amec foster wheeler

Sitewide Groundwater Monitoring Report
December 2014 through March 2015

Broadway-Pantano WQARF Site
Tucson, Arizona

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LIST OF ACRONYMS AND ABBREVIATIONS

%	percent
µg/L	micrograms per liter
ADEQ	Arizona Department of Environmental Quality
AWQS	Aquifer Water Quality Standard
BNL	Broadway North Landfill
BSL	Broadway South Landfill
bwt	below the water table
CCA	Clear Creek Associates
cis-1,2-DCE	cis-1,2-dichloroethene
COC(s)	chemical(s) of concern
COT-ES	City of Tucson – Environmental Services
EPA	US Environmental Protection Agency
ft	feet
ft/ft	feet/foot
ft/yr	feet per year
FS	Feasibility Study
GAC	granular activated carbon
GOU	Groundwater Operable Unit
ISCO	in-situ chemical oxidation
LOU	Landfill Operable Unit
MDL	method detection limit
mg/L	milligrams per liter
MS	matrix spike
PDB	passive diffusion bag
PCE	tetrachloroethene
QAPP	Quality Assurance Project Plan
RCRA	Resource Conservation Recovery Act
RI	Remedial Investigation
RPD	relative percent difference
TCE	trichloroethene
TestAmerica	TestAmerica Laboratories, Inc.
VOC	volatile organic compound
WCS	Western Containment System
WQARF	Water Quality Revolving Fund

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1.0 INTRODUCTION

This Sitewide Groundwater Monitoring Report presents the results and sampling activities conducted from December 2014 to March 2015 at the Broadway-Pantano Water Quality Revolving Fund (WQARF) Site (the Site), located in Tucson, Arizona (Figure 1). This work was completed by Amec Foster Wheeler Environment and Infrastructure, Inc. (Amec Foster Wheeler) on behalf of Arizona Department of Environmental Quality (ADEQ) in accordance with ADEQ Contract No. ADEQ14-77536. All field activities and analytical procedures were conducted in general accordance with the December 18, 2014 Groundwater Sampling Program Memorandum (Amec Foster Wheeler, 2014) and the February 9, 2015 Quality Assurance Project Plan (QAPP) Addendum (Amec Foster Wheeler, 2015).

The objectives of the groundwater sampling program were to:

1. Perform a data gap analysis to meet data requirements for preparation of a draft Feasibility Study (FS) Report; and
2. Obtain up-to-date information to be used in the development of the draft FS Report for plume delineation and remediation, including evaluation of groundwater cleanup in the vicinity of the Landfill Operable Unit (LOU).

Achievement of the objectives included:

1. Completion of one round of area wide groundwater level measurements.
2. Completion of one round of area wide groundwater quality sampling of key wells.
3. Enhanced (quarterly) groundwater monitoring of select downgradient wells and wells in the vicinity of the LOU.
4. Evaluation of groundwater quality at select wells in the vicinity of potential volatile organic compound (VOC) sources impacting groundwater. Analyses included biodegradation indicator parameters, general chemistry, and metals.

This sampling program was conducted in conjunction with the Western Containment System (WCS) Enhanced Groundwater Monitoring program conducted by City of Tucson – Environmental Services (COT-ES). The Enhanced Groundwater Monitoring Program was initiated in December 2012 to monitor VOCs in the vicinity and downgradient of the WCS after the WCS was shut down on October 12, 2012. Select wells are monitored to determine if the WCS should be reactivated if VOC concentrations in the vicinity of WCS rebound.

The last sitewide groundwater sampling event which included water quality sampling and water level gauging was conducted in September 2011 by Stantec on behalf of ADEQ (Stantec, 2012a). Another round of groundwater elevation measurements was conducted in February 2013 by Clear Creek Associates (CCA) on behalf of ADEQ (CCA, 2015).

The chemicals of concern (COCs) in the Site Groundwater Operable Unit (GOU) include tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), vinyl chloride and methylene chloride. The primary COC is PCE, which has an Aquifer Water Quality Standard (AWQS) of 5 micrograms per liter (µg/L).

Amec Foster Wheeler coordinated site access with ADEQ, property managers, Tucson Water and the COT-ES for this sampling event. Table 1 presents well construction and location information for Site groundwater wells; Table 1 was consolidated from information provided by previous consultants and ADEQ reports. If discrepancies were identified in the well construction information (specifically groundwater reference elevations), the data reported in the GOU Remedial Investigation (RI) (Stantec, 2012b) were used. The historical water quality and water elevation data compiled for the GOU and LOU RIs were also incorporated into the Amec Foster Wheeler Site database. The source of information has been documented in the Site database.

2.0 MONITORING RESULTS

2.1 Site Monitoring Network

The Site monitoring network consists of 85 groundwater wells, of which 63 were monitored for groundwater quality during the reporting period. Sampled wells are identified in Table 1 and the location and well type are presented in Figure 1. The type of wells sampled included:

- Active and inactive COT water production wells within or adjacent to the Site GOU (C-020B, C-022A, C-025B, C-026A, C-048A, C-058A, C-114A, C-125A, D-018A, D-022A, D-039A, and D-040A);
- A privately owned water production well (CVA);
- WCS groundwater remediation wells (injection well R-090A and extraction wells R-092A and C-026B);
- Select ADEQ and COT monitoring wells including 22 monitor wells sampled by either Tucson Water or COT-ES on a quarterly basis to evaluate WCS performance; and
- Groundwater monitoring wells located in the vicinity of the LOU which includes Broadway South Landfill (BSL) and Broadway North Landfill (BNL).

As indicated in Table 1, there were three wells that were targeted for sampling (411-P at the St. Joseph Hospital, C-124A, and C-026B) but were not sampled. Well 411-P, a private water production well, was not active and there was no wellhead access to deploy sampling equipment. Tucson Water well C-124A had an inoperable pump and could not be sampled. C-026B was not sampled because depth-specific sampling was performed in collocated well C-026A.

2.2 Sampling Procedures

Details of the Enhanced Groundwater Sampling Event conducted by Amec Foster Wheeler in December 2014/January 2015 and the Sitewide Groundwater Sampling Event conducted by both Amec Foster Wheeler and Tucson Water/COT-ES in February/March 2015 are summarized in Tables 2 and 3, respectively.

As part of the Enhanced Groundwater Sampling Event, Amec Foster Wheeler collected samples from six wells (CVA, C-048A, R-068A, WR-273A, WR-274A and WR-367A) on January 12 and 13, 2015. These samples were collected using passive diffusion bag (PDB) samplers and

were analyzed for VOCs using US Environmental Protection Agency (EPA) Method 8260B. PDB sampling was performed in accordance with the methods used for recent groundwater sampling conducted by the COT. Table 2 presents PDB placement depths.

With the exception of select Tucson Water production wells (which were sampled from ports located on well discharge piping), the Sitewide Groundwater Samples evaluated for VOC analysis by EPA Method 8260 were also collected using passive PDB samplers. To provide comparable results, the majority of the PDB samples were collected at 25 feet (ft) below the water table (bwt). For wells screened deeper than 25 ft bwt, the PDB was placed within the screen interval of the well (e.g., BP-24B, BP-24C, D-040A, and WR-353A). Refer to Table 3 for PDB placement depths.

Based on previous sampling events, limited differences in VOC concentrations were reported, minimizing the need to collect multiple depth-specific samples in each well (Stantec, 2012a). However, 15 depth-specific samples were collected within the screened interval of seven wells across the Site to evaluate variation in concentrations versus depth. These wells were BP-7 (3), BP-20 (2), C-026A (4), R-090A (4), R-092A (4), WR-274A (3) and WR-367A (2). The number in parentheses represents the number of depth-specific samples collected in each well. Three grouped well locations with individual wells screened to monitor vertical distribution of VOCs were also sampled and included: BP-24A, BP-24B and BP-24C; WR-178A and WR-352; and WR-273A and WR-353A.

In addition to VOC analysis by EPA Method 8260, five select wells (R-068A, WR-274A, WR-275A, WR-353A and WR-367A) were sampled for the Resource Conservation Recovery Act (RCRA) 8 metals by ICP-AES using EPA Method 200.7/6010B. Metals analyses were conducted in wells located in the vicinity of the BNL where metals have historically been reported at or above their respective AQWS.

A full suite of analyses was collected at R-068A, WR-273A, WR-274A, WR-353A and WR-367A. These analyses and field tests were used to evaluate the degree of microbiological activity, natural attenuation and treatability of groundwater underlying the source area. The well locations were selected based on historic water quality data. The full suite of analyses included anions by Method 300, cations and metals by EPA Method 6010 and 7470A, alkalinity by SM 2320B, pH by SM 4500, SVOCs by EPA Method 8270C, dissolved organic carbon by SM 5310B, hardness by SM 2340B and dissolved gases (e.g., ethene, ethane, and methane) by RSK 175. A Hydrasleeve™ was used to collect samples for metals analyses and microbiological activity/treatability assessment. The samples were collected from approximately 25 ft bwt. A CHEMetrics field test kit (Catalog No. K-6210) was used to measure ferrous and total iron concentrations and YSI 556 field instruments were used to measure groundwater field parameters (i.e., pH, electrical conductivity, dissolved oxygen, and temperature).

Two wellhead samples were collected in Tucson Water production wells C-51A/B and C-125A on December 22, 2014. This supplemental sampling event was performed to monitor VOC concentrations as part of a data gap evaluation to assess water quality west of WR-704 (the downgradient edge of the plume) and elevated groundwater VOC concentrations in the vicinity of BNL and BSL.

Groundwater samples collected by Amec Foster Wheeler were submitted under chain of custody to TestAmerica Laboratories, Inc. (TestAmerica), an Arizona Department of Health Services licensed laboratory. In addition, three spilt samples were submitted to Accutest Laboratories (Accutest) for quality assurance purposes. This comparison of lab results was performed because COT-ES used Accutest to analyze the groundwater samples they collected. Water quality samples collected by Tucson Water were analyzed by the Tucson Water laboratory using drinking water EPA Method 524.1.

2.3 Groundwater Level Gauging

Water levels were gauged in 65 wells by Amec Foster Wheeler for the Sitewide Groundwater Sampling Event. The wells and water levels for this event and other monitoring dates this year are listed in Table 4. No active pumping occurred within the GOU during the water level gauging. The water elevations used to develop the groundwater elevation contour map are posted on Figure 2. Data collected from five wells (C-048A, CVA, D-018A, R-125A and D-049A) were not used to develop the contour map because the values appear anomalous. Inconsistent values are likely due to uncertainties regarding the reference elevation or obstructions in production well access ports. Additionally, the wells screened deeper in the aquifer (i.e., B-24B/C, WR-352A and WR-353A) were not posted or used to develop the groundwater elevation contour map. The water levels provided by Tucson Water for inactive and active production wells in the vicinity of the GOU were not included in water elevation contouring, gradient and flow direction calculations as they were measured in November 2014. In the future, efforts will be made to coordinate water level gauging with Tucson Water. Select Tucson Water wells where samples were collected during this event were included (Table 4).

In March 2015, depth to water measurements ranged from 280.65 (C-048A) to 375.42 (D-041A) ft below top of casing. The groundwater elevation contour map for the Site including the calculated flow direction and gradient are shown in Figure 2. The flow direction and gradient were calculated in three general areas (BNL, BSL and the WSC area). The calculated flow direction and gradient for BNL is 278 degrees from north (WNW) and 0.0022 feet/foot (ft/ft), BSL is 320 degrees from north (NW) and 0.0027 (ft/ft), and WCS area is 292 degrees from north (WNW) and 0.0023 ft/ft. The flow pattern and gradient are similar to the two most recent events (2011 and 2013). Tabulated historical water elevation data from 2001 through March 2015 are listed in Appendix A. Field forms documenting the water level gauging are presented in in Appendix B.

Hydrographs of select wells across the GOU are presented on Figure 3. There is a consistent trend in water level rises across the GOU from 2002 to 2015. The calculated trends in groundwater levels for select areas are listed in Table 5. A rise in water levels between 2002 and 2007 ranged from 0.22 to 0.47 feet per year (ft/yr) increasing to 2.77 to 3.48 ft/yr between 2007 and 2015. The rise in water levels is attributed to the reduced pumping of the Central Well Field since the introduction of Central Avra Valley Storage and Recovery Project to the public water system. The consistent rise in water levels across the GOU limited the change in flow direction and gradient in the GOU. Groundwater hydrographs for the wells in the GOU are presented in Appendix C.

The variability in estimated vertical gradients between nested wells is presented in Table 6. As indicated, an upward gradient was measured between BP-24A and BP-24B (a 1.31 ft difference in groundwater elevations) as well as BP-24B and BP-24C (a 0.38 ft difference in groundwater elevations). A slight upward gradient was also observed between wells WR-273A and WR-353A (a 0.11 ft difference in groundwater elevations). A slight downward gradient was observed between wells WR-178A and WR-352A (a -0.09 ft difference in groundwater elevations).

2.4 Groundwater Quality Sampling

VOC water quality results from the Enhanced Groundwater Monitoring Event and Sitewide Groundwater Monitoring Event are listed in Table 7 for the COCs. PCE and TCE were the only COCs detected at concentrations equaling or exceeding their respective AWQS of 5 µg/L. The only other compound consistently detected within the GOU plume was cis-1,2-DCE, which was below its AWQS of 70 µg/L. Vinyl chloride was not detected during these events above the reporting limit of 0.5 µg/L. Sporadic detections of benzene were reported as well as dichlorodifluoromethane.

The PCE, TCE and cis-1,2-DCE plumes maps for the Sitewide event are shown in Figures 4 through 6, respectively. The maximum concentration of PCE (120 µg/L) and TCE (35 µg/L) were detected in the vicinity of BNL in monitoring well WR-274A. The second highest detection of PCE (40 µg/L) was detected in the vicinity of BSL in monitoring well BP-23. BP-23 was the only monitoring well outside the plume originating from BNL that had an exceedance of TCE AWQS (5.8 µg/L).

PCE concentrations were consistent in the depth-specific PDB samples collected in the same well with the exception of BP-07 where the concentration decreased from 4.0 µg/L to 0.29 µg/L between 25 and 50 ft bwt. As in the previous sampling events, PCE concentrations exceeding the AWQS were limited to the upper 85 to 100 ft of the water table based on depth specific sampling in BP-07 and nested wells BP-24A/B/C, WR-178A/WR-352A and WR-273A/WR-353A.

Refer to the water quality time series plots in Appendix D for trends in PCE concentrations in select wells and areas. The key findings of the 2015 Sitewide Groundwater Monitoring Event are summarized as follows:

<u>Broadway North Landfill</u>

- The PCE concentration in WR-274A has decreased from 190 µg/L in November 2011 to 120 µg/L in March 2015. PCE concentrations in the northern portion of BNL (i.e., WR-273A and R-069A) have continued to decrease and are currently below the AWQS. PCE concentrations in R-068A, the location of the highest PCE concentrations historically in GOU, continue to decrease with time.

<u>Broadway South Landfill</u>

- PCE concentrations in the vicinity of BSL as represented by BP-23 (40 µg/L), WR-367A (9.7 µg/L) and BP-10 (9.4 µg/L) exceed the AWQS for PCE. The concentrations in BP-23 and BP-10 increased since 2011 and were similar to slightly higher in WR-367A. It

should be noted that higher concentrations of PCE were reported in wells BP-10 and WR-367A in 2001 and 2002. PCE concentrations in monitoring wells located on the southern end of BSL (WR-435 [4.2 µg/L] and BP-22 [4.3 µg/L]) were approaching the AWQS.

WCS Area

- PCE concentrations in WR-178A (2.7 µg/L) and SJ-002 (7.1 µg/L) located side gradient and upgradient of WCS extraction well R-92A have increased since the WCS was shut off.
- VOC concentrations in PDB samples collected from the two WCS extraction wells, as well as wells directly downgradient of the WCS, were below reporting limits. It should be noted that COT-ES reported a detection of PCE at 1.4 µg/L in R-092A when this well was pumped for 48 hours as part of the operation and maintenance of the WCS.

West of WCS

- PCE concentrations at WR-704A located west of WCS extraction well C-026B exceeded the AWQS for PCE (7.1 µg/L) and was below the AWQS in WR-702A in February 2015.
- PCE concentrations in Tucson Water wells and a private water production well west of WR-704 (i.e., CVA, C-048A and C-051B) were all below the reporting limit.

Metals

The RCRA 8 metal results collected in five select wells (R-068A, WR-274A, WR-275A, WR-353A and WR-367A) are presented in Table 8. Barium and chromium were detected in each well sampled and lead was detected in three of the five wells sampled; all sample concentrations were less than the respective AWQS.

Source Area Groundwater Evaluation

The results of the source area groundwater evaluation sampling conducted at R-068A, WR-273A, WR-274A, and WR-367A are presented in Table 9 for field parameters and Table 10 for select analytes. These analyses and field tests were used to evaluate the degree of microbiological activity, natural attenuation and treatability of source area groundwater. Summary findings are as follows:

- Conditions are likely not conducive to reductive dechlorination based on:
    - Presence of dissolved oxygen (3.79 to 5.88 milligrams per liter [mg/L]) – these measurements were not conducted in situ and may be biased high.
    - Presence of other alternate electron acceptors (sulfate at 28 to 41 mg/L and nitrate at 0.93 to 3.3 mg/L).
    - Low dissolved organic carbon (0.56 to 0.9 mg/L).
    - No ethene (<2.0 µg/L).

- Conditions are likely suitable for treatment of extracted groundwater by granular activated carbon (GAC):
  - No SVOCs were detected that may require an alternative treatment technology.
  - No metals were detected above their respective AWQS.
  - PCE, TCE and cis-1,2-DCE are all absorbed by GAC.
  - Groundwater is alkaline (230 to 410 mg/L) and hard (200 mg/L) limiting the use of air stripping and could require maintenance of re-injection and treatment systems.
- Conditions are likely suitable for in-situ chemical oxidation (ISCO) remediation:
  - Dissolved iron, although limited, assists in catalyzing some ISCO products, thus assisting in the reactivity of the oxidant.
  - Heavy metals concentrations are low or not detected limiting potential mobility of metals in groundwater.

2.5 Transducers

Of the 11 pressure transducers remaining in Broadway-Pantano GOU monitoring wells, Amec Foster Wheeler pulled eight of them from SJ-002, BP-2, WR-273A, WR-177A, WR-181A, WR-358A, BP-24A, and BP-19. Pressure transducers were left in monitoring wells BP-3, BP-5, and SJ-001 to monitor responses in these wells if the WCS is reactivated. With the exception of BP-2, Amec Foster Wheeler was unable to communicate with the transducer and download the pressure transducer data. In-Situ Inc. technical support was unable to resolve the problems which may be associated with low battery life or the connection between the transducer and the computers used to download the data. The retrieval of this data is not considered critical as Amec Foster Wheeler does not intend to use the data for the FS.

3.0 DATA VERIFICATION

Amec Foster Wheeler submitted collected samples to TestAmerica located in Phoenix, Arizona. Refer to Section 2.2 for the list of analytical methods used for the analyses. Analytical data were verified by comparing the forms and reports to the requirements specified in the QAPP addendum and/or ADEQ data verification form. Copies of the laboratory analytical reports for samples collected by Amec Foster Wheeler are presented in Appendix E. The laboratory's certified analytical report and supporting documentation were reviewed to assess the following:

- Data package deliverable completeness;
- Chain of custody compliance;
- Holding time compliance;
- Presence or absence of laboratory contamination as demonstrated by laboratory blanks;
- Temperature of samples at time of submittal;

- Accuracy and bias as demonstrated by recovery laboratory control sample and matrix spike (MS) samples;
- Analytical precision as relative percent difference (RPD) of analyte concentration between laboratory duplicates or MS and MS duplicates; and
- Insofar as possible, the degree of conformance to method requirements and good laboratory practices.

The forms detailing the results of the data verification are presented in Appendix F. Any anomalies, deficiencies and quality control problems identified in the laboratory reports were reviewed and added to the data verification forms.

The initial laboratory analyses for three samples in Laboratory Data Group 550-37362 were reported at a higher reporting limit for COCs than acceptable. To address this, the laboratory also reported the method detection limit (MDL), which was well below the acceptable detection limit. In all three samples, the COC values were reported below the MDL such that the data was considered acceptable. Lower reporting limits were used for the remainder of the analyses. Three compounds (chloromethane, toluene and 1,3,5-trimethylbenzene) were reported in three separate trip blanks. These compounds are not COCs and were not reported in the samples at concentrations that would cause the samples to be rejected. In conclusion, no data qualifiers were assigned to the reported results that caused any data to be rejected and not usable.

Five duplicates (10 percent (%) of the samples) were collected and analyzed for the 45 samples collected by Amec Foster Wheeler during the February/March 2015 Sitewide Sampling Event. One duplicate for metals was collected for the 6 samples collected during the source evaluation and metals analyses. Maximum RPDs between primary and duplicate results were either less than 20% or the difference between primary and duplicate results were less than the reporting limit, indicating acceptable sampling and analytical precision.

Three split samples were submitted to Accutest to evaluate the reproducibility between TestAmerica used by Amec Foster Wheeler and Accutest used by COT-ES. The results for PCE are compared below. Based on the comparison, the analytical results from the two laboratories are considered acceptable and comparable. It should be noted that although the RPD for sample WR-275A-340.91-022615 is 42.6%, this is due to the low levels of PCE which only varied by 0.2 µg/L.

Comparison of Laboratory Results: Test America and Accutest

Sample ID	Test America PCE (µg/L)	Accutest PCE (µg/L)	Difference (µg/L)	% Difference
R-068A-341.86-PDB-022615	24	25.4	1.4	5.7
WR-273A-323.33-PDB-022615	4.1	4.5	0.4	9.3
WR-275A-340.91-PDB-022615	0.37	0.57	0.2	42.6

4.0 REFERENCES

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler), 2014. *Groundwater Sampling Program for Broadway Pantano* WQARF Site, Tucson, Arizona. Memorandum prepared for ADEQ. December 18, 2014. Job Number 14-2014-2029.

Amec Foster Wheeler, 2014. *Groundwater Sampling Program for Broadway Pantano* WQARF Site, Tucson, Arizona. Memorandum prepared for ADEQ. December 18, 2014. Job Number 14-2014-2029.

Clear Creek Associates (CCA), 2015. *Final Remedial Investigation Report* Broadway Pantano WQARF Site Landfill Operable Unit, Tucson, Arizona. Prepared for ADEQ. Prepared by Cave Creek Associates. February 27, 2015.

Stantec, 2012a. *Groundwater Monitoring Report* Broadway Pantano WQARF Site, Tucson, Arizona. Prepared for ADEQ. Prepared by Stantec. June 01, 2012. Job Number 2122022353.

Stantec, 2012b. *Remedial Investigation Report, Groundwater Operable Unit* Broadway Pantano WQARF Site, Tucson, Arizona. Prepared for ADEQ. Prepared by Stantec. June 01, 2012.

TABLES

Table 1

Well Completion Information and Sampling Summary

Well Name	Location Type	ADWR ID	Northing (NAD83SP Int'l Ft)	Easting (NAD83SP Int'l Ft)	Meauring Point (ft amsl)	Total Well Depth (ft)	Date Installed	Casing Type	Top Screen Depth (ft bgs)	Bottom Screen Depth (ft bgs)	Sampled During Reporting Period?	Justification for Not Sampling
411-P	Groundwater	603227	448358.0	1028401.0	2,565.6	484	8/1/1974	-	305	484	Targeted but Not Sampled	No sampling access
414-P	Groundwater	-	448567.6	1037301.0	-	-	-	-	-	-	Not Sampled	-
416-P	Groundwater	801196	451002.3	1025786.0	2,535.0	400	1/1/1977	-	-	-	Not Sampled	-
417-P	Groundwater	-	-	-	-	-	-	-	-	-	Not Sampled	-
Alberts	Groundwater	-	-	-	-	-	-	-	-	-	Not Sampled	-
BP-01	Groundwater	589345	450591.4	1025849.2	2,535.5	456	1/1/2002	-	261	436	**Sampled**	-
BP-02	Groundwater	589349	449937.5	1025908.8	2,540.5	466	1/1/2002	-	265	440	**Sampled**	-
BP-03	Groundwater	589348	449772.7	1024682.7	2,533.5	450	7/1/2002	-	255	430	**Sampled**	-
BP-04	Groundwater	589347	448933.7	1025946.5	2,547.3	460	1/1/2002	-	260	435	**Sampled**	-
BP-05	Groundwater	589346	449463.9	1028795.7	2,570.3	477	1/1/2002	-	280	455	**Sampled**	-
BP-07	Groundwater	589343	447593.6	1032439.0	2,579.3	488	1/1/2002	-	281	456	**Sampled**	-
BP-08	Groundwater	587095	446590.1	1032504.7	2,602.6	492	1/1/2001	-	297	472	**Sampled**	-
BP-09	Groundwater	589342	446127.2	1035326.9	2,581.6	478	1/1/2002	-	280.5	455.5	**Sampled**	-
BP-10	Groundwater	589341	445672.4	1034598.5	2,594.8	487	12/1/2001	-	285	460	**Sampled**	-
BP-11	Groundwater	588207	444681.8	1035413.9	2,606.8	498	9/1/2001	-	378	478	**Sampled**	-
BP-15	Groundwater	589338	445402.3	1030153.5	2,595.5	488.5	11/1/2015	-	293.5	468.5	**Sampled**	-
BP-16	Groundwater	589337	445530.3	1033860.7	2,602.5	501.5	6/1/2002	-	295	470	**Sampled**	-
BP-19	Groundwater	596237	450207.8	1031896.3	2,545.4	440	2/1/2003	-	245	420	**Sampled**	-
BP-20	Groundwater	208705	450728.7	1025338.2	2,532.2	470	8/1/2005	-	280	430	**Sampled**	-
BP-21	Groundwater	208704	450264.4	1025104.6	2,533.7	470	8/1/2005	-	280	430	**Sampled**	-
BP-22	Groundwater	211472	444271.5	1036029.2	2,605.7	458	5/1/2006	-	195	200	**Sampled**	-
BP-23	Groundwater	211653	444896.6	1035961.1	2,599.9	455	5/1/2006	-	195	200	**Sampled**	-
BP-24A	Groundwater	908056	448608.3	1032036.0	2,567.7	358	12/1/2007	-	325	355	**Sampled**	-
BP-24B	Groundwater	908057	448583.1	1032054.8	2,568.0	414	12/1/2007	-	385	405	**Sampled**	-
BP-24C	Groundwater	908058	448543.2	1032067.6	2,568.3	462	11/1/2007	-	440	460	**Sampled**	-
BP-25	Groundwater	908951	449422.6	1034137.0	2,550.2	380	5/1/2008	-	300	375	**Sampled**	-
C-012B	Groundwater	-	443473.3	1019542.7	2,569.9	-	-	-	259	800	Not Sampled	-
C-020B	Groundwater	620022	450482.1	1028650.6	2,562.7	500	11/1/1966	-	225	500	**Sampled**	-
C-022A	Groundwater	620023	448633.8	1031305.9	2,585.3	400	7/1/1986	-	338	398	**Sampled**	-
C-025B	Groundwater	620026	444885.8	1029147.9	2,601.4	700	11/1/1991	-	377	580	**Sampled**	-
C-026A	Groundwater	620027	449976.9	1026088.1	2,540.2	600	3/1/1956	-	336	596	**Sampled**	-
C-026B	Groundwater	620028	450074.4	1026139.4	2,539.2	935	11/1/1977	-	280	520	Targeted but Not Sampled	Information provided by C-026A
C-048A	Groundwater	-	452242.5	1020218.3	2,498.8	-	11/1/1977	-	-	-	**Sampled**	-
C-048B	Groundwater	619983	452298.1	1020214.8	2,498.4	-	-	-	250	500	Not Sampled	-
C-049A	Groundwater	619984	454318.9	1021372.8	2,482.7	-	-	-	126	385	Not Sampled	-
C-049B	Groundwater	619985	454273.8	1021372.8	2,482.4	-	-	-	240	500	Not Sampled	-
C-051A	Groundwater	619988	450205.6	1020675.9	2,519.0	-	-	-	126	336	Not Sampled	-
C-051B	Groundwater	619989	450226.4	1020675.9	2,519.5	-	-	-	208	780	**Sampled**	-
C-056A	Groundwater	619993	452308.0	1026730.6	2,532.3	500	8/1/1957	-	334	500	Not Sampled	-
C-058A	Groundwater	-	449033.0	1023449.8	2,542.4	-	-	-	-	-	**Sampled**	-
C-114A	Groundwater	619959	450695.3	1028146.9	2,552.1	1000	8/1/1977	-	290	510	**Sampled**	-
C-124A	Groundwater	559217	-	-	2,496.4	-	-	-	410	970	Targeted but Not Sampled	Inoperable pump
C-125A	Groundwater	60668	452332.6	1018249.2	2,497.4	-	-	-	440	1,000	**Sampled**	-
CVA	Groundwater	-	450614.1	1020654.2	2,527.0	-	-	-	-	-	**Sampled**	-
D-018A	Groundwater	620057	444856.7	1032035.2	2,609.1	710	9/1/1976	-	465	700	**Sampled**	-

Table 1

Well Completion Information and Sampling Summary

Well Name	Location Type	ADWR ID	Northing (NAD83SP Int'l Ft)	Easting (NAD83SP Int'l Ft)	Meauring Point (ft amsl)	Total Well Depth (ft)	Date Installed	Casing Type	Top Screen Depth (ft bgs)	Bottom Screen Depth (ft bgs)	Sampled During Reporting Period?	Justification for Not Sampling
D-021A	Groundwater	620059	447569.4	1030744.4	2,578.7	550	1/1/1976	-	328	550	**Sampled**	-
D-022A	Groundwater	620060	447739.0	1033875.6	2,578.8	460	12/1/1966	-	310	460	**Sampled**	-
D-039A	Groundwater	620074	444559.4	1034275.7	2,618.1	435	2/1/1957	Steel	193	435	**Sampled**	-
D-040A	Groundwater	620075	443361.7	1034207.3	2,637.0	556	3/1/1963	Steel	222	556	**Sampled**	-
D-041A	Groundwater	620076	442847.3	1035144.9	2,642.2	702	10/1/1975	Steel	249	702	Not Sampled	-
D-049A	Groundwater	-	444762.2	1038536.5	2,599.8	552	-	Steel	148	552	Not Sampled	-
R-068A	Soil Vapor	578599	447589.0	1034883.4	2,577.6	370	-	-	240	368	**Sampled**	-
R-069B	Groundwater	578601	448796.0	1034780.4	2,561.6	379	-	-	257	365	**Sampled**	-
R-090A	Groundwater	587017	448520.3	1026133.2	2,552.7	500	-	-	-	-	**Sampled**	-
R-091A	Groundwater	587018	448416.2	1026056.8	2,554.2	500	-	-	-	-	Not Sampled	-
R-092A	Groundwater	587019	448329.3	1027792.9	2,562.0	500	-	-	-	-	**Sampled**	-
R-124A	Groundwater	204041	443280.2	1036234.1	2,620.0	410	-	SCH 80 PVC	370	410	**Sampled**	-
R-125A	Groundwater	204042	442318.8	1036506.8	2,612.6	395	-	SCH 80 PVC	355	395	**Sampled**	-
SE-001	Groundwater	568641	448549.9	1024654.4	2,544.1	375	-	-	305	365	**Sampled**	-
SJ-001	Groundwater	568639	447512.0	1029356.3	2,583.7	396	-	-	327	387	**Sampled**	-
SJ-002	Groundwater	568640	448206.8	1030079.3	2,589.2	398	-	-	331	391	**Sampled**	-
WR-155A	Groundwater	-	450012.2	1026154.7	2,538.9	-	-	-	-	-	Not Sampled	-
WR-177A	Groundwater	527410	446772.6	1034012.2	2,586.9	476	7/1/1990	-	319	470	**Sampled**	-
WR-178A	Groundwater	527412	448685.2	1028058.1	2,560.6	465	8/1/1990	-	309	460	**Sampled**	-
WR-179A	Groundwater	527409	445910.6	1031138.2	2,597.9	495	8/1/1990	-	339	490	**Sampled**	-
WR-180A	Groundwater	527411	449808.8	1030190.1	2,560.1	471	8/1/1990	-	313	465	**Sampled**	-
WR-181A	Groundwater	527406	450086.5	1035030.3	2,548.8	438	8/1/1990	Steel	287	438	**Sampled**	-
WR-186A	Groundwater	527407	451255.1	1033590.9	2,545.5	410	1/1/1991	Steel	260	410	Not Sampled	-
WR-207A	Groundwater	531208	446652.0	1036692.0	2,580.9	205	8/1/1991	-	310	450	Not Sampled	-
WR-207B	Groundwater	592443	447024.0	1036573.6	2,577.3	450	10/1/1902	-	300	450	**Sampled**	-
WR-273A	Groundwater	558356	448885.0	1033867.2	2,555.9	347	1/1/1997	-	298	338	**Sampled**	-
WR-274A	Groundwater	558355	448053.5	1033668.4	2,568.5	350	1/1/1997	-	306	346	**Sampled**	-
WR-275A	Groundwater	558354	447489.2	1033995.7	2,574.6	360	1/1/1997	-	317	358	**Sampled**	-
WR-352A	Groundwater	575473	448648.8	1028055.4	2,558.6	465	11/1/1999	-	420	460	**Sampled**	-
WR-353A	Groundwater	575474	448866.4	1033827.2	2,553.1	458	10/1/1999	-	410	450	**Sampled**	-
WR-354A	Groundwater	576420	446951.7	1027518.5	2,564.8	381	12/1/1999	-	331	381	**Sampled**	-
WR-358A	Groundwater	577633	449017.5	1032925.7	2,549.9	371	11/1/1999	-	321	371	**Sampled**	-
WR-367A	Groundwater	581353	445353.1	1035415.2	2,600.8	408	7/1/1900	-	312	407	**Sampled**	-
WR-434A	Groundwater	-	443271.7	1035950.3	-	-	-	SCH 40 PVC	45	50	Not Sampled	-
WR-435A	Groundwater	587406	443772.6	1035629.1	2,619.5	420	-	SCH 80 PVC	330	420	**Sampled**	-
WR-458A	Groundwater	205404	451176.3	1030136.3	2,542.5	425	-	Sch 80 PVC	252	420	Not Sampled	-
WR-459A	Groundwater	205405	451185.9	1031827.8	2,536.5	406	-	Sch 80 PVC	254	406	Not Sampled	-
WR-702A	Groundwater	910267	450650.2	1024006.1	2,526.3	412	1/1/1909	-	292	392	**Sampled**	-
WR-703A	Groundwater	910326	451083.5	1023290.6	2,520.7	410	1/1/1909	-	294	394	**Sampled**	-
WR-704A	Groundwater	910363	450899.9	1022370.9	2,521.8	360	1/1/1909	-	290	350	**Sampled**	-

