00				< 6.00			641	6.9	374	31			24.4										
	3/6/2007	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00			631	7.3	415	32.2			21										
	5/16/2007	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00			699	7.1	446	33.7													
	8/23/2007	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00			723	7.1	426	31.1													
	11/15/2007	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00			619	7.4	447	31.3			19										
	2/20/2008	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00			700	7.3	417	31			18.1										
	6/10/2008	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00			669	7.2	451	34.5			19										
	8/12/2008	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00			760	7.2	461	34.3			19.5										
	11/18/2008	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00			735	7	390	34.5			20.5										
	3/4/2009	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00			641	7.1	485	28.6			20										
	8/26/2009	2.300	< 1.0	< 1.00	< 1.0	< 1.0	< 1.0	< 1.00			721.0	7.2	426.0	31.5			21.0										
	9/17/2009	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00																			
	2/19/2010	< 1.000	< 1	< 1.00	< 1	< 1	< 1	< 1.00				765	7.08	409	36			19.8									
	6/28/2010	< 1.000	< 1	< 1.00	< 2	< 2	< 1	< 1.00				642	7.03	215	well			24.3									
	9/21/2010	< 1.000	0.28 J	< 1.00	< 2	< 2	< 1	< 1.00				661	7.2	449	30			21.8									
	12/8/2010	< 1.000	< 1	< 1.00	< 2	< 2	< 1	< 1.00				8490	7.86	930	32.9			16.1									
	2/16/2011	< 1.000	< 1	< 1.00	< 2	< 2	< 1	< 1.00				614	7.26	457	32.6			21.7									
	5/11/2011	< 2.000	< 2	< 2.00				< 6.00				1159	7.13	395	30.4			23.1									
	8/17/2011	< 1.000	< 1	< 1.00				< 3.00				569	7.54	569	30.2			29.5									
	11/10/2011	< 1.000	< 1	< 1.00				< 3.00				635	7.67	250	28.6			13.1									
	2/14/2012	< 1.000	< 1	< 1.00				< 3.00				637	7.84	373	30			21.5									
5/8/2012	< 1.000	< 1	< 1.00				< 3.00				646	7.63	347	33.1			20.8										
8/13/2012	< 1.000	< 1	< 1.00				< 3.00				650	7.12	374	30.9			26.6										
11/5/2012	< 1.000	< 1	< 1.00				< 3.00				636	7.48	409	35.5			20.1										
3/5/2013	< 1.000	< 1	< 1.00				< 3.00				627		408	30.9													
6/28/2013	< 1.000	< 1	< 1.00				< 3.00				426		416	31.3													
10/5/2013	< 1.000	< 1	< 1.00				< 3.00				387		443	29.1													
PTP-01		5/7/1997	38.000	1	22.00				8.40			2420		1500	490												
		10/21/1997	7.900	< 0.5	18.00				3.10			2250.0		1400.0	470.0												
		5/12/1998	62.000	2	21.00				13.00			2300		1400	480												
		10/20/1998										2090		1410	380												
		5/11/1999										2250		1240	330												
		10/20/1999										2300		1630	460												
		5/9/2000										2210		1400	510												
		10/27/2000										2050		1570	530												
		5/2/2001										2370		1240	520												
		10/23/2001										2370		1280	550												
		4/29/2002										2390		1400	500												

Well	Replicate	Sample Date	Chromium, mg/l	Cobalt, mg/l	Copper, mg/l	Iron, mg/l	Lead, mg/l	Magnesium, mg/l	Manganese, mg/l	Mercury, mg/l	Molybdenum, mg/l	Nickel, mg/l	Potassium, mg/l	Selenium	Silica, mg/l	Silver, mg/l	Sodium, mg/l	Uranium, mg/l	Zinc, mg/l	Alkalinity (as CaCO3), mg/l	Alkalinity - Bicarbonate, mg/l	Alkalinity - Carbonate, mg/l	Alkalinity - Hydroxide, mg/l	Hardness (as CaCO3), mg/l	
Doom Supply (cont.)		5/20/2003						15.8									62.6			191				185	
		9/20/2003						14.8									65.5			213				171	
	D	11/6/2003																64.8							
		11/6/2003																62.7							
		2/25/2004																67.1							
		5/13/2004																62.7							
		8/25/2004																63.8							
		11/15/2004																61.8							
		2/15/2005																73.5							
		5/25/2005																58.3							
	D	8/23/2005																65.5							
		8/23/2005																66							
		12/15/2005																68.7							
		2/14/2006																59.8							
		5/9/2006																56.6							
		8/23/2006																62.4							
		3/6/2007																65.8							
		5/16/2007																62.6							
		8/23/2007																58.8							
		11/15/2007																62.7							
		2/20/2008																65.5							
		6/10/2008																67							
		8/12/2008																56.5							
		11/18/2008																61.3							
		3/4/2009																64.6							
		8/26/2009																64.7							
		9/17/2009																							
		2/19/2010																57.4							
		6/28/2010																65.6							
		9/21/2010																64.2							
		12/8/2010																67.9							
		2/16/2011																65.8							
	5/11/2011																62.1								
	8/17/2011																65.4								
	11/10/2011																60.2								
	2/14/2012																63.5								
	5/8/2012																67.1								
	8/13/2012																65.6								
	11/5/2012																60.4								
	3/5/2013																68.8								
	6/28/2013																72.3								
	10/5/2013																68.3								
PTP-01		5/7/1997																							
		10/21/1997																							
		5/12/1998																							
		10/20/1998																							
		5/11/1999																							
		10/20/1999																							
		5/9/2000																							
		10/27/2000																							
		5/2/2001																							
		10/23/2001																							
		4/29/2002																							
		11/4/2002				10		61	0				7		26			170			520	520	< 2	< 2	810
		11/3/2003																190.0							
		11/10/2004																167.0							
		12/12/2005																192.0							
		3/6/2007																222							
		11/12/2007																197							
		11/17/2008																145							
		2/25/2010																183.0							
		12/8/2010																176.0							
		11/10/2011																165.0							
		11/8/2012																140							
	1/10/2014																174								
Injection Well		11/9/2004															6010.0								
		12/15/2005															8620.0								
		3/6/2007															6690								
		11/16/2007															9260								
		11/20/2008															5250								
		2/19/2010															3700								
		12/8/2010															7240								
		11/8/2011																							

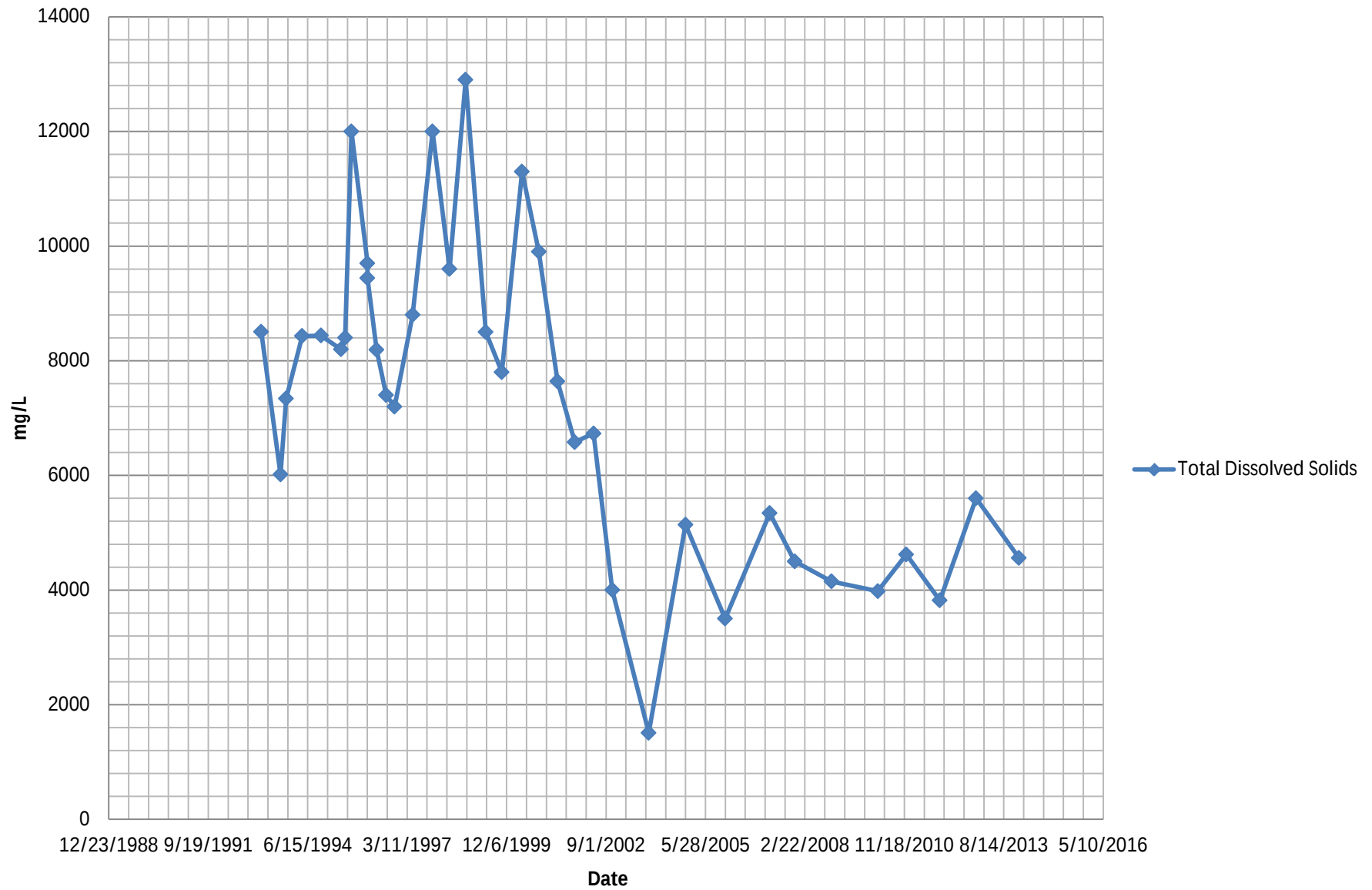
1. < : Denotes a sample value of less than the lat
2. --- : No analysis performed.
3. Jm : Estimated value--possible matrix effect.
4. Jc: This concentration may be biased because
s meet method requirements and analytical result
5. * : Method blank had detectable levels of this c
6. 1.2/<0.05 : NEL Lab result/Montgomery Watso
7. P : Denotes sample was received with a pH gr
8. H: Sample was analyzed outside the EPA tech
9. R : Denotes a reanalyzed sample.
10. J : Indicates an estimated value.
11. PM: indicates ICP-AES method
12. 1.00 (404) : Result in parenthesis is from a re
13. ** : Doom Supply was resampled on 9/17/200



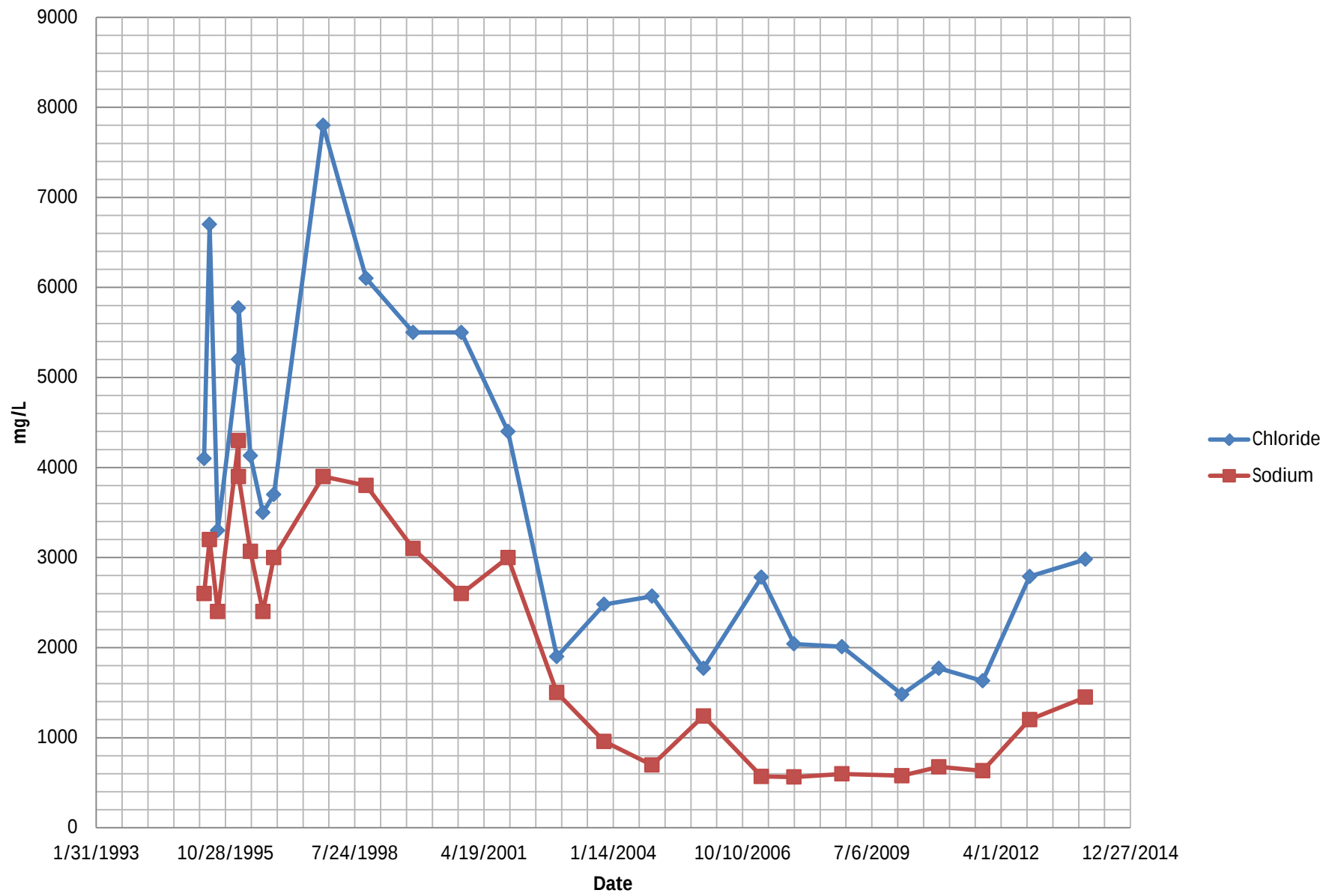
Appendix B

Groundwater Concentration Trends

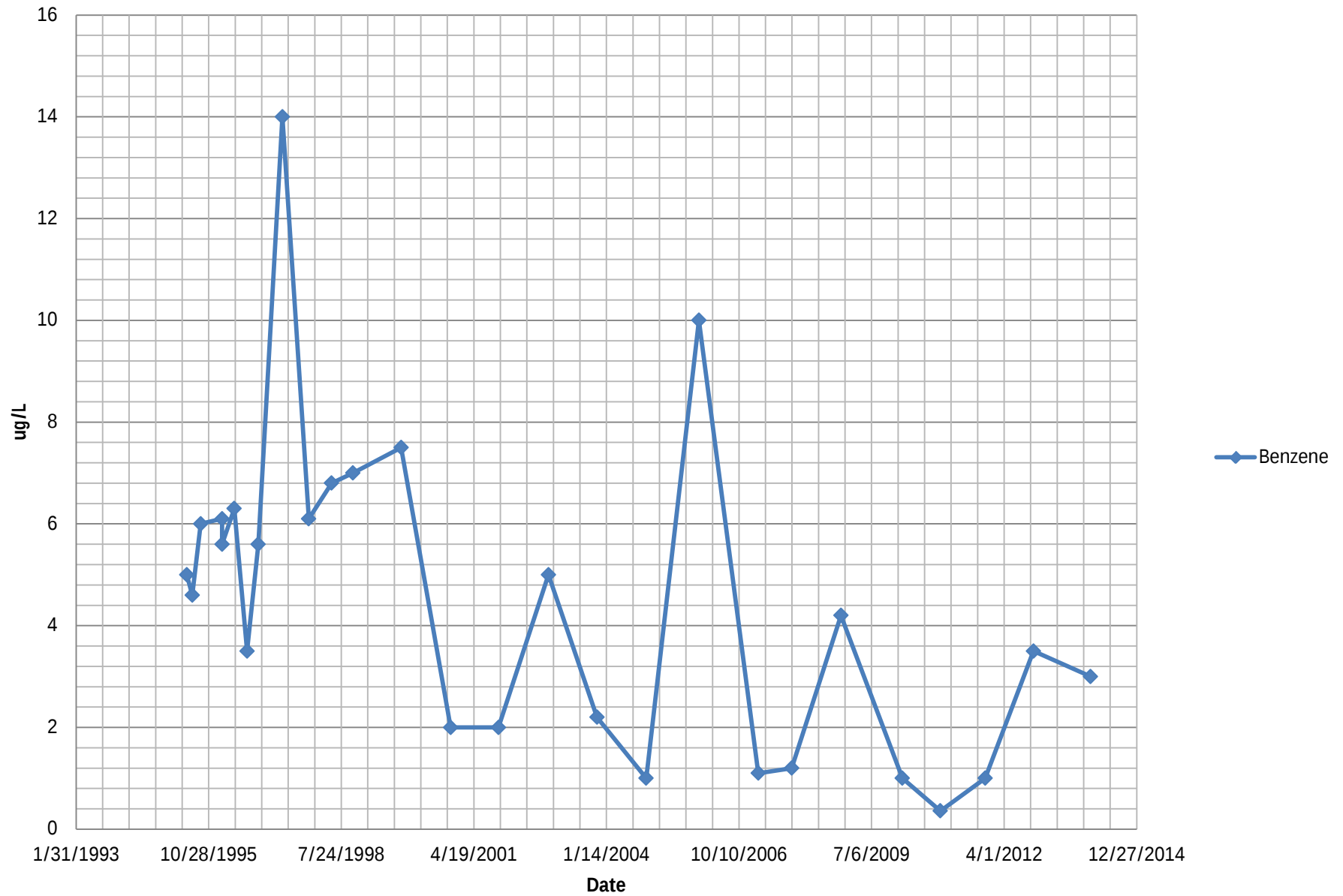
ACW-01 Total Dissolved Solids



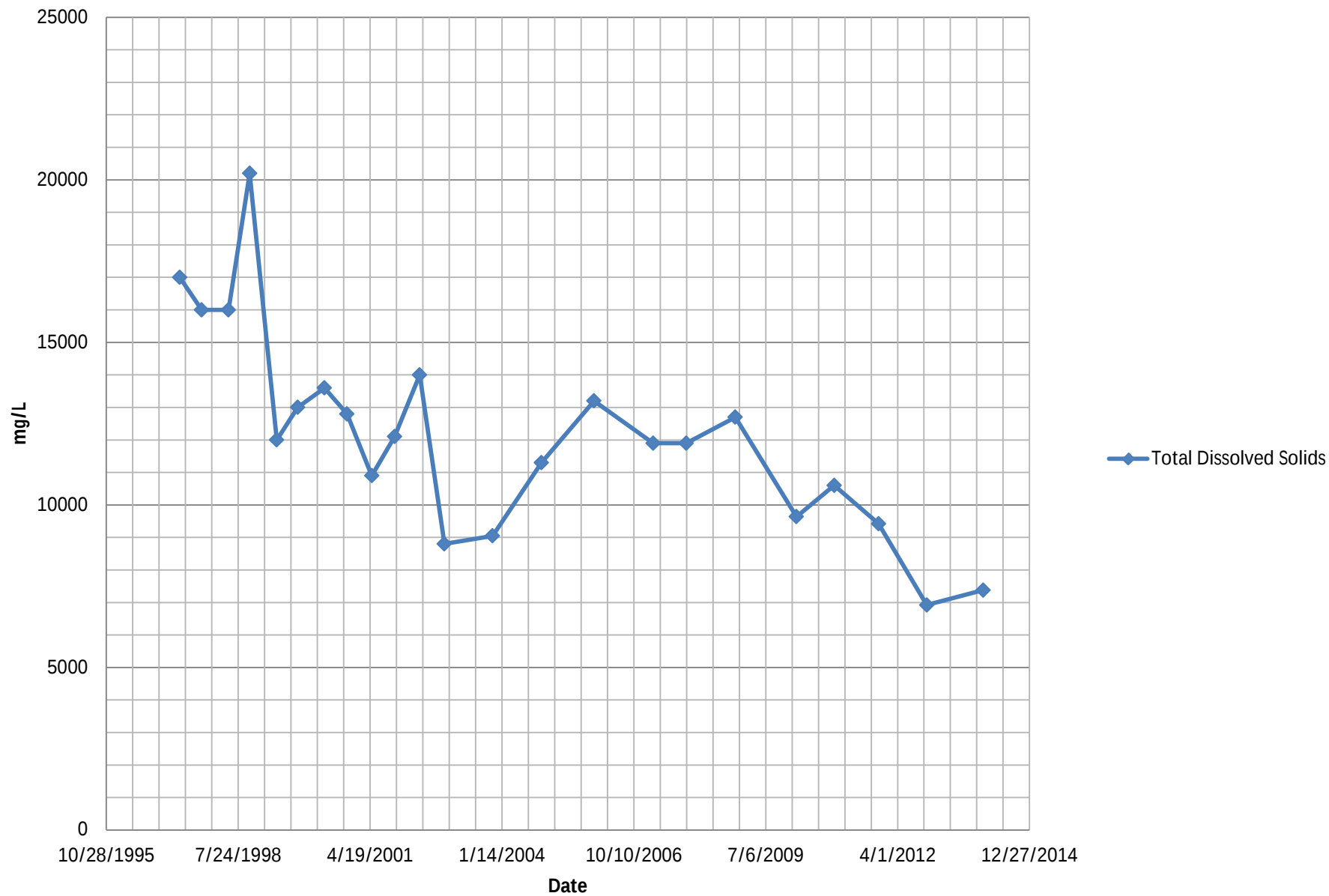
ACW-01 Chloride and Sodium Concentrations



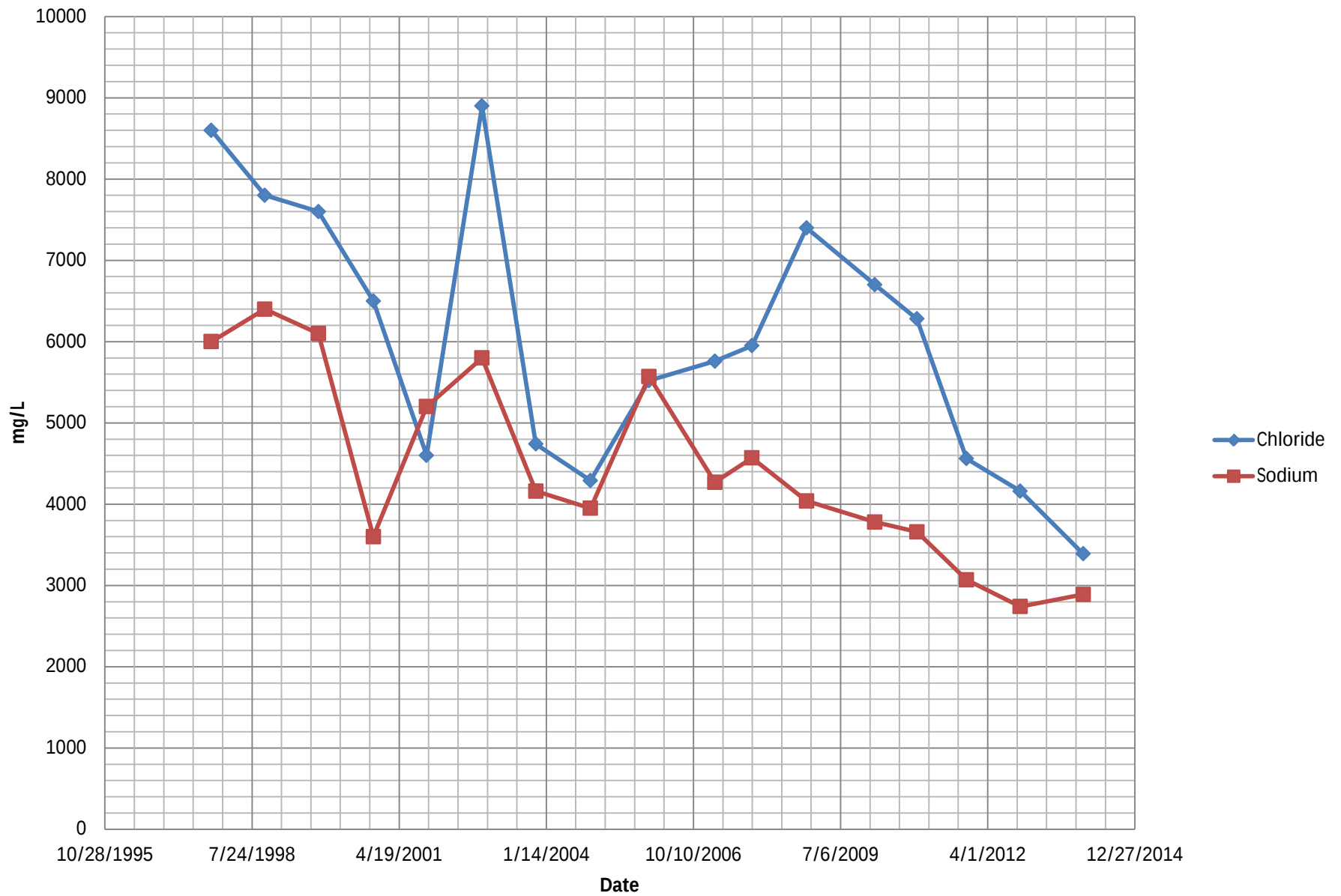
ACW-01 Benzene Concentration



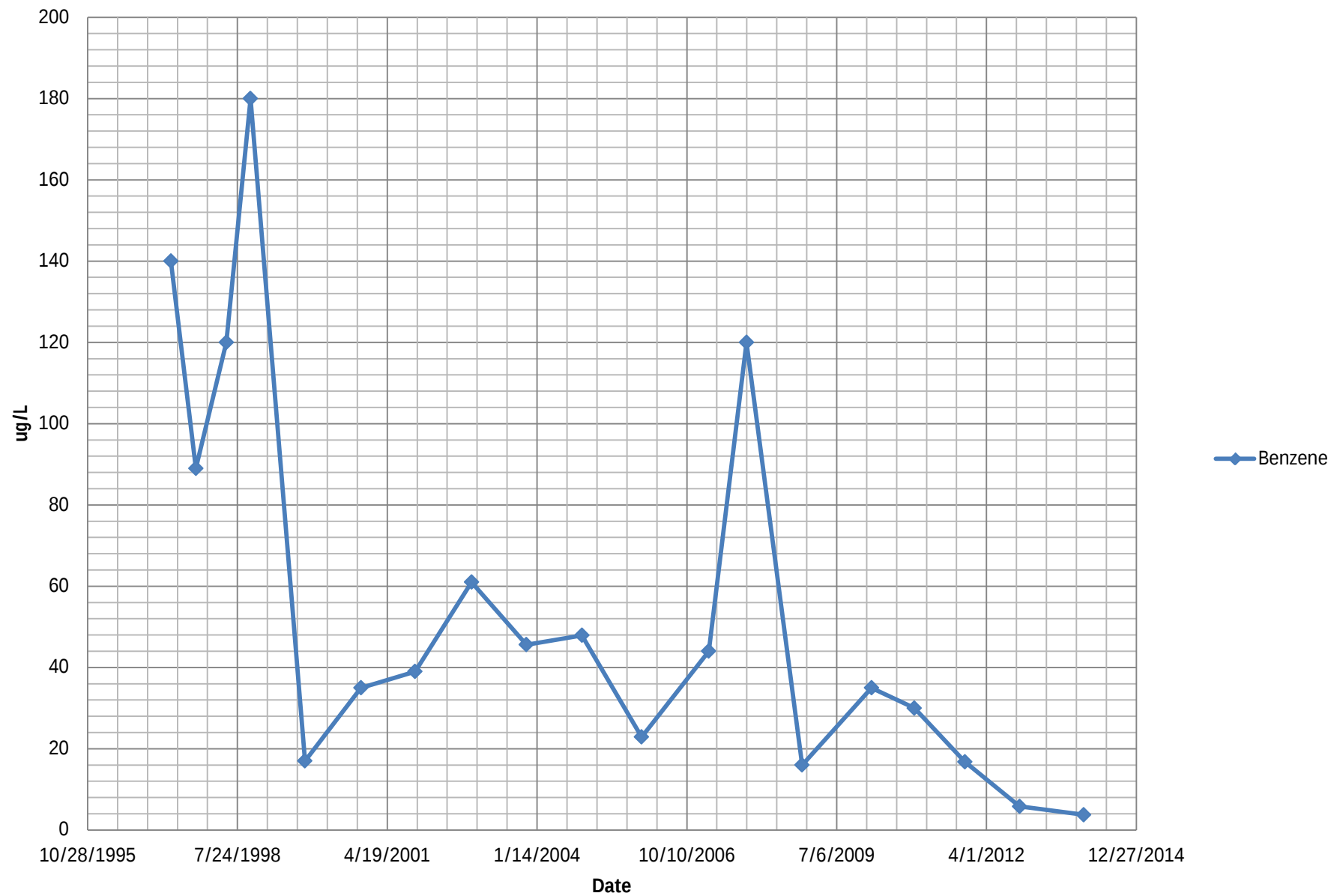
ACW-2 Total Dissolved Solids Concentration



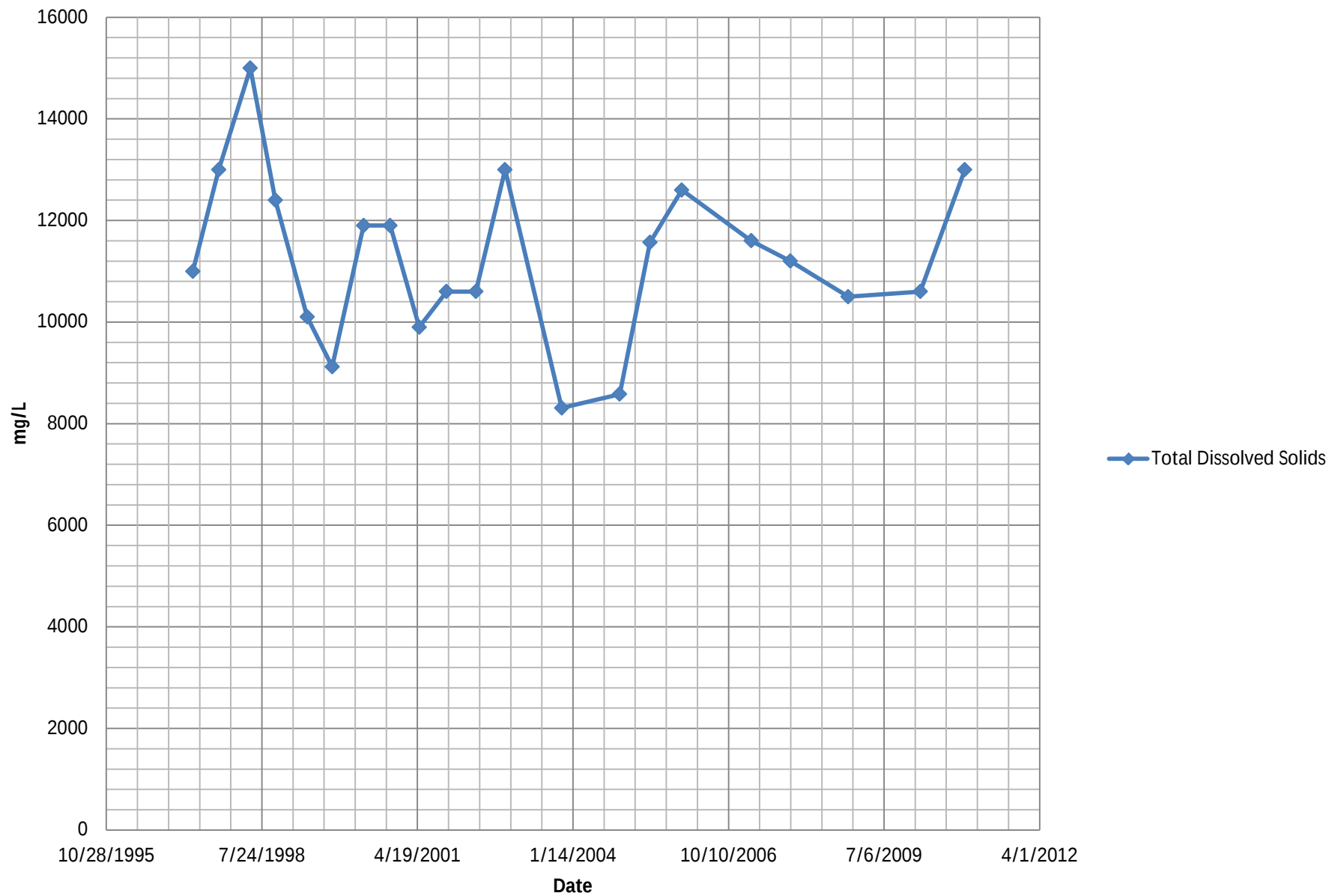
ACW-2A Chloride and Sodium Concentrations



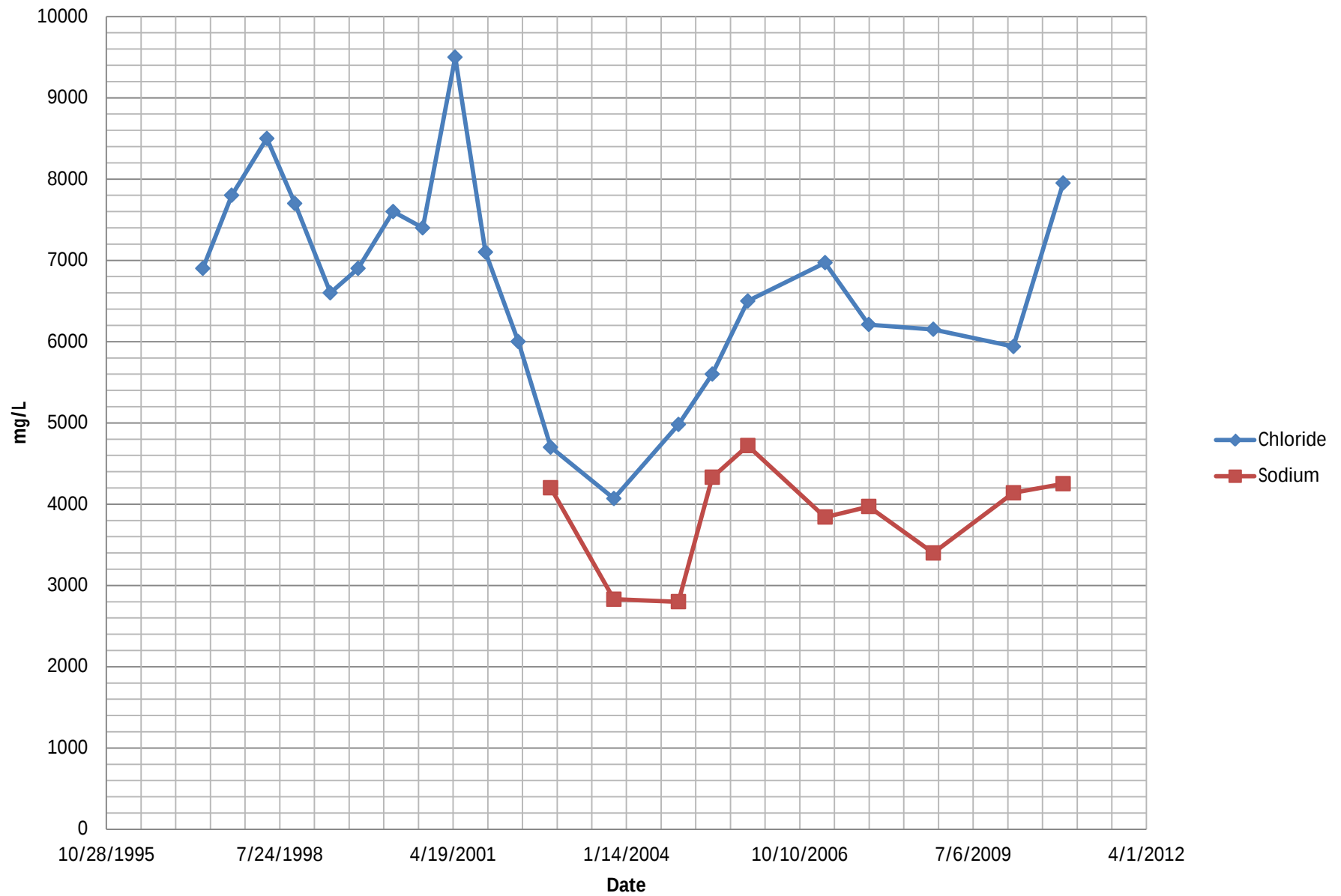
ACW-2A Benzene Concentration



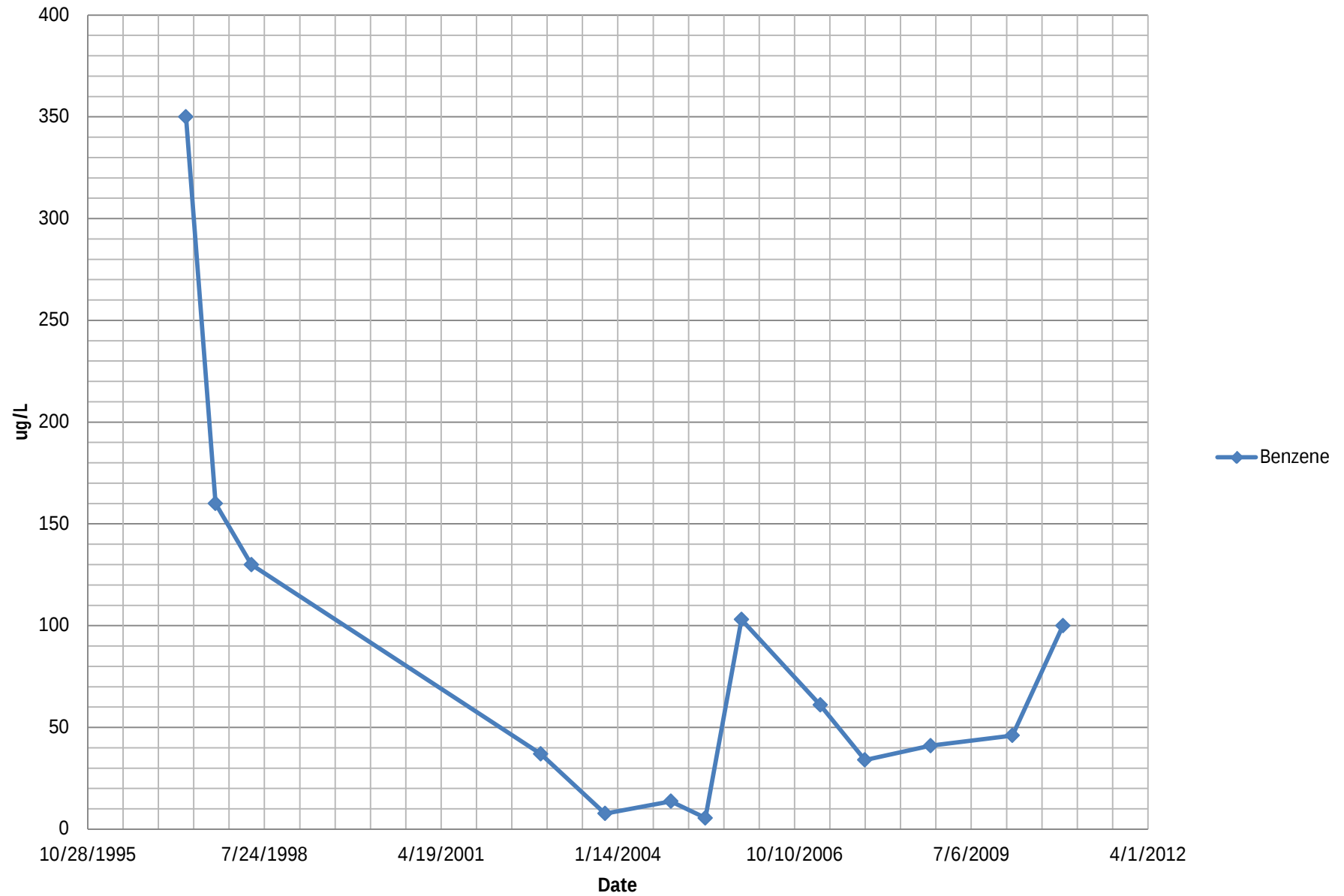
ACW-3 Total Dissolved Solids Concentration



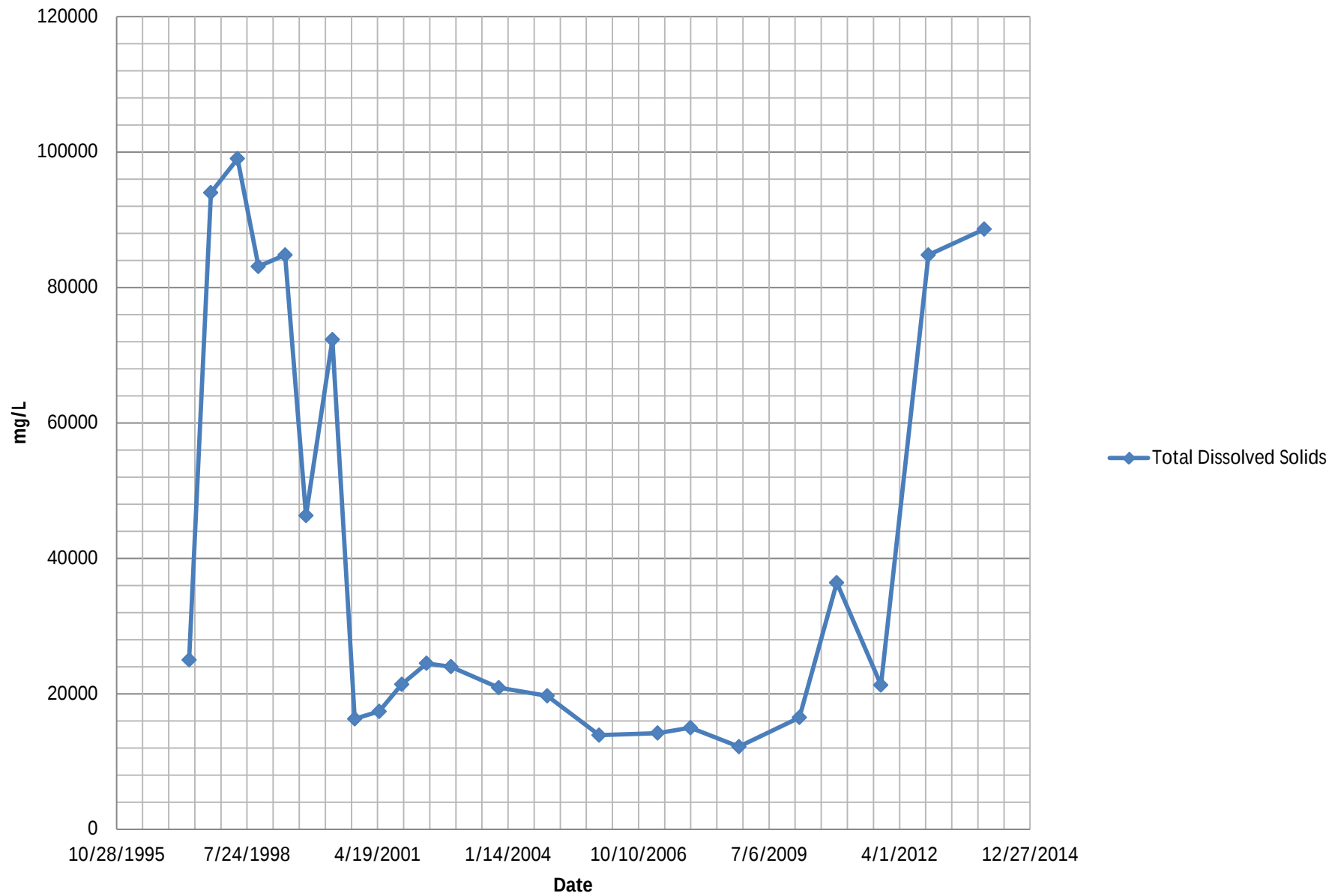
ACW-3 Chloride and Sodium Concentrations



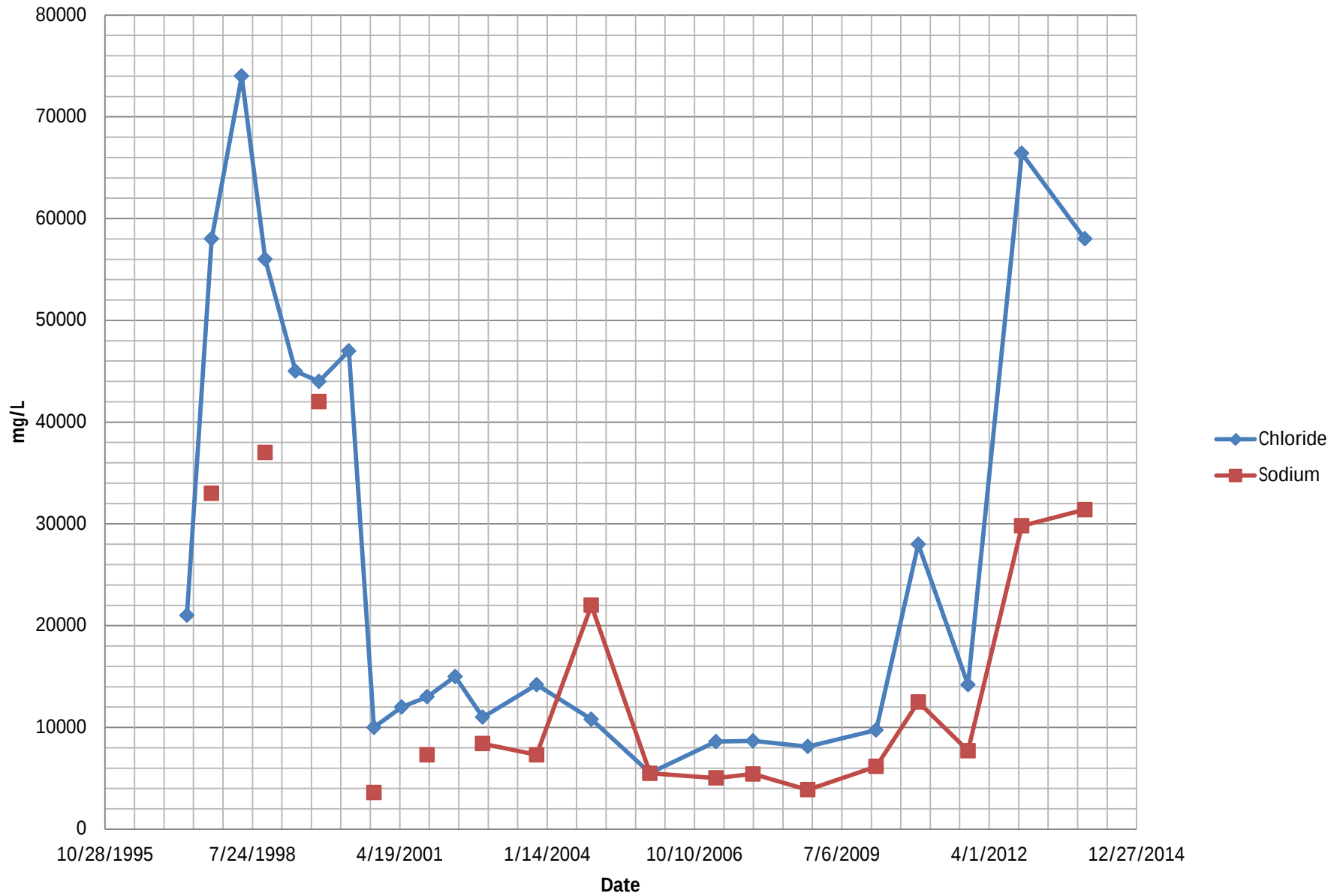
ACW-03 Benzene Concentration



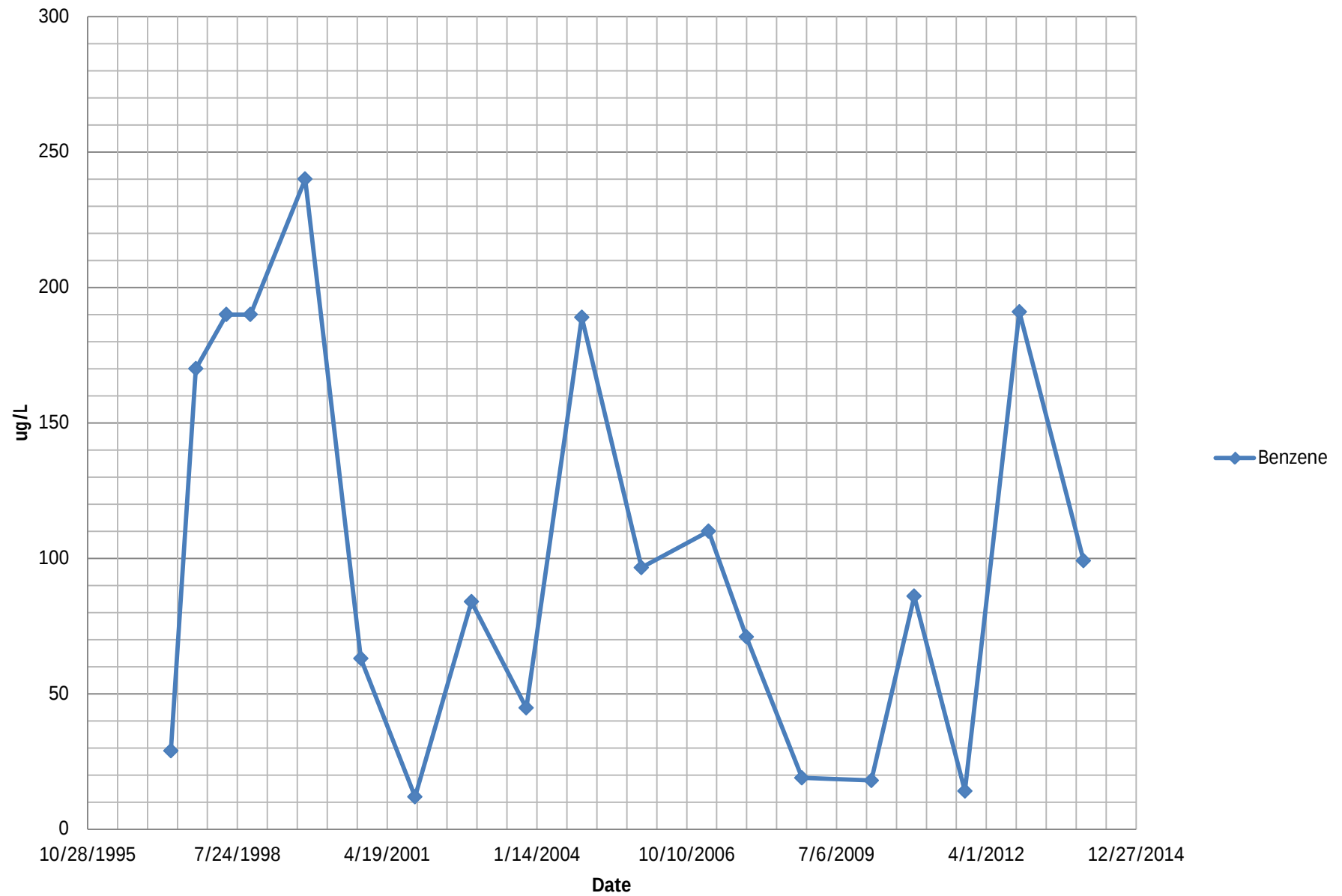
ACW-04 Total Dissolved Solids Concentration



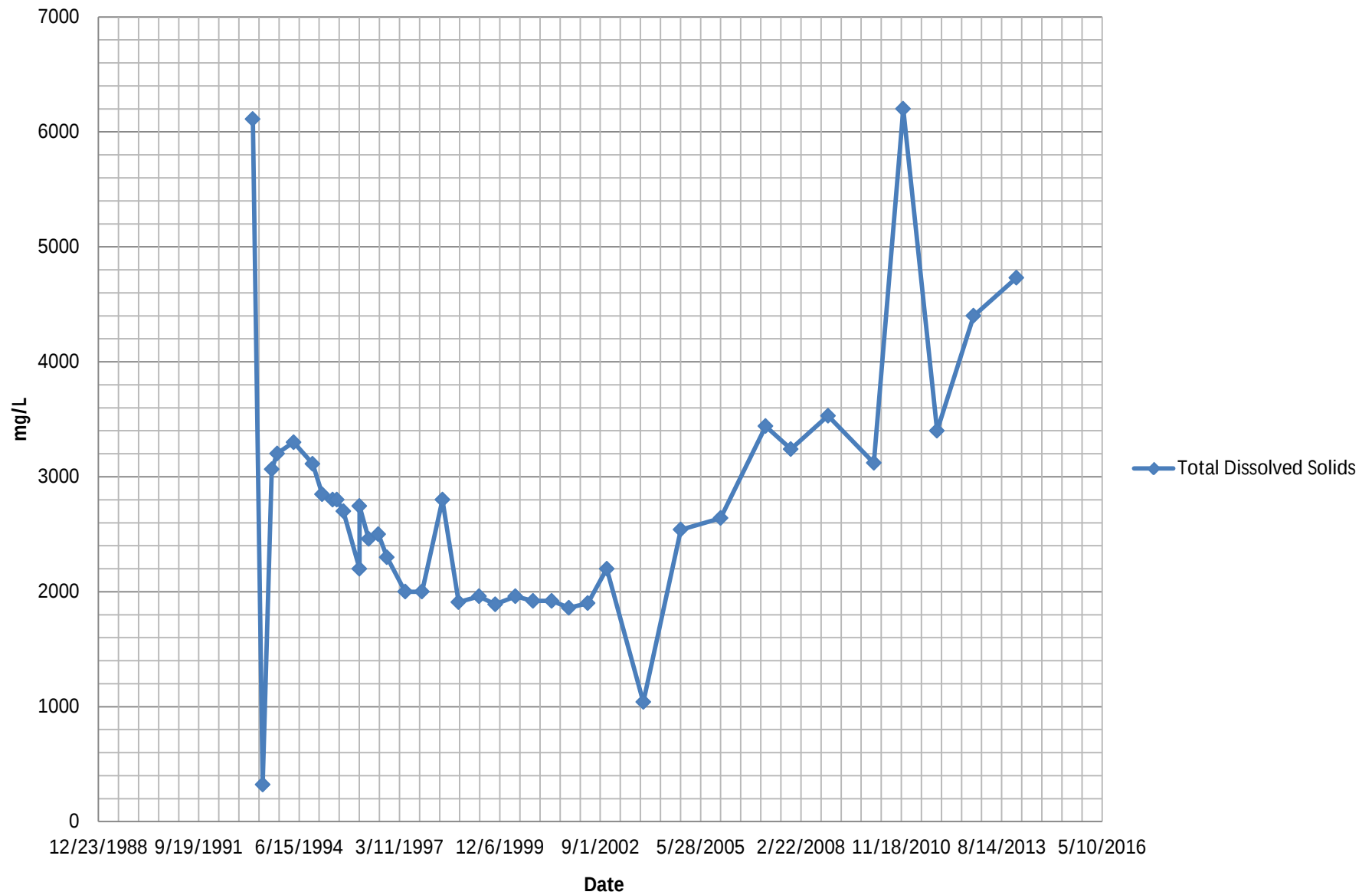
ACW-04 Chloride and Sodium Concentrations