Notes:

ft - feet

ft amsl - Feet above mean sea level

ft bgs - feet below ground surface

Table 2
Enhanced Groundwater Sampling Event Summary
December 2014/January 2015

Well ID #	Sample ID	PDB Deployment Date	PDB Retrieval Date	PDB Set Depth (ft bwt)	PDB Set Depth (ft btoc)	Water Level at Set (ft btoc)	Water Level at Retrieval (ft btoc)	Analysis
CVA	BP-CVA-WG-321.5.011215	12/22/2014	1/12/2015	24	321.50	296.49	297.34	8260B
C-048A	BP-C-48-WG-300-011215	12/22/2014	1/12/2015	18	300.00	281.08	281.83	8260B
R-068A	BP-R-68A-WG-342-011315	12/22/2014	1/13/2015	25	342.00	317.04	316.87	8260B
WR-273A	BP-WR-273A-WG-323-011315	12/23/2014	1/13/2015	25	323.40	298.40	298.07	8260B
WR-274A (shallow)	BP-WR-274A-WG-316-011315	12/23/2014	1/13/2015	5	316.07	311.09	310.84	8260B
WR-274A (medium)	BP-WR-274A-WG-326-011315	12/23/2014	1/13/2015	15	326.09	311.09	310.84	8260B
WR-274A (deep)	BP-WR-274A-WG-3-011316	12/23/2014	1/13/2015	25	336.09	311.09	310.84	8260B
WR-367A (shallow)	BP-WR-367A-WG-343-011215	12/23/2014	1/12/2015	5	343.69	338.44	338.44	8260B
WR-367A (deep)	BP-WR-367A-WG-363-011215	12/23/2014	1/12/2015	25	363.69	338.44	338.44	8260B

Notes:

ID - identification

ft btoc - feet below top of casing

ft bwt - feet below water table

Table 3

Sitewide Groundwater Sampling Event Summary
February/March 2015

Well ID #	Sampled By	Sample ID	Measuring Point Elevation (ft. asl)	PDB Deployment Date	PDB Retrieval Date	Depth to Groundwater (ft. BTOC)	PDB Set Depth (ft bwt)	PDB Set Depth (ft. btoc)	Analysis	Comments
BP-1	AmecFW	BP-1-323-PDB-022415	2535.48	2/2/2015	2/24/2015	298.00	25	323.00	8260LL	
BP-2	COT-ES	ADEQ-BP-02	2540.49	11/25/2014	2/19/2015	303.05	26	329.05	8260B	
BP-3	COT-ES	ADEQ-BP-03	2533.45	11/25/2014	2/19/2015	299.59	26	325.59	8260B	
BP-4	COT-ES	ADEQ-BP-04	2547.26	11/25/2014	2/19/2015	308.92	26	334.92	8260B	
BP-5	COT-ES	ADEQ-BP-05	2570.31	11/24/2014	2/18/2015	325.09	26	351.09	8260B	
BP-7	AmecFW	BP-7-329.09-PDB-022315 BP-7-349.09-PDB-022315 BP-7-374.09-PDB-022315	2579.34	2/2/2015	2/23/2015	324.09	5,25,50	329.09, 349.09, 374.09	8260LL	
BP-8	AmecFW	BP-8-371.55-PDB-022315	2602.64	2/3/2015	2/23/2015	346.55	25	371.55	8260LL	
BP-9	AmecFW	BP-9-344.69-PDB-022515	2581.61	2/3/2015	2/25/2015	319.69	25	344.69	8260LL	
BP-10	AmecFW	BP-10-358.85-PDB-022515	2594.77	2/3/2015	2/25/2015	333.85	25	358.85	8260LL	
BP-11	AmecFW	BP-11-428-PDB-022515	2606.78	2/3/2015	2/25/2015	342.68	82	367.68	8260LL	PDB depth adjusted to fit inside screened interval
BP-15	AmecFW	BP-15-367.83-PDB-022315	2595.45	2/3/2015	2/23/2015	342.83	25	367.83	8260LL	
BP-16	COT-ES	ADEQ-BP-16	2602.53	11/24/2014	2/18/2015	343.56	25	368.56	8260B	
BP-19	AmecFW	BP-19-317.11-PDB-022315	2545.43	2/2/2015	2/23/2015	292.11	25	317.11	8260LL	
BP-20	AmecFW	BP-20-323.60-PDB-022415 BP-20-348.60-PDB-022415	2532.21	2/2/2015	2/24/2015	298.60	25,50	323.60, 348.60	8260LL	
BP-21	COT-ES	ADEQ-BP-21	2533.69	11/25/2014	2/19/2015	299.23	26	325.23	8260B	
BP-22	AmecFW	BP-22-364.94-PDB-022515	2605.69	2/3/2015	2/25/2015	339.94	25	364.94	8260LL	
BP-23	AmecFW	BP-23-363.8-PDB-022515	2599.90	2/5/2015	2/25/2015	337.80	25	362.80	8260LL	
BP-24A	AmecFW	BP-24A-330.55-PDB-022615	2567.74	2/2/2015	2/26/2015	315.55	15	330.55	8260LL	PDB depth adjusted to fit inside screened interval
BP-24B	AmecFW	BP-24B-395-PDB-022315	2568.01	2/2/2015	2/23/2015	314.28	81	395.00	8260LL	PDB depth adjusted to fit inside screened interval
BP-24C	AmecFW	BP-24C-450-PDB-022315	2568.28	2/3/2015	2/23/2015	314.25	136	450.00	8260LL	PDB depth adjusted to fit inside screened interval
BP-25	AmecFW	BP-25-317.10-PDB-022515	2550.16	2/9/2015	2/25/2015	292.10	25	317.10	8260LL	

Table 3

Sitewide Groundwater Sampling Event Summary
February/March 2015

Well ID #	Sampled By	Sample ID	Measuring Point Elevation (ft. asl)	PDB Deployment Date	PDB Retrieval Date	Depth to Groundwater (ft. BTOC)	PDB Set Depth (ft bwt)	PDB Set Depth (ft. btoc)	Analysis	Comments
C-020B[1]	TW	C-020B	2562.70	NA	2/23/2015[1]	NA	NA	NA	8260B	Grab Sample
C-022A	AmecFW	C-22A-357.80-PDB-030215	2585.26	2/3/2015	3/2/2015	332.80	25	357.80	8260LL	
C-025B[1]	TW	C-025B	2601.40	NA	2/24/2015[1]	NA	NA	NA	8260B	Grab Sample
C-026A[2]	COT-ES	C-026A-25 C-026A-50 C-026A-75 C-026A-100	2540.15	2/11/2015	3/3/2015	302.45	25, 50, 75, 100	NA	8260B	
C-026B	AmecFW	Not collected, refer to samples collected for C-026A								
C-048A	AmecFW	C-48A/B-305-PDB-030215	2498.75	2/3/2015	3/2/2015	281.31	24	305.00	8260LL	PDB depth adjusted to accommodate length of steel cable
C-051B[1]	AmecFW	C-51B-122214	2519.48	NA	12/22/2014[1]	NA	NA	NA	8260B	Grab Sample
C-058A	AmecFW	C-058A-336.25-PDB-030215	2542.44	2/5/2015	3/2/2015	311.25	25	336.25	8260LL	
C-114A[1]	TW	C-114A	2552.12	NA	2/23/2015[1]	NA	NA	NA	8260B	Grab Sample
C-124A	AmecFW	Sample not collected due to inoperable pump.								
C-125A[1]	AmecFW	C-125A-O-GRAB-030215	2497.35	NA	3/2/2015[1]	281.03	NA	NA	8260LL	Grab Sample
CVA	AmecFW	CVA-321.06-PDB-022415	UNK	2/2/2015	2/24/2015	296.06	25	321.06	8260LL	No reference elevation
D-018A[1]	AmecFW	D-018A-O-GRAB-022415	2609.05	NA	2/24/2015[1]	329.60	NA	NA	8260LL	Grab Sample
D-021A	AmecFW	D-021A-353.95-PDB-030215	2578.72	2/3/2015	3/2/2015	328.95	25	353.95	8260LL	
D-022A	AmecFW	D-022A-342.43-PDB-030215	2578.82	2/3/2015	3/2/2015	317.43	25	342.43	8260LL	
D-039A	AmecFW	D-039A-381.76-PDB-030215	2618.06	2/3/2015	3/2/2015	356.76	25	381.76	8260LL	
D-040A	AmecFW	D-040A-480-PDB-030215	2637.04	2/3/2015	3/2/2015	372.97	107	480.00	8260LL	PDB depth adjusted to fit inside screened interval
R-068A	AmecFW	R-068A-341.86-PDB-022615	2577.89	2/9/2015	2/26/2015	316.86	25	341.86	8260LL	Also sampled with Hydrasleeve and Split submitted to Accutest
R-069B[2]	AmecFW	R-69B-326.71-PDB-022615 R-69B-326.71-PDB-022615-DUP	2561.56	2/5/2015	2/26/2015	301.71	25	326.71	8260LL	
R-090A	COT-ES	R090A-25 R090A-50 R090A-75 R090A-100	2,552.7	2/11/2015	3/3/2015	NA	25, 50, 75, 100	NA	8260B	
R-092A	COT-ES	R092A-25 R092A-50 R092A-75 R092A-100	2561.96	2/11/2015	3/3/2015	319.02	25, 50, 75, 100	344.02, 369.02, 394.02, 419.02	8260B	
R-124[1]	AmecFW	R-124A-O-GRAB-022415	2620.03	NA	2/24/2015[1]	348.94	NA	NA	8260LL	Sample from dedicated pump Grab Sample 2/24/15
R-125[1]	AmecFW	R-125A-O-GRAB-022415	2612.58	NA	2/24/2015[1]	333.69	NA	NA	8260LL	Sample from dedicated pump Grab Sample 2/24/15
SE-001	AmecFW	SE-001-332.49-PDB-022415	2544.09	2/2/2015	2/24/2015	308.49	24	332.49	8260LL	Tether only was long enough to set 24 ft bwt
SJ-001	COT-ES	ADEQ-SJ-01	2583.73	11/25/2014	2/19/2015	336.19	26	362.19	8260B	
SJ-002	COT-ES	ADEQ-SJ-02	2589.16	11/24/2014	2/18/2015	340.28	27	367.67	8260B	

Table 3

Sitewide Groundwater Sampling Event Summary
February/March 2015

Well ID #	Sampled By	Sample ID	Measuring Point Elevation (ft. asl)	PDB Deployment Date	PDB Retrieval Date	Depth to Groundwater (ft. BTOC)	PDB Set Depth (ft bwt)	PDB Set Depth (ft. btoc)	Analysis	Comments
WR-177A[2]	AmecFW	WR-177A-352.59-PDB-022615 WR-177A-352.59-PDB-022615-DUP	2586.85	2/9/2015	2/26/2015	327.59	25	352.59	8260LL	
WR-178A	COT-ES	WR-178A	2560.59	11/24/2014	2/18/2015	316.54	26	342.54	8260B	
WR-179A	COT-ES	WR-179A	2597.91	11/24/2014	2/18/2015	344.42	25	369.11	8260B	
WR-180A	COT-ES	WR-180A	2560.13	11/24/2014	2/18/2015	311.62	25	337.62	8260B	
WR-181A	AmecFW	WR-181A-314.28-PDB-022515	2548.82	2/9/2015	2/25/2015	289.28	25	314.28	8260LL	
WR-207B	AmecFW	WR-207B-338.7-PDB-022315	2577.25	2/9/2015	2/23/2015	313.7	25	338.70	8260LL	
WR-273A	AmecFW	WR-273A-323.33-PDB-022615	2555.89	2/4/2015	2/26/2015	298.33	25	323.33	8260LL	Also sampled with Hydrasleeve
WR-274A[2]	AmecFW	WR-274A-315.89-PDB-022615 WR-274A-325.89-PDB-022615 WR-274A-325.89-PDB-022615-DUP WR-274A-335.89-PDB-022615	2568.54	2/5/2015	2/26/2015	310.89	5,15,25	315.89, 325.89, 335.89	8260LL	Also sampled with Hydrasleeve and Split submitted to Accutest
WR-275A	AmecFW	WR-275A-340-91-PDB-022615	2574.58	2/5/2015	2/26/2015	315.91	25	340.91	8260LL	Also sampled with Hydrasleeve and Split submitted to Accutest
WR-352A	COT-ES	WR-352A	2558.62	11/24/2014	2/18/2015	314.61	26	340.61	8260B	
WR-353A[2]	AmecFW	WR-353A-430-PDB-022615 WR-353A-430-PDB-022615-DUP	2553.10	2/4/2015	2/26/2015	298.07	131	430	8260LL	PDB depth adjusted to fit inside screened interval, sampled with Hydrasleeve
WR-354A	COT-ES	WR-354A	2564.84	11/24/2014	2/18/2015	321.44	26	347.44	8260B	
WR-358A	AmecFW	WR-358A-319.38-PDB-022515	2549.91	2/9/2015	2/25/2015	294.38	25	319.38	8260LL	
WR-367A[2]	AmecFW	WR-367A-363.43-PDB-022515 WR-367A-363.43-PDB-022515	2600.76	2/4/2015	2/25/2015	338.43	25	363.43	8260LL	Also sampled with Hydrasleeve
WR-435A	AmecFW	WR-435A-377.20-PDB-022515	2619.53	2/3/2015	2/25/2015	352.2	25	377.20	8260LL	
WR-702A	COT-ES	WR-0702A	2526.33	11/25/2015	2/19/2015	295.28	26	321.28	8260B	
WR-703A	COT-ES	WR-0703A	2520.74	11/25/2015	2/19/2015	290.21	26	316.21	8260B	
WR-704A	COT-ES	WR-0704A	2521.84	11/25/2015	2/19/2015	293.63	26	319.63	8260B	

Notes:
[1] Grab sample collected from pumped well sampling port
[2] Duplicate Sample Taken
AMECFW - Amec Foster Wheeler Environment & Infrastructure, Inc.
COT-ES - City of Tucson Environmental Services
ft. asl - feet a bove sea level
ft. BTOC - feet below top of casing (reference elevation)
ft. bwt - feet below water table
ID - identification
NA - not applicable
TW - Tucson Water

Table 4

Groundwater Elevation Data Summary
February/March 2015

Well ID	ADWR Reg. No.	Measuring Point Elevation (ft amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-01	589345	2535.48	261-436	2/2/2015	298.00	2237.48
BP-01	589345	2535.48	261-436	2/24/2015	298.01	2237.47
BP-02	589349	2540.49	265-440	2/27/2015	301.98	2238.51
BP-03	589348	2533.45	255-430	2/27/2015	298.63	2234.82
BP-04	589347	2547.3	260-435	2/27/2015	307.88	2239.42
BP-05	589346	2570.31	280-455	2/27/2015	324.13	2246.18
BP-07	589343	2579.34	281-456	2/2/2015	324.09	2255.25
BP-07	589343	2579.34	281-456	2/23/2015	324.02	2255.32
BP-08	587095	2602.64	297-472	2/3/2015	346.55	2256.09
BP-08	587095	2602.64	297-472	2/23/2015	346.39	2256.25
BP-09	589342	2581.61	280.5-455.5	2/3/2015	319.69	2261.92
BP-09	589342	2581.61	280.5-455.5	2/25/2015	319.49	2262.12
BP-10	589341	2594.77	285-460	2/3/2015	333.85	2260.92
BP-10	589341	2594.77	285-460	2/25/2015	333.56	2261.21
BP-11	588207	2606.78	378-478	2/3/2015	342.68	2264.10
BP-11	588207	2606.78	378-478	2/25/2015	342.55	2264.23
BP-15	589338	2595.45	293.5-468.5	2/3/2015	342.83	2252.62
BP-15	589338	2595.45	293.5-468.5	2/23/2015	346.39	2249.06
BP-16	589337	2602.53	295-470	2/27/2015	342.41	2260.12
BP-19	596237	2545.43	245-420	2/2/2015	292.11	2253.32
BP-19	596237	2545.43	245-420	2/23/2015	292.08	2253.35
BP-20	208705	2532.21	280-430	2/2/2015	298.60	2233.61
BP-20	208705	2532.21	280-430	2/24/2015	298.64	2233.57
BP-21	208704	2533.69	280-430	2/19/2015	298.17	2235.52
BP-22	211472	2605.69	195-200, 245-250, 295-300, 358-438	2/3/2015	339.94	2265.75
BP-22	211472	2605.69	195-200, 245-250, 295-300, 358-438	2/25/2015	339.73	2265.96
BP-23	211653	2599.9	195-200, 245-250, 295-300, 358-438	2/5/2015	337.80	2262.10
BP-23	211653	2599.9	195-200, 245-250, 295-300, 358-438	2/25/2015	337.10	2262.80
BP-24A	908056	2567.74	325-355	2/2/2015	315.55	2252.19
BP-24A	908056	2567.74	325-355	2/26/2015	315.25	2252.49
BP-24B	908057	2568.01	385-405	2/2/2015	314.28	2253.73
BP-24B	908057	2568.01	385-405	2/23/2015	314.21	2253.80
BP-24C	908058	2568.28	440-460	2/3/2015	314.25	2254.03
BP-24C	908058	2568.28	440-460	2/23/2015	314.10	2254.18
BP-25	908951	2550.16	300-375	2/9/2015	292.10	2258.06
BP-25	908951	2550.16	300-375	2/25/2015	292.08	2258.08
C-022A	620023	2585.26	168-345, 338-398	2/3/2015	332.80	2252.46
C-022A	620023	2585.26	168-345, 338-398	3/2/2015	332.62	2252.64

Table 4

Groundwater Elevation Data Summary
February/March 2015

Well ID	ADWR Reg. No.	Measuring Point Elevation (ft amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
C-048A	NA	2498.75	-	2/3/2015	281.31	2217.44
C-048A	NA	2498.75	-	3/2/2015	280.65	2218.10
C-058A	619994	2542.44	-	2/5/2015	311.25	2231.19
C-058A	619994	2542.44	-	3/2/2015	311.02	2231.42
C-125A	60668	2497.35	440-1000	3/2/2015	281.03	2216.32
CVA	611851	2527	-	2/2/2015	296.06	2230.94
CVA	611851	2527	-	2/24/2015	295.45	2231.55
D-018A	620057	2609.05	340-501, 465-700	2/24/2015	329.50	2279.55
D-021A	620059	2578.72	153-353, 328-550	2/3/2015	328.95	2249.77
D-021A	620059	2578.72	153-353, 328-550	3/2/2015	326.78	2251.94
D-022A	620060	2578.82	143-318, 310-460	2/3/2015	317.43	2261.39
D-022A	620060	2578.82	143-318, 310-460	3/2/2015	320.31	2258.51
D-039A	620074	2618.06	193-435	2/3/2015	356.76	2261.30
D-039A	620074	2618.06	193-435	3/2/2015	356.52	2261.54
D-040A	620075	2637.04	222-402, 410-556	2/3/2015	372.97	2264.07
D-040A	620075	2637.04	222-402, 410-556	3/2/2015	372.68	2264.36
D-041A	620076	2642.16	249-457, 337-702	3/2/2015	375.42	2266.74
D-049A	NA	2599.82	148-552	3/2/2015	325.42	2274.40
R-068A	578599	2577.6	240-368	2/9/2015	316.86	2260.74
R-068A	578599	2577.6	240-368	2/26/2015	316.64	2260.96
R-069B	578601	2561.56	257-365	2/5/2015	301.71	2259.85
R-069B	578601	2561.56	257-365	2/26/2015	301.45	2260.11
R-090A	587017	2552.74	290-490	2/27/2015	312.70	2240.04
R-091A	587018	2554.17	290-490	2/27/2015	314.14	2240.03
R-092A	587019	2561.96	290-490	3/3/2015	319.06	2242.90
R-124A	204041	2620.03	370-410	2/24/2015	350.62	2269.41
R-125A	204042	2612.58	355-395	2/24/2015	333.69	2278.89
SE-001	568641	2544.09	305-365	2/2/2015	308.49	2235.60
SE-001	568641	2544.09	305-365	2/24/2015	308.46	2235.63
SJ-001	568639	2583.73	327-387	2/27/2015	334.85	2248.88
SJ-002	568640	2589.16	331-391	2/27/2015	339.34	2249.82
WR-177A	527410	2586.85	319-470	2/9/2015	327.59	2259.26
WR-177A	527410	2586.85	319-470	2/26/2015	321.54	2265.31
WR-178A	527412	2560.59	309-460	2/27/2015	315.61	2244.98
WR-179A	527409	2597.91	339-490	2/27/2015	343.33	2254.58
WR-180A	527411	2560.13	313-465	2/27/2015	310.59	2249.54
WR-181A	527406	2548.82	287-438	2/9/2015	289.28	2259.54
WR-181A	527406	2548.82	287-438	2/25/2015	289.31	2259.51
WR-186A	527407	2545.49	259-410	2/27/2015	288.10	2257.39
WR-207A	531208	2580.91	310-450	2/19/2015	294.78	2286.13
WR-207B	592443	2577.25	300-450	2/9/2015	313.70	2263.55

Table 4

Groundwater Elevation Data Summary
February/March 2015

Well ID	ADWR Reg. No.	Measuring Point Elevation (ft amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-207B	592443	2577.25	300-450	2/23/2015	313.67	2263.58
WR-273A	558356	2555.89	298-338	2/4/2015	298.33	2257.56
WR-273A	558356	2555.89	298-338	2/26/2015	297.80	2258.09
WR-274A	558355	2568.54	306-346	2/5/2015	310.89	2257.65
WR-274A	558355	2568.54	306-346	2/26/2015	310.55	2257.99
WR-275A	558354	2574.58	317-358	2/5/2015	315.91	2258.67
WR-275A	558354	2574.58	317-358	2/26/2015	315.50	2259.08
WR-352A	575473	2558.62	420-460	2/27/2015	313.73	2244.89
WR-353A	575474	2553.1	410-450	2/4/2015	298.07	2255.03
WR-353A	575474	2553.1	410-450	2/26/2015	294.90	2258.20
WR-354A	576420	2564.84	331-381	2/27/2015	320.48	2244.36
WR-358A	577633	2549.91	321-371	2/9/2015	294.38	2255.53
WR-358A	577633	2549.91	321-371	2/25/2015	294.36	2255.55
WR-367A	581353	2600.76	312-407	2/4/2015	338.43	2262.33
WR-367A	581353	2600.76	312-407	2/25/2015	338.34	2262.42
WR-435A	587406	2619.53	330-420	2/3/2015	352.20	2267.33
WR-435A	587406	2619.53	330-420	2/25/2015	351.98	2267.55
WR-458A	205404	2542.49	252-420	2/27/2015	293.16	2249.33
WR-459A	205405	2536.51	254-406	2/27/2015	282.98	2253.53
WR-702A	910267	2526.33	292-392	2/27/2015	294.48	2231.85
WR-703A	910326	2520.74	294-394	2/27/2015	289.51	2231.23
WR-704A	910363	2521.84	290-350	2/27/2015	294.51	2227.33

Notes:

ft amsl = feet above mean sea level

- = data not applicable or available

Table 5

Trends in Water Elevation Changes
February/March 2015 Sampling Event

Well	2002 to 2007 WL Change		2002 to 2007 WL Change		Comments
	ft/day	ft/yr	ft/day	ft/yr	
BNL Area					
WR-274A	0.0013	0.47	0.0076	2.78	
WR-367A	0.0015	0.55	0.0074	2.70	
WR-273A	0.0011	0.40	0.0075	2.74	
R-068A	0.0016	0.58	0.0077	2.81	
WR-358A	0.0010	0.37	0.0077	2.81	
Average	**0.0013**	**0.47**	**0.0076**	**2.77**	
WCS Area					
SJ-002	0.0019	0.69	0.0083	3.03	
WR-178A	0.0007	0.26	0.0095	3.47	
C-026A	0.0011	0.40	0.0108	**3.95**	
Average	**0.0012**	**0.45**	**0.0095**	**3.48**	
Western GOU Area					
WR-702A	NA	NA	0.0090	3.29	2009 to 2015
WR-704A	NA	NA	0.0087	3.18	2009 to 2015
BP-021	0.0006	0.22	0.0091	3.32	
Average	**0.0006**	**0.22**	**0.0089**	**3.26**	

Notes:

BNL - Broadway North Landfill

ft/yr - feet per year

GOU - Groundwater Operable Unit

NA - not applicable

WCS - Western Containment System

Table 6

Estimated Vertical Gradients Between Collocated Wells
February/March 2015 Sampling Event

Well ID	Date	Measured Groundwater Elevation (ft asl)	Elevation Difference Between Well and Next Shallowest Well (ft)	Screened Interval of Well (ft bgs)	Midpoint of Screened Interval (ft bgs)	Distance between Midpoints of Screened Intervals (ft)	Calculated Vertical Gradient Between Well Screens (ft/ft)
BP-24A	2/26/2015	2252.49	---	325-355	340	---	---
BP-24B	2/23/2015	2253.80	1.31	385-405	395	55	0.02382
BP-24C	2/23/2015	2254.18	0.38	440-460	450	55	0.00691
WR-178A	2/27/2015	2244.98	---	309-460	384.5	---	---
WR-352A	2/27/2015	2244.89	-0.09	420-460	440	55.5	-0.00162
WR-273A	2/26/2015	2258.09	---	298-338	318	---	---
WR-353A	2/26/2015	2258.20	0.11	410-450	430	112	0.00098

Notes:

ft - feet

ft asl - feet above sea level

ft bgs - feet below ground surface

ft/ft - feet per foot

ID - identification

Table 7

Summary of Groundwater Quality Data, Select VOCs
December 2014 - March 2015

Well	Date	Sample Depth (bwt)	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Benzene	cis-1,2 Dichloroethene	Methylene Chloride	trans-1,2 Dichloroethene	Dichlorodiflouromethane
			µg/L				µg/L			
BP-01	2/24/2015	25	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
BP-02	2/19/2015	25	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
BP-03	2/19/2015	25	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	0.53
BP-04	2/19/2015	25	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
BP-05	2/18/2015	25	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
BP-07	2/23/2015	5	3.1	0.76	<0.50	<0.50	0.43 J	<1.00	<0.50	0.92
BP-07	2/23/2015	25	4.0	0.87	<0.50	<0.50	0.37 J	<1.00	<0.50	0.92
BP-07	2/23/2015	50	0.29 J	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	0.62
BP-08	2/23/2015	25	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
BP-09	2/25/2015	25	0.74	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
BP-10	2/25/2015	25	**9.4**	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	3.1
BP-11	2/25/2015	82	0.39 J	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	0.76
BP-15	2/23/2015	25	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
BP-16	2/18/2015	25	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
BP-19	2/23/2015	25	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
BP-20	2/24/2015	25	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
BP-20	2/24/2015	50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
BP-21	2/19/2015	25	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	0.87
BP-22	2/25/2015	25	4.3	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	4.1
BP-23	2/25/2015	25	**40**	**5.8**	<0.50	0.38 J	1.1	<1.00	<0.50	5.4
BP-24A	2/26/2015	15	3.6	1.9	<0.50	<0.50	<0.50	<1.00	<0.50	1.2
BP-24B	2/23/2015	81	**14**	2.1	<0.50	<0.50	1.0	<1.00	<0.50	6.0
BP-24C	2/23/2015	136	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
BP-25	2/25/2015	25	3.2	1.30	<0.50	<0.50	1.7	<1.00	<0.50	<0.50
C-020B	2/23/2015	WH	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
C-022A	2/3/2015	25	**17**	3.1	<0.50	<0.50	0.39 J	<1.00	<0.50	5.5
C-025B	2/23/2015	WH	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
C-026A	3/3/2015	25	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
C-026A	3/3/2015	50	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
C-026A	3/3/2015	75	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
C-026A	3/3/2015	100	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50

Table 7

Summary of Groundwater Quality Data, Select VOCs
December 2014 - March 2015

Well	Date	Sample Depth (bwt)	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Benzene	cis-1,2 Dichloroethene	Methylene Chloride	trans-1,2 Dichloroethene	Dichlorodiflouromethane
			µg/L				µg/L			
C-026A-D	3/3/2015	25	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
C-026A-D	3/3/2015	50	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
C-026A-D	3/3/2015	75	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
C-026A-D	3/3/2015	100	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
C-048A	12/1/2015	18	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
C-048A	2/3/2015	24	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
C-051B	12/22/2014	WH	<2.00	<2.00	<5.00	<2.00	<2.00	<5.00	<2.00	<5.00
C-058A	2/3/2015	25	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	0.55
C-114A	2/23/2015	WH	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
C-125A	12/22/2014	WH	<2.00	<2.00	<5.00	<2.00	<2.00	<5.00	<2.00	<5.00
C-125A	2/3/2015	WH	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
CVA	12/1/2015	24	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
CVA	2/24/2015	25	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
D-018A	2/24/2015	WH	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
D-018A	2/24/2015	WH	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
D-021A	2/3/2015	25	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
D-022A	2/3/2015	22	**38**	**11**	<0.50	0.82	6.9	<1.00	<0.50	3.9
D-039A	2/3/2015	25	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
D-040A	2/3/2015	107	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
R-068A	1/13/2015	25	**29**	**9.5**	<0.50	<0.50	15	<1.00	<0.50	0.70
R-068A	9/2/2015	25	**24**	**5.7**	<0.50	<0.50	10	<1.00	<0.50	<0.50
R-068A	2/26/2015	25	**25**	**9.5**	<0.50	<1.00	15	<5.00	<0.50	0.68
R-068A	2/26/2015	25	**24**	**9.7**	<0.50	0.15 J	17	<1.00	<0.50	0.75
R-069B	2/26/2015	25	2.5	2.0	<0.50	<0.50	0.64	<1.00	<0.50	0.43 J
R-069B-D	2/26/2015	25	2.5	2.2	<0.50	<0.50	0.85	<1.00	<0.50	<0.50
R-090A	3/3/2015	25	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
R-090A	3/3/2015	50	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
R-090A	3/3/2015	75	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
R-090A	3/3/2015	100	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
R-092A	3/3/2015	25	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
R-092A	3/3/2015	50	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50