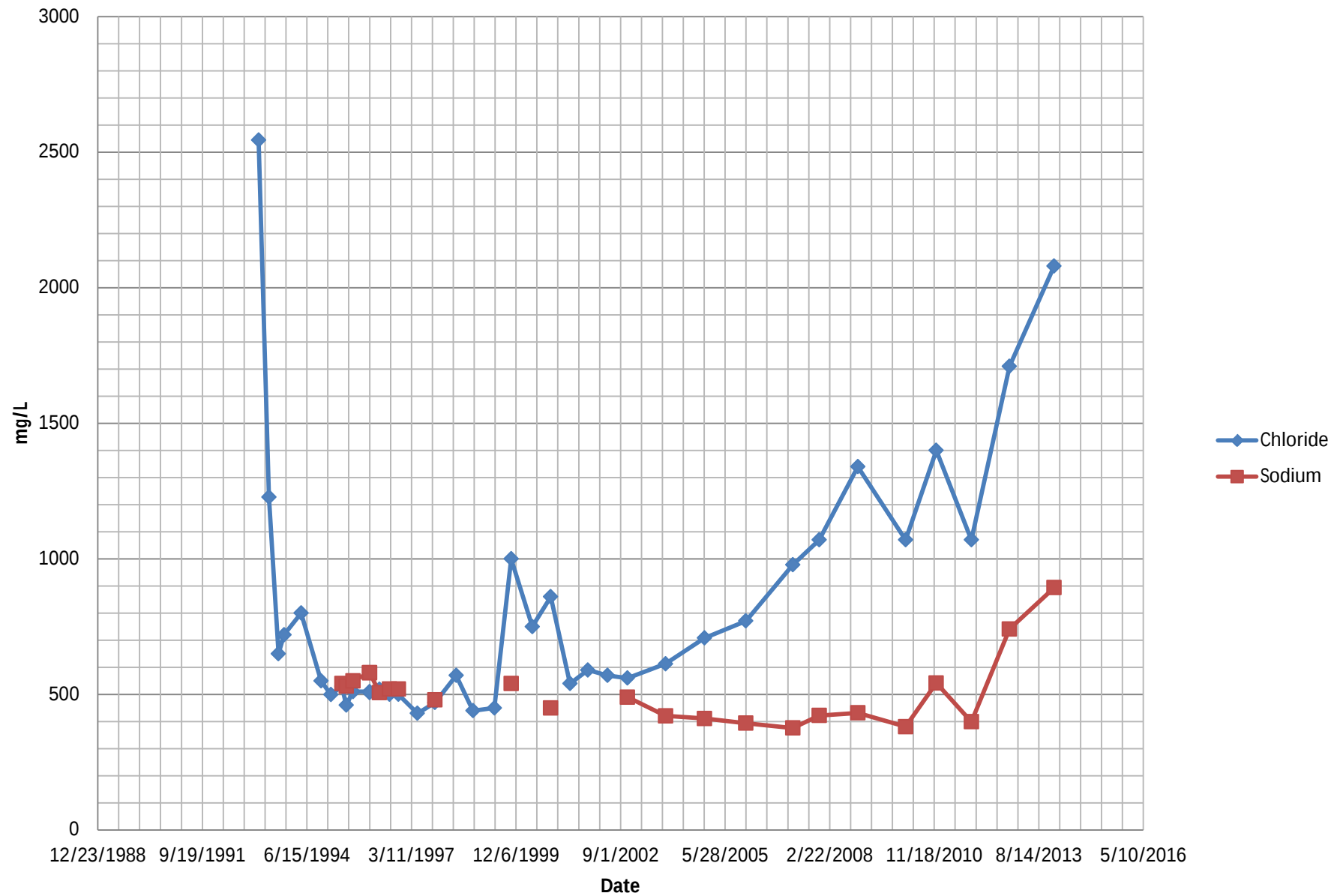
ACW-04 Benzene Concentration



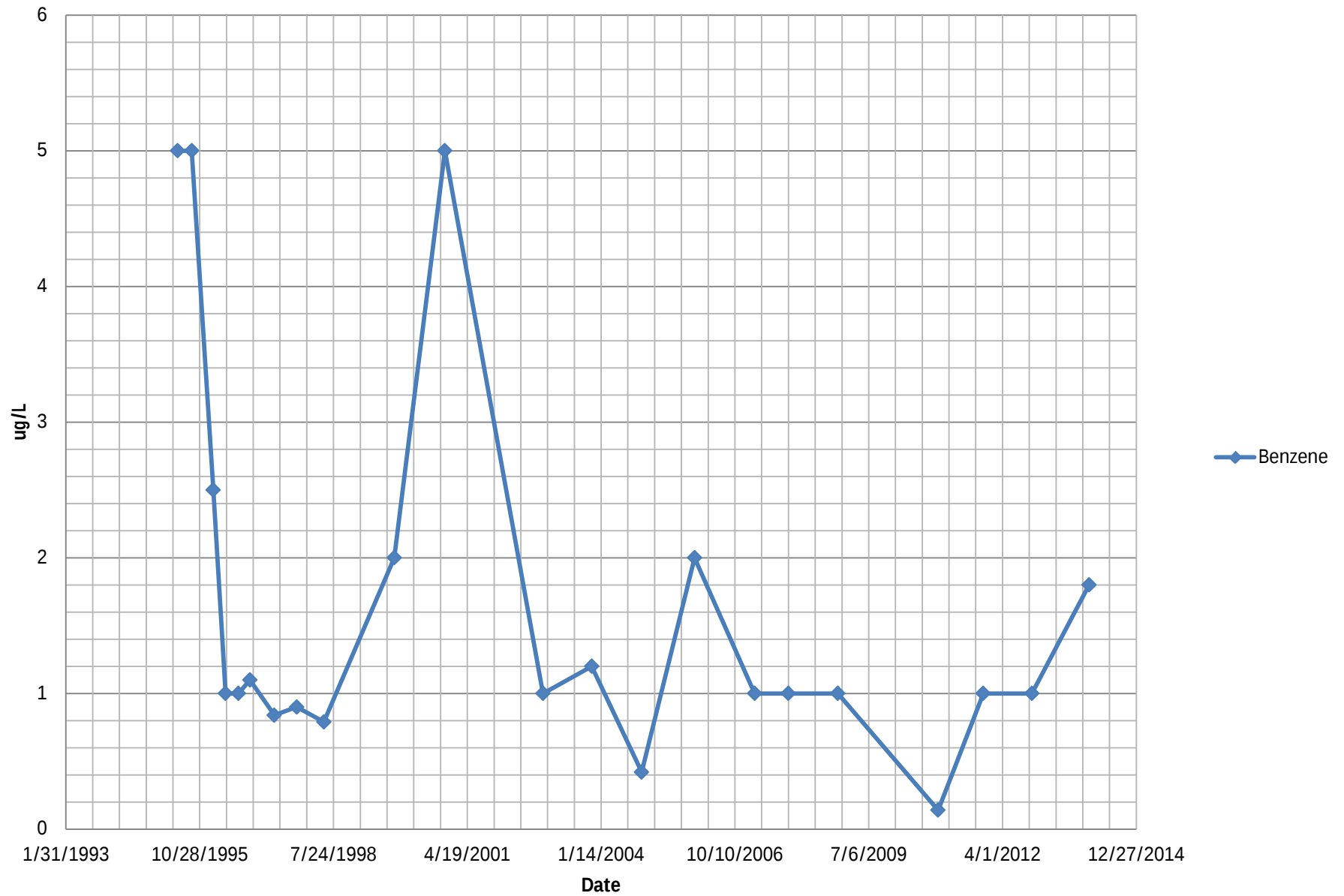
ACW-05 Total Dissolved Solids Concentration



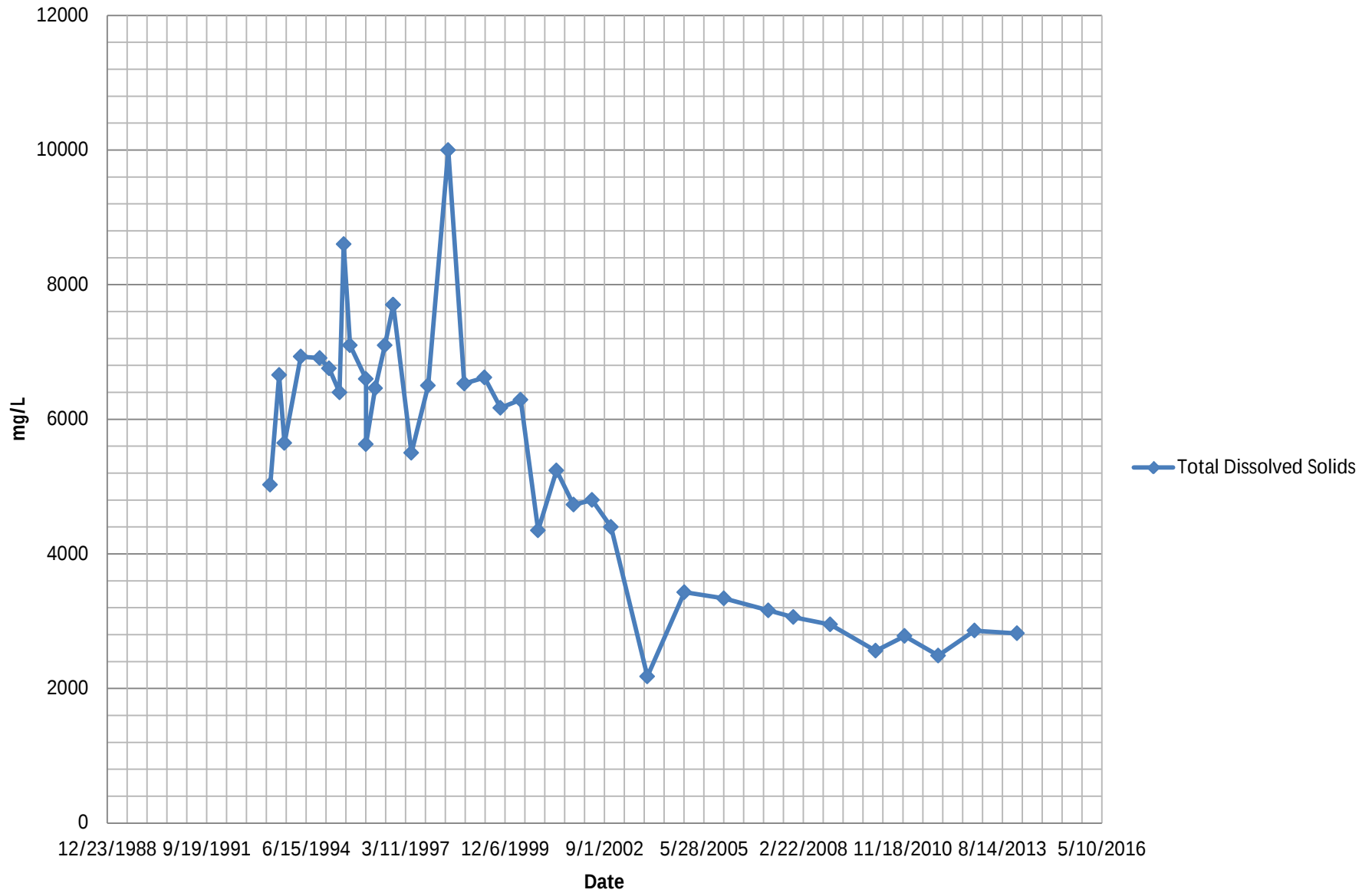
ACW-05 Chloride and Sodium Concentration



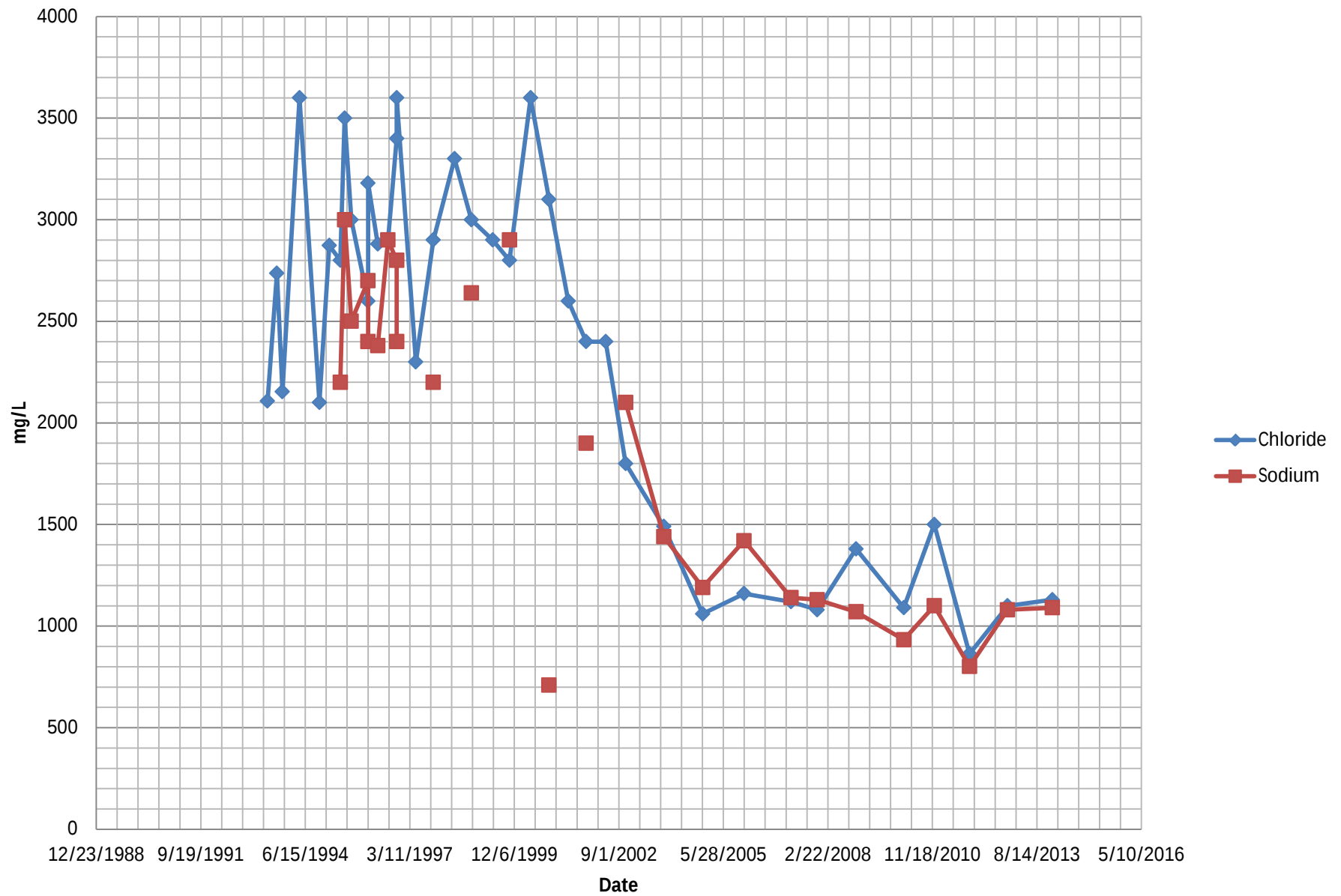
ACW-05 Benzene Concentration



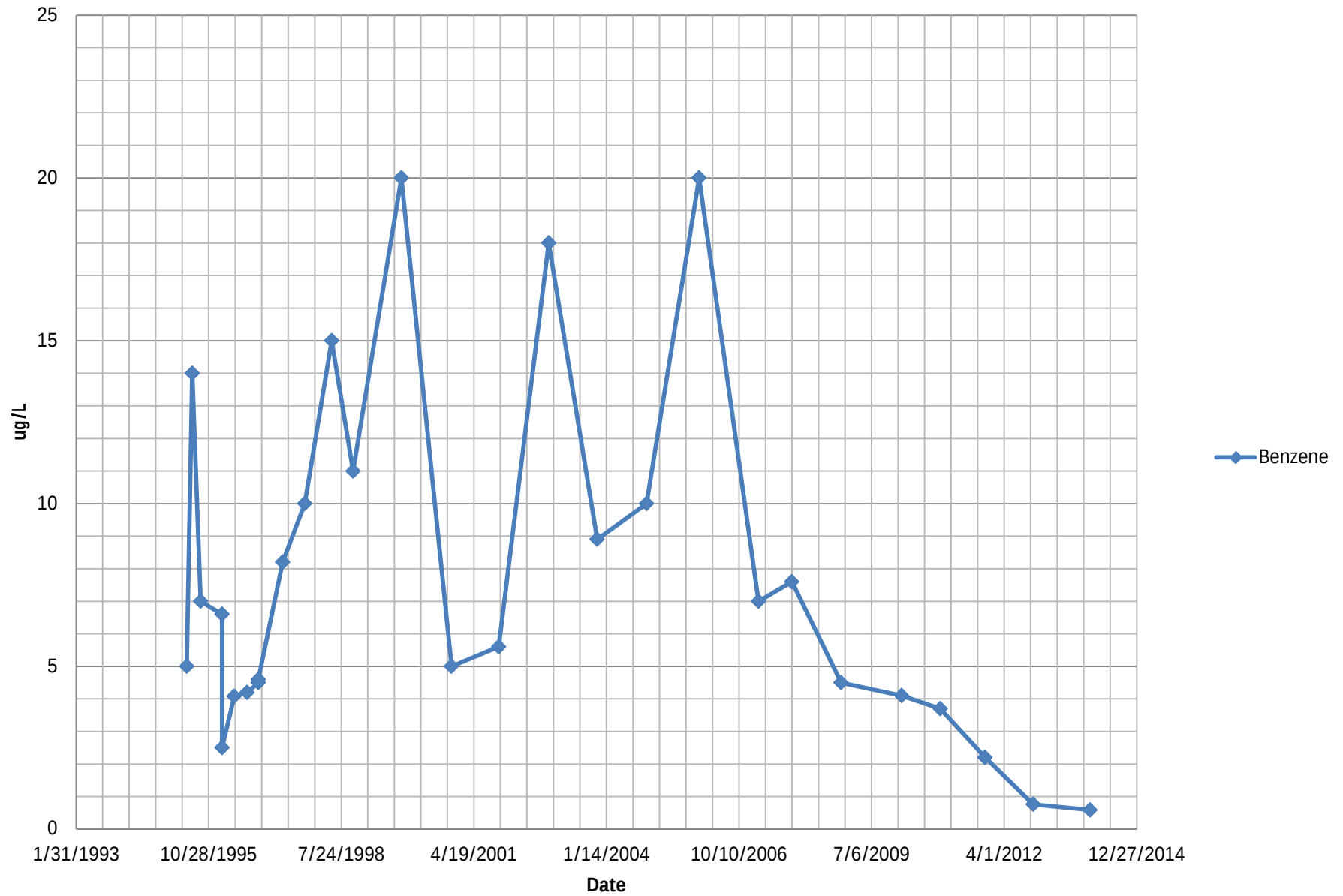
ACW-6 Total Dissolved Solids Concentration



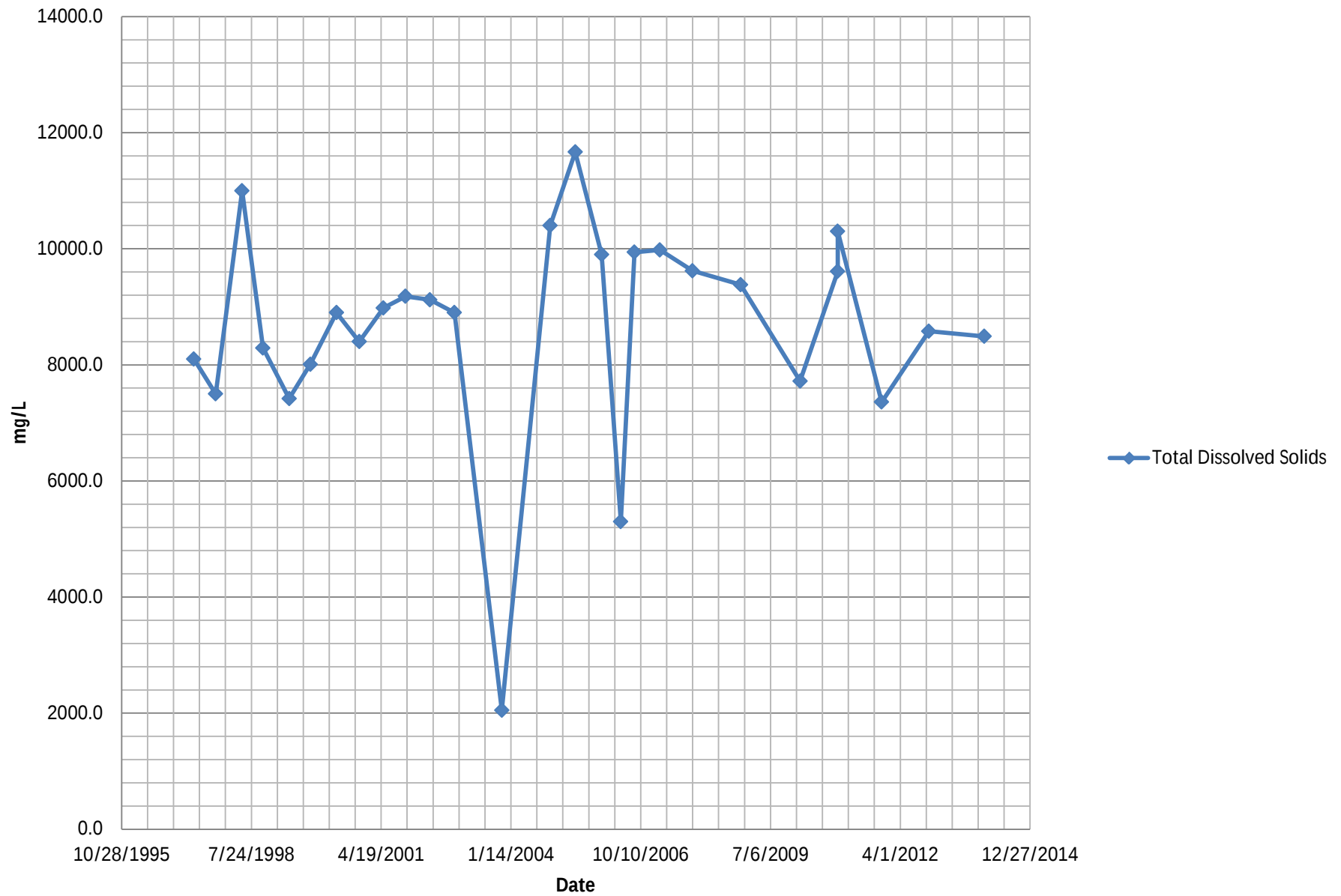
ACW-06 Chloride and Sodium Concentration



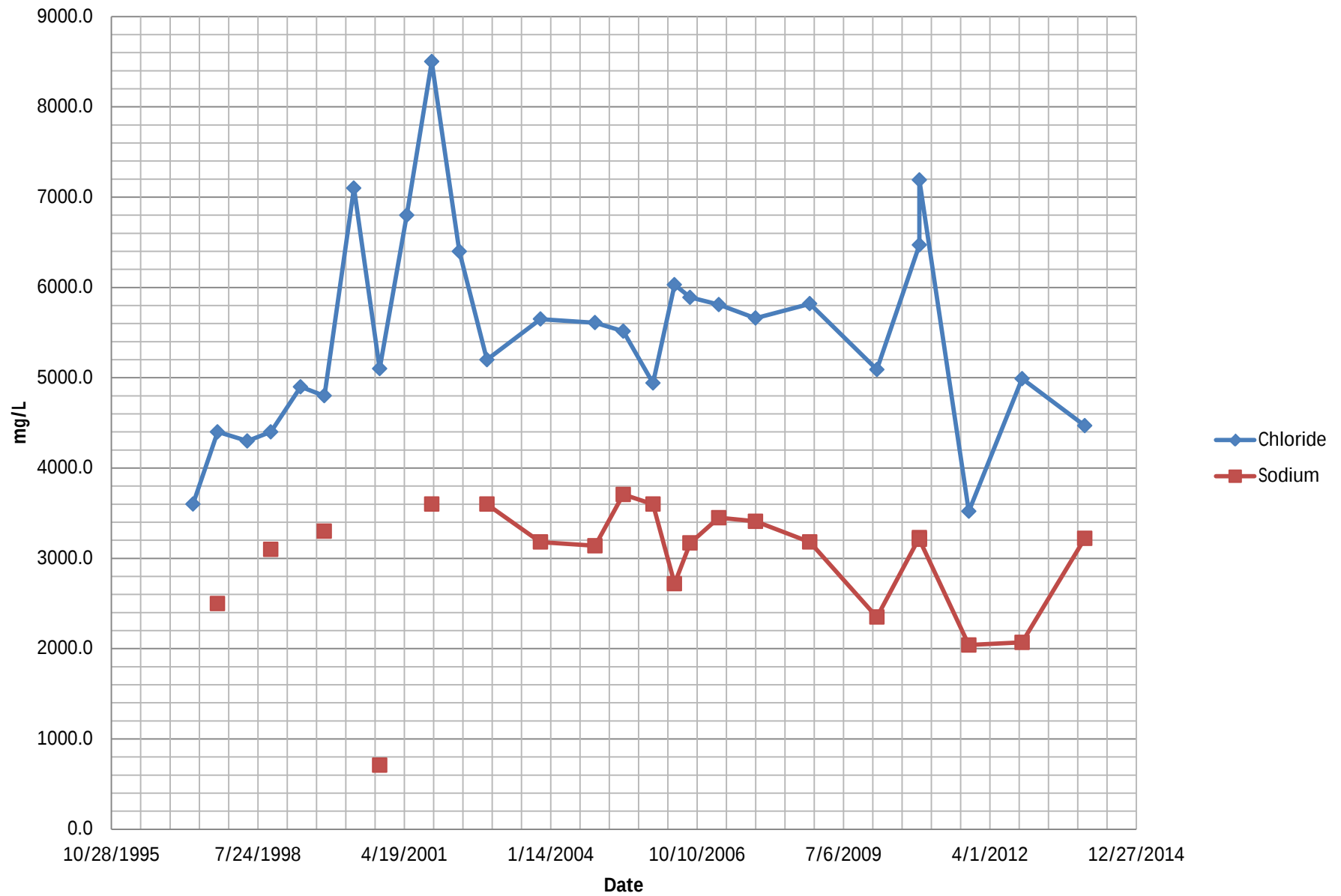
ACW-06 Benzene Concentration



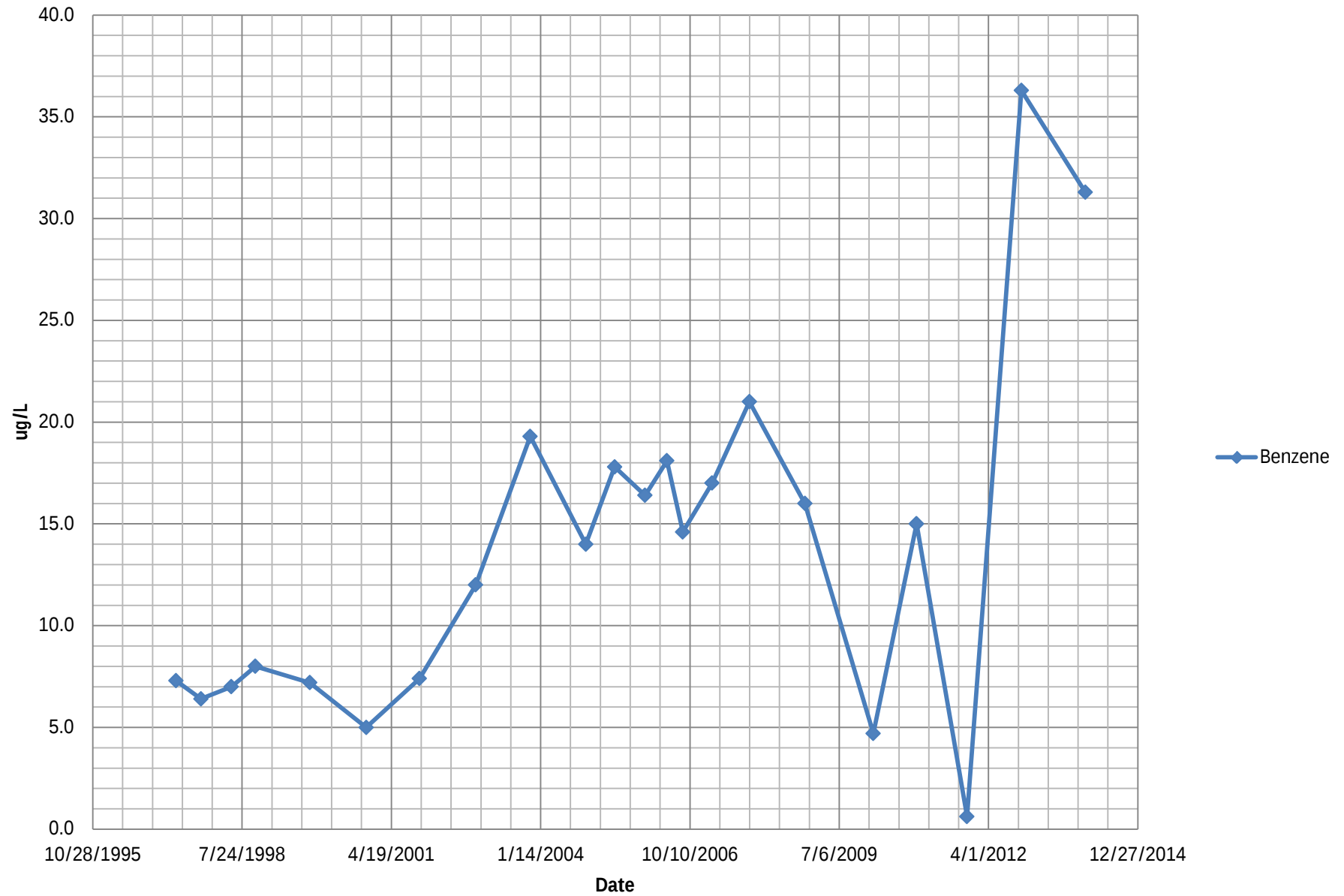
ACW-07 Total Dissolved Solids Concentration



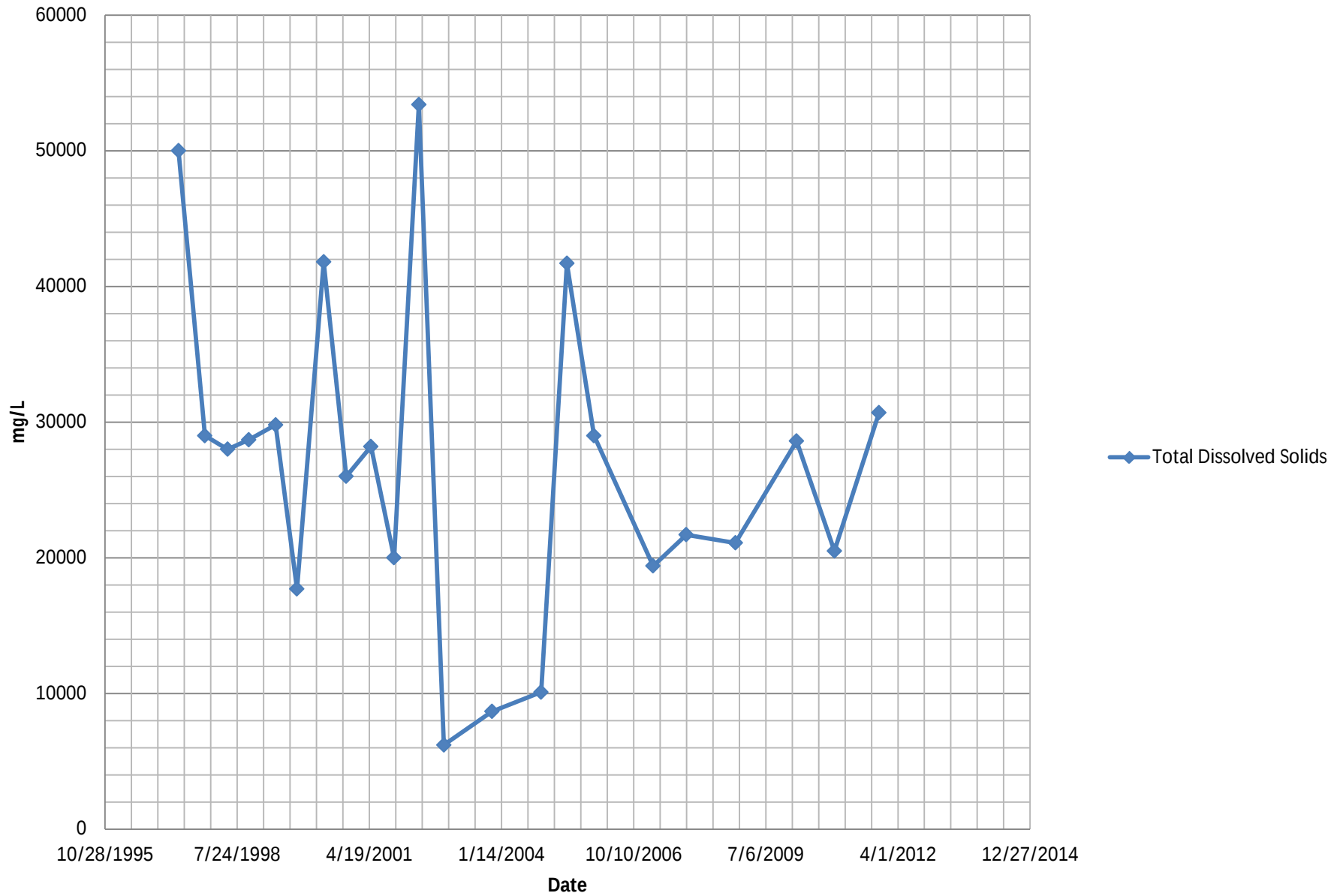
ACW-07 Chloride and Sodium Concentration



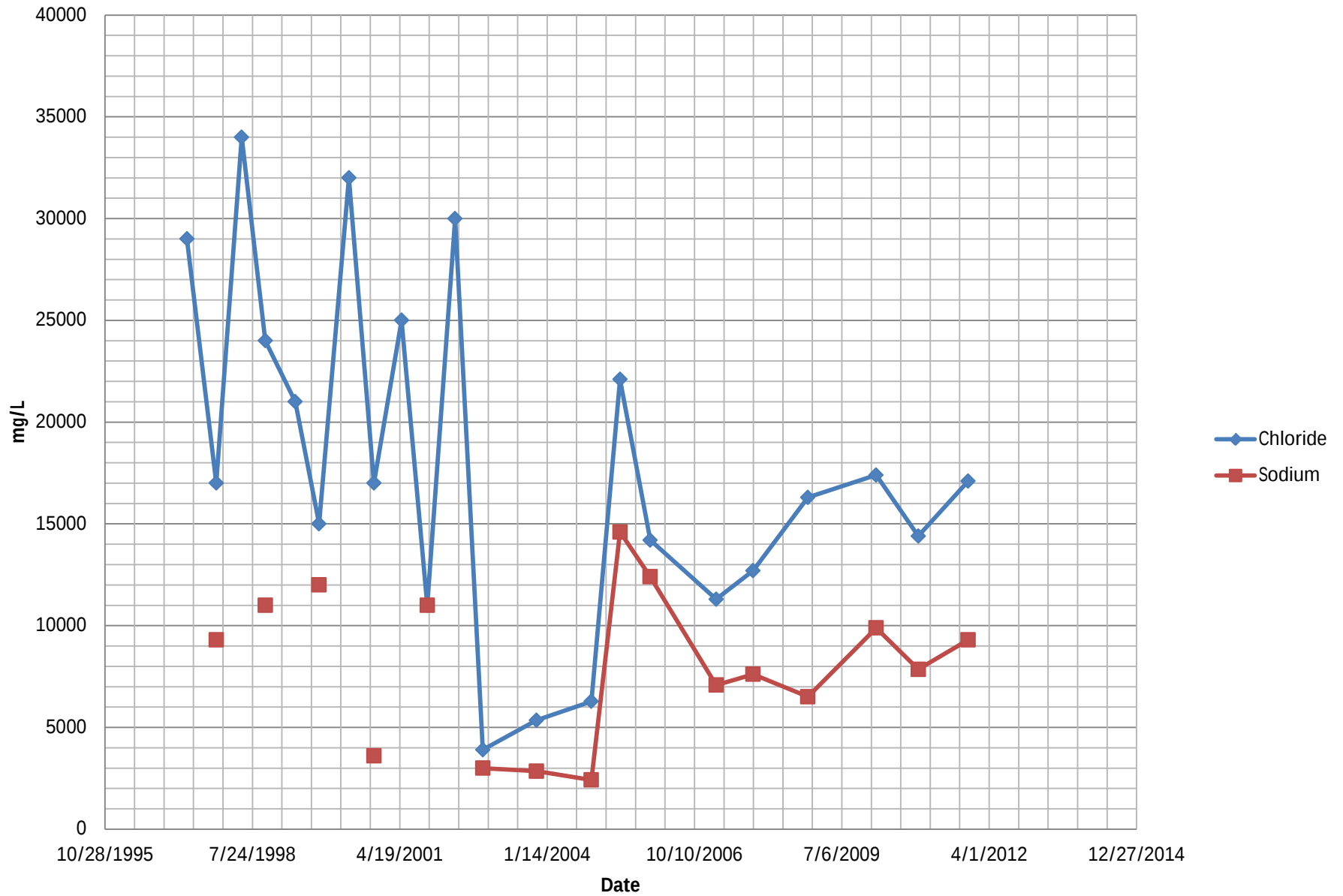
ACW-07 Benzene Concentration



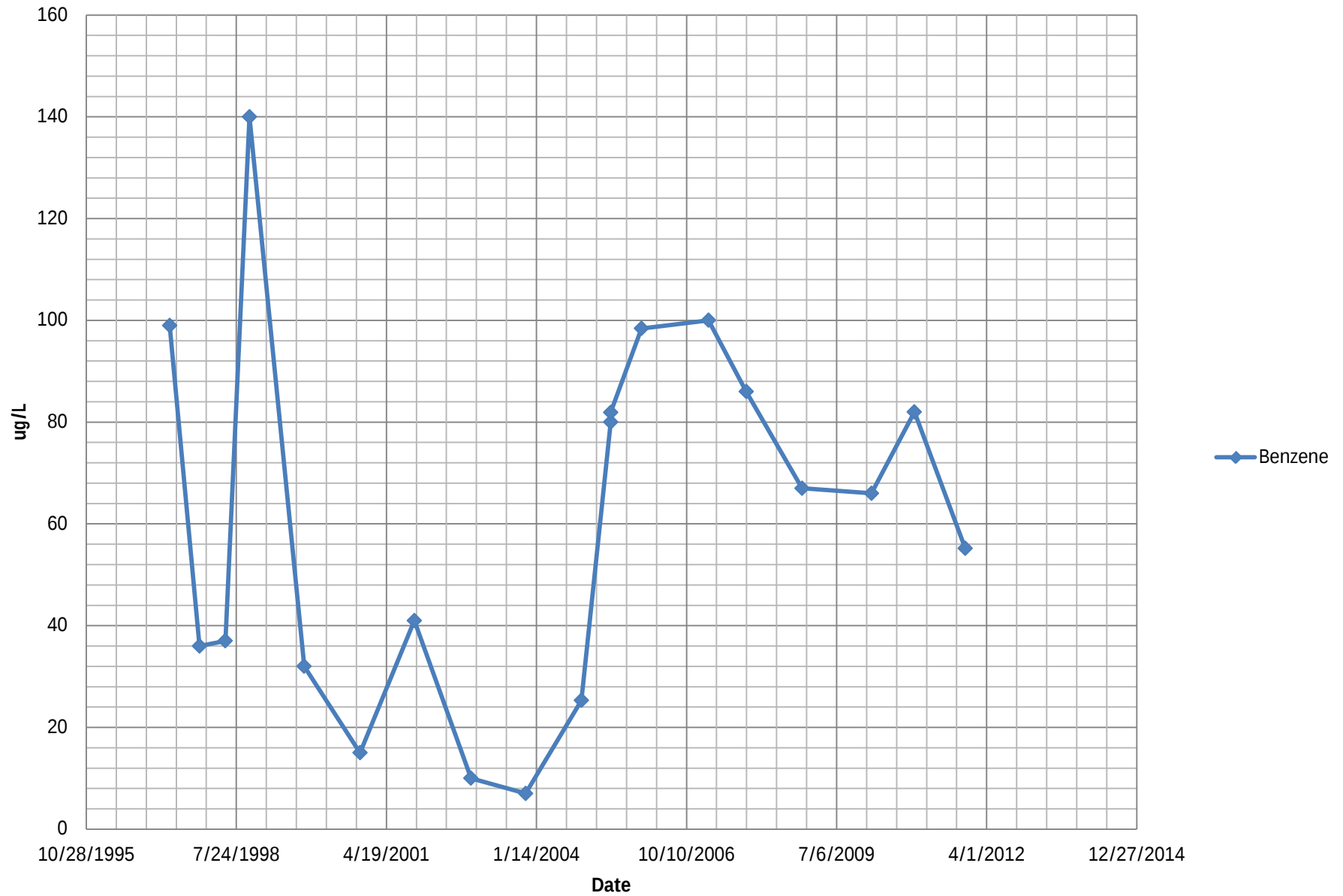
ACW-08 Total Dissolved Solids Concentration



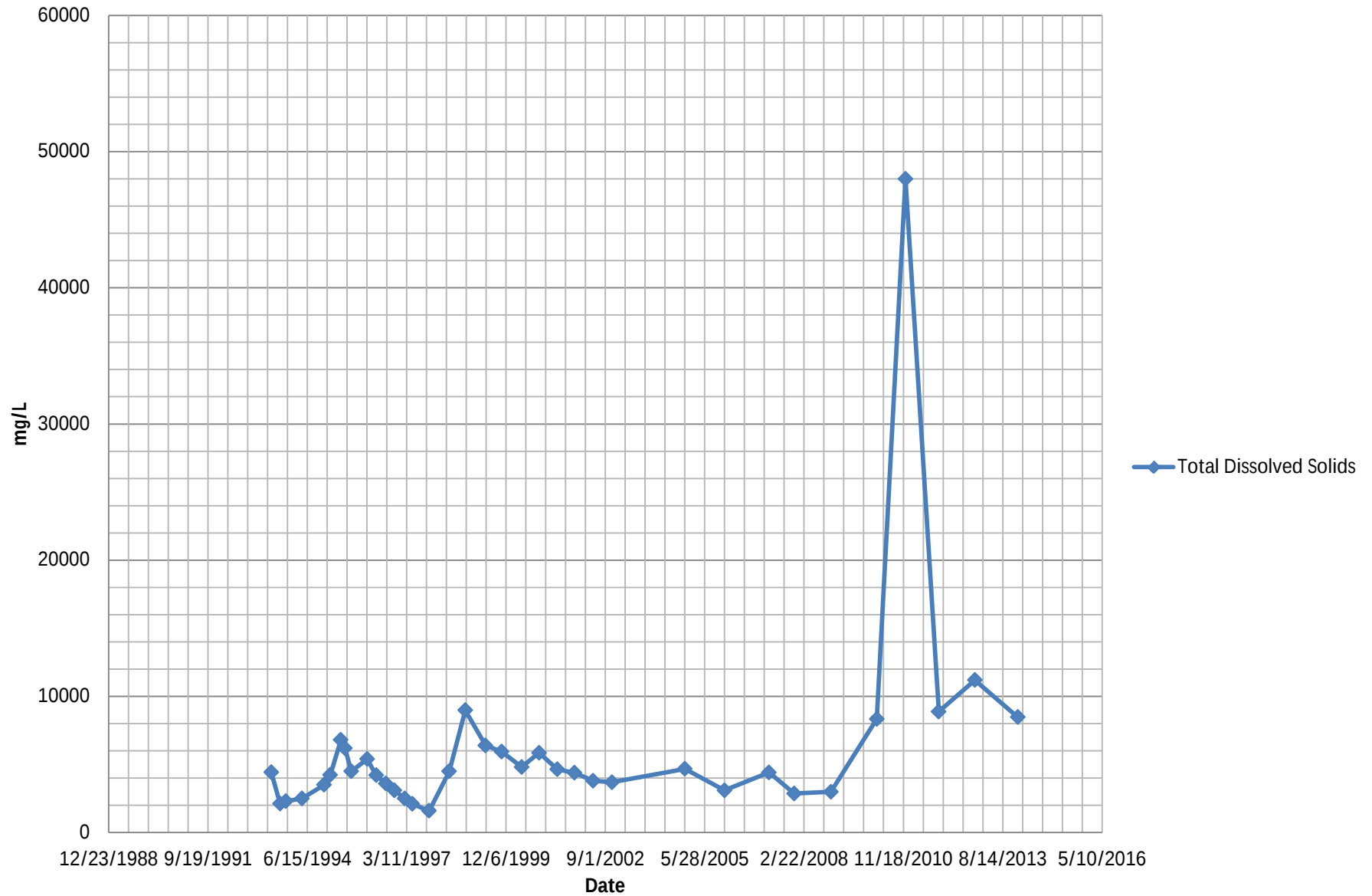
ACW-08 Chloride and Sodium Concentrations



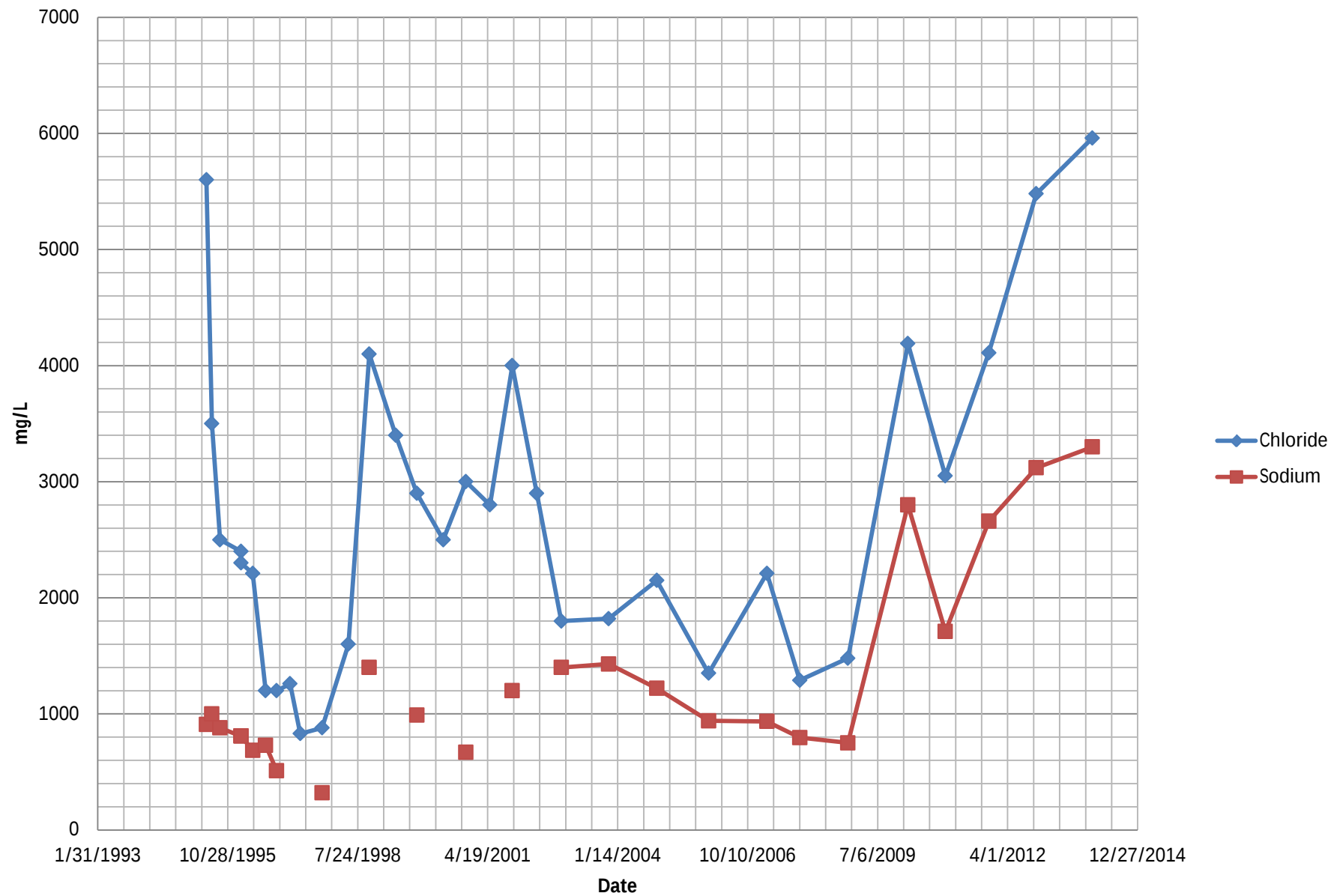
ACW-08 Benzene Concentration



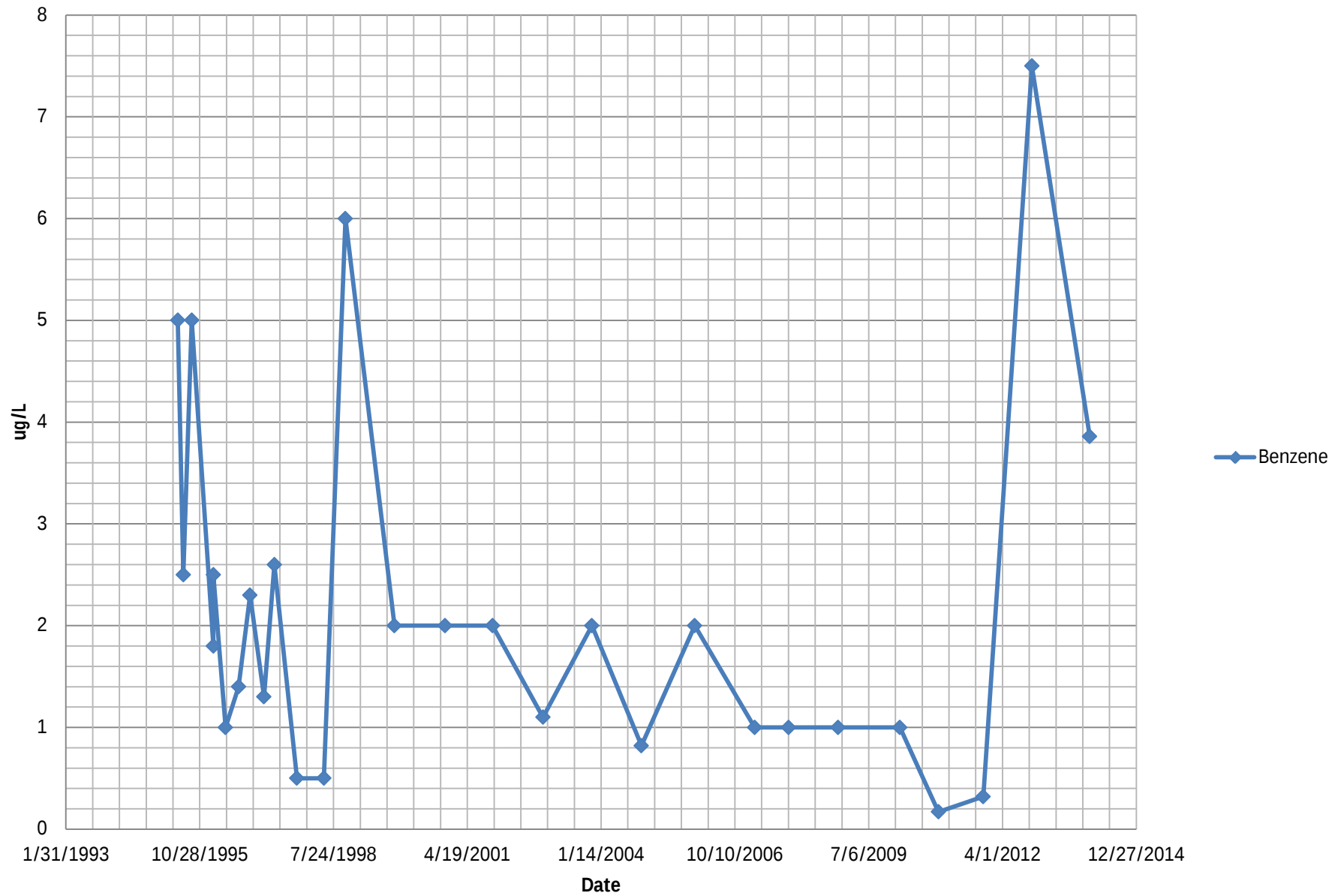
ACW-9 Total Dissolved Solids Concentration