Table 7

Summary of Groundwater Quality Data, Select VOCs
December 2014 - March 2015

Well	Date	Sample Depth (bwt)	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Benzene	cis-1,2 Dichloroethene	Methylene Chloride	trans-1,2 Dichloroethene	Dichlorodiflouromethane
			µg/L				µg/L			
R-092A	3/3/2015	75	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
R-092A	3/3/2015	100	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
R-124A	2/24/2015	WH	1.3	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	1.7
R-125A	2/24/2015	WH	0.2 J	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
SE-001	2/24/2015	24	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	0.41 J
SJ-001	2/19/2015	25	3.8	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	0.97
SJ-002	2/18/2015	25	**7.1**	1.1	<0.50	<1.00	<0.50	<5.00	<0.50	0.93
WR-177A	2/26/2015	25	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
WR-177A-D	2/26/2015	25	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
WR-178A	2/18/2015	25	2.7	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
WR-179A	2/18/2015	25	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
WR-180A	2/18/2015	25	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
WR-181A	2/25/2015	25	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
WR-207B	2/23/2015	25	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	0.39 J
WR-273A	1/13/2015	25	4.6	2.4	<0.50	<0.50	1.4	<1.00	<0.50	1.1
WR-273A	2/4/2015	25	3.9	1.8	<0.50	<0.50	1.1	<1.00	<0.50	1.0
WR-273A	2/26/2015	25	4.5	2.6	<0.50	<0.50	1.4	<1.00	<0.50	1.1
WR-274A	1/13/2015	5	**110**	**32**	<0.50	0.16 J	34	<1.00	<0.50	4.5
WR-274A	1/13/2015	15	**100**	**32**	<0.50	0.25 J	33	<1.00	<0.50	4.2
WR-274A	1/13/2015	25	**110**	**35**	<0.50	0.29 J	36	<1.00	<0.50	4.5
WR-274A	2/5/2015	25	**83**	**23**	<0.50	0.27 J	30	<1.00	<0.50	4.8
WR-274A	2/26/2015	5	**120**	**34**	<0.50	0.27 J	36	<1.00	<0.50	5.7
WR-274A	2/26/2015	15	**100**	**32**	<0.50	0.32 J	36	<1.00	<0.50	4.8
WR-274A	2/26/2015	25	**110**	**32**	<0.50	0.36 J	36	<1.00	<0.50	4.7
WR-274A-D	2/26/2015	15	**120**	**35**	<0.50	0.3 J	38	<1.00	<0.50	5.6
WR-275A	2/26/2015	25	0.57	<0.50	<0.50	<0.50	0.81	<1.00	<0.50	<0.50
WR-352A*	2/18/2015	25	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
WR-353A	2/26/2015	131	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
WR-353A-D	2/26/2015	131	<0.50	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	<0.50
WR-354A	2/18/2015	25	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
WR-354A-D	2/18/2015	25	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50

Table 7

Summary of Groundwater Quality Data, Select VOCs
December 2014 - March 2015

Well	Date	Sample Depth (bwt)	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Benzene	cis-1,2 Dichloroethene	Methylene Chloride	trans-1,2 Dichloroethene	Dichlorodiflouromethane
			µg/L				µg/L			
WR-358A	2/25/2015	25	**29**	**9.3**	<0.50	0.22 J	6.6	<1.00	<0.50	23
WR-367A	1/12/2015	5	**10**	0.41 J	<0.50	<0.50	<0.50	<1.00	<0.50	1.7
WR-367A	1/12/2015	25	**9.7**	0.47 J	<0.50	<0.50	<0.50	<1.00	<0.50	1.9
WR-367A	2/5/2015	25	**7.4**	0.41 J	<0.50	<0.50	<0.50	<1.00	<0.50	2.0
WR-367A	2/25/2015	25	**9.7**	0.43 J	<0.50	<0.50	<0.50	<1.00	<0.50	1.7
WR-367A-D	2/25/2015	25	**10**	0.61	<0.50	<0.50	<0.50	<1.00	<0.50	2.1
WR-435A	2/25/2015	25	4.2	<0.50	<0.50	<0.50	<0.50	<1.00	<0.50	0.99
WR-702A	2/19/2015	25	2.1	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	1.3
WR-703A	2/19/2015	25	<0.50	<0.50	<0.50	<1.00	<0.50	<5.00	<0.50	<0.50
WR-704A	2/19/2015	25	**7.1**	0.60	<0.50	<1.00	<0.50	<5.00	<0.50	3.5
MCL/AWQS			**5**	**5**	**2**	**5**	**70**	**5**	**100**	**N/A**

Notes:
- = data not applicable or available
* - sample collected outside of screened interval
µg/L - micrograms per liter bwt - below water table
bwt - below water table
J - indicates result was less than the reporting limit
- Grey text indicates non-detection
- Bold values exceed the compounds Maximum Contaminant Level (MCL) (40 CFR Parts 141 and 142)/Arizona Aquifer Water Quality Standards (AWQS)
- Samples collected between 2/5/2015 and 2/9/2015 were collected using a hydrasleeve sampler

Table 8

Summary of Groundwater Quality Data, RCRA Metals
February 2015

Well	Date	Samle Depth (bwt)	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
			µg/L							
R-068A	2/9/2015	25	<100.00	330.00	<1.00	3.5 J	6.3 J	<0.50	<100.00	<10.00
WR-274A	2/5/2015	25	<100.00	320.00	<1.00	7.1 J	4 J	<0.50	<100.00	<10.00
WR-275A	2/9/2015	25	<100.00	180.00	<1.00	1.2 J	<15.00	<0.50	<100.00	<10.00
WR-275A-D	2/9/2015	25	<100.00	170.00	<1.00	<10.00	<15.00	<0.50	<100.00	<10.00
WR-353A	2/9/2015	25	<100.00	80.00	<1.00	3.5 J	<15.00	<0.50	<100.00	<10.00
WR-367A	2/5/2015	25	7 J	190.00	<1.00	2.2 J	6 J	<0.50	<100.00	<10.00
MCL/AWQS			**10**	**2,000**	**50**	**10**	**50**	**2**	**50**	**N/A**

Notes:
µg/L - micrograms per liter
bwt - below water table
- Grey text indicates result was less than the reporting limit
- **Bold** values exceed the compounds Maximum Contaminant Level (MCL) (40 CFR Parts 141 and 142)/Arizona Aquifer Water Quality Standards (AWQS) (AAC Title R18-11)

Table 9

Summary of Field Parameter Data, Source Area Groudnwater Evaluation
February 2015

Well ID	Sample ID	Sample Date	Sample Time	Water Level (ft btoc)	Sample Depth (bwt/btoc)	pH	DO (mg/L)	EC (µS/cm)	Fe (ppm)	Fe+2 (ppm)	Analysis	Comments
WR-353A	WR-353A-430-H-020915	2/9/2015	13:20	298.07	131.93,430	7.18	4.24	361	<0.1	<0.1	Metals/Cations	Adjusted sampling depth to fit inside screen interval
WR-367A	WR-367A-363.48-H-020515	2/5/2015	11:55	338.43	25,363.48	7.42	3.79	547	1.0	0.2	DOC, 8260LL, RSK 175 (ethane, methane,ethene), Metals/Cations, Anions, pH,	
WR-275A	WR-275A-340.91-H-020915 WR-275A-340.91-H-020915-DUP	2/9/2015	11:45	315.91	25,340.91	6.90	4.18	1232	<0.1	<0.1	Metals/Cations	
R-068A	R-068A-341.86-H-020915	2/9/2015	10:30	316.86	25,341.86	7.00	5.88	899	<0.1	<0.1	DOC, 8260LL, RSK 175 (ethane, methane,ethene), Metals/Cations, Anions, pH,	
WR-273A	WR-273A-323.33-H-020415	2/4/2015	13:15	298.33	25,323.33	7.22	5.40	591	<0.1	<0.1	DOC, 8260LL, RSK 175 (ethane, methane,ethene), Metals/Cations, Anions, pH,	
WR-274A	WR-274A-335.89-H-020515	2/5/2015	15:50	310.89	25,335.89	7.40	4.83	587	0.4	0.4	DOC,8260LL,RSK 175, Metals/Cations, Anions, pH, Alkalinity, Hardness, Nitrate/Nitrite 8270C	

Notes:
µS/cm - micro-Siemens per centimeter
bwt - below water table
ft btoc - feet below top of casing
ID - identification
mg/L - milligrams per liter
ppm - parts per million

Table 10

Summary of Groundwater Quality Data, Source Area Groundwater Evaluation
February 2015

Well Name	Sample Date	Sample Depth	Trichloroethene	Tetrachloroethene	cis-1,2-Dichloroethene	Vinyl Chloride	Ethene	Ethane	Methane
			µg/L						
R-068A	2/9/2015	25	**5.7**	**24**	10	<0.50	<2.80	<2.00	<0.99
WR-273A	2/4/2015	25	1.8	3.9	1.1	<0.50	<2.80	<2.00	<0.99
WR-274A	2/5/2015	25	**23**	**83**	30	<0.50	<2.80	<2.00	2.7
WR-367A	2/5/2015	25	0.41 J	**7.4**	<0.50	<0.50	<2.80	<2.00	11
AWQS			**5**	**5**	**70**	**2**	**N/A**	**N/A**	**N/A**

Notes:
µg/L - micrograms per liter
AWQS - Aquifer Water Quality Standard
ft bwt - feet below water table
mg/L - milligams per liter
S.U. - standard unit
J - indicates result was less than the reporting limit Grey text indicates non-detection
Bold text indicates a result detected above the AWQS
- Grey text indicates result was less than the reporting limit
- = data not applicable or available

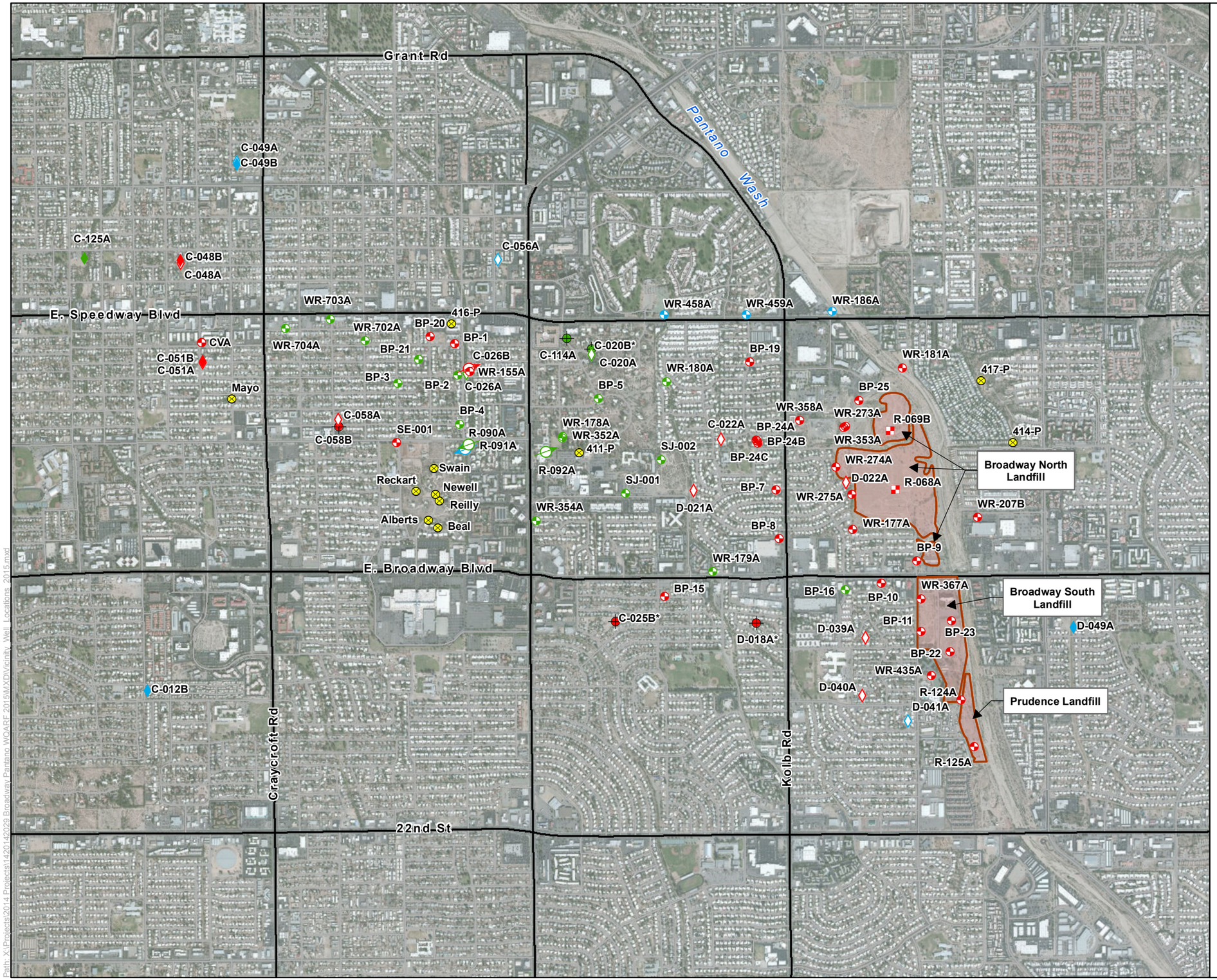
Table 10

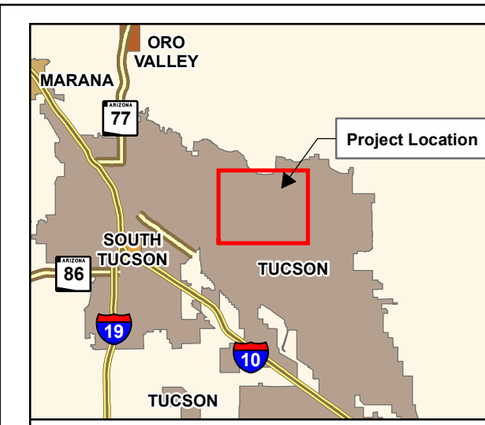
Summary of Groundwater Quality Data, Source Area Groundwater Evaluation
February 2015

Well Name	Sample Date	Sample Depth	Chloride	Dissolved Organic Carbon	Total Organic Carbon	Alkalinity, Total (as CaCO3)	Ferrous Iron	Sulfate	Nitrate as N	pH
			mg/L							S.U.
R-068A	2/9/2015	25	21	0.9 J	-	320	-	40	3.0	7.18
WR-273A	2/4/2015	25	3.8	<1.00	-	250	0.34	27	1.8	7.32
WR-274A	2/5/2015	25	10	-	1.0	410	-	28	0.93	7.19
WR-367A	2/5/2015	25	6.6	0.56 J	-	230	-	41	3.3	7.54
AWQS			**N/A**	**NA**	**N/A**	**N/A**	**N/A**	**N/A**	**10**	**N/A**

Notes:
µg/L - micrograms per liter
AWQS - Aquifer Water Quality Standard
ft bwt - feet below water table
mg/L - milligams per liter
S.U. - standard unit
J - indicates result was less than the reporti
Bold text indicates a result detected above
- Grey text indicates result was less than th
- = data not applicable or available

FIGURES





Area of Detail

Legend

Key to Well Symbology

- Active Monitoring Well
- Active Production Well
- Inactive Production Well
- Last On/First Off Well
- Air Injection/Monitoring Well
- Western Containment Injection Well
- Western Containment Extraction Well
- Abandoned Well
- Private Well
- Landfill Boundaries

RED Symbol indicates ADEQ sampling
GREEN Symbol indicates City of Tucson/Tucson Water Sampling
BLUE Symbol indicates Water Level Well

Notes:

WR-178A Well Identification
*Denotes pump status unknown
ADEQ Arizona Department of Environmental Quality

0 1,000 2,000 4,000 Feet

N

Broadway - Pantano WQARF Site
Tucson, Arizona

Vicinity and Well Location Map

FIGURE **1**

Job No.:	14-2014-2029
PM:	AY
Date:	4/29/2015
Scale:	1" = 2000'

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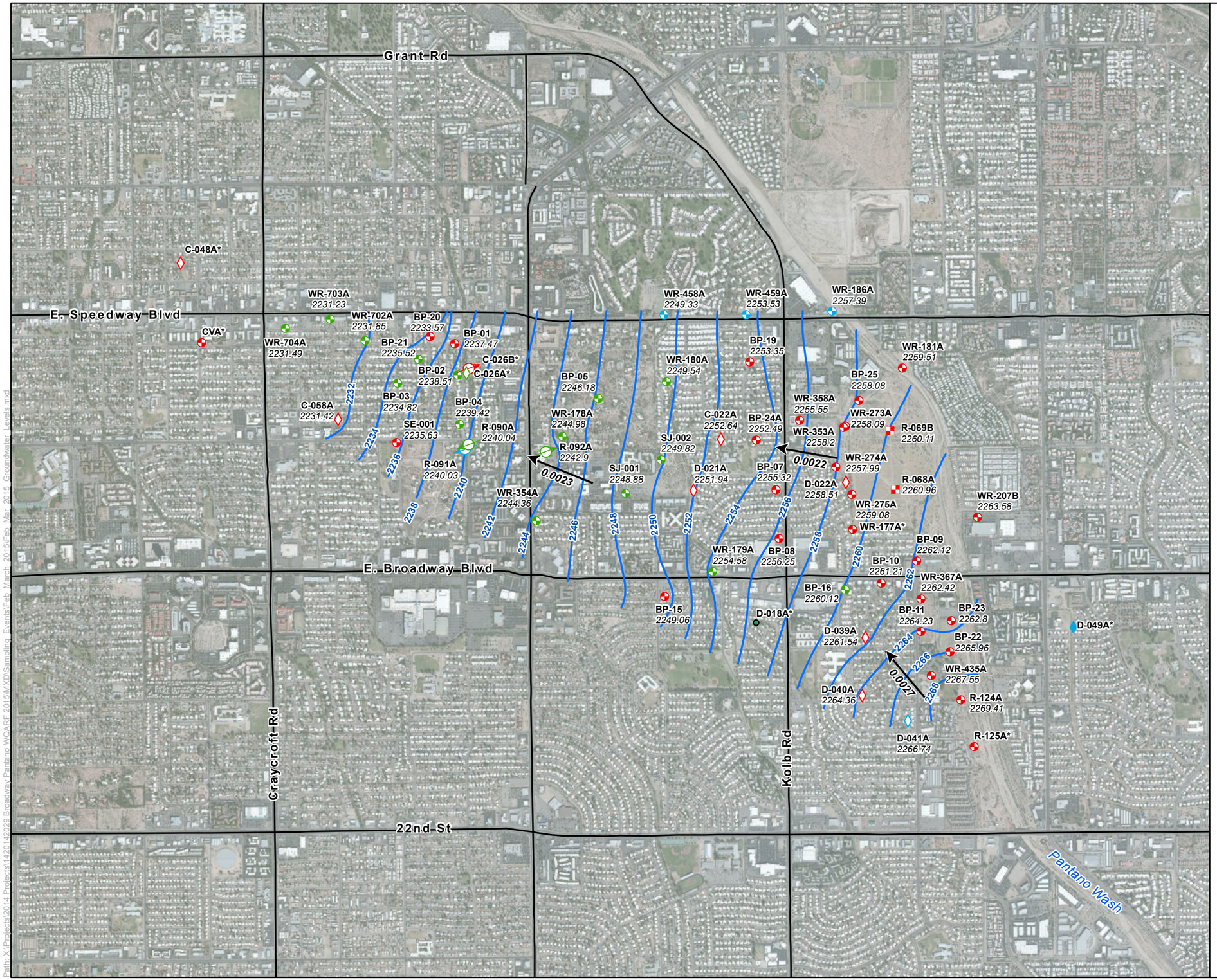

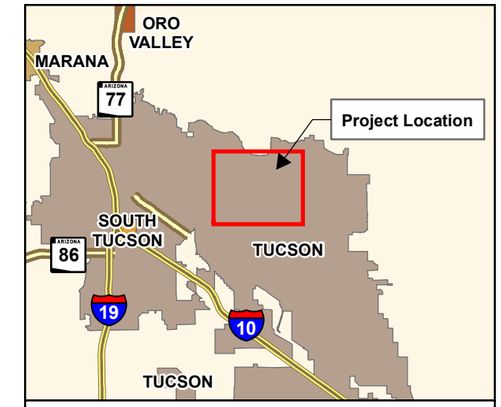

Area of Detail

Legend

Key to Well Symbology

- Active Monitoring Well
- Active Production Well
- Inactive Production Well
- Last On/First Off Well
- Air Injection/Monitoring Well
- Western Containment Injection Well
- Western Containment Extraction Well
- Abandoned Well
- Groundwater flow direction and gradient
- Feb/March Groundwater Elevation Contours (ft)

RED Symbol indicates ADEQ sampling
GREEN Symbol indicates City of Tucson/Tucson Water Sampling
BLUE Symbol indicates Water Level Well

Notes:

WR-178A Well Identification
2244.98 Groundwater elevation (amsl)
* Water level not used in contouring due to suspect reference elevation or water level measurement.
- Groundwater elevation in feet amsl (above mean sea level)
- Sampling Interval: 2/24/2015 to 3/2/2015

0.0023 - Groundwater gradient in feet/feet
ADEQ Arizona Department of Environmental Quality

0 1,000 2,000 4,000 Feet

N

Feb/March 2015 Sampling Event
Broadway - Pantano WQARF Site
Tucson, Arizona

Groundwater Elevation Contour Map

FIGURE **2**

Job No.:	14-2014-2029
PM:	AY
Date:	4/29/2015
Scale:	1" = 2000'

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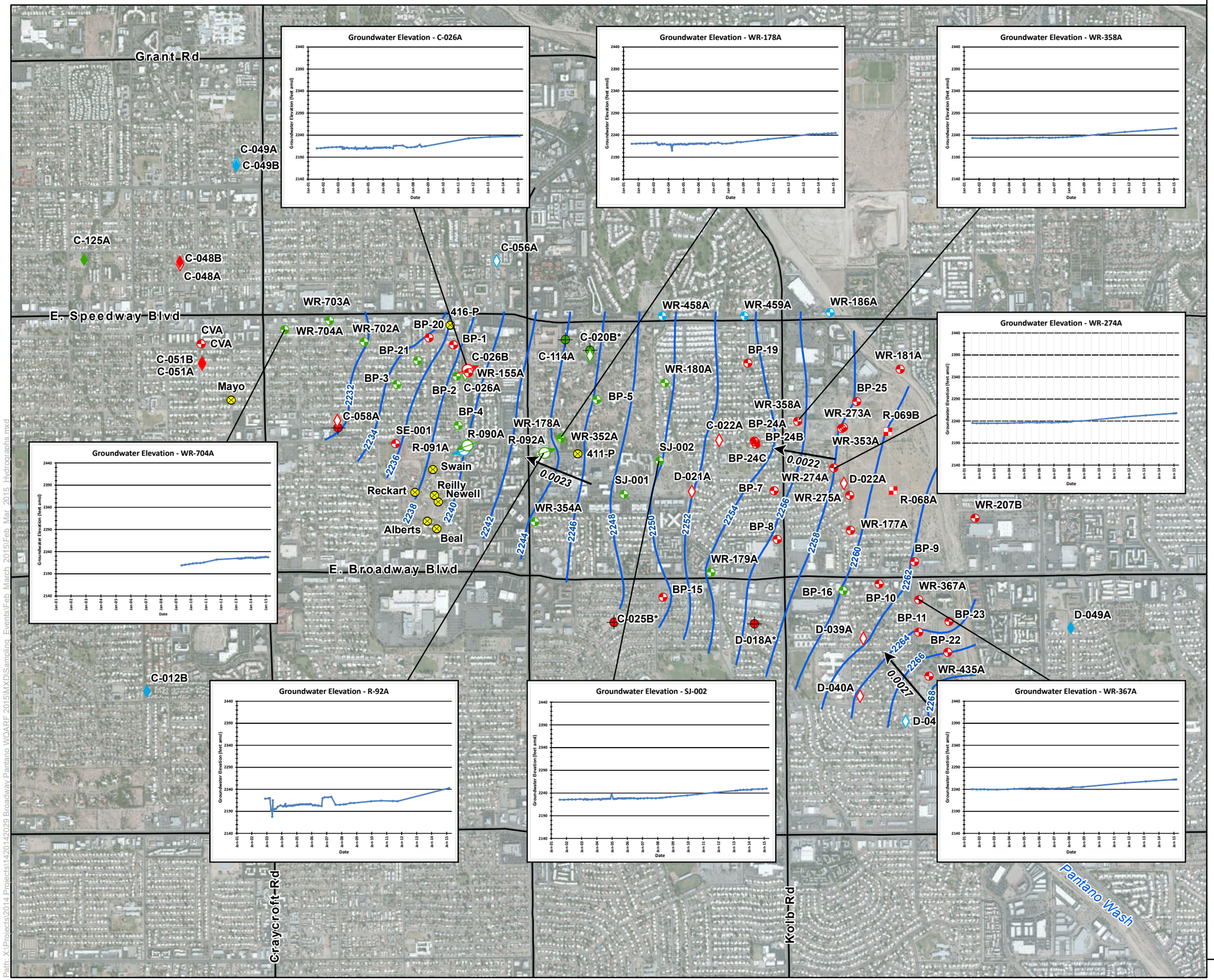

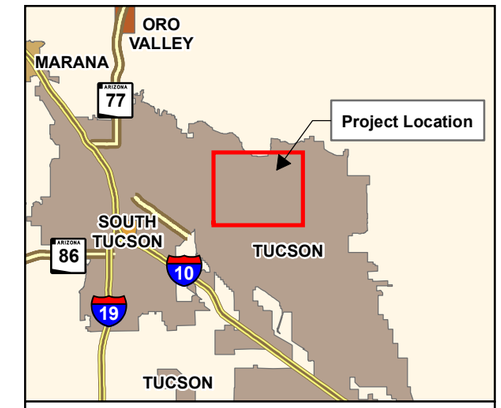

Area of Detail

Legend

Key to Well Symbology

- Active Monitoring Well
- Active Production Well
- Inactive Production Well
- Last On/First Off Well
- Air Injection/Monitoring Well
- Western Containment Injection Well
- Western Containment Extraction Well
- Abandoned Well
- Private Well
- Groundwater flow direction and gradient
- Feb/March Groundwater Elevation Contours (ft amsl)

RED Symbol indicates ADEQ sampling
GREEN Symbol indicates City of Tucson/Tucson Water Sampling
BLUE Symbol indicates Water Level Well

Notes:

WR-178A Well Identification
- Groundwater elevation in feet amsl (above mean sea level)

0.0023 - Goundwater gradient in feet/feet

ADEQ Arizona Department of Environmental Quality

0 1,000 2,000 4,000 Feet

N

Feb/March 2015 Sampling Event
Broadway - Pantano WQARF Site
Tucson, Arizona

Groundwater Hydrograph Map

FIGURE **3**

Job No.:	14-2014-2029
PM:	AY
Date:	4/29/2015
Scale:	1" = 2000'

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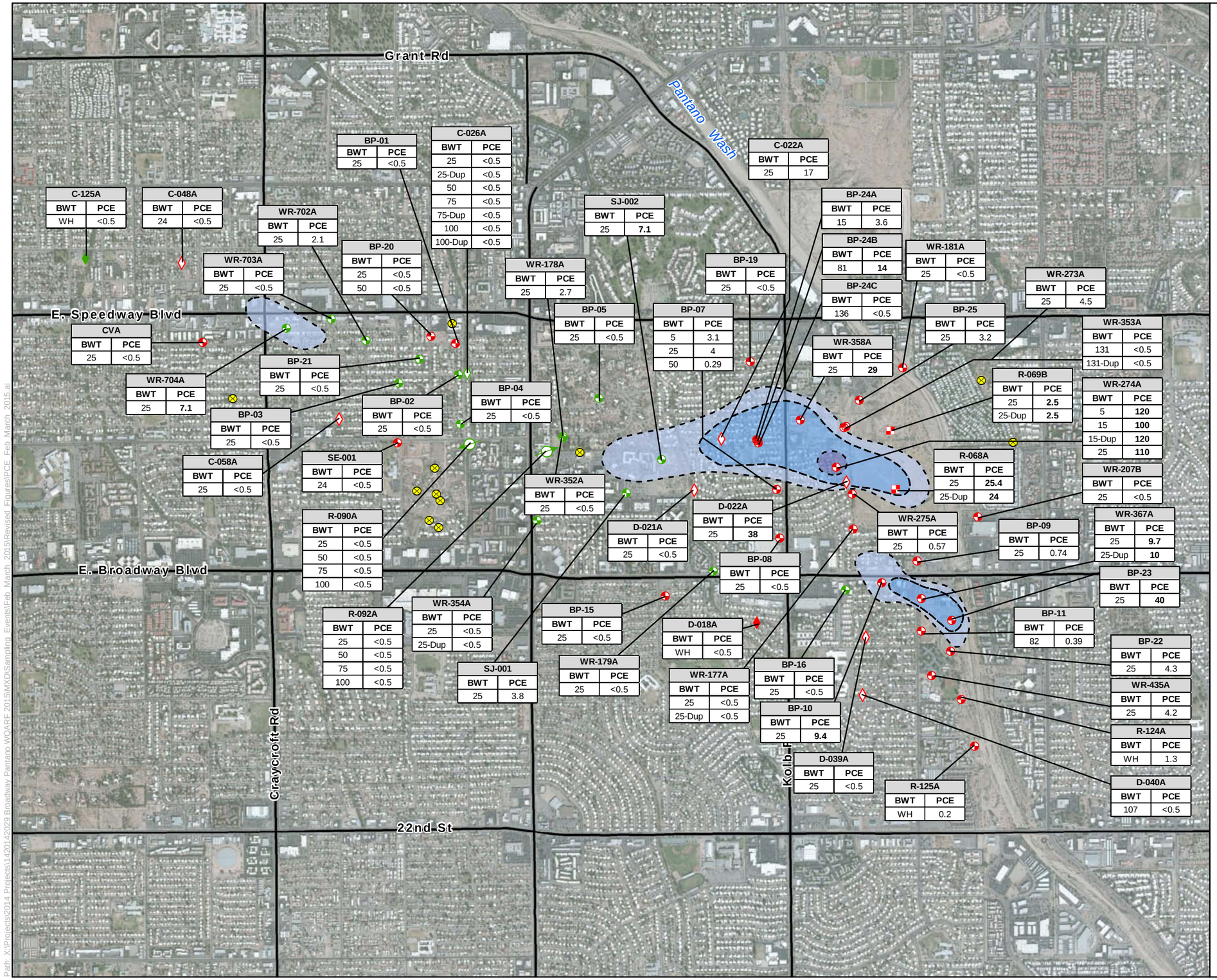

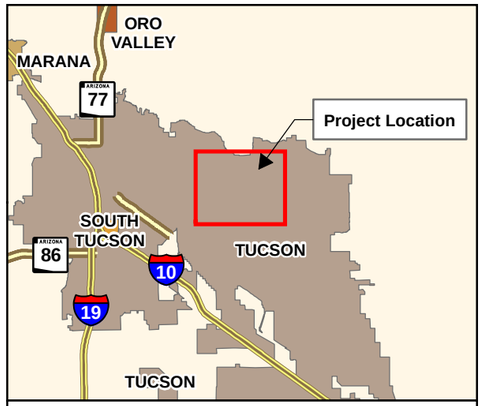

Area of Detail

Legend

Key to Well Symbology

- Active Monitoring Well
- Active Production Well
- Inactive Production Well
- Last On/First Off Well
- Air Injection/Monitoring Well
- Western Containment Injection Well
- Western Containment Extraction Well
- Abandoned Well
- Private Well

PCE Concentration (Dashed Where Inferred)

- 5µg/L
- 10µg/L
- 100µg/L

RED Symbol indicates ADEQ sampling
GREEN Symbol indicates City of Tucson/Tucson Water Sampling
BLUE Symbol indicates Water Level Well

Notes:

WR-274A	Well Identification
BWT	Below water table
PCE	Tetrachloroethene
µg/L	Micrograms per liter
ADEQ	Arizona Department of Environmental Quality

0 1,000 2,000 4,000 Feet

N

February - March 2015 Sampling Event
Broadway - Pantano WQARF Site
Tucson, Arizona

PCE Plume Map

FIGURE **4**

Job No.:	14-2014-2029
PM:	AY
Date:	4/30/2015
Scale:	1" = 2000'