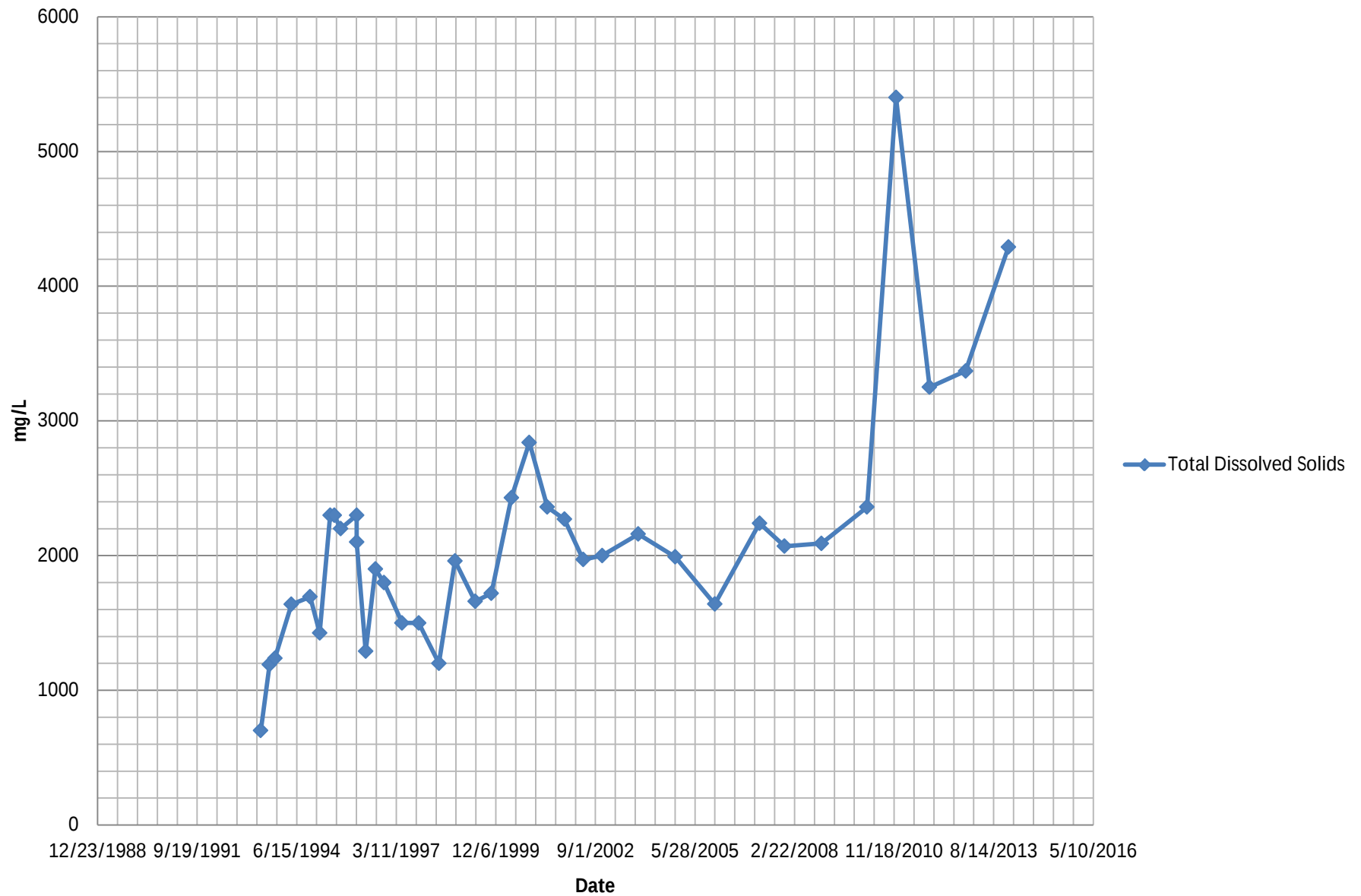
ACW-09 Chloride and Sodium Concentrations



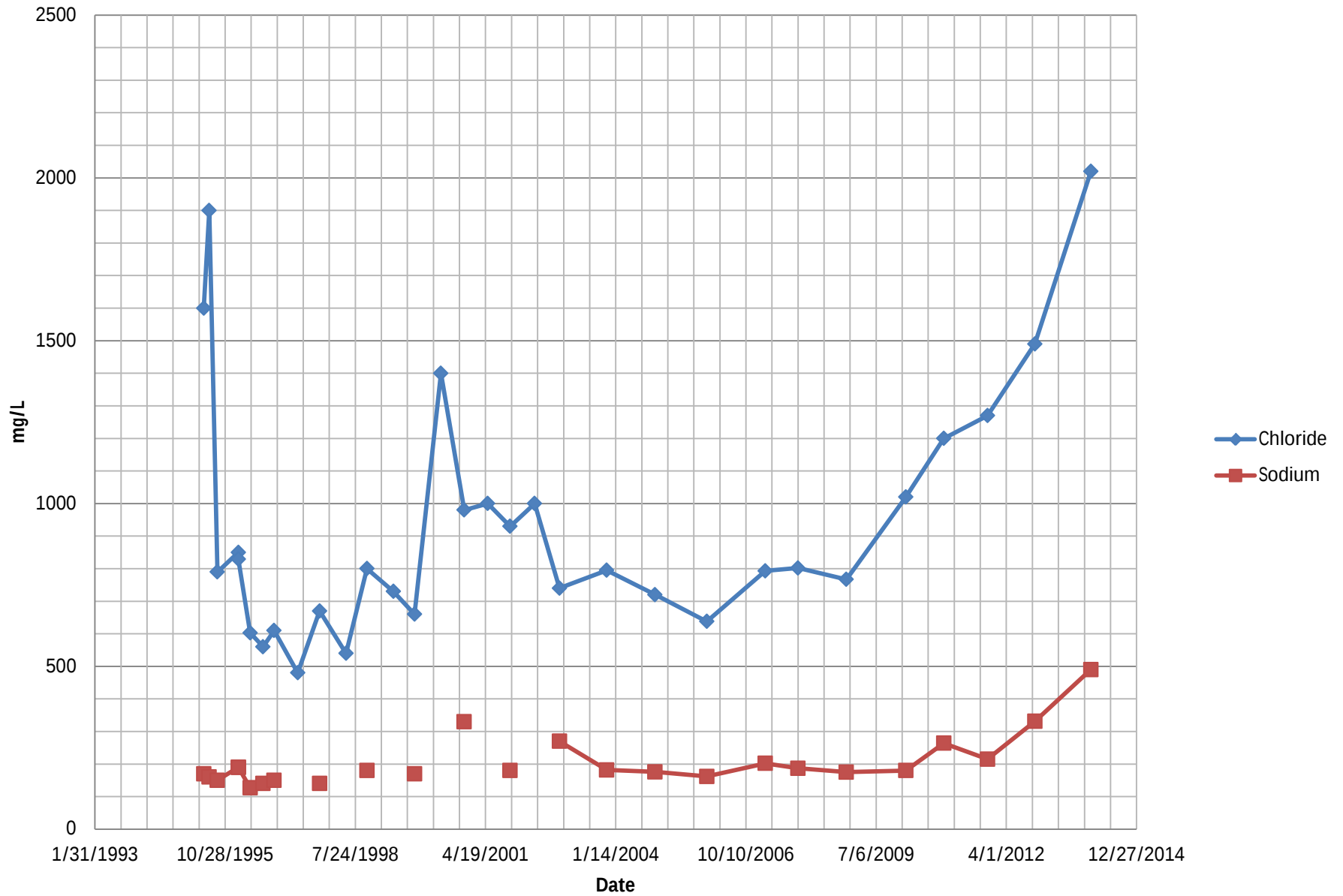
ACW-09 Benzene Concentration



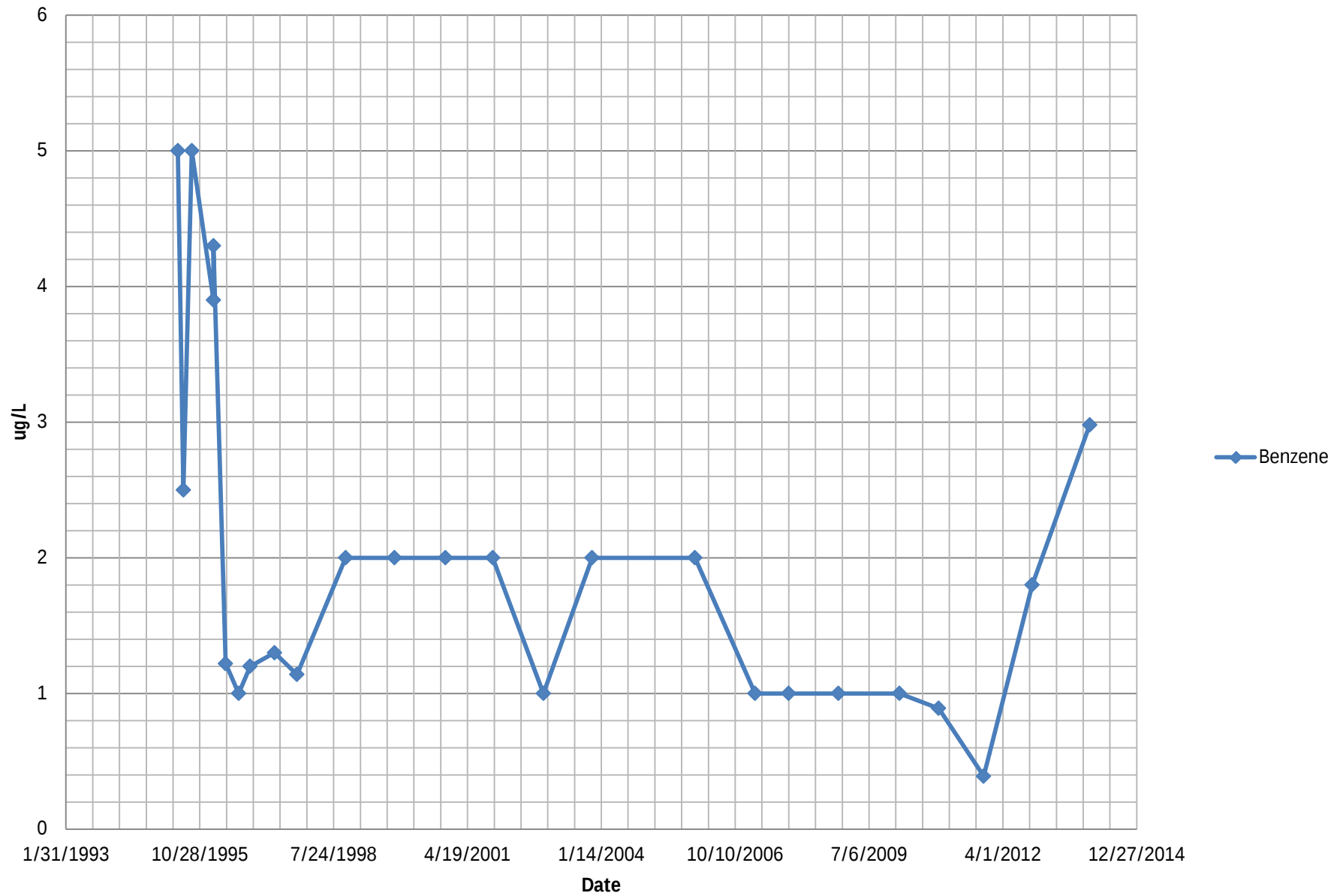
ACW-10 Total Dissolved Solids Concentration



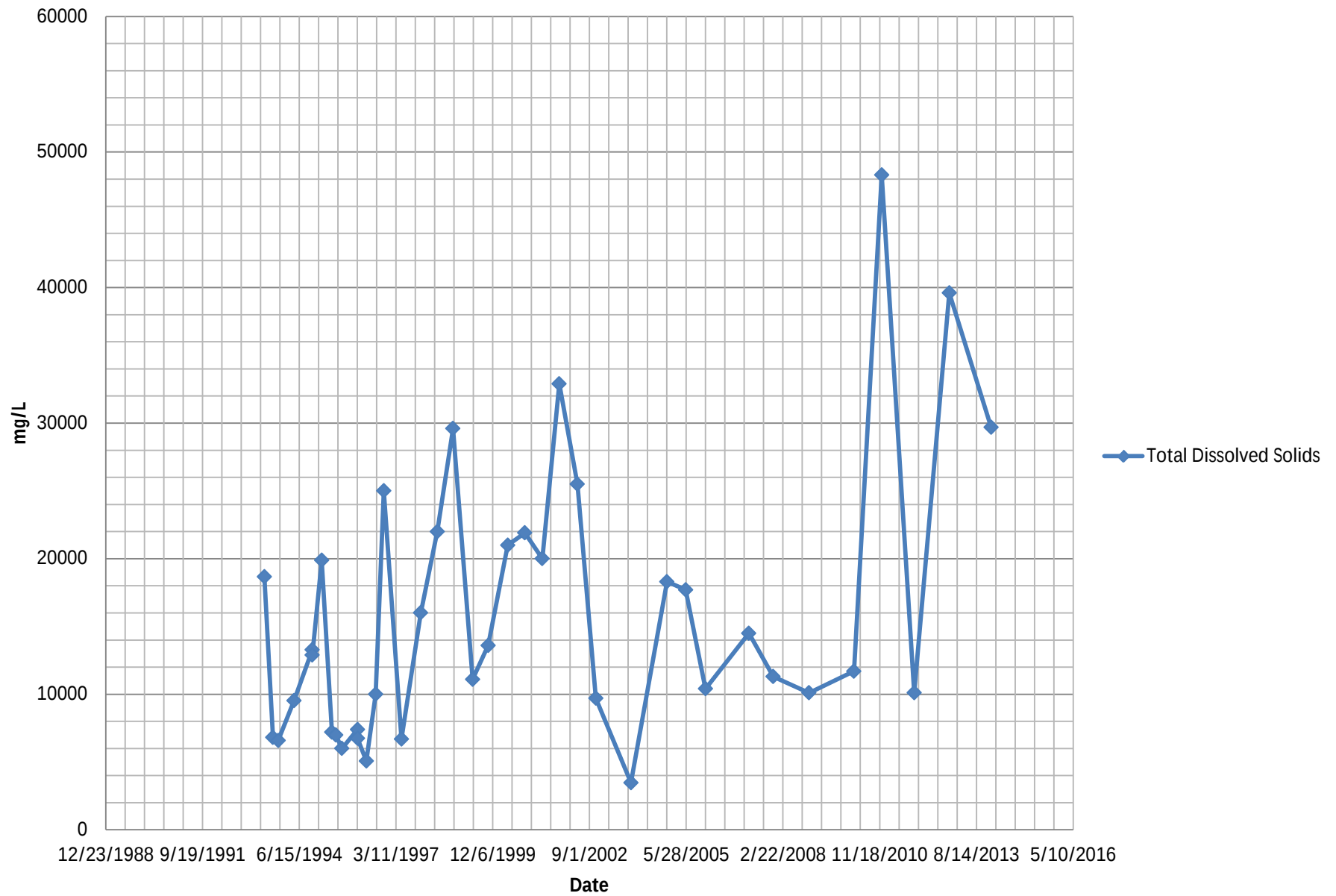
ACW-10 Chloride and Sodium Concentrations



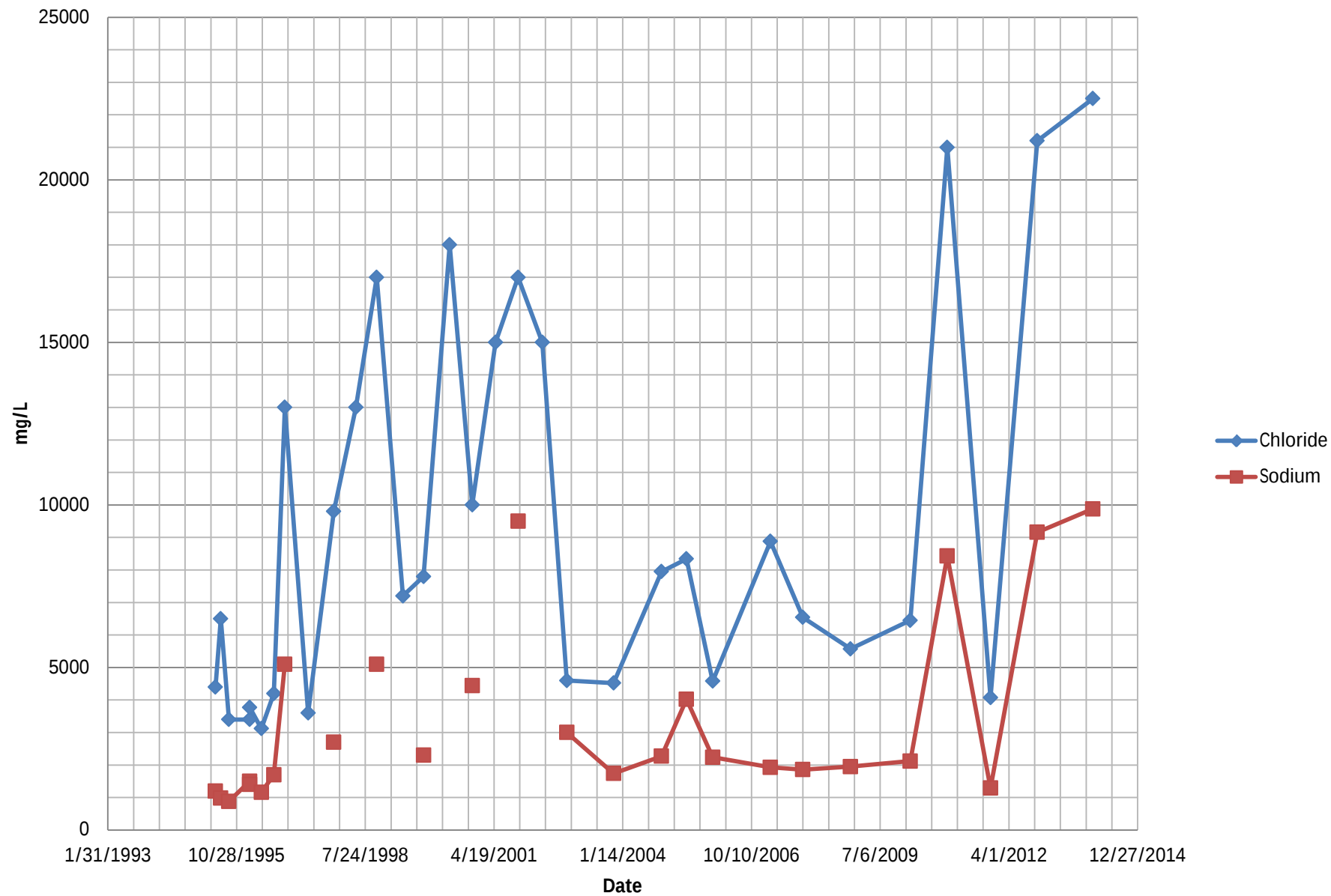
ACW-10 Benzene Concentration



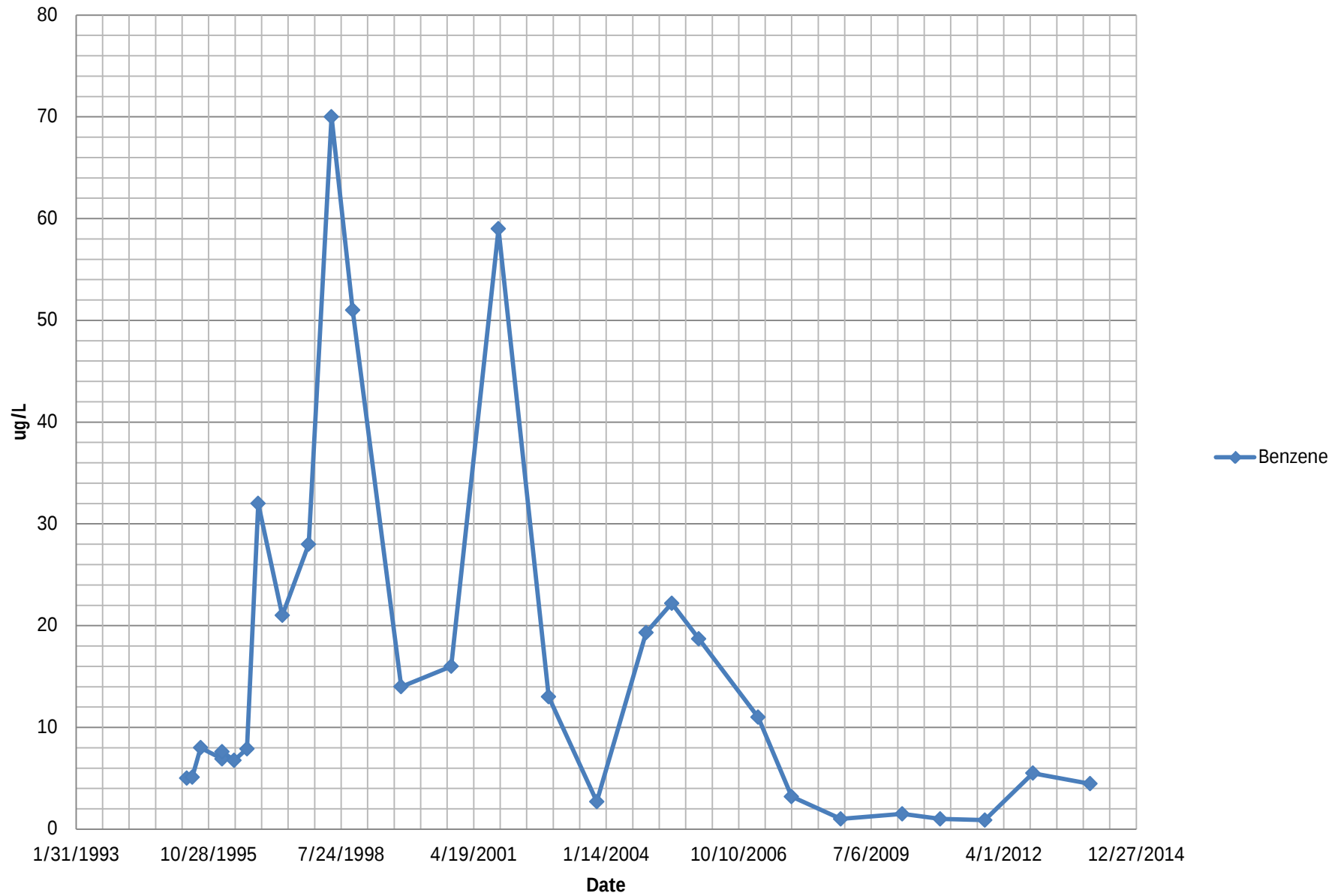
ACW-11 Total Dissolved Solids Concentration



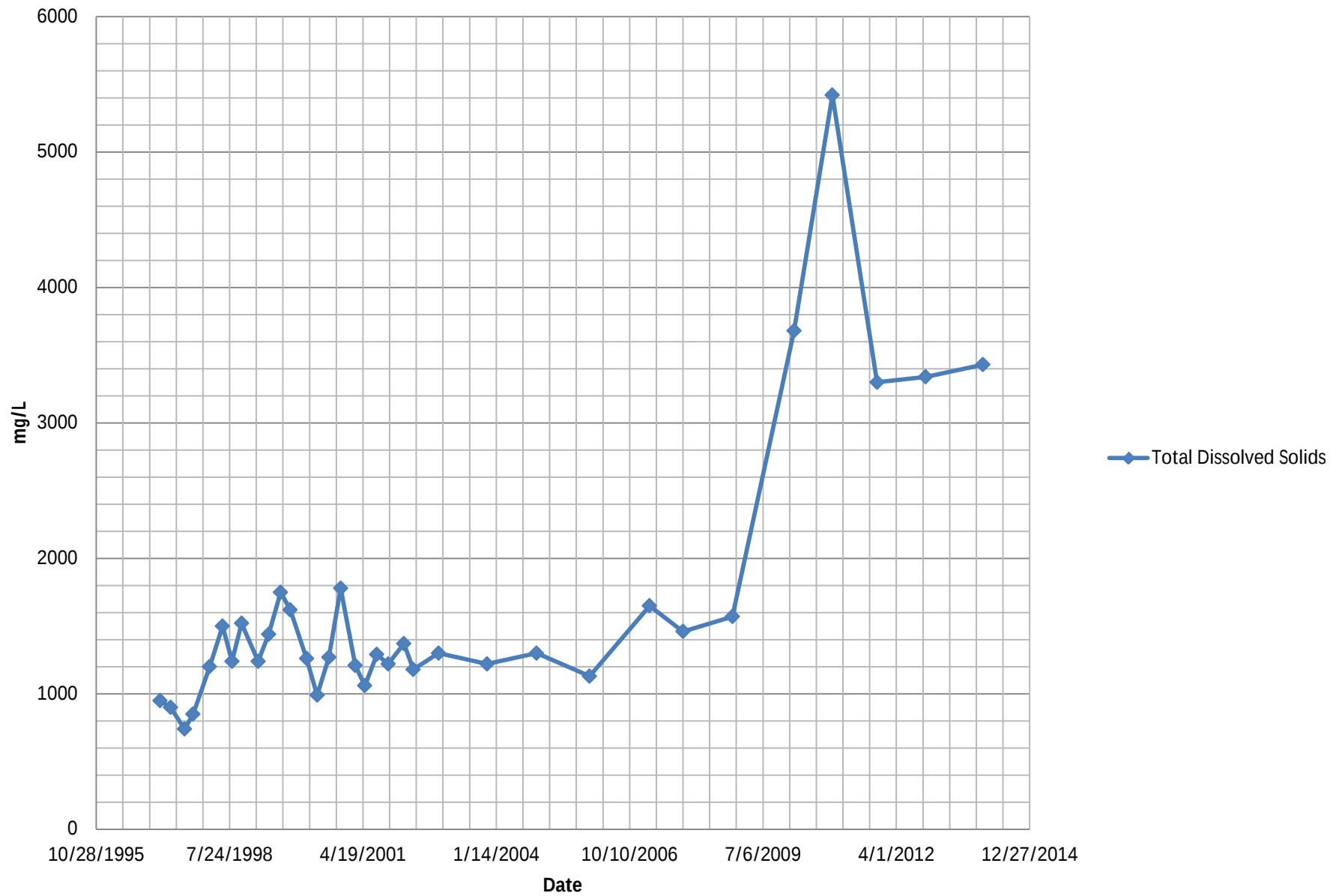
ACW-11 Chloride and Sodium Concentrations



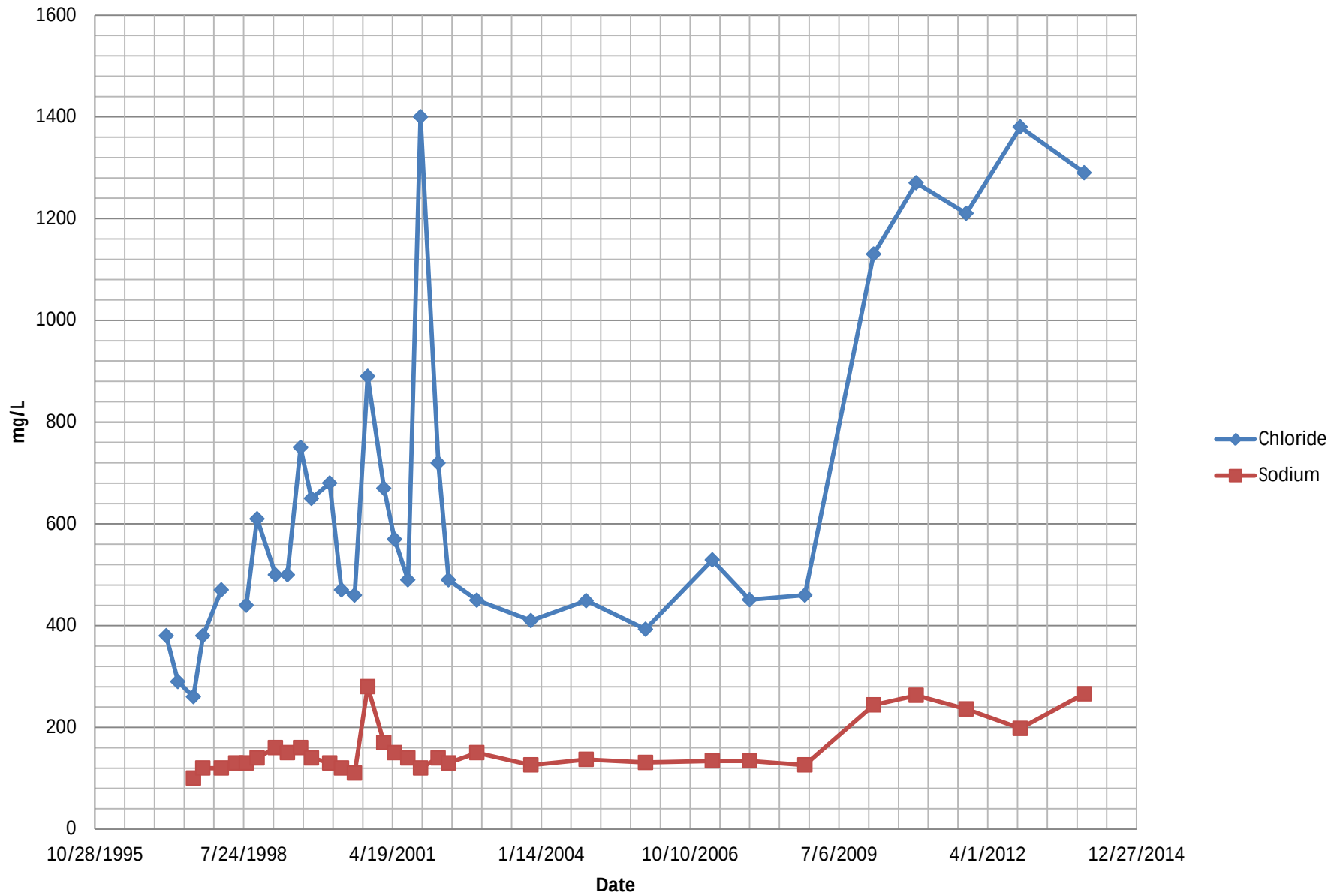
ACW-11 Benzene Concentration



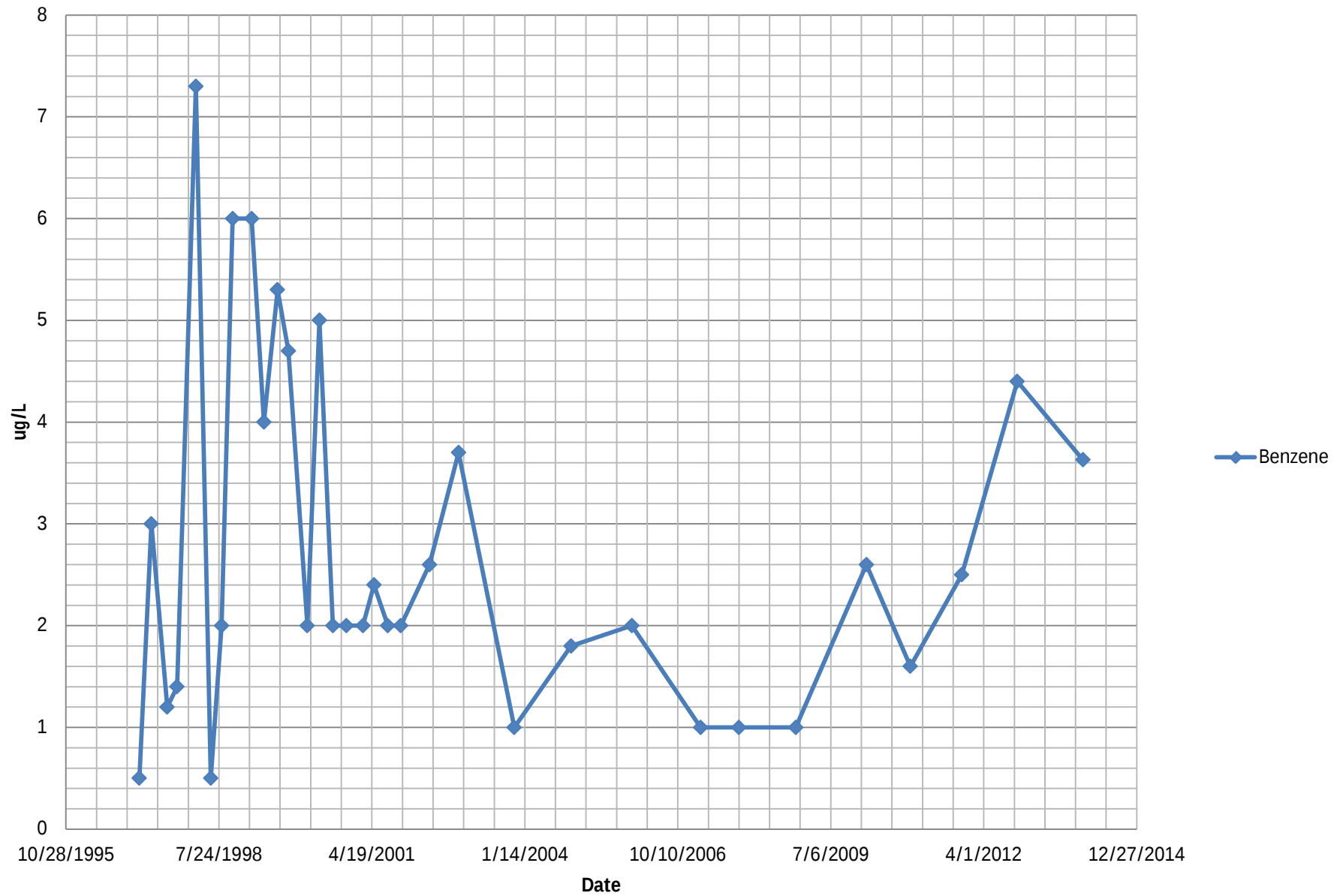
ACW-12 Total Dissolved Solids Concentration



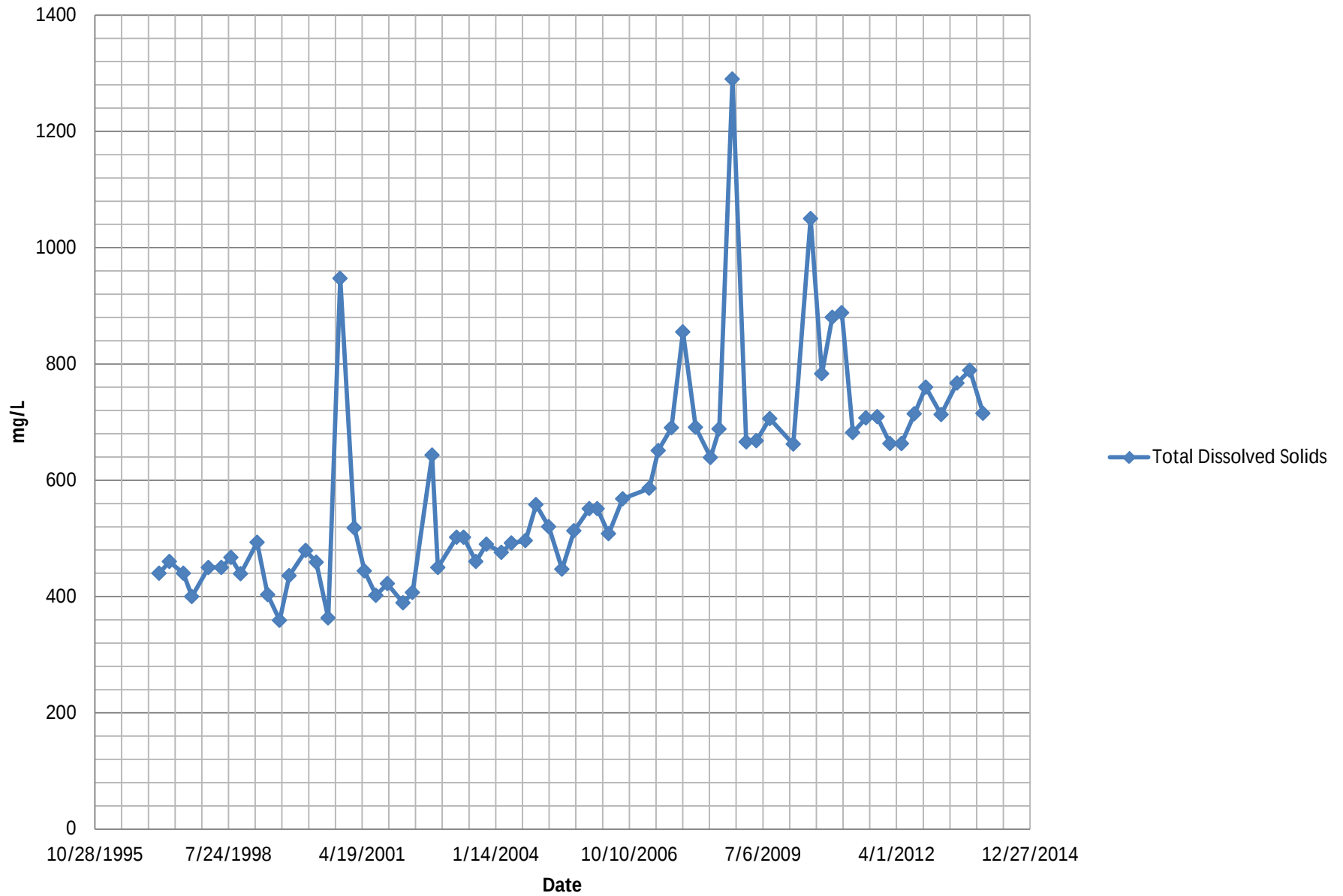
ACW-12 Chloride and Sodium Concentrations



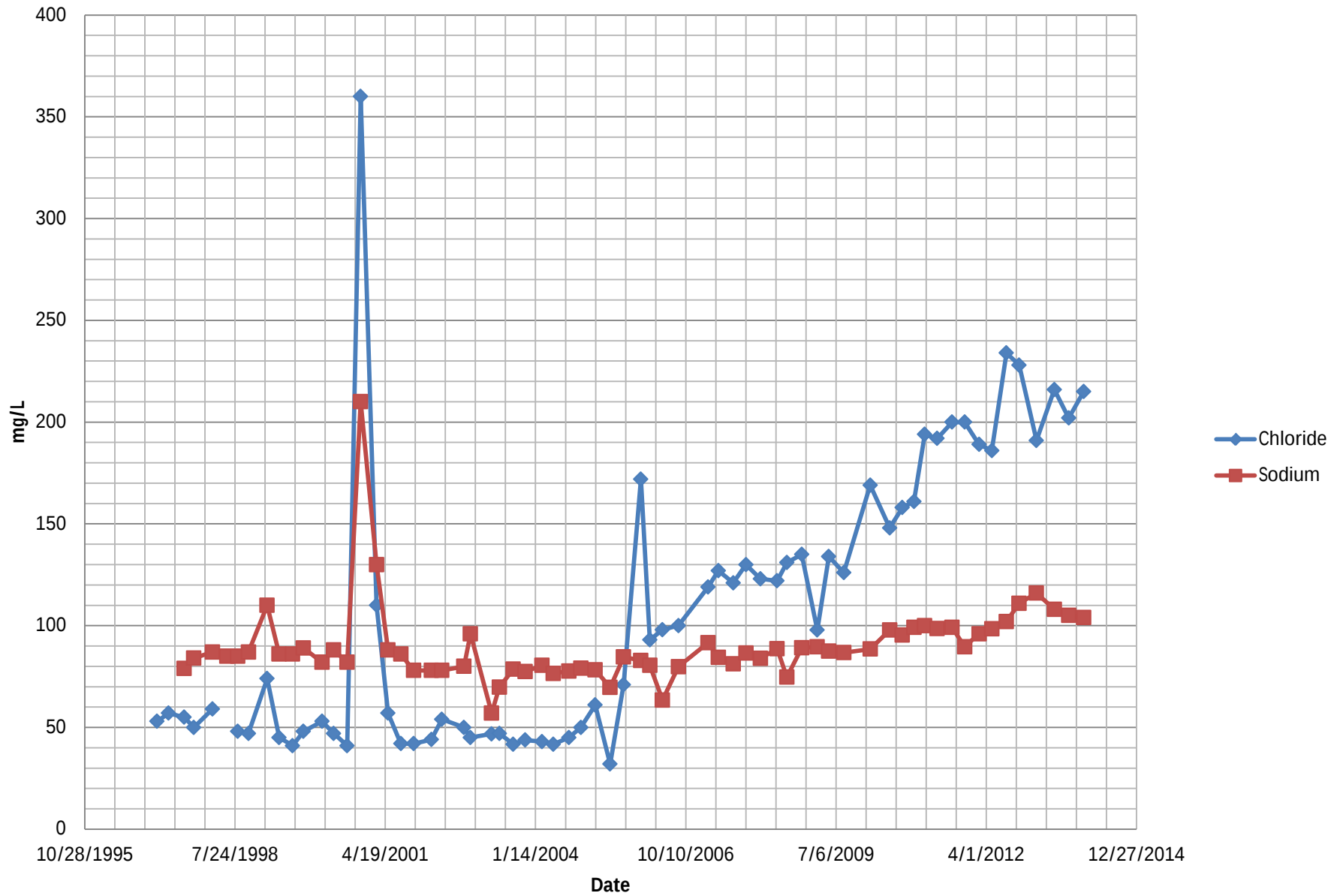
ACW-12 Benzene Concentration



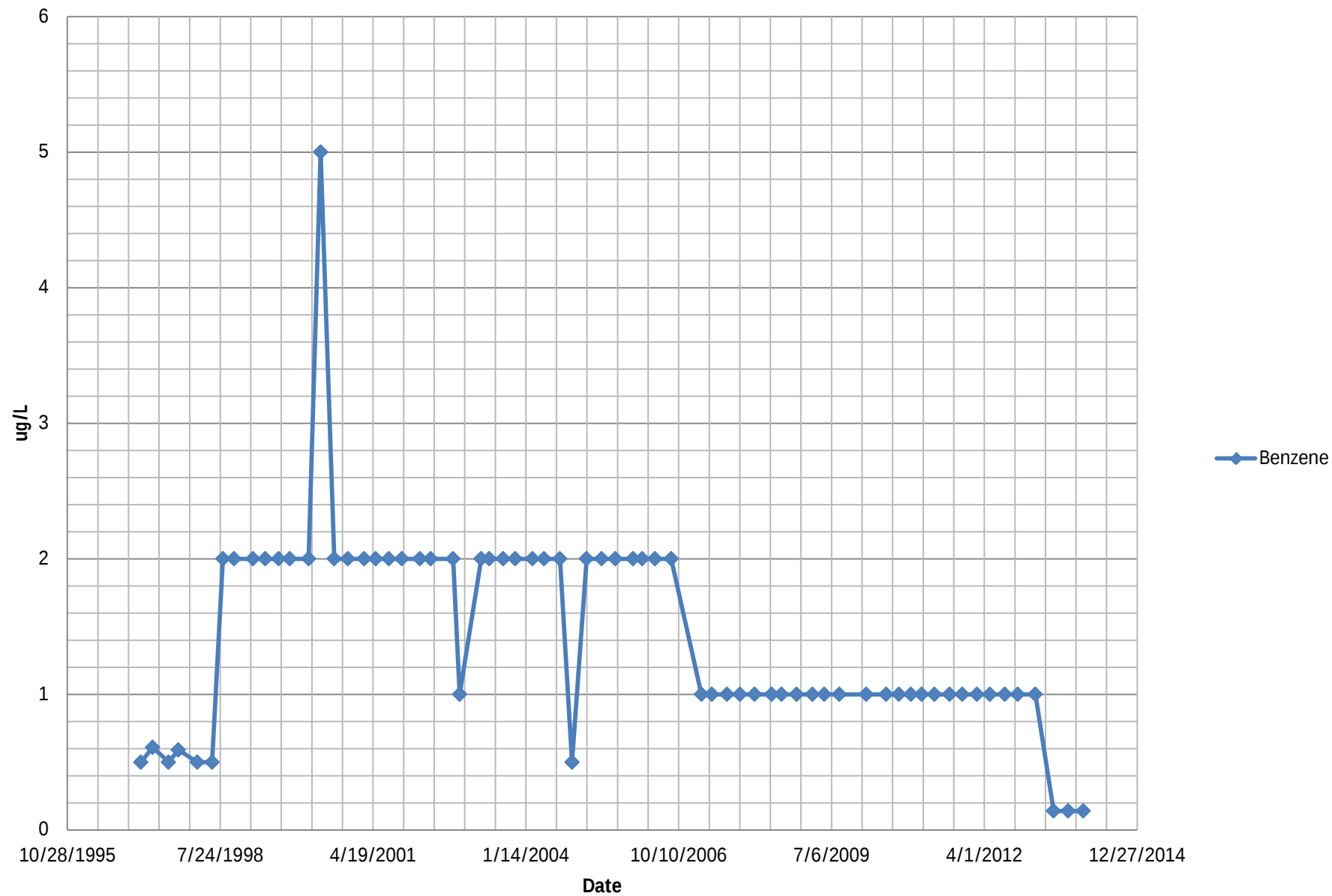
ACW-13 Total Dissolved Solids Concentration



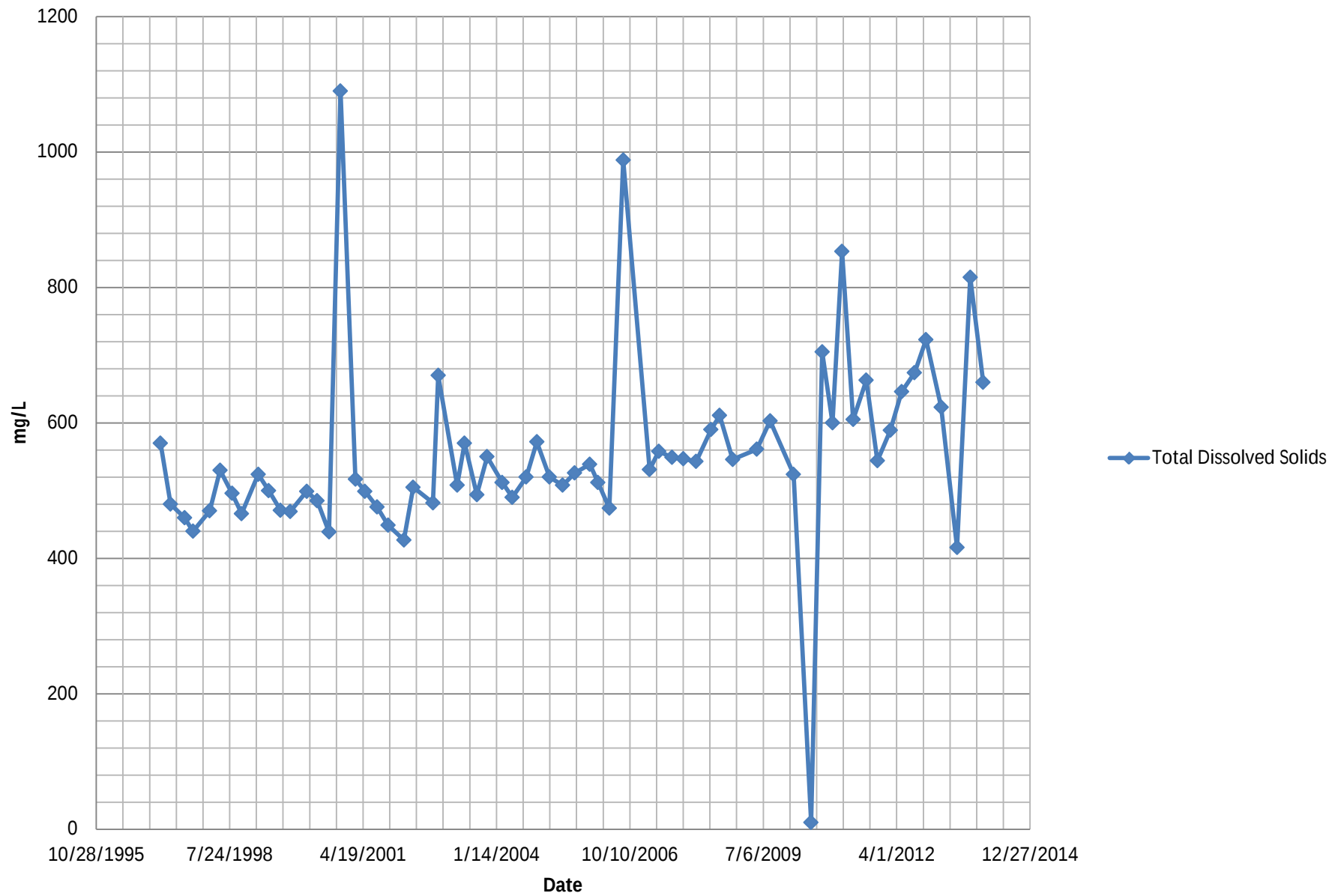
ACW-13 Chloride and Sodium Concentrations



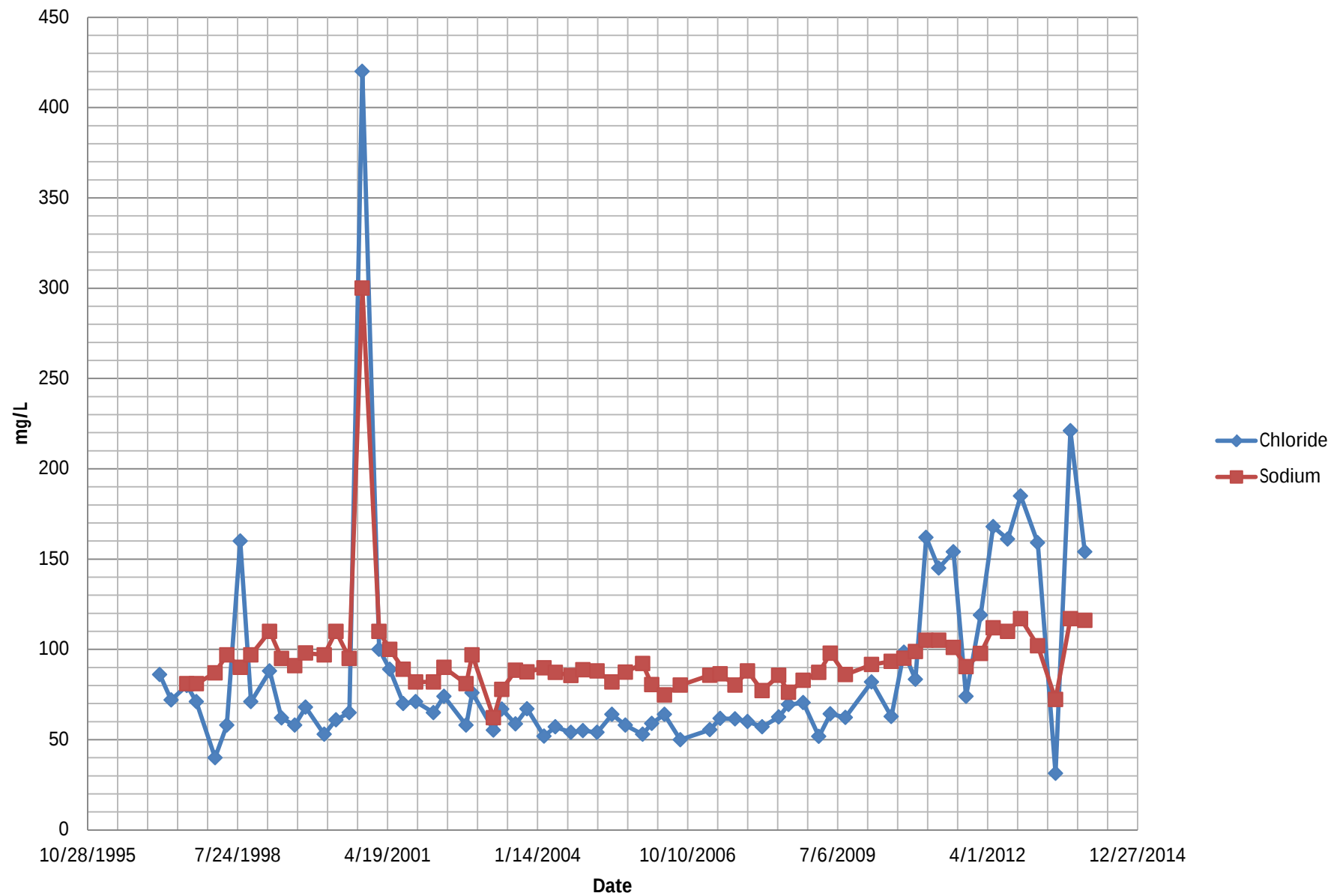
ACW-13 Benzene Concentrations



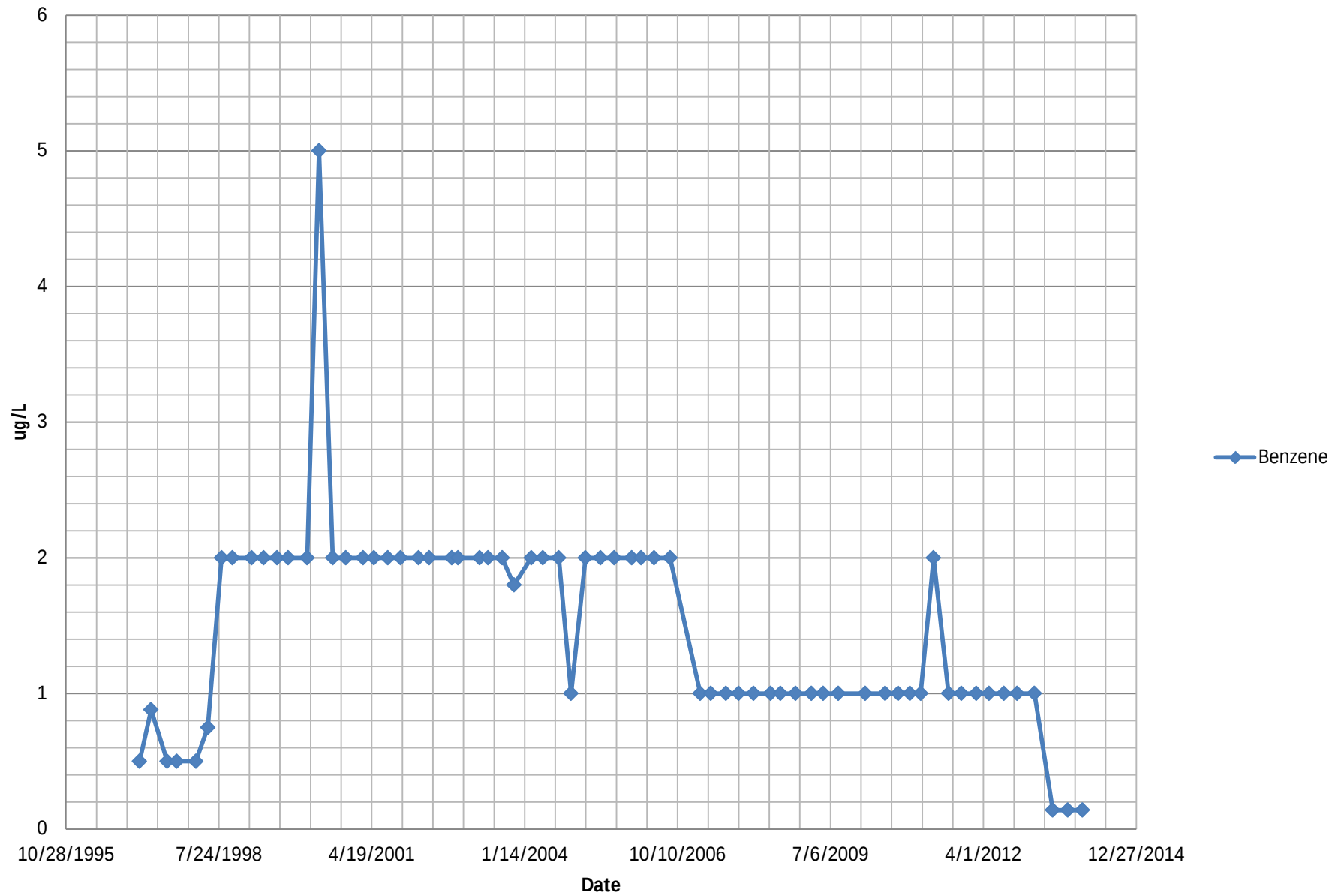
ACW-14 Total Dissolved Solids Concentration