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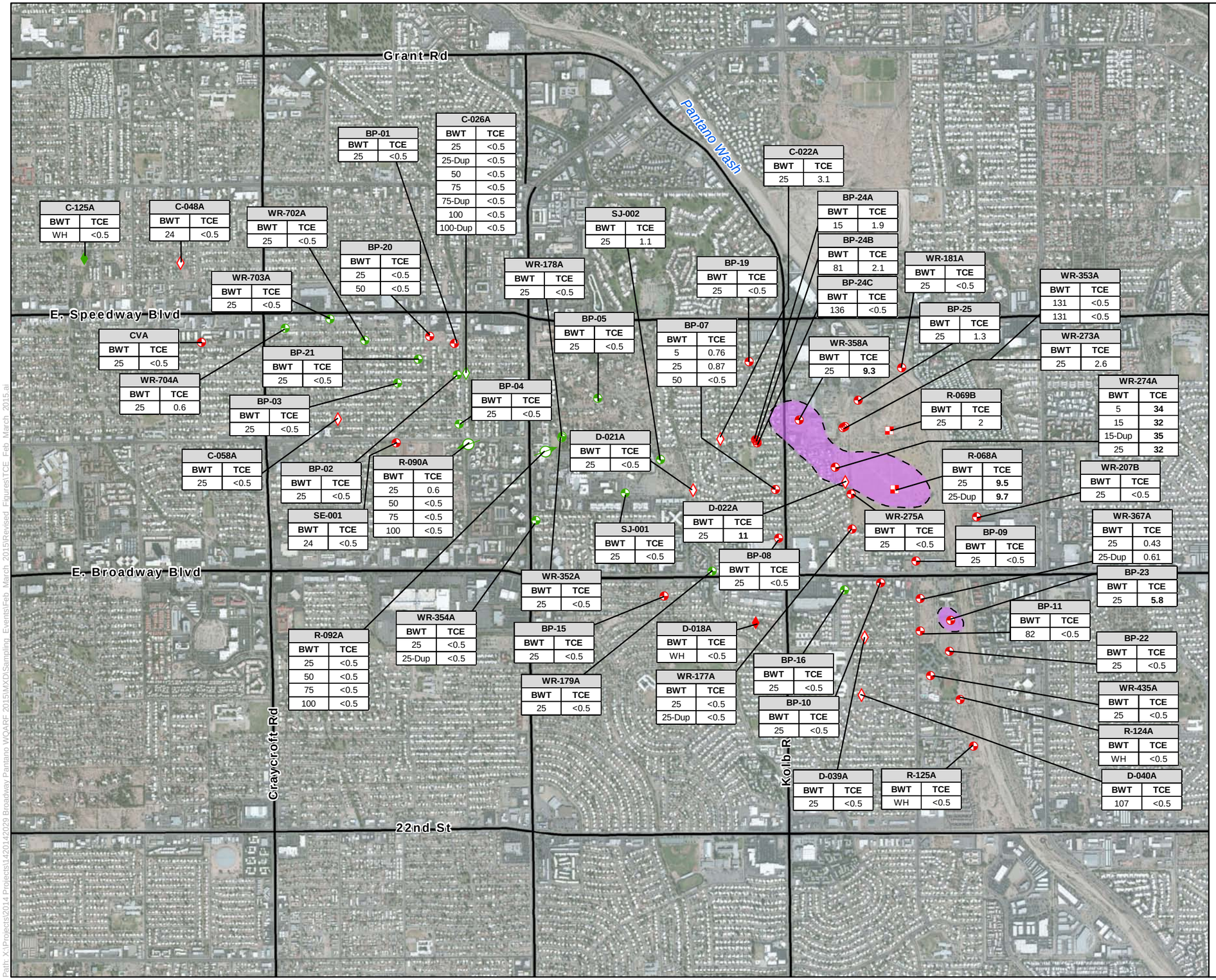

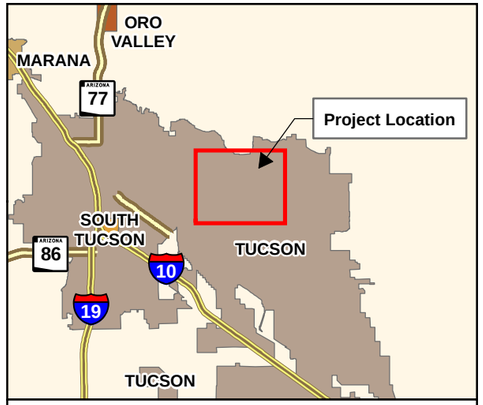

Area of Detail

Legend

Key to Well Symbology

- Active Monitoring Well
- Active Production Well
- Inactive Production Well
- Last On/First Off Well
- Air Injection/Monitoring Well
- Western Containment Injection Well
- Western Containment Extraction Well
- Abandoned Well
- Private Well

TCE Concentration (Dashed Where Inferred)

5µg/L

RED Symbol indicates ADEQ sampling
GREEN Symbol indicates City of Tucson/Tucson Water Sampling
BLUE Symbol indicates Water Level Well

WR-274A	Well Identification
BWT	Below water table
TCE	Trichloroethene
µg/L	Micrograms per Liter
ADEQ	Arizona Department of Environmental Quality

0 1,000 2,000 4,000 Feet

N

February - March 2015 Sampling Event
Broadway - Pantano WQARF Site
Tucson, Arizona

TCE Plume Map

FIGURE **5**

Job No.:	14-2014-2029
PM:	AY
Date:	4/30/2015
Scale:	1" = 2000'

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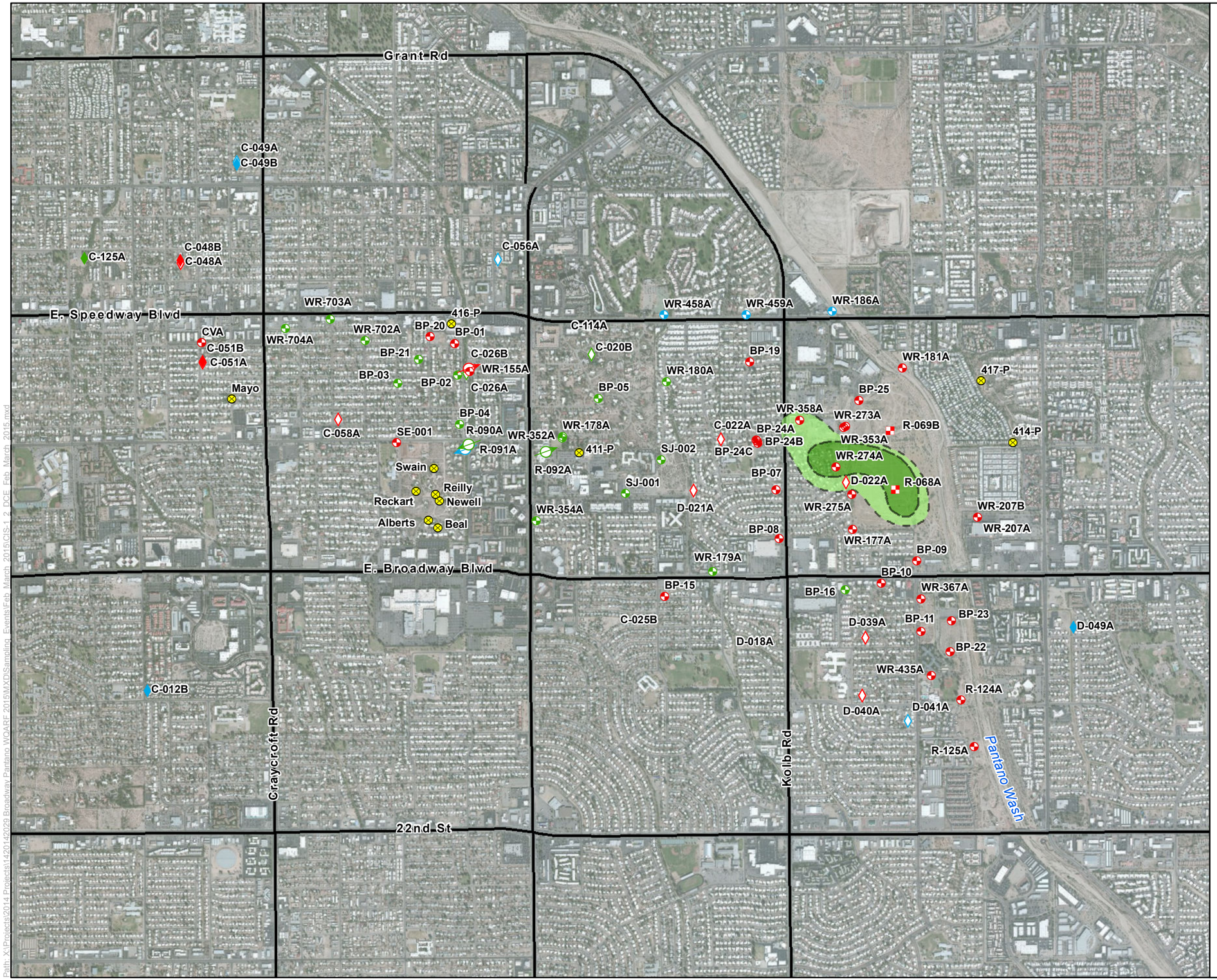

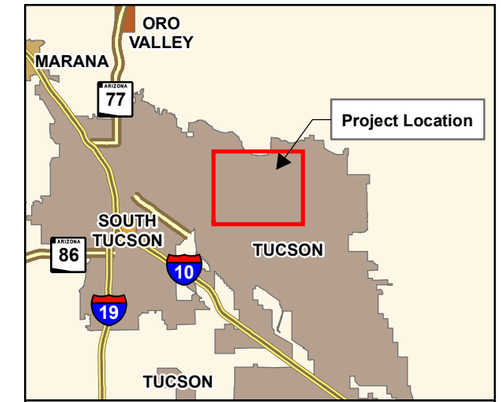

Area of Detail

Legend

Key to Well Symbology

- Active Monitoring Well
- Active Production Well
- Inactive Production Well
- Last On/First Off Well
- Air Injection/Monitoring Well
- Western Containment Injection Well
- Western Containment Extraction Well
- Abandoned Well
- Private Well

Cis-1,2 - DCE Concentrations (Dashed Where Inferred)

- 5µg/L
- 10µg/L

RED Symbol indicates ADEQ sampling
GREEN Symbol indicates City of Tucson/Tucson Water Sampling
BLUE Symbol indicates Water Level Well

Notes:

WR-274A	Well Identification
Cis-1,2-DCE	Cis-1,2 Dichloroethene
µg/L	Micrograms per liter
ADEQ	Arizona Department of Environmental Quality

0 1,000 2,000 4,000 Feet

N

February/March, 2015 Sampling Event
Broadway - Pantano WQARF Site
Tucson, Arizona

CIS-1,2 - DCE Plume Map

FIGURE **6**

Job No.:	14-2014-2029
PM:	AY
Date:	4/29/2015
Scale:	1" = 2000'

The map shown here has been created with all due and reasonable care and is strictly for use with Amec Foster Wheeler Project Number 14-2014-2029. This map has not been certified by a licensed land surveyor, and any third party use of this map comes without warranties of any kind. Amec Foster Wheeler assumes no liability, direct or indirect, whatsoever for any such third party or unintended use.

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Path: X:\Projects\2014 Projects\142014\2029 Broadway Pantano WQARF 2015\MXD\Sampling_Events\Feb_March_2015\CIS-1_2_DCE_Feb_March_2015.mxd

APPENDIX A

GROUNDWATER ELEVATION DATA 2001-2015

Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
411-P	603227	2565.58	305-484	12/3/2003	345.46	2220.12
		2565.58	305-484	1/29/2004	345.13	2220.45
		2565.58	305-484	2/25/2004	345.01	2220.57
		2565.58	305-484	3/30/2004	359.35	2206.23
		2565.58	305-484	4/13/2004	357.17	2208.41
		2565.58	305-484	5/10/2004	360.22	2205.36
		2565.58	305-484	6/17/2004	345.46	2220.12
		2565.58	305-484	7/28/2004	344.89	2220.69
		2565.58	305-484	8/24/2004	342.26	2223.32
		2565.58	305-484	9/22/2004	345.04	2220.54
		2565.58	305-484	12/20/2004	357.44	2208.14
		2565.58	305-484	1/27/2005	354.89	2210.69
		2565.58	305-484	2/16/2005	345.11	2220.47
		2565.58	305-484	3/14/2005	344.87	2220.71
		2565.58	305-484	4/22/2005	345.27	2220.31
		2565.58	305-484	5/16/2005	344.02	2221.56
		2565.58	305-484	6/10/2005	357.76	2207.82
		2565.58	305-484	6/10/2005	343.86	2221.72
		2565.58	305-484	7/29/2005	344.06	2221.52
		2565.58	305-484	7/29/2005	357.35	2208.23
		2565.58	305-484	8/29/2005	343.67	2221.91
		2565.58	305-484	8/29/2005	357.7	2207.88
		2565.58	305-484	9/19/2005	344.68	2220.9
		2565.58	305-484	9/19/2005	353.08	2212.5
		2565.58	305-484	2/27/2006	343.55	2222.03
		2565.58	305-484	2/27/2006	357.53	2208.05
		2565.58	305-484	3/20/2006	341.98	2223.6
		2565.58	305-484	3/20/2006	347.65	2217.93
		2565.58	305-484	4/3/2006	347.76	2217.82
		2565.58	305-484	4/3/2006	343.35	2222.23
		2565.58	305-484	5/30/2006	355.97	2209.61
		2565.58	305-484	5/30/2006	343.6	2221.98
		2565.58	305-484	6/16/2006	355.09	2210.49
		2565.58	305-484	6/16/2006	343.9	2221.68
		2565.58	305-484	8/31/2006	357.9	2207.68
		2565.58	305-484	9/21/2006	355.04	2210.54
		2565.58	305-484	9/21/2006	344.8	2220.78
		2565.58	305-484	11/13/2006	346.65	2218.93
		2565.58	305-484	11/13/2006	342.24	2223.34
		2565.58	305-484	2/6/2007	342.92	2222.66

NOTE: ft amsl - feet above mean sea level
- = data not applicable or available

Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
411-P	603227	2565.58	305-484	2/6/2007	356.68	2208.9
		2565.58	305-484	4/23/2007	341.22	2224.36
		2565.58	305-484	8/6/2007	356.25	2209.33
		2565.58	305-484	8/6/2007	343.92	2221.66
		2565.58	305-484	4/7/2008	355.52	2210.06
		2565.58	305-484	4/7/2008	341.99	2223.59
		2565.58	305-484	6/17/2008	340.11	2225.47
		2565.58	305-484	7/30/2008	339.02	2226.56
		2565.58	305-484	10/28/2008	346.75	2218.83
		2565.58	305-484	10/28/2008	340.72	2224.86
BP-01	589345	2535.48	261-436	2/11/2002	326.27	2209.21
		2535.48	261-436	5/6/2002	325.53	2209.95
		2535.48	261-436	8/5/2002	324.93	2210.55
		2535.48	261-436	11/25/2002	323.6	2211.88
		2535.48	261-436	2/13/2003	323.98	2211.5
		2535.48	261-436	3/17/2003	323.76	2211.72
		2535.48	261-436	4/15/2003	324.71	2210.77
		2535.48	261-436	4/22/2003	324.69	2210.79
		2535.48	261-436	4/29/2003	324.73	2210.75
		2535.48	261-436	5/6/2003	324.77	2210.71
		2535.48	261-436	5/13/2003	324.73	2210.75
		2535.48	261-436	5/20/2003	324.72	2210.76
		2535.48	261-436	5/27/2003	324.49	2210.99
		2535.48	261-436	6/3/2003	324.65	2210.83
		2535.48	261-436	8/14/2003	324	2211.48
		2535.48	261-436	9/23/2003	324.68	2210.8
		2535.48	261-436	12/1/2003	324.44	2211.04
		2535.48	261-436	1/29/2004	324.47	2211.01
		2535.48	261-436	2/25/2004	324.3	2211.18
		2535.48	261-436	3/29/2004	325.99	2209.49
		2535.48	261-436	4/13/2004	324.55	2210.93
		2535.48	261-436	5/10/2004	324.05	2211.43
		2535.48	261-436	6/17/2004	323.76	2211.72
		2535.48	261-436	7/28/2004	323.71	2211.77
		2535.48	261-436	8/24/2004	323.66	2211.82
		2535.48	261-436	9/21/2004	323.45	2212.03
		2535.48	261-436	10/19/2004	323.41	2212.07
		2535.48	261-436	11/15/2004	323.65	2211.83
		2535.48	261-436	12/20/2004	324.36	2211.12
		2535.48	261-436	1/27/2005	323.49	2211.99

NOTE: ft amsl - feet above mean sea level
- = data not applicable or available

Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-01	589345	2535.48	261-436	2/16/2005	324.42	2211.06
		2535.48	261-436	3/14/2005	324.11	2211.37
		2535.48	261-436	4/22/2005	323.79	2211.69
		2535.48	261-436	5/16/2005	322.66	2212.82
		2535.48	261-436	6/10/2005	322.42	2213.06
		2535.48	261-436	7/29/2005	322.3	2213.18
		2535.48	261-436	8/29/2005	322.32	2213.16
		2535.48	261-436	9/19/2005	322.49	2212.99
		2535.48	261-436	10/18/2005	322.28	2213.2
		2535.48	261-436	11/14/2005	322.23	2213.25
		2535.48	261-436	12/6/2005	322.19	2213.29
		2535.48	261-436	1/23/2006	321.93	2213.55
		2535.48	261-436	2/27/2006	321.31	2214.17
		2535.48	261-436	3/20/2006	321.56	2213.92
		2535.48	261-436	4/3/2006	321.57	2213.91
		2535.48	261-436	5/30/2006	321.96	2213.52
		2535.48	261-436	6/16/2006	321.96	2213.52
		2535.48	261-436	7/13/2006	323.14	2212.34
		2535.48	261-436	8/29/2006	322.97	2212.51
		2535.48	261-436	9/21/2006	322.05	2213.43
		2535.48	261-436	11/13/2006	321.28	2214.2
		2535.48	261-436	2/5/2007	321.91	2213.57
		2535.48	261-436	4/25/2007	320.97	2214.51
		2535.48	261-436	8/6/2007	321.51	2213.97
		2535.48	261-436	11/14/2007	321.18	2214.3
		2535.48	261-436	2/21/2008	320.37	2215.11
		2535.48	261-436	4/8/2008	319.81	2215.67
		2535.48	261-436	7/28/2008	319.5	2215.98
		2535.48	261-436	10/28/2008	318.59	2216.89
		2535.48	261-436	12/17/2009	312.96	2222.52
		2535.48	261-436	8/19/2010	308.68	2226.8
		2535.48	261-436	9/19/2011	304.29	2231.19
		2535.48	261-436	2/12/2013	300.84	2234.64
		2535.48	261-436	2/2/2015	298	2237.48
		2535.48	261-436	2/24/2015	298.01	2237.47
BP-02	589349	2540.49	265-440	2/12/2002	330.3	2210.19
		2540.49	265-440	5/6/2002	329.58	2210.91
		2540.49	265-440	8/6/2002	329.1	2211.39
		2540.49	265-440	11/25/2002	328.64	2211.85
		2540.49	265-440	2/13/2003	328.25	2212.24

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Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-02	589349	2540.49	265-440	3/18/2003	327.94	2212.55
		2540.49	265-440	4/15/2003	328.75	2211.74
		2540.49	265-440	4/22/2003	329.57	2210.92
		2540.49	265-440	4/29/2003	329.56	2210.93
		2540.49	265-440	5/6/2003	329.49	2211
		2540.49	265-440	5/13/2003	329.5	2210.99
		2540.49	265-440	5/20/2003	329.45	2211.04
		2540.49	265-440	5/27/2003	328.36	2212.13
		2540.49	265-440	6/3/2003	329.4	2211.09
		2540.49	265-440	7/25/2003	328.91	2211.58
		2540.49	265-440	8/14/2003	328.28	2212.21
		2540.49	265-440	9/23/2003	329.25	2211.24
		2540.49	265-440	12/1/2003	328.94	2211.55
		2540.49	265-440	1/29/2004	329.21	2211.28
		2540.49	265-440	2/25/2004	328.91	2211.58
		2540.49	265-440	3/29/2004	332.86	2207.63
		2540.49	265-440	4/13/2004	328.91	2211.58
		2540.49	265-440	5/10/2004	328.83	2211.66
		2540.49	265-440	6/17/2004	328.4	2212.09
		2540.49	265-440	7/28/2004	328.61	2211.88
		2540.49	265-440	8/24/2004	328.52	2211.97
		2540.49	265-440	9/22/2004	328.44	2212.05
		2540.49	265-440	10/19/2004	328.18	2212.31
		2540.49	265-440	11/15/2004	328.54	2211.95
		2540.49	265-440	12/20/2004	329.23	2211.26
		2540.49	265-440	1/27/2005	328.31	2212.18
		2540.49	265-440	2/16/2005	329.16	2211.33
		2540.49	265-440	3/14/2005	328.97	2211.52
		2540.49	265-440	4/22/2005	328.58	2211.91
		2540.49	265-440	5/16/2005	327.44	2213.05
		2540.49	265-440	7/29/2005	327.16	2213.33
		2540.49	265-440	8/29/2005	327.18	2213.31
		2540.49	265-440	9/19/2005	327.28	2213.21
		2540.49	265-440	10/18/2005	327.2	2213.29
		2540.49	265-440	11/14/2005	327.08	2213.41
		2540.49	265-440	12/6/2005	327	2213.49
		2540.49	265-440	1/23/2006	326.77	2213.72
		2540.49	265-440	2/27/2006	326.57	2213.92
		2540.49	265-440	3/20/2006	326.49	2214
		2540.49	265-440	4/3/2006	326.46	2214.03

NOTE: ft amsl - feet above mean sea level
- = data not applicable or available

Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-02	589349	2540.49	265-440	5/30/2006	326.81	2213.68
		2540.49	265-440	6/16/2006	326.84	2213.65
		2540.49	265-440	7/13/2006	327.94	2212.55
		2540.49	265-440	8/29/2006	327.83	2212.66
		2540.49	265-440	9/21/2006	325.75	2214.74
		2540.49	265-440	11/13/2006	325.3	2215.19
		2540.49	265-440	2/5/2007	325.89	2214.6
		2540.49	265-440	4/25/2007	324.93	2215.56
		2540.49	265-440	8/6/2007	326.56	2213.93
		2540.49	265-440	11/13/2007	326.28	2214.21
		2540.49	265-440	2/21/2008	325.33	2215.16
		2540.49	265-440	4/8/2008	324.77	2215.72
		2540.49	265-440	7/28/2008	324.84	2215.65
		2540.49	265-440	10/28/2008	323.61	2216.88
		2540.49	265-440	12/17/2009	318.19	2222.3
		2540.49	265-440	8/19/2010	312.77	2227.72
		2540.49	265-440	9/19/2011	308.55	2231.94
		2540.49	265-440	2/12/2013	305.25	2235.24
		2540.49	265-440	4/2/2013	304.92	2235.57
		2540.49	265-440	6/4/2013	304.22	2236.27
		2540.49	265-440	8/22/2013	304.28	2236.21
		2540.49	265-440	11/19/2013	304.12	2236.37
		2540.49	265-440	2/20/2014	304.22	2236.27
		2540.49	265-440	5/15/2014	303.35	2237.14
		2540.49	265-440	8/21/2014	303.21	2237.28
		2540.49	265-440	11/25/2014	303.05	2237.44
		2540.49	265-440	2/27/2015	301.98	2238.51
BP-03	589348	2533.45	255-430	8/5/2002	327.19	2206.26
		2533.45	255-430	11/25/2002	326.1	2207.35
		2533.45	255-430	2/13/2003	326.08	2207.37
		2533.45	255-430	3/17/2003	325.82	2207.63
		2533.45	255-430	4/15/2003	325.65	2207.8
		2533.45	255-430	4/22/2003	325.46	2207.99
		2533.45	255-430	4/29/2003	325.34	2208.11
		2533.45	255-430	5/6/2003	325.34	2208.11
		2533.45	255-430	5/13/2003	325.2	2208.25
		2533.45	255-430	5/20/2003	325.15	2208.3
		2533.45	255-430	5/27/2003	325.12	2208.33
		2533.45	255-430	6/3/2003	325.04	2208.41
		2533.45	255-430	8/14/2003	325.1	2208.35

NOTE: ft amsl - feet above mean sea level
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Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-03	589348	2533.45	255-430	9/23/2003	325.41	2208.04
		2533.45	255-430	12/1/2003	325.44	2208.01
		2533.45	255-430	1/29/2004	325.27	2208.18
		2533.45	255-430	2/25/2004	324.99	2208.46
		2533.45	255-430	3/29/2004	326.12	2207.33
		2533.45	255-430	4/13/2004	325.3	2208.15
		2533.45	255-430	5/10/2004	324.28	2209.17
		2533.45	255-430	6/17/2004	324.04	2209.41
		2533.45	255-430	7/28/2004	323.92	2209.53
		2533.45	255-430	8/24/2004	323.89	2209.56
		2533.45	255-430	9/21/2004	323.74	2209.71
		2533.45	255-430	10/19/2004	323.72	2209.73
		2533.45	255-430	11/15/2004	323.72	2209.73
		2533.45	255-430	12/20/2004	324.56	2208.89
		2533.45	255-430	1/27/2005	323.55	2209.9
		2533.45	255-430	2/16/2005	324.47	2208.98
		2533.45	255-430	3/14/2005	324.18	2209.27
		2533.45	255-430	4/22/2005	323.72	2209.73
		2533.45	255-430	5/16/2005	322.53	2210.92
		2533.45	255-430	6/10/2005	322.29	2211.16
		2533.45	255-430	7/29/2005	322.34	2211.11
		2533.45	255-430	8/29/2005	322.3	2211.15
		2533.45	255-430	9/19/2005	322.4	2211.05
		2533.45	255-430	10/18/2005	322.37	2211.08
		2533.45	255-430	11/14/2005	322.2	2211.25
		2533.45	255-430	12/6/2005	322.17	2211.28
		2533.45	255-430	1/23/2006	321.89	2211.56
		2533.45	255-430	2/27/2006	321.63	2211.82
		2533.45	255-430	3/20/2006	321.65	2211.8
		2533.45	255-430	4/3/2006	321.68	2211.77
		2533.45	255-430	5/30/2006	322.19	2211.26
		2533.45	255-430	6/16/2006	322.18	2211.27
		2533.45	255-430	7/13/2006	322.96	2210.49
		2533.45	255-430	8/29/2006	322.97	2210.48
		2533.45	255-430	9/21/2006	322.79	2210.66
		2533.45	255-430	11/13/2006	322.75	2210.7
		2533.45	255-430	2/5/2007	323.41	2210.04
		2533.45	255-430	4/26/2007	322.48	2210.97
		2533.45	255-430	8/6/2007	321.71	2211.74
		2533.45	255-430	11/13/2007	321.29	2212.16

NOTE: ft amsl - feet above mean sea level
- = data not applicable or available

Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-03	589348	2533.45	255-430	2/21/2008	320.34	2213.11
		2533.45	255-430	4/8/2008	319.62	2213.83
		2533.45	255-430	7/28/2008	319.72	2213.73
		2533.45	255-430	10/28/2008	318.53	2214.92
		2533.45	255-430	12/17/2009	312.64	2220.81
		2533.45	255-430	8/19/2010	309.77	2223.68
		2533.45	255-430	9/19/2011	305.09	2228.36
		2533.45	255-430	2/12/2013	301.69	2231.76
		2533.45	255-430	4/2/2013	301.73	2231.72
		2533.45	255-430	6/4/2013	300.91	2232.54
		2533.45	255-430	8/22/2013	300.85	2232.6
		2533.45	255-430	11/19/2013	300.67	2232.78
		2533.45	255-430	2/20/2014	300.5	2232.95
		2533.45	255-430	5/15/2014	300.35	2233.1
		2533.45	255-430	8/21/2014	299.92	2233.53
		2533.45	255-430	11/25/2014	299.59	2233.86
		2533.45	255-430	2/27/2015	298.63	2234.82
BP-04	589347	2547.3	260-435	2/12/2002	335.93	2211.37
		2547.3	260-435	5/6/2002	335.38	2211.92
		2547.3	260-435	8/6/2002	334.93	2212.37
		2547.3	260-435	11/25/2002	334.44	2212.86
		2547.3	260-435	2/13/2003	333.92	2213.38
		2547.3	260-435	3/17/2003	333.57	2213.73
		2547.3	260-435	4/15/2003	328.76	2218.54
		2547.3	260-435	4/22/2003	328.15	2219.15
		2547.3	260-435	4/29/2003	327.85	2219.45
		2547.3	260-435	5/6/2003	327.62	2219.68
		2547.3	260-435	5/13/2003	327.65	2219.65
		2547.3	260-435	5/20/2003	327.26	2220.04
		2547.3	260-435	5/27/2003	329.24	2218.06
		2547.3	260-435	6/3/2003	327.51	2219.79
		2547.3	260-435	7/25/2003	331.1	2216.2
		2547.3	260-435	8/14/2003	329.95	2217.35
		2547.3	260-435	9/23/2003	330.07	2217.23
		2547.3	260-435	12/1/2003	330.88	2216.42
		2547.3	260-435	1/29/2004	329.89	2217.41
		2547.3	260-435	2/25/2004	329.49	2217.81
		2547.3	260-435	3/29/2004	331.62	2215.68
		2547.3	260-435	4/13/2004	330.13	2217.17
		2547.3	260-435	5/10/2004	328.5	2218.8

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Appendix A. Groundwater Elevation Data, 2001 through March 2015
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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-04	589347	2547.3	260-435	6/17/2004	328.93	2218.37
		2547.3	260-435	7/28/2004	328.6	2218.7
		2547.3	260-435	8/24/2004	328.51	2218.79
		2547.3	260-435	9/21/2004	328.45	2218.85
		2547.3	260-435	10/19/2004	328.42	2218.88
		2547.3	260-435	11/15/2004	327.82	2219.48
		2547.3	260-435	12/20/2004	328.77	2218.53
		2547.3	260-435	1/27/2005	327.44	2219.86
		2547.3	260-435	2/16/2005	328.33	2218.97
		2547.3	260-435	3/14/2005	328.34	2218.96
		2547.3	260-435	4/22/2005	327.71	2219.59
		2547.3	260-435	5/16/2005	326.56	2220.74
		2547.3	260-435	6/10/2005	326.49	2220.81
		2547.3	260-435	7/29/2005	326.69	2220.61
		2547.3	260-435	8/29/2005	326.38	2220.92
		2547.3	260-435	9/19/2005	326.47	2220.83
		2547.3	260-435	10/18/2005	326.67	2220.63
		2547.3	260-435	11/14/2005	326.22	2221.08
		2547.3	260-435	12/6/2005	326.21	2221.09
		2547.3	260-435	1/23/2006	325.96	2221.34
		2547.3	260-435	2/27/2006	325.81	2221.49
		2547.3	260-435	3/20/2006	325.9	2221.4
		2547.3	260-435	4/3/2006	325.72	2221.58
		2547.3	260-435	5/30/2006	326.02	2221.28
		2547.3	260-435	6/16/2006	326.09	2221.21
		2547.3	260-435	8/29/2006	326.96	2220.34
		2547.3	260-435	9/21/2006	329.23	2218.07
		2547.3	260-435	11/13/2006	330.81	2216.49
		2547.3	260-435	2/5/2007	331.42	2215.88
		2547.3	260-435	4/26/2007	330.04	2217.26
		2547.3	260-435	8/6/2007	326.24	2221.06
		2547.3	260-435	11/13/2007	325.81	2221.49
		2547.3	260-435	2/21/2008	324.97	2222.33
		2547.3	260-435	4/8/2008	324.36	2222.94
		2547.3	260-435	7/30/2008	324.81	2222.49
		2547.3	260-435	10/28/2008	323.15	2224.15
		2547.3	260-435	12/17/2009	318.26	2229.04
		2547.3	260-435	8/19/2010	317.03	2230.27
		2547.3	260-435	9/19/2011	313.09	2234.21
		2547.3	260-435	2/12/2013	311.36	2235.94