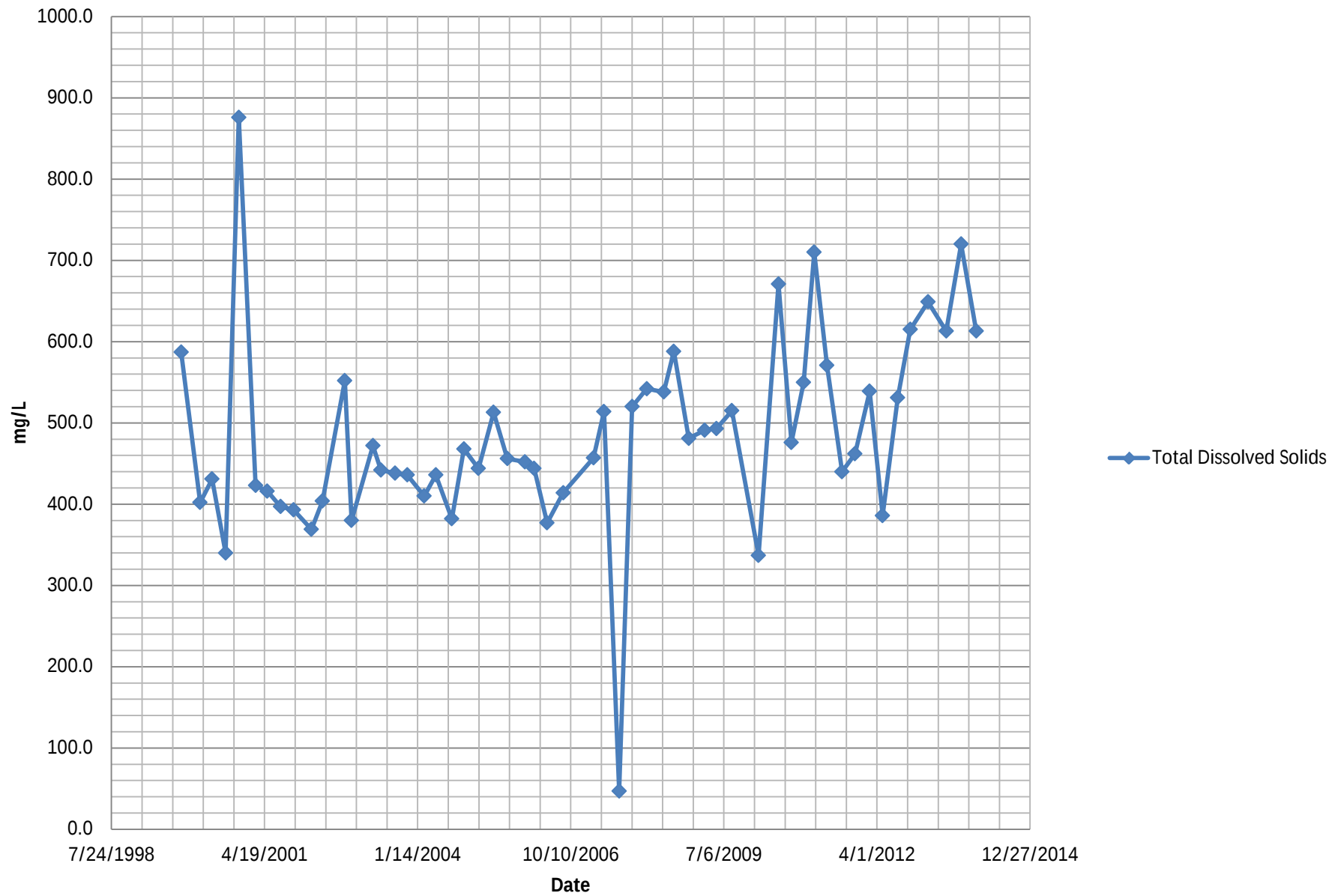
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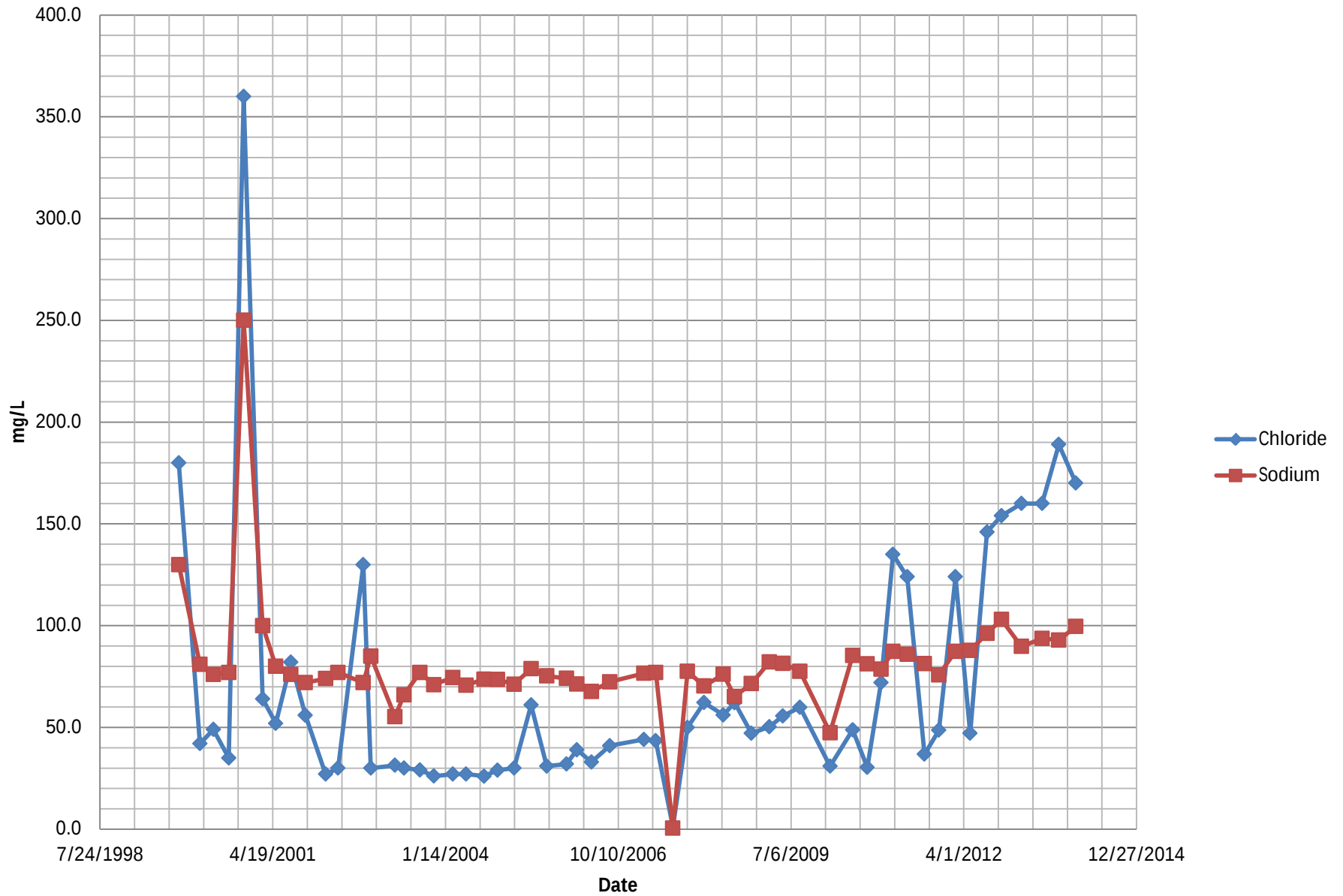
ACW-14 Benzene Concentration



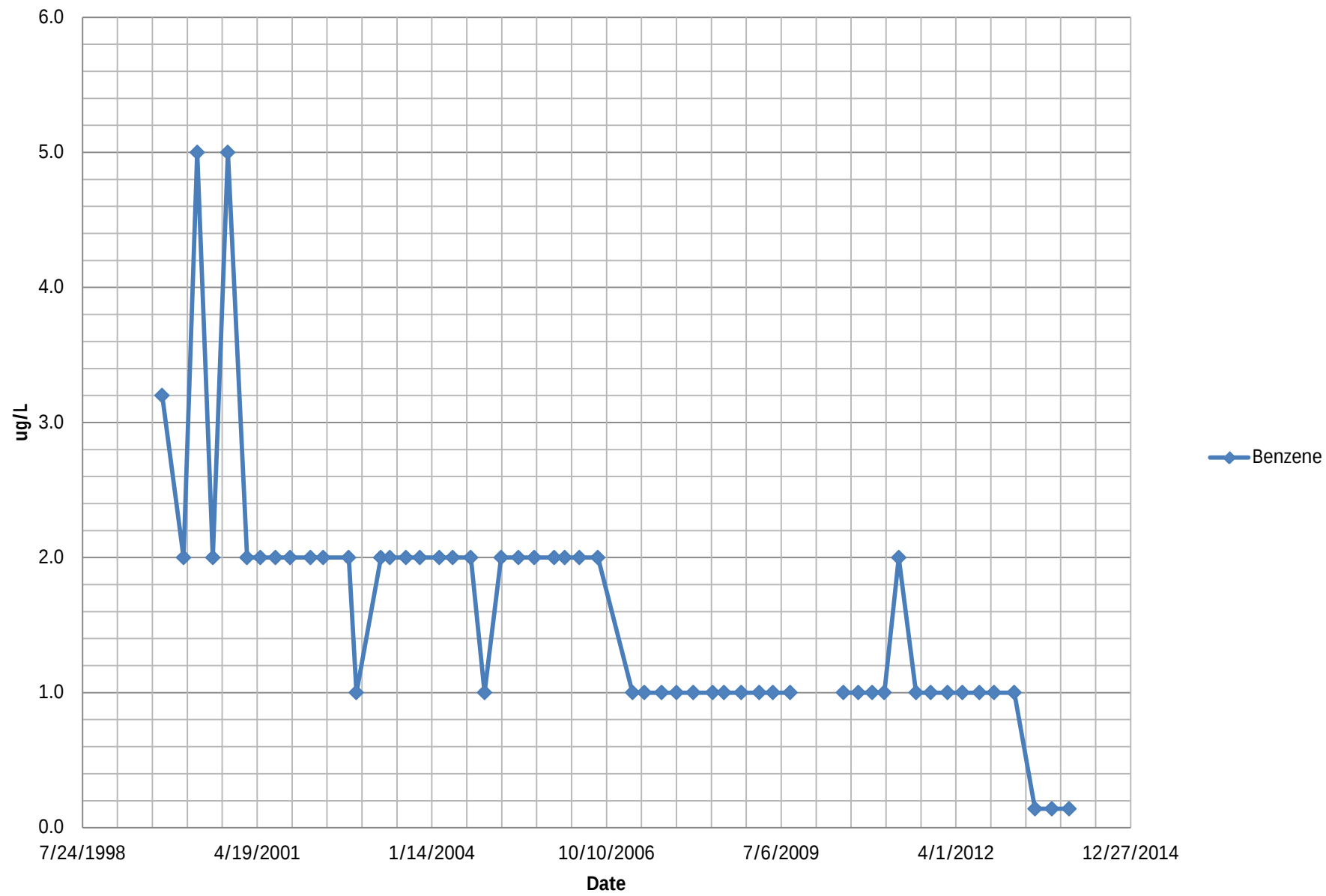
ACW-15 Total Dissolved Solids Concentration



ACW-15 Chloride and Sodium Concentrations



ACW-15 Benzene Concentration





Appendix C

No Purge Assessment Work Plan

No Purge Assessment Work Plan

March 31, 2014



No Purge Assessment Work Plan

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Project Number:

Date:
March 31, 2014

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Table 2	Standard Purge and HydraSleeve Analytical Data

Attachments

ARCADIS HydraSleeve™ Sampling SOP version 2c

1. Introduction

The goal of the full No Purge Assessment is to evaluate whether no purge sampling techniques can be used as an alternative to standard three casing volume purge (standard purge) sampling to demonstrate compliance with groundwater quality standards; and if so, under what conditions. The comparison of standard purge and no purge sampling is based upon the following criteria:

- Historical standard purge sampling data exists for comparison
- Standard Purge field parameters have been confirmed to meet stabilization prior to sampling and are representative of the groundwater formation.
- Constituents of Concern (CoCs) include benzene, toluene, ethylbenzene, and total xylenes (collectively referred to as BTEX), total dissolved solids (TDS), specific conductance, chloride, and sodium
- Site monitoring wells are placed in permeable aquifer materials that are appropriate for standard purge and no purge sampling.

Standard purge and no purge are both viable groundwater sampling methodologies (ITRC, 2006, 2007; Parker and Clark, 2002; Parsons, 2005; Puls and Barcelona, 1996), as both are based on the principle that groundwater is continuously flushing the open interval of a monitoring well. The pilot study program assumes that the results of standard purge sampling are the standard for comparison. For this study, the HydraSleeve™ sampling method was chosen as the no purge technique due to its simplicity of use, repeatability, compatibility with a range of CoCs, and cost advantages. A key technical advantage to HydraSleeve™ samplers is that they can be deployed to collect samples from target depths more precisely than bailers while causing less agitation, and lack the equilibration time and analyte limitations associated with permeable diffusion bags (PDBs). In addition, a new HydraSleeve™ may be deployed after sampling and left in place in a target well between sampling events, thereby reducing field time following the initial deployment. Refer to Appendix A for a Standard Operating Procedure for the use of HydraSleeve™ and bibliography of studies conducted using No Purge sampling methods are included in the following References section.

To assess brine and hydrocarbon impacts to the groundwater in the Plant area, EPNG has installed eighteen monitoring wells, one piezometer, and three recovery wells on the Plant property and adjoining properties to the east (located hydraulically downgradient). EPNG has designated fifteen monitoring wells (ACW-1 through ACW-15) as program monitoring wells from which groundwater samples are frequently collected and submitted to an analytical laboratory for analysis (ACW-2 was replaced by ACW-2A on December 10, 1990). The locations of these wells are shown on Figures 2 of the 2013 Annual Groundwater Remediation Report.

The following outlines groundwater sampling of the Program wells for the Plant.

- 1st Quarter – sample monitoring wells ACW-13, ACW-14, and ACW-15 and analyze for: benzene, toluene, ethylbenzene, and total xylenes (collectively referred to as BTEX), total dissolved solids (TDS), specific conductance, chloride, and sodium.
- 2nd Quarter – sample monitoring wells ACW-13, ACW-14, and ACW-15 and analyze for: BTEX, TDS, specific conductance, chloride, and sodium.
- 3rd Quarter – sample monitoring wells ACW-13, ACW-14, and ACW-15 and analyze for: BTEX, TDS, specific conductance, chloride, and sodium.
- 4th Quarter – sample all program and non-program (Section 1.2) wells and analyze for: BTEX, TDS, specific conductance, chloride, and sodium.

Program Monitoring Wells

Monitoring Well	Sampled Q1, Q2, Q3, and Q4	Sampled Q4 Only
ACW-1		X
ACW-2A		X
ACW-3		X
ACW-4		X

ACW-5		X
ACW-6		X
ACW-7		X
ACW-8		X
ACW-9		X
ACW-10		X
ACW-11		X
ACW-12		X
ACW-13	X	
ACW-14	X	
ACW-15	X	

Program monitoring wells ACW-3 and ACW-8 were converted to permanent groundwater recovery wells in October 2005. Because of the downhole equipment, these wells will not be sampled in this program. In addition to the program monitoring wells, EPNG also collects groundwater samples from two non-program monitoring wells (ENSR-1 and ENSR-3), one piezometer (PTP-1), one up gradient water supply well (EPNG-1), and two down gradient active water supply wells (Oxy Supply Well and Doom Supply Well). EPNG-1 is located at the northwest corner of the Plant property. The Oxy Supply Well is located in the approximate center of Section 5 of Township 24 South, Range 37 East and formerly provided potable water to Oxy's Myers Langlie Mattix Unit Water Injection Station. The Oxy Production well and EPNG-1 were not in service in 2013. The Doom Supply Well is a private water supply well that provides water to the residence of Mr. Jimmie J. Doom and is located in the approximate center of the northwest quarter of Section 8 of Township 24 South, Range 37 East. Additionally, 3 Recovery wells (RW-1, RW-2, and RW-3) are located within the plant boundary. Only the Non-Program Wells ENSR-1, ENSR-3 and PTP-1 will be included in this study as all other wells have downhole equipment preventing the installation of the HydraSleeve™.

Non-program Wells

Well	Sampled Q1, Q2, Q3, and Q4	Sampled Q4 Only
ENSR-1		X
ENSR-3		X

EPNG-1	Out of service in 2013	X
PTP-1		X
Oxv Supply Well	Out of service in 2013	
Doom Supply Well	X	

Only the Non-Program Wells ENSR-1, ENSR-3 and PTP-1 will be included in this study as all other wells have downhole equipment preventing the installation of the HydraSleeve™.

2. Methodology

2.1 Sampling

The current monitoring program at the Jal No. 4 site utilizes standard purge sampling for determination of concentrations of chemicals of concern in the groundwater bearing unit. No purge sampling was initiated in the third quarter of 2013 and was conducted according to the ARCADIS HydraSleeve™ (Sleeves) Sampling SOP version 2c (Attachment 1). In order to ensure that stabilization of the well was achieved, Sleeves were installed a minimum of two weeks prior to each sampling event to allow the wells to equilibrate before sample collection. During each sampling event, groundwater levels in each program and non-program well will be recorded. HydraSleeve™ samples will then be collected. Once the no purge samples are collected from each well, the purge samples will be collected per the current work plan. Tables 1 and 2 provide summaries of preliminary no pure and purge laboratory results. The laboratory reports can be found in Appendix A of the 2013 Annual Remediation Report.

2.2 Evaluating the Data

For the purpose of determining if the standard purge samples and no purge samples are comparable and that the no purge samples are representative of the groundwater concentrations of COC's an analysis of the data will be performed. The collection of this data is in the preliminary stages and a sufficient population of data has not yet been collected to make a determination.

Evaluation of relative percent difference (RPD) between paired standard purge and no purge results will be used to classify individual wells with regards to no purge performance. An RPD of 150% will be used as a cutoff for screening potentially erroneous results (i.e., outliers).

Paired t-tests will be conducted across the site for each analyte to evaluate bias in the two sampling methods (i.e., standard purge result greater than no purge result).

Logistic regression models will be built to evaluate the reliability of using measured no purge concentrations to predict whether concentrations obtained using standard purge would exceed regulatory limits.

References

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ARCADIS

Attachments

ARCADIS
HydraSleeve™
Sampling SOP

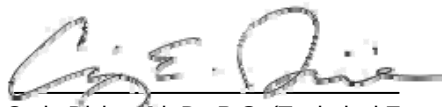
Groundwater Sampling with HydraSleeves™ – Standard Operating Procedure

Rev. #: 2

Rev Date: February 2011

Approval Signatures

Prepared by:  Date: 2/2/11
Erika L.W. Carter, Ph.D.

Reviewed by:  Date: 2/2/11
Craig Divine, Ph.D., P.G. (Technical Expert)

I. Scope and Application

This Standard Operating Procedure (SOP) establishes guidelines and procedures for use by field personnel in the deployment of HydraSleeves™ and subsequent collection and documentation of groundwater samples for chemical analysis. Proper collection procedures are necessary to assure the quality and integrity of all groundwater samples. The details within this SOP should be used in conjunction with site-specific work plans.

The HydraSleeve™ groundwater sampler can be used to collect a representative sample for most physical and chemical parameters without purging the well. It collects a groundwater sample from a user-defined interval (typically within the well screen), without mixing fluid from other intervals. The HydraSleeve™ is placed within the screened interval of the monitoring well, and a period of time is allocated for the well to re-equilibrate following HydraSleeve™ down-hole deployment. The sealed HydraSleeve™ can be activated and removed for sample collection within several hours to several months. When activated, the HydraSleeve™ collects a sample with no drawdown and minimal agitation or displacement of the water column. Once the sampler is full, the one-way reed valve collapses, preventing mixing of extraneous, non-representative fluid during HydraSleeve™ recovery from the well.

Use of this SOP will provide samples for Level III and Level IV analytical data for use in risk assessments, site characterizations, evaluation of remediation alternatives, engineering design of remediation activities, and in support during remediation activities.

II. Personnel Qualifications

All personnel shall meet the requirements of the site-specific Health and Safety Plan (HASP).

The Project Manager is responsible for ensuring that all sample collection activities are conducted in accordance with this SOP and any other appropriate procedures. This will be accomplished through staff training and by maintaining quality assurance/quality control (QA/QC).

The Field Manager is responsible for periodic observation of field activities and review of field generated documentation associated with this SOP. The Field Manager is also responsible for implementation of corrective action (e.g., retraining personnel, additional review of work plans and SOPs, variances to QC sampling requirements, issuing non-conformances, etc.) if problems occur.

Field personnel assigned to collect groundwater samples are responsible for completing their tasks according to specifications outlined in this SOP and other appropriate procedures. Field staff shall have prior experience in groundwater sampling. The determination of placement of the HydraSleeve™ in the monitoring well shall be made by a qualified geoscientist. All staff are responsible for reporting deviations from procedures in the Field Activity Daily Log, and to the Field Manager or Project Manager.

III. Equipment List

There are three main steps for collecting groundwater samples with HydraSleeves™: 1) assembly and deployment of the HydraSleeve™, 2) collecting the groundwater samples after the equilibration period, 3) and pouring the groundwater samples into containers. The equipment needed for each step is listed below.

Equipment needed for assembly and deployment of the HydraSleeves™:

- Appropriate personal protective equipment (PPE)
- Well location maps and table identifying HydraSleeve™ deployment locations/depths
- Well keys
- Flame ionization detector (FID) (as appropriate)
- Photoionization detector (PID) (as appropriate)
- Electronic water-level indicator, 0.01 ft accuracy
- Oil/water interface probe (as appropriate)
- Plastic sheeting to protect all down-hole sampling equipment from contact with potential sources of contamination.
- Decontamination equipment
- Appropriate size HydraSleeves™ for the wells being sampled. Some examples are provided below. Check the manufacturer's website for additional options:
 - o 2-L 2" HydraSleeve™ SuperSleeve (SS) (1.9" OD, 60" long; volume of 2 liters; requires special 2-piece top weight) for 2" Schedule 40 wells

- o 1-L 2" HydraSleeve™ (1.75" OD, 36" long; volume of 1 liter) for 2" wells
 - o 1.5" HydraSleeve™ (1.5" OD, 30" long; volume of 625 mL) for 1.5" wells
 - o 1" HydraSleeve™ (1" OD, 48" long; volume of 325 mL) for wells less than 1.5"
- 1/8-inch diameter braided polypropylene rope (for tethers)
- Weights (stainless steel or other inert material) to anchor HydraSleeves™ in wells (note special weights are required for SuperSleeve-style HydraSleeves™)
- Cable ties to anchor HydraSleeves™ to tether
- Measuring tape
- Cutting implement, such as scissor or knife
- Approved site-specific workplan, Field Sampling Plan (FSP), and HASP

Equipment needed for collection/dispensing of groundwater samples:

- Appropriate PPE
- Planned Sample Table (PST), sample labels, and Chain of Custody forms (COC)
- Sample bottles, coolers, ice
- Blank collection field forms
- Well keys, site maps, and sample list
- Electronic water-level indicator, 0.01 ft accuracy
- Oil/Water interface probe (as appropriate)
- Decontamination equipment

- Plastic sheeting to protect all down-hole sampling equipment from contact with potential sources of contamination.
- Bucket or other container to hold extra groundwater
- Additional HydraSleeves™ and zip ties to deploy for the next sampling event, as appropriate
- Approved site-specific workplan, FSP, and HASP

Unless otherwise specified in the site-specific workplan, it is advisable to establish a sampling order starting with the least contaminated well and progressing to the most contaminated last.

IV. Cautions

Selection of the appropriate size HydraSleeve™ depends on sample volume requirements, well diameter, and the length of the saturated screened interval (which dictates the maximum distance allowed over which to pull and fill the HydraSleeve™). The largest HydraSleeve™ (60-inch) holds 2 liters of sample; the smallest holds 325 mL of sample. The sample volume requirements must be verified with the laboratory before deploying the HydraSleeve™ samplers. The HydraSleeve™ sampler is designed for single use (deployment and sample collection) only; tethers and weights should be reused after proper decontamination.

According to the manufacturer, HydraSleeve™ has been used successfully with no equilibration period at some sites for some analytical parameters. HydraSleeve™ does not require dissolved compounds to diffuse across a membrane as in the case of polyethylene diffusion bag (PDB) samplers (ITRC, 2004). Because the HydraSleeve™ mechanically obtains a “core” of the water column, rather than relying on diffusion through a membrane, the HydraSleeve™ sampler can be retrieved shortly after deployment in many cases. One way to conservatively estimate the maximum required equilibration period is to estimate the flush-out period for the well based on the Darcy velocity within the formation (hydraulic conductivity times gradient) (Attachment B). It should be noted, however, that representative groundwater sampling may occur with a shorter flushing period, or no flushing period, if the well contains minimal accumulated silt and care is taken to minimize well disturbance during HydraSleeve™ deployment. Site-specific testing versus another accepted groundwater sampling method can be performed at a subset of wells – preferably spanning a range of hydraulic conductivity, geologic materials, and chemical concentrations – to verify that the HydraSleeve™ device produces samples similar to those obtained from the other accepted method.

V. Health and Safety Considerations

The HASP will be followed at all times. Appropriate personal protective equipment (PPE) will be worn at all times. Other safety considerations include exposure to contaminated groundwater or non aqueous phase liquid (NAPL) and using sharp cutting tools (scissors, knife).

VI. Procedure

Field personnel will perform deployment of the HydraSleeves™ in accordance with the following procedures.

Preliminary Site Activities

1. Visually inspect the well to ensure that it is undamaged, properly labeled and secured. Damage or other conditions that may affect the integrity of the well will be recorded on the Field Activity Daily Log and brought to the attention of the Field Manager or Project Manager.
2. Equipment will either be new or decontaminated in accordance with SOPs prior to use.
3. Lay out plastic sheeting and set up monitoring and sampling equipment.
4. Don appropriate PPE.
5. If specified in the site-specific workplan, measure volatile organic compounds (VOCs) at the rim of the unopened well with a PID and FID and record the reading in the field logbook.
6. Observe if any air is flowing into or out of the casing (e.g., bubbles, hissing sounds). In the event such conditions are observed, they should be noted on the HydraSleeve™ Field Form (Attachment A).
7. Remove well cap.
8. If specified in the site-specific workplan, measure VOCs at the rim of the well with a PID and FID instrument record the reading in the field logbook.
9. If the well casing does not have a reference point (usually a V-cut or indelible mark in the well casing), make one. Record all measurements from this mark.

10. If specified in the site-specific workplan, determine if non-aqueous phase liquid (NAPL) is present in the well using an oil/water interface probe in accordance with SOPs. If NAPL is present, record the depth to NAPL and static water level on the HydraSleeve™ Field Form. A HydraSleeve™ will not be deployed nor will samples be collected from wells where NAPL is present. If NAPL is not present, measure the static water level followed by the total depth of the well with an electronic interface probe, and record the measurements on the HydraSleeve™ Field Form.
11. Measure and record the depth to water and the total depth of the groundwater monitoring well (to 0.01 ft) in all wells to be sampled. Care should be taken to minimize disturbance to the water column and to any particulates attached to the sides or at the bottom of the well.
12. Determine the total depth of the well. Compare the measurement of the total depth of the well with the previous measurement and check against the well construction logs to determine the percent of screen occluded by sediment (if any). If more than 20 percent of a well screen is occluded by sediment, the well will not be sampled until it is re-developed.

Assembly and Deployment of Standard HydraSleeves™

1. Begin assembling the HydraSleeve™ by removing the HydraSleeve™ from the package and grasp top to “pop” open (Figure 1). Squeeze side fins together at top to bend reinforcing strips outward (Figure 2). Attach rope to hole at top of HydraSleeve™ (using cable ties) (Figure 3). Fold the two holes at bottom of HydraSleeve™ together and attach weight (using zip tie) (Figure 4). Sampler is ready to insert into the well at the predetermined depth specified in the site-specific workplan (Figure 5).

Figure 1

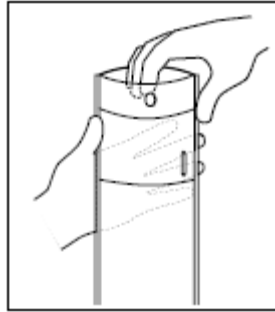


Figure 2



Figure 3

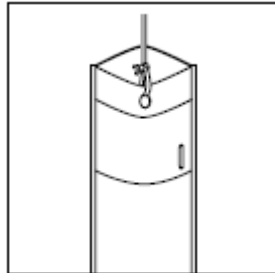


Figure 4

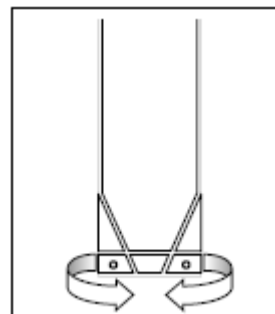
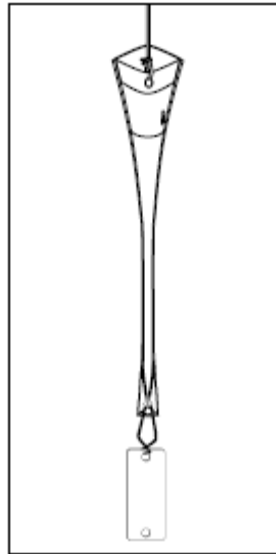


Figure 5



2. Two methods of deployment can be used. Either way, the top of the HydraSleeve™ will be positioned below the midpoint of the saturated screened interval by a distance approximately equal to 0.75 times the full length of the HydraSleeve™. For example, a 36" HydraSleeve™ will be lowered so that the top of the HydraSleeve™ is approximately 27" below the midpoint of the saturated screened interval. This position is appropriate to collect the groundwater sample from approximately the middle of the saturated screened interval when the HydraSleeve™ is pulled upward.
 - a. Bottom Anchor Deployment (preferred). Using the determined well depth, calculate the distance from the bottom of the well to the desired sampling depth (specified on the HydraSleeve™ Field Form. Attach an appropriate length anchor line between the weight and the bottom of the sampler and *slowly* lower the assembly until the weight rests on the bottom of the well, allowing the top of the sampler to float at the correct sampling depth. Attach the suspension line to the well cap to suspend the HydraSleeve™ at the correct depth until activated for sampling. Allow sufficient extra tether length such that if the tether becomes untied from the well cap and the sampler sinks to the bottom it may still be easily retrieved.
 - b. Top-Down Deployment. Measure the correct amount of suspension line needed to "hang" the top of the

HydraSleeve™(s) at the desired sampling depth (specified on the HydraSleeve™ Field Form). Once constructed, slowly lower the assembly in the well and attach the suspension line to the well cap to suspend the HydraSleeve™ at the correct depth until activated for sampling. Allow sufficient extra tether length such that if the tether becomes untied from the well cap and the sampler sinks to the bottom it may still be easily retrieved.

3. For wells in which another passive sampling device (e.g., passive diffusion bag [PDB]) is to be used concurrently, the HydraSleeve™ should be suspended from the same line directly beneath the other passive sampler. If the top-down deployment method is used, care should be taken to ensure the weight is not resting on the bottom of the well. If necessary, the weight may be placed at the top of the HydraSleeve™, as described below.
4. For wells with screen lengths less than 10 feet (specified on the HydraSleeve™ Field Form) or where the saturated screen length is less than 10 feet (determined during water level gauging), top-down deployment will be used as described above with the exception of the placement of the weight. The weight for these wells will be placed on the top of the HydraSleeve™ as shown in the figure below (Photo 1). The hanging clip is inserted locking the top of the HydraSleeve™ and the weight together. The tether will be attached to the apex of the clip, as shown below (Photo 2).

Photo 1

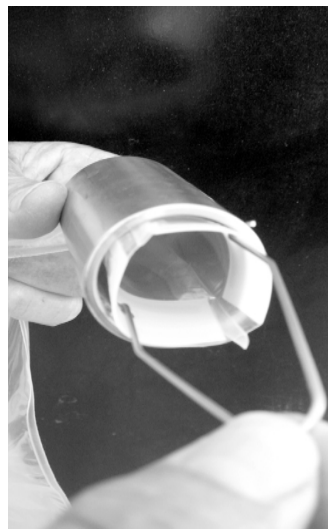
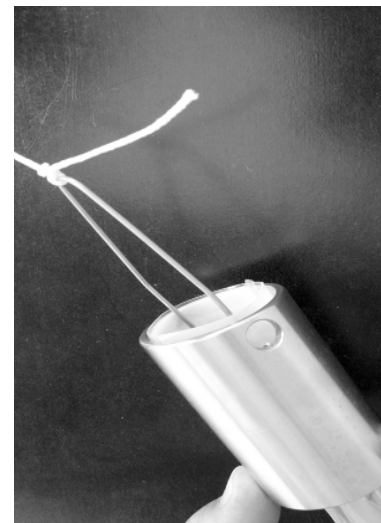


Photo 2



5. At this point deployment is complete. The well must be allowed time for the stabilization of well water and formation water following any disturbance caused by the sampler deployment before groundwater samples can be collected. The manufacturer's recommended deployment time is hours to months. The time shall be specified in the site-specific workplan. The maximum deployment time at the site will be one year.
6. After the equilibration period is complete; the groundwater samples are ready to be collected for analysis.

Assembly and Deployment of SuperSleeve-style HydraSleeve™ SS

1. Begin assembling the HydraSleeve™ by removing the HydraSleeve™ SS from the package and attaching the bottom weight (Photos 3 and 4). Fold the two holes at bottom of HydraSleeve™ together. Open prongs of bottom weight clip by squeezing. Insert reusable weight clip through holes and attach the bottom weight.

Photo 3



Photo 4



2. Attach the top weight as follows: Insert the open (check valve) end of the HydraSleeve™ SS through the bottom of the stainless steel portion of top weight until about 1/2 inch of the open sleeve protrudes above the female threads. Thread stainless steel weight (female thread) onto PVC top piece (male thread) locking the top of the HydraSleeve SS between the threads (Photo 5).

Photo 5



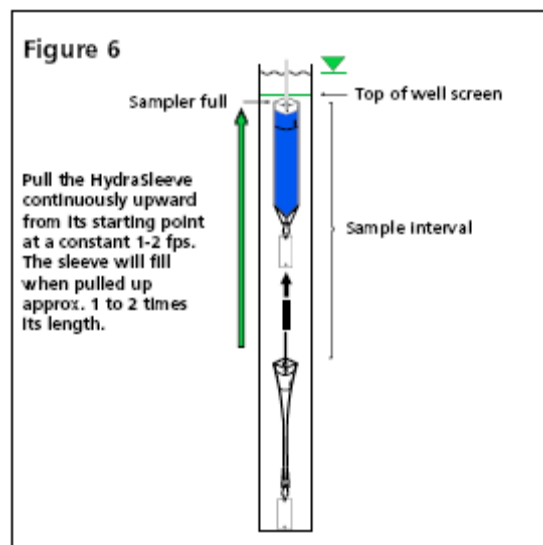
3. Attach rope to top weight (using cable ties).
4. Sampler is ready to insert into the well (Photo 6). Lower the HydraSleeve SS into the well until the bottom weight touches the bottom. Provide enough slack to allow the top weight to fully compress the sampler into the bottom of the well. For example, the 2-liter HydraSleeve™ SS (5-feet long) will compress to within 2 feet of bottom of a 2-inch well screen in about 4 hours. The 2-liter HydraSleeve™ SS requires about 5 feet of water over the top of the sampler to completely fill; thus it should not be used in wells with shorter than a 10-ft saturated screen length.

Photo 6

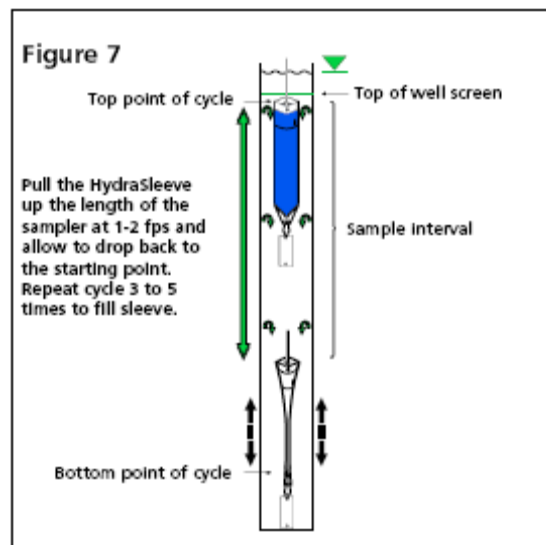


Collecting Groundwater Samples from HydraSleeves™

1. Conduct the Preliminary Site Activities detailed above with the following exception: The depth to groundwater should be collected prior to retrieval of the HydraSleeve™, while the total well depth should be collected only after the HydraSleeve™ has been retrieved from the well.
2. The Continuous Pull method is preferred and will be used for the majority of the wells. If the well to be sampled has a saturated screen length less than 10 feet in length, the Short Strokes method may be used. However, to minimize disturbance of well sediments, a preferable alternative is to use a top-weighted HydraSleeve deployment method (standard style HydraSleeve™ or SuperSleeve). The HydraSleeve™ Field Form will state the screen length and sample collection method for each well.
 - a. Continuous Pull method – The HydraSleeve™ must move upward at an approximate rate of one foot per second or faster (about the speed a bailer is usually pulled upward) for water to pass through the check valve into the sample sleeve. The total upward distance the check valve must travel to fill the sample sleeve is about 1 to 2 times the length of the sampler. For example, a 36-inch HydraSleeve™ needs a total upward movement of 36 to no more than 72 inches to fill. Pull the HydraSleeve™ continuously upward from its starting point at a constant 1 to 2 feet per second until full. This method usually provides the least turbid samples and is analogous to coring the water column from the bottom up (Figure 6).



- b. Short Strokes method – Pull the sampler upward at about 1 to 2 feet per second for the length of the sampler (36 inches) and let it drop back to the starting point. Repeat the cycle 3 to 5 times (Figure 7).
3. If the HydraSleeve™ is retrieved from the well and is not completely full, the sample will not be collected and a new HydraSleeve™ will be deployed. The replacement HydraSleeve™ will be allowed to equilibrate, as appropriate, prior to retrieval. After the equilibration time, the HydraSleeve™ may be collected again.



4. Collect sample parameters in the following order: VOCs (care should be taken to avoid agitation and volatilization of sample during the decanting process), explosives, metals, and other parameters. Samples will be collected and labeled in accordance with SOPs. Types of sample bottles and volume requirements for each analysis are provided in the Quality Assurance Project Plan (QAPP) and site-specific workplan. Metals samples will not be field filtered unless otherwise specified. If field filtering is required for any analyte, sample groundwater to be filtered will be decanted into an unpreserved bottle and filtered using a small hand pump as shown below in Photo 7.

5. The 36-inch long HydraSleeve™ has a capacity of 1 liter, and the largest (60-inch long) HydraSleeve™ SS for a 2-inch diameter well has a capacity of 2 liters. All groundwater samples, including QA/QC samples for a given well will be collected with one HydraSleeve™. If the volume requirement for sample analysis exceeds the capacity of the HydraSleeve™, it is not acceptable to redeploy the same or a second HydraSleeve to fill additional bottles. Rather, sampling of the well must be completely repeated. A larger size HydraSleeve™ must be deployed for the appropriate duration of time, or another approved sampling method (e.g., low-flow) must be used. Complete sample documentation on the Groundwater Sample Log.
6. Inspect the sampling bottles (obtained from the analytical laboratory prior to the sampling event) to be used to ensure that they are appropriate for the samples being collected, are undamaged, and have had the appropriate types and volumes of preservatives added. The types of sample containers to be used and sample preservation requirements will be provided in the site-specific workplan.

Photo 7



7. To remove a sample from the HydraSleeve™ with the least amount of aeration and agitation use the short plastic discharge tube (included). First, squeeze the full sampler just below the top to expel water resting above the flexible check valve (Photo 8).

Photo 8



8. Then, push the pointed discharge tube through the outer polyethylene sleeve about 3-4 inches below the white reinforcing strips (Photo 9).

Photo 9



9. Discharge the sample into the desired container in the order described in step 4 (Photo 10). Raising and lowering the bottom of the sampler or pinching the sample sleeve just below the discharge tube will control the flow of the sample. The sample sleeve can also be squeezed, forcing fluid up through the discharge tube, similar to squeezing a tube of toothpaste.

Photo 10



10. To obtain a duplicate/blind duplicate sample, collect a duplicate from the same bag as an original sample and send for analysis with the appropriate labeling.
11. To obtain an equipment blank, pour deionized water into a HydraSleeve and collect the blank using the same method as the samples and send for analysis with the appropriate labeling.
12. Place collected samples immediately in a sample cooler that is already full of ice or ice packs such that the samples are immediately chilled and stored at a temperature of 4 degrees Celsius, in accordance with SOPs.
13. Record depth to groundwater and total well depth.
14. Field parameters will be collected mid-screen from wells specified in the site-specific workplan. Calibrate all field analytical test equipment (e.g., pH, temperature, conductivity, ORP, turbidity, and DO) according to the instrument manufacturer's specifications and SOPs. Daily calibration results will be recorded on the appropriate form(s) as specified by the FSP and site-specific workplans. Instruments that cannot be calibrated according to the manufacturer's specifications will be removed from service and tagged.
15. Field parameter measurements (temperature, specific conductance, pH, DO, and ORP) will be taken after the HydraSleeve™ is removed from the well and the groundwater samples collected. This would occur through the use of a down-hole multi-meter (e.g., a YSI 600XL). Gently lower the probe of the meter down the well until it reaches the middle of the screen (screen intervals are found on the HydraSleeve™ Field Form). Follow the manufacturer's guidelines on how to determine

stability of parameter readings. Once the meter readings have stabilized, record them on the HydraSleeve™ Field Form. Turbidity will be measured from groundwater taken directly from the HydraSleeve™, after analytical samples have been dispensed.

16. After the groundwater samples and field measurements have been collected, it may be necessary to deploy another HydraSleeve™ in the well for future sampling events (e.g., quarterly, semi-annually, etc.). The site-specific workplan will state if another HydraSleeve™ is to be deployed. The same suspension line will be reused for additional deployment to ensure consistency in the deployment depth. Follow the steps outlined previously in this SOP for deployment instructions.
17. Secure the well.
18. Properly dispose of PPE and disposable equipment.
19. Decontaminate any cutting devices, reusable weights, suspension lines, or sampler attachment mechanisms after each usage in accordance with SOPs.

VII. Waste Management

Any unused water from the PDB sampler and water used to decontaminate cutting devices should be disposed following SOPs and in accordance with local, State, and Federal regulations.

VIII. Data Recording and Management

All data will be recorded on HydraSleeve™ field forms and groundwater sampling field forms. Daily field logs will be maintained. Records generated as a result of this SOP will be controlled and maintained in the project record files in accordance with project requirements.

IX. Quality Assurance

Quality assurance procedures shall be conducted in accordance with the site-specific QAPP.

X. References

Cordry, K.E., 2006. HydraSleeve™ Field Manual. Las Cruces, N.M.: GeolInsight, Inc.
http://www.hydrasleeve.com/images/stories/support/HydraSleeve_No-Purge_manual_updated.pdf

GeolInsight, Inc. 2010a. Standard Operating Procedure: Sampling Groundwater With a HydraSleeve™. Las Cruces, N.M.: GeolInsight, Inc.
http://www.hydrasleeve.com/images/stories/support/HydraSleeve_SOP.pdf

GeolInsight, Inc. 2010b. SuperSleeve Assembly Instructions. Las Cruces, N.M.
http://www.hydrasleeve.com/images/stories/support/SSfield_manual.pdf

Interstate Technology and Regulatory Council. 2004. Technical and Regulatory Guidance for Using Polyethylene Diffusion Bag Samplers to Monitor Volatile Organic Compounds in Groundwater. February.

XI. Attachments

- A. HydraSleeve™ Field Form
- B. Calculation Of Maximum Required Equilibration Period (Flush-Out Time) Based On Well Geometry And Darcy Velocity



HydraSleeve™ Field Form

Site: _____
Location: _____
Well ID: _____

Well Type: ☐ Monitoring ☐ Other: _____
Well Finish: ☐ Stick Up ☐ Flush Mount _____
Measuring Pt: ☐ Top of Casing ☐ Other (specify): _____
Total Depth As Constructed (ft bgs): _____ Screened Interval (ft bgs): _____
Well Casing: Diameter: _____ Material: _____
Well Screen: Diameter: _____

Deployment

Date and Time of Deployment:	Date: _____	Time: _____
Weather Conditions: _____		
Depth to groundwater at time of deployment: _____		
Total well depth at time of deployment: _____		
Dimensions of HydraSleeve™: Length (in.) _____ Diameter (in.) _____		
Deployment Method/Position of Weight: ☐ Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. ☐ Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. ☐ Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.		
Deployment Depth (Top of HydraSleeve™) (ft bgs): _____		

Retrieval

Date and Time of Retrieval:	Date: _____	Time: _____
Total # of days deployed: _____		
Weather Conditions: _____		
Retrieval Method: ☐ Continuous Pull (preferred) ☐ Short Strokes		
Depth to groundwater at time of retrieval (measured before retrieval): _____		
Total well depth at time of retrieval (measured after retrieval): _____		
Downhole Field Parameters Upon Retrieval:		
Temp: _____ (°C)	ORP: _____ (mV)	Water quality meter: _____
pH: _____	DO: _____ (mg/L)	Serial #: _____
Turbidity of Groundwater Sample (dispensed from HydraSleeve™):		
Turbidity: _____ (NTU)	Turbidity meter: _____	Serial #: _____

Notes/Observations:

--

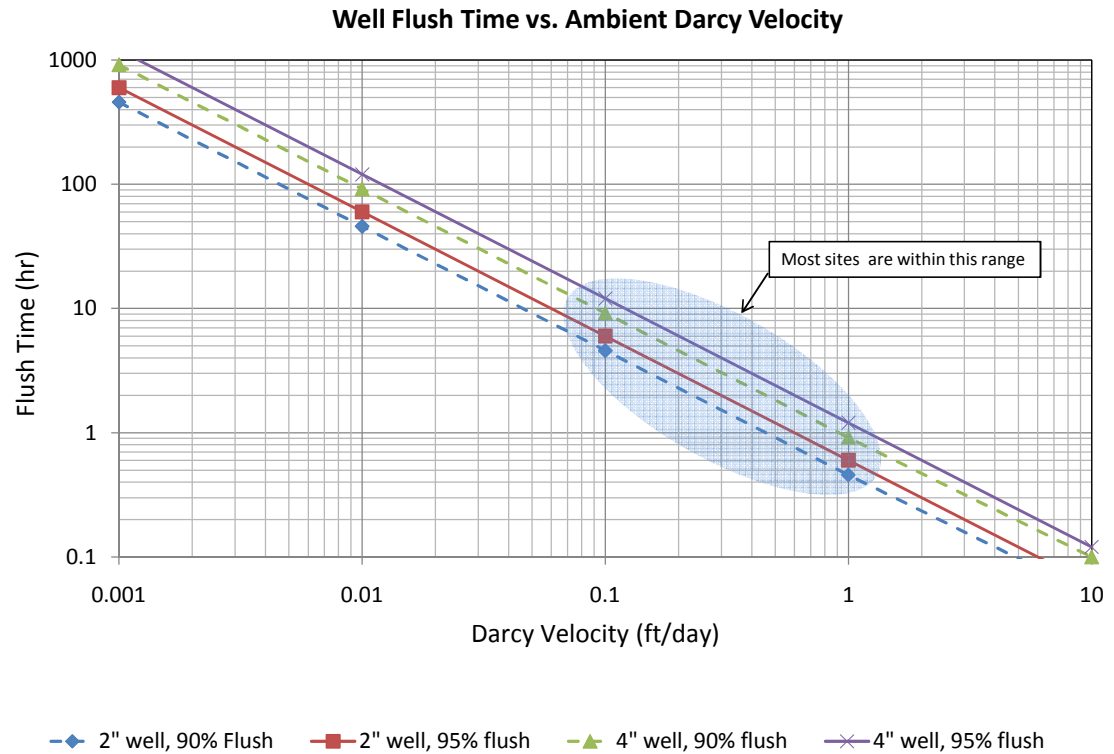
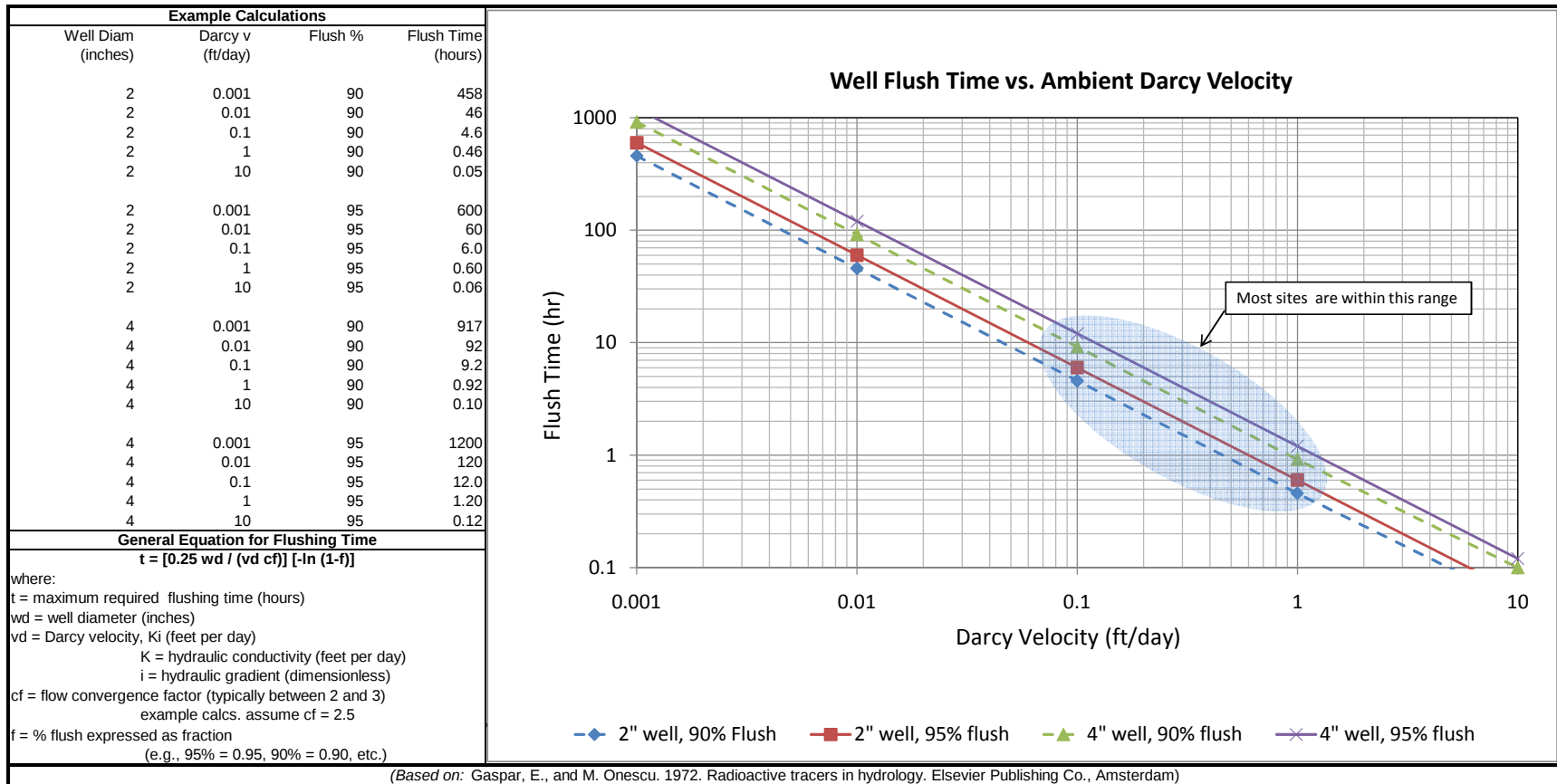
Field Sampling Technician: Name(s) and Company

Name

Company

--

ATTACHMENT B
CALCULATION OF MAXIMUM REQUIRED EQUILIBRATION PERIOD (FLUSH-OUT TIME) BASED ON WELL GEOMETRY AND DARCY VELOCITY



(Based on: Gaspar, E., and M. Onescu. 1972. Radioactive tracers in hydrology. Elsevier Publishing Co., Amsterdam)



Appendix D

Analytical Data



03/18/13

Technical Report for

El Paso Corporation

EL Paso Natural Gas Jal #4

ARF#W-BEN-102-08-13-KAD-01

Accutest Job Number: TC26485

Sampling Dates: 03/01/13 - 03/05/13

Report to:

SAIC
3700 West Robinson. Suite 200
Norman, OK 73072
LabData@saic.com; KRISTIN.A.DRUCQUER@saic.com
ATTN: Kristin Drucquer

Total number of pages in report: 50



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.


Richard Rodriguez
Laboratory Director

Client Service contact: Electa Brown 713-271-4700

Certifications: TX (T104704220-12-9) AR (12-029-0) AZ (AZ0769) FL (E87628) KS (E-10366)
LA (85695/04004) OK (2012-059)

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Test results relate only to samples analyzed.

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Sample Summary

El Paso Corporation

Job No: TC26485

EL Paso Natural Gas Jal #4

Project No: ARF#W-BEN-102-08-13-KAD-01

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
TC26485-1	03/01/13	10:50	03/06/13	AQ	Ground Water	ACW-15
TC26485-1D	03/01/13	10:50	03/06/13	AQ	Water Dup/MSD	ACW-15
TC26485-1S	03/01/13	10:50	03/06/13	AQ	Water Matrix Spike	ACW-15
TC26485-2	03/01/13	12:35	03/06/13	AQ	Ground Water	ACW-13
TC26485-3	03/01/13	13:40	03/06/13	AQ	Ground Water	DOOM SUPPLY
TC26485-4	03/01/13	15:25	03/06/13	AQ	Ground Water	ACW-14
TC26485-5	03/01/13	00:00	03/06/13	AQ	Ground Water	DUP-01
TC26485-6	03/05/13	13:15	03/06/13	AQ	Ground Water	ACW-14
TC26485-7	03/05/13	13:30	03/06/13	AQ	Ground Water	ACW-15
TC26485-7D	03/05/13	13:30	03/06/13	AQ	Water Dup/MSD	ACW-15
TC26485-7S	03/05/13	13:30	03/06/13	AQ	Water Matrix Spike	ACW-15
TC26485-8	03/05/13	13:45	03/06/13	AQ	Ground Water	ACW-13
TC26485-9	03/05/13	14:00	03/06/13	AQ	Ground Water	DOOM SUPPLY



Sample Summary
(continued)

El Paso Corporation

Job No: TC26485

EL Paso Natural Gas Jal #4
Project No: ARF#W-BEN-102-08-13-KAD-01

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
TC26485-10	03/05/13	00:00	03/06/13	AQ	Ground Water	DUP-01
TC26485-11	03/05/13	16:40	03/06/13	AQ	Ground Water	RINSATE

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: El Paso Corporation

Job No TC26485

Site: EL Paso Natural Gas Jal #4

Report Date 3/15/2013 4:05:15 PM

11 Samples were collected between 03/01/2013 and 03/05/2013 and received intact at Accutest on 03/06/2013 and properly preserved in 1 cooler at 1.7 Deg C. These Samples received an Accutest job number of TC26485. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ

Batch ID: VC1369

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) TC26485-1MS, TC26485-1MSD were used as the QC samples indicated.