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-04	589347	2547.3	260-435	4/2/2013	311.04	2236.26
		2547.3	260-435	6/4/2013	310.79	2236.51
		2547.3	260-435	8/22/2013	310.33	2236.97
		2547.3	260-435	11/19/2013	310.97	2236.33
		2547.3	260-435	2/20/2014	310.55	2236.75
		2547.3	260-435	5/15/2014	309.48	2237.82
		2547.3	260-435	8/21/2014	309.24	2238.06
		2547.3	260-435	11/25/2014	308.92	2238.38
		2547.3	260-435	2/27/2015	307.88	2239.42
BP-05	589346	2570.31	280-455	2/11/2002	349.55	2220.76
		2570.31	280-455	5/6/2002	349.38	2220.93
		2570.31	280-455	8/5/2002	349.08	2221.23
		2570.31	280-455	11/25/2002	348.1	2222.21
		2570.31	280-455	2/13/2003	348.01	2222.3
		2570.31	280-455	3/17/2003	347.8	2222.51
		2570.31	280-455	4/15/2003	348.96	2221.35
		2570.31	280-455	4/22/2003	348.99	2221.32
		2570.31	280-455	4/29/2003	349.21	2221.1
		2570.31	280-455	5/6/2003	349.43	2220.88
		2570.31	280-455	5/13/2003	349.57	2220.74
		2570.31	280-455	5/20/2003	349.74	2220.57
		2570.31	280-455	5/27/2003	349.81	2220.5
		2570.31	280-455	6/3/2003	349.73	2220.58
		2570.31	280-455	7/25/2003	349.97	2220.34
		2570.31	280-455	8/14/2003	349.62	2220.69
		2570.31	280-455	9/23/2003	349.24	2221.07
		2570.31	280-455	12/1/2003	348.99	2221.32
		2570.31	280-455	1/29/2004	348.4	2221.91
		2570.31	280-455	2/25/2004	348.45	2221.86
		2570.31	280-455	3/29/2004	349.88	2220.43
		2570.31	280-455	4/13/2004	349.58	2220.73
		2570.31	280-455	5/10/2004	348.21	2222.1
		2570.31	280-455	6/17/2004	348.32	2221.99
		2570.31	280-455	7/28/2004	348.12	2222.19
		2570.31	280-455	8/24/2004	347.84	2222.47
		2570.31	280-455	9/21/2004	347.98	2222.33
		2570.31	280-455	10/19/2004	347.74	2222.57
		2570.31	280-455	11/15/2004	347.69	2222.62
		2570.31	280-455	12/20/2004	348.51	2221.8
		2570.31	280-455	1/27/2005	347.39	2222.92

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-05	589346	2570.31	280-455	2/16/2005	348.46	2221.85
		2570.31	280-455	3/14/2005	348.04	2222.27
		2570.31	280-455	4/22/2005	348.07	2222.24
		2570.31	280-455	5/16/2005	346.96	2223.35
		2570.31	280-455	6/10/2005	346.87	2223.44
		2570.31	280-455	7/29/2005	347	2223.31
		2570.31	280-455	8/29/2005	347	2223.31
		2570.31	280-455	9/19/2005	347.23	2223.08
		2570.31	280-455	10/18/2005	347.11	2223.2
		2570.31	280-455	11/14/2005	346.76	2223.55
		2570.31	280-455	12/6/2005	346.77	2223.54
		2570.31	280-455	1/23/2006	346.42	2223.89
		2570.31	280-455	2/27/2006	346.5	2223.81
		2570.31	280-455	3/20/2006	346.46	2223.85
		2570.31	280-455	4/3/2006	346.42	2223.89
		2570.31	280-455	5/30/2006	346.57	2223.74
		2570.31	280-455	6/16/2006	346.63	2223.68
		2570.31	280-455	7/13/2006	348.53	2221.78
		2570.31	280-455	8/29/2006	347.69	2222.62
		2570.31	280-455	9/21/2006	347.39	2222.92
		2570.31	280-455	11/13/2006	346.38	2223.93
		2570.31	280-455	2/5/2007	346.84	2223.47
		2570.31	280-455	4/24/2007	345.73	2224.58
		2570.31	280-455	8/6/2007	346.56	2223.75
		2570.31	280-455	11/13/2007	346.47	2223.84
		2570.31	280-455	2/20/2008	345.71	2224.6
		2570.31	280-455	4/9/2008	345.24	2225.07
		2570.31	280-455	7/30/2008	343.72	2226.59
		2570.31	280-455	10/28/2008	343.4	2226.91
		2570.31	280-455	12/17/2009	339.4	2230.91
		2570.31	280-455	8/19/2010	336.79	2233.52
		2570.31	280-455	9/19/2011	332.9	2237.41
		2570.31	280-455	2/12/2013	328.32	2241.99
		2570.31	280-455	4/1/2013	327.97	2242.34
		2570.31	280-455	6/3/2013	327	2243.31
		2570.31	280-455	8/22/2013	326.88	2243.43
		2570.31	280-455	11/18/2013	326.96	2243.35
		2570.31	280-455	2/19/2014	326.99	2243.32
		2570.31	280-455	5/14/2014	325.52	2244.79
		2570.31	280-455	8/21/2014	325.3	2245.01

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-05	589346	2570.31	280-455	11/24/2014	325.09	2245.22
		2570.31	280-455	2/27/2015	324.13	2246.18
BP-07	589343	2579.34	281-456	2/11/2002	347.08	2232.26
		2579.34	281-456	5/6/2002	346.69	2232.65
		2579.34	281-456	8/5/2002	346.97	2232.37
		2579.34	281-456	3/17/2003	346.49	2232.85
		2579.34	281-456	12/1/2003	346.52	2232.82
		2579.34	281-456	5/10/2004	345.55	2233.79
		2579.34	281-456	9/21/2004	345.38	2233.96
		2579.34	281-456	11/15/2004	345.7	2233.64
		2579.34	281-456	1/27/2005	344.82	2234.52
		2579.34	281-456	2/16/2005	345.81	2233.53
		2579.34	281-456	3/14/2005	345.51	2233.83
		2579.34	281-456	4/22/2005	345.44	2233.9
		2579.34	281-456	5/16/2005	344.23	2235.11
		2579.34	281-456	6/10/2005	344.24	2235.1
		2579.34	281-456	9/19/2005	345.02	2234.32
		2579.34	281-456	11/14/2005	344.97	2234.37
		2579.34	281-456	1/23/2006	344.6	2234.74
		2579.34	281-456	4/3/2006	344.33	2235.01
		2579.34	281-456	8/29/2006	345.17	2234.17
		2579.34	281-456	9/21/2006	345.06	2234.28
		2579.34	281-456	11/13/2006	344.93	2234.41
		2579.34	281-456	2/7/2007	344.66	2234.68
		2579.34	281-456	4/27/2007	344.15	2235.19
		2579.34	281-456	8/6/2007	344.2	2235.14
		2579.34	281-456	11/14/2007	343.92	2235.42
		2579.34	281-456	2/19/2008	343.26	2236.08
		2579.34	281-456	4/8/2008	342.87	2236.47
		2579.34	281-456	7/30/2008	343.27	2236.07
		2579.34	281-456	10/28/2008	341.49	2237.85
		2579.34	281-456	12/17/2009	337.92	2241.42
		2579.34	281-456	8/19/2010	335.63	2243.71
		2579.34	281-456	9/19/2011	332.28	2247.06
		2579.34	281-456	2/15/2013	328.74	2250.6
		2579.34	281-456	2/2/2015	324.09	2255.25
		2579.34	281-456	2/23/2015	324.02	2255.32
BP-08	587095	2602.64	297-472	7/24/2001	369.3	2233.34
		2602.64	297-472	11/5/2001	369.81	2232.83
		2602.64	297-472	2/11/2002	369.49	2233.15

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-08	587095	2602.64	297-472	5/6/2002	369.05	2233.59
		2602.64	297-472	8/5/2002	369.39	2233.25
		2602.64	297-472	3/17/2003	369.01	2233.63
		2602.64	297-472	12/1/2003	368.7	2233.94
		2602.64	297-472	5/10/2004	367.68	2234.96
		2602.64	297-472	9/21/2004	367.36	2235.28
		2602.64	297-472	11/15/2004	367.26	2235.38
		2602.64	297-472	1/27/2005	366.87	2235.77
		2602.64	297-472	2/16/2005	367.89	2234.75
		2602.64	297-472	3/14/2005	367.62	2235.02
		2602.64	297-472	4/22/2005	367.42	2235.22
		2602.64	297-472	5/16/2005	366.27	2236.37
		2602.64	297-472	6/10/2005	366.28	2236.36
		2602.64	297-472	9/19/2005	367.08	2235.56
		2602.64	297-472	11/14/2005	366.99	2235.65
		2602.64	297-472	1/23/2006	366.62	2236.02
		2602.64	297-472	4/3/2006	366.38	2236.26
		2602.64	297-472	8/29/2006	367.31	2235.33
		2602.64	297-472	9/21/2006	367.22	2235.42
		2602.64	297-472	11/13/2006	367.05	2235.59
		2602.64	297-472	2/7/2007	366.79	2235.85
		2602.64	297-472	4/23/2007	366.35	2236.29
		2602.64	297-472	8/6/2007	366.38	2236.26
		2602.64	297-472	11/16/2007	366.15	2236.49
		2602.64	297-472	2/20/2008	365.53	2237.11
		2602.64	297-472	4/8/2008	365.13	2237.51
		2602.64	297-472	7/30/2008	364.56	2238.08
		2602.64	297-472	10/28/2008	363.94	2238.7
		2602.64	297-472	12/12/2008	363.5	2239.14
		2602.64	297-472	12/17/2009	360.42	2242.22
		2602.64	297-472	8/19/2010	358.07	2244.57
		2602.64	297-472	9/19/2011	354.8	2247.84
		2602.64	297-472	2/1/2013	351.21	2251.43
		2602.64	297-472	2/3/2015	346.55	2256.09
		2602.64	297-472	2/23/2015	346.39	2256.25
BP-09	589342	2581.61	280.5-455.5	2/12/2002	342.63	2238.98
		2581.61	280.5-455.5	5/6/2002	342.31	2239.3
		2581.61	280.5-455.5	8/5/2002	342.84	2238.77
		2581.61	280.5-455.5	3/17/2003	342.96	2238.65
		2581.61	280.5-455.5	12/1/2003	342.4	2239.21

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-09	589342	2581.61	280.5-455.5	5/10/2004	341.44	2240.17
		2581.61	280.5-455.5	9/22/2004	341.4	2240.21
		2581.61	280.5-455.5	11/15/2004	341.07	2240.54
		2581.61	280.5-455.5	5/16/2005	340.2	2241.41
		2581.61	280.5-455.5	11/14/2005	340.99	2240.62
		2581.61	280.5-455.5	4/4/2006	340.2	2241.41
		2581.61	280.5-455.5	8/29/2006	341.05	2240.56
		2581.61	280.5-455.5	9/21/2006	341.07	2240.54
		2581.61	280.5-455.5	11/13/2006	341	2240.61
		2581.61	280.5-455.5	2/7/2007	340.72	2240.89
		2581.61	280.5-455.5	4/26/2007	339.89	2241.72
		2581.61	280.5-455.5	8/6/2007	339.92	2241.69
		2581.61	280.5-455.5	11/16/2007	339.65	2241.96
		2581.61	280.5-455.5	2/19/2008	338.9	2242.71
		2581.61	280.5-455.5	4/9/2008	338.1	2243.51
		2581.61	280.5-455.5	7/29/2008	337.54	2244.07
		2581.61	280.5-455.5	10/28/2008	337.21	2244.4
		2581.61	280.5-455.5	12/12/2008	336.67	2244.94
		2581.61	280.5-455.5	12/17/2009	333.07	2248.54
		2581.61	280.5-455.5	8/18/2010	330.98	2250.63
		2581.61	280.5-455.5	9/19/2011	327.68	2253.93
		2581.61	280.5-455.5	2/15/2013	324.35	2257.26
		2581.61	280.5-455.5	2/3/2015	319.69	2261.92
		2581.61	280.5-455.5	2/25/2015	319.49	2262.12
BP-10	589341	2594.77	285-460	2/12/2002	356.1	2238.67
		2594.77	285-460	5/7/2002	355.86	2238.91
		2594.77	285-460	8/6/2002	356.41	2238.36
		2594.77	285-460	3/18/2003	356.36	2238.41
		2594.77	285-460	12/2/2003	355.73	2239.04
		2594.77	285-460	5/10/2004	354.8	2239.97
		2594.77	285-460	9/22/2004	354.58	2240.19
		2594.77	285-460	11/16/2004	354.46	2240.31
		2594.77	285-460	5/16/2005	353.41	2241.36
		2594.77	285-460	11/14/2005	354.3	2240.47
		2594.77	285-460	4/4/2006	353.55	2241.22
		2594.77	285-460	11/13/2006	354.35	2240.42
		2594.77	285-460	4/23/2007	353.57	2241.2
		2594.77	285-460	11/14/2007	353.21	2241.56
		2594.77	285-460	2/19/2008	352.55	2242.22
		2594.77	285-460	4/10/2008	352.09	2242.68

NOTE: ft amsl - feet above mean sea level
- = data not applicable or available

Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-10	589341	2594.77	285-460	7/30/2008	351.32	2243.45
		2594.77	285-460	10/28/2008	351.02	2243.75
		2594.77	285-460	12/12/2008	350.49	2244.28
		2594.77	285-460	12/17/2009	347.15	2247.62
		2594.77	285-460	9/20/2011	341.73	2253.04
		2594.77	285-460	2/15/2013	338.38	2256.39
		2594.77	285-460	2/3/2015	333.85	2260.92
		2594.77	285-460	2/25/2015	333.56	2261.21
BP-11	588207	2606.78	378-478	11/5/2001	365.04	2241.74
		2606.78	378-478	2/12/2002	364.63	2242.15
		2606.78	378-478	5/6/2002	364.24	2242.54
		2606.78	378-478	8/6/2002	365.25	2241.53
		2606.78	378-478	3/17/2003	365.05	2241.73
		2606.78	378-478	12/2/2003	364.41	2242.37
		2606.78	378-478	5/10/2004	363.44	2243.34
		2606.78	378-478	9/22/2004	363.21	2243.57
		2606.78	378-478	11/15/2004	363.03	2243.75
		2606.78	378-478	5/16/2005	361.99	2244.79
		2606.78	378-478	11/14/2005	362.94	2243.84
		2606.78	378-478	4/4/2006	362.22	2244.56
		2606.78	378-478	8/29/2006	363.25	2243.53
		2606.78	378-478	9/21/2006	363.19	2243.59
		2606.78	378-478	11/13/2006	363.11	2243.67
		2606.78	378-478	2/7/2007	362.87	2243.91
		2606.78	378-478	4/25/2007	362.09	2244.69
		2606.78	378-478	8/6/2007	362.11	2244.67
		2606.78	378-478	11/12/2007	362.03	2244.75
		2606.78	378-478	2/19/2008	360.91	2245.87
		2606.78	378-478	4/7/2008	360.36	2246.42
		2606.78	378-478	7/29/2008	359.82	2246.96
		2606.78	378-478	10/28/2008	359.57	2247.21
		2606.78	378-478	12/12/2008	359.03	2247.75
		2606.78	378-478	12/17/2009	355.91	2250.87
		2606.78	378-478	9/20/2011	350.57	2256.21
		2606.78	378-478	2/15/2013	346.68	2260.1
		2606.78	378-478	2/3/2015	342.68	2264.1
		2606.78	378-478	2/25/2015	342.55	2264.23
BP-15	589338	2595.45	293.5-468.5	2/11/2002	366.73	2228.72
		2595.45	293.5-468.5	5/6/2002	366.18	2229.27
		2595.45	293.5-468.5	8/5/2002	366.51	2228.94

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Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-15	589338	2595.45	293.5-468.5	3/17/2003	365.87	2229.58
		2595.45	293.5-468.5	12/1/2003	365.34	2230.11
		2595.45	293.5-468.5	5/10/2004	364.08	2231.37
		2595.45	293.5-468.5	9/21/2004	363.65	2231.8
		2595.45	293.5-468.5	11/15/2004	363.56	2231.89
		2595.45	293.5-468.5	5/16/2005	362.45	2233
		2595.45	293.5-468.5	11/14/2005	363.02	2232.43
		2595.45	293.5-468.5	4/3/2006	362.52	2232.93
		2595.45	293.5-468.5	5/30/2006	362.64	2232.81
		2595.45	293.5-468.5	6/16/2006	362.82	2232.63
		2595.45	293.5-468.5	7/13/2006	364.13	2231.32
		2595.45	293.5-468.5	8/29/2006	363.75	2231.7
		2595.45	293.5-468.5	9/21/2006	363.56	2231.89
		2595.45	293.5-468.5	11/13/2006	363.2	2232.25
		2595.45	293.5-468.5	2/7/2007	362.99	2232.46
		2595.45	293.5-468.5	4/25/2007	362.51	2232.94
		2595.45	293.5-468.5	8/6/2007	362.8	2232.65
		2595.45	293.5-468.5	11/12/2007	362.66	2232.79
		2595.45	293.5-468.5	2/21/2008	361.87	2233.58
		2595.45	293.5-468.5	4/8/2008	361.45	2234
		2595.45	293.5-468.5	7/30/2008	360.95	2234.5
		2595.45	293.5-468.5	10/28/2008	360.3	2235.15
		2595.45	293.5-468.5	12/17/2009	357.01	2238.44
		2595.45	293.5-468.5	8/19/2010	354.42	2241.03
		2595.45	293.5-468.5	9/20/2011	351.35	2244.1
		2595.45	293.5-468.5	2/13/2013	347.24	2248.21
		2595.45	293.5-468.5	2/3/2015	342.83	2252.62
		2595.45	293.5-468.5	2/23/2015	346.39	2249.06
BP-16	589337	2602.53	295-470	8/5/2002	365.38	2237.15
		2602.53	295-470	3/17/2003	365.16	2237.37
		2602.53	295-470	12/1/2003	364.53	2238
		2602.53	295-470	5/10/2004	363.57	2238.96
		2602.53	295-470	8/24/2004	363.36	2239.17
		2602.53	295-470	9/22/2004	363.27	2239.26
		2602.53	295-470	11/15/2004	363.05	2239.48
		2602.53	295-470	2/16/2005	363.74	2238.79
		2602.53	295-470	5/16/2005	362.12	2240.41
		2602.53	295-470	9/19/2005	363.09	2239.44
		2602.53	295-470	11/14/2005	362.94	2239.59
		2602.53	295-470	1/23/2006	362.6	2239.93

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Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-16	589337	2602.53	295-470	4/4/2006	362.26	2240.27
		2602.53	295-470	5/30/2006	362.35	2240.18
		2602.53	295-470	6/16/2006	362.5	2240.03
		2602.53	295-470	7/13/2006	363	2239.53
		2602.53	295-470	8/29/2006	363.37	2239.16
		2602.53	295-470	9/21/2006	363.25	2239.28
		2602.53	295-470	11/13/2006	363.08	2239.45
		2602.53	295-470	2/7/2007	362.97	2239.56
		2602.53	295-470	4/26/2007	362.25	2240.28
		2602.53	295-470	8/6/2007	362.45	2240.08
		2602.53	295-470	11/12/2007	362.29	2240.24
		2602.53	295-470	2/19/2008	361.48	2241.05
		2602.53	295-470	4/7/2008	360.87	2241.66
		2602.53	295-470	7/29/2008	360.4	2242.13
		2602.53	295-470	10/28/2008	360.01	2242.52
		2602.53	295-470	12/12/2008	359.55	2242.98
		2602.53	295-470	12/17/2009	356.46	2246.07
		2602.53	295-470	8/18/2010	354.17	2248.36
		2602.53	295-470	9/20/2011	350.82	2251.71
		2602.53	295-470	2/13/2013	347.36	2255.17
		2602.53	295-470	4/1/2013	347	2255.53
		2602.53	295-470	6/3/2013	345.95	2256.58
		2602.53	295-470	8/21/2013	345.45	2257.08
		2602.53	295-470	11/18/2013	344.89	2257.64
		2602.53	295-470	2/19/2014	344.38	2258.15
		2602.53	295-470	5/14/2014	344.15	2258.38
		2602.53	295-470	8/20/2014	343.92	2258.61
		2602.53	295-470	11/24/2014	343.56	2258.97
		2602.53	295-470	2/27/2015	342.41	2260.12
BP-19	596237	2545.43	245-420	3/17/2003	313.67	2231.76
		2545.43	245-420	12/1/2003	314.24	2231.19
		2545.43	245-420	5/10/2004	313.43	2232
		2545.43	245-420	9/22/2004	313.75	2231.68
		2545.43	245-420	11/15/2004	313.45	2231.98
		2545.43	245-420	5/16/2005	312.32	2233.11
		2545.43	245-420	11/14/2005	313.13	2232.3
		2545.43	245-420	4/3/2006	312.43	2233
		2545.43	245-420	8/29/2006	313.17	2232.26
		2545.43	245-420	9/21/2006	313.18	2232.25
		2545.43	245-420	11/13/2006	312.99	2232.44

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-19	596237	2545.43	245-420	2/7/2007	312.75	2232.68
		2545.43	245-420	4/24/2007	312.44	2232.99
		2545.43	245-420	8/6/2007	312.24	2233.19
		2545.43	245-420	11/13/2007	311.98	2233.45
		2545.43	245-420	2/19/2008	311.13	2234.3
		2545.43	245-420	4/9/2008	310.75	2234.68
		2545.43	245-420	7/30/2008	310.3	2235.13
		2545.43	245-420	10/28/2008	309.44	2235.99
		2545.43	245-420	12/17/2009	305.56	2239.87
		2545.43	245-420	8/19/2010	303.56	2241.87
		2545.43	245-420	9/20/2011	300.01	2245.42
		2545.43	245-420	2/13/2013	296.6	2248.83
		2545.43	245-420	2/2/2015	292.11	2253.32
		2545.43	245-420	2/23/2015	292.08	2253.35
BP-20	208705	2532.21	280-430	9/19/2005	323.75	2208.46
		2532.21	280-430	10/17/2005	323.53	2208.68
		2532.21	280-430	11/14/2005	323.42	2208.79
		2532.21	280-430	12/6/2005	323.41	2208.8
		2532.21	280-430	1/23/2006	323.13	2209.08
		2532.21	280-430	2/27/2006	322.84	2209.37
		2532.21	280-430	3/20/2006	322.75	2209.46
		2532.21	280-430	4/3/2006	322.76	2209.45
		2532.21	280-430	5/30/2006	323.23	2208.98
		2532.21	280-430	6/16/2006	323.24	2208.97
		2532.21	280-430	7/13/2006	324.25	2207.96
		2532.21	280-430	8/29/2006	324.18	2208.03
		2532.21	280-430	9/21/2006	323.76	2208.45
		2532.21	280-430	11/13/2006	323.07	2209.14
		2532.21	280-430	2/5/2007	323.61	2208.6
		2532.21	280-430	4/25/2007	322.67	2209.54
		2532.21	280-430	8/6/2007	322.68	2209.53
		2532.21	280-430	11/13/2007	322.29	2209.92
		2532.21	280-430	2/21/2008	321.43	2210.78
		2532.21	280-430	4/8/2008	320.79	2211.42
		2532.21	280-430	7/28/2008	320.55	2211.66
		2532.21	280-430	10/28/2008	319.39	2212.82
		2532.21	280-430	12/17/2009	313.42	2218.79
		2532.21	280-430	8/19/2010	309.75	2222.46
		2532.21	280-430	9/19/2011	304.95	2227.26
		2532.21	280-430	2/2/2015	298.6	2233.61

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Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-20	208705	2532.21	280-430	2/24/2015	298.64	2233.57
BP-21	208704	2533.69	280-430	9/19/2005	322.44	2211.25
		2533.69	280-430	10/17/2005	322.24	2211.45
		2533.69	280-430	11/14/2005	322.13	2211.56
		2533.69	280-430	12/6/2005	322.11	2211.58
		2533.69	280-430	1/23/2006	321.84	2211.85
		2533.69	280-430	2/27/2006	321.59	2212.1
		2533.69	280-430	3/20/2006	321.53	2212.16
		2533.69	280-430	4/3/2006	321.5	2212.19
		2533.69	280-430	5/30/2006	322	2211.69
		2533.69	280-430	6/16/2006	322.02	2211.67
		2533.69	280-430	8/31/2006	322.86	2210.83
		2533.69	280-430	9/21/2006	322.5	2211.19
		2533.69	280-430	11/13/2006	322.06	2211.63
		2533.69	280-430	2/6/2007	322.7	2210.99
		2533.69	280-430	4/26/2007	321.71	2211.98
		2533.69	280-430	8/6/2007	321.55	2212.14
		2533.69	280-430	11/19/2007	321.13	2212.56
		2533.69	280-430	2/21/2008	320.23	2213.46
		2533.69	280-430	4/8/2008	319.56	2214.13
		2533.69	280-430	7/29/2008	319.52	2214.17
		2533.69	280-430	10/28/2008	318.31	2215.38
		2533.69	280-430	12/17/2009	312.57	2221.12
		2533.69	280-430	8/18/2010	309.4	2224.29
		2533.69	280-430	9/19/2011	304.51	2229.18
		2533.69	280-430	4/2/2013	301.05	2232.64
		2533.69	280-430	6/4/2013	300.33	2233.36
		2533.69	280-430	8/6/2013	300.61	2233.08
		2533.69	280-430	8/21/2013	299.97	2233.72
		2533.69	280-430	11/19/2013	299.81	2233.88
		2533.69	280-430	2/20/2014	299.96	2233.73
		2533.69	280-430	5/15/2014	299.78	2233.91
		2533.69	280-430	8/21/2014	299.39	2234.3
		2533.69	280-430	11/25/2014	299.23	2234.46
		2533.69	280-430	2/19/2015	298.17	2235.52
BP-22	211472	2605.69	195-200, 245-250, 295-300, 358-438	5/24/2006	360.76	2244.93
		2605.69	195-200, 245-250, 295-300, 358-438	11/13/2006	360.66	2245.03
		2605.69	195-200, 245-250, 295-300, 358-438	4/23/2007	359.48	2246.21
		2605.69	195-200, 245-250, 295-300, 358-438	11/12/2007	359.29	2246.4
		2605.69	195-200, 245-250, 295-300, 358-438	2/19/2008	358.03	2247.66

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-22	211472	2605.69	195-200, 245-250, 295-300, 358-438	4/7/2008	357.35	2248.34
		2605.69	195-200, 245-250, 295-300, 358-438	10/28/2008	356.97	2248.72
		2605.69	195-200, 245-250, 295-300, 358-438	12/12/2008	355.98	2249.71
		2605.69	195-200, 245-250, 295-300, 358-438	9/20/2011	347.77	2257.92
		2605.69	195-200, 245-250, 295-300, 358-438	2/12/2013	373.16	2232.53
		2605.69	195-200, 245-250, 295-300, 358-438	2/3/2015	339.94	2265.75
		2605.69	195-200, 245-250, 295-300, 358-438	2/25/2015	339.73	2265.96
BP-23	211653	2599.9	195-200, 245-250, 295-300, 358-438	5/24/2006	358.53	2241.37
		2599.9	195-200, 245-250, 295-300, 358-438	11/13/2006	358.31	2241.59
		2599.9	195-200, 245-250, 295-300, 358-438	4/23/2007	357.25	2242.65
		2599.9	195-200, 245-250, 295-300, 358-438	11/20/2007	356.62	2243.28
		2599.9	195-200, 245-250, 295-300, 358-438	2/19/2008	355.7	2244.2
		2599.9	195-200, 245-250, 295-300, 358-438	4/7/2008	354.21	2245.69
		2599.9	195-200, 245-250, 295-300, 358-438	10/28/2008	354.46	2245.44
		2599.9	195-200, 245-250, 295-300, 358-438	12/12/2008	353.61	2246.29
		2599.9	195-200, 245-250, 295-300, 358-438	9/20/2011	344.99	2254.91
		2599.9	195-200, 245-250, 295-300, 358-438	2/15/2013	337.96	2261.94
		2599.9	195-200, 245-250, 295-300, 358-438	2/5/2015	337.8	2262.1
		2599.9	195-200, 245-250, 295-300, 358-438	2/25/2015	337.1	2262.8
BP-24A	908056	2567.74	325-355	1/21/2008	335.14	2232.6
		2567.74	325-355	2/19/2008	334.92	2232.82
		2567.74	325-355	4/9/2008	334.46	2233.28
		2567.74	325-355	7/29/2008	333.92	2233.82
		2567.74	325-355	10/28/2008	333.22	2234.52
		2567.74	325-355	12/17/2009	329.38	2238.36
		2567.74	325-355	8/19/2010	327.11	2240.63
		2567.74	325-355	9/20/2011	323.74	2244
		2567.74	325-355	2/13/2013	320.12	2247.62
		2567.74	325-355	2/2/2015	315.55	2252.19
		2567.74	325-355	2/26/2015	315.25	2252.49
BP-24B	908057	2568.01	385-405	1/21/2008	333.87	2234.14
		2568.01	385-405	4/7/2008	332.27	2235.74
		2568.01	385-405	10/28/2008	331.87	2236.14
		2568.01	385-405	9/20/2011	322.46	2245.55
		2568.01	385-405	2/15/2013	318.87	2249.14
		2568.01	385-405	2/2/2015	314.28	2253.73
		2568.01	385-405	2/23/2015	314.21	2253.8
BP-24C	908058	2568.28	440-460	1/21/2008	333.84	2234.44
		2568.28	440-460	4/7/2008	332.2	2236.08
		2568.28	440-460	10/28/2008	331.83	2236.45

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
BP-24C	908058	2568.28	440-460	9/20/2011	322.39	2245.89
		2568.28	440-460	2/15/2013	318.79	2249.49
		2568.28	440-460	2/3/2015	314.25	2254.03
		2568.28	440-460	2/23/2015	314.1	2254.18
BP-25	908951	2550.16	300-375	5/9/2008	310.85	2239.31
		2550.16	300-375	2/13/2013	297.27	2252.89
		2550.16	300-375	2/9/2015	292.1	2258.06
		2550.16	300-375	2/25/2015	292.08	2258.08
C-012B		2569.9	259-800	1/10/2002	368.77	2201.13
		2569.9	259-800	1/15/2003	368.71	2201.19
		2569.9	259-800	2/18/2004	366.83	2203.07
		2569.9	259-800	1/28/2005	363.94	2205.96
		2569.9	259-800	1/24/2007	366.34	2203.56
		2569.9	259-800	2/29/2008	361.55	2208.35
		2569.9	259-800	2/27/2009	356.9	2213
		2569.9	259-800	1/13/2010	354.77	2215.13
		2569.9	259-800	3/1/2011	350.73	2219.17
		2569.9	259-800	2/27/2012	345.79	2224.11
		2569.9	259-800	12/19/2012	342.72	2227.18
		2569.9	259-800	12/27/2013	340.11	2229.79
		2569.9	259-800	11/10/2014	339.1	2230.8
C-020B	620022	2562.7	225-500	2/22/2002	343.93	2218.8
		2562.7	225-500	2/26/2002	343.97	2218.76
		2562.7	225-500	4/20/2002	343.95	2218.78
		2562.7	225-500	5/29/2002	343.97	2218.76
		2562.7	225-500	7/10/2002	343.78	2218.95
		2562.7	225-500	8/20/2002	343.58	2219.15
		2562.7	225-500	10/7/2002	343.22	2219.51
		2562.7	225-500	10/30/2002	343.4	2219.3
		2562.7	225-500	1/10/2003	343	2219.7
		2562.7	225-500	1/29/2003	343	2219.7
		2562.7	225-500	4/11/2003	342.9	2219.8
		2562.7	225-500	8/6/2003	343.5	2219.2
		2562.7	225-500	10/6/2003	343.4	2219.3
		2562.7	225-500	1/7/2004	342.7	2220
		2562.7	225-500	2/18/2004	342.9	2219.8
		2562.7	225-500	3/16/2004	342.8	2219.9
		2562.7	225-500	10/15/2004	342.3	2220.4
		2562.7	225-500	2/14/2005	341.8	2220.9
		2562.7	225-500	5/19/2005	341.6	2221.1

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
C-020B	620022	2562.7	225-500	10/17/2005	338.69	2224.01
		2562.7	225-500	11/14/2005	338.87	2223.83
		2562.7	225-500	12/6/2005	339.91	2222.79
		2562.7	225-500	1/12/2006	341.31	2221.42
		2562.7	225-500	1/23/2006	339.57	2223.13
		2562.7	225-500	2/27/2006	339.49	2223.21
		2562.7	225-500	3/20/2006	339.43	2223.27
		2562.7	225-500	4/4/2006	339.48	2223.22
		2562.7	225-500	5/8/2006	341.05	2221.68
		2562.7	225-500	5/30/2006	339.53	2223.17
		2562.7	225-500	6/16/2006	339.59	2223.11
		2562.7	225-500	7/27/2006	342.15	2220.58
		2562.7	225-500	1/28/2007	341.09	2221.64
		2562.7	225-500	1/29/2007	341.13	2221.6
		2562.7	225-500	6/20/2007	340.61	2222.12
		2562.7	225-500	12/5/2007	340.16	2222.57
		2562.7	225-500	1/28/2008	339.49	2223.24
		2562.7	225-500	5/5/2008	339.07	2223.66
		2562.7	225-500	8/25/2008	337.8	2224.93
		2562.7	225-500	2/12/2009	336.4	2226.33
		2562.7	225-500	5/26/2009	336.76	2225.97
		2562.7	225-500	9/15/2009	334.73	2228
		2562.7	225-500	12/22/2009	333.18	2229.55
		2562.7	225-500	4/5/2010	329.22	2233.51
		2562.7	225-500	9/29/2010	327.38	2235.35
		2562.7	225-500	12/8/2010	327.13	2235.6
		2562.7	225-500	1/27/2011	329.25	2233.48
		2562.7	225-500	4/6/2011	324.54	2238.19
		2562.7	225-500	6/1/2011	327.94	2234.79
		2562.7	225-500	9/6/2011	324.92	2237.81
		2562.7	225-500	12/7/2011	325.93	2236.8
		2562.7	225-500	1/31/2012	325.2	2237.53
		2562.7	225-500	7/13/2012	323.88	2238.85
		2562.7	225-500	12/18/2012	321.54	2241.19
		2562.7	225-500	12/20/2013	319.86	2242.87
		2562.7	225-500	1/22/2014	319.23	2243.5
		2562.7	225-500	11/7/2014	318.39	2244.34
C-022A	620023	2585.26	168-345, 338-398	7/23/2001	355.17	2230.09
		2585.26	168-345, 338-398	11/5/2001	355.81	2229.45
		2585.26	168-345, 338-398	2/12/2002	355.47	2229.79

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
C-022A	620023	2585.26	168-345, 338-398	2/22/2002	355.46	2227.4
		2585.26	168-345, 338-398	5/6/2002	355.26	2230
		2585.26	168-345, 338-398	8/5/2002	355.38	2229.88
		2585.26	168-345, 338-398	1/29/2003	355.52	2227.34
		2585.26	168-345, 338-398	3/17/2003	354.81	2230.45
		2585.26	168-345, 338-398	12/2/2003	355.07	2230.19
		2585.26	168-345, 338-398	1/6/2004	355.57	2227.29
		2585.26	168-345, 338-398	5/10/2004	354.32	2230.94
		2585.26	168-345, 338-398	9/22/2004	354.26	2231
		2585.26	168-345, 338-398	11/16/2004	354.18	2231.08
		2585.26	168-345, 338-398	2/14/2005	353.85	2229.01
		2585.26	168-345, 338-398	5/16/2005	353.08	2232.18
		2585.26	168-345, 338-398	11/14/2005	353.62	2231.64
		2585.26	168-345, 338-398	12/14/2005	354.27	2228.59
		2585.26	168-345, 338-398	4/3/2006	353.07	2232.19
		2585.26	168-345, 338-398	11/13/2006	353.51	2231.75
		2585.26	168-345, 338-398	2/16/2007	354.25	2228.61
		2585.26	168-345, 338-398	4/23/2007	352.91	2232.35
		2585.26	168-345, 338-398	11/12/2007	352.91	2232.35
		2585.26	168-345, 338-398	2/20/2008	352.13	2233.13
		2585.26	168-345, 338-398	4/7/2008	354.21	2231.05
		2585.26	168-345, 338-398	10/28/2008	350.26	2235
		2585.26	168-345, 338-398	3/3/2009	349.92	2232.94
		2585.26	168-345, 338-398	2/22/2010	342.5	2240.36
		2585.26	168-345, 338-398	1/27/2011	343.6	2239.26
		2585.26	168-345, 338-398	9/19/2011	341.03	2244.23
		2585.26	168-345, 338-398	1/31/2012	340.29	2242.57
		2585.26	168-345, 338-398	12/17/2012	337.3	2245.56
		2585.26	168-345, 338-398	2/14/2013	337.19	2248.07
		2585.26	168-345, 338-398	12/31/2013	334.23	2248.63
		2585.26	168-345, 338-398	11/14/2014	332.7	2250.16
		2585.26	168-345, 338-398	2/3/2015	332.8	2252.46
		2585.26	168-345, 338-398	3/2/2015	332.62	2252.64
C-025B	620026	2601.4	249-479, 337-580	2/27/2003	375.09	2226.31
		2601.4	249-479, 337-580	1/6/2004	373.61	2227.79
		2601.4	249-479, 337-580	2/23/2005	371.12	2230.28
		2601.4	249-479, 337-580	6/16/2005	371.14	2230.26
		2601.4	249-479, 337-580	12/27/2005	371.52	2229.88
		2601.4	249-479, 337-580	1/18/2007	371.83	2229.57
		2601.4	249-479, 337-580	2/28/2008	370.25	2231.15

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
C-025B	620026	2601.4	249-479, 337-580	2/25/2009	367.68	2233.72
		2601.4	249-479, 337-580	2/23/2010	364.89	2236.51
		2601.4	249-479, 337-580	3/2/2011	361.22	2240.18
		2601.4	249-479, 337-580	3/1/2012	357.86	2243.54
		2601.4	249-479, 337-580	12/20/2012	355.19	2246.21
		2601.4	249-479, 337-580	12/31/2013	350.02	2251.38
		2601.4	249-479, 337-580	11/18/2014	349.06	2252.34
C-026A	620027	2540.15	130-350, 336-596	8/1/2001	330.22	2209.93
		2540.15	130-350, 336-596	11/5/2001	329.69	2210.46
		2540.15	130-350, 336-596	1/8/2002	329.5	2207.62
		2540.15	130-350, 336-596	2/12/2002	328.73	2211.42
		2540.15	130-350, 336-596	5/6/2002	328.04	2212.11
		2540.15	130-350, 336-596	8/6/2002	327.57	2212.58
		2540.15	130-350, 336-596	11/26/2002	327.28	2212.87
		2540.15	130-350, 336-596	1/15/2003	327.35	2209.77
		2540.15	130-350, 336-596	2/13/2003	326.92	2213.23
		2540.15	130-350, 336-596	3/18/2003	326.77	2213.38
		2540.15	130-350, 336-596	4/15/2003	327.35	2212.8
		2540.15	130-350, 336-596	4/22/2003	330.95	2209.2
		2540.15	130-350, 336-596	4/29/2003	330.97	2209.18
		2540.15	130-350, 336-596	5/6/2003	330.99	2209.16
		2540.15	130-350, 336-596	5/13/2003	331	2209.15
		2540.15	130-350, 336-596	5/20/2003	330.29	2209.86
		2540.15	130-350, 336-596	5/27/2003	328.52	2211.63
		2540.15	130-350, 336-596	6/3/2003	330.93	2209.22
		2540.15	130-350, 336-596	7/25/2003	328.81	2211.34
		2540.15	130-350, 336-596	8/14/2003	328.66	2211.49
		2540.15	130-350, 336-596	9/23/2003	330.21	2209.94
		2540.15	130-350, 336-596	11/21/2003	327.03	2210.09
		2540.15	130-350, 336-596	12/2/2003	329.53	2210.62
		2540.15	130-350, 336-596	1/29/2004	330.41	2209.74
		2540.15	130-350, 336-596	2/25/2004	327.91	2212.24
		2540.15	130-350, 336-596	3/29/2004	332.34	2207.81
		2540.15	130-350, 336-596	4/13/2004	330.27	2209.88
		2540.15	130-350, 336-596	5/10/2004	330.21	2209.94
		2540.15	130-350, 336-596	6/17/2004	330.07	2210.08
		2540.15	130-350, 336-596	7/28/2004	330.33	2209.82
		2540.15	130-350, 336-596	8/24/2004	330.38	2209.77
		2540.15	130-350, 336-596	9/22/2004	330.08	2210.07
		2540.15	130-350, 336-596	10/19/2004	329.73	2210.42

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
C-026A	620027	2540.15	130-350, 336-596	11/17/2004	326.71	2213.44
		2540.15	130-350, 336-596	12/20/2004	330.94	2209.21
		2540.15	130-350, 336-596	1/27/2005	329.76	2210.39
		2540.15	130-350, 336-596	2/17/2005	330.67	2209.48
		2540.15	130-350, 336-596	2/23/2005	326.09	2211.03
		2540.15	130-350, 336-596	3/14/2005	330.46	2209.69
		2540.15	130-350, 336-596	4/22/2005	330.06	2210.09
		2540.15	130-350, 336-596	5/16/2005	328.97	2211.18
		2540.15	130-350, 336-596	6/10/2005	328.63	2211.52
		2540.15	130-350, 336-596	7/29/2005	328.61	2211.54
		2540.15	130-350, 336-596	8/29/2005	328.67	2211.48
		2540.15	130-350, 336-596	9/19/2005	328.83	2211.32
		2540.15	130-350, 336-596	10/18/2005	328.66	2211.49
		2540.15	130-350, 336-596	11/14/2005	328.64	2211.51
		2540.15	130-350, 336-596	12/6/2005	328.51	2211.64
		2540.15	130-350, 336-596	1/13/2006	328.62	2208.5
		2540.15	130-350, 336-596	1/23/2006	328.28	2211.87
		2540.15	130-350, 336-596	2/27/2006	328.1	2212.05
		2540.15	130-350, 336-596	3/20/2006	328.43	2211.72
		2540.15	130-350, 336-596	4/3/2006	328.4	2211.75
		2540.15	130-350, 336-596	5/30/2006	328.33	2211.82
		2540.15	130-350, 336-596	6/16/2006	328.34	2211.81
		2540.15	130-350, 336-596	8/31/2006	329.82	2210.33
		2540.15	130-350, 336-596	9/21/2006	324.62	2215.53
		2540.15	130-350, 336-596	11/13/2006	324.12	2216.03
		2540.15	130-350, 336-596	1/26/2007	324.66	2212.46
		2540.15	130-350, 336-596	4/24/2007	323.57	2216.58
		2540.15	130-350, 336-596	8/6/2007	328.04	2212.11
		2540.15	130-350, 336-596	11/14/2007	327.83	2212.32
		2540.15	130-350, 336-596	2/20/2008	326.99	2213.16
		2540.15	130-350, 336-596	4/7/2008	325.95	2214.2
		2540.15	130-350, 336-596	6/17/2008	321.7	2218.45
		2540.15	130-350, 336-596	7/28/2008	326.52	2213.63
		2540.15	130-350, 336-596	10/28/2008	325.28	2214.87
		2540.15	130-350, 336-596	8/16/2011	308.04	2229.08
		2540.15	130-350, 336-596	9/1/2011	307.89	2229.23
		2540.15	130-350, 336-596	9/22/2011	307.35	2232.8
		2540.15	130-350, 336-596	11/21/2011	307.05	2230.07
		2540.15	130-350, 336-596	3/22/2012	307.02	2230.1
		2540.15	130-350, 336-596	3/23/2012	306.87	2230.25

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
C-026A	620027	2540.15	130-350, 336-596	1/2/2013	303.17	2233.95
		2540.15	130-350, 336-596	2/12/2013	304.12	2236.03
		2540.15	130-350, 336-596	11/19/2013	302.9	2237.25
		2540.15	130-350, 336-596	2/24/2014	301.1	2236.02
		2540.15	130-350, 336-596	11/10/2014	300.51	2236.61
C-026B	620028	2539.21	280-520	1/8/2002	328.7	2208.3
		2539.21	280-520	11/26/2002	327.35	2211.86
		2539.21	280-520	1/15/2003	326.5	2210.5
		2539.21	280-520	2/13/2003	326.23	2212.98
		2539.21	280-520	3/18/2003	325.71	2213.5
		2539.21	280-520	4/15/2003	326.97	2212.24
		2539.21	280-520	4/22/2003	-	-
		2539.21	280-520	4/29/2003	-	-
		2539.21	280-520	5/6/2003	-	-
		2539.21	280-520	5/13/2003	-	-
		2539.21	280-520	5/20/2003	-	-
		2539.21	280-520	5/27/2003	-	-
		2539.21	280-520	6/3/2003	370.24	2168.97
		2539.21	280-520	7/18/2003	348.75	2190.46
		2539.21	280-520	8/14/2003	-	-
		2539.21	280-520	9/23/2003	354.9	2184.31
		2539.21	280-520	11/21/2003	326.27	2210.73
		2539.21	280-520	12/2/2003	348.55	2190.66
		2539.21	280-520	1/29/2004	354.7	2184.51
		2539.21	280-520	2/25/2004	353	2186.21
		2539.21	280-520	3/29/2004	368	2171.21
		2539.21	280-520	4/13/2004	365	2174.21
		2539.21	280-520	5/10/2004	367	2172.21
		2539.21	280-520	6/17/2004	368	2171.21
		2539.21	280-520	7/28/2004	368	2171.21
		2539.21	280-520	8/24/2004	368	2171.21
		2539.21	280-520	9/21/2004	369.05	2170.16
		2539.21	280-520	10/19/2004	368	2171.21
		2539.21	280-520	11/15/2004	369	2170.21
		2539.21	280-520	12/20/2004	369	2170.21
		2539.21	280-520	1/27/2005	370	2169.21
		2539.21	280-520	2/17/2005	370	2169.21
		2539.21	280-520	3/14/2005	370	2169.21
		2539.21	280-520	4/22/2005	370	2169.21
		2539.21	280-520	5/16/2005	371	2168.21

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
C-026B	620028	2539.21	280-520	6/10/2005	371	2168.21
		2539.21	280-520	7/29/2005	372	2167.21
		2539.21	280-520	8/29/2005	372	2167.21
		2539.21	280-520	9/19/2005	373	2166.21
		2539.21	280-520	10/18/2005	373	2166.21
		2539.21	280-520	11/14/2005	373	2166.21
		2539.21	280-520	1/23/2006	376	2163.21
		2539.21	280-520	2/27/2006	377	2162.21
		2539.21	280-520	3/20/2006	377	2162.21
		2539.21	280-520	4/3/2006	377	2162.21
		2539.21	280-520	5/30/2006	378	2161.21
		2539.21	280-520	6/16/2006	379	2160.21
		2539.21	280-520	8/29/2006	381	2158.21
		2539.21	280-520	9/21/2006	326	2213.21
		2539.21	280-520	11/13/2006	324	2215.21
		2539.21	280-520	12/6/2006	376	2163.21
		2539.21	280-520	1/26/2007	324.44	2212.56
		2539.21	280-520	2/5/2007	324	2215.21
		2539.21	280-520	4/23/2007	323	2216.21
		2539.21	280-520	8/6/2007	375	2164.21
		2539.21	280-520	11/14/2007	374	2165.21
		2539.21	280-520	11/29/2007	320.5	2216.5
		2539.21	280-520	2/20/2008	376	2163.21
		2539.21	280-520	4/7/2008	378	2161.21
		2539.21	280-520	7/29/2008	378	2161.21
		2539.21	280-520	10/28/2008	378	2161.21
		2539.21	280-520	12/17/2009	375	2164.21
		2539.21	280-520	6/3/2011	309.68	2229.53
		2539.21	280-520	9/20/2011	308.62	2230.59
		2539.21	280-520	3/22/2012	305.96	2231.04
		2539.21	280-520	3/23/2012	305.9	2231.1
		2539.21	280-520	1/2/2013	303.38	2233.62
		2539.21	280-520	2/24/2014	300.48	2236.52
		2539.21	280-520	11/10/2014	299.87	2237.13
C-048A		2498.75	-	1/8/2002	318.26	2180.49
		2498.75	-	1/17/2003	315.13	2183.62
		2498.75	-	2/25/2004	312.9	2185.85
		2498.75	-	2/25/2005	311.17	2187.58
		2498.75	-	1/4/2006	310.06	2188.69
		2498.75	-	2/15/2008	305.89	2192.86

NOTE: ft amsl - feet above mean sea level
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Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
C-048A		2498.75	-	2/9/2009	301.62	2197.13
		2498.75	-	2/2/2010	294.55	2204.2
		2498.75	-	2/25/2011	289.52	2209.23
		2498.75	-	2/22/2012	283.3	2215.45
		2498.75	-	12/26/2012	280.81	2217.94
		2498.75	-	12/20/2013	280.38	2218.37
		2498.75	-	11/26/2014	279.8	2218.95
		2498.75	-	12/22/2014	281.08	2217.67
		2498.75	-	2/3/2015	281.31	2217.44
		2498.75	-	3/2/2015	280.65	2218.1
C-048B	619983	2498.39	250-500	1/8/2002	318.56	2179.83
		2498.39	250-500	1/17/2003	315.38	2183.01
		2498.39	250-500	2/12/2004	313.88	2184.51
		2498.39	250-500	2/25/2005	311.58	2186.81
		2498.39	250-500	1/4/2006	310.8	2187.59
		2498.39	250-500	2/15/2008	307.2	2191.19
		2498.39	250-500	2/9/2009	302.2	2196.19
		2498.39	250-500	2/2/2010	294.76	2203.63
		2498.39	250-500	2/25/2011	289.46	2208.93
		2498.39	250-500	2/22/2012	283.51	2214.88
		2498.39	250-500	12/26/2012	280.52	2217.87
		2498.39	250-500	12/20/2013	278.18	2220.21
		2498.39	250-500	11/26/2014	280.28	2218.11
C-049A	619984	2482.68	126-385	1/8/2002	302.47	2180.21
		2482.68	126-385	1/17/2003	298.77	2183.91
		2482.68	126-385	2/14/2004	297.75	2184.93
		2482.68	126-385	2/25/2004	298.13	2184.55
		2482.68	126-385	2/28/2005	296.59	2186.09
		2482.68	126-385	1/4/2006	294.99	2187.69
		2482.68	126-385	1/31/2007	294.28	2188.4
		2482.68	126-385	2/15/2008	290.54	2192.14
		2482.68	126-385	2/20/2009	284.62	2198.06
		2482.68	126-385	3/5/2010	276.62	2206.06
		2482.68	126-385	2/25/2011	272.18	2210.5
		2482.68	126-385	2/22/2012	266.62	2216.06
		2482.68	126-385	12/20/2012	264.88	2217.8
		2482.68	126-385	12/20/2013	264.6	2218.08
		2482.68	126-385	11/10/2014	264.4	2218.28
C-049B	619985	2482.42	240-500	1/8/2002	302.04	2180.38
		2482.42	240-500	1/17/2003	298.44	2183.98

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Appendix A. Groundwater Elevation Data, 2001 through March 2015
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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
C-049B	619985	2482.42	240-500	2/25/2004	299.22	2183.2
		2482.42	240-500	2/28/2005	296.09	2186.33
		2482.42	240-500	1/4/2006	294.61	2187.81
		2482.42	240-500	1/31/2007	292.43	2189.99
		2482.42	240-500	2/15/2008	289.15	2193.27
		2482.42	240-500	2/20/2009	283.65	2198.77
		2482.42	240-500	3/5/2010	275.74	2206.68
		2482.42	240-500	2/25/2011	271.75	2210.67
		2482.42	240-500	2/22/2012	265.77	2216.65
		2482.42	240-500	12/20/2012	263.36	2219.06
		2482.42	240-500	12/20/2013	263.77	2218.65
		2482.42	240-500	11/10/2014	263.83	2218.59
C-051A	619988	2519.01	126-336	2/20/2009	-	-
		2519.01	126-336	2/2/2010	-	-
		2519.01	126-336	2/25/2011	-	-
		2519.01	126-336	12/19/2013	299.15	2219.86
		2519.01	126-336	11/10/2014	298.15	2220.86
C-051B	619989	2519.48	208-780	1/8/2002	335.91	2183.57
		2519.48	208-780	1/17/2003	332.83	2186.65
		2519.48	208-780	2/17/2004	331.57	2187.91
		2519.48	208-780	2/25/2005	328.95	2190.53
		2519.48	208-780	1/4/2006	328.17	2191.31
		2519.48	208-780	1/29/2007	328.97	2190.51
		2519.48	208-780	2/15/2008	325.22	2194.26
		2519.48	208-780	2/20/2009	319.66	2199.82
		2519.48	208-780	2/2/2010	314.14	2205.34
		2519.48	208-780	2/25/2011	309.11	2210.37
		2519.48	208-780	2/22/2012	302.8	2216.68
		2519.48	208-780	12/20/2012	300.51	2218.97
		2519.48	208-780	12/19/2013	297.3	2222.18
		2519.48	208-780	11/10/2014	297.82	2221.66
C-056A	619993	2532.3	123-352, 334-500	8/1/2001	321.22	2211.08
		2532.3	123-352, 334-500	11/5/2001	320.92	2211.38
		2532.3	123-352, 334-500	1/8/2002	319.94	2208.56
		2532.3	123-352, 334-500	2/11/2002	319.74	2212.56
		2532.3	123-352, 334-500	5/6/2002	318.82	2213.48
		2532.3	123-352, 334-500	8/5/2002	318.24	2214.06
		2532.3	123-352, 334-500	1/17/2003	316.78	2211.72
		2532.3	123-352, 334-500	3/17/2003	317.45	2214.85
		2532.3	123-352, 334-500	12/1/2003	317.83	2214.47

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
C-056A	619993	2532.3	123-352, 334-500	2/12/2004	316.95	2211.55
		2532.3	123-352, 334-500	2/25/2004	317.6	2214.7
		2532.3	123-352, 334-500	3/30/2004	328.53	2203.77
		2532.3	123-352, 334-500	4/13/2004	318.72	2213.58
		2532.3	123-352, 334-500	5/10/2004	317.3	2215
		2532.3	123-352, 334-500	6/17/2004	317.31	2214.99
		2532.3	123-352, 334-500	7/28/2004	317.16	2215.14
		2532.3	123-352, 334-500	8/24/2004	317.11	2215.19
		2532.3	123-352, 334-500	9/21/2004	317.11	2215.19
		2532.3	123-352, 334-500	2/23/2005	315.04	2213.46
		2532.3	123-352, 334-500	7/29/2005	315.84	2216.46
		2532.3	123-352, 334-500	8/29/2005	315.73	2216.57
		2532.3	123-352, 334-500	9/19/2005	315.8	2216.5
		2532.3	123-352, 334-500	10/17/2005	315.67	2216.63
		2532.3	123-352, 334-500	11/14/2005	315.57	2216.73
		2532.3	123-352, 334-500	12/6/2005	315.48	2216.82
		2532.3	123-352, 334-500	1/4/2006	315.17	2213.33
		2532.3	123-352, 334-500	1/23/2006	315.24	2217.06
		2532.3	123-352, 334-500	2/27/2006	315.03	2217.27
		2532.3	123-352, 334-500	3/20/2006	314.94	2217.36
		2532.3	123-352, 334-500	4/3/2006	314.85	2217.45
		2532.3	123-352, 334-500	5/30/2006	314.95	2217.35
		2532.3	123-352, 334-500	6/16/2006	315.24	2217.06
		2532.3	123-352, 334-500	8/31/2006	316.41	2215.89
		2532.3	123-352, 334-500	9/21/2006	316.23	2216.07
		2532.3	123-352, 334-500	1/31/2007	315.66	2212.84
		2532.3	123-352, 334-500	2/15/2008	313.8	2214.7
		2532.3	123-352, 334-500	2/21/2008	313.83	2218.47
		2532.3	123-352, 334-500	3/2/2009	309.75	2218.75
		2532.3	123-352, 334-500	3/5/2010	304.57	2223.93
		2532.3	123-352, 334-500	2/25/2011	301.39	2227.11
		2532.3	123-352, 334-500	2/22/2012	296.8	2231.7
		2532.3	123-352, 334-500	12/26/2012	294.12	2234.38
		2532.3	123-352, 334-500	12/20/2013	292.71	2235.79
		2532.3	123-352, 334-500	11/10/2014	291.98	2236.52
C-058A		2542.44	-	8/1/2001	344.04	2198.4
		2542.44	-	11/5/2001	342.65	2199.79
		2542.44	-	1/10/2002	342.41	2197.67
		2542.44	-	2/11/2002	341.14	2201.3
		2542.44	-	5/6/2002	340.07	2202.37

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
C-058A		2542.44	-	8/5/2002	339.95	2202.49
		2542.44	-	1/15/2003	339.89	2200.19
		2542.44	-	3/17/2003	334.67	2207.77
		2542.44	-	12/1/2003	337.92	2204.52
		2542.44	-	2/17/2004	336.36	2203.72
		2542.44	-	2/25/2004	337.22	2205.22
		2542.44	-	3/30/2004	350.92	2191.52
		2542.44	-	4/13/2004	338.01	2204.43
		2542.44	-	5/10/2004	336.23	2206.21
		2542.44	-	6/17/2004	335.95	2206.49
		2542.44	-	7/28/2004	335.81	2206.63
		2542.44	-	8/24/2004	335.75	2206.69
		2542.44	-	9/21/2004	335.78	2206.66
		2542.44	-	10/19/2004	335.7	2206.74
		2542.44	-	11/17/2004	335.84	2206.6
		2542.44	-	12/20/2004	336.77	2205.67
		2542.44	-	1/27/2005	335.53	2206.91
		2542.44	-	2/17/2005	336.41	2206.03
		2542.44	-	2/23/2005	335.7	2204.38
		2542.44	-	3/14/2005	336.13	2206.31
		2542.44	-	4/22/2005	335.61	2206.83
		2542.44	-	5/16/2005	334.36	2208.08
		2542.44	-	6/10/2005	334.11	2208.33
		2542.44	-	7/29/2005	334.42	2208.02
		2542.44	-	8/29/2005	334.35	2208.09
		2542.44	-	9/19/2005	334.49	2207.95
		2542.44	-	10/18/2005	334.45	2207.99
		2542.44	-	11/14/2005	334.33	2208.11
		2542.44	-	12/6/2005	334.18	2208.26
		2542.44	-	1/4/2006	334.96	2205.12
		2542.44	-	1/23/2006	333.79	2208.65
		2542.44	-	2/27/2006	333.58	2208.86
		2542.44	-	3/20/2006	333.85	2208.59
		2542.44	-	4/3/2006	334.01	2208.43
		2542.44	-	5/30/2006	334.63	2207.81
		2542.44	-	6/16/2006	334.64	2207.8
		2542.44	-	11/13/2006	335.13	2207.31
		2542.44	-	1/26/2007	336.56	2203.52
		2542.44	-	4/25/2007	334.91	2207.53
		2542.44	-	11/16/2007	333.17	2209.27

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Broadway-Pantano WQARF Site
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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
C-058A		2542.44	-	2/15/2008	333.48	2206.6
		2542.44	-	2/20/2008	332.16	2210.28
		2542.44	-	4/7/2008	330.62	2211.82
		2542.44	-	10/28/2008	330.62	2211.82
		2542.44	-	3/3/2009	329.38	2210.7
		2542.44	-	3/5/2010	323.07	2217.01
		2542.44	-	2/4/2011	320.52	2219.56
		2542.44	-	9/22/2011	317.01	2225.43
		2542.44	-	2/23/2012	315.25	2224.83
		2542.44	-	12/20/2012	312.81	2227.27
		2542.44	-	2/14/2013	313.93	2228.51
		2542.44	-	12/20/2013	310.95	2229.13
		2542.44	-	11/10/2014	310.15	2229.93
		2542.44	-	2/5/2015	311.25	2231.19
		2542.44	-	3/2/2015	311.02	2231.42
C-114A	619959	2552.12	290-510	12/3/2003	336.61	2215.51
		2552.12	290-510	1/29/2004	336.89	2215.23
		2552.12	290-510	2/25/2004	336.8	2215.32
		2552.12	290-510	3/29/2004	337.01	2215.11
		2552.12	290-510	4/13/2004	336.87	2215.25
		2552.12	290-510	5/11/2004	336.77	2215.35
		2552.12	290-510	6/17/2004	336.99	2215.13
		2552.12	290-510	7/28/2004	336.74	2215.38
		2552.12	290-510	8/24/2004	336.68	2215.44
		2552.12	290-510	9/21/2004	336.67	2215.45
		2552.12	290-510	10/19/2004	336.44	2215.68
		2552.12	290-510	11/15/2004	336.69	2215.43
		2552.12	290-510	12/20/2004	336.52	2215.6
		2552.12	290-510	1/27/2005	336.43	2215.69
		2552.12	290-510	2/16/2005	336.32	2215.8
		2552.12	290-510	3/14/2005	336.19	2215.93
		2552.12	290-510	4/22/2005	336.14	2215.98
		2552.12	290-510	5/16/2005	336.2	2215.92
		2552.12	290-510	6/10/2005	336.24	2215.88
		2552.12	290-510	7/29/2005	336.05	2216.07
		2552.12	290-510	8/29/2005	336.12	2216
		2552.12	290-510	9/19/2005	336.08	2216.04
		2552.12	290-510	10/18/2005	336.07	2216.05
		2552.12	290-510	11/14/2005	335.94	2216.18
C-124A	559217	2496.39	410-970	1/7/2002	325.07	2171.32

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
C-124A	559217	2496.39	410-970	1/21/2003	321.13	2175.26
		2496.39	410-970	2/9/2004	320.16	2176.23
		2496.39	410-970	2/25/2005	316.98	2179.41
		2496.39	410-970	1/5/2006	316.83	2179.56
		2496.39	410-970	1/31/2007	317.75	2178.64
		2496.39	410-970	2/15/2008	312.24	2184.15
		2496.39	410-970	2/9/2009	307.45	2188.94
		2496.39	410-970	3/5/2010	297.65	2198.74
		2496.39	410-970	3/1/2011	292.94	2203.45
		2496.39	410-970	2/23/2012	287	2209.39
		2496.39	410-970	12/24/2012	285.04	2211.35
		2496.39	410-970	12/19/2013	283.46	2212.93
		2496.39	410-970	11/10/2014	282.59	2213.8
C-125A	60668	2497.35	440-1000	1/31/2002	323.17	2174.18
		2497.35	440-1000	2/10/2003	318.35	2179
		2497.35	440-1000	1/21/2004	318.65	2178.7
		2497.35	440-1000	1/19/2005	317.35	2180
		2497.35	440-1000	1/24/2006	313.03	2184.32
		2497.35	440-1000	1/31/2007	314.66	2182.69
		2497.35	440-1000	2/15/2008	309.63	2187.72
		2497.35	440-1000	2/9/2009	304.62	2192.73
		2497.35	440-1000	2/2/2010	296.08	2201.27
		2497.35	440-1000	2/25/2011	291.88	2205.47
		2497.35	440-1000	2/22/2012	282.43	2214.92
		2497.35	440-1000	12/19/2012	282.07	2215.28
		2497.35	440-1000	12/20/2013	280.87	2216.48
		2497.35	440-1000	11/10/2014	280.34	2217.01
		2497.35	440-1000	3/2/2015	281.03	2216.32
CVA		2527	-	12/22/2014	296.49	2230.51
		2527	-	2/2/2015	296.06	2230.94
		2527	-	2/24/2015	295.45	2231.55
D-018A	620057	2609.05	340-501, 465-700	2/5/2002	377.8	2231.245
		2609.05	340-501, 465-700	2/10/2003	377.33	2231.715
		2609.05	340-501, 465-700	1/6/2004	376.15	2232.895
		2609.05	340-501, 465-700	2/17/2005	373.96	2235.085
		2609.05	340-501, 465-700	10/5/2005	370.2	2238.845
		2609.05	340-501, 465-700	12/22/2005	374.5	2234.545
		2609.05	340-501, 465-700	2/1/2007	374.2	2234.845
		2609.05	340-501, 465-700	1/23/2008	373.56	2235.485
		2609.05	340-501, 465-700	3/2/2009	369.77	2239.275