Matrix AQ

Batch ID: VX1801

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) TC26583-2MS, TC26583-2MSD were used as the QC samples indicated.

Metals By Method EPA 200.7

Matrix AQ

Batch ID: MP20043

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) TC26485-7MS, TC26485-7MSD, TC26485-7SDL were used as the QC samples for metals.

Wet Chemistry By Method EPA 120.1

Matrix AQ

Batch ID: GN48941

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) TC26485-1DUP were used as the QC samples for Specific Conductivity.

Wet Chemistry By Method EPA 300/SW846 9056

Matrix AQ

Batch ID: GP22947

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) TC26465-1DUP, TC26465-1MS were used as the QC samples for Chloride.
- Matrix Spike Recovery(s) for Chloride are outside control limits. Probable cause due to matrix interference.

Matrix AQ

Batch ID: GP22949

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) TC26485-1DUP, TC26485-1MS were used as the QC samples for Chloride.

Wet Chemistry By Method SM 2540C

Matrix AQ

Batch ID: GN48912

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) TC26404-3DUP were used as the QC samples for Solids, Total Dissolved.

Matrix AQ

Batch ID: GN48950

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) TC26485-1DUP were used as the QC samples for Solids, Total Dissolved.

Accutest Laboratories Gulf Coast (ALGC) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALGC and as stated on the COC. ALGC certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALGC Quality Manual except as noted above. This report is to be used in its entirety. ALGC is not responsible for any assumptions of data quality if partial data packages are used

Summary of Hits

Job Number: TC26485
Account: El Paso Corporation
Project: EL Paso Natural Gas Jal #4
Collected: 03/01/13 thru 03/05/13



Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
TC26485-1	ACW-15					
		Chloride	160	10	mg/l	EPA 300/SW846 9056
		Solids, Total Dissolved	649	10	mg/l	SM 2540C
		Specific Conductivity	992	1.0	umhos/cm	EPA 120.1
TC26485-2	ACW-13					
		Chloride	191	10	mg/l	EPA 300/SW846 9056
		Solids, Total Dissolved	713	10	mg/l	SM 2540C
		Specific Conductivity	1100	1.0	umhos/cm	EPA 120.1
TC26485-3	DOOM SUPPLY					
		Chloride	30.9	2.5	mg/l	EPA 300/SW846 9056
		Solids, Total Dissolved	408	10	mg/l	SM 2540C
		Specific Conductivity	627	1.0	umhos/cm	EPA 120.1
TC26485-4	ACW-14					
		Chloride	159	10	mg/l	EPA 300/SW846 9056
		Solids, Total Dissolved	623	10	mg/l	SM 2540C
		Specific Conductivity	1070	1.0	umhos/cm	EPA 120.1
TC26485-5	DUP-01					
		Chloride	187	10	mg/l	EPA 300/SW846 9056
		Solids, Total Dissolved	742	10	mg/l	SM 2540C
		Specific Conductivity	1120	1.0	umhos/cm	EPA 120.1
TC26485-6	ACW-14					
		Sodium	102000	5000	ug/l	EPA 200.7
TC26485-7	ACW-15					
		Sodium	89800	5000	ug/l	EPA 200.7
TC26485-8	ACW-13					
		Sodium	116000	5000	ug/l	EPA 200.7
TC26485-9	DOOM SUPPLY					
		Sodium	68800	5000	ug/l	EPA 200.7

Summary of Hits

Job Number: TC26485
Account: El Paso Corporation
Project: EL Paso Natural Gas Jal #4
Collected: 03/01/13 thru 03/05/13



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

TC26485-10 DUP-01

Sodium	98900	5000			ug/l	EPA 200.7
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TC26485-11 RINSATE

Chloride	1.2	0.50			mg/l	EPA 300/SW846 9056
Specific Conductivity	8.3	1.0			umhos/cm	EPA 120.1

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	ACW-15	Date Sampled:	03/01/13
Lab Sample ID:	TC26485-1	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	EL Paso Natural Gas Jal #4		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C002589360.D	1	03/12/13	CF	n/a	n/a	VC1369
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.34	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.32	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.87	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		72-122%
17060-07-0	1,2-Dichloroethane-D4	93%		68-124%
2037-26-5	Toluene-D8	93%		80-119%
460-00-4	4-Bromofluorobenzene	81%		72-126%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ACW-15	Date Sampled:	03/01/13
Lab Sample ID:	TC26485-1	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	EL Paso Natural Gas Jal #4		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	160	10	mg/l	20	03/07/13 10:44	ES	EPA 300/SW846 9056
Solids, Total Dissolved	649	10	mg/l	1	03/07/13	BG	SM 2540C
Specific Conductivity	992	1.0	umhos/cm	1	03/07/13 12:00	BG	EPA 120.1

RL = Reporting Limit

Report of Analysis

Page 1 of 1

Client Sample ID:	ACW-13	Date Sampled:	03/01/13
Lab Sample ID:	TC26485-2	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	EL Paso Natural Gas Jal #4		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0089677.D	1	03/08/13	CF	n/a	n/a	VX1801
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.34	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.32	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.87	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		72-122%
17060-07-0	1,2-Dichloroethane-D4	91%		68-124%
2037-26-5	Toluene-D8	90%		80-119%
460-00-4	4-Bromofluorobenzene	88%		72-126%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ACW-13	Date Sampled:	03/01/13
Lab Sample ID:	TC26485-2	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	EL Paso Natural Gas Jal #4		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	191	10	mg/l	20	03/06/13 17:54	ES	EPA 300/SW846 9056
Solids, Total Dissolved	713	10	mg/l	1	03/06/13	BG	SM 2540C
Specific Conductivity	1100	1.0	umhos/cm	1	03/07/13 12:00	BG	EPA 120.1

RL = Reporting Limit

Report of Analysis

Client Sample ID:	DOOM SUPPLY	Date Sampled:	03/01/13
Lab Sample ID:	TC26485-3	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	EL Paso Natural Gas Jal #4		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0089678.D	1	03/08/13	CF	n/a	n/a	VX1801
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.34	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.32	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.87	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		72-122%
17060-07-0	1,2-Dichloroethane-D4	92%		68-124%
2037-26-5	Toluene-D8	90%		80-119%
460-00-4	4-Bromofluorobenzene	89%		72-126%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DOOM SUPPLY	Date Sampled:	03/01/13
Lab Sample ID:	TC26485-3	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	EL Paso Natural Gas Jal #4		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	30.9	2.5	mg/l	5	03/06/13 18:11	ES	EPA 300/SW846 9056
Solids, Total Dissolved	408	10	mg/l	1	03/06/13	BG	SM 2540C
Specific Conductivity	627	1.0	umhos/cm	1	03/07/13 12:00	BG	EPA 120.1

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ACW-14	Date Sampled:	03/01/13
Lab Sample ID:	TC26485-4	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	EL Paso Natural Gas Jal #4		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0089679.D	1	03/08/13	CF	n/a	n/a	VX1801
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.34	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.32	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.87	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		72-122%
17060-07-0	1,2-Dichloroethane-D4	92%		68-124%
2037-26-5	Toluene-D8	90%		80-119%
460-00-4	4-Bromofluorobenzene	86%		72-126%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	ACW-14	Date Sampled:	03/01/13
Lab Sample ID:	TC26485-4	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	EL Paso Natural Gas Jal #4		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	159	10	mg/l	20	03/06/13 18:28	ES	EPA 300/SW846 9056
Solids, Total Dissolved	623	10	mg/l	1	03/06/13	BG	SM 2540C
Specific Conductivity	1070	1.0	umhos/cm	1	03/07/13 12:00	BG	EPA 120.1

RL = Reporting Limit

Report of Analysis

Client Sample ID:	DUP-01	Date Sampled:	03/01/13
Lab Sample ID:	TC26485-5	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	EL Paso Natural Gas Jal #4		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0089680.D	1	03/08/13	CF	n/a	n/a	VX1801
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.34	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.32	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.87	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		72-122%
17060-07-0	1,2-Dichloroethane-D4	92%		68-124%
2037-26-5	Toluene-D8	89%		80-119%
460-00-4	4-Bromofluorobenzene	88%		72-126%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DUP-01	Date Sampled:	03/01/13
Lab Sample ID:	TC26485-5	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	EL Paso Natural Gas Jal #4		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	187	10	mg/l	20	03/06/13 18:45	ES	EPA 300/SW846 9056
Solids, Total Dissolved	742	10	mg/l	1	03/06/13	BG	SM 2540C
Specific Conductivity	1120	1.0	umhos/cm	1	03/07/13 12:00	BG	EPA 120.1

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ACW-14	Date Sampled:	03/05/13
Lab Sample ID:	TC26485-6	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	EL Paso Natural Gas Jal #4		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	102000	5000	ug/l	1	03/07/13	03/14/13 NS	EPA 200.7 ¹	SW846 3050B ²

(1) Instrument QC Batch: MA7962
(2) Prep QC Batch: MP20043

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ACW-15	Date Sampled:	03/05/13
Lab Sample ID:	TC26485-7	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	EL Paso Natural Gas Jal #4		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	89800	5000	ug/l	1	03/07/13	03/14/13 NS	EPA 200.7 ¹	SW846 3050B ²

(1) Instrument QC Batch: MA7962
(2) Prep QC Batch: MP20043

RL = Reporting Limit

Report of Analysis

Client Sample ID:	ACW-13	Date Sampled:	03/05/13
Lab Sample ID:	TC26485-8	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	EL Paso Natural Gas Jal #4		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	116000	5000	ug/l	1	03/07/13	03/14/13 NS	EPA 200.7 ¹	SW846 3050B ²

(1) Instrument QC Batch: MA7962
(2) Prep QC Batch: MP20043

RL = Reporting Limit

Report of Analysis

Client Sample ID:	DOOM SUPPLY	Date Sampled:	03/05/13
Lab Sample ID:	TC26485-9	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	EL Paso Natural Gas Jal #4		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	68800	5000	ug/l	1	03/07/13	03/14/13 NS	EPA 200.7 ¹	SW846 3050B ²

(1) Instrument QC Batch: MA7962
(2) Prep QC Batch: MP20043

RL = Reporting Limit

Report of Analysis

Client Sample ID:	DUP-01	Date Sampled:	03/05/13
Lab Sample ID:	TC26485-10	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	EL Paso Natural Gas Jal #4		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	98900	5000	ug/l	1	03/07/13	03/14/13 NS	EPA 200.7 ¹	SW846 3050B ²

(1) Instrument QC Batch: MA7962
(2) Prep QC Batch: MP20043

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RINSATE	Date Sampled:	03/05/13
Lab Sample ID:	TC26485-11	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	EL Paso Natural Gas Jal #4		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	X0089681.D	1	03/08/13	CF	n/a	n/a	VX1801
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.34	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.32	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.87	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		72-122%
17060-07-0	1,2-Dichloroethane-D4	91%		68-124%
2037-26-5	Toluene-D8	89%		80-119%
460-00-4	4-Bromofluorobenzene	88%		72-126%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	RINSATE	Date Sampled:	03/05/13
Lab Sample ID:	TC26485-11	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	EL Paso Natural Gas Jal #4		

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Sodium	< 5000	5000	ug/l	1	03/07/13	03/14/13 NS	EPA 200.7 ¹	SW846 3050B ²

(1) Instrument QC Batch: MA7962
(2) Prep QC Batch: MP20043

RL = Reporting Limit

Report of Analysis

Client Sample ID:	RINSATE	Date Sampled:	03/05/13
Lab Sample ID:	TC26485-11	Date Received:	03/06/13
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	EL Paso Natural Gas Jal #4		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	1.2	0.50	mg/l	1	03/06/13 19:02	ES	EPA 300/SW846 9056
Solids, Total Dissolved	< 10	10	mg/l	1	03/06/13	BG	SM 2540C
Specific Conductivity	8.3	1.0	umhos/cm	1	03/07/13 12:00	BG	EPA 120.1

RL = Reporting Limit

Misc. Forms

5

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Accutest Job Number: TC26485 **Client:** KINDER MORGAN EL PASO **Project:** JAL 4
Date / Time Received: 3/6/2013 **Delivery Method:** FedEx **Airbill #'s:** 554609251221
No. Coolers: 1 **Therm ID:** IR6; **Temp Adjustment Factor:** -0.1;
Cooler Temps (Initial/Adjusted): #1: (1.8/1.7);

Cooler Security		Y or N		Y or N	
1. Custody Seals Present:	☒	☐	3. COC Present:	☒	☐
2. Custody Seals Intact:	☒	☐	4. Smpl Dates/Time OK	☒	☐
Cooler Temperature		Y or N			
1. Temp criteria achieved:	☒	☐			
2. Cooler temp verification:					
3. Cooler media:	Ice (Bag)				
Quality Control Preservation	Y	or N	N/A	WTB	STB
1. Trip Blank present / cooler:	☐	☒	☐	☐	☐
2. Trip Blank listed on COC:	☐	☒	☐		
3. Samples preserved properly:	☒	☐			
4. VOCs headspace free:	☒	☐	☐		

Sample Integrity - Documentation		Y	or	N
1. Sample labels present on bottles:	☒			☐
2. Container labeling complete:	☒			☐
3. Sample container label / COC agree:	☐			☒
Sample Integrity - Condition		Y	or	N
1. Sample recvd within HT:	☒			☐
2. All containers accounted for:	☒			☐
3. Condition of sample:	Intact			
Sample Integrity - Instructions		Y	or N	N/A
1. Analysis requested is clear:	☒			☐
2. Bottles received for unspecified tests	☐			☒
3. Sufficient volume recvd for analysis:	☒			☐
4. Compositing instructions clear:	☐			☐
5. Filtering instructions clear:	☐			☒

Comments COC says ACW 14 but bottle label says MW 14. Date and time match.

TC26485: Chain of Custody

Page 2 of 5

Accutest Job Number: TC26485**CSR:** Electa Brown**Response Date:** 3/8/2013**Response:** Email client sample ID label does not match chain of custody.

5.1

5

TC26485: Chain of Custody
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Sample Receipt Log

Job #: TC26485

Date / Time Received: 3/6/2013

Initials: EC

Client: KINDER MORGAN EL PASO

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
	TC26485-1	1000ml	1	3B	N/P	Note #2 - Preservative check not applicable.				
	TC26485-1	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-1	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-1	40ml	4	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-1	1000ml	5	3B	N/P	Note #2 - Preservative check not applicable.				
	TC26485-1	40ml	6	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-1	40ml	7	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-1	40ml	8	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-1	1000ml	9	3B	N/P	Note #2 - Preservative check not applicable.				
	TC26485-1	40ml	10	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-1	40ml	11	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-1	40ml	12	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-2	1000ml	1	3B	N/P	Note #2 - Preservative check not applicable.				
	TC26485-2	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-2	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-2	40ml	4	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-3	1000ml	1	3B	N/P	Note #2 - Preservative check not applicable.				
	TC26485-3	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-3	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-3	40ml	4	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-4	1000ml	1	3B	N/P	Note #2 - Preservative check not applicable.				
	TC26485-4	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-4	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-4	40ml	4	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				

TC26485: Chain of Custody

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Sample Receipt Log

Page 4 of 4

Job #: TC26485

Date / Time Received: 3/6/2013

Initials: EC

Client: KINDER MORGAN EL PASO

Cooler #	Sample ID:	Vol	Bot #	Location	Pres	pH	Therm ID	Initial Temp	Therm CF	Corrected Temp
	TC26485-5	1000ml	1	3B	N/P	Note #2 - Preservative check not applicable.				
	TC26485-5	40ml	2	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-5	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-5	40ml	4	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-6	250ml	1	M1-I	HNO3	pH < 2				
	TC26485-7	250ml	1	M1-I	HNO3	pH < 2				
	TC26485-7	250ml	2	M1-I	HNO3	pH < 2				
	TC26485-7	250ml	3	M1-I	HNO3	pH < 2				
	TC26485-8	250ml	1	M1-I	HNO3	pH < 2				
	TC26485-9	250ml	1	M1-I	HNO3	pH < 2				
	TC26485-10	250ml	1	M1-I	HNO3	pH < 2				
	TC26485-11	1000ml	1	3B	N/P	Note #2 - Preservative check not applicable.				
	TC26485-11	250ml	2	M1-I	HNO3	pH < 2				
	TC26485-11	40ml	3	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-11	40ml	4	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				
	TC26485-11	40ml	5	VR	HCL	Note #1 - Preservative to be checked by analyst at the instrument.				

TC26485: Chain of Custody
Page 5 of 5

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: TC26485
Account: ELPASOX El Paso Corporation
Project: EL Paso Natural Gas Jal #4

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX1801-MB	X0089666.D	1	03/08/13	CF	n/a	n/a	VX1801

The QC reported here applies to the following samples:

Method: SW846 8260B

TC26485-2, TC26485-3, TC26485-4, TC26485-5, TC26485-11

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.34	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.32	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.87	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	93% 72-122%
17060-07-0	1,2-Dichloroethane-D4	90% 68-124%
2037-26-5	Toluene-D8	90% 80-119%
460-00-4	4-Bromofluorobenzene	90% 72-126%

Method Blank Summary

Page 1 of 1

Job Number: TC26485
Account: ELPASOX El Paso Corporation
Project: EL Paso Natural Gas Jal #4

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC1369-MB	C002589359.ID		03/12/13	CF	n/a	n/a	VC1369

The QC reported here applies to the following samples:

Method: SW846 8260B

TC26485-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.34	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.32	ug/l	
108-88-3	Toluene	ND	1.0	0.33	ug/l	
1330-20-7	Xylene (total)	ND	3.0	0.87	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	97% 72-122%
17060-07-0	1,2-Dichloroethane-D4	95% 68-124%
2037-26-5	Toluene-D8	92% 80-119%
460-00-4	4-Bromofluorobenzene	84% 72-126%

Blank Spike Summary

Page 1 of 1

Job Number: TC26485
Account: ELPASOX El Paso Corporation
Project: EL Paso Natural Gas Jal #4

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VX1801-BS	X0089663.D	1	03/08/13	CF	n/a	n/a	VX1801

The QC reported here applies to the following samples:

Method: SW846 8260B

TC26485-2, TC26485-3, TC26485-4, TC26485-5, TC26485-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	26.1	104	68-119
100-41-4	Ethylbenzene	25	25.7	103	71-117
108-88-3	Toluene	25	26.2	105	73-119
1330-20-7	Xylene (total)	75	81.2	108	74-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	72-122%
17060-07-0	1,2-Dichloroethane-D4	87%	68-124%
2037-26-5	Toluene-D8	91%	80-119%
460-00-4	4-Bromofluorobenzene	88%	72-126%

* = Outside of Control Limits.

Blank Spike Summary

Page 1 of 1

Job Number: TC26485
Account: ELPASOX El Paso Corporation
Project: EL Paso Natural Gas Jal #4

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC1369-BS	C002589356.D		03/11/13	CF	n/a	n/a	VC1369

The QC reported here applies to the following samples:

Method: SW846 8260B

TC26485-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	26.3	105	68-119
100-41-4	Ethylbenzene	25	25.7	103	71-117
108-88-3	Toluene	25	25.6	102	73-119
1330-20-7	Xylene (total)	75	82.7	110	74-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	97%	72-122%
17060-07-0	1,2-Dichloroethane-D4	88%	68-124%
2037-26-5	Toluene-D8	94%	80-119%
460-00-4	4-Bromofluorobenzene	80%	72-126%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: TC26485
Account: ELPASOX El Paso Corporation
Project: EL Paso Natural Gas Jal #4

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TC26583-2MS	X0089668.D	50	03/08/13	CF	n/a	n/a	VX1801
TC26583-2MSD	X0089669.D	50	03/08/13	CF	n/a	n/a	VX1801
TC26583-2 ^a	X0089667.D	50	03/08/13	CF	n/a	n/a	VX1801

The QC reported here applies to the following samples:

Method: SW846 8260B

TC26485-2, TC26485-3, TC26485-4, TC26485-5, TC26485-11

CAS No.	Compound	TC26583-2 ug/l	Spike Q	ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	1140		1250	2400	101	2360	98	2	68-119/12
100-41-4	Ethylbenzene	20.5	J	1250	1280	101	1260	99	2	71-117/12
108-88-3	Toluene	ND		1250	1260	101	1240	99	2	73-119/13
1330-20-7	Xylene (total)	ND		3750	3950	105	3870	103	2	74-119/13

CAS No.	Surrogate Recoveries	MS	MSD	TC26583-2	Limits
1868-53-7	Dibromofluoromethane	92%	92%	93%	72-122%
17060-07-0	1,2-Dichloroethane-D4	87%	87%	89%	68-124%
2037-26-5	Toluene-D8	91%	91%	90%	80-119%
460-00-4	4-Bromofluorobenzene	87%	87%	90%	72-126%

(a) Sample was not preserved to a pH < 2

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: TC26485
Account: ELPASOX El Paso Corporation
Project: EL Paso Natural Gas Jal #4

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
TC26485-1MS	C002589361.D		03/12/13	CF	n/a	n/a	VC1369
TC26485-1MSD	C002589362.D		03/12/13	CF	n/a	n/a	VC1369
TC26485-1	C002589360.D		03/12/13	CF	n/a	n/a	VC1369

The QC reported here applies to the following samples:

Method: SW846 8260B

TC26485-1

CAS No.	Compound	TC26485-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	25	25.5	102	25.2	101	1	68-119/12
100-41-4	Ethylbenzene	ND	25	25.8	103	24.9	100	4	71-117/12
108-88-3	Toluene	ND	25	25.2	101	24.5	98	3	73-119/13
1330-20-7	Xylene (total)	ND	75	83.0	111	81.4	109	2	74-119/13

CAS No.	Surrogate Recoveries	MS	MSD	TC26485-1	Limits
1868-53-7	Dibromofluoromethane	95%	94%	98%	72-122%
17060-07-0	1,2-Dichloroethane-D4	88%	89%	93%	68-124%
2037-26-5	Toluene-D8	93%	93%	93%	80-119%
460-00-4	4-Bromofluorobenzene	80%	79%	81%	72-126%

* = Outside of Control Limits.

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: TC26485
Account: ELPASOX - El Paso Corporation
Project: EL Paso Natural Gas Jal #4

QC Batch ID: MP20043
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 03/07/13

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.3	12		
Antimony	5.0	1	2.9		
Arsenic	5.0	1.7	1		
Barium	200	.97	3.4		
Beryllium	4.0	.056	.16		
Boron	100	1.4	7.8		
Cadmium	4.0	.11	.11		
Calcium	5000	7.4	25		
Chromium	10	.23	.27		
Cobalt	50	.15	.22		
Copper	20	1.1	5.9		
Iron	100	1.1	23		
Lead	3.0	1	1.8		
Lithium	300	2	2		
Magnesium	5000	7.7	7.9		
Manganese	15	.054	1.9		
Molybdenum	10	.39	.39		
Nickel	40	.69	1.4		
Potassium	5000	39	45		
Selenium	5.0	1.5	1.5		
Silver	10	1.2	1.2		
Sodium	5000	9.2	100	10.2	<5000
Strontium	10	.061	.4		
Thallium	10	.67	1.2		
Tin	20	.69	2.8		
Titanium	20	.29	.3		
Vanadium	50	.3	.3		
Zinc	20	.51	3.5		

Associated samples MP20043: TC26485-6, TC26485-7, TC26485-8, TC26485-9, TC26485-10, TC26485-11

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC26485
 Account: ELPASOX - El Paso Corporation
 Project: EL Paso Natural Gas Jal #4

QC Batch ID: MP20043
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 03/07/13

Metal	TC26485-7 Original MS		SpikeLot MPTW4	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Potassium					
Selenium					
Silver					
Sodium	89800	135000	50000	90.4	70-130
Strontium					
Thallium					
Tin					
Titanium					
Vanadium					
Zinc					

Associated samples MP20043: TC26485-6, TC26485-7, TC26485-8, TC26485-9, TC26485-10, TC26485-11

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: TC26485
 Account: ELPASOX - El Paso Corporation
 Project: EL Paso Natural Gas Jal #4

QC Batch ID: MP20043
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 03/07/13

Metal	TC26485-7 Original	MSD	SpikeLot MPTW4	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic						
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium						
Silver						
Sodium	89800	133000	50000	86.4	1.5	10
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP20043: TC26485-6, TC26485-7, TC26485-8, TC26485-9, TC26485-10, TC26485-11

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: TC26485
 Account: ELPASOX - El Paso Corporation
 Project: EL Paso Natural Gas Jal #4

QC Batch ID: MP20043
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 03/07/13

Metal	BSP Result	SpikeLot MPTW4	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium	49200	50000	98.4	85-115
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP20043: TC26485-6, TC26485-7, TC26485-8, TC26485-9, TC26485-10, TC26485-11

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: TC26485
 Account: ELPASOX - El Paso Corporation
 Project: EL Paso Natural Gas Jal #4

QC Batch ID: MP20043
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 03/07/13

Metal	TC26485-7		%DIF	QC Limits
	Original	SDL 1:5		
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium				
Silver				
Sodium	89800	89900	0.2	0-10
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP20043: TC26485-6, TC26485-7, TC26485-8, TC26485-9, TC26485-10, TC26485-11

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

General Chemistry

QC Data Summaries

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Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC26485
Account: ELPASOX - El Paso Corporation
Project: EL Paso Natural Gas Jal #4

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chloride	GP22947/GN48904	0.50	0.0	mg/l	10	9.35	93.5	90-110%
Chloride	GP22949/GN48935	0.50	0.0	mg/l	10	9.45	94.5	90-110%
Nitrogen, Nitrate	GP22947/GN48904	0.50	0.0	mg/l	10	9.26	92.6	90-110%
Solids, Total Dissolved	GN48912	10	0.0	mg/l	500	471	94.2	88-110%
Solids, Total Dissolved	GN48950	10	0.0	mg/l	500	486	97.2	88-110%
Specific Conductivity	GN48941	1.0	<1.0	umhos/cm				
Sulfate	GP22947/GN48904	0.50	0.0	mg/l	10	9.81	98.1	90-110%

Associated Samples:

Batch GN48912: TC26485-2, TC26485-3, TC26485-4, TC26485-5, TC26485-11
Batch GN48941: TC26485-1, TC26485-2, TC26485-3, TC26485-4, TC26485-5, TC26485-11
Batch GN48950: TC26485-1
Batch GP22947: TC26485-2, TC26485-3, TC26485-4, TC26485-5, TC26485-11
Batch GP22949: TC26485-1
(*) Outside of QC limits

8.1

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DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC26485
Account: ELPASOX - El Paso Corporation
Project: EL Paso Natural Gas Jal #4

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chloride	GP22947/GN48904	TC26465-1	mg/l	728	657	10.3	0-13%
Chloride	GP22949/GN48935	TC26485-1	mg/l	160	160	0.0	0-13%
Nitrogen, Nitrate	GP22947/GN48904	TC26465-1	mg/l	0.62	0.61	1.6	0-14%
Solids, Total Dissolved	GN48912	TC26404-3	mg/l	2410	2410	0.0	0-5%
Solids, Total Dissolved	GN48950	TC26485-1	mg/l	649	651	0.3	0-5%
Specific Conductivity	GN48941	TC26485-1	umhos/cm	992	990	0.2	0-10%
Sulfate	GP22947/GN48904	TC26465-1	mg/l	276	277	0.4	0-20%

Associated Samples:

Batch GN48912: TC26485-2, TC26485-3, TC26485-4, TC26485-5, TC26485-11
Batch GN48941: TC26485-1, TC26485-2, TC26485-3, TC26485-4, TC26485-5, TC26485-11
Batch GN48950: TC26485-1
Batch GP22947: TC26485-2, TC26485-3, TC26485-4, TC26485-5, TC26485-11
Batch GP22949: TC26485-1
(*) Outside of QC limits

8.2

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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: TC26485
Account: ELPASOX - El Paso Corporation
Project: EL Paso Natural Gas Jal #4

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chloride	GP22947/GN48904	TC26465-1	mg/l	728	1000	1590	86.2N	90-110%
Chloride	GP22949/GN48935	TC26485-1	mg/l	160	200	368	104.0	90-110%
Nitrogen, Nitrate	GP22947/GN48904	TC26465-1	mg/l	0.62	10	9.9	92.8	90-110%
Sulfate	GP22947/GN48904	TC26465-1	mg/l	276	500	807	106.2	90-110%

Associated Samples:

Batch GP22947: TC26485-2, TC26485-3, TC26485-4, TC26485-5, TC26485-11

Batch GP22949: TC26485-1

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

8.3

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Corpus Christi
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Tel: (361)289-2673

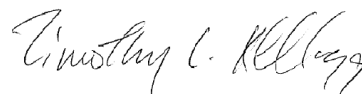
TestAmerica Job ID: 560-40937-1

TestAmerica Sample Delivery Group: Quarterly Monitoring
Client Project/Site: Jal #4 Gas Plant - June 2013

For:

ARCADIS U.S., Inc.
1004 North Big Spring
Suite 300
Midland, Texas 79701

Attn: Hank McConnell



Authorized for release by:
7/12/2013 1:01:39 PM

Timothy Kellogg, Lab Director
tim.kellogg@testamericainc.com

LINKS

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

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

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Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: Jal #4 Gas Plant - June 2013

TestAmerica Job ID: 560-40937-1
SDG: Quarterly Monitoring

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.

Glossary

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

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Jal #4 Gas Plant - June 2013

TestAmerica Job ID: 560-40937-1
SDG: Quarterly Monitoring

Job ID: 560-40937-1

Laboratory: TestAmerica Corpus Christi

Narrative

Receipt

The samples were received on 6/29/2013 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.5° C. No analytical or quality issues were noted.

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Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Jal #4 Gas Plant - June 2013

TestAmerica Job ID: 560-40937-1
SDG: Quarterly Monitoring

Client Sample ID: DOOM

Date Collected: 06/28/13 09:45

Date Received: 06/29/13 10:30

Lab Sample ID: 560-40937-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			07/03/13 19:46	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			07/03/13 19:46	1
Toluene	<0.000300		0.00100	0.000300	mg/L			07/03/13 19:46	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			07/03/13 19:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130		07/03/13 19:46	1
4-Bromofluorobenzene (Surr)	88		70 - 130		07/03/13 19:46	1
Dibromofluoromethane (Surr)	109		70 - 130		07/03/13 19:46	1
1,2-Dichloroethane-d4 (Surr)	110		70 - 130		07/03/13 19:46	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	72.3		1.00	0.310	mg/L		07/02/13 12:35	07/03/13 16:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31.3		5.00	0.960	mg/L			07/08/13 17:32	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	426		1.00	1.00	umhos/cm			07/08/13 09:45	1
Total Dissolved Solids	416		10.0	10.0	mg/L			07/02/13 09:04	1

Client Sample ID: ACW-14

Date Collected: 06/28/13 15:10

Date Received: 06/29/13 10:30

Lab Sample ID: 560-40937-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			07/03/13 19:21	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			07/03/13 19:21	1
Toluene	<0.000300		0.00100	0.000300	mg/L			07/03/13 19:21	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			07/03/13 19:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130		07/03/13 19:21	1
4-Bromofluorobenzene (Surr)	88		70 - 130		07/03/13 19:21	1
Dibromofluoromethane (Surr)	102		70 - 130		07/03/13 19:21	1
1,2-Dichloroethane-d4 (Surr)	110		70 - 130		07/03/13 19:21	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	130		1.00	0.310	mg/L		07/02/13 12:35	07/03/13 16:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	206		5.00	0.960	mg/L			07/08/13 17:54	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	802		1.00	1.00	umhos/cm			07/08/13 09:45	1
Total Dissolved Solids	737		10.0	10.0	mg/L			07/02/13 09:04	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Jal #4 Gas Plant - June 2013

TestAmerica Job ID: 560-40937-1
SDG: Quarterly Monitoring

Client Sample ID: ACW-13

Lab Sample ID: 560-40937-3

Date Collected: 06/28/13 11:05

Matrix: Water

Date Received: 06/29/13 10:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		07/03/13 18:55	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		07/03/13 18:55	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		07/03/13 18:55	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		07/03/13 18:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		70 - 130		07/03/13 18:55	1
4-Bromofluorobenzene (Surr)	88		70 - 130		07/03/13 18:55	1
Dibromofluoromethane (Surr)	104		70 - 130		07/03/13 18:55	1
1,2-Dichloroethane-d4 (Surr)	110		70 - 130		07/03/13 18:55	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	108		1.00	0.310	mg/L	—	07/02/13 12:35	07/03/13 16:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	216		5.00	0.960	mg/L	—		07/08/13 18:16	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	796		1.00	1.00	umhos/cm	—		07/08/13 09:45	1
Total Dissolved Solids	767		10.0	10.0	mg/L	—		07/02/13 09:04	1

Client Sample ID: FB-1

Lab Sample ID: 560-40937-4

Date Collected: 06/28/13 09:45

Matrix: Water

Date Received: 06/29/13 10:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		07/03/13 18:30	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		07/03/13 18:30	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		07/03/13 18:30	1
Xylenes, Total	0.000703	J	0.00300	0.000226	mg/L	—		07/03/13 18:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130		07/03/13 18:30	1
4-Bromofluorobenzene (Surr)	89		70 - 130		07/03/13 18:30	1
Dibromofluoromethane (Surr)	104		70 - 130		07/03/13 18:30	1
1,2-Dichloroethane-d4 (Surr)	109		70 - 130		07/03/13 18:30	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.310		1.00	0.310	mg/L	—	07/02/13 12:35	07/03/13 16:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.192		1.00	0.192	mg/L	—		07/08/13 18:38	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1.50		1.00	1.00	umhos/cm	—		07/08/13 09:45	1
Total Dissolved Solids	<10.0		10.0	10.0	mg/L	—		07/02/13 09:04	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Jal #4 Gas Plant - June 2013

TestAmerica Job ID: 560-40937-1
SDG: Quarterly Monitoring

Client Sample ID: EB-1

Lab Sample ID: 560-40937-5

Date Collected: 06/28/13 12:25

Matrix: Water

Date Received: 06/29/13 10:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			07/03/13 18:05	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			07/03/13 18:05	1
Toluene	<0.000300		0.00100	0.000300	mg/L			07/03/13 18:05	1
Xylenes, Total	0.000783	J	0.00300	0.000226	mg/L			07/03/13 18:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		70 - 130		07/03/13 18:05	1
4-Bromofluorobenzene (Surr)	87		70 - 130		07/03/13 18:05	1
Dibromofluoromethane (Surr)	105		70 - 130		07/03/13 18:05	1
1,2-Dichloroethane-d4 (Surr)	109		70 - 130		07/03/13 18:05	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.310		1.00	0.310	mg/L		07/02/13 12:35	07/03/13 16:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.192		1.00	0.192	mg/L			07/08/13 19:00	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1.50		1.00	1.00	umhos/cm			07/08/13 09:45	1
Total Dissolved Solids	20.0		10.0	10.0	mg/L			07/02/13 09:04	1

Client Sample ID: ACW-15

Lab Sample ID: 560-40937-6

Date Collected: 06/28/13 12:25

Matrix: Water

Date Received: 06/29/13 10:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			07/03/13 17:39	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			07/03/13 17:39	1
Toluene	<0.000300		0.00100	0.000300	mg/L			07/03/13 17:39	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			07/03/13 17:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		70 - 130		07/03/13 17:39	1
4-Bromofluorobenzene (Surr)	90		70 - 130		07/03/13 17:39	1
Dibromofluoromethane (Surr)	103		70 - 130		07/03/13 17:39	1
1,2-Dichloroethane-d4 (Surr)	109		70 - 130		07/03/13 17:39	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	93.7		1.00	0.310	mg/L		07/02/13 12:35	07/03/13 16:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	160		5.00	0.960	mg/L			07/08/13 19:22	5
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	675		1.00	1.00	umhos/cm			07/08/13 09:45	1
Total Dissolved Solids	613		10.0	10.0	mg/L			07/02/13 09:04	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Jal #4 Gas Plant - June 2013

TestAmerica Job ID: 560-40937-1
SDG: Quarterly Monitoring

Client Sample ID: TRIP BLANK

Lab Sample ID: 560-40937-7

Date Collected: 06/28/13 00:00

Matrix: Water

Date Received: 06/29/13 10:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			07/03/13 17:14	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			07/03/13 17:14	1
Toluene	<0.000300		0.00100	0.000300	mg/L			07/03/13 17:14	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			07/03/13 17:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		70 - 130		07/03/13 17:14	1
4-Bromofluorobenzene (Surr)	89		70 - 130		07/03/13 17:14	1
Dibromofluoromethane (Surr)	103		70 - 130		07/03/13 17:14	1
1,2-Dichloroethane-d4 (Surr)	107		70 - 130		07/03/13 17:14	1

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Jal #4 Gas Plant - June 2013

TestAmerica Job ID: 560-40937-1
SDG: Quarterly Monitoring

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 560-89851/8

Matrix: Water

Analysis Batch: 89851

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			07/03/13 13:52	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			07/03/13 13:52	1
Toluene	<0.000300		0.00100	0.000300	mg/L			07/03/13 13:52	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			07/03/13 13:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		70 - 130		07/03/13 13:52	1
4-Bromofluorobenzene (Surr)	90		70 - 130		07/03/13 13:52	1
Dibromofluoromethane (Surr)	107		70 - 130		07/03/13 13:52	1
1,2-Dichloroethane-d4 (Surr)	108		70 - 130		07/03/13 13:52	1

Lab Sample ID: LCS 560-89851/3

Matrix: Water

Analysis Batch: 89851

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0250	0.02361		mg/L		94	70 - 130
Ethylbenzene	0.0250	0.02443		mg/L		98	70 - 130
Toluene	0.0250	0.02429		mg/L		97	70 - 130
Xylenes, Total	0.0750	0.07475		mg/L		100	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	102		70 - 130
4-Bromofluorobenzene (Surr)	102		70 - 130
Dibromofluoromethane (Surr)	100		70 - 130
1,2-Dichloroethane-d4 (Surr)	98		70 - 130

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 560-89827/1-A

Matrix: Water

Analysis Batch: 89921

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 89827

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.310		1.00	0.310	mg/L		07/02/13 12:35	07/03/13 14:55	1

Lab Sample ID: LCS 560-89827/2-A

Matrix: Water

Analysis Batch: 89921

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 89827

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	50.0	51.34		mg/L		103	80 - 120

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Jal #4 Gas Plant - June 2013

TestAmerica Job ID: 560-40937-1
SDG: Quarterly Monitoring

Method: 120.1 - Conductivity, Specific Conductance

Lab Sample ID: MB 560-89980/3
Matrix: Water
Analysis Batch: 89980

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.00		1.00	1.00	umhos/cm			07/08/13 09:45	1

Lab Sample ID: LCS 560-89980/4
Matrix: Water
Analysis Batch: 89980

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	1000	949.0		umhos/cm		95	90 - 110

Lab Sample ID: 560-40937-6 DU
Matrix: Water
Analysis Batch: 89980

Client Sample ID: ACW-15
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	675		675.0		umhos/cm		0	

Method: 9056 - Anions, Ion Chromatography

Lab Sample ID: MB 560-90030/4
Matrix: Water
Analysis Batch: 90030

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.192		1.00	0.192	mg/L			07/08/13 15:19	1

Lab Sample ID: LCS 560-90030/5
Matrix: Water
Analysis Batch: 90030

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.36		mg/L		104	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 560-89801/1
Matrix: Water
Analysis Batch: 89801

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10.0		10.0	10.0	mg/L			07/02/13 09:04	1

Lab Sample ID: LCS 560-89801/2
Matrix: Water
Analysis Batch: 89801

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	2250	2136		mg/L		95	80 - 120

TestAmerica Corpus Christi

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Jal #4 Gas Plant - June 2013

TestAmerica Job ID: 560-40937-1
SDG: Quarterly Monitoring

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 560-40937-6 MS

Matrix: Water

Analysis Batch: 89801

Client Sample ID: ACW-15

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	613		2250	2620		mg/L		89	75 - 125

Lab Sample ID: 560-40937-6 MSD

Matrix: Water

Analysis Batch: 89801

Client Sample ID: ACW-15

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids	613		2250	2656		mg/L		91	75 - 125	1	20

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Jal #4 Gas Plant - June 2013

TestAmerica Job ID: 560-40937-1
SDG: Quarterly Monitoring

GC/MS VOA

Analysis Batch: 89851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-40937-1	DOOM	Total/NA	Water	8260B	
560-40937-2	ACW-14	Total/NA	Water	8260B	
560-40937-3	ACW-13	Total/NA	Water	8260B	
560-40937-4	FB-1	Total/NA	Water	8260B	
560-40937-5	EB-1	Total/NA	Water	8260B	
560-40937-6	ACW-15	Total/NA	Water	8260B	
560-40937-7	TRIP BLANK	Total/NA	Water	8260B	
LCS 560-89851/3	Lab Control Sample	Total/NA	Water	8260B	
MB 560-89851/8	Method Blank	Total/NA	Water	8260B	

Metals

Prep Batch: 89827

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-40937-1	DOOM	Total/NA	Water	3010A	
560-40937-2	ACW-14	Total/NA	Water	3010A	
560-40937-3	ACW-13	Total/NA	Water	3010A	
560-40937-4	FB-1	Total/NA	Water	3010A	
560-40937-5	EB-1	Total/NA	Water	3010A	
560-40937-6	ACW-15	Total/NA	Water	3010A	
LCS 560-89827/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 560-89827/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 89921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-40937-1	DOOM	Total/NA	Water	6010B	89827
560-40937-2	ACW-14	Total/NA	Water	6010B	89827
560-40937-3	ACW-13	Total/NA	Water	6010B	89827
560-40937-4	FB-1	Total/NA	Water	6010B	89827
560-40937-5	EB-1	Total/NA	Water	6010B	89827
560-40937-6	ACW-15	Total/NA	Water	6010B	89827
LCS 560-89827/2-A	Lab Control Sample	Total/NA	Water	6010B	89827
MB 560-89827/1-A	Method Blank	Total/NA	Water	6010B	89827

General Chemistry

Analysis Batch: 89801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-40937-1	DOOM	Total/NA	Water	SM 2540C	
560-40937-2	ACW-14	Total/NA	Water	SM 2540C	
560-40937-3	ACW-13	Total/NA	Water	SM 2540C	
560-40937-4	FB-1	Total/NA	Water	SM 2540C	
560-40937-5	EB-1	Total/NA	Water	SM 2540C	
560-40937-6	ACW-15	Total/NA	Water	SM 2540C	
560-40937-6 MS	ACW-15	Total/NA	Water	SM 2540C	
560-40937-6 MSD	ACW-15	Total/NA	Water	SM 2540C	
LCS 560-89801/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 560-89801/1	Method Blank	Total/NA	Water	SM 2540C	

TestAmerica Corpus Christi

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Jal #4 Gas Plant - June 2013

TestAmerica Job ID: 560-40937-1
SDG: Quarterly Monitoring

General Chemistry (Continued)

Analysis Batch: 89980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-40937-1	DOOM	Total/NA	Water	120.1	
560-40937-2	ACW-14	Total/NA	Water	120.1	
560-40937-3	ACW-13	Total/NA	Water	120.1	
560-40937-4	FB-1	Total/NA	Water	120.1	
560-40937-5	EB-1	Total/NA	Water	120.1	
560-40937-6	ACW-15	Total/NA	Water	120.1	
560-40937-6 DU	ACW-15	Total/NA	Water	120.1	
LCS 560-89980/4	Lab Control Sample	Total/NA	Water	120.1	
MB 560-89980/3	Method Blank	Total/NA	Water	120.1	

Analysis Batch: 90030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-40937-1	DOOM	Total/NA	Water	9056	
560-40937-2	ACW-14	Total/NA	Water	9056	
560-40937-3	ACW-13	Total/NA	Water	9056	
560-40937-4	FB-1	Total/NA	Water	9056	
560-40937-5	EB-1	Total/NA	Water	9056	
560-40937-6	ACW-15	Total/NA	Water	9056	
LCS 560-90030/5	Lab Control Sample	Total/NA	Water	9056	
MB 560-90030/4	Method Blank	Total/NA	Water	9056	

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Jal #4 Gas Plant - June 2013

TestAmerica Job ID: 560-40937-1
SDG: Quarterly Monitoring

Client Sample ID: DOOM

Date Collected: 06/28/13 09:45

Date Received: 06/29/13 10:30

Lab Sample ID: 560-40937-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	89851	07/03/13 19:46	RJT	TAL CC
Total/NA	Prep	3010A			89827	07/02/13 12:35	MIG	TAL CC
Total/NA	Analysis	6010B		1	89921	07/03/13 16:32	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	89801	07/02/13 09:04	KL	TAL CC
Total/NA	Analysis	120.1		1	89980	07/08/13 09:45	OV56	TAL CC
Total/NA	Analysis	9056		5	90030	07/08/13 17:32	HMZ	TAL CC

Client Sample ID: ACW-14

Date Collected: 06/28/13 15:10

Date Received: 06/29/13 10:30

Lab Sample ID: 560-40937-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	89851	07/03/13 19:21	RJT	TAL CC
Total/NA	Prep	3010A			89827	07/02/13 12:35	MIG	TAL CC
Total/NA	Analysis	6010B		1	89921	07/03/13 16:36	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	89801	07/02/13 09:04	KL	TAL CC
Total/NA	Analysis	120.1		1	89980	07/08/13 09:45	OV56	TAL CC
Total/NA	Analysis	9056		5	90030	07/08/13 17:54	HMZ	TAL CC

Client Sample ID: ACW-13

Date Collected: 06/28/13 11:05

Date Received: 06/29/13 10:30

Lab Sample ID: 560-40937-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	89851	07/03/13 18:55	RJT	TAL CC
Total/NA	Prep	3010A			89827	07/02/13 12:35	MIG	TAL CC
Total/NA	Analysis	6010B		1	89921	07/03/13 16:40	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	89801	07/02/13 09:04	KL	TAL CC
Total/NA	Analysis	120.1		1	89980	07/08/13 09:45	OV56	TAL CC
Total/NA	Analysis	9056		5	90030	07/08/13 18:16	HMZ	TAL CC

Client Sample ID: FB-1

Date Collected: 06/28/13 09:45

Date Received: 06/29/13 10:30

Lab Sample ID: 560-40937-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	89851	07/03/13 18:30	RJT	TAL CC
Total/NA	Prep	3010A			89827	07/02/13 12:35	MIG	TAL CC
Total/NA	Analysis	6010B		1	89921	07/03/13 16:44	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	89801	07/02/13 09:04	KL	TAL CC
Total/NA	Analysis	120.1		1	89980	07/08/13 09:45	OV56	TAL CC

TestAmerica Corpus Christi

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Jal #4 Gas Plant - June 2013

TestAmerica Job ID: 560-40937-1
SDG: Quarterly Monitoring

Client Sample ID: FB-1

Lab Sample ID: 560-40937-4

Date Collected: 06/28/13 09:45

Matrix: Water

Date Received: 06/29/13 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056		1	90030	07/08/13 18:38	HMZ	TAL CC

Client Sample ID: EB-1

Lab Sample ID: 560-40937-5

Date Collected: 06/28/13 12:25

Matrix: Water

Date Received: 06/29/13 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	89851	07/03/13 18:05	RJT	TAL CC
Total/NA	Prep	3010A			89827	07/02/13 12:35	MIG	TAL CC
Total/NA	Analysis	6010B		1	89921	07/03/13 16:49	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	89801	07/02/13 09:04	KL	TAL CC
Total/NA	Analysis	120.1		1	89980	07/08/13 09:45	OV56	TAL CC
Total/NA	Analysis	9056		1	90030	07/08/13 19:00	HMZ	TAL CC

Client Sample ID: ACW-15

Lab Sample ID: 560-40937-6

Date Collected: 06/28/13 12:25

Matrix: Water

Date Received: 06/29/13 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	89851	07/03/13 17:39	RJT	TAL CC
Total/NA	Prep	3010A			89827	07/02/13 12:35	MIG	TAL CC
Total/NA	Analysis	6010B		1	89921	07/03/13 16:53	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	89801	07/02/13 09:04	KL	TAL CC
Total/NA	Analysis	120.1		1	89980	07/08/13 09:45	OV56	TAL CC
Total/NA	Analysis	9056		5	90030	07/08/13 19:22	HMZ	TAL CC

Client Sample ID: TRIP BLANK

Lab Sample ID: 560-40937-7

Date Collected: 06/28/13 00:00

Matrix: Water

Date Received: 06/29/13 10:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	89851	07/03/13 17:14	RJT	TAL CC

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: Jal #4 Gas Plant - June 2013

TestAmerica Job ID: 560-40937-1
SDG: Quarterly Monitoring

Laboratory: TestAmerica Corpus Christi

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Kansas	NELAP	7	E-10362	10-31-13
Oklahoma	State Program	6	9968	08-31-13
Texas	NELAP	6	T104704210-12-8	03-31-14
USDA	Federal		P330-11-00060	02-03-14

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: Jal #4 Gas Plant - June 2013

TestAmerica Job ID: 560-40937-1
SDG: Quarterly Monitoring

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CC
6010B	Metals (ICP)	SW846	TAL CC
120.1	Conductivity, Specific Conductance	MCAWW	TAL CC
9056	Anions, Ion Chromatography	SW846	TAL CC
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CC

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

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

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

Sample Summary

Client: ARCADIS U.S., Inc.

Project/Site: Jal #4 Gas Plant - June 2013

TestAmerica Job ID: 560-40937-1

SDG: Quarterly Monitoring

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-40937-1	DOOM	Water	06/28/13 09:45	06/29/13 10:30
560-40937-2	ACW-14	Water	06/28/13 15:10	06/29/13 10:30
560-40937-3	ACW-13	Water	06/28/13 11:05	06/29/13 10:30
560-40937-4	FB-1	Water	06/28/13 09:45	06/29/13 10:30
560-40937-5	EB-1	Water	06/28/13 12:25	06/29/13 10:30
560-40937-6	ACW-15	Water	06/28/13 12:25	06/29/13 10:30
560-40937-7	TRIP BLANK	Water	06/28/13 00:00	06/29/13 10:30

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 560-40937-1

SDG Number: Quarterly Monitoring

Login Number: 40937

List Number: 1

Creator: Adams, Christi L

List Source: TestAmerica Corpus Christi

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

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Corpus Christi
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Tel: (361)289-2673

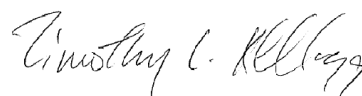
TestAmerica Job ID: 560-42953-1

TestAmerica Sample Delivery Group: October 2013
Client Project/Site: KMEP Jal #4 Gas Plant

For:

ARCADIS U.S., Inc.
1004 North Big Spring
Suite 300
Midland, Texas 79701

Attn: Hank McConnell



Authorized for release by:
11/14/2013 4:17:33 PM

Timothy Kellogg, Lab Director
(361)289-2673
tim.kellogg@testamericainc.com

LINKS

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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

Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Glossary

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

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Job ID: 560-42953-1

Laboratory: TestAmerica Corpus Christi

Narrative

Receipt

The samples were received on 10/5/2013 10:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1° C. No analytical or quality issues were noted.