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
D-018A	620057	2609.05	340-501, 465-700	1/19/2010	368.23	2240.815
		2609.05	340-501, 465-700	3/2/2011	364.28	2244.765
		2609.05	340-501, 465-700	3/1/2012	361.02	2248.025
		2609.05	340-501, 465-700	12/28/2012	358.48	2250.565
		2609.05	340-501, 465-700	12/31/2013	355.54	2253.505
		2609.05	340-501, 465-700	11/14/2014	352.64	2256.405
		2609.05	340-501, 465-700	2/24/2015	329.5	2279.55
D-021A	620059	2578.72	153-353, 328-550	11/5/2001	351.1	2227.62
		2578.72	153-353, 328-550	2/14/2002	350.39	2228.33
		2578.72	153-353, 328-550	5/6/2002	350.23	2228.49
		2578.72	153-353, 328-550	8/5/2002	-	-
		2578.72	153-353, 328-550	3/17/2003	349.62	2229.1
		2578.72	153-353, 328-550	12/1/2003	349.82	2228.9
		2578.72	153-353, 328-550	5/13/2004	349.04	2229.68
		2578.72	153-353, 328-550	9/21/2004	347.66	2231.06
		2578.72	153-353, 328-550	11/15/2004	348.42	2230.3
		2578.72	153-353, 328-550	5/16/2005	347.42	2231.3
		2578.72	153-353, 328-550	11/14/2005	347.77	2230.95
		2578.72	153-353, 328-550	4/3/2006	347.36	2231.36
		2578.72	153-353, 328-550	4/24/2007	347.28	2231.44
		2578.72	153-353, 328-550	11/16/2007	347.22	2231.5
		2578.72	153-353, 328-550	2/20/2008	346.57	2232.15
		2578.72	153-353, 328-550	4/7/2008	346.12	2232.6
		2578.72	153-353, 328-550	10/28/2008	344.74	2233.98
		2578.72	153-353, 328-550	3/2/2009	342.51	2231.95
		2578.72	153-353, 328-550	2/22/2010	339.14	2235.32
		2578.72	153-353, 328-550	1/28/2011	336.04	2238.42
		2578.72	153-353, 328-550	9/22/2011	335.4	2243.32
		2578.72	153-353, 328-550	1/30/2012	332.78	2241.68
		2578.72	153-353, 328-550	8/7/2012	330.92	2243.54
		2578.72	153-353, 328-550	12/20/2012	329.71	2244.75
		2578.72	153-353, 328-550	2/14/2013	331.27	2247.45
		2578.72	153-353, 328-550	12/31/2013	326.5	2247.96
		2578.72	153-353, 328-550	11/14/2014	325.32	2249.14
		2578.72	153-353, 328-550	2/3/2015	328.95	2249.77
		2578.72	153-353, 328-550	3/2/2015	326.78	2251.94
D-022A	620060	2578.82	143-318, 310-460	7/23/2001	339.29	2239.53
		2578.82	143-318, 310-460	11/6/2001	340.17	2238.65
		2578.82	143-318, 310-460	2/12/2002	343.14	2235.68
		2578.82	143-318, 310-460	2/25/2002	341.02	2232.3

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Appendix A. Groundwater Elevation Data, 2001 through March 2015
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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
D-022A	620060	2578.82	143-318, 310-460	5/7/2002	343.03	2235.79
		2578.82	143-318, 310-460	8/5/2002	343.29	2235.53
		2578.82	143-318, 310-460	1/31/2003	341.01	2232.31
		2578.82	143-318, 310-460	3/18/2003	343.41	2235.41
		2578.82	143-318, 310-460	12/2/2003	342.97	2235.85
		2578.82	143-318, 310-460	1/13/2004	339.6	2233.72
		2578.82	143-318, 310-460	5/10/2004	342.38	2236.44
		2578.82	143-318, 310-460	9/22/2004	342.02	2236.8
		2578.82	143-318, 310-460	11/15/2004	341.92	2236.9
		2578.82	143-318, 310-460	2/17/2005	338.54	2234.78
		2578.82	143-318, 310-460	5/16/2005	341.01	2237.81
		2578.82	143-318, 310-460	11/14/2005	341.76	2237.06
		2578.82	143-318, 310-460	12/14/2005	339.48	2233.84
		2578.82	143-318, 310-460	1/23/2006	341.48	2237.34
		2578.82	143-318, 310-460	4/4/2006	341.55	2237.27
		2578.82	143-318, 310-460	11/13/2006	341.79	2237.03
		2578.82	143-318, 310-460	2/14/2007	339.01	2234.31
		2578.82	143-318, 310-460	4/23/2007	340.97	2237.85
		2578.82	143-318, 310-460	11/20/2007	340.44	2238.38
		2578.82	143-318, 310-460	2/20/2008	340.25	2238.57
		2578.82	143-318, 310-460	4/7/2008	338.46	2240.36
		2578.82	143-318, 310-460	10/28/2008	338.17	2240.65
		2578.82	143-318, 310-460	12/12/2008	337.64	2241.18
		2578.82	143-318, 310-460	3/2/2009	334.33	2238.99
		2578.82	143-318, 310-460	2/22/2010	330.42	2242.9
		2578.82	143-318, 310-460	1/27/2011	328.14	2245.18
		2578.82	143-318, 310-460	9/23/2011	328.7	2250.12
		2578.82	143-318, 310-460	2/2/2012	324.7	2248.62
		2578.82	143-318, 310-460	12/20/2012	322.44	2250.88
		2578.82	143-318, 310-460	2/14/2013	325.35	2253.47
		2578.82	143-318, 310-460	12/31/2013	319.17	2254.15
		2578.82	143-318, 310-460	11/3/2014	317.62	2255.7
		2578.82	143-318, 310-460	2/3/2015	317.43	2261.39
		2578.82	143-318, 310-460	3/2/2015	320.31	2258.51
D-039A	620074	2618.06	193-435	7/23/2001	378.15	2239.91
		2618.06	193-435	11/5/2001	378.79	2239.27
		2618.06	193-435	2/11/2002	378.01	2240.05
		2618.06	193-435	2/25/2002	377.75	2238.83
		2618.06	193-435	5/6/2002	377.58	2240.48
		2618.06	193-435	8/5/2002	378.46	2239.6

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
D-039A	620074	2618.06	193-435	2/10/2003	377.93	2238.65
		2618.06	193-435	3/17/2003	378.14	2239.92
		2618.06	193-435	12/2/2003	377.43	2240.63
		2618.06	193-435	1/6/2004	376.7	2239.88
		2618.06	193-435	5/10/2004	376.32	2241.74
		2618.06	193-435	9/21/2004	375.9	2242.16
		2618.06	193-435	11/15/2004	375.85	2242.21
		2618.06	193-435	2/23/2005	374.79	2241.79
		2618.06	193-435	5/16/2005	374.82	2243.24
		2618.06	193-435	11/14/2005	375.8	2242.26
		2618.06	193-435	12/28/2005	375.45	2241.13
		2618.06	193-435	4/4/2006	375.78	2242.28
		2618.06	193-435	11/13/2006	376.22	2241.84
		2618.06	193-435	2/14/2007	375.3	2241.28
		2618.06	193-435	4/23/2007	375.27	2242.79
		2618.06	193-435	11/12/2007	375.4	2242.66
		2618.06	193-435	2/20/2008	375	2243.06
		2618.06	193-435	4/7/2008	372.96	2245.1
		2618.06	193-435	7/29/2008	374.14	2243.92
		2618.06	193-435	10/28/2008	373.43	2244.63
		2618.06	193-435	12/12/2008	372.53	2245.53
		2618.06	193-435	2/13/2009	371.41	2245.17
		2618.06	193-435	12/17/2009	369.61	2248.45
		2618.06	193-435	1/19/2010	369.18	2247.4
		2618.06	193-435	8/19/2010	367.41	2250.65
		2618.06	193-435	1/28/2011	365.33	2251.25
		2618.06	193-435	9/21/2011	364.86	2253.2
		2618.06	193-435	2/6/2012	362.27	2254.31
		2618.06	193-435	12/27/2012	358.95	2257.63
		2618.06	193-435	2/14/2013	361.15	2256.91
		2618.06	193-435	12/31/2013	356.35	2260.23
		2618.06	193-435	11/3/2014	355.07	2261.51
		2618.06	193-435	2/3/2015	356.76	2261.3
		2618.06	193-435	3/2/2015	356.52	2261.54
D-040A	620075	2637.04	222-402, 410-556	7/24/2001	395.82	2241.22
		2637.04	222-402, 410-556	11/5/2001	395.51	2241.53
		2637.04	222-402, 410-556	2/5/2002	392.67	2241.6
		2637.04	222-402, 410-556	2/11/2002	394.04	2243
		2637.04	222-402, 410-556	5/6/2002	393.45	2243.59
		2637.04	222-402, 410-556	8/5/2002	395.49	2241.55

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
D-040A	620075	2637.04	222-402, 410-556	1/30/2003	393.51	2240.76
		2637.04	222-402, 410-556	3/17/2003	394.09	2242.95
		2637.04	222-402, 410-556	12/2/2003	393.18	2243.86
		2637.04	222-402, 410-556	1/7/2004	390.79	2243.48
		2637.04	222-402, 410-556	5/10/2004	392.34	2244.7
		2637.04	222-402, 410-556	9/21/2004	391.66	2245.38
		2637.04	222-402, 410-556	11/15/2004	391.55	2245.49
		2637.04	222-402, 410-556	2/23/2005	389.35	2244.92
		2637.04	222-402, 410-556	5/16/2005	390.53	2246.51
		2637.04	222-402, 410-556	11/14/2005	391.82	2245.22
		2637.04	222-402, 410-556	12/22/2005	390.03	2244.24
		2637.04	222-402, 410-556	4/4/2006	391.33	2245.71
		2637.04	222-402, 410-556	11/13/2006	392.31	2244.73
		2637.04	222-402, 410-556	2/14/2007	390.07	2244.2
		2637.04	222-402, 410-556	4/23/2007	391.2	2245.84
		2637.04	222-402, 410-556	11/12/2007	391.49	2245.55
		2637.04	222-402, 410-556	2/20/2008	390.49	2246.55
		2637.04	222-402, 410-556	4/7/2008	389.63	2247.41
		2637.04	222-402, 410-556	10/28/2008	389.48	2247.56
		2637.04	222-402, 410-556	12/12/2008	388.47	2248.57
		2637.04	222-402, 410-556	2/13/2009	386.1	2248.17
		2637.04	222-402, 410-556	1/19/2010	384.25	2250.02
		2637.04	222-402, 410-556	1/28/2011	380.57	2253.7
		2637.04	222-402, 410-556	9/21/2011	380.68	2256.36
		2637.04	222-402, 410-556	2/6/2012	377.53	2256.74
		2637.04	222-402, 410-556	12/27/2012	373.67	2260.6
		2637.04	222-402, 410-556	2/14/2013	377.19	2259.85
		2637.04	222-402, 410-556	12/31/2013	371.75	2262.52
		2637.04	222-402, 410-556	11/3/2014	370.93	2263.34
		2637.04	222-402, 410-556	2/3/2015	372.97	2264.07
		2637.04	222-402, 410-556	3/2/2015	372.68	2264.36
D-041A	620076	2642.16	249-457, 337-702	2/5/2002	395.81	2246.84
		2642.16	249-457, 337-702	2/10/2003	396.37	2246.28
		2642.16	249-457, 337-702	1/7/2004	394.89	2247.76
		2642.16	249-457, 337-702	2/23/2005	393.02	2249.63
		2642.16	249-457, 337-702	11/15/2005	394.47	2247.69
		2642.16	249-457, 337-702	12/22/2005	393.79	2248.86
		2642.16	249-457, 337-702	4/4/2006	393.97	2248.19
		2642.16	249-457, 337-702	11/13/2006	394.96	2247.2
		2642.16	249-457, 337-702	2/14/2007	393.71	2248.94

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
D-041A	620076	2642.16	249-457, 337-702	4/23/2007	393.54	2248.62
		2642.16	249-457, 337-702	11/12/2007	-	-
		2642.16	249-457, 337-702	2/20/2008	392.59	2249.57
		2642.16	249-457, 337-702	4/7/2008	391.17	2250.99
		2642.16	249-457, 337-702	10/28/2008	391.92	2250.24
		2642.16	249-457, 337-702	12/12/2008	390.92	2251.24
		2642.16	249-457, 337-702	2/23/2009	389.02	2253.63
		2642.16	249-457, 337-702	1/19/2010	387.49	2255.16
		2642.16	249-457, 337-702	1/27/2011	384.18	2258.47
		2642.16	249-457, 337-702	9/21/2011	383.33	2258.83
		2642.16	249-457, 337-702	2/6/2012	381.19	2261.46
		2642.16	249-457, 337-702	12/27/2012	377.91	2264.74
		2642.16	249-457, 337-702	12/31/2013	375.66	2266.99
		2642.16	249-457, 337-702	11/3/2014	374.68	2267.97
		2642.16	249-457, 337-702	3/2/2015	375.42	2266.74
D-049A		2599.82	148-552	2/2/2002	362.38	2237.44
		2599.82	148-552	2/3/2003	361.14	2238.68
		2599.82	148-552	1/6/2004	354.22	2245.6
		2599.82	148-552	1/12/2005	352.74	2247.08
		2599.82	148-552	12/27/2005	352.48	2247.34
		2599.82	148-552	1/18/2007	352.38	2247.44
		2599.82	148-552	2/28/2008	349.63	2250.19
		2599.82	148-552	2/23/2009	346.55	2253.27
		2599.82	148-552	2/17/2010	340.2	2259.62
		2599.82	148-552	3/2/2011	337.24	2262.58
		2599.82	148-552	3/1/2012	333.93	2265.89
		2599.82	148-552	12/27/2012	331.28	2268.54
		2599.82	148-552	12/20/2013	334.97	2264.85
		2599.82	148-552	11/14/2014	325.36	2274.46
		2599.82	148-552	3/2/2015	325.42	2274.4
R-068A	578599	2577.6	240-368	2/14/2002	340.5	2237.1
		2577.6	240-368	5/9/2002	340.26	2237.34
		2577.6	240-368	8/8/2002	340.54	2237.06
		2577.6	240-368	3/20/2003	340.61	2236.99
		2577.6	240-368	12/2/2003	339.96	2237.64
		2577.6	240-368	5/13/2004	339.3	2238.3
		2577.6	240-368	11/16/2004	338.99	2238.61
		2577.6	240-368	5/16/2005	338.01	2239.59
		2577.6	240-368	11/14/2005	338.83	2238.77
		2577.6	240-368	4/3/2006	337.97	2239.63

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
R-068A	578599	2577.6	240-368	11/13/2006	338.61	2238.99
		2577.6	240-368	4/23/2007	337.81	2239.79
		2577.6	240-368	11/20/2007	337.2	2240.4
		2577.6	240-368	2/20/2008	336.43	2241.17
		2577.6	240-368	4/8/2008	335.1	2242.5
		2577.6	240-368	10/29/2008	334.84	2242.76
		2577.6	240-368	9/27/2011	325.17	2252.43
		2577.6	240-368	2/11/2013	321.58	2256.02
		2577.6	240-368	12/22/2014	317.04	2260.56
		2577.6	240-368	2/9/2015	316.86	2260.74
		2577.6	240-368	2/26/2015	316.64	2260.96
R-069B	578601	2561.56	257-365	2/14/2002	326.3	2235.26
		2561.56	257-365	5/9/2002	326.17	2235.39
		2561.56	257-365	8/8/2002	326.4	2235.16
		2561.56	257-365	3/20/2003	326.45	2235.11
		2561.56	257-365	12/2/2003	324.9	2236.66
		2561.56	257-365	5/13/2004	324.31	2237.25
		2561.56	257-365	9/22/2004	-	-
		2561.56	257-365	11/16/2004	324.1	2237.46
		2561.56	257-365	5/16/2005	323.09	2238.47
		2561.56	257-365	11/21/2005	324.17	2237.39
		2561.56	257-365	4/3/2006	323.24	2238.32
		2561.56	257-365	11/13/2006	324.39	2237.17
		2561.56	257-365	4/23/2007	323.25	2238.31
		2561.56	257-365	11/16/2007	322.29	2239.27
		2561.56	257-365	2/20/2008	321.3	2240.26
		2561.56	257-365	4/8/2008	320.12	2241.44
		2561.56	257-365	10/29/2008	319.75	2241.81
		2561.56	257-365	9/23/2011	310.12	2251.44
		2561.56	257-365	2/11/2013	307.1	2254.46
		2561.56	257-365	2/5/2015	301.71	2259.85
		2561.56	257-365	2/26/2015	301.45	2260.11
R-090A	587017	2552.74	290-490	11/25/2002	335.79	2216.95
		2552.74	290-490	2/13/2003	335.37	2217.37
		2552.74	290-490	3/17/2003	335.1	2217.64
		2552.74	290-490	4/15/2003	273.73	2279.01
		2552.74	290-490	4/29/2003	271.95	2280.79
		2552.74	290-490	5/6/2003	256.2	2296.54
		2552.74	290-490	5/13/2003	274.13	2278.61
		2552.74	290-490	5/20/2003	213.39	2339.35

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
R-090A	587017	2552.74	290-490	5/27/2003	324.75	2227.99
		2552.74	290-490	6/3/2003	112.39	2440.35
		2552.74	290-490	7/18/2003	329.44	2223.3
		2552.74	290-490	8/14/2003	329.18	2223.56
		2552.74	290-490	9/23/2003	328.95	2223.79
		2552.74	290-490	1/29/2004	312.8	2239.94
		2552.74	290-490	2/25/2004	296	2256.74
		2552.74	290-490	3/29/2004	310	2242.74
		2552.74	290-490	4/13/2004	302	2250.74
		2552.74	290-490	5/10/2004	303	2249.74
		2552.74	290-490	6/17/2004	300	2252.74
		2552.74	290-490	7/28/2004	295	2257.74
		2552.74	290-490	8/24/2004	292	2260.74
		2552.74	290-490	9/21/2004	298.67	2254.07
		2552.74	290-490	10/19/2004	296	2256.74
		2552.74	290-490	11/15/2004	292	2260.74
		2552.74	290-490	12/20/2004	297	2255.74
		2552.74	290-490	1/27/2005	295	2257.74
		2552.74	290-490	2/16/2005	295	2257.74
		2552.74	290-490	3/14/2005	300	2252.74
		2552.74	290-490	4/22/2005	299	2253.74
		2552.74	290-490	5/16/2005	297	2255.74
		2552.74	290-490	6/10/2005	297	2255.74
		2552.74	290-490	7/29/2005	296	2256.74
		2552.74	290-490	8/29/2005	298	2254.74
		2552.74	290-490	9/19/2005	296	2256.74
		2552.74	290-490	10/18/2005	291	2261.74
		2552.74	290-490	11/14/2005	293	2259.74
		2552.74	290-490	12/6/2005	289	2263.74
		2552.74	290-490	1/23/2006	288	2264.74
		2552.74	290-490	2/27/2006	291	2261.74
		2552.74	290-490	3/20/2006	291	2261.74
		2552.74	290-490	4/3/2006	290	2262.74
		2552.74	290-490	5/30/2006	287	2265.74
		2552.74	290-490	6/16/2006	287	2265.74
		2552.74	290-490	8/29/2006	286	2266.74
		2552.74	290-490	9/21/2006	334	2218.74
		2552.74	290-490	11/13/2006	335	2217.74
		2552.74	290-490	2/5/2007	335	2217.74
		2552.74	290-490	4/23/2007	336	2216.74

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Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
R-090A	587017	2552.74	290-490	8/6/2007	289	2263.74
		2552.74	290-490	11/14/2007	277	2275.74
		2552.74	290-490	2/20/2008	280	2272.74
		2552.74	290-490	4/7/2008	284	2268.74
		2552.74	290-490	7/29/2008	300	2252.74
		2552.74	290-490	10/28/2008	291	2261.74
		2552.74	290-490	12/17/2009	289	2263.74
		2552.74	290-490	8/18/2010	307.6	2245.14
		2552.74	290-490	6/3/2011	297.05	2255.69
		2552.74	290-490	9/20/2011	297.5	2255.24
		2552.74	290-490	2/27/2015	312.7	2240.04
R-091A	587018	2554.17	290-490	11/25/2002	337.29	2216.88
		2554.17	290-490	2/13/2003	336.86	2217.31
		2554.17	290-490	3/17/2003	336.51	2217.66
		2554.17	290-490	4/15/2003	299.71	2254.46
		2554.17	290-490	4/22/2003	-	-
		2554.17	290-490	4/29/2003	298.75	2255.42
		2554.17	290-490	5/6/2003	295.9	2258.27
		2554.17	290-490	5/13/2003	290.06	2264.11
		2554.17	290-490	5/20/2003	289.53	2264.64
		2554.17	290-490	5/27/2003	319.61	2234.56
		2554.17	290-490	6/3/2003	283.38	2270.79
		2554.17	290-490	7/18/2003	274.76	2279.41
		2554.17	290-490	8/14/2003	278.05	2276.12
		2554.17	290-490	9/23/2003	274.3	2279.87
		2554.17	290-490	12/1/2003	-	-
		2554.17	290-490	1/29/2004	312.2	2241.97
		2554.17	290-490	2/25/2004	311	2243.17
		2554.17	290-490	3/29/2004	313	2241.17
		2554.17	290-490	4/13/2004	305	2249.17
		2554.17	290-490	5/10/2004	300	2254.17
		2554.17	290-490	6/17/2004	300	2254.17
		2554.17	290-490	7/28/2004	297	2257.17
		2554.17	290-490	8/24/2004	295	2259.17
		2554.17	290-490	9/21/2004	300.55	2253.62
		2554.17	290-490	10/19/2004	295	2259.17
		2554.17	290-490	11/15/2004	291	2263.17
		2554.17	290-490	12/20/2004	297	2257.17
		2554.17	290-490	1/27/2005	294	2260.17
		2554.17	290-490	2/16/2005	293	2261.17

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Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
R-091A	587018	2554.17	290-490	3/14/2005	297	2257.17
		2554.17	290-490	4/22/2005	295	2259.17
		2554.17	290-490	5/16/2005	294	2260.17
		2554.17	290-490	6/10/2005	293	2261.17
		2554.17	290-490	7/29/2005	291	2263.17
		2554.17	290-490	8/29/2005	294	2260.17
		2554.17	290-490	9/19/2005	292	2262.17
		2554.17	290-490	10/18/2005	296	2258.17
		2554.17	290-490	11/14/2005	287	2267.17
		2554.17	290-490	12/6/2005	286	2268.17
		2554.17	290-490	1/23/2006	294	2260.17
		2554.17	290-490	2/27/2006	286	2268.17
		2554.17	290-490	3/20/2006	287	2267.17
		2554.17	290-490	4/30/2006	285	2269.17
		2554.17	290-490	5/30/2006	291	2263.17
		2554.17	290-490	6/16/2006	291	2263.17
		2554.17	290-490	8/29/2006	291	2263.17
		2554.17	290-490	9/21/2006	334	2220.17
		2554.17	290-490	11/13/2006	336	2218.17
		2554.17	290-490	2/5/2007	337	2217.17
		2554.17	290-490	4/23/2007	337	2217.17
		2554.17	290-490	8/6/2007	285	2269.17
		2554.17	290-490	11/14/2007	282	2272.17
		2554.17	290-490	2/20/2008	288	2266.17
		2554.17	290-490	4/7/2008	281	2273.17
		2554.17	290-490	7/29/2008	302	2252.17
		2554.17	290-490	10/28/2008	296	2258.17
		2554.17	290-490	12/17/2009	281.8	2272.37
		2554.17	290-490	8/18/2010	306.2	2247.97
		2554.17	290-490	6/3/2011	297.45	2256.72
		2554.17	290-490	9/20/2011	297.2	2256.97
		2554.17	290-490	2/27/2015	314.14	2240.03
R-092A	587019	2561.96	290-490	11/25/2002	343.15	2218.81
		2561.96	290-490	2/13/2003	342.44	2219.52
		2561.96	290-490	3/17/2003	342.09	2219.87
		2561.96	290-490	4/15/2003	370.85	2191.11
		2561.96	290-490	4/22/2003	368	2193.96
		2561.96	290-490	4/29/2003	369.05	2192.91
		2561.96	290-490	5/6/2003	370	2191.96
		2561.96	290-490	5/13/2003	384.17	2177.79

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Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
R-092A	587019	2561.96	290-490	5/20/2003	369.61	2192.35
		2561.96	290-490	5/27/2003	347.02	2214.94
		2561.96	290-490	6/3/2003	370.51	2191.45
		2561.96	290-490	7/18/2003	366.51	2195.45
		2561.96	290-490	8/14/2003	366.45	2195.51
		2561.96	290-490	9/23/2003	361.4	2200.56
		2561.96	290-490	12/2/2003	358.34	2203.62
		2561.96	290-490	1/29/2004	360.7	2201.26
		2561.96	290-490	2/25/2004	360	2201.96
		2561.96	290-490	3/30/2004	355	2206.96
		2561.96	290-490	4/13/2004	361	2200.96
		2561.96	290-490	5/10/2004	360	2201.96
		2561.96	290-490	6/17/2004	359	2202.96
		2561.96	290-490	7/28/2004	359	2202.96
		2561.96	290-490	8/24/2004	359	2202.96
		2561.96	290-490	9/21/2004	359.42	2202.54
		2561.96	290-490	10/19/2004	358	2203.96
		2561.96	290-490	11/15/2004	358	2203.96
		2561.96	290-490	12/20/2004	357	2204.96
		2561.96	290-490	1/27/2005	357	2204.96
		2561.96	290-490	2/17/2005	357	2204.96
		2561.96	290-490	3/14/2005	356	2205.96
		2561.96	290-490	4/22/2005	356	2205.96
		2561.96	290-490	5/16/2005	356	2205.96
		2561.96	290-490	6/10/2005	356	2205.96
		2561.96	290-490	7/29/2005	356	2205.96
		2561.96	290-490	8/29/2005	356	2205.96
		2561.96	290-490	9/19/2005	356	2205.96
		2561.96	290-490	10/18/2005	356	2205.96
		2561.96	290-490	11/14/2005	356	2205.96
		2561.96	290-490	12/6/2005	355	2206.96
		2561.96	290-490	1/23/2006	358	2203.96
		2561.96	290-490	2/27/2006	358	2203.96
		2561.96	290-490	3/20/2006	358	2203.96
		2561.96	290-490	4/3/2006	358	2203.96
		2561.96	290-490	5/30/2006	359	2202.96
		2561.96	290-490	6/16/2006	359	2202.96
		2561.96	290-490	8/29/2006	360	2201.96
		2561.96	290-490	9/21/2006	342	2219.96
		2561.96	290-490	11/13/2006	340	2221.96

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Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
R-092A	587019	2561.96	290-490	2/5/2007	340	2221.96
		2561.96	290-490	4/23/2007	339	2222.96
		2561.96	290-490	8/6/2007	357	2204.96
		2561.96	290-490	11/14/2007	357	2204.96
		2561.96	290-490	2/20/2008	356	2205.96
		2561.96	290-490	4/7/2008	356	2205.96
		2561.96	290-490	7/29/2008	353	2208.96
		2561.96	290-490	10/28/2008	353	2208.96
		2561.96	290-490	12/17/2009	349	2212.96
		2561.96	290-490	8/18/2010	347.8	2214.16
		2561.96	290-490	6/3/2011	348.56	2213.4
		2561.96	290-490	9/20/2011	349	2212.96
		2561.96	290-490	3/3/2015	319.06	2242.9
R-124A	204041	2620.03	370-410	11/14/2005	368.94	2251.09
		2620.03	370-410	4/3/2006	367.19	2252.84
		2620.03	370-410	11/13/2006	369.56	2250.47
		2620.03	370-410	4/23/2007	367.78	2252.25
		2620.03	370-410	11/13/2007	367.83	2252.2
		2620.03	370-410	2/19/2008	365.68	2254.35
		2620.03	370-410	4/7/2008	364.19	2255.84
		2620.03	370-410	10/28/2008	-	-
		2620.03	370-410	12/12/2008	363.82	2256.21
		2620.03	370-410	9/21/2011	357.22	2262.81
		2620.03	370-410	2/15/2013	352.93	2267.1
		2620.03	370-410	2/24/2015	350.62	2269.41
R-125A	204042	2612.58	355-395	11/14/2005	354.19	2258.39
		2612.58	355-395	4/3/2006	353.29	2259.29
		2612.58	355-395	11/13/2006	354.9	2257.68
		2612.58	355-395	4/23/2007	352.06	2260.52
		2612.58	355-395	11/12/2007	352.39	2260.19
		2612.58	355-395	2/19/2008	-	-
		2612.58	355-395	4/7/2008	-	-
		2612.58	355-395	10/28/2008	-	-
		2612.58	355-395	12/12/2008	346.91	2265.67
		2612.58	355-395	9/21/2011	332.95	2279.63
		2612.58	355-395	2/19/2013	337.32	2275.26
		2612.58	355-395	2/24/2015	333.69	2278.89
SE-001	568641	2544.09	305-365	7/24/2001	339.63	2204.46
		2544.09	305-365	11/5/2001	338.87	2205.22
		2544.09	305-365	2/11/2002	337.58	2206.51

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Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
SE-001	568641	2544.09	305-365	5/6/2002	336.9	2207.19
		2544.09	305-365	8/5/2002	336.39	2207.7
		2544.09	305-365	11/25/2002	335.2	2208.89
		2544.09	305-365	2/13/2003	335.32	2208.77
		2544.09	305-365	3/17/2003	335.12	2208.97
		2544.09	305-365	4/15/2003	334.04	2210.05
		2544.09	305-365	4/22/2003	333.61	2210.48
		2544.09	305-365	4/29/2003	333.25	2210.84
		2544.09	305-365	5/6/2003	333.21	2210.88
		2544.09	305-365	5/13/2003	333	2211.09
		2544.09	305-365	5/20/2003	332.89	2211.2
		2544.09	305-365	5/27/2003	332.94	2211.15
		2544.09	305-365	6/3/2003	332.72	2211.37
		2544.09	305-365	8/14/2003	333.39	2210.7
		2544.09	305-365	9/23/2003	333.47	2210.62
		2544.09	305-365	12/1/2003	333.81	2210.28
		2544.09	305-365	1/29/2004	333.51	2210.58
		2544.09	305-365	2/25/2004	333.04	2211.05
		2544.09	305-365	3/29/2004	334.14	2209.95
		2544.09	305-365	4/13/2004	333.62	2210.47
		2544.09	305-365	5/10/2004	332.24	2211.85
		2544.09	305-365	6/17/2004	331.98	2212.11
		2544.09	305-365	7/28/2004	331.88	2212.21
		2544.09	305-365	8/24/2004	331.9	2212.19
		2544.09	305-365	9/21/2004	331.72	2212.37
		2544.09	305-365	10/19/2004	331.57	2212.52
		2544.09	305-365	11/15/2004	331.49	2212.6
		2544.09	305-365	12/20/2004	332.36	2211.73
		2544.09	305-365	1/27/2005	331.17	2212.92
		2544.09	305-365	2/16/2005	332.03	2212.06
		2544.09	305-365	3/14/2005	331.94	2212.15
		2544.09	305-365	4/22/2005	331.39	2212.7
		2544.09	305-365	5/16/2005	330.2	2213.89
		2544.09	305-365	6/10/2005	329.99	2214.1
		2544.09	305-365	7/29/2005	330.17	2213.92
		2544.09	305-365	8/29/2005	330.05	2214.04
		2544.09	305-365	9/19/2005	330.02	2214.07
		2544.09	305-365	10/18/2005	330.25	2213.84
		2544.09	305-365	11/14/2005	329.92	2214.17
		2544.09	305-365	12/6/2005	329.92	2214.17

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
SE-001	568641	2544.09	305-365	1/23/2006	329.64	2214.45
		2544.09	305-365	2/27/2006	329.4	2214.69
		2544.09	305-365	3/20/2006	329.45	2214.64
		2544.09	305-365	4/3/2006	329.49	2214.6
		2544.09	305-365	5/30/2006	329.93	2214.16
		2544.09	305-365	6/16/2006	329.98	2214.11
		2544.09	305-365	8/29/2006	330.64	2213.45
		2544.09	305-365	9/21/2006	330.75	2213.34
		2544.09	305-365	11/13/2006	331.84	2212.25
		2544.09	305-365	2/7/2007	332.48	2211.61
		2544.09	305-365	4/24/2007	331.82	2212.27
		2544.09	305-365	8/6/2007	329.79	2214.3
		2544.09	305-365	11/13/2007	329.21	2214.88
		2544.09	305-365	2/21/2008	328.34	2215.75
		2544.09	305-365	4/7/2008	327.69	2216.4
		2544.09	305-365	7/30/2008	327.99	2216.1
		2544.09	305-365	10/28/2008	326.6	2217.49
		2544.09	305-365	12/17/2009	321.15	2222.94
		2544.09	305-365	8/19/2010	319.01	2225.08
		2544.09	305-365	9/19/2011	314.66	2229.43
		2544.09	305-365	2/12/2013	311.56	2232.53
		2544.09	305-365	2/2/2015	308.49	2235.6
		2544.09	305-365	2/24/2015	308.46	2235.63
SJ-001	568639	2583.73	327-387	7/24/2001	360.23	2223.5
		2583.73	327-387	11/5/2001	360.28	2223.45
		2583.73	327-387	2/12/2002	359.57	2224.16
		2583.73	327-387	5/7/2002	359.5	2224.23
		2583.73	327-387	8/6/2002	359.47	2224.26
		2583.73	327-387	11/25/2002	358.7	2225.03
		2583.73	327-387	2/13/2003	358.61	2225.12
		2583.73	327-387	3/17/2003	358.37	2225.36
		2583.73	327-387	4/15/2003	359.2	2224.53
		2583.73	327-387	4/22/2003	359.12	2224.61
		2583.73	327-387	4/29/2003	359.3	2224.43
		2583.73	327-387	5/6/2003	359.44	2224.29
		2583.73	327-387	5/13/2003	359.5	2224.23
		2583.73	327-387	5/20/2003	359.74	2223.99
		2583.73	327-387	5/27/2003	359.85	2223.88
		2583.73	327-387	6/3/2003	359.71	2224.02
		2583.73	327-387	7/25/2003	361.85	2221.88