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Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Client Sample ID: Doom Well

Lab Sample ID: 560-42953-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	68.3		1.00	0.310	mg/L	1		6010B	Total/NA
Chloride	29.1		2.00	0.384	mg/L	2		9056	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Specific Conductance	387		1.00	1.00	umhos/cm	1		120.1	Total/NA
Total Dissolved Solids	443		10.0	10.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: Dup-1

Lab Sample ID: 560-42953-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	99.3		1.00	0.310	mg/L	1		6010B	Total/NA
Chloride	188		5.00	0.960	mg/L	5		9056	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Specific Conductance	675		1.00	1.00	umhos/cm	1		120.1	Total/NA
Total Dissolved Solids	693		10.0	10.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: ACW-14 Lower

Lab Sample ID: 560-42953-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	101		1.00	0.310	mg/L	1		6010B	Total/NA
Chloride	68.6		2.00	0.384	mg/L	2		9056	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Specific Conductance	520		1.00	1.00	umhos/cm	1		120.1	Total/NA
Total Dissolved Solids	544		10.0	10.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: ACW-15 Upper

Lab Sample ID: 560-42953-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	87.0		1.00	0.310	mg/L	1		6010B	Total/NA
Chloride	52.9		2.00	0.384	mg/L	2		9056	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Specific Conductance	449		1.00	1.00	umhos/cm	1		120.1	Total/NA
Total Dissolved Solids	498		10.0	10.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: ACW-13 Upper

Lab Sample ID: 560-42953-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	112		1.00	0.310	mg/L	1		6010B	Total/NA
Chloride	301		10.0	1.92	mg/L	10		9056	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Specific Conductance	902		1.00	1.00	umhos/cm	1		120.1	Total/NA
Total Dissolved Solids	1030		10.0	10.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: ACW-13 Purge

Lab Sample ID: 560-42953-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	105		1.00	0.310	mg/L	1		6010B	Total/NA
Chloride	202		10.0	1.92	mg/L	10		9056	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Specific Conductance	739		1.00	1.00	umhos/cm	1		120.1	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Corpus Christi

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Client Sample ID: ACW-13 Purge (Continued)

Lab Sample ID: 560-42953-6

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	789		10.0	10.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: ACW-13 Lower

Lab Sample ID: 560-42953-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	109		1.00	0.310	mg/L	1		6010B	Total/NA
Chloride	281		10.0	1.92	mg/L	10		9056	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Specific Conductance	918		1.00	1.00	umhos/cm	1		120.1	Total/NA
Total Dissolved Solids	954		10.0	10.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: ACW-15 Purge

Lab Sample ID: 560-42953-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	92.9		1.00	0.310	mg/L	1		6010B	Total/NA
Chloride	189		5.00	0.960	mg/L	5		9056	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Specific Conductance	691		1.00	1.00	umhos/cm	1		120.1	Total/NA
Total Dissolved Solids	720		10.0	10.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: ACW-14 Upper

Lab Sample ID: 560-42953-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	98.5		1.00	0.310	mg/L	1		6010B	Total/NA
Chloride	81.9		2.00	0.384	mg/L	2		9056	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Specific Conductance	532		1.00	1.00	umhos/cm	1		120.1	Total/NA
Total Dissolved Solids	569		10.0	10.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: ACW-15 Lower

Lab Sample ID: 560-42953-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	79.2		1.00	0.310	mg/L	1		6010B	Total/NA
Chloride	50.8		2.00	0.384	mg/L	2		9056	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Specific Conductance	454		1.00	1.00	umhos/cm	1		120.1	Total/NA
Total Dissolved Solids	488		10.0	10.0	mg/L	1		SM 2540C	Total/NA

Client Sample ID: ACW-14 Purge

Lab Sample ID: 560-42953-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	117		1.00	0.310	mg/L	1		6010B	Total/NA
Chloride	221		10.0	1.92	mg/L	10		9056	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
Specific Conductance	804		1.00	1.00	umhos/cm	1		120.1	Total/NA
Total Dissolved Solids	815		10.0	10.0	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Corpus Christi

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Client Sample ID: Trip Blank

Lab Sample ID: 560-42953-12

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Client Sample ID: Doom Well

Date Collected: 10/03/13 14:17

Date Received: 10/05/13 10:10

Lab Sample ID: 560-42953-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	-		10/09/13 12:42	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	-		10/09/13 12:42	1
Toluene	<0.000300		0.00100	0.000300	mg/L	-		10/09/13 12:42	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	-		10/09/13 12:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		10/09/13 12:42	1
4-Bromofluorobenzene (Surr)	92		70 - 130		10/09/13 12:42	1
Dibromofluoromethane (Surr)	106		70 - 130		10/09/13 12:42	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 140		10/09/13 12:42	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	68.3		1.00	0.310	mg/L	-	10/08/13 10:45	10/09/13 18:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	29.1		2.00	0.384	mg/L	-		10/11/13 00:49	2
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	387		1.00	1.00	umhos/cm	-		10/16/13 16:15	1
Total Dissolved Solids	443		10.0	10.0	mg/L	-		10/08/13 11:00	1

Client Sample ID: Dup-1

Date Collected: 10/03/13 00:00

Date Received: 10/05/13 10:10

Lab Sample ID: 560-42953-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	-		10/08/13 17:16	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	-		10/08/13 17:16	1
Toluene	<0.000300		0.00100	0.000300	mg/L	-		10/08/13 17:16	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	-		10/08/13 17:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		70 - 130		10/08/13 17:16	1
4-Bromofluorobenzene (Surr)	91		70 - 130		10/08/13 17:16	1
Dibromofluoromethane (Surr)	103		70 - 130		10/08/13 17:16	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 140		10/08/13 17:16	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	99.3		1.00	0.310	mg/L	-	10/08/13 10:45	10/09/13 18:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	188		5.00	0.960	mg/L	-		10/11/13 19:32	5
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	675		1.00	1.00	umhos/cm	-		10/16/13 16:15	1
Total Dissolved Solids	693		10.0	10.0	mg/L	-		10/08/13 11:00	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Client Sample ID: ACW-14 Lower

Lab Sample ID: 560-42953-3

Date Collected: 10/02/13 13:40

Matrix: Water

Date Received: 10/05/13 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		10/08/13 17:41	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		10/08/13 17:41	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		10/08/13 17:41	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		10/08/13 17:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		70 - 130		10/08/13 17:41	1
4-Bromofluorobenzene (Surr)	93		70 - 130		10/08/13 17:41	1
Dibromofluoromethane (Surr)	105		70 - 130		10/08/13 17:41	1
1,2-Dichloroethane-d4 (Surr)	120		70 - 140		10/08/13 17:41	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	101		1.00	0.310	mg/L	—	10/08/13 10:45	10/09/13 18:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	68.6		2.00	0.384	mg/L	—		10/11/13 02:17	2
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	520		1.00	1.00	umhos/cm	—		10/16/13 16:15	1
Total Dissolved Solids	544		10.0	10.0	mg/L	—		10/08/13 11:00	1

Client Sample ID: ACW-15 Upper

Lab Sample ID: 560-42953-4

Date Collected: 10/02/13 12:20

Matrix: Water

Date Received: 10/05/13 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		10/08/13 18:06	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		10/08/13 18:06	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		10/08/13 18:06	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		10/08/13 18:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		10/08/13 18:06	1
4-Bromofluorobenzene (Surr)	94		70 - 130		10/08/13 18:06	1
Dibromofluoromethane (Surr)	106		70 - 130		10/08/13 18:06	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 140		10/08/13 18:06	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	87.0		1.00	0.310	mg/L	—	10/09/13 10:20	10/09/13 19:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52.9		2.00	0.384	mg/L	—		10/11/13 02:39	2
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	449		1.00	1.00	umhos/cm	—		10/16/13 16:15	1
Total Dissolved Solids	498		10.0	10.0	mg/L	—		10/08/13 11:00	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Client Sample ID: ACW-13 Upper

Lab Sample ID: 560-42953-5

Date Collected: 10/02/13 11:50

Matrix: Water

Date Received: 10/05/13 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		10/08/13 18:31	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		10/08/13 18:31	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		10/08/13 18:31	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		10/08/13 18:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		10/08/13 18:31	1
4-Bromofluorobenzene (Surr)	91		70 - 130		10/08/13 18:31	1
Dibromofluoromethane (Surr)	104		70 - 130		10/08/13 18:31	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 140		10/08/13 18:31	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	112		1.00	0.310	mg/L	—	10/09/13 10:20	10/09/13 19:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	301		10.0	1.92	mg/L	—		10/11/13 19:55	10
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	902		1.00	1.00	umhos/cm	—		10/16/13 16:15	1
Total Dissolved Solids	1030		10.0	10.0	mg/L	—		10/08/13 11:00	1

Client Sample ID: ACW-13 Purge

Lab Sample ID: 560-42953-6

Date Collected: 10/02/13 17:50

Matrix: Water

Date Received: 10/05/13 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		10/08/13 18:56	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		10/08/13 18:56	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		10/08/13 18:56	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		10/08/13 18:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		10/08/13 18:56	1
4-Bromofluorobenzene (Surr)	92		70 - 130		10/08/13 18:56	1
Dibromofluoromethane (Surr)	106		70 - 130		10/08/13 18:56	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 140		10/08/13 18:56	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	105		1.00	0.310	mg/L	—	10/09/13 10:20	10/09/13 19:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	202		10.0	1.92	mg/L	—		10/11/13 21:04	10
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	739		1.00	1.00	umhos/cm	—		10/16/13 16:15	1
Total Dissolved Solids	789		10.0	10.0	mg/L	—		10/08/13 11:00	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Client Sample ID: ACW-13 Lower

Lab Sample ID: 560-42953-7

Date Collected: 10/02/13 11:55

Matrix: Water

Date Received: 10/05/13 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		10/08/13 19:21	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		10/08/13 19:21	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		10/08/13 19:21	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		10/08/13 19:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		10/08/13 19:21	1
4-Bromofluorobenzene (Surr)	91		70 - 130		10/08/13 19:21	1
Dibromofluoromethane (Surr)	106		70 - 130		10/08/13 19:21	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 140		10/08/13 19:21	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	109		1.00	0.310	mg/L	—	10/09/13 10:20	10/09/13 19:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	281		10.0	1.92	mg/L	—		10/11/13 21:26	10
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	918		1.00	1.00	umhos/cm	—		10/16/13 16:15	1
Total Dissolved Solids	954		10.0	10.0	mg/L	—		10/08/13 11:00	1

Client Sample ID: ACW-15 Purge

Lab Sample ID: 560-42953-8

Date Collected: 10/03/13 12:59

Matrix: Water

Date Received: 10/05/13 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		10/08/13 19:46	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		10/08/13 19:46	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		10/08/13 19:46	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		10/08/13 19:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		10/08/13 19:46	1
4-Bromofluorobenzene (Surr)	90		70 - 130		10/08/13 19:46	1
Dibromofluoromethane (Surr)	107		70 - 130		10/08/13 19:46	1
1,2-Dichloroethane-d4 (Surr)	120		70 - 140		10/08/13 19:46	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	92.9		1.00	0.310	mg/L	—	10/09/13 10:20	10/09/13 19:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	189		5.00	0.960	mg/L	—		10/11/13 21:48	5
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	691		1.00	1.00	umhos/cm	—		10/16/13 16:15	1
Total Dissolved Solids	720		10.0	10.0	mg/L	—		10/08/13 11:00	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Client Sample ID: ACW-14 Upper

Lab Sample ID: 560-42953-9

Date Collected: 10/02/13 13:35

Matrix: Water

Date Received: 10/05/13 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		10/08/13 20:11	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		10/08/13 20:11	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		10/08/13 20:11	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		10/08/13 20:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		10/08/13 20:11	1
4-Bromofluorobenzene (Surr)	94		70 - 130		10/08/13 20:11	1
Dibromofluoromethane (Surr)	107		70 - 130		10/08/13 20:11	1
1,2-Dichloroethane-d4 (Surr)	116		70 - 140		10/08/13 20:11	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	98.5		1.00	0.310	mg/L	—	10/09/13 10:20	10/09/13 19:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	81.9		2.00	0.384	mg/L	—		10/11/13 04:29	2
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	532		1.00	1.00	umhos/cm	—		10/16/13 16:15	1
Total Dissolved Solids	569		10.0	10.0	mg/L	—		10/08/13 11:00	1

Client Sample ID: ACW-15 Lower

Lab Sample ID: 560-42953-10

Date Collected: 10/02/13 12:25

Matrix: Water

Date Received: 10/05/13 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		10/09/13 14:23	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		10/09/13 14:23	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		10/09/13 14:23	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		10/09/13 14:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		10/09/13 14:23	1
4-Bromofluorobenzene (Surr)	88		70 - 130		10/09/13 14:23	1
Dibromofluoromethane (Surr)	104		70 - 130		10/09/13 14:23	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 140		10/09/13 14:23	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	79.2		1.00	0.310	mg/L	—	10/09/13 10:20	10/09/13 19:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	50.8		2.00	0.384	mg/L	—		10/11/13 04:51	2
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	454		1.00	1.00	umhos/cm	—		10/16/13 16:15	1
Total Dissolved Solids	488		10.0	10.0	mg/L	—		10/08/13 11:00	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Client Sample ID: ACW-14 Purge

Lab Sample ID: 560-42953-11

Date Collected: 10/02/13 16:28

Matrix: Water

Date Received: 10/05/13 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			10/09/13 14:48	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			10/09/13 14:48	1
Toluene	<0.000300		0.00100	0.000300	mg/L			10/09/13 14:48	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			10/09/13 14:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		10/09/13 14:48	1
4-Bromofluorobenzene (Surr)	89		70 - 130		10/09/13 14:48	1
Dibromofluoromethane (Surr)	103		70 - 130		10/09/13 14:48	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 140		10/09/13 14:48	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	117		1.00	0.310	mg/L		10/09/13 10:20	10/09/13 19:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	221		10.0	1.92	mg/L			10/11/13 22:10	10
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	804		1.00	1.00	umhos/cm			10/16/13 16:15	1
Total Dissolved Solids	815		10.0	10.0	mg/L			10/08/13 11:00	1

Client Sample ID: Trip Blank

Lab Sample ID: 560-42953-12

Date Collected: 10/03/13 00:00

Matrix: Water

Date Received: 10/05/13 10:10

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			10/09/13 13:32	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			10/09/13 13:32	1
Toluene	<0.000300		0.00100	0.000300	mg/L			10/09/13 13:32	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			10/09/13 13:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		10/09/13 13:32	1
4-Bromofluorobenzene (Surr)	91		70 - 130		10/09/13 13:32	1
Dibromofluoromethane (Surr)	104		70 - 130		10/09/13 13:32	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 140		10/09/13 13:32	1

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 560-93563/8

Matrix: Water

Analysis Batch: 93563

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			10/08/13 11:48	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			10/08/13 11:48	1
Toluene	<0.000300		0.00100	0.000300	mg/L			10/08/13 11:48	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			10/08/13 11:48	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		10/08/13 11:48	1
4-Bromofluorobenzene (Surr)	92		70 - 130		10/08/13 11:48	1
Dibromofluoromethane (Surr)	103		70 - 130		10/08/13 11:48	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 140		10/08/13 11:48	1

Lab Sample ID: LCS 560-93563/3

Matrix: Water

Analysis Batch: 93563

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0250	0.02608		mg/L		104	70 - 130
Ethylbenzene	0.0250	0.02297		mg/L		92	70 - 130
Toluene	0.0250	0.02447		mg/L		98	70 - 130
Xylenes, Total	0.0750	0.06919		mg/L		92	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	94		70 - 130
Dibromofluoromethane (Surr)	100		70 - 130
1,2-Dichloroethane-d4 (Surr)	112		70 - 140

Lab Sample ID: MB 560-93600/10

Matrix: Water

Analysis Batch: 93600

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			10/09/13 13:07	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			10/09/13 13:07	1
Toluene	<0.000300		0.00100	0.000300	mg/L			10/09/13 13:07	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			10/09/13 13:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		70 - 130		10/09/13 13:07	1
4-Bromofluorobenzene (Surr)	94		70 - 130		10/09/13 13:07	1
Dibromofluoromethane (Surr)	107		70 - 130		10/09/13 13:07	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 140		10/09/13 13:07	1

TestAmerica Corpus Christi

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 560-93600/3

Matrix: Water

Analysis Batch: 93600

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0250	0.02667		mg/L		107	70 - 130
Ethylbenzene	0.0250	0.02432		mg/L		97	70 - 130
Toluene	0.0250	0.02572		mg/L		103	70 - 130
Xylenes, Total	0.0750	0.07344		mg/L		98	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Dibromofluoromethane (Surr)	102		70 - 130
1,2-Dichloroethane-d4 (Surr)	110		70 - 140

Lab Sample ID: 560-42953-1 MS

Matrix: Water

Analysis Batch: 93600

Client Sample ID: Doom Well

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.000140		0.0250	0.02828		mg/L		113	70 - 130
Ethylbenzene	<0.000200		0.0250	0.02555		mg/L		102	70 - 130
Toluene	<0.000300		0.0250	0.02641		mg/L		106	70 - 130
Xylenes, Total	<0.000226		0.0750	0.07555		mg/L		101	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	96		70 - 130
Dibromofluoromethane (Surr)	104		70 - 130
1,2-Dichloroethane-d4 (Surr)	110		70 - 140

Lab Sample ID: 560-42953-1 MSD

Matrix: Water

Analysis Batch: 93600

Client Sample ID: Doom Well

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.000140		0.0250	0.02849		mg/L		114	70 - 130	1	20
Ethylbenzene	<0.000200		0.0250	0.02581		mg/L		103	70 - 130	1	20
Toluene	<0.000300		0.0250	0.02625		mg/L		105	70 - 130	1	20
Xylenes, Total	<0.000226		0.0750	0.07648		mg/L		102	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	93		70 - 130
4-Bromofluorobenzene (Surr)	96		70 - 130
Dibromofluoromethane (Surr)	104		70 - 130
1,2-Dichloroethane-d4 (Surr)	110		70 - 140

TestAmerica Corpus Christi

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 560-93577/1-A
Matrix: Water
Analysis Batch: 93638

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 93577

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.310		1.00	0.310	mg/L		10/08/13 10:45	10/09/13 16:01	1

Lab Sample ID: LCS 560-93577/2-A
Matrix: Water
Analysis Batch: 93638

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 93577

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	50.0	51.82		mg/L		104	80 - 120

Lab Sample ID: MB 560-93621/1-A
Matrix: Water
Analysis Batch: 93638

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 93621

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.310		1.00	0.310	mg/L		10/09/13 10:20	10/09/13 18:34	1

Lab Sample ID: LCS 560-93621/2-A
Matrix: Water
Analysis Batch: 93638

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 93621

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	50.0	51.34		mg/L		103	80 - 120

Method: 120.1 - Conductivity, Specific Conductance

Lab Sample ID: MB 560-93902/3
Matrix: Water
Analysis Batch: 93902

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.00		1.00	1.00	umhos/cm			10/16/13 16:15	1

Lab Sample ID: LCS 560-93902/4
Matrix: Water
Analysis Batch: 93902

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	1000	1003		umhos/cm		100	90 - 110

Lab Sample ID: 560-42953-8 DU
Matrix: Water
Analysis Batch: 93902

Client Sample ID: ACW-15 Purge
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	691		691.0		umhos/cm		0	

TestAmerica Corpus Christi

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Method: 120.1 - Conductivity, Specific Conductance (Continued)

Lab Sample ID: 560-42953-11 DU
Matrix: Water
Analysis Batch: 93902

Client Sample ID: ACW-14 Purge
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Specific Conductance	804		804.0		umhos/cm		0	

Method: 9056 - Anions, Ion Chromatography

Lab Sample ID: MB 560-93693/34
Matrix: Water
Analysis Batch: 93693

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.192		1.00	0.192	mg/L			10/11/13 00:00	1

Lab Sample ID: LCS 560-93693/35
Matrix: Water
Analysis Batch: 93693

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.940		mg/L		99	80 - 120

Lab Sample ID: 560-42953-1 MS
Matrix: Water
Analysis Batch: 93693

Client Sample ID: Doom Well
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	29.1		20.0	47.73		mg/L		93	80 - 120

Lab Sample ID: 560-42953-1 MSD
Matrix: Water
Analysis Batch: 93693

Client Sample ID: Doom Well
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	29.1		20.0	47.81		mg/L		93	80 - 120	0	30

Lab Sample ID: MB 560-93741/3
Matrix: Water
Analysis Batch: 93741

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.192		1.00	0.192	mg/L			10/11/13 13:35	1

Lab Sample ID: LCS 560-93741/4
Matrix: Water
Analysis Batch: 93741

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.687		mg/L		97	80 - 120

TestAmerica Corpus Christi

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Method: 9056 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 560-42953-5 MS

Matrix: Water

Analysis Batch: 93741

Client Sample ID: ACW-13 Upper

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	301		100	393.3		mg/L		92	80 - 120

Lab Sample ID: 560-42953-5 MSD

Matrix: Water

Analysis Batch: 93741

Client Sample ID: ACW-13 Upper

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	301		100	389.9		mg/L		89	80 - 120	1	30

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 560-93585/1

Matrix: Water

Analysis Batch: 93585

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10.0		10.0	10.0	mg/L			10/08/13 11:00	1

Lab Sample ID: LCS 560-93585/2

Matrix: Water

Analysis Batch: 93585

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	2250	2300		mg/L		102	80 - 120

Lab Sample ID: 560-42953-2 MS

Matrix: Water

Analysis Batch: 93585

Client Sample ID: Dup-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	693		2250	2734		mg/L		91	75 - 125

Lab Sample ID: 560-42953-2 MSD

Matrix: Water

Analysis Batch: 93585

Client Sample ID: Dup-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids	693		2250	2700		mg/L		89	75 - 125	1	20

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Client Sample ID: Doom Well

Date Collected: 10/03/13 14:17

Date Received: 10/05/13 10:10

Lab Sample ID: 560-42953-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	93600	10/09/13 12:42	RJT	TAL CC
Total/NA	Prep	3010A			93577	10/08/13 10:45	MIG	TAL CC
Total/NA	Analysis	6010B		1	93638	10/09/13 18:18	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	93585	10/08/13 11:00	OV56	TAL CC
Total/NA	Analysis	9056		2	93693	10/11/13 00:49	HMZ	TAL CC
Total/NA	Analysis	120.1		1	93902	10/16/13 16:15	OV56	TAL CC

Client Sample ID: Dup-1

Date Collected: 10/03/13 00:00

Date Received: 10/05/13 10:10

Lab Sample ID: 560-42953-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	93563	10/08/13 17:16	RJT	TAL CC
Total/NA	Prep	3010A			93577	10/08/13 10:45	MIG	TAL CC
Total/NA	Analysis	6010B		1	93638	10/09/13 18:22	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	93585	10/08/13 11:00	OV56	TAL CC
Total/NA	Analysis	9056		5	93741	10/11/13 19:32	HMZ	TAL CC
Total/NA	Analysis	120.1		1	93902	10/16/13 16:15	OV56	TAL CC

Client Sample ID: ACW-14 Lower

Date Collected: 10/02/13 13:40

Date Received: 10/05/13 10:10

Lab Sample ID: 560-42953-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	93563	10/08/13 17:41	RJT	TAL CC
Total/NA	Prep	3010A			93577	10/08/13 10:45	MIG	TAL CC
Total/NA	Analysis	6010B		1	93638	10/09/13 18:26	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	93585	10/08/13 11:00	OV56	TAL CC
Total/NA	Analysis	9056		2	93693	10/11/13 02:17	HMZ	TAL CC
Total/NA	Analysis	120.1		1	93902	10/16/13 16:15	OV56	TAL CC

Client Sample ID: ACW-15 Upper

Date Collected: 10/02/13 12:20

Date Received: 10/05/13 10:10

Lab Sample ID: 560-42953-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	93563	10/08/13 18:06	RJT	TAL CC
Total/NA	Prep	3010A			93621	10/09/13 10:20	MIG	TAL CC
Total/NA	Analysis	6010B		1	93638	10/09/13 19:11	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	93585	10/08/13 11:00	OV56	TAL CC
Total/NA	Analysis	9056		2	93693	10/11/13 02:39	HMZ	TAL CC

TestAmerica Corpus Christi

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Client Sample ID: ACW-15 Upper

Lab Sample ID: 560-42953-4

Date Collected: 10/02/13 12:20

Matrix: Water

Date Received: 10/05/13 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	120.1		1	93902	10/16/13 16:15	OV56	TAL CC

Client Sample ID: ACW-13 Upper

Lab Sample ID: 560-42953-5

Date Collected: 10/02/13 11:50

Matrix: Water

Date Received: 10/05/13 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	93563	10/08/13 18:31	RJT	TAL CC
Total/NA	Prep	3010A			93621	10/09/13 10:20	MIG	TAL CC
Total/NA	Analysis	6010B		1	93638	10/09/13 19:15	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	93585	10/08/13 11:00	OV56	TAL CC
Total/NA	Analysis	9056		10	93741	10/11/13 19:55	HMZ	TAL CC
Total/NA	Analysis	120.1		1	93902	10/16/13 16:15	OV56	TAL CC

Client Sample ID: ACW-13 Purge

Lab Sample ID: 560-42953-6

Date Collected: 10/02/13 17:50

Matrix: Water

Date Received: 10/05/13 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	93563	10/08/13 18:56	RJT	TAL CC
Total/NA	Prep	3010A			93621	10/09/13 10:20	MIG	TAL CC
Total/NA	Analysis	6010B		1	93638	10/09/13 19:20	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	93585	10/08/13 11:00	OV56	TAL CC
Total/NA	Analysis	9056		10	93741	10/11/13 21:04	HMZ	TAL CC
Total/NA	Analysis	120.1		1	93902	10/16/13 16:15	OV56	TAL CC

Client Sample ID: ACW-13 Lower

Lab Sample ID: 560-42953-7

Date Collected: 10/02/13 11:55

Matrix: Water

Date Received: 10/05/13 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	93563	10/08/13 19:21	RJT	TAL CC
Total/NA	Prep	3010A			93621	10/09/13 10:20	MIG	TAL CC
Total/NA	Analysis	6010B		1	93638	10/09/13 19:24	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	93585	10/08/13 11:00	OV56	TAL CC
Total/NA	Analysis	9056		10	93741	10/11/13 21:26	HMZ	TAL CC
Total/NA	Analysis	120.1		1	93902	10/16/13 16:15	OV56	TAL CC

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Client Sample ID: ACW-15 Purge

Lab Sample ID: 560-42953-8

Date Collected: 10/03/13 12:59

Matrix: Water

Date Received: 10/05/13 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	93563	10/08/13 19:46	RJT	TAL CC
Total/NA	Prep	3010A			93621	10/09/13 10:20	MIG	TAL CC
Total/NA	Analysis	6010B		1	93638	10/09/13 19:28	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	93585	10/08/13 11:00	OV56	TAL CC
Total/NA	Analysis	9056		5	93741	10/11/13 21:48	HMZ	TAL CC
Total/NA	Analysis	120.1		1	93902	10/16/13 16:15	OV56	TAL CC

Client Sample ID: ACW-14 Upper

Lab Sample ID: 560-42953-9

Date Collected: 10/02/13 13:35

Matrix: Water

Date Received: 10/05/13 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	93563	10/08/13 20:11	RJT	TAL CC
Total/NA	Prep	3010A			93621	10/09/13 10:20	MIG	TAL CC
Total/NA	Analysis	6010B		1	93638	10/09/13 19:32	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	93585	10/08/13 11:00	OV56	TAL CC
Total/NA	Analysis	9056		2	93693	10/11/13 04:29	HMZ	TAL CC
Total/NA	Analysis	120.1		1	93902	10/16/13 16:15	OV56	TAL CC

Client Sample ID: ACW-15 Lower

Lab Sample ID: 560-42953-10

Date Collected: 10/02/13 12:25

Matrix: Water

Date Received: 10/05/13 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	93600	10/09/13 14:23	RJT	TAL CC
Total/NA	Prep	3010A			93621	10/09/13 10:20	MIG	TAL CC
Total/NA	Analysis	6010B		1	93638	10/09/13 19:36	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	93585	10/08/13 11:00	OV56	TAL CC
Total/NA	Analysis	9056		2	93693	10/11/13 04:51	HMZ	TAL CC
Total/NA	Analysis	120.1		1	93902	10/16/13 16:15	OV56	TAL CC

Client Sample ID: ACW-14 Purge

Lab Sample ID: 560-42953-11

Date Collected: 10/02/13 16:28

Matrix: Water

Date Received: 10/05/13 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	93600	10/09/13 14:48	RJT	TAL CC
Total/NA	Prep	3010A			93621	10/09/13 10:20	MIG	TAL CC
Total/NA	Analysis	6010B		1	93638	10/09/13 19:40	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	93585	10/08/13 11:00	OV56	TAL CC
Total/NA	Analysis	9056		10	93741	10/11/13 22:10	HMZ	TAL CC

TestAmerica Corpus Christi

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Client Sample ID: ACW-14 Purge

Lab Sample ID: 560-42953-11

Date Collected: 10/02/13 16:28

Matrix: Water

Date Received: 10/05/13 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	120.1		1	93902	10/16/13 16:15	OV56	TAL CC

Client Sample ID: Trip Blank

Lab Sample ID: 560-42953-12

Date Collected: 10/03/13 00:00

Matrix: Water

Date Received: 10/05/13 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	93600	10/09/13 13:32	RJT	TAL CC

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Laboratory: TestAmerica Corpus Christi

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Kansas	NELAP	7	E-10362	10-31-14
Oklahoma	State Program	6	9968	08-31-14
Texas	NELAP	6	T104704210-12-8	03-31-14
USDA	Federal		P330-11-00060	02-03-14

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CC
6010B	Metals (ICP)	SW846	TAL CC
120.1	Conductivity, Specific Conductance	MCAWW	TAL CC
9056	Anions, Ion Chromatography	SW846	TAL CC
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CC

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

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

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plant

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-42953-1	Doom Well	Water	10/03/13 14:17	10/05/13 10:10
560-42953-2	Dup-1	Water	10/03/13 00:00	10/05/13 10:10
560-42953-3	ACW-14 Lower	Water	10/02/13 13:40	10/05/13 10:10
560-42953-4	ACW-15 Upper	Water	10/02/13 12:20	10/05/13 10:10
560-42953-5	ACW-13 Upper	Water	10/02/13 11:50	10/05/13 10:10
560-42953-6	ACW-13 Purge	Water	10/02/13 17:50	10/05/13 10:10
560-42953-7	ACW-13 Lower	Water	10/02/13 11:55	10/05/13 10:10
560-42953-8	ACW-15 Purge	Water	10/03/13 12:59	10/05/13 10:10
560-42953-9	ACW-14 Upper	Water	10/02/13 13:35	10/05/13 10:10
560-42953-10	ACW-15 Lower	Water	10/02/13 12:25	10/05/13 10:10
560-42953-11	ACW-14 Purge	Water	10/02/13 16:28	10/05/13 10:10
560-42953-12	Trip Blank	Water	10/03/13 00:00	10/05/13 10:10

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Loc: 560
42953

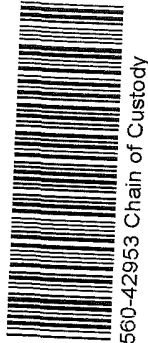
Lab Work Order #

ID#:

Page 1 of 1

Client: Frank McConnell		Telephone: 432-687-5400		Preservative		R		C		E	
ARCADIS		Fax:		Filtered (✓)							
Address: 1004 N Big Spring Suite 300		E-mail Address: 432-687-5401		# of Containers		1		3		2	
City: Midland State: TX Zip: 79701		E-mail Address: hank.mcconnell@arcadis-us.com		Container Information							
Project Name/Location (City, State): KMEP Jail GP		Project #: MT001127.0001		PARAMETER ANALYSIS & METHOD BTEX Sodium TDS, Cond., C							
Sample's Printed Name: Russell Grant		Sample's Signature: <i>[Signature]</i>									

Sample ID	Collection Date	Time	Type (✓)	Matrix	REMARKS
Doom well	10/3	1417	X	W	
Dup-1	10/3	—	X	W	
ACW-14 Lower	10/2	1340	X	W	
ACW-15 upper	10/2	1220	X	W	
ACW-13 upper	10/2	1150	X	W	
ACW-13 Purge	10/2	1750	X	W	
ACW-13 Lower	10/2	1155	X	W	
ACW-15 Purge	10/3	1259	X	W	
ACW-14 Upper	10/2	1335	X	W	
ACW-15 Lower	10/2	1225	X	W	
ACW-14 Purge	10/2	1620	X	W	
Temp Blank	—	—	—	—	
Trip Blank	—	—	—	—	



Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

FedEx Sat

Laboratory Information and Receipt Lab Name: Test America - CC Cooler Custody Seal (✓) ☒ Intact ☐ Not Intact Sample Receipt: 202005 Condition/Cooler Temp: 21°C		Relinquished By Printed Name: Russell Grant Signature: <i>[Signature]</i> Firm: ARCADIS Date/Time: 10/4/13 1543		Received By Printed Name: V. Kood Signature: <i>[Signature]</i> Firm/Courier: 25th Avenue Date/Time: 10/5/13 1010	
Laboratory Information and Receipt Lab Name: Test America - CC Cooler Custody Seal (✓) ☒ Intact ☐ Not Intact Sample Receipt: 202005 Condition/Cooler Temp: 21°C		Relinquished By Printed Name: Russell Grant Signature: <i>[Signature]</i> Firm: ARCADIS Date/Time: 10/4/13 1543		Received By Printed Name: V. Kood Signature: <i>[Signature]</i> Firm/Courier: 25th Avenue Date/Time: 10/5/13 1010	

Shipping Tracking #: **9019 3579 6334**

20730826 CoC AR Form 01.12.2007

11/14/2013

WHITE - Laboratory returns with results
YELLOW - Lab copy
PINK - Retained by ARCADIS

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 560-42953-1

SDG Number: October 2013

Login Number: 42953

List Number: 1

Creator: Rood, Vivian R

List Source: TestAmerica Corpus Christi

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

Default Detection Limits

Client: ARCADIS U.S., Inc.
Project/Site: KMEP Jal #4 Gas Plan

TestAmerica Job ID: 560-42953-1
SDG: October 2013

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	MQL	MDL	Units	Method
Benzene	0.00100	0.000140	mg/L	8260B
Ethylbenzene	0.00100	0.000200	mg/L	8260B
Toluene	0.00100	0.000300	mg/L	8260B
Xylenes, Total	0.00300	0.000226	mg/L	8260B

Method: 6010B - Metals (ICP)

Analyte	MQL	MDL	Units	Method
Sodium	1.00	0.310	mg/L	6010B

General Chemistry

Analyte	MQL	MDL	Units	Method
Specific Conductance	1.00	1.00	umhos/cm	120.1
Chloride	1.00	0.192	mg/L	9056
Total Dissolved Solids	10.0	10.0	mg/L	SM 2540C

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Corpus Christi
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Tel: (361)289-2673

TestAmerica Job ID: 560-44767-1

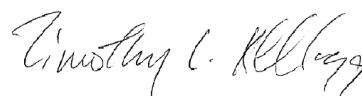
TestAmerica Sample Delivery Group: January 2014

Client Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

For:

ARCADIS U.S., Inc.
1004 North Big Spring
Suite 300
Midland, Texas 79701

Attn: Hank McConnell



Authorized for release by:

1/24/2014 4:16:22 PM

Timothy Kellogg, Lab Director
(361)289-2673

tim.kellogg@testamericainc.com

LINKS

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results through

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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

Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery exceeds the control limits

Glossary

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

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Job ID: 560-44767-1

Laboratory: TestAmerica Corpus Christi

Narrative

Receipt

The samples were received on 1/11/2014 12:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 0.8° C, 1.5° C, 1.8° C, 1.9° C and 2.2° C.

Metals

Method(s) EPA 6010B: It was noted that the matrix spike and matrix spike duplicate (MS/MSD) recoveries for sodium on 560-44767-34 were outside of the control limits. Matrix interferences inherent to the sample are suspected to be the cause of the recoveries. No other analytical or quality issues were noted.

General Chemistry

Method(s) SM 2540C: It was noted that the matrix spike and matrix spike duplicate (MS/MSD) recoveries for total dissolved solids (TDS) on 560-44767-2, -10 and -25 were outside of the control limits. Matrix interferences inherent to the sample are suspected to be the cause of the recoveries. The associated laboratory control sample (LCS) recovery was within acceptance limits. No other analytical or quality issues were noted.

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-15 167'

Date Collected: 01/08/14 13:10

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	-		01/14/14 13:05	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	-		01/14/14 13:05	1
Toluene	<0.000300		0.00100	0.000300	mg/L	-		01/14/14 13:05	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	-		01/14/14 13:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		70 - 130		01/14/14 13:05	1
4-Bromofluorobenzene (Surr)	100		70 - 130		01/14/14 13:05	1
Dibromofluoromethane (Surr)	100		70 - 130		01/14/14 13:05	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 140		01/14/14 13:05	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	87.6		1.00	0.310	mg/L	-	01/14/14 10:40	01/15/14 16:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	60.5		20.0	5.00	mg/L	-		01/16/14 12:02	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	738		1.00	1.00	umhos/cm	-		01/14/14 10:00	1
Total Dissolved Solids	474		10.0	10.0	mg/L	-		01/14/14 10:45	1

Client Sample ID: ACW-12 147' 5"

Date Collected: 01/08/14 16:40

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00203		0.00100	0.000140	mg/L	-		01/14/14 13:30	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	-		01/14/14 13:30	1
Toluene	<0.000300		0.00100	0.000300	mg/L	-		01/14/14 13:30	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	-		01/14/14 13:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		01/14/14 13:30	1
4-Bromofluorobenzene (Surr)	100		70 - 130		01/14/14 13:30	1
Dibromofluoromethane (Surr)	99		70 - 130		01/14/14 13:30	1
1,2-Dichloroethane-d4 (Surr)	109		70 - 140		01/14/14 13:30	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	260		1.00	0.310	mg/L	-	01/14/14 10:40	01/15/14 16:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1350		160	40.0	mg/L	-		01/16/14 10:39	8

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	4880		1.00	1.00	umhos/cm	-		01/14/14 10:00	1
Total Dissolved Solids	3500		10.0	10.0	mg/L	-		01/14/14 10:45	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-7 109.9'

Lab Sample ID: 560-44767-3

Date Collected: 01/08/14 15:43

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000546	J	0.00100	0.000140	mg/L	—		01/14/14 13:56	1
Ethylbenzene	0.00140		0.00100	0.000200	mg/L	—		01/14/14 13:56	1
Toluene	0.000407	J	0.00100	0.000300	mg/L	—		01/14/14 13:56	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		01/14/14 13:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		01/14/14 13:56	1
4-Bromofluorobenzene (Surr)	102		70 - 130		01/14/14 13:56	1
Dibromofluoromethane (Surr)	100		70 - 130		01/14/14 13:56	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 140		01/14/14 13:56	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	2310		1.00	0.310	mg/L	—	01/14/14 10:40	01/15/14 16:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3190		400	100	mg/L	—		01/16/14 10:40	20
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	11300		1.00	1.00	umhos/cm	—		01/14/14 10:00	1
Total Dissolved Solids	6470		10.0	10.0	mg/L	—		01/14/14 10:45	1

Client Sample ID: ACW-10 137' 7"

Lab Sample ID: 560-44767-4

Date Collected: 01/09/14 09:38

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		01/14/14 14:20	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		01/14/14 14:20	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		01/14/14 14:20	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		01/14/14 14:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	92		70 - 130		01/14/14 14:20	1
4-Bromofluorobenzene (Surr)	101		70 - 130		01/14/14 14:20	1
Dibromofluoromethane (Surr)	102		70 - 130		01/14/14 14:20	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 140		01/14/14 14:20	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	241		1.00	0.310	mg/L	—	01/14/14 10:40	01/15/14 17:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1080		200	50.0	mg/L	—		01/16/14 12:04	10
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	4110		1.00	1.00	umhos/cm	—		01/14/14 10:00	1
Total Dissolved Solids	2860		10.0	10.0	mg/L	—		01/14/14 10:45	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-15 152'

Lab Sample ID: 560-44767-5

Date Collected: 01/08/14 13:00

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		01/14/14 14:46	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		01/14/14 14:46	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		01/14/14 14:46	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		01/14/14 14:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		70 - 130		01/14/14 14:46	1
4-Bromofluorobenzene (Surr)	99		70 - 130		01/14/14 14:46	1
Dibromofluoromethane (Surr)	98		70 - 130		01/14/14 14:46	1
1,2-Dichloroethane-d4 (Surr)	116		70 - 140		01/14/14 14:46	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	92.2		1.00	0.310	mg/L	—	01/15/14 12:00	01/15/14 19:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	59.2		20.0	5.00	mg/L	—		01/16/14 12:04	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	753		1.00	1.00	umhos/cm	—		01/14/14 10:00	1
Total Dissolved Solids	481		10.0	10.0	mg/L	—		01/14/14 10:45	1

Client Sample ID: ACW-9 153' 11"

Lab Sample ID: 560-44767-6

Date Collected: 01/09/14 10:25

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		01/14/14 15:11	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		01/14/14 15:11	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		01/14/14 15:11	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		01/14/14 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		01/14/14 15:11	1
4-Bromofluorobenzene (Surr)	97		70 - 130		01/14/14 15:11	1
Dibromofluoromethane (Surr)	98		70 - 130		01/14/14 15:11	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 140		01/14/14 15:11	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	4060		1.00	0.310	mg/L	—	01/15/14 12:00	01/15/14 19:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5560		800	200	mg/L	—		01/16/14 10:42	40

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	18200		1.00	1.00	umhos/cm	—		01/14/14 10:00	1
Total Dissolved Solids	10700		10.0	10.0	mg/L	—		01/14/14 10:45	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ENSR-1 121.5"

Lab Sample ID: 560-44767-7

Date Collected: 01/09/14 12:50

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		01/14/14 15:56	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		01/14/14 15:56	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		01/14/14 15:56	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		01/14/14 15:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		01/14/14 15:56	1
4-Bromofluorobenzene (Surr)	100		70 - 130		01/14/14 15:56	1
Dibromofluoromethane (Surr)	101		70 - 130		01/14/14 15:56	1
1,2-Dichloroethane-d4 (Surr)	116		70 - 140		01/14/14 15:56	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	681		1.00	0.310	mg/L	—	01/15/14 12:00	01/15/14 19:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	421		100	25.0	mg/L	—		01/16/14 10:43	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	2750		1.00	1.00	umhos/cm	—		01/14/14 10:00	1
Total Dissolved Solids	1610		10.0	10.0	mg/L	—		01/14/14 10:45	1

Client Sample ID: ACW-12 162' 11"

Lab Sample ID: 560-44767-8

Date Collected: 01/09/14 16:50

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00124		0.00100	0.000140	mg/L	—		01/14/14 16:21	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		01/14/14 16:21	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		01/14/14 16:21	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		01/14/14 16:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		70 - 130		01/14/14 16:21	1
4-Bromofluorobenzene (Surr)	98		70 - 130		01/14/14 16:21	1
Dibromofluoromethane (Surr)	102		70 - 130		01/14/14 16:21	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 140		01/14/14 16:21	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	268		1.00	0.310	mg/L	—	01/15/14 12:00	01/15/14 19:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1350		200	50.0	mg/L	—		01/16/14 10:44	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	4990		1.00	1.00	umhos/cm	—		01/14/14 10:00	1
Total Dissolved Solids	3090		10.0	10.0	mg/L	—		01/14/14 10:45	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: Trip Blank

Lab Sample ID: 560-44767-9

Date Collected: 01/09/14 00:00

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			01/14/14 16:46	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/14/14 16:46	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/14/14 16:46	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/14/14 16:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		01/14/14 16:46	1
4-Bromofluorobenzene (Surr)	99		70 - 130		01/14/14 16:46	1
Dibromofluoromethane (Surr)	100		70 - 130		01/14/14 16:46	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 140		01/14/14 16:46	1

Client Sample ID: ACW-10 154' 11"

Lab Sample ID: 560-44767-10

Date Collected: 01/09/14 09:56

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			01/14/14 17:11	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/14/14 17:11	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/14/14 17:11	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/14/14 17:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		70 - 130		01/14/14 17:11	1
4-Bromofluorobenzene (Surr)	100		70 - 130		01/14/14 17:11	1
Dibromofluoromethane (Surr)	101		70 - 130		01/14/14 17:11	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 140		01/14/14 17:11	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	254		1.00	0.310	mg/L		01/15/14 12:00	01/15/14 19:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1100		200	50.0	mg/L			01/16/14 12:05	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	4200		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	2770		10.0	10.0	mg/L			01/14/14 10:45	1

Client Sample ID: ENSR-1 130'

Lab Sample ID: 560-44767-11

Date Collected: 01/09/14 13:00

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			01/14/14 17:37	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/14/14 17:37	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/14/14 17:37	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/14/14 17:37	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ENSR-1 130'

Lab Sample ID: 560-44767-11

Date Collected: 01/09/14 13:00

Matrix: Water

Date Received: 01/11/14 12:20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		70 - 130		01/14/14 17:37	1
4-Bromofluorobenzene (Surr)	97		70 - 130		01/14/14 17:37	1
Dibromofluoromethane (Surr)	102		70 - 130		01/14/14 17:37	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 140		01/14/14 17:37	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	676		1.00	0.310	mg/L		01/15/14 12:00	01/15/14 19:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	389		100	25.0	mg/L			01/16/14 10:45	5
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	2760		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	1600		10.0	10.0	mg/L			01/14/14 10:45	1

Client Sample ID: ENSR-1 145' 5"

Lab Sample ID: 560-44767-12

Date Collected: 01/09/14 13:10

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000634	J	0.00100	0.000140	mg/L			01/14/14 18:02	1
Ethylbenzene	0.000227	J	0.00100	0.000200	mg/L			01/14/14 18:02	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/14/14 18:02	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/14/14 18:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		70 - 130		01/14/14 18:02	1
4-Bromofluorobenzene (Surr)	99		70 - 130		01/14/14 18:02	1
Dibromofluoromethane (Surr)	102		70 - 130		01/14/14 18:02	1
1,2-Dichloroethane-d4 (Surr)	116		70 - 140		01/14/14 18:02	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	994		1.00	0.310	mg/L		01/15/14 12:00	01/15/14 19:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	867		160	40.0	mg/L			01/16/14 10:46	8
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	4050		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	2100		10.0	10.0	mg/L			01/14/14 10:45	1

Client Sample ID: ENSR-3 121.5'

Lab Sample ID: 560-44767-13

Date Collected: 01/09/14 14:10

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000480	J	0.00100	0.000140	mg/L			01/14/14 18:27	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ENSR-3 121.5'

Lab Sample ID: 560-44767-13

Date Collected: 01/09/14 14:10

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	0.00101		0.00100	0.000200	mg/L			01/14/14 18:27	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/14/14 18:27	1
Xylenes, Total	0.000523	J	0.00300	0.000226	mg/L			01/14/14 18:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		01/14/14 18:27	1
4-Bromofluorobenzene (Surr)	102		70 - 130		01/14/14 18:27	1
Dibromofluoromethane (Surr)	94		70 - 130		01/14/14 18:27	1
1,2-Dichloroethane-d4 (Surr)	115		70 - 140		01/14/14 18:27	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	188		1.00	0.310	mg/L		01/16/14 07:30	01/16/14 12:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	348		80.0	20.0	mg/L			01/16/14 10:48	4
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	2040		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	1110		10.0	10.0	mg/L			01/14/14 10:45	1

Client Sample ID: ENSR-3 144.5'

Lab Sample ID: 560-44767-14

Date Collected: 01/09/14 14:30

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0633		0.00100	0.000140	mg/L			01/14/14 18:52	1
Ethylbenzene	0.00243		0.00100	0.000200	mg/L			01/14/14 18:52	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/14/14 18:52	1
Xylenes, Total	0.000623	J	0.00300	0.000226	mg/L			01/14/14 18:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		70 - 130		01/14/14 18:52	1
4-Bromofluorobenzene (Surr)	99		70 - 130		01/14/14 18:52	1
Dibromofluoromethane (Surr)	98		70 - 130		01/14/14 18:52	1
1,2-Dichloroethane-d4 (Surr)	111		70 - 140		01/14/14 18:52	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	175		1.00	0.310	mg/L		01/16/14 07:30	01/16/14 12:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	518		100	25.0	mg/L			01/16/14 10:48	5
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	2440		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	1400		10.0	10.0	mg/L			01/14/14 10:45	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-11 154.5'

Lab Sample ID: 560-44767-15

Date Collected: 01/09/14 15:10

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00154		0.00100	0.000140	mg/L	—		01/14/14 19:17	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		01/14/14 19:17	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		01/14/14 19:17	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		01/14/14 19:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		70 - 130		01/14/14 19:17	1
4-Bromofluorobenzene (Surr)	95		70 - 130		01/14/14 19:17	1
Dibromofluoromethane (Surr)	100		70 - 130		01/14/14 19:17	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 140		01/14/14 19:17	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	4120		1.00	0.310	mg/L	—	01/16/14 07:30	01/16/14 12:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7310		800	200	mg/L	—		01/16/14 10:49	40
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	19600		1.00	1.00	umhos/cm	—		01/14/14 10:00	1
Total Dissolved Solids	13200		10.0	10.0	mg/L	—		01/14/14 10:45	1

Client Sample ID: ACW-11 138.5'

Lab Sample ID: 560-44767-16

Date Collected: 01/09/14 15:00

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000753	J	0.00100	0.000140	mg/L	—		01/14/14 19:43	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		01/14/14 19:43	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		01/14/14 19:43	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		01/14/14 19:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		01/14/14 19:43	1
4-Bromofluorobenzene (Surr)	98		70 - 130		01/14/14 19:43	1
Dibromofluoromethane (Surr)	99		70 - 130		01/14/14 19:43	1
1,2-Dichloroethane-d4 (Surr)	117		70 - 140		01/14/14 19:43	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	1430		1.00	0.310	mg/L	—	01/16/14 07:30	01/16/14 12:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3000		400	100	mg/L	—		01/16/14 10:49	20
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	12100		1.00	1.00	umhos/cm	—		01/14/14 10:00	1
Total Dissolved Solids	8010		10.0	10.0	mg/L	—		01/14/14 16:30	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ENSR-3 135'

Lab Sample ID: 560-44767-17

Date Collected: 01/09/14 14:20

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000694	J	0.00100	0.000140	mg/L			01/14/14 20:08	1
Ethylbenzene	0.00117		0.00100	0.000200	mg/L			01/14/14 20:08	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/14/14 20:08	1
Xylenes, Total	0.000473	J	0.00300	0.000226	mg/L			01/14/14 20:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		70 - 130		01/14/14 20:08	1
4-Bromofluorobenzene (Surr)	98		70 - 130		01/14/14 20:08	1
Dibromofluoromethane (Surr)	100		70 - 130		01/14/14 20:08	1
1,2-Dichloroethane-d4 (Surr)	116		70 - 140		01/14/14 20:08	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	180		1.00	0.310	mg/L		01/16/14 07:30	01/16/14 12:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	370		80.0	20.0	mg/L			01/16/14 10:50	4
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	2060		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	1040		10.0	10.0	mg/L			01/14/14 16:30	1

Client Sample ID: Trip Blank

Lab Sample ID: 560-44767-18

Date Collected: 01/09/14 00:00

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			01/14/14 20:33	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/14/14 20:33	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/14/14 20:33	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/14/14 20:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		70 - 130		01/14/14 20:33	1
4-Bromofluorobenzene (Surr)	98		70 - 130		01/14/14 20:33	1
Dibromofluoromethane (Surr)	104		70 - 130		01/14/14 20:33	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 140		01/14/14 20:33	1

Client Sample ID: ACW-10

Lab Sample ID: 560-44767-19

Date Collected: 01/10/14 12:12

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00298		0.00100	0.000140	mg/L			01/14/14 20:58	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/14/14 20:58	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/14/14 20:58	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/14/14 20:58	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-10

Date Collected: 01/10/14 12:12

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-19

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		70 - 130		01/14/14 20:58	1
4-Bromofluorobenzene (Surr)	97		70 - 130		01/14/14 20:58	1
Dibromofluoromethane (Surr)	99		70 - 130		01/14/14 20:58	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 140		01/14/14 20:58	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	490		1.00	0.310	mg/L		01/16/14 07:30	01/16/14 13:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2020		320	80.0	mg/L			01/16/14 10:50	16
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	6800		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	4290		10.0	10.0	mg/L			01/14/14 16:30	1

Client Sample ID: ENSR-3

Date Collected: 01/10/14 10:57

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-20

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0302		0.00100	0.000140	mg/L			01/14/14 21:24	1
Ethylbenzene	0.00195		0.00100	0.000200	mg/L			01/14/14 21:24	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/14/14 21:24	1
Xylenes, Total	0.00714		0.00300	0.000226	mg/L			01/14/14 21:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		01/14/14 21:24	1
4-Bromofluorobenzene (Surr)	99		70 - 130		01/14/14 21:24	1
Dibromofluoromethane (Surr)	94		70 - 130		01/14/14 21:24	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 140		01/14/14 21:24	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	173		1.00	0.310	mg/L		01/16/14 07:30	01/16/14 13:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	495		100	25.0	mg/L			01/16/14 10:51	5
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	2370		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	1430		10.0	10.0	mg/L			01/14/14 16:30	1

Client Sample ID: ACW-7

Date Collected: 01/09/14 12:55

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-21

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0313		0.00100	0.000140	mg/L			01/15/14 20:14	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-7

Date Collected: 01/09/14 12:55

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-21

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	0.00574		0.00100	0.000200	mg/L			01/15/14 20:14	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/15/14 20:14	1
Xylenes, Total	0.000298	J	0.00300	0.000226	mg/L			01/15/14 20:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		70 - 130		01/15/14 20:14	1
4-Bromofluorobenzene (Surr)	102		70 - 130		01/15/14 20:14	1
Dibromofluoromethane (Surr)	102		70 - 130		01/15/14 20:14	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 140		01/15/14 20:14	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	3220		1.00	0.310	mg/L		01/16/14 07:30	01/16/14 13:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4470		500	125	mg/L			01/16/14 10:51	25
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	14800		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	8490		10.0	10.0	mg/L			01/14/14 16:30	1

Client Sample ID: ACW-5

Date Collected: 01/08/14 13:58

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-22

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00180		0.00100	0.000140	mg/L			01/15/14 20:39	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/15/14 20:39	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/15/14 20:39	1
Xylenes, Total	0.000290	J	0.00300	0.000226	mg/L			01/15/14 20:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		01/15/14 20:39	1
4-Bromofluorobenzene (Surr)	100		70 - 130		01/15/14 20:39	1
Dibromofluoromethane (Surr)	97		70 - 130		01/15/14 20:39	1
1,2-Dichloroethane-d4 (Surr)	107		70 - 140		01/15/14 20:39	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	894		1.00	0.310	mg/L		01/16/14 07:30	01/16/14 13:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2080		320	80.0	mg/L			01/16/14 10:52	16
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	7320		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	4730		10.0	10.0	mg/L			01/14/14 16:30	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: DUP-1

Lab Sample ID: 560-44767-23

Date Collected: 01/10/14 00:00

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00376		0.00100	0.000140	mg/L	—		01/15/14 21:05	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		01/15/14 21:05	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		01/15/14 21:05	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		01/15/14 21:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		01/15/14 21:05	1
4-Bromofluorobenzene (Surr)	104		70 - 130		01/15/14 21:05	1
Dibromofluoromethane (Surr)	101		70 - 130		01/15/14 21:05	1
1,2-Dichloroethane-d4 (Surr)	111		70 - 140		01/15/14 21:05	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	259		1.00	0.310	mg/L	—	01/16/14 07:30	01/16/14 13:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1270		200	50.0	mg/L	—		01/16/14 11:27	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	5160		1.00	1.00	umhos/cm	—		01/14/14 10:00	1
Total Dissolved Solids	3500		10.0	10.0	mg/L	—		01/14/14 16:30	1

Client Sample ID: EB-1

Lab Sample ID: 560-44767-24

Date Collected: 01/10/14 15:06

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		01/15/14 19:49	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		01/15/14 19:49	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		01/15/14 19:49	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		01/15/14 19:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		70 - 130		01/15/14 19:49	1
4-Bromofluorobenzene (Surr)	102		70 - 130		01/15/14 19:49	1
Dibromofluoromethane (Surr)	99		70 - 130		01/15/14 19:49	1
1,2-Dichloroethane-d4 (Surr)	108		70 - 140		01/15/14 19:49	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.310		1.00	0.310	mg/L	—	01/16/14 07:30	01/16/14 13:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		20.0	5.00	mg/L	—		01/16/14 11:29	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.00		1.00	1.00	umhos/cm	—		01/14/14 10:00	1
Total Dissolved Solids	<10.0		10.0	10.0	mg/L	—		01/14/14 16:30	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-12

Lab Sample ID: 560-44767-25

Date Collected: 01/10/14 13:40

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00363		0.00100	0.000140	mg/L	—		01/15/14 21:30	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		01/15/14 21:30	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		01/15/14 21:30	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		01/15/14 21:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130		01/15/14 21:30	1
4-Bromofluorobenzene (Surr)	103		70 - 130		01/15/14 21:30	1
Dibromofluoromethane (Surr)	100		70 - 130		01/15/14 21:30	1
1,2-Dichloroethane-d4 (Surr)	109		70 - 140		01/15/14 21:30	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	266		1.00	0.310	mg/L	—	01/16/14 07:30	01/16/14 13:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1290		200	50.0	mg/L	—		01/16/14 11:30	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	5170		1.00	1.00	umhos/cm	—		01/14/14 10:00	1
Total Dissolved Solids	3430		10.0	10.0	mg/L	—		01/14/14 16:30	1

Client Sample ID: ACW-14 174'

Lab Sample ID: 560-44767-26

Date Collected: 01/08/14 12:59

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		01/15/14 21:55	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		01/15/14 21:55	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		01/15/14 21:55	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		01/15/14 21:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		70 - 130		01/15/14 21:55	1
4-Bromofluorobenzene (Surr)	102		70 - 130		01/15/14 21:55	1
Dibromofluoromethane (Surr)	99		70 - 130		01/15/14 21:55	1
1,2-Dichloroethane-d4 (Surr)	111		70 - 140		01/15/14 21:55	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	105		1.00	0.310	mg/L	—	01/16/14 07:30	01/16/14 13:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	82.7		20.0	5.00	mg/L	—		01/16/14 11:31	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	873		1.00	1.00	umhos/cm	—		01/14/14 10:00	1
Total Dissolved Solids	540		10.0	10.0	mg/L	—		01/14/14 16:30	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-2A 117' 6"

Lab Sample ID: 560-44767-27

Date Collected: 01/10/14 12:29

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00836		0.00100	0.000140	mg/L			01/15/14 22:20	1
Ethylbenzene	0.00220		0.00100	0.000200	mg/L			01/15/14 22:20	1
Toluene	0.00345		0.00100	0.000300	mg/L			01/15/14 22:20	1
Xylenes, Total	0.00258	J	0.00300	0.000226	mg/L			01/15/14 22:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		01/15/14 22:20	1
4-Bromofluorobenzene (Surr)	101		70 - 130		01/15/14 22:20	1
Dibromofluoromethane (Surr)	100		70 - 130		01/15/14 22:20	1
1,2-Dichloroethane-d4 (Surr)	108		70 - 140		01/15/14 22:20	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	2110		1.00	0.310	mg/L		01/16/14 07:30	01/16/14 13:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2340		320	80.0	mg/L			01/16/14 11:32	16
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	9180		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	5100		10.0	10.0	mg/L			01/15/14 14:00	1

Client Sample ID: ACW-4 167"

Lab Sample ID: 560-44767-28

Date Collected: 01/10/14 11:59

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0842		0.00100	0.000140	mg/L			01/15/14 22:46	1
Ethylbenzene	0.0176		0.00100	0.000200	mg/L			01/15/14 22:46	1
Toluene	0.00150		0.00100	0.000300	mg/L			01/15/14 22:46	1
Xylenes, Total	0.0281		0.00300	0.000226	mg/L			01/15/14 22:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130		01/15/14 22:46	1
4-Bromofluorobenzene (Surr)	115		70 - 130		01/15/14 22:46	1
Dibromofluoromethane (Surr)	105		70 - 130		01/15/14 22:46	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 140		01/15/14 22:46	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	31700		50.0	15.5	mg/L		01/16/14 07:30	01/17/14 11:40	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	67700		8000	2000	mg/L			01/16/14 12:05	400
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	134000		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	106000		10.0	10.0	mg/L			01/15/14 14:00	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-4 155' 6"

Lab Sample ID: 560-44767-29

Date Collected: 01/10/14 11:49

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0986		0.00100	0.000140	mg/L			01/15/14 23:11	1
Ethylbenzene	0.0231		0.00100	0.000200	mg/L			01/15/14 23:11	1
Toluene	0.00157		0.00100	0.000300	mg/L			01/15/14 23:11	1
Xylenes, Total	0.0358		0.00300	0.000226	mg/L			01/15/14 23:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		70 - 130		01/15/14 23:11	1
4-Bromofluorobenzene (Surr)	111		70 - 130		01/15/14 23:11	1
Dibromofluoromethane (Surr)	103		70 - 130		01/15/14 23:11	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 140		01/15/14 23:11	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	30200		50.0	15.5	mg/L		01/16/14 07:30	01/17/14 11:44	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52100		8000	2000	mg/L			01/16/14 12:06	400
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	114000		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	80500		10.0	10.0	mg/L			01/15/14 14:00	1

Client Sample ID: ACW-1 130'

Lab Sample ID: 560-44767-30

Date Collected: 01/10/14 15:29

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00239		0.00100	0.000140	mg/L			01/15/14 23:36	1
Ethylbenzene	0.000346	J	0.00100	0.000200	mg/L			01/15/14 23:36	1
Toluene	0.000481	J	0.00100	0.000300	mg/L			01/15/14 23:36	1
Xylenes, Total	0.000381	J	0.00300	0.000226	mg/L			01/15/14 23:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		01/15/14 23:36	1
4-Bromofluorobenzene (Surr)	100		70 - 130		01/15/14 23:36	1
Dibromofluoromethane (Surr)	108		70 - 130		01/15/14 23:36	1
1,2-Dichloroethane-d4 (Surr)	108		70 - 140		01/15/14 23:36	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	1830		1.00	0.310	mg/L		01/16/14 07:30	01/16/14 14:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3850		400	100	mg/L			01/16/14 12:06	20
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	12100		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	6780		10.0	10.0	mg/L			01/16/14 16:00	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-4

Lab Sample ID: 560-44767-31

Date Collected: 01/10/14 14:28

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.0991		0.00100	0.000140	mg/L			01/16/14 00:02	1
Ethylbenzene	0.0348		0.00100	0.000200	mg/L			01/16/14 00:02	1
Toluene	0.00276		0.00100	0.000300	mg/L			01/16/14 00:02	1
Xylenes, Total	0.0540		0.00300	0.000226	mg/L			01/16/14 00:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		01/16/14 00:02	1
4-Bromofluorobenzene (Surr)	117		70 - 130		01/16/14 00:02	1
Dibromofluoromethane (Surr)	103		70 - 130		01/16/14 00:02	1
1,2-Dichloroethane-d4 (Surr)	111		70 - 140		01/16/14 00:02	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	31400		50.0	15.5	mg/L		01/16/14 07:30	01/17/14 11:49	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	58000		8000	2000	mg/L			01/16/14 12:07	400
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	123000		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	88600		10.0	10.0	mg/L			01/16/14 16:00	1

Client Sample ID: FB-1

Lab Sample ID: 560-44767-32

Date Collected: 01/10/14 15:20

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			01/16/14 00:27	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/16/14 00:27	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/16/14 00:27	1
Xylenes, Total	0.000269	J	0.00300	0.000226	mg/L			01/16/14 00:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		70 - 130		01/16/14 00:27	1
4-Bromofluorobenzene (Surr)	99		70 - 130		01/16/14 00:27	1
Dibromofluoromethane (Surr)	102		70 - 130		01/16/14 00:27	1
1,2-Dichloroethane-d4 (Surr)	107		70 - 140		01/16/14 00:27	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	5.21		1.00	0.310	mg/L		01/16/14 07:30	01/16/14 14:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		20.0	5.00	mg/L			01/16/14 11:35	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.00		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	<10.0		10.0	10.0	mg/L			01/16/14 16:00	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: EB-2

Lab Sample ID: 560-44767-33

Date Collected: 01/10/14 15:48

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		01/16/14 00:52	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		01/16/14 00:52	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		01/16/14 00:52	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		01/16/14 00:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		70 - 130		01/16/14 00:52	1
4-Bromofluorobenzene (Surr)	102		70 - 130		01/16/14 00:52	1
Dibromofluoromethane (Surr)	102		70 - 130		01/16/14 00:52	1
1,2-Dichloroethane-d4 (Surr)	109		70 - 140		01/16/14 00:52	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	2.52		1.00	0.310	mg/L	—	01/16/14 07:30	01/16/14 14:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		20.0	5.00	mg/L	—		01/16/14 11:36	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.00		1.00	1.00	umhos/cm	—		01/14/14 10:00	1
Total Dissolved Solids	48.0		10.0	10.0	mg/L	—		01/16/14 16:00	1

Client Sample ID: ACW-2A

Lab Sample ID: 560-44767-34

Date Collected: 01/10/14 15:16

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00376		0.00100	0.000140	mg/L	—		01/16/14 01:17	1
Ethylbenzene	0.00114		0.00100	0.000200	mg/L	—		01/16/14 01:17	1
Toluene	0.000744	J	0.00100	0.000300	mg/L	—		01/16/14 01:17	1
Xylenes, Total	0.00116	J	0.00300	0.000226	mg/L	—		01/16/14 01:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		01/16/14 01:17	1
4-Bromofluorobenzene (Surr)	101		70 - 130		01/16/14 01:17	1
Dibromofluoromethane (Surr)	105		70 - 130		01/16/14 01:17	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 140		01/16/14 01:17	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	2890		1.00	0.310	mg/L	—	01/16/14 07:45	01/16/14 17:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3390		400	100	mg/L	—		01/16/14 12:07	20
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	12600		1.00	1.00	umhos/cm	—		01/14/14 10:00	1
Total Dissolved Solids	7380		10.0	10.0	mg/L	—		01/16/14 16:00	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: Trip Blank

Date Collected: 01/10/14 00:00

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-35

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			01/16/14 11:34	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/16/14 11:34	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/16/14 11:34	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/16/14 11:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130		01/16/14 11:34	1
4-Bromofluorobenzene (Surr)	98		70 - 130		01/16/14 11:34	1
Dibromofluoromethane (Surr)	99		70 - 130		01/16/14 11:34	1
1,2-Dichloroethane-d4 (Surr)	107		70 - 140		01/16/14 11:34	1

Client Sample ID: ACW-6

Date Collected: 01/09/14 11:59

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-36

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000585	J	0.00100	0.000140	mg/L			01/16/14 12:24	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/16/14 12:24	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/16/14 12:24	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/16/14 12:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		01/16/14 12:24	1
4-Bromofluorobenzene (Surr)	99		70 - 130		01/16/14 12:24	1
Dibromofluoromethane (Surr)	100		70 - 130		01/16/14 12:24	1
1,2-Dichloroethane-d4 (Surr)	107		70 - 140		01/16/14 12:24	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	1090		1.00	0.310	mg/L		01/16/14 07:45	01/16/14 18:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1130		200	50.0	mg/L			01/16/14 11:38	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	5060		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	2820		10.0	10.0	mg/L			01/15/14 14:00	1

Client Sample ID: ACW-14

Date Collected: 01/09/14 16:16

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-37

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			01/16/14 12:49	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/16/14 12:49	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/16/14 12:49	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/16/14 12:49	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-14

Date Collected: 01/09/14 16:16

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-37

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		70 - 130		01/16/14 12:49	1
4-Bromofluorobenzene (Surr)	97		70 - 130		01/16/14 12:49	1
Dibromofluoromethane (Surr)	100		70 - 130		01/16/14 12:49	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 140		01/16/14 12:49	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	116		1.00	0.310	mg/L		01/16/14 07:45	01/16/14 18:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	154		40.0	10.0	mg/L			01/16/14 11:39	2
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1110		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	660		10.0	10.0	mg/L			01/15/14 14:00	1

Client Sample ID: ACW-15

Date Collected: 01/10/14 09:06

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-38

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			01/16/14 13:14	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/16/14 13:14	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/16/14 13:14	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/16/14 13:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130		01/16/14 13:14	1
4-Bromofluorobenzene (Surr)	97		70 - 130		01/16/14 13:14	1
Dibromofluoromethane (Surr)	100		70 - 130		01/16/14 13:14	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 140		01/16/14 13:14	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	99.6		1.00	0.310	mg/L		01/16/14 07:45	01/16/14 18:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	170		40.0	10.0	mg/L			01/16/14 11:39	2
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1080		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	613		10.0	10.0	mg/L			01/16/14 16:00	1

Client Sample ID: DTP-1

Date Collected: 01/10/14 10:04

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-39

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00120		0.00100	0.000140	mg/L			01/16/14 13:39	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: DTP-1

Date Collected: 01/10/14 10:04

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-39

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	0.00141		0.00100	0.000200	mg/L			01/16/14 13:39	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/16/14 13:39	1
Xylenes, Total	0.00809		0.00300	0.000226	mg/L			01/16/14 13:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		70 - 130		01/16/14 13:39	1
4-Bromofluorobenzene (Surr)	100		70 - 130		01/16/14 13:39	1
Dibromofluoromethane (Surr)	99		70 - 130		01/16/14 13:39	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 140		01/16/14 13:39	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	174		1.00	0.310	mg/L		01/16/14 07:45	01/16/14 18:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	278		80.0	20.0	mg/L			01/16/14 11:40	4
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1890		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	1050		10.0	10.0	mg/L			01/16/14 16:00	1

Client Sample ID: ACW-13

Date Collected: 01/09/14 17:43

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-40

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			01/16/14 14:04	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/16/14 14:04	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/16/14 14:04	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/16/14 14:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		70 - 130		01/16/14 14:04	1
4-Bromofluorobenzene (Surr)	98		70 - 130		01/16/14 14:04	1
Dibromofluoromethane (Surr)	99		70 - 130		01/16/14 14:04	1
1,2-Dichloroethane-d4 (Surr)	102		70 - 140		01/16/14 14:04	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	104		1.00	0.310	mg/L		01/16/14 07:45	01/16/14 18:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	215		40.0	10.0	mg/L			01/16/14 11:40	2
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1230		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	715		10.0	10.0	mg/L			01/15/14 14:00	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-5 107'

Lab Sample ID: 560-44767-41

Date Collected: 01/08/14 14:20

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			01/16/14 11:47	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/16/14 11:47	1
Toluene	0.000675	J	0.00100	0.000300	mg/L			01/16/14 11:47	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/16/14 11:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		70 - 130		01/16/14 11:47	1
4-Bromofluorobenzene (Surr)	105		70 - 130		01/16/14 11:47	1
Dibromofluoromethane (Surr)	104		70 - 130		01/16/14 11:47	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 140		01/16/14 11:47	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	462		1.00	0.310	mg/L		01/16/14 07:45	01/16/14 18:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1240		200	50.0	mg/L			01/16/14 11:41	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	5410		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	3740		10.0	10.0	mg/L			01/15/14 14:00	1

Client Sample ID: ACW-14 159'

Lab Sample ID: 560-44767-42

Date Collected: 01/08/14 12:47

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00526		0.00100	0.000140	mg/L			01/16/14 13:30	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/16/14 13:30	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/16/14 13:30	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/16/14 13:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		70 - 130		01/16/14 13:30	1
4-Bromofluorobenzene (Surr)	96		70 - 130		01/16/14 13:30	1
Dibromofluoromethane (Surr)	101		70 - 130		01/16/14 13:30	1
1,2-Dichloroethane-d4 (Surr)	110		70 - 140		01/16/14 13:30	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	103		1.00	0.310	mg/L		01/16/14 07:45	01/16/14 18:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	85.1		20.0	5.00	mg/L			01/16/14 11:41	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	870		1.00	1.00	umhos/cm			01/14/14 10:00	1
Total Dissolved Solids	545		10.0	10.0	mg/L			01/15/14 14:00	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: Trip Blank

Lab Sample ID: 560-44767-43

Date Collected: 01/08/14 00:00

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00143		0.00100	0.000140	mg/L			01/16/14 13:55	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/16/14 13:55	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/16/14 13:55	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/16/14 13:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		70 - 130		01/16/14 13:55	1
4-Bromofluorobenzene (Surr)	101		70 - 130		01/16/14 13:55	1
Dibromofluoromethane (Surr)	102		70 - 130		01/16/14 13:55	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 140		01/16/14 13:55	1

Client Sample ID: ACW-13 160'

Lab Sample ID: 560-44767-44

Date Collected: 01/09/14 09:05

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000733	J	0.00100	0.000140	mg/L			01/16/14 14:20	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/16/14 14:20	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/16/14 14:20	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/16/14 14:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		01/16/14 14:20	1
4-Bromofluorobenzene (Surr)	100		70 - 130		01/16/14 14:20	1
Dibromofluoromethane (Surr)	103		70 - 130		01/16/14 14:20	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 140		01/16/14 14:20	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	109		1.00	0.310	mg/L		01/16/14 07:45	01/16/14 18:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	280		40.0	10.0	mg/L			01/16/14 11:42	2

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	1450		1.00	1.00	umhos/cm			01/21/14 09:00	1
Total Dissolved Solids	833		10.0	10.0	mg/L			01/15/14 14:00	1

Client Sample ID: Trip Blank

Lab Sample ID: 560-44767-45

Date Collected: 01/09/14 00:00

Matrix: Water

Date Received: 01/11/14 12:20

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000362	J	0.00100	0.000140	mg/L			01/16/14 14:45	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/16/14 14:45	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/16/14 14:45	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/16/14 14:45	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: Trip Blank

Lab Sample ID: 560-44767-45

Date Collected: 01/09/14 00:00

Matrix: Water

Date Received: 01/11/14 12:20

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Toluene-d8 (Surr)</i>	95		70 - 130		01/16/14 14:45	1
<i>4-Bromofluorobenzene (Surr)</i>	102		70 - 130		01/16/14 14:45	1
<i>Dibromofluoromethane (Surr)</i>	99		70 - 130		01/16/14 14:45	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	111		70 - 140		01/16/14 14:45	1

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 560-97186/8

Matrix: Water

Analysis Batch: 97186

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			01/14/14 12:40	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/14/14 12:40	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/14/14 12:40	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/14/14 12:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		70 - 130		01/14/14 12:40	1
4-Bromofluorobenzene (Surr)	99		70 - 130		01/14/14 12:40	1
Dibromofluoromethane (Surr)	100		70 - 130		01/14/14 12:40	1
1,2-Dichloroethane-d4 (Surr)	111		70 - 140		01/14/14 12:40	1

Lab Sample ID: LCS 560-97186/3

Matrix: Water

Analysis Batch: 97186

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0250	0.02548		mg/L		102	70 - 130
Ethylbenzene	0.0250	0.02476		mg/L		99	70 - 130
Toluene	0.0250	0.02419		mg/L		97	70 - 130
Xylenes, Total	0.0500	0.05051		mg/L		101	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	95		70 - 130
Dibromofluoromethane (Surr)	107		70 - 130
1,2-Dichloroethane-d4 (Surr)	112		70 - 140

Lab Sample ID: 560-44767-1 MS

Matrix: Water

Analysis Batch: 97186

Client Sample ID: ACW-15 167'

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.000140		0.0250	0.02620		mg/L		105	70 - 130
Ethylbenzene	<0.000200		0.0250	0.02568		mg/L		103	70 - 130
Toluene	<0.000300		0.0250	0.02503		mg/L		100	70 - 130
Xylenes, Total	<0.000226		0.0500	0.05148		mg/L		103	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	96		70 - 130
Dibromofluoromethane (Surr)	104		70 - 130
1,2-Dichloroethane-d4 (Surr)	112		70 - 140

TestAmerica Corpus Christi

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 560-44767-1 MSD

Matrix: Water

Analysis Batch: 97186

Client Sample ID: ACW-15 167'

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.000140		0.0250	0.02598		mg/L		104	70 - 130	1	20
Ethylbenzene	<0.000200		0.0250	0.02507		mg/L		100	70 - 130	2	20
Toluene	<0.000300		0.0250	0.02377		mg/L		95	70 - 130	5	20
Xylenes, Total	<0.000226		0.0500	0.05112		mg/L		102	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	95		70 - 130
4-Bromofluorobenzene (Surr)	98		70 - 130
Dibromofluoromethane (Surr)	106		70 - 130
1,2-Dichloroethane-d4 (Surr)	112		70 - 140

Lab Sample ID: MB 560-97268/8

Matrix: Water

Analysis Batch: 97268

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			01/15/14 19:23	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/15/14 19:23	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/15/14 19:23	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/15/14 19:23	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		01/15/14 19:23	1
4-Bromofluorobenzene (Surr)	101		70 - 130		01/15/14 19:23	1
Dibromofluoromethane (Surr)	99		70 - 130		01/15/14 19:23	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 140		01/15/14 19:23	1

Lab Sample ID: LCS 560-97268/3

Matrix: Water

Analysis Batch: 97268

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0250	0.02515		mg/L		101	70 - 130
Ethylbenzene	0.0250	0.02438		mg/L		98	70 - 130
Toluene	0.0250	0.02394		mg/L		96	70 - 130
Xylenes, Total	0.0500	0.05036		mg/L		101	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Dibromofluoromethane (Surr)	108		70 - 130
1,2-Dichloroethane-d4 (Surr)	109		70 - 140

TestAmerica Corpus Christi

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 560-44767-24 MS

Matrix: Water

Analysis Batch: 97268

Client Sample ID: EB-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.000140		0.0250	0.02565		mg/L		103	70 - 130
Ethylbenzene	<0.000200		0.0250	0.02511		mg/L		100	70 - 130
Toluene	<0.000300		0.0250	0.02454		mg/L		98	70 - 130
Xylenes, Total	<0.000226		0.0500	0.05104		mg/L		102	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	98		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Dibromofluoromethane (Surr)	105		70 - 130
1,2-Dichloroethane-d4 (Surr)	110		70 - 140

Lab Sample ID: 560-44767-24 MSD

Matrix: Water

Analysis Batch: 97268

Client Sample ID: EB-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.000140		0.0250	0.02532		mg/L		101	70 - 130	1	20
Ethylbenzene	<0.000200		0.0250	0.02519		mg/L		101	70 - 130	0	20
Toluene	<0.000300		0.0250	0.02474		mg/L		99	70 - 130	1	20
Xylenes, Total	<0.000226		0.0500	0.05150		mg/L		103	70 - 130	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	97		70 - 130
Dibromofluoromethane (Surr)	105		70 - 130
1,2-Dichloroethane-d4 (Surr)	108		70 - 140

Lab Sample ID: MB 560-97283/8

Matrix: Water

Analysis Batch: 97283

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			01/16/14 10:44	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/16/14 10:44	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/16/14 10:44	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/16/14 10:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		70 - 130		01/16/14 10:44	1
4-Bromofluorobenzene (Surr)	96		70 - 130		01/16/14 10:44	1
Dibromofluoromethane (Surr)	101		70 - 130		01/16/14 10:44	1
1,2-Dichloroethane-d4 (Surr)	106		70 - 140		01/16/14 10:44	1

TestAmerica Corpus Christi

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 560-97283/3

Matrix: Water

Analysis Batch: 97283

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0250	0.02493		mg/L		100	70 - 130
Ethylbenzene	0.0250	0.02416		mg/L		97	70 - 130
Toluene	0.0250	0.02436		mg/L		97	70 - 130
Xylenes, Total	0.0750	0.07311		mg/L		97	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	103		70 - 130
Dibromofluoromethane (Surr)	103		70 - 130
1,2-Dichloroethane-d4 (Surr)	105		70 - 140

Lab Sample ID: MB 560-97290/8

Matrix: Water

Analysis Batch: 97290

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			01/16/14 11:22	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/16/14 11:22	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/16/14 11:22	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/16/14 11:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		01/16/14 11:22	1
4-Bromofluorobenzene (Surr)	101		70 - 130		01/16/14 11:22	1
Dibromofluoromethane (Surr)	101		70 - 130		01/16/14 11:22	1
1,2-Dichloroethane-d4 (Surr)	110		70 - 140		01/16/14 11:22	1

Lab Sample ID: LCS 560-97290/3

Matrix: Water

Analysis Batch: 97290

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0250	0.02561		mg/L		102	70 - 130
Ethylbenzene	0.0250	0.02483		mg/L		99	70 - 130
Toluene	0.0250	0.02493		mg/L		100	70 - 130
Xylenes, Total	0.0500	0.05213		mg/L		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Dibromofluoromethane (Surr)	108		70 - 130
1,2-Dichloroethane-d4 (Surr)	112		70 - 140

TestAmerica Corpus Christi

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 560-44767-41 MS

Matrix: Water

Analysis Batch: 97290

Client Sample ID: ACW-5 107'

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	<0.000140		0.0250	0.02642		mg/L		106	70 - 130
Ethylbenzene	<0.000200		0.0250	0.02517		mg/L		101	70 - 130
Toluene	0.000675	J	0.0250	0.02575		mg/L		100	70 - 130
Xylenes, Total	<0.000226		0.0500	0.05150		mg/L		103	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	99		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Dibromofluoromethane (Surr)	109		70 - 130
1,2-Dichloroethane-d4 (Surr)	111		70 - 140

Lab Sample ID: 560-44767-41 MSD

Matrix: Water

Analysis Batch: 97290

Client Sample ID: ACW-5 107'

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	<0.000140		0.0250	0.02524		mg/L		101	70 - 130	5	20
Ethylbenzene	<0.000200		0.0250	0.02429		mg/L		97	70 - 130	4	20
Toluene	0.000675	J	0.0250	0.02478		mg/L		96	70 - 130	4	20
Xylenes, Total	<0.000226		0.0500	0.05021		mg/L		100	70 - 130	3	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	97		70 - 130
4-Bromofluorobenzene (Surr)	98		70 - 130
Dibromofluoromethane (Surr)	109		70 - 130
1,2-Dichloroethane-d4 (Surr)	110		70 - 140

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 560-97204/1-A

Matrix: Water

Analysis Batch: 97291

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 97204

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.310		1.00	0.310	mg/L		01/14/14 10:40	01/15/14 14:05	1

Lab Sample ID: LCS 560-97204/2-A

Matrix: Water

Analysis Batch: 97291

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 97204

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	50.0	52.39		mg/L		105	80 - 120

TestAmerica Corpus Christi

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 560-97257/1-A

Matrix: Water

Analysis Batch: 97291

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 97257

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.310		1.00	0.310	mg/L		01/15/14 12:00	01/15/14 17:26	1

Lab Sample ID: LCS 560-97257/2-A

Matrix: Water

Analysis Batch: 97291

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 97257

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	50.0	54.70		mg/L		109	80 - 120

Lab Sample ID: MB 560-97286/1-A

Matrix: Water

Analysis Batch: 97334

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 97286

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.310		1.00	0.310	mg/L		01/16/14 07:30	01/16/14 11:43	1

Lab Sample ID: LCS 560-97286/2-A

Matrix: Water

Analysis Batch: 97334

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 97286

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	50.0	49.19		mg/L		98	80 - 120

Lab Sample ID: 560-44767-13 MS

Matrix: Water

Analysis Batch: 97334

Client Sample ID: ENSR-3 121.5'

Prep Type: Total/NA

Prep Batch: 97286

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	188		50.0	233.5		mg/L		90	80 - 120

Lab Sample ID: 560-44767-13 MSD

Matrix: Water

Analysis Batch: 97334

Client Sample ID: ENSR-3 121.5'

Prep Type: Total/NA

Prep Batch: 97286

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sodium	188		50.0	241.0		mg/L		105	80 - 120	3	20

Lab Sample ID: MB 560-97287/1-A

Matrix: Water

Analysis Batch: 97339

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 97287

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.310		1.00	0.310	mg/L		01/16/14 07:45	01/16/14 17:39	1

Lab Sample ID: LCS 560-97287/2-A

Matrix: Water

Analysis Batch: 97339

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 97287

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	50.0	49.38		mg/L		99	80 - 120

TestAmerica Corpus Christi

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Lab Sample ID: 560-44767-34 MS
Matrix: Water
Analysis Batch: 97339

Client Sample ID: ACW-2A
Prep Type: Total/NA
Prep Batch: 97287

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	2890		50.0	3050	4	mg/L		322	80 - 120

Lab Sample ID: 560-44767-34 MSD
Matrix: Water
Analysis Batch: 97339

Client Sample ID: ACW-2A
Prep Type: Total/NA
Prep Batch: 97287

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sodium	2890		50.0	2951	4	mg/L		124	80 - 120	3	20

Method: 120.1 - Conductivity, Specific Conductance

Lab Sample ID: MB 560-97254/3
Matrix: Water
Analysis Batch: 97254

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.00		1.00	1.00	umhos/cm			01/14/14 10:00	1

Lab Sample ID: MB 560-97254/31
Matrix: Water
Analysis Batch: 97254

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.00		1.00	1.00	umhos/cm			01/14/14 10:00	1

Lab Sample ID: LCS 560-97254/32
Matrix: Water
Analysis Batch: 97254

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	1000	1006		umhos/cm		101	90 - 110

Lab Sample ID: LCS 560-97254/4
Matrix: Water
Analysis Batch: 97254

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	1000	1006		umhos/cm		101	90 - 110

Lab Sample ID: 560-44767-11 DU
Matrix: Water
Analysis Batch: 97254

Client Sample ID: ENSR-1 130'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	2760		2760		umhos/cm		0	

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Method: 120.1 - Conductivity, Specific Conductance (Continued)

Lab Sample ID: 560-44767-22 DU
Matrix: Water
Analysis Batch: 97254

Client Sample ID: ACW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Specific Conductance	7320		7360		umhos/cm		0.5	

Lab Sample ID: 560-44767-31 DU
Matrix: Water
Analysis Batch: 97254

Client Sample ID: ACW-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Specific Conductance	123000		122600		umhos/cm		0.08	

Lab Sample ID: 560-44767-42 DU
Matrix: Water
Analysis Batch: 97254

Client Sample ID: ACW-14 159'
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Specific Conductance	870		870.0		umhos/cm		0	

Lab Sample ID: MB 560-97474/3
Matrix: Water
Analysis Batch: 97474

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.00		1.00	1.00	umhos/cm			01/21/14 09:00	1

Lab Sample ID: LCS 560-97474/4
Matrix: Water
Analysis Batch: 97474

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Specific Conductance	1000	1002		umhos/cm		100	90 - 110

Method: 9251 - Chloride

Lab Sample ID: MB 560-97329/3
Matrix: Water
Analysis Batch: 97329

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		20.0	5.00	mg/L			01/16/14 10:35	1

Lab Sample ID: MB 560-97329/33
Matrix: Water
Analysis Batch: 97329

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		20.0	5.00	mg/L			01/16/14 11:25	1

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Method: 9251 - Chloride (Continued)

Lab Sample ID: MB 560-97329/63

Matrix: Water

Analysis Batch: 97329

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		20.0	5.00	mg/L			01/16/14 12:01	1

Lab Sample ID: LCS 560-97329/34

Matrix: Water

Analysis Batch: 97329

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	150	135.3		mg/L		90	85 - 115

Lab Sample ID: LCS 560-97329/4

Matrix: Water

Analysis Batch: 97329

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	150	159.8		mg/L		106	85 - 115

Lab Sample ID: LCS 560-97329/64

Matrix: Water

Analysis Batch: 97329

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	150	140.7		mg/L		94	85 - 115

Lab Sample ID: 560-44767-1 MS

Matrix: Water

Analysis Batch: 97329

Client Sample ID: ACW-15 167'

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	60.5		200	256.8		mg/L		98	85 - 115

Lab Sample ID: 560-44767-1 MSD

Matrix: Water

Analysis Batch: 97329

Client Sample ID: ACW-15 167'

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	60.5		200	264.2		mg/L		102	85 - 115	3	30

Lab Sample ID: 560-44767-12 MS

Matrix: Water

Analysis Batch: 97329

Client Sample ID: ENSR-1 145' 5"

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	867		1600	2540		mg/L		105	85 - 115

Lab Sample ID: 560-44767-12 MSD

Matrix: Water

Analysis Batch: 97329

Client Sample ID: ENSR-1 145' 5"

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	867		1600	2498		mg/L		102	85 - 115	2	30

TestAmerica Corpus Christi

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Lab Sample ID: 560-44767-23 MS
Matrix: Water
Analysis Batch: 97329

Client Sample ID: DUP-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1270		2000	3242		mg/L		98	85 - 115

Lab Sample ID: 560-44767-23 MSD
Matrix: Water
Analysis Batch: 97329

Client Sample ID: DUP-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1270		2000	3246		mg/L		99	85 - 115	0	30

Lab Sample ID: 560-44767-33 MS
Matrix: Water
Analysis Batch: 97329

Client Sample ID: EB-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<5.00		200	202.5		mg/L		101	85 - 115

Lab Sample ID: 560-44767-33 MSD
Matrix: Water
Analysis Batch: 97329

Client Sample ID: EB-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<5.00		200	206.5		mg/L		103	85 - 115	2	30

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 560-97205/1
Matrix: Water
Analysis Batch: 97205

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10.0		10.0	10.0	mg/L			01/14/14 10:45	1

Lab Sample ID: LCS 560-97205/2
Matrix: Water
Analysis Batch: 97205

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	2250	2140		mg/L		95	80 - 120

Lab Sample ID: 560-44767-2 MS
Matrix: Water
Analysis Batch: 97205

Client Sample ID: ACW-12 147' 5"
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	3500		2250	4550	F1	mg/L		47	75 - 125

TestAmerica Corpus Christi

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 560-44767-2 MSD

Matrix: Water

Analysis Batch: 97205

Client Sample ID: ACW-12 147' 5"

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids	3500		2250	4130	F1	mg/L		28	75 - 125	10	20

Lab Sample ID: 560-44767-10 MS

Matrix: Water

Analysis Batch: 97205

Client Sample ID: ACW-10 154' 11"

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids	2770		2250	4310	F1	mg/L		69	75 - 125		

Lab Sample ID: 560-44767-10 MSD

Matrix: Water

Analysis Batch: 97205

Client Sample ID: ACW-10 154' 11"

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids	2770		2250	4300	F1	mg/L		68	75 - 125	0	20

Lab Sample ID: MB 560-97226/1

Matrix: Water

Analysis Batch: 97226

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10.0		10.0	10.0	mg/L			01/14/14 16:30	1

Lab Sample ID: LCS 560-97226/2

Matrix: Water

Analysis Batch: 97226

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids	2250	2100		mg/L		93	80 - 120		

Lab Sample ID: 560-44767-25 MS

Matrix: Water

Analysis Batch: 97226

Client Sample ID: ACW-12

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids	3430		2250	4770	F1	mg/L		60	75 - 125		

Lab Sample ID: 560-44767-25 MSD

Matrix: Water

Analysis Batch: 97226

Client Sample ID: ACW-12

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids	3430		2250	4570	F1	mg/L		51	75 - 125	4	20

Lab Sample ID: MB 560-97262/1

Matrix: Water

Analysis Batch: 97262

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10.0		10.0	10.0	mg/L			01/15/14 14:00	1

TestAmerica Corpus Christi

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Lab Sample ID: LCS 560-97262/2

Matrix: Water

Analysis Batch: 97262

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	2250	2112		mg/L		94	80 - 120

Lab Sample ID: 560-44767-41 MS

Matrix: Water

Analysis Batch: 97262

Client Sample ID: ACW-5 107'

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	3740		2250	5760		mg/L		90	75 - 125

Lab Sample ID: 560-44767-41 MSD

Matrix: Water

Analysis Batch: 97262

Client Sample ID: ACW-5 107'

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Dissolved Solids	3740		2250	5830		mg/L		93	75 - 125	1	20

Lab Sample ID: MB 560-97319/1

Matrix: Water

Analysis Batch: 97319

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10.0		10.0	10.0	mg/L			01/16/14 16:00	1

Lab Sample ID: LCS 560-97319/2

Matrix: Water

Analysis Batch: 97319

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	2250	2124		mg/L		94	80 - 120

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

GC/MS VOA

Analysis Batch: 97186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-1	ACW-15 167'	Total/NA	Water	8260B	
560-44767-1 MS	ACW-15 167'	Total/NA	Water	8260B	
560-44767-1 MSD	ACW-15 167'	Total/NA	Water	8260B	
560-44767-2	ACW-12 147' 5"	Total/NA	Water	8260B	
560-44767-3	ACW-7 109.9'	Total/NA	Water	8260B	
560-44767-4	ACW-10 137' 7"	Total/NA	Water	8260B	
560-44767-5	ACW-15 152'	Total/NA	Water	8260B	
560-44767-6	ACW-9 153' 11"	Total/NA	Water	8260B	
560-44767-7	ENSR-1 121.5"	Total/NA	Water	8260B	
560-44767-8	ACW-12 162' 11"	Total/NA	Water	8260B	
560-44767-9	Trip Blank	Total/NA	Water	8260B	
560-44767-10	ACW-10 154' 11"	Total/NA	Water	8260B	
560-44767-11	ENSR-1 130'	Total/NA	Water	8260B	
560-44767-12	ENSR-1 145' 5"	Total/NA	Water	8260B	
560-44767-13	ENSR-3 121.5'	Total/NA	Water	8260B	
560-44767-14	ENSR-3 144.5'	Total/NA	Water	8260B	
560-44767-15	ACW-11 154.5'	Total/NA	Water	8260B	
560-44767-16	ACW-11 138.5'	Total/NA	Water	8260B	
560-44767-17	ENSR-3 135'	Total/NA	Water	8260B	
560-44767-18	Trip Blank	Total/NA	Water	8260B	
560-44767-19	ACW-10	Total/NA	Water	8260B	
560-44767-20	ENSR-3	Total/NA	Water	8260B	
LCS 560-97186/3	Lab Control Sample	Total/NA	Water	8260B	
MB 560-97186/8	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 97268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-21	ACW-7	Total/NA	Water	8260B	
560-44767-22	ACW-5	Total/NA	Water	8260B	
560-44767-23	DUP-1	Total/NA	Water	8260B	
560-44767-24	EB-1	Total/NA	Water	8260B	
560-44767-24 MS	EB-1	Total/NA	Water	8260B	
560-44767-24 MSD	EB-1	Total/NA	Water	8260B	
560-44767-25	ACW-12	Total/NA	Water	8260B	
560-44767-26	ACW-14 174'	Total/NA	Water	8260B	
560-44767-27	ACW-2A 117' 6"	Total/NA	Water	8260B	
560-44767-28	ACW-4 167"	Total/NA	Water	8260B	
560-44767-29	ACW-4 155' 6"	Total/NA	Water	8260B	
560-44767-30	ACW-1 130'	Total/NA	Water	8260B	
560-44767-31	ACW-4	Total/NA	Water	8260B	
560-44767-32	FB-1	Total/NA	Water	8260B	
560-44767-33	EB-2	Total/NA	Water	8260B	
560-44767-34	ACW-2A	Total/NA	Water	8260B	
LCS 560-97268/3	Lab Control Sample	Total/NA	Water	8260B	
MB 560-97268/8	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 97283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-35	Trip Blank	Total/NA	Water	8260B	
560-44767-36	ACW-6	Total/NA	Water	8260B	
560-44767-37	ACW-14	Total/NA	Water	8260B	

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QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

GC/MS VOA (Continued)

Analysis Batch: 97283 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-38	ACW-15	Total/NA	Water	8260B	
560-44767-39	DTP-1	Total/NA	Water	8260B	
560-44767-40	ACW-13	Total/NA	Water	8260B	
LCS 560-97283/3	Lab Control Sample	Total/NA	Water	8260B	
MB 560-97283/8	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 97290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-41	ACW-5 107'	Total/NA	Water	8260B	
560-44767-41 MS	ACW-5 107'	Total/NA	Water	8260B	
560-44767-41 MSD	ACW-5 107'	Total/NA	Water	8260B	
560-44767-42	ACW-14 159'	Total/NA	Water	8260B	
560-44767-43	Trip Blank	Total/NA	Water	8260B	
560-44767-44	ACW-13 160'	Total/NA	Water	8260B	
560-44767-45	Trip Blank	Total/NA	Water	8260B	
LCS 560-97290/3	Lab Control Sample	Total/NA	Water	8260B	
MB 560-97290/8	Method Blank	Total/NA	Water	8260B	

Metals

Prep Batch: 97204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-1	ACW-15 167'	Total/NA	Water	3010A	
560-44767-2	ACW-12 147' 5"	Total/NA	Water	3010A	
560-44767-3	ACW-7 109.9'	Total/NA	Water	3010A	
560-44767-4	ACW-10 137' 7"	Total/NA	Water	3010A	
LCS 560-97204/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 560-97204/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 97257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-5	ACW-15 152'	Total/NA	Water	3010A	
560-44767-6	ACW-9 153' 11"	Total/NA	Water	3010A	
560-44767-7	ENSR-1 121.5"	Total/NA	Water	3010A	
560-44767-8	ACW-12 162' 11"	Total/NA	Water	3010A	
560-44767-10	ACW-10 154' 11"	Total/NA	Water	3010A	
560-44767-11	ENSR-1 130'	Total/NA	Water	3010A	
560-44767-12	ENSR-1 145' 5"	Total/NA	Water	3010A	
LCS 560-97257/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 560-97257/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 97286

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-13	ENSR-3 121.5'	Total/NA	Water	3010A	
560-44767-13 MS	ENSR-3 121.5'	Total/NA	Water	3010A	
560-44767-13 MSD	ENSR-3 121.5'	Total/NA	Water	3010A	
560-44767-14	ENSR-3 144.5'	Total/NA	Water	3010A	
560-44767-15	ACW-11 154.5'	Total/NA	Water	3010A	
560-44767-16	ACW-11 138.5'	Total/NA	Water	3010A	
560-44767-17	ENSR-3 135'	Total/NA	Water	3010A	

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QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Metals (Continued)

Prep Batch: 97286 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-19	ACW-10	Total/NA	Water	3010A	
560-44767-20	ENSR-3	Total/NA	Water	3010A	
560-44767-21	ACW-7	Total/NA	Water	3010A	
560-44767-22	ACW-5	Total/NA	Water	3010A	
560-44767-23	DUP-1	Total/NA	Water	3010A	
560-44767-24	EB-1	Total/NA	Water	3010A	
560-44767-25	ACW-12	Total/NA	Water	3010A	
560-44767-26	ACW-14 174'	Total/NA	Water	3010A	
560-44767-27	ACW-2A 117' 6"	Total/NA	Water	3010A	
560-44767-28	ACW-4 167"	Total/NA	Water	3010A	
560-44767-29	ACW-4 155' 6"	Total/NA	Water	3010A	
560-44767-30	ACW-1 130'	Total/NA	Water	3010A	
560-44767-31	ACW-4	Total/NA	Water	3010A	
560-44767-32	FB-1	Total/NA	Water	3010A	
560-44767-33	EB-2	Total/NA	Water	3010A	
LCS 560-97286/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 560-97286/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 97287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-34	ACW-2A	Total/NA	Water	3010A	
560-44767-34 MS	ACW-2A	Total/NA	Water	3010A	
560-44767-34 MSD	ACW-2A	Total/NA	Water	3010A	
560-44767-36	ACW-6	Total/NA	Water	3010A	
560-44767-37	ACW-14	Total/NA	Water	3010A	
560-44767-38	ACW-15	Total/NA	Water	3010A	
560-44767-39	DTP-1	Total/NA	Water	3010A	
560-44767-40	ACW-13	Total/NA	Water	3010A	
560-44767-41	ACW-5 107'	Total/NA	Water	3010A	
560-44767-42	ACW-14 159'	Total/NA	Water	3010A	
560-44767-44	ACW-13 160'	Total/NA	Water	3010A	
LCS 560-97287/2-A	Lab Control Sample	Total/NA	Water	3010A	
MB 560-97287/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 97291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-1	ACW-15 167'	Total/NA	Water	6010B	97204
560-44767-2	ACW-12 147' 5"	Total/NA	Water	6010B	97204
560-44767-3	ACW-7 109.9'	Total/NA	Water	6010B	97204
560-44767-4	ACW-10 137' 7"	Total/NA	Water	6010B	97204
560-44767-5	ACW-15 152'	Total/NA	Water	6010B	97257
560-44767-6	ACW-9 153' 11"	Total/NA	Water	6010B	97257
560-44767-7	ENSR-1 121.5"	Total/NA	Water	6010B	97257
560-44767-8	ACW-12 162' 11"	Total/NA	Water	6010B	97257
560-44767-10	ACW-10 154' 11"	Total/NA	Water	6010B	97257
560-44767-11	ENSR-1 130'	Total/NA	Water	6010B	97257
560-44767-12	ENSR-1 145' 5"	Total/NA	Water	6010B	97257
LCS 560-97204/2-A	Lab Control Sample	Total/NA	Water	6010B	97204
LCS 560-97257/2-A	Lab Control Sample	Total/NA	Water	6010B	97257
MB 560-97204/1-A	Method Blank	Total/NA	Water	6010B	97204
MB 560-97257/1-A	Method Blank	Total/NA	Water	6010B	97257

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QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Metals (Continued)

Analysis Batch: 97334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-13	ENSR-3 121.5'	Total/NA	Water	6010B	97286
560-44767-13 MS	ENSR-3 121.5'	Total/NA	Water	6010B	97286
560-44767-13 MSD	ENSR-3 121.5'	Total/NA	Water	6010B	97286
560-44767-14	ENSR-3 144.5'	Total/NA	Water	6010B	97286
560-44767-15	ACW-11 154.5'	Total/NA	Water	6010B	97286
560-44767-16	ACW-11 138.5'	Total/NA	Water	6010B	97286
560-44767-17	ENSR-3 135'	Total/NA	Water	6010B	97286
560-44767-19	ACW-10	Total/NA	Water	6010B	97286
560-44767-20	ENSR-3	Total/NA	Water	6010B	97286
560-44767-21	ACW-7	Total/NA	Water	6010B	97286
560-44767-22	ACW-5	Total/NA	Water	6010B	97286
560-44767-23	DUP-1	Total/NA	Water	6010B	97286
560-44767-24	EB-1	Total/NA	Water	6010B	97286
560-44767-25	ACW-12	Total/NA	Water	6010B	97286
560-44767-26	ACW-14 174'	Total/NA	Water	6010B	97286
560-44767-27	ACW-2A 117' 6"	Total/NA	Water	6010B	97286
560-44767-30	ACW-1 130'	Total/NA	Water	6010B	97286
560-44767-32	FB-1	Total/NA	Water	6010B	97286
560-44767-33	EB-2	Total/NA	Water	6010B	97286
LCS 560-97286/2-A	Lab Control Sample	Total/NA	Water	6010B	97286
MB 560-97286/1-A	Method Blank	Total/NA	Water	6010B	97286

Analysis Batch: 97339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-34	ACW-2A	Total/NA	Water	6010B	97287
560-44767-34 MS	ACW-2A	Total/NA	Water	6010B	97287
560-44767-34 MSD	ACW-2A	Total/NA	Water	6010B	97287
560-44767-36	ACW-6	Total/NA	Water	6010B	97287
560-44767-37	ACW-14	Total/NA	Water	6010B	97287
560-44767-38	ACW-15	Total/NA	Water	6010B	97287
560-44767-39	DTP-1	Total/NA	Water	6010B	97287
560-44767-40	ACW-13	Total/NA	Water	6010B	97287
560-44767-41	ACW-5 107'	Total/NA	Water	6010B	97287
560-44767-42	ACW-14 159'	Total/NA	Water	6010B	97287
560-44767-44	ACW-13 160'	Total/NA	Water	6010B	97287
LCS 560-97287/2-A	Lab Control Sample	Total/NA	Water	6010B	97287
MB 560-97287/1-A	Method Blank	Total/NA	Water	6010B	97287

Analysis Batch: 97365

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-28	ACW-4 167"	Total/NA	Water	6010B	97286
560-44767-29	ACW-4 155' 6"	Total/NA	Water	6010B	97286
560-44767-31	ACW-4	Total/NA	Water	6010B	97286

General Chemistry

Analysis Batch: 97205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-1	ACW-15 167"	Total/NA	Water	SM 2540C	
560-44767-2	ACW-12 147' 5"	Total/NA	Water	SM 2540C	

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QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

General Chemistry (Continued)

Analysis Batch: 97205 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-2 MS	ACW-12 147' 5"	Total/NA	Water	SM 2540C	
560-44767-2 MSD	ACW-12 147' 5"	Total/NA	Water	SM 2540C	
560-44767-3	ACW-7 109.9'	Total/NA	Water	SM 2540C	
560-44767-4	ACW-10 137' 7"	Total/NA	Water	SM 2540C	
560-44767-5	ACW-15 152'	Total/NA	Water	SM 2540C	
560-44767-6	ACW-9 153' 11"	Total/NA	Water	SM 2540C	
560-44767-7	ENSR-1 121.5"	Total/NA	Water	SM 2540C	
560-44767-8	ACW-12 162' 11"	Total/NA	Water	SM 2540C	
560-44767-10	ACW-10 154' 11"	Total/NA	Water	SM 2540C	
560-44767-10 MS	ACW-10 154' 11"	Total/NA	Water	SM 2540C	
560-44767-10 MSD	ACW-10 154' 11"	Total/NA	Water	SM 2540C	
560-44767-11	ENSR-1 130'	Total/NA	Water	SM 2540C	
560-44767-12	ENSR-1 145' 5"	Total/NA	Water	SM 2540C	
560-44767-13	ENSR-3 121.5'	Total/NA	Water	SM 2540C	
560-44767-14	ENSR-3 144.5'	Total/NA	Water	SM 2540C	
560-44767-15	ACW-11 154.5'	Total/NA	Water	SM 2540C	
LCS 560-97205/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 560-97205/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 97226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-16	ACW-11 138.5'	Total/NA	Water	SM 2540C	
560-44767-17	ENSR-3 135'	Total/NA	Water	SM 2540C	
560-44767-19	ACW-10	Total/NA	Water	SM 2540C	
560-44767-20	ENSR-3	Total/NA	Water	SM 2540C	
560-44767-21	ACW-7	Total/NA	Water	SM 2540C	
560-44767-22	ACW-5	Total/NA	Water	SM 2540C	
560-44767-23	DUP-1	Total/NA	Water	SM 2540C	
560-44767-24	EB-1	Total/NA	Water	SM 2540C	
560-44767-25	ACW-12	Total/NA	Water	SM 2540C	
560-44767-25 MS	ACW-12	Total/NA	Water	SM 2540C	
560-44767-25 MSD	ACW-12	Total/NA	Water	SM 2540C	
560-44767-26	ACW-14 174'	Total/NA	Water	SM 2540C	
LCS 560-97226/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 560-97226/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 97254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-1	ACW-15 167'	Total/NA	Water	120.1	
560-44767-2	ACW-12 147' 5"	Total/NA	Water	120.1	
560-44767-3	ACW-7 109.9'	Total/NA	Water	120.1	
560-44767-4	ACW-10 137' 7"	Total/NA	Water	120.1	
560-44767-5	ACW-15 152'	Total/NA	Water	120.1	
560-44767-6	ACW-9 153' 11"	Total/NA	Water	120.1	
560-44767-7	ENSR-1 121.5"	Total/NA	Water	120.1	
560-44767-8	ACW-12 162' 11"	Total/NA	Water	120.1	
560-44767-10	ACW-10 154' 11"	Total/NA	Water	120.1	
560-44767-11	ENSR-1 130'	Total/NA	Water	120.1	
560-44767-11 DU	ENSR-1 130'	Total/NA	Water	120.1	
560-44767-12	ENSR-1 145' 5"	Total/NA	Water	120.1	
560-44767-13	ENSR-3 121.5'	Total/NA	Water	120.1	

TestAmerica Corpus Christi

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

General Chemistry (Continued)

Analysis Batch: 97254 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-14	ENSR-3 144.5'	Total/NA	Water	120.1	
560-44767-15	ACW-11 154.5'	Total/NA	Water	120.1	
560-44767-16	ACW-11 138.5'	Total/NA	Water	120.1	
560-44767-17	ENSR-3 135'	Total/NA	Water	120.1	
560-44767-19	ACW-10	Total/NA	Water	120.1	
560-44767-20	ENSR-3	Total/NA	Water	120.1	
560-44767-21	ACW-7	Total/NA	Water	120.1	
560-44767-22	ACW-5	Total/NA	Water	120.1	
560-44767-22 DU	ACW-5	Total/NA	Water	120.1	
560-44767-23	DUP-1	Total/NA	Water	120.1	
560-44767-24	EB-1	Total/NA	Water	120.1	
560-44767-25	ACW-12	Total/NA	Water	120.1	
560-44767-26	ACW-14 174'	Total/NA	Water	120.1	
560-44767-27	ACW-2A 117' 6"	Total/NA	Water	120.1	
560-44767-28	ACW-4 167"	Total/NA	Water	120.1	
560-44767-29	ACW-4 155' 6"	Total/NA	Water	120.1	
560-44767-30	ACW-1 130'	Total/NA	Water	120.1	
560-44767-31	ACW-4	Total/NA	Water	120.1	
560-44767-31 DU	ACW-4	Total/NA	Water	120.1	
560-44767-32	FB-1	Total/NA	Water	120.1	
560-44767-33	EB-2	Total/NA	Water	120.1	
560-44767-34	ACW-2A	Total/NA	Water	120.1	
560-44767-36	ACW-6	Total/NA	Water	120.1	
560-44767-37	ACW-14	Total/NA	Water	120.1	
560-44767-38	ACW-15	Total/NA	Water	120.1	
560-44767-39	DTP-1	Total/NA	Water	120.1	
560-44767-40	ACW-13	Total/NA	Water	120.1	
560-44767-41	ACW-5 107'	Total/NA	Water	120.1	
560-44767-42	ACW-14 159'	Total/NA	Water	120.1	
560-44767-42 DU	ACW-14 159'	Total/NA	Water	120.1	
LCS 560-97254/32	Lab Control Sample	Total/NA	Water	120.1	
LCS 560-97254/4	Lab Control Sample	Total/NA	Water	120.1	
MB 560-97254/3	Method Blank	Total/NA	Water	120.1	
MB 560-97254/31	Method Blank	Total/NA	Water	120.1	

Analysis Batch: 97262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-27	ACW-2A 117' 6"	Total/NA	Water	SM 2540C	
560-44767-28	ACW-4 167"	Total/NA	Water	SM 2540C	
560-44767-29	ACW-4 155' 6"	Total/NA	Water	SM 2540C	
560-44767-36	ACW-6	Total/NA	Water	SM 2540C	
560-44767-37	ACW-14	Total/NA	Water	SM 2540C	
560-44767-40	ACW-13	Total/NA	Water	SM 2540C	
560-44767-41	ACW-5 107'	Total/NA	Water	SM 2540C	
560-44767-41 MS	ACW-5 107'	Total/NA	Water	SM 2540C	
560-44767-41 MSD	ACW-5 107'	Total/NA	Water	SM 2540C	
560-44767-42	ACW-14 159'	Total/NA	Water	SM 2540C	
560-44767-44	ACW-13 160'	Total/NA	Water	SM 2540C	
LCS 560-97262/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 560-97262/1	Method Blank	Total/NA	Water	SM 2540C	

TestAmerica Corpus Christi

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

General Chemistry (Continued)

Analysis Batch: 97319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-30	ACW-1 130'	Total/NA	Water	SM 2540C	
560-44767-31	ACW-4	Total/NA	Water	SM 2540C	
560-44767-32	FB-1	Total/NA	Water	SM 2540C	
560-44767-33	EB-2	Total/NA	Water	SM 2540C	
560-44767-34	ACW-2A	Total/NA	Water	SM 2540C	
560-44767-38	ACW-15	Total/NA	Water	SM 2540C	
560-44767-39	DTP-1	Total/NA	Water	SM 2540C	
LCS 560-97319/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 560-97319/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 97329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-1	ACW-15 167'	Total/NA	Water	9251	
560-44767-1 MS	ACW-15 167'	Total/NA	Water	9251	
560-44767-1 MSD	ACW-15 167'	Total/NA	Water	9251	
560-44767-2	ACW-12 147' 5"	Total/NA	Water	9251	
560-44767-3	ACW-7 109.9'	Total/NA	Water	9251	
560-44767-4	ACW-10 137' 7"	Total/NA	Water	9251	
560-44767-5	ACW-15 152'	Total/NA	Water	9251	
560-44767-6	ACW-9 153' 11"	Total/NA	Water	9251	
560-44767-7	ENSR-1 121.5"	Total/NA	Water	9251	
560-44767-8	ACW-12 162' 11"	Total/NA	Water	9251	
560-44767-10	ACW-10 154' 11"	Total/NA	Water	9251	
560-44767-11	ENSR-1 130'	Total/NA	Water	9251	
560-44767-12	ENSR-1 145' 5"	Total/NA	Water	9251	
560-44767-12 MS	ENSR-1 145' 5"	Total/NA	Water	9251	
560-44767-12 MSD	ENSR-1 145' 5"	Total/NA	Water	9251	
560-44767-13	ENSR-3 121.5'	Total/NA	Water	9251	
560-44767-14	ENSR-3 144.5'	Total/NA	Water	9251	
560-44767-15	ACW-11 154.5'	Total/NA	Water	9251	
560-44767-16	ACW-11 138.5'	Total/NA	Water	9251	
560-44767-17	ENSR-3 135'	Total/NA	Water	9251	
560-44767-19	ACW-10	Total/NA	Water	9251	
560-44767-20	ENSR-3	Total/NA	Water	9251	
560-44767-21	ACW-7	Total/NA	Water	9251	
560-44767-22	ACW-5	Total/NA	Water	9251	
560-44767-23	DUP-1	Total/NA	Water	9251	
560-44767-23 MS	DUP-1	Total/NA	Water	9251	
560-44767-23 MSD	DUP-1	Total/NA	Water	9251	
560-44767-24	EB-1	Total/NA	Water	9251	
560-44767-25	ACW-12	Total/NA	Water	9251	
560-44767-26	ACW-14 174'	Total/NA	Water	9251	
560-44767-27	ACW-2A 117' 6"	Total/NA	Water	9251	
560-44767-28	ACW-4 167"	Total/NA	Water	9251	
560-44767-29	ACW-4 155' 6"	Total/NA	Water	9251	
560-44767-30	ACW-1 130'	Total/NA	Water	9251	
560-44767-31	ACW-4	Total/NA	Water	9251	
560-44767-32	FB-1	Total/NA	Water	9251	
560-44767-33	EB-2	Total/NA	Water	9251	
560-44767-33 MS	EB-2	Total/NA	Water	9251	
560-44767-33 MSD	EB-2	Total/NA	Water	9251	

TestAmerica Corpus Christi

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

General Chemistry (Continued)

Analysis Batch: 97329 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-34	ACW-2A	Total/NA	Water	9251	
560-44767-36	ACW-6	Total/NA	Water	9251	
560-44767-37	ACW-14	Total/NA	Water	9251	
560-44767-38	ACW-15	Total/NA	Water	9251	
560-44767-39	DTP-1	Total/NA	Water	9251	
560-44767-40	ACW-13	Total/NA	Water	9251	
560-44767-41	ACW-5 107'	Total/NA	Water	9251	
560-44767-42	ACW-14 159'	Total/NA	Water	9251	
560-44767-44	ACW-13 160'	Total/NA	Water	9251	
LCS 560-97329/34	Lab Control Sample	Total/NA	Water	9251	
LCS 560-97329/4	Lab Control Sample	Total/NA	Water	9251	
LCS 560-97329/64	Lab Control Sample	Total/NA	Water	9251	
MB 560-97329/3	Method Blank	Total/NA	Water	9251	
MB 560-97329/33	Method Blank	Total/NA	Water	9251	
MB 560-97329/63	Method Blank	Total/NA	Water	9251	

Analysis Batch: 97474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
560-44767-44	ACW-13 160'	Total/NA	Water	120.1	
LCS 560-97474/4	Lab Control Sample	Total/NA	Water	120.1	
MB 560-97474/3	Method Blank	Total/NA	Water	120.1	

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-15 167'

Date Collected: 01/08/14 13:10

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 13:05	RP56	TAL CC
Total/NA	Prep	3010A			97204	01/14/14 10:40	MIG	TAL CC
Total/NA	Analysis	6010B		1	97291	01/15/14 16:48	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97205	01/14/14 10:45	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		1	97329	01/16/14 12:02	LPO	TAL CC

Client Sample ID: ACW-12 147' 5"

Date Collected: 01/08/14 16:40

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 13:30	RP56	TAL CC
Total/NA	Prep	3010A			97204	01/14/14 10:40	MIG	TAL CC
Total/NA	Analysis	6010B		1	97291	01/15/14 16:52	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97205	01/14/14 10:45	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		8	97329	01/16/14 10:39	LPO	TAL CC

Client Sample ID: ACW-7 109.9'

Date Collected: 01/08/14 15:43

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 13:56	RP56	TAL CC
Total/NA	Prep	3010A			97204	01/14/14 10:40	MIG	TAL CC
Total/NA	Analysis	6010B		1	97291	01/15/14 16:56	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97205	01/14/14 10:45	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		20	97329	01/16/14 10:40	LPO	TAL CC

Client Sample ID: ACW-10 137' 7"

Date Collected: 01/09/14 09:38

Date Received: 01/11/14 12:20

Lab Sample ID: 560-44767-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 14:20	RP56	TAL CC
Total/NA	Prep	3010A			97204	01/14/14 10:40	MIG	TAL CC
Total/NA	Analysis	6010B		1	97291	01/15/14 17:00	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97205	01/14/14 10:45	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC

TestAmerica Corpus Christi

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-10 137' 7"

Lab Sample ID: 560-44767-4

Date Collected: 01/09/14 09:38

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9251		10	97329	01/16/14 12:04	LPO	TAL CC

Client Sample ID: ACW-15 152'

Lab Sample ID: 560-44767-5

Date Collected: 01/08/14 13:00

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 14:46	RP56	TAL CC
Total/NA	Prep	3010A			97257	01/15/14 12:00	MIG	TAL CC
Total/NA	Analysis	6010B		1	97291	01/15/14 19:05	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97205	01/14/14 10:45	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		1	97329	01/16/14 12:04	LPO	TAL CC

Client Sample ID: ACW-9 153' 11"

Lab Sample ID: 560-44767-6

Date Collected: 01/09/14 10:25

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 15:11	RP56	TAL CC
Total/NA	Prep	3010A			97257	01/15/14 12:00	MIG	TAL CC
Total/NA	Analysis	6010B		1	97291	01/15/14 19:09	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97205	01/14/14 10:45	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		40	97329	01/16/14 10:42	LPO	TAL CC

Client Sample ID: ENSR-1 121.5"

Lab Sample ID: 560-44767-7

Date Collected: 01/09/14 12:50

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 15:56	RP56	TAL CC
Total/NA	Prep	3010A			97257	01/15/14 12:00	MIG	TAL CC
Total/NA	Analysis	6010B		1	97291	01/15/14 19:14	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97205	01/14/14 10:45	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		5	97329	01/16/14 10:43	LPO	TAL CC

TestAmerica Corpus Christi

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-12 162' 11"

Lab Sample ID: 560-44767-8

Date Collected: 01/09/14 16:50

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 16:21	RP56	TAL CC
Total/NA	Prep	3010A			97257	01/15/14 12:00	MIG	TAL CC
Total/NA	Analysis	6010B		1	97291	01/15/14 19:18	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97205	01/14/14 10:45	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		10	97329	01/16/14 10:44	LPO	TAL CC

Client Sample ID: Trip Blank

Lab Sample ID: 560-44767-9

Date Collected: 01/09/14 00:00

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 16:46	RP56	TAL CC

Client Sample ID: ACW-10 154' 11"

Lab Sample ID: 560-44767-10

Date Collected: 01/09/14 09:56

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 17:11	RP56	TAL CC
Total/NA	Prep	3010A			97257	01/15/14 12:00	MIG	TAL CC
Total/NA	Analysis	6010B		1	97291	01/15/14 19:22	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97205	01/14/14 10:45	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		10	97329	01/16/14 12:05	LPO	TAL CC

Client Sample ID: ENSR-1 130'

Lab Sample ID: 560-44767-11

Date Collected: 01/09/14 13:00

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 17:37	RP56	TAL CC
Total/NA	Prep	3010A			97257	01/15/14 12:00	MIG	TAL CC
Total/NA	Analysis	6010B		1	97291	01/15/14 19:26	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97205	01/14/14 10:45	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		5	97329	01/16/14 10:45	LPO	TAL CC

TestAmerica Corpus Christi

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ENSR-1 145' 5"

Lab Sample ID: 560-44767-12

Date Collected: 01/09/14 13:10

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 18:02	RP56	TAL CC
Total/NA	Prep	3010A			97257	01/15/14 12:00	MIG	TAL CC
Total/NA	Analysis	6010B		1	97291	01/15/14 19:31	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97205	01/14/14 10:45	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		8	97329	01/16/14 10:46	LPO	TAL CC

Client Sample ID: ENSR-3 121.5'

Lab Sample ID: 560-44767-13

Date Collected: 01/09/14 14:10

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 18:27	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 12:24	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97205	01/14/14 10:45	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		4	97329	01/16/14 10:48	LPO	TAL CC

Client Sample ID: ENSR-3 144.5'

Lab Sample ID: 560-44767-14

Date Collected: 01/09/14 14:30

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 18:52	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 12:40	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97205	01/14/14 10:45	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		5	97329	01/16/14 10:48	LPO	TAL CC

Client Sample ID: ACW-11 154.5'

Lab Sample ID: 560-44767-15

Date Collected: 01/09/14 15:10

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 19:17	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 12:45	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97205	01/14/14 10:45	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC

TestAmerica Corpus Christi

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-11 154.5'

Lab Sample ID: 560-44767-15

Date Collected: 01/09/14 15:10

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9251		40	97329	01/16/14 10:49	LPO	TAL CC

Client Sample ID: ACW-11 138.5'

Lab Sample ID: 560-44767-16

Date Collected: 01/09/14 15:00

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 19:43	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 12:49	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97226	01/14/14 16:30	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		20	97329	01/16/14 10:49	LPO	TAL CC

Client Sample ID: ENSR-3 135'

Lab Sample ID: 560-44767-17

Date Collected: 01/09/14 14:20

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 20:08	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 12:53	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97226	01/14/14 16:30	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		4	97329	01/16/14 10:50	LPO	TAL CC

Client Sample ID: Trip Blank

Lab Sample ID: 560-44767-18

Date Collected: 01/09/14 00:00

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 20:33	RP56	TAL CC

Client Sample ID: ACW-10

Lab Sample ID: 560-44767-19

Date Collected: 01/10/14 12:12

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 20:58	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 13:10	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97226	01/14/14 16:30	OV56	TAL CC

TestAmerica Corpus Christi

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-10

Lab Sample ID: 560-44767-19

Date Collected: 01/10/14 12:12

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		16	97329	01/16/14 10:50	LPO	TAL CC

Client Sample ID: ENSR-3

Lab Sample ID: 560-44767-20

Date Collected: 01/10/14 10:57

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97186	01/14/14 21:24	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 13:14	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97226	01/14/14 16:30	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		5	97329	01/16/14 10:51	LPO	TAL CC

Client Sample ID: ACW-7

Lab Sample ID: 560-44767-21

Date Collected: 01/09/14 12:55

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97268	01/15/14 20:14	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 13:19	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97226	01/14/14 16:30	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		25	97329	01/16/14 10:51	LPO	TAL CC

Client Sample ID: ACW-5

Lab Sample ID: 560-44767-22

Date Collected: 01/08/14 13:58

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97268	01/15/14 20:39	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 13:23	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97226	01/14/14 16:30	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		16	97329	01/16/14 10:52	LPO	TAL CC

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: DUP-1

Lab Sample ID: 560-44767-23

Date Collected: 01/10/14 00:00

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97268	01/15/14 21:05	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 13:27	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97226	01/14/14 16:30	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		10	97329	01/16/14 11:27	LPO	TAL CC

Client Sample ID: EB-1

Lab Sample ID: 560-44767-24

Date Collected: 01/10/14 15:06

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97268	01/15/14 19:49	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 13:31	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97226	01/14/14 16:30	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		1	97329	01/16/14 11:29	LPO	TAL CC

Client Sample ID: ACW-12

Lab Sample ID: 560-44767-25

Date Collected: 01/10/14 13:40

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97268	01/15/14 21:30	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 13:35	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97226	01/14/14 16:30	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	9251		10	97329	01/16/14 11:30	LPO	TAL CC

Client Sample ID: ACW-14 174'

Lab Sample ID: 560-44767-26

Date Collected: 01/08/14 12:59

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97268	01/15/14 21:55	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 13:40	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97226	01/14/14 16:30	OV56	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC

TestAmerica Corpus Christi

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-14 174'

Lab Sample ID: 560-44767-26

Date Collected: 01/08/14 12:59

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9251		1	97329	01/16/14 11:31	LPO	TAL CC

Client Sample ID: ACW-2A 117' 6"

Lab Sample ID: 560-44767-27

Date Collected: 01/10/14 12:29

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97268	01/15/14 22:20	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 13:44	EDR	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	SM 2540C		1	97262	01/15/14 14:00	OV56	TAL CC
Total/NA	Analysis	9251		16	97329	01/16/14 11:32	LPO	TAL CC

Client Sample ID: ACW-4 167"

Lab Sample ID: 560-44767-28

Date Collected: 01/10/14 11:59

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97268	01/15/14 22:46	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		50	97365	01/17/14 11:40	EDR	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	SM 2540C		1	97262	01/15/14 14:00	OV56	TAL CC
Total/NA	Analysis	9251		400	97329	01/16/14 12:05	LPO	TAL CC

Client Sample ID: ACW-4 155' 6"

Lab Sample ID: 560-44767-29

Date Collected: 01/10/14 11:49

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97268	01/15/14 23:11	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		50	97365	01/17/14 11:44	EDR	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	SM 2540C		1	97262	01/15/14 14:00	OV56	TAL CC
Total/NA	Analysis	9251		400	97329	01/16/14 12:06	LPO	TAL CC

TestAmerica Corpus Christi

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-1 130'

Lab Sample ID: 560-44767-30

Date Collected: 01/10/14 15:29

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97268	01/15/14 23:36	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 14:13	EDR	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	SM 2540C		1	97319	01/16/14 16:00	OV56	TAL CC
Total/NA	Analysis	9251		20	97329	01/16/14 12:06	LPO	TAL CC

Client Sample ID: ACW-4

Lab Sample ID: 560-44767-31

Date Collected: 01/10/14 14:28

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97268	01/16/14 00:02	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		50	97365	01/17/14 11:49	EDR	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	SM 2540C		1	97319	01/16/14 16:00	OV56	TAL CC
Total/NA	Analysis	9251		400	97329	01/16/14 12:07	LPO	TAL CC

Client Sample ID: FB-1

Lab Sample ID: 560-44767-32

Date Collected: 01/10/14 15:20

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97268	01/16/14 00:27	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 14:22	EDR	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	SM 2540C		1	97319	01/16/14 16:00	OV56	TAL CC
Total/NA	Analysis	9251		1	97329	01/16/14 11:35	LPO	TAL CC

Client Sample ID: EB-2

Lab Sample ID: 560-44767-33

Date Collected: 01/10/14 15:48

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97268	01/16/14 00:52	RP56	TAL CC
Total/NA	Prep	3010A			97286	01/16/14 07:30	RLM	TAL CC
Total/NA	Analysis	6010B		1	97334	01/16/14 14:26	EDR	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	SM 2540C		1	97319	01/16/14 16:00	OV56	TAL CC

TestAmerica Corpus Christi

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: EB-2

Lab Sample ID: 560-44767-33

Date Collected: 01/10/14 15:48

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9251		1	97329	01/16/14 11:36	LPO	TAL CC

Client Sample ID: ACW-2A

Lab Sample ID: 560-44767-34

Date Collected: 01/10/14 15:16

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97268	01/16/14 01:17	RP56	TAL CC
Total/NA	Prep	3010A			97287	01/16/14 07:45	RLM	TAL CC
Total/NA	Analysis	6010B		1	97339	01/16/14 17:47	EDR	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	SM 2540C		1	97319	01/16/14 16:00	OV56	TAL CC
Total/NA	Analysis	9251		20	97329	01/16/14 12:07	LPO	TAL CC

Client Sample ID: Trip Blank

Lab Sample ID: 560-44767-35

Date Collected: 01/10/14 00:00

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97283	01/16/14 11:34	RP56	TAL CC

Client Sample ID: ACW-6

Lab Sample ID: 560-44767-36

Date Collected: 01/09/14 11:59

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97283	01/16/14 12:24	RP56	TAL CC
Total/NA	Prep	3010A			97287	01/16/14 07:45	RLM	TAL CC
Total/NA	Analysis	6010B		1	97339	01/16/14 18:03	EDR	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	SM 2540C		1	97262	01/15/14 14:00	OV56	TAL CC
Total/NA	Analysis	9251		10	97329	01/16/14 11:38	LPO	TAL CC

Client Sample ID: ACW-14

Lab Sample ID: 560-44767-37

Date Collected: 01/09/14 16:16

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97283	01/16/14 12:49	RP56	TAL CC
Total/NA	Prep	3010A			97287	01/16/14 07:45	RLM	TAL CC
Total/NA	Analysis	6010B		1	97339	01/16/14 18:08	EDR	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC

TestAmerica Corpus Christi

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-14

Lab Sample ID: 560-44767-37

Date Collected: 01/09/14 16:16

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	97262	01/15/14 14:00	OV56	TAL CC
Total/NA	Analysis	9251		2	97329	01/16/14 11:39	LPO	TAL CC

Client Sample ID: ACW-15

Lab Sample ID: 560-44767-38

Date Collected: 01/10/14 09:06

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97283	01/16/14 13:14	RP56	TAL CC
Total/NA	Prep	3010A			97287	01/16/14 07:45	RLM	TAL CC
Total/NA	Analysis	6010B		1	97339	01/16/14 18:12	EDR	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	SM 2540C		1	97319	01/16/14 16:00	OV56	TAL CC
Total/NA	Analysis	9251		2	97329	01/16/14 11:39	LPO	TAL CC

Client Sample ID: DTP-1

Lab Sample ID: 560-44767-39

Date Collected: 01/10/14 10:04

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97283	01/16/14 13:39	RP56	TAL CC
Total/NA	Prep	3010A			97287	01/16/14 07:45	RLM	TAL CC
Total/NA	Analysis	6010B		1	97339	01/16/14 18:16	EDR	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	SM 2540C		1	97319	01/16/14 16:00	OV56	TAL CC
Total/NA	Analysis	9251		4	97329	01/16/14 11:40	LPO	TAL CC

Client Sample ID: ACW-13

Lab Sample ID: 560-44767-40

Date Collected: 01/09/14 17:43

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97283	01/16/14 14:04	RP56	TAL CC
Total/NA	Prep	3010A			97287	01/16/14 07:45	RLM	TAL CC
Total/NA	Analysis	6010B		1	97339	01/16/14 18:33	EDR	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	SM 2540C		1	97262	01/15/14 14:00	OV56	TAL CC
Total/NA	Analysis	9251		2	97329	01/16/14 11:40	LPO	TAL CC

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: ACW-5 107'

Lab Sample ID: 560-44767-41

Date Collected: 01/08/14 14:20

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97290	01/16/14 11:47	RJT	TAL CC
Total/NA	Prep	3010A			97287	01/16/14 07:45	RLM	TAL CC
Total/NA	Analysis	6010B		1	97339	01/16/14 18:37	EDR	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	SM 2540C		1	97262	01/15/14 14:00	OV56	TAL CC
Total/NA	Analysis	9251		10	97329	01/16/14 11:41	LPO	TAL CC

Client Sample ID: ACW-14 159'

Lab Sample ID: 560-44767-42

Date Collected: 01/08/14 12:47

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97290	01/16/14 13:30	RJT	TAL CC
Total/NA	Prep	3010A			97287	01/16/14 07:45	RLM	TAL CC
Total/NA	Analysis	6010B		1	97339	01/16/14 18:41	EDR	TAL CC
Total/NA	Analysis	120.1		1	97254	01/14/14 10:00	OV56	TAL CC
Total/NA	Analysis	SM 2540C		1	97262	01/15/14 14:00	OV56	TAL CC
Total/NA	Analysis	9251		1	97329	01/16/14 11:41	LPO	TAL CC

Client Sample ID: Trip Blank

Lab Sample ID: 560-44767-43

Date Collected: 01/08/14 00:00

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97290	01/16/14 13:55	RJT	TAL CC

Client Sample ID: ACW-13 160'

Lab Sample ID: 560-44767-44

Date Collected: 01/09/14 09:05

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97290	01/16/14 14:20	RJT	TAL CC
Total/NA	Prep	3010A			97287	01/16/14 07:45	RLM	TAL CC
Total/NA	Analysis	6010B		1	97339	01/16/14 18:45	EDR	TAL CC
Total/NA	Analysis	SM 2540C		1	97262	01/15/14 14:00	OV56	TAL CC
Total/NA	Analysis	9251		2	97329	01/16/14 11:42	LPO	TAL CC
Total/NA	Analysis	120.1		1	97474	01/21/14 09:00	OV56	TAL CC

TestAmerica Corpus Christi

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Client Sample ID: Trip Blank

Lab Sample ID: 560-44767-45

Date Collected: 01/09/14 00:00

Matrix: Water

Date Received: 01/11/14 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97290	01/16/14 14:45	RJT	TAL CC

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

Certification Summary

Client: ARCADIS U.S., Inc.

Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1

SDG: January 2014

Laboratory: TestAmerica Corpus Christi

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Kansas	NELAP	7	E-10362	10-31-14
Oklahoma	State Program	6	9968	08-31-14
Texas	NELAP	6	T104704210	03-31-14
USDA	Federal		P330-11-00060	02-03-14

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CC
6010B	Metals (ICP)	SW846	TAL CC
120.1	Conductivity, Specific Conductance	MCAWW	TAL CC
9251	Chloride	SW846	TAL CC
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CC

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

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

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44767-1
SDG: January 2014

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-44767-1	ACW-15 167'	Water	01/08/14 13:10	01/11/14 12:20
560-44767-2	ACW-12 147' 5"	Water	01/08/14 16:40	01/11/14 12:20
560-44767-3	ACW-7 109.9'	Water	01/08/14 15:43	01/11/14 12:20
560-44767-4	ACW-10 137' 7"	Water	01/09/14 09:38	01/11/14 12:20
560-44767-5	ACW-15 152'	Water	01/08/14 13:00	01/11/14 12:20
560-44767-6	ACW-9 153' 11"	Water	01/09/14 10:25	01/11/14 12:20
560-44767-7	ENSR-1 121.5"	Water	01/09/14 12:50	01/11/14 12:20
560-44767-8	ACW-12 162' 11"	Water	01/09/14 16:50	01/11/14 12:20
560-44767-9	Trip Blank	Water	01/09/14 00:00	01/11/14 12:20
560-44767-10	ACW-10 154' 11"	Water	01/09/14 09:56	01/11/14 12:20
560-44767-11	ENSR-1 130'	Water	01/09/14 13:00	01/11/14 12:20
560-44767-12	ENSR-1 145' 5"	Water	01/09/14 13:10	01/11/14 12:20
560-44767-13	ENSR-3 121.5'	Water	01/09/14 14:10	01/11/14 12:20
560-44767-14	ENSR-3 144.5'	Water	01/09/14 14:30	01/11/14 12:20
560-44767-15	ACW-11 154.5'	Water	01/09/14 15:10	01/11/14 12:20
560-44767-16	ACW-11 138.5'	Water	01/09/14 15:00	01/11/14 12:20
560-44767-17	ENSR-3 135'	Water	01/09/14 14:20	01/11/14 12:20
560-44767-18	Trip Blank	Water	01/09/14 00:00	01/11/14 12:20
560-44767-19	ACW-10	Water	01/10/14 12:12	01/11/14 12:20
560-44767-20	ENSR-3	Water	01/10/14 10:57	01/11/14 12:20
560-44767-21	ACW-7	Water	01/09/14 12:55	01/11/14 12:20
560-44767-22	ACW-5	Water	01/08/14 13:58	01/11/14 12:20
560-44767-23	DUP-1	Water	01/10/14 00:00	01/11/14 12:20
560-44767-24	EB-1	Water	01/10/14 15:06	01/11/14 12:20
560-44767-25	ACW-12	Water	01/10/14 13:40	01/11/14 12:20
560-44767-26	ACW-14 174'	Water	01/08/14 12:59	01/11/14 12:20
560-44767-27	ACW-2A 117' 6"	Water	01/10/14 12:29	01/11/14 12:20
560-44767-28	ACW-4 167"	Water	01/10/14 11:59	01/11/14 12:20
560-44767-29	ACW-4 155' 6"	Water	01/10/14 11:49	01/11/14 12:20
560-44767-30	ACW-1 130'	Water	01/10/14 15:29	01/11/14 12:20
560-44767-31	ACW-4	Water	01/10/14 14:28	01/11/14 12:20
560-44767-32	FB-1	Water	01/10/14 15:20	01/11/14 12:20
560-44767-33	EB-2	Water	01/10/14 15:48	01/11/14 12:20
560-44767-34	ACW-2A	Water	01/10/14 15:16	01/11/14 12:20
560-44767-35	Trip Blank	Water	01/10/14 00:00	01/11/14 12:20
560-44767-36	ACW-6	Water	01/09/14 11:59	01/11/14 12:20
560-44767-37	ACW-14	Water	01/09/14 16:16	01/11/14 12:20
560-44767-38	ACW-15	Water	01/10/14 09:06	01/11/14 12:20
560-44767-39	DTP-1	Water	01/10/14 10:04	01/11/14 12:20
560-44767-40	ACW-13	Water	01/09/14 17:43	01/11/14 12:20
560-44767-41	ACW-5 107'	Water	01/08/14 14:20	01/11/14 12:20
560-44767-42	ACW-14 159'	Water	01/08/14 12:47	01/11/14 12:20
560-44767-43	Trip Blank	Water	01/08/14 00:00	01/11/14 12:20
560-44767-44	ACW-13 160'	Water	01/09/14 09:05	01/11/14 12:20
560-44767-45	Trip Blank	Water	01/09/14 00:00	01/11/14 12:20

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Loc: 560
44767

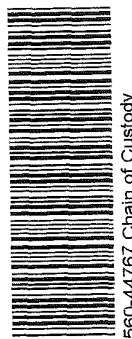
Lab Work Order #

Page / of /

ID#:

Contact & Company Name: Hank McConnell		Telephone:
Address: 1004 N Big Sky		Fax:
City: Milled	State: TX	Zip: 79701
Email Address: hank.mcconnell@arcadis-us.com		
Project Name/Location (City, State): Sal NM		
Sampler's Printed Name: Aaron Sides		
Sampler's Signature: 		

Sample ID	Collection Date	Time	Type	Matrix	
				Comp	Grab
ACW-15 167'	1/8	1310	/	W	W
ACW-12 147'5"	1/8	1640	/	W	W
ACW-7 109.9'	1/8	1543	/	W	W
ACW-10 137'7"	1/9	0938	/	W	W
ACW-15 152'	1/8	1300	/	W	W
ACW-9 153'11"	1/9	1035	/	W	W
ENSR-1 181.5'	1/9	1250	/	W	W
ACW-12 162'11"	1/8	1650	/	W	W
TRIP Blank					



560-44767 Chain of Custody

BTX
Sediment
HIS Conductivity

REMARKS

06/10.8
Jelly Seal
20 frozen

Special Instructions/Comments:

☐ Special QA/QC Instructions(✓):

Laboratory Information and Receipt		Relinquished By		Received By		Relinquished By		Laboratory Received By	
Lab Name:		Printed Name:		Printed Name:		Printed Name:		Printed Name:	
Cooler Custody Seal (✓) ☐ Intact ☐ Not Intact		Signature:		Signature:		Signature:		Signature:	
Sample Receipt: Condition/Cooler Temp: _____		Firm:		Firm/Courier:		Firm:		Firm:	
Shipping Tracking #:		Date/Time:		Date/Time:		Date/Time:		Date/Time:	

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

ID#:

Page ____ of ____

Contact & Company Name: Hank McComell Address: 1001 N Big Spring St Ste 200 City: Midland TX Zip: 79701 Telephone: _____ Fax: _____ E-mail Address: _____		Preservative Filtered (✓) # of Containers Container Information		PARAMETER ANALYSIS & METHOD TOX, CI BTEX Sealing		Keys Preservation Key: A. H ₂ SO ₄ B. HCL C. HNO ₃ D. NaOH E. None F. Other: G. Other: H. Other: 10. Other: Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz Glass 7. 4 oz Glass 8. 8 oz Glass 9. Other: 10. Other: Matrix Key: SE - Sediment SO - Soil W - Water T - Tissue SL - Sludge A - Air NL - NAPL/Oil SW - Sample Wipe Other:	
Send Results to: Project Name/Location (City, State): Sampler's Printed Name: Sampler's Signature:		Collection Date Time Type (✓) Comp Grab Matrix		REMARKS		Special Instructions/Comments (✓): □ Special QA/QC Instructions (✓):	
Sample ID ACW-10 154.11" ENSR-1 130' ENSR-1 145.5' ENSR-3 121.5' ENSR-3 144.5' ACW-11 154.5' ACW-11 138.5' ENSR-3 135' TRIP Blank		1/9 0956 1/9 1300 1/9 1310 1/9 1410 1/9 1430 1/9 1510 1/9 1500 1/9 1420		3 3 3 3 3 3 3 3		2.0/2-2 TR4 Seal	
Laboratory Information and Receipt Lab Name: Cooler Custody Seal (✓) □ Cooler packed with Ice (✓) Specify Turnaround Requirements: Shipping Tracking #:		Received By: Printed Name: Signature: Firm/Courier: Date/Time:		Relinquished By: Printed Name: Signature: Firm/Courier: Date/Time:		Laboratory Received By: Printed Name: Signature: Firm: Date/Time:	
Distribution:		WHITE - Laboratory returns with results		YELLOW - Lab copy		PINK - Retained by ARCADIS	

[illegible]

[illegible]

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

Lab Work Order #

Page 1 of 1

Send Results to: City: <u>Midland</u> State: <u>TX</u> Zip: <u>79701</u> Project Name/Location (City, State): <u>KM Jal #4</u> Sample ID: <u>ACW-6</u> Project #: <u>MT001126.0001</u> Sampler's Printed Name: <u>Carol S. Longwood</u> Signature: <u>[Signature]</u>		Telephone: <u>432-687-5400</u> Fax: <u>432-687-5401</u> E-mail Address: <u>hank.mcconnell@arcadis-us.com</u>		Preservation: <u>Filtered (✓)</u> # of Containers: <u>1</u> Container Information: <u>3</u>		Keys: Preservation Key: A. H ₂ SO ₄ B. HCL C. HNO ₃ D. NaOH E. None F. Other: G. Other: H. Other: Matrix Key: SE - Sediment SO - Soil W - Water T - Tissue NL - NAP/Oil SL - Sludge SW - Sample Wipe Other:	
PARAMETER ANALYSIS & METHOD							
COM							
TDS, Cond, Cl, Sodium							
REMARKS							
1.3/1.5 JRL Seal							
Special Instructions/Comments:							
Special Instructions/Comments (✓):							
Laboratory Information and Receipt Lab Name: <u>Test America</u> Cooler Custody Seal (✓) ☒ Intact ☐ Not Intact Sample Receipt: Condition/Cooler Temp:		Relinquished By Printed Name: <u>[Signature]</u> Signature: <u>[Signature]</u> Firm/Counter: <u>ARCADIS</u> Date/Time: <u>11/14/14 17:14</u>		Received By Printed Name: <u>[Signature]</u> Signature: <u>[Signature]</u> Firm/Counter: <u>ARCADIS</u> Date/Time: <u>11/14/14 12:20</u>		Relinquished By Printed Name: Signature: Firm/Counter: Date/Time:	
Lab Name: <u>Test America</u> Cooler packed with ice (✓) Specify Turnaround Requirements: Shipping Tracking #:		Printed Name: Signature: Firm/Counter: Date/Time:		Printed Name: Signature: Firm/Counter: Date/Time:		Laboratory Received By Printed Name: Signature: Firm/Counter: Date/Time:	

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 560-44767-1

SDG Number: January 2014

Login Number: 44767

List Number: 1

Creator: Wing, Randi

List Source: TestAmerica Corpus Christi

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

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Corpus Christi
1733 N. Padre Island Drive
Corpus Christi, TX 78408
Tel: (361)289-2673

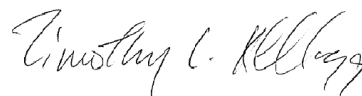
TestAmerica Job ID: 560-44835-1

Client Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

For:

ARCADIS U.S., Inc.
1004 North Big Spring
Suite 300
Midland, Texas 79701

Attn: Hank McConnell



Authorized for release by:
1/28/2014 10:16:56 AM

Timothy Kellogg, Lab Director
(361)289-2673
tim.kellogg@testamericainc.com

LINKS

Review your project
results through

TotalAccess

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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

Definitions/Glossary

Client: ARCADIS U.S., Inc.

Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44835-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44835-1

Job ID: 560-44835-1

Laboratory: TestAmerica Corpus Christi

Narrative

Receipt

The samples were received on 1/15/2014 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.5° C. No analytical or quality issues were noted.

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Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44835-1

Client Sample ID: ACW-9

Date Collected: 01/13/14 11:47

Date Received: 01/15/14 10:00

Lab Sample ID: 560-44835-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00386		0.00100	0.000140	mg/L	-		01/16/14 15:35	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	-		01/16/14 15:35	1
Toluene	<0.000300		0.00100	0.000300	mg/L	-		01/16/14 15:35	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	-		01/16/14 15:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		01/16/14 15:35	1
4-Bromofluorobenzene (Surr)	99		70 - 130		01/16/14 15:35	1
Dibromofluoromethane (Surr)	98		70 - 130		01/16/14 15:35	1
1,2-Dichloroethane-d4 (Surr)	108		70 - 140		01/16/14 15:35	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	3300		1.00	0.310	mg/L	-	01/16/14 07:45	01/16/14 19:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5960		800	200	mg/L	-		01/17/14 11:06	40
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	18600		1.00	1.00	umhos/cm	-		01/21/14 09:00	1
Total Dissolved Solids	8480		10.0	10.0	mg/L	-		01/17/14 11:30	1

Client Sample ID: ACW-11

Date Collected: 01/13/14 13:26

Date Received: 01/15/14 10:00

Lab Sample ID: 560-44835-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00446		0.00100	0.000140	mg/L	-		01/16/14 16:01	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	-		01/16/14 16:01	1
Toluene	<0.000300		0.00100	0.000300	mg/L	-		01/16/14 16:01	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	-		01/16/14 16:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		01/16/14 16:01	1
4-Bromofluorobenzene (Surr)	106		70 - 130		01/16/14 16:01	1
Dibromofluoromethane (Surr)	101		70 - 130		01/16/14 16:01	1
1,2-Dichloroethane-d4 (Surr)	111		70 - 140		01/16/14 16:01	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	9880		1.00	0.310	mg/L	-	01/16/14 07:45	01/16/14 19:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22500		4000	1000	mg/L	-		01/17/14 11:06	200
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	52200		1.00	1.00	umhos/cm	-		01/21/14 09:00	1
Total Dissolved Solids	29700		10.0	10.0	mg/L	-		01/17/14 11:30	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44835-1

Client Sample ID: ACW-1

Date Collected: 01/13/14 13:57

Date Received: 01/15/14 10:00

Lab Sample ID: 560-44835-3

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00300		0.00100	0.000140	mg/L			01/16/14 16:26	1
Ethylbenzene	0.000277	J	0.00100	0.000200	mg/L			01/16/14 16:26	1
Toluene	0.000457	J	0.00100	0.000300	mg/L			01/16/14 16:26	1
Xylenes, Total	0.000443	J	0.00300	0.000226	mg/L			01/16/14 16:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		01/16/14 16:26	1
4-Bromofluorobenzene (Surr)	100		70 - 130		01/16/14 16:26	1
Dibromofluoromethane (Surr)	108		70 - 130		01/16/14 16:26	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 140		01/16/14 16:26	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	1450		1.00	0.310	mg/L		01/16/14 15:00	01/17/14 18:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	2980		400	100	mg/L			01/17/14 10:36	20
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	9900		1.00	1.00	umhos/cm			01/21/14 09:00	1
Total Dissolved Solids	4560		10.0	10.0	mg/L			01/17/14 11:30	1

Client Sample ID: ENSR-1

Date Collected: 01/13/14 15:40

Date Received: 01/15/14 10:00

Lab Sample ID: 560-44835-4

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.00786		0.00100	0.000140	mg/L			01/16/14 16:51	1
Ethylbenzene	0.00156		0.00100	0.000200	mg/L			01/16/14 16:51	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/16/14 16:51	1
Xylenes, Total	0.00106	J	0.00300	0.000226	mg/L			01/16/14 16:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		01/16/14 16:51	1
4-Bromofluorobenzene (Surr)	98		70 - 130		01/16/14 16:51	1
Dibromofluoromethane (Surr)	108		70 - 130		01/16/14 16:51	1
1,2-Dichloroethane-d4 (Surr)	109		70 - 140		01/16/14 16:51	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	2420		1.00	0.310	mg/L		01/16/14 15:00	01/17/14 18:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4410		800	200	mg/L			01/17/14 11:07	40
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	13600		1.00	1.00	umhos/cm			01/21/14 09:00	1
Total Dissolved Solids	6240		10.0	10.0	mg/L			01/17/14 11:30	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44835-1

Client Sample ID: EB-3

Lab Sample ID: 560-44835-5

Date Collected: 01/13/14 18:26

Matrix: Water

Date Received: 01/15/14 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		01/16/14 17:17	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		01/16/14 17:17	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		01/16/14 17:17	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		01/16/14 17:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		01/16/14 17:17	1
4-Bromofluorobenzene (Surr)	99		70 - 130		01/16/14 17:17	1
Dibromofluoromethane (Surr)	102		70 - 130		01/16/14 17:17	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 140		01/16/14 17:17	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	0.724	J	1.00	0.310	mg/L	—	01/16/14 15:00	01/17/14 18:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		20.0	5.00	mg/L	—		01/17/14 10:37	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	2.90		1.00	1.00	umhos/cm	—		01/21/14 09:00	1
Total Dissolved Solids	<10.0		10.0	10.0	mg/L	—		01/17/14 11:30	1

Client Sample ID: FB-2

Lab Sample ID: 560-44835-6

Date Collected: 01/13/14 18:15

Matrix: Water

Date Received: 01/15/14 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		01/16/14 17:41	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		01/16/14 17:41	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		01/16/14 17:41	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L	—		01/16/14 17:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		70 - 130		01/16/14 17:41	1
4-Bromofluorobenzene (Surr)	100		70 - 130		01/16/14 17:41	1
Dibromofluoromethane (Surr)	104		70 - 130		01/16/14 17:41	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 140		01/16/14 17:41	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.310		1.00	0.310	mg/L	—	01/16/14 15:00	01/17/14 19:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		20.0	5.00	mg/L	—		01/17/14 10:37	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.00		1.00	1.00	umhos/cm	—		01/21/14 09:00	1
Total Dissolved Solids	<10.0		10.0	10.0	mg/L	—		01/17/14 11:30	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44835-1

Client Sample ID: FB-3

Date Collected: 01/13/14 15:18

Date Received: 01/15/14 10:00

Lab Sample ID: 560-44835-7

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		01/16/14 18:07	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		01/16/14 18:07	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		01/16/14 18:07	1
Xylenes, Total	0.000267	J	0.00300	0.000226	mg/L	—		01/16/14 18:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		70 - 130		01/16/14 18:07	1
4-Bromofluorobenzene (Surr)	103		70 - 130		01/16/14 18:07	1
Dibromofluoromethane (Surr)	101		70 - 130		01/16/14 18:07	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 140		01/16/14 18:07	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.310		1.00	0.310	mg/L	—	01/16/14 15:00	01/17/14 19:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		20.0	5.00	mg/L	—		01/17/14 10:38	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.00		1.00	1.00	umhos/cm	—		01/21/14 09:00	1
Total Dissolved Solids	<10.0		10.0	10.0	mg/L	—		01/17/14 11:30	1

Client Sample ID: EB-4

Date Collected: 01/13/14 18:05

Date Received: 01/15/14 10:00

Lab Sample ID: 560-44835-8

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L	—		01/16/14 18:32	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L	—		01/16/14 18:32	1
Toluene	<0.000300		0.00100	0.000300	mg/L	—		01/16/14 18:32	1
Xylenes, Total	0.000400	J	0.00300	0.000226	mg/L	—		01/16/14 18:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		70 - 130		01/16/14 18:32	1
4-Bromofluorobenzene (Surr)	101		70 - 130		01/16/14 18:32	1
Dibromofluoromethane (Surr)	103		70 - 130		01/16/14 18:32	1
1,2-Dichloroethane-d4 (Surr)	114		70 - 140		01/16/14 18:32	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.310		1.00	0.310	mg/L	—	01/16/14 15:00	01/17/14 19:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		20.0	5.00	mg/L	—		01/17/14 10:38	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.00		1.00	1.00	umhos/cm	—		01/21/14 09:00	1
Total Dissolved Solids	<10.0		10.0	10.0	mg/L	—		01/17/14 11:30	1

TestAmerica Corpus Christi

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44835-1

Client Sample ID: Trip Blank

Lab Sample ID: 560-44835-9

Date Collected: 01/13/14 00:00

Matrix: Water

Date Received: 01/15/14 10:00

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.000273	J	0.00100	0.000140	mg/L			01/16/14 15:10	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/16/14 15:10	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/16/14 15:10	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/16/14 15:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		70 - 130		01/16/14 15:10	1
4-Bromofluorobenzene (Surr)	105		70 - 130		01/16/14 15:10	1
Dibromofluoromethane (Surr)	107		70 - 130		01/16/14 15:10	1
1,2-Dichloroethane-d4 (Surr)	113		70 - 140		01/16/14 15:10	1

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44835-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 560-97290/8

Matrix: Water

Analysis Batch: 97290

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.000140		0.00100	0.000140	mg/L			01/16/14 11:22	1
Ethylbenzene	<0.000200		0.00100	0.000200	mg/L			01/16/14 11:22	1
Toluene	<0.000300		0.00100	0.000300	mg/L			01/16/14 11:22	1
Xylenes, Total	<0.000226		0.00300	0.000226	mg/L			01/16/14 11:22	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		70 - 130		01/16/14 11:22	1
4-Bromofluorobenzene (Surr)	101		70 - 130		01/16/14 11:22	1
Dibromofluoromethane (Surr)	101		70 - 130		01/16/14 11:22	1
1,2-Dichloroethane-d4 (Surr)	110		70 - 140		01/16/14 11:22	1

Lab Sample ID: LCS 560-97290/3

Matrix: Water

Analysis Batch: 97290

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.0250	0.02561		mg/L		102	70 - 130
Ethylbenzene	0.0250	0.02483		mg/L		99	70 - 130
Toluene	0.0250	0.02493		mg/L		100	70 - 130
Xylenes, Total	0.0500	0.05213		mg/L		104	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	100		70 - 130
4-Bromofluorobenzene (Surr)	99		70 - 130
Dibromofluoromethane (Surr)	108		70 - 130
1,2-Dichloroethane-d4 (Surr)	112		70 - 140

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 560-97287/1-A

Matrix: Water

Analysis Batch: 97339

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 97287

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.310		1.00	0.310	mg/L		01/16/14 07:45	01/16/14 17:39	1

Lab Sample ID: LCS 560-97287/2-A

Matrix: Water

Analysis Batch: 97339

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 97287

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	50.0	49.38		mg/L		99	80 - 120

TestAmerica Corpus Christi

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44835-1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 560-97316/1-A

Matrix: Water

Analysis Batch: 97427

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 97316

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<0.310		1.00	0.310	mg/L		01/16/14 15:00	01/17/14 17:22	1

Lab Sample ID: LCS 560-97316/2-A

Matrix: Water

Analysis Batch: 97427

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 97316

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	50.0	45.28		mg/L		91	80 - 120

Method: 120.1 - Conductivity, Specific Conductance

Lab Sample ID: MB 560-97474/3

Matrix: Water

Analysis Batch: 97474

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	<1.00		1.00	1.00	umhos/cm			01/21/14 09:00	1

Lab Sample ID: LCS 560-97474/4

Matrix: Water

Analysis Batch: 97474

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	1000	1002		umhos/cm		100	90 - 110

Lab Sample ID: 560-44835-4 DU

Matrix: Water

Analysis Batch: 97474

Client Sample ID: ENSR-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	13600		13590		umhos/cm		0.07	

Method: 9251 - Chloride

Lab Sample ID: MB 560-97362/3

Matrix: Water

Analysis Batch: 97362

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<5.00		20.0	5.00	mg/L			01/17/14 10:23	1

Lab Sample ID: LCS 560-97362/4

Matrix: Water

Analysis Batch: 97362

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	150	152.1		mg/L		101	85 - 115

TestAmerica Corpus Christi

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44835-1

Method: 9251 - Chloride (Continued)

Lab Sample ID: 560-44835-8 MS

Matrix: Water

Analysis Batch: 97362

Client Sample ID: EB-4

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	<5.00		200	208.6		mg/L		104	85 - 115

Lab Sample ID: 560-44835-8 MSD

Matrix: Water

Analysis Batch: 97362

Client Sample ID: EB-4

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	<5.00		200	208.9		mg/L		104	85 - 115	0	30

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 560-97409/1

Matrix: Water

Analysis Batch: 97409

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10.0		10.0	10.0	mg/L			01/17/14 11:30	1

Lab Sample ID: LCS 560-97409/2

Matrix: Water

Analysis Batch: 97409

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	2250	1800		mg/L		80	80 - 120

TestAmerica Corpus Christi

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44835-1

Client Sample ID: ACW-9

Date Collected: 01/13/14 11:47

Date Received: 01/15/14 10:00

Lab Sample ID: 560-44835-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97290	01/16/14 15:35	RJT	TAL CC
Total/NA	Prep	3010A			97287	01/16/14 07:45	RLM	TAL CC
Total/NA	Analysis	6010B		1	97339	01/16/14 19:39	EDR	TAL CC
Total/NA	Analysis	9251		40	97362	01/17/14 11:06	LPO	TAL CC
Total/NA	Analysis	SM 2540C		1	97409	01/17/14 11:30	OV56	TAL CC
Total/NA	Analysis	120.1		1	97474	01/21/14 09:00	OV56	TAL CC

Client Sample ID: ACW-11

Date Collected: 01/13/14 13:26

Date Received: 01/15/14 10:00

Lab Sample ID: 560-44835-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97290	01/16/14 16:01	RJT	TAL CC
Total/NA	Prep	3010A			97287	01/16/14 07:45	RLM	TAL CC
Total/NA	Analysis	6010B		1	97339	01/16/14 19:43	EDR	TAL CC
Total/NA	Analysis	9251		200	97362	01/17/14 11:06	LPO	TAL CC
Total/NA	Analysis	SM 2540C		1	97409	01/17/14 11:30	OV56	TAL CC
Total/NA	Analysis	120.1		1	97474	01/21/14 09:00	OV56	TAL CC

Client Sample ID: ACW-1

Date Collected: 01/13/14 13:57

Date Received: 01/15/14 10:00

Lab Sample ID: 560-44835-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97290	01/16/14 16:26	RJT	TAL CC
Total/NA	Prep	3010A			97316	01/16/14 15:00	MIG	TAL CC
Total/NA	Analysis	6010B		1	97427	01/17/14 18:46	EDR	TAL CC
Total/NA	Analysis	9251		20	97362	01/17/14 10:36	LPO	TAL CC
Total/NA	Analysis	SM 2540C		1	97409	01/17/14 11:30	OV56	TAL CC
Total/NA	Analysis	120.1		1	97474	01/21/14 09:00	OV56	TAL CC

Client Sample ID: ENSR-1

Date Collected: 01/13/14 15:40

Date Received: 01/15/14 10:00

Lab Sample ID: 560-44835-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97290	01/16/14 16:51	RJT	TAL CC
Total/NA	Prep	3010A			97316	01/16/14 15:00	MIG	TAL CC
Total/NA	Analysis	6010B		1	97427	01/17/14 18:50	EDR	TAL CC
Total/NA	Analysis	9251		40	97362	01/17/14 11:07	LPO	TAL CC
Total/NA	Analysis	SM 2540C		1	97409	01/17/14 11:30	OV56	TAL CC

TestAmerica Corpus Christi

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44835-1

Client Sample ID: ENSR-1

Lab Sample ID: 560-44835-4

Date Collected: 01/13/14 15:40

Matrix: Water

Date Received: 01/15/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	120.1		1	97474	01/21/14 09:00	OV56	TAL CC

Client Sample ID: EB-3

Lab Sample ID: 560-44835-5

Date Collected: 01/13/14 18:26

Matrix: Water

Date Received: 01/15/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97290	01/16/14 17:17	RJT	TAL CC
Total/NA	Prep	3010A			97316	01/16/14 15:00	MIG	TAL CC
Total/NA	Analysis	6010B		1	97427	01/17/14 18:54	EDR	TAL CC
Total/NA	Analysis	9251		1	97362	01/17/14 10:37	LPO	TAL CC
Total/NA	Analysis	SM 2540C		1	97409	01/17/14 11:30	OV56	TAL CC
Total/NA	Analysis	120.1		1	97474	01/21/14 09:00	OV56	TAL CC

Client Sample ID: FB-2

Lab Sample ID: 560-44835-6

Date Collected: 01/13/14 18:15

Matrix: Water

Date Received: 01/15/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97290	01/16/14 17:41	RJT	TAL CC
Total/NA	Prep	3010A			97316	01/16/14 15:00	MIG	TAL CC
Total/NA	Analysis	6010B		1	97427	01/17/14 19:11	EDR	TAL CC
Total/NA	Analysis	9251		1	97362	01/17/14 10:37	LPO	TAL CC
Total/NA	Analysis	SM 2540C		1	97409	01/17/14 11:30	OV56	TAL CC
Total/NA	Analysis	120.1		1	97474	01/21/14 09:00	OV56	TAL CC

Client Sample ID: FB-3

Lab Sample ID: 560-44835-7

Date Collected: 01/13/14 15:18

Matrix: Water

Date Received: 01/15/14 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97290	01/16/14 18:07	RJT	TAL CC
Total/NA	Prep	3010A			97316	01/16/14 15:00	MIG	TAL CC
Total/NA	Analysis	6010B		1	97427	01/17/14 19:15	EDR	TAL CC
Total/NA	Analysis	9251		1	97362	01/17/14 10:38	LPO	TAL CC
Total/NA	Analysis	SM 2540C		1	97409	01/17/14 11:30	OV56	TAL CC
Total/NA	Analysis	120.1		1	97474	01/21/14 09:00	OV56	TAL CC

TestAmerica Corpus Christi

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

TestAmerica Job ID: 560-44835-1

Client Sample ID: EB-4

Date Collected: 01/13/14 18:05

Date Received: 01/15/14 10:00

Lab Sample ID: 560-44835-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97290	01/16/14 18:32	RJT	TAL CC
Total/NA	Prep	3010A			97316	01/16/14 15:00	MIG	TAL CC
Total/NA	Analysis	6010B		1	97427	01/17/14 19:19	EDR	TAL CC
Total/NA	Analysis	9251		1	97362	01/17/14 10:38	LPO	TAL CC
Total/NA	Analysis	SM 2540C		1	97409	01/17/14 11:30	OV56	TAL CC
Total/NA	Analysis	120.1		1	97474	01/21/14 09:00	OV56	TAL CC

Client Sample ID: Trip Blank

Date Collected: 01/13/14 00:00

Date Received: 01/15/14 10:00

Lab Sample ID: 560-44835-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	97290	01/16/14 15:10	RJT	TAL CC

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

Certification Summary

Client: ARCADIS U.S., Inc.

TestAmerica Job ID: 560-44835-1

Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

Laboratory: TestAmerica Corpus Christi

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Kansas	NELAP	7	E-10362	10-31-14
Oklahoma	State Program	6	9968	08-31-14
Texas	NELAP	6	T104704210	03-31-14
USDA	Federal		P330-11-00060	02-03-14

Method Summary

Client: ARCADIS U.S., Inc.

TestAmerica Job ID: 560-44835-1

Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CC
6010B	Metals (ICP)	SW846	TAL CC
120.1	Conductivity, Specific Conductance	MCAWW	TAL CC
9251	Chloride	SW846	TAL CC
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CC

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

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

Laboratory References:

TAL CC = TestAmerica Corpus Christi, 1733 N. Padre Island Drive, Corpus Christi, TX 78408, TEL (361)289-2673

Sample Summary

Client: ARCADIS U.S., Inc.

TestAmerica Job ID: 560-44835-1

Project/Site: Quarterly Monitoring for Jal #4 Gas Plan

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
560-44835-1	ACW-9	Water	01/13/14 11:47	01/15/14 10:00
560-44835-2	ACW-11	Water	01/13/14 13:26	01/15/14 10:00
560-44835-3	ACW-1	Water	01/13/14 13:57	01/15/14 10:00
560-44835-4	ENSR-1	Water	01/13/14 15:40	01/15/14 10:00
560-44835-5	EB-3	Water	01/13/14 18:26	01/15/14 10:00
560-44835-6	FB-2	Water	01/13/14 18:15	01/15/14 10:00
560-44835-7	FB-3	Water	01/13/14 15:18	01/15/14 10:00
560-44835-8	EB-4	Water	01/13/14 18:05	01/15/14 10:00
560-44835-9	Trip Blank	Water	01/13/14 00:00	01/15/14 10:00

CHAIN OF CUSTODY & LABORATORY ANALYSIS REQUEST FORM

ID#:

Lab Work Order #

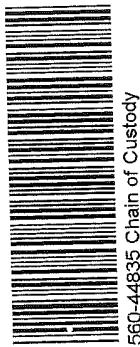
Loc: 560

44835

Page 1 of 1

Send Results to: Contact: hank.mcconnell ARCADIS Address: 004 N Big Spring Suite 300 City: Midland State: TX Zip: 79701 Telephone: 432-687-5400 Fax: 432-687-5401 Email Address: hank.mcconnell@arcadis-us.com		Keys Preservation Key: A. H ₂ SO ₄ B. HCl C. HNO ₃ D. NaOH E. None F. Other: G. Other: H. Other: 10. Other: Container Information Key: 1. 40 ml Vial 2. 1 L Amber 3. 250 ml Plastic 4. 500 ml Plastic 5. Encore 6. 2 oz. Glass 7. 4 oz. Glass 8. 8 oz. Glass 9. Other: 10. Other: Matrix Key: SE - Sediment SW - Sample Wipe A - Air NL - NAPL/Oil SW - Sample Wipe Other:	
PARAMETER ANALYSIS & METHOD com			
Project Name/Location (City, State): KM Ja1 #4 Ja1, NM	Project #: MT001126.0001	Sampler's Signature: <i>Max Key</i>	Matrix
Sample ID	Collection Date	Type (✓)	Comp

Sample ID	Collection Date	Type (✓)	Comp	Matrix	REMARKS
ACW-9	01/31/14 1147	/		W	
ACW-11	01/31/14 1326	/		W	
ACW-1	01/31/14 1357	/		W	
ENSR-1	01/31/14 1540	/		W	
EB-3	01/31/14 1826	/		W	
EB-2	01/31/14 1815	/		W	
EB-3	01/31/14 1518	/		W	
EB-4	01/31/14 1805	/		W	
Temp Blank					
Trip Blank					



560-44835 Chain of Custody

☐ Special QA/QC Instructions(✓):

Special Instructions/Comments:

Laboratory Information and Receipt Lab Name: Test America ☒ Cooler packed with ice (✓) Sample Receipt: <i>Standard</i> Shipping Tracking #: <i>803045897545</i>		Relinquished By Printed Name: <i>Max Key</i> Signature: <i>[Signature]</i> Firm: ARCADIS Date/Time: <i>01/14/14 1602</i> 		Received By Printed Name: <i>V.B. Good</i> Signature: <i>[Signature]</i> Firm: <i>[Signature]</i> Date/Time: <i>01/15/14 1000</i>		Laboratory Received By Printed Name: Signature: Firm: Date/Time:	
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Distribution: WHITE - Laboratory returns with results

YELLOW - Lab copy

PINK - Retained by ARCADIS

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 560-44835-1

Login Number: 44835

List Source: TestAmerica Corpus Christi

List Number: 1

Creator: Rood, Vivian R

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