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
SJ-001	568639	2583.73	327-387	8/14/2003	359.65	2224.08
		2583.73	327-387	9/23/2003	359.28	2224.45
		2583.73	327-387	12/2/2003	358.91	2224.82
		2583.73	327-387	1/29/2004	358.43	2225.3
		2583.73	327-387	2/25/2004	358.37	2225.36
		2583.73	327-387	3/30/2004	359.78	2223.95
		2583.73	327-387	4/13/2004	359.38	2224.35
		2583.73	327-387	5/10/2004	358.08	2225.65
		2583.73	327-387	6/17/2004	358.08	2225.65
		2583.73	327-387	7/28/2004	357.86	2225.87
		2583.73	327-387	8/24/2004	357.57	2226.16
		2583.73	327-387	9/22/2004	358.73	2225
		2583.73	327-387	10/19/2004	357.47	2226.26
		2583.73	327-387	11/15/2004	357.77	2225.96
		2583.73	327-387	12/20/2004	358.32	2225.41
		2583.73	327-387	1/27/2005	357.13	2226.6
		2583.73	327-387	2/16/2005	358.16	2225.57
		2583.73	327-387	3/14/2005	357.78	2225.95
		2583.73	327-387	4/22/2005	357.7	2226.03
		2583.73	327-387	5/16/2005	356.56	2227.17
		2583.73	327-387	6/10/2005	356.53	2227.2
		2583.73	327-387	7/29/2005	356.74	2226.99
		2583.73	327-387	8/29/2005	356.77	2226.96
		2583.73	327-387	9/19/2005	357.05	2226.68
		2583.73	327-387	10/18/2005	356.99	2226.74
		2583.73	327-387	11/19/2005	356.57	2227.16
		2583.73	327-387	12/6/2005	356.55	2227.18
		2583.73	327-387	1/23/2006	356.25	2227.48
		2583.73	327-387	2/27/2006	356.38	2227.35
		2583.73	327-387	3/20/2006	356.35	2227.38
		2583.73	327-387	4/3/2006	356.28	2227.45
		2583.73	327-387	5/30/2006	356.38	2227.35
		2583.73	327-387	6/16/2006	356.47	2227.26
		2583.73	327-387	8/29/2006	357.36	2226.37
		2583.73	327-387	9/21/2006	357.2	2226.53
		2583.73	327-387	11/13/2006	356.55	2227.18
		2583.73	327-387	2/7/2007	356.57	2227.16
		2583.73	327-387	4/26/2007	355.71	2228.02
		2583.73	327-387	8/6/2007	356.41	2227.32
		2583.73	327-387	11/14/2007	356.32	2227.41

NOTE: ft amsl - feet above mean sea level
- = data not applicable or available

Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
SJ-001	568639	2583.73	327-387	2/21/2008	355.64	2228.09
		2583.73	327-387	4/10/2008	355.2	2228.53
		2583.73	327-387	7/30/2008	353.84	2229.89
		2583.73	327-387	10/29/2008	353.62	2230.11
		2583.73	327-387	12/17/2009	350.02	2233.71
		2583.73	327-387	8/18/2010	347.54	2236.19
		2583.73	327-387	9/23/2011	344.09	2239.64
		2583.73	327-387	2/14/2013	339.34	2244.39
		2583.73	327-387	4/1/2013	339.14	2244.59
		2583.73	327-387	6/3/2013	338.05	2245.68
		2583.73	327-387	8/21/2013	337.92	2245.81
		2583.73	327-387	11/18/2013	337.44	2246.29
		2583.73	327-387	2/20/2014	337.51	2246.22
		2583.73	327-387	5/15/2014	336.45	2247.28
		2583.73	327-387	8/21/2014	336.14	2247.59
		2583.73	327-387	11/25/2014	336.19	2247.54
		2583.73	327-387	2/27/2015	334.85	2248.88
SJ-002	568640	2589.16	331-391	7/24/2001	363.73	2225.43
		2589.16	331-391	11/5/2001	364	2225.16
		2589.16	331-391	2/12/2002	363.44	2225.72
		2589.16	331-391	5/7/2002	363.34	2225.82
		2589.16	331-391	8/6/2002	363.35	2225.81
		2589.16	331-391	11/25/2002	362.4	2226.76
		2589.16	331-391	2/13/2003	363.62	2225.54
		2589.16	331-391	3/17/2003	362.36	2226.8
		2589.16	331-391	4/15/2003	362.94	2226.22
		2589.16	331-391	4/22/2003	362.84	2226.32
		2589.16	331-391	4/29/2003	362.98	2226.18
		2589.16	331-391	5/6/2003	363.14	2226.02
		2589.16	331-391	5/13/2003	363.21	2225.95
		2589.16	331-391	5/20/2003	363.41	2225.75
		2589.16	331-391	5/27/2003	363.53	2225.63
		2589.16	331-391	6/3/2003	363.41	2225.75
		2589.16	331-391	8/14/2003	363.46	2225.7
		2589.16	331-391	9/23/2003	363.2	2225.96
		2589.16	331-391	12/2/2003	362.92	2226.24
		2589.16	331-391	1/29/2004	362.46	2226.7
		2589.16	331-391	2/25/2004	362.41	2226.75
		2589.16	331-391	3/30/2004	363.81	2225.35
		2589.16	331-391	4/13/2004	363.38	2225.78

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Appendix A. Groundwater Elevation Data, 2001 through March 2015
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Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
SJ-002	568640	2589.16	331-391	5/10/2004	362.09	2227.07
		2589.16	331-391	6/17/2004	362.14	2227.02
		2589.16	331-391	7/28/2004	361.97	2227.19
		2589.16	331-391	8/24/2004	361.8	2227.36
		2589.16	331-391	9/22/2004	361.85	2227.31
		2589.16	331-391	10/19/2004	361.65	2227.51
		2589.16	331-391	11/15/2004	361.74	2227.42
		2589.16	331-391	12/20/2004	352.39	2236.77
		2589.16	331-391	1/27/2005	361.25	2227.91
		2589.16	331-391	2/16/2005	362.34	2226.82
		2589.16	331-391	3/14/2005	361.98	2227.18
		2589.16	331-391	4/22/2005	361.82	2227.34
		2589.16	331-391	5/16/2005	360.73	2228.43
		2589.16	331-391	6/10/2005	360.7	2228.46
		2589.16	331-391	7/29/2005	360.92	2228.24
		2589.16	331-391	8/29/2005	360.94	2228.22
		2589.16	331-391	9/19/2005	361.19	2227.97
		2589.16	331-391	10/18/2005	361.18	2227.98
		2589.16	331-391	11/14/2005	360.92	2228.24
		2589.16	331-391	12/6/2005	360.84	2228.32
		2589.16	331-391	1/23/2006	360.57	2228.59
		2589.16	331-391	2/27/2006	360.61	2228.55
		2589.16	331-391	3/20/2006	360.6	2228.56
		2589.16	331-391	4/3/2006	360.51	2228.65
		2589.16	331-391	5/30/2006	360.57	2228.59
		2589.16	331-391	6/16/2006	360.63	2228.53
		2589.16	331-391	8/29/2006	361.53	2227.63
		2589.16	331-391	9/21/2006	361.4	2227.76
		2589.16	331-391	11/13/2006	360.87	2228.29
		2589.16	331-391	2/7/2007	360.91	2228.25
		2589.16	331-391	4/27/2007	360.19	2228.97
		2589.16	331-391	8/6/2007	360.54	2228.62
		2589.16	331-391	11/16/2007	360.68	2228.48
		2589.16	331-391	2/20/2008	359.84	2229.32
		2589.16	331-391	4/10/2008	359.62	2229.54
		2589.16	331-391	7/29/2008	358.29	2230.87
		2589.16	331-391	10/28/2008	357.67	2231.49
		2589.16	331-391	12/17/2009	354.24	2234.92
		2589.16	331-391	8/18/2010	351.73	2237.43
		2589.16	331-391	9/19/2011	348.12	2241.04

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Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
SJ-002	568640	2589.16	331-391	2/13/2013	343.84	2245.32
		2589.16	331-391	4/1/2013	343.52	2245.64
		2589.16	331-391	6/3/2013	342.51	2246.65
		2589.16	331-391	8/21/2013	341.99	2247.17
		2589.16	331-391	11/18/2013	341.91	2247.25
		2589.16	331-391	2/19/2014	341.81	2247.35
		2589.16	331-391	3/14/2014	340.89	2248.27
		2589.16	331-391	8/20/2014	340.46	2248.7
		2589.16	331-391	11/24/2014	340.28	2248.88
		2589.16	331-391	2/27/2015	339.34	2249.82
WR-155A		2538.92	-	10/19/2004	332.27	2206.65
		2538.92	-	11/17/2004	324.81	2214.11
		2538.92	-	12/20/2004	333.27	2205.65
		2538.92	-	1/27/2005	332.26	2206.66
		2538.92	-	2/16/2005	333.19	2205.73
		2538.92	-	3/14/2005	332.97	2205.95
		2538.92	-	4/22/2005	332.69	2206.23
		2538.92	-	5/16/2005	331.54	2207.38
		2538.92	-	6/10/2005	331.34	2207.58
		2538.92	-	7/29/2005	331.36	2207.56
		2538.92	-	8/29/2005	331.4	2207.52
		2538.92	-	9/19/2005	331.58	2207.34
		2538.92	-	10/18/2005	331.48	2207.44
		2538.92	-	11/14/2005	331.45	2207.47
		2538.92	-	12/6/2005	331.34	2207.58
		2538.92	-	1/23/2006	331.21	2207.71
		2538.92	-	2/27/2006	331.09	2207.83
		2538.92	-	3/20/2006	331.05	2207.87
		2538.92	-	4/3/2006	331.1	2207.82
		2538.92	-	5/30/2006	331.46	2207.46
		2538.92	-	6/16/2006	331.51	2207.41
		2538.92	-	8/31/2006	332.66	2206.26
		2538.92	-	9/21/2006	323.54	2215.38
		2538.92	-	11/13/2006	322.97	2215.95
		2538.92	-	4/24/2007	322.74	2216.18
		2538.92	-	8/6/2007	331.13	2207.79
		2538.92	-	11/13/2007	330.8	2208.12
		2538.92	-	2/20/2008	329.98	2208.94
		2538.92	-	4/7/2008	328.81	2210.11
		2538.92	-	6/17/2008	320.35	2218.57

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Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-155A		2538.92	-	10/28/2008	328.43	2210.49
		2538.92	-	9/22/2011	306.52	2232.4
		2538.92	-	2/14/2013	302.9	2236.02
WR-177A	527410	2586.85	319-470	7/24/2001	350.05	2236.8
		2586.85	319-470	11/5/2001	350.62	2236.23
		2586.85	319-470	2/11/2002	350.46	2236.39
		2586.85	319-470	5/6/2002	350.23	2236.62
		2586.85	319-470	8/5/2002	350.55	2236.3
		2586.85	319-470	3/17/2003	350.48	2236.37
		2586.85	319-470	12/2/2003	350.22	2236.63
		2586.85	319-470	5/10/2004	349.26	2237.59
		2586.85	319-470	9/21/2004	349.2	2237.65
		2586.85	319-470	11/15/2004	348.22	2238.63
		2586.85	319-470	2/16/2005	349.56	2237.29
		2586.85	319-470	3/14/2005	349.28	2237.57
		2586.85	319-470	4/22/2005	349.07	2237.78
		2586.85	319-470	5/16/2005	348.01	2238.84
		2586.85	319-470	6/10/2005	347.92	2238.93
		2586.85	319-470	9/19/2005	348.71	2238.14
		2586.85	319-470	11/14/2005	348.67	2238.18
		2586.85	319-470	1/23/2006	348.42	2238.43
		2586.85	319-470	4/3/2006	348.04	2238.81
		2586.85	319-470	11/13/2006	348.77	2238.08
		2586.85	319-470	4/23/2007	348.01	2238.84
		2586.85	319-470	11/14/2007	347.69	2239.16
		2586.85	319-470	2/20/2008	346.83	2240.02
		2586.85	319-470	4/7/2008	345.52	2241.33
		2586.85	319-470	7/28/2008	345.79	2241.06
		2586.85	319-470	10/29/2008	345.34	2241.51
		2586.85	319-470	12/12/2008	344.74	2242.11
		2586.85	319-470	12/17/2009	341.38	2245.47
		2586.85	319-470	8/18/2010	339.14	2247.71
		2586.85	319-470	9/21/2011	335.79	2251.06
		2586.85	319-470	2/14/2013	332.41	2254.44
		2586.85	319-470	2/9/2015	327.59	2259.26
		2586.85	319-470	2/26/2015	321.54	2265.31
WR-178A	527412	2560.59	309-460	7/24/2001	340.21	2220.38
		2560.59	309-460	11/5/2001	340.01	2220.58
		2560.59	309-460	2/12/2002	339.2	2221.39
		2560.59	309-460	5/7/2002	339.47	2221.12

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Appendix A. Groundwater Elevation Data, 2001 through March 2015
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Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-178A	527412	2560.59	309-460	8/6/2002	339.18	2221.41
		2560.59	309-460	11/26/2002	338.85	2221.74
		2560.59	309-460	2/13/2003	337.74	2222.85
		2560.59	309-460	3/17/2003	337.47	2223.12
		2560.59	309-460	4/15/2003	341.56	2219.03
		2560.59	309-460	4/22/2003	341.67	2218.92
		2560.59	309-460	4/29/2003	342.06	2218.53
		2560.59	309-460	5/6/2003	342.29	2218.3
		2560.59	309-460	5/13/2003	342.34	2218.25
		2560.59	309-460	5/20/2003	342.8	2217.79
		2560.59	309-460	5/27/2003	342.17	2218.42
		2560.59	309-460	6/3/2003	342.39	2218.2
		2560.59	309-460	7/25/2003	339.95	2220.64
		2560.59	309-460	8/14/2003	341.53	2219.06
		2560.59	309-460	9/23/2003	340.59	2220
		2560.59	309-460	12/2/2003	342.09	2218.5
		2560.59	309-460	1/29/2004	341.81	2218.78
		2560.59	309-460	2/25/2004	341.73	2218.86
		2560.59	309-460	3/30/2004	355.6	2204.99
		2560.59	309-460	4/13/2004	343.65	2216.94
		2560.59	309-460	5/10/2004	341.55	2219.04
		2560.59	309-460	6/17/2004	341.46	2219.13
		2560.59	309-460	7/28/2004	341.32	2219.27
		2560.59	309-460	8/24/2004	340.85	2219.74
		2560.59	309-460	9/22/2004	341.28	2219.31
		2560.59	309-460	10/19/2004	340.5	2220.09
		2560.59	309-460	11/15/2004	340.76	2219.83
		2560.59	309-460	12/20/2004	341.73	2218.86
		2560.59	309-460	1/27/2005	340.68	2219.91
		2560.59	309-460	2/16/2005	341.77	2218.82
		2560.59	309-460	3/14/2005	342.27	2218.32
		2560.59	309-460	4/22/2005	341.44	2219.15
		2560.59	309-460	5/16/2005	340.28	2220.31
		2560.59	309-460	6/10/2005	340.1	2220.49
		2560.59	309-460	7/29/2005	340.21	2220.38
		2560.59	309-460	8/29/2005	340.38	2220.21
		2560.59	309-460	9/19/2005	340.59	2220
		2560.59	309-460	10/18/2005	340.33	2220.26
		2560.59	309-460	11/14/2005	339.7	2220.89
		2560.59	309-460	12/6/2005	339.71	2220.88

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-178A	527412	2560.59	309-460	1/23/2006	339.4	2221.19
		2560.59	309-460	2/27/2006	339.74	2220.85
		2560.59	309-460	3/20/2006	339.69	2220.9
		2560.59	309-460	4/3/2006	339.75	2220.84
		2560.59	309-460	5/30/2006	339.93	2220.66
		2560.59	309-460	6/16/2006	340.04	2220.55
		2560.59	309-460	7/13/2006	341.27	2219.32
		2560.59	309-460	8/29/2006	340.91	2219.68
		2560.59	309-460	9/21/2006	339.67	2220.92
		2560.59	309-460	11/13/2006	338.16	2222.43
		2560.59	309-460	2/7/2007	338.63	2221.96
		2560.59	309-460	4/25/2007	337.4	2223.19
		2560.59	309-460	8/6/2007	340.01	2220.58
		2560.59	309-460	11/14/2007	339.78	2220.81
		2560.59	309-460	2/20/2008	338.98	2221.61
		2560.59	309-460	4/9/2008	338.72	2221.87
		2560.59	309-460	7/30/2008	336.26	2224.33
		2560.59	309-460	10/28/2008	336.66	2223.93
		2560.59	309-460	12/17/2009	332.29	2228.3
		2560.59	309-460	8/19/2010	329.66	2230.93
		2560.59	309-460	9/20/2011	326.2	2234.39
		2560.59	309-460	4/1/2013	319.45	2241.14
		2560.59	309-460	6/3/2013	318.5	2242.09
		2560.59	309-460	8/21/2013	318.01	2242.58
		2560.59	309-460	11/18/2013	318.13	2242.46
		2560.59	309-460	2/19/2014	318.2	2242.39
		2560.59	309-460	5/19/2014	317.19	2243.4
		2560.59	309-460	8/21/2014	316.82	2243.77
		2560.59	309-460	11/24/2014	316.54	2244.05
		2560.59	309-460	2/27/2015	315.61	2244.98
WR-179A	527409	2597.91	339-490	7/23/2001	367.57	2230.34
		2597.91	339-490	11/5/2001	367.75	2230.16
		2597.91	339-490	2/12/2002	366.99	2230.92
		2597.91	339-490	5/6/2002	366.55	2231.36
		2597.91	339-490	8/6/2002	367.05	2230.86
		2597.91	339-490	3/17/2003	366.39	2231.52
		2597.91	339-490	12/1/2003	365.9	2232.01
		2597.91	339-490	5/10/2004	364.76	2233.15
		2597.91	339-490	9/21/2004	364.48	2233.43
		2597.91	339-490	11/15/2004	364.35	2233.56

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-179A	527409	2597.91	339-490	5/16/2005	363.35	2234.56
		2597.91	339-490	11/14/2005	354.88	2243.03
		2597.91	339-490	12/6/2005	363.77	2234.14
		2597.91	339-490	4/3/2006	363.42	2234.49
		2597.91	339-490	5/30/2006	363.43	2234.48
		2597.91	339-490	6/16/2006	363.59	2234.32
		2597.91	339-490	7/13/2006	364.48	2233.43
		2597.91	339-490	8/29/2006	364.47	2233.44
		2597.91	339-490	9/21/2006	364.39	2233.52
		2597.91	339-490	11/13/2006	364.07	2233.84
		2597.91	339-490	2/7/2007	363.9	2234.01
		2597.91	339-490	4/25/2007	363.22	2234.69
		2597.91	339-490	8/6/2007	363.62	2234.29
		2597.91	339-490	11/14/2007	363.34	2234.57
		2597.91	339-490	2/20/2008	362.8	2235.11
		2597.91	339-490	4/7/2008	362.3	2235.61
		2597.91	339-490	7/29/2008	361.73	2236.18
		2597.91	339-490	10/28/2008	361.21	2236.7
		2597.91	339-490	12/17/2009	357.86	2240.05
		2597.91	339-490	8/19/2010	355.29	2242.62
		2597.91	339-490	9/19/2011	352.16	2245.75
		2597.91	339-490	2/15/2013	348.19	2249.72
		2597.91	339-490	4/1/2013	347.4	2250.51
		2597.91	339-490	6/3/2013	346.83	2251.08
		2597.91	339-490	8/21/2013	346.29	2251.62
		2597.91	339-490	11/13/2013	345.73	2252.18
		2597.91	339-490	2/19/2014	345.6	2252.31
		2597.91	339-490	5/14/2014	345.1	2252.81
		2597.91	339-490	8/20/2014	344.88	2253.03
		2597.91	339-490	11/24/2014	344.42	2253.49
		2597.91	339-490	2/27/2015	343.33	2254.58
WR-180A	527411	2560.13	313-465	7/24/2001	334.43	2225.7
		2560.13	313-465	11/5/2001	334.89	2225.24
		2560.13	313-465	2/11/2002	334.39	2225.74
		2560.13	313-465	5/6/2002	334.28	2225.85
		2560.13	313-465	8/5/2002	334.18	2225.95
		2560.13	313-465	3/17/2003	333.18	2226.95
		2560.13	313-465	12/1/2003	333.92	2226.21
		2560.13	313-465	5/10/2004	333.14	2226.99
		2560.13	313-465	7/28/2004	333.23	2226.9

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-180A	527411	2560.13	313-465	8/24/2004	333.16	2226.97
		2560.13	313-465	9/22/2004	333.26	2226.87
		2560.13	313-465	10/19/2004	333.01	2227.12
		2560.13	313-465	11/15/2004	332.93	2227.2
		2560.13	313-465	12/20/2004	333.53	2226.6
		2560.13	313-465	1/27/2005	332.44	2227.69
		2560.13	313-465	2/16/2005	333.46	2226.67
		2560.13	313-465	3/14/2005	333.1	2227.03
		2560.13	313-465	4/22/2005	333.1	2227.03
		2560.13	313-465	5/16/2005	331.82	2228.31
		2560.13	313-465	6/10/2005	332.03	2228.1
		2560.13	313-465	7/29/2005	332.26	2227.87
		2560.13	313-465	8/29/2005	332.19	2227.94
		2560.13	313-465	9/19/2005	332.42	2227.71
		2560.13	313-465	10/18/2005	332.43	2227.7
		2560.13	313-465	11/14/2005	332.35	2227.78
		2560.13	313-465	12/6/2005	332.24	2227.89
		2560.13	313-465	1/23/2006	331.88	2228.25
		2560.13	313-465	2/27/2006	331.87	2228.26
		2560.13	313-465	3/20/2006	331.74	2228.39
		2560.13	313-465	4/3/2006	331.72	2228.41
		2560.13	313-465	5/30/2006	331.92	2228.21
		2560.13	313-465	6/16/2006	331.92	2228.21
		2560.13	313-465	7/13/2006	333.05	2227.08
		2560.13	313-465	8/29/2006	332.69	2227.44
		2560.13	313-465	9/21/2006	332.61	2227.52
		2560.13	313-465	11/13/2006	332.17	2227.96
		2560.13	313-465	2/7/2007	332.28	2227.85
		2560.13	313-465	4/24/2007	331.56	2228.57
		2560.13	313-465	8/6/2007	331.68	2228.45
		2560.13	313-465	11/13/2007	331.6	2228.53
		2560.13	313-465	2/21/2008	330.8	2229.33
		2560.13	313-465	4/9/2008	330.36	2229.77
		2560.13	313-465	7/30/2008	329.5	2230.63
		2560.13	313-465	10/28/2008	328.85	2231.28
		2560.13	313-465	12/17/2009	324.86	2235.27
		2560.13	313-465	8/19/2010	322.51	2237.62
		2560.13	313-465	9/19/2011	318.86	2241.27
		2560.13	313-465	2/14/2013	314.91	2245.22
		2560.13	313-465	4/2/2013	314.64	2245.49

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-180A	527411	2560.13	313-465	6/4/2013	315.85	2244.28
		2560.13	313-465	8/22/2013	131.65	2428.48
		2560.13	313-465	11/19/2013	313.44	2246.69
		2560.13	313-465	2/19/2014	313.5	2246.63
		2560.13	313-465	5/14/2014	312.78	2247.35
		2560.13	313-465	8/28/2014	311.87	2248.26
		2560.13	313-465	11/24/2014	311.62	2248.51
		2560.13	313-465	2/27/2015	310.59	2249.54
WR-181A	527406	2548.82	287-438	7/23/2001	311.22	2237.6
		2548.82	287-438	11/5/2001	312.21	2236.61
		2548.82	287-438	2/12/2002	312.08	2236.74
		2548.82	287-438	5/6/2002	311.92	2236.9
		2548.82	287-438	8/5/2002	312.22	2236.6
		2548.82	287-438	3/17/2003	312.08	2236.74
		2548.82	287-438	12/1/2003	312.2	2236.62
		2548.82	287-438	5/10/2004	311.39	2237.43
		2548.82	287-438	9/22/2004	311.66	2237.16
		2548.82	287-438	11/15/2004	311.58	2237.24
		2548.82	287-438	5/16/2005	310.32	2238.5
		2548.82	287-438	11/14/2005	312.04	2236.78
		2548.82	287-438	1/23/2006	311.42	2237.4
		2548.82	287-438	4/4/2006	310.72	2238.1
		2548.82	287-438	11/13/2006	311.36	2237.46
		2548.82	287-438	4/23/2007	310.3	2238.52
		2548.82	287-438	8/6/2007	310.04	2238.78
		2548.82	287-438	11/14/2007	309.7	2239.12
		2548.82	287-438	2/21/2008	308.9	2239.92
		2548.82	287-438	4/9/2008	308.28	2240.54
		2548.82	287-438	7/30/2008	307.72	2241.1
		2548.82	287-438	10/28/2008	306.9	2241.92
		2548.82	287-438	12/17/2009	302.94	2245.88
		2548.82	287-438	8/19/2010	301.22	2247.6
		2548.82	287-438	9/21/2011	297.23	2251.59
		2548.82	287-438	2/13/2013	294.87	2253.95
		2548.82	287-438	2/9/2015	289.28	2259.54
		2548.82	287-438	2/25/2015	289.31	2259.51
WR-186A	527407	2545.49	259-410	7/24/2001	309.01	2236.48
		2545.49	259-410	11/5/2001	310.03	2235.46
		2545.49	259-410	2/11/2002	309.53	2235.96
		2545.49	259-410	5/6/2002	309.47	2236.02

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-186A	527407	2545.49	259-410	8/5/2002	309.83	2235.66
		2545.49	259-410	3/17/2003	309.35	2236.14
		2545.49	259-410	12/2/2003	309.81	2235.68
		2545.49	259-410	5/10/2004	309.08	2236.41
		2545.49	259-410	9/22/2004	309.73	2235.76
		2545.49	259-410	11/15/2004	309.43	2236.06
		2545.49	259-410	5/16/2005	308.25	2237.24
		2545.49	259-410	11/14/2005	309.88	2235.61
		2545.49	259-410	4/4/2006	308.59	2236.9
		2545.49	259-410	11/13/2006	309.38	2236.11
		2545.49	259-410	4/7/2008	305.59	2239.9
		2545.49	259-410	10/28/2008	304.94	2240.55
		2545.49	259-410	9/23/2011	295.78	2249.71
		2545.49	259-410	2/27/2015	288.1	2257.39
WR-207A	531208	2580.91	310-450	7/23/2001	340.81	2240.1
		2580.91	310-450	11/5/2001	341.66	2239.25
		2580.91	310-450	2/11/2002	341.93	2238.98
		2580.91	310-450	5/6/2002	341.48	2239.43
		2580.91	310-450	8/5/2002	342.09	2238.82
		2580.91	310-450	2/19/2015	294.78	2286.13
WR-207B	592443	2577.25	300-450	3/17/2003	339.03	2238.22
		2577.25	300-450	12/2/2003	338.34	2238.91
		2577.25	300-450	5/10/2004	337.37	2239.88
		2577.25	300-450	9/21/2004	337.29	2239.96
		2577.25	300-450	11/15/2004	337.23	2240.02
		2577.25	300-450	5/16/2005	336.04	2241.21
		2577.25	300-450	11/14/2005	336.87	2240.38
		2577.25	300-450	1/23/2006	336.57	2240.68
		2577.25	300-450	4/3/2006	336.11	2241.14
		2577.25	300-450	11/13/2006	336.36	2240.89
		2577.25	300-450	4/23/2007	335.81	2241.44
		2577.25	300-450	11/13/2007	335.46	2241.79
		2577.25	300-450	2/21/2008	334.26	2242.99
		2577.25	300-450	4/7/2008	332.79	2244.46
		2577.25	300-450	7/28/2008	333.22	2244.03
		2577.25	300-450	10/28/2008	332.75	2244.5
		2577.25	300-450	12/12/2008	332.07	2245.18
		2577.25	300-450	12/17/2009	327.74	2249.51
		2577.25	300-450	8/18/2010	325.56	2251.69
		2577.25	300-450	9/20/2011	322.16	2255.09

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-207B	592443	2577.25	300-450	2/13/2013	319.11	2258.14
		2577.25	300-450	2/9/2015	313.7	2263.55
		2577.25	300-450	2/23/2015	313.67	2263.58
WR-273A	558356	2555.89	298-338	7/24/2001	319.99	2235.9
		2555.89	298-338	2/12/2002	320.53	2235.36
		2555.89	298-338	5/7/2002	320.52	2235.37
		2555.89	298-338	8/5/2002	320.69	2235.2
		2555.89	298-338	3/18/2003	320.69	2235.2
		2555.89	298-338	12/2/2003	320.59	2235.3
		2555.89	298-338	5/10/2004	319.76	2236.13
		2555.89	298-338	9/22/2004	319.84	2236.05
		2555.89	298-338	11/16/2004	319.84	2236.05
		2555.89	298-338	5/16/2005	318.65	2237.24
		2555.89	298-338	11/14/2005	319.66	2236.23
		2555.89	298-338	4/3/2006	318.86	2237.03
		2555.89	298-338	11/13/2006	319.51	2236.38
		2555.89	298-338	4/23/2007	318.61	2237.28
		2555.89	298-338	11/20/2007	318.02	2237.87
		2555.89	298-338	2/20/2008	317.43	2238.46
		2555.89	298-338	4/7/2008	316.05	2239.84
		2555.89	298-338	7/28/2008	316.18	2239.71
		2555.89	298-338	11/4/2008	315.52	2240.37
		2555.89	298-338	12/17/2009	311.56	2244.33
		2555.89	298-338	8/19/2010	309.66	2246.23
		2555.89	298-338	9/20/2011	306.12	2249.77
		2555.89	298-338	2/11/2013	303.1	2252.79
		2555.89	298-338	12/23/2014	298.4	2257.49
		2555.89	298-338	2/4/2015	298.33	2257.56
		2555.89	298-338	2/26/2015	297.8	2258.09
WR-274A	558355	2568.54	306-346	7/24/2001	332.94	2235.6
		2568.54	306-346	11/5/2001	333.57	2234.97
		2568.54	306-346	2/12/2002	333.44	2235.1
		2568.54	306-346	5/7/2002	333.33	2235.21
		2568.54	306-346	8/5/2002	333.56	2234.98
		2568.54	306-346	3/18/2003	333.54	2235
		2568.54	306-346	12/2/2003	333.28	2235.26
		2568.54	306-346	5/10/2004	332.55	2235.99
		2568.54	306-346	9/22/2004	332.36	2236.18
		2568.54	306-346	11/16/2004	332.39	2236.15
		2568.54	306-346	5/16/2005	331.39	2237.15

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-274A	558355	2568.54	306-346	11/14/2005	332.06	2236.48
		2568.54	306-346	1/23/2006	331.78	2236.76
		2568.54	306-346	4/3/2006	331.36	2237.18
		2568.54	306-346	11/13/2006	332.05	2236.49
		2568.54	306-346	4/23/2007	331.29	2237.25
		2568.54	306-346	11/16/2007	330.8	2237.74
		2568.54	306-346	2/20/2008	330.06	2238.48
		2568.54	306-346	4/8/2008	328.82	2239.72
		2568.54	306-346	10/29/2008	328.49	2240.05
		2568.54	306-346	9/23/2011	319.05	2249.49
		2568.54	306-346	2/14/2013	315.6	2252.94
		2568.54	306-346	12/23/2014	311.09	2257.45
		2568.54	306-346	2/5/2015	310.89	2257.65
		2568.54	306-346	2/26/2015	310.55	2257.99
WR-275A	558354	2574.58	317-358	7/23/2001	338.09	2236.49
		2574.58	317-358	11/5/2001	338.82	2235.76
		2574.58	317-358	2/12/2002	338.72	2235.86
		2574.58	317-358	5/7/2002	338.55	2236.03
		2574.58	317-358	8/5/2002	338.82	2235.76
		2574.58	317-358	3/18/2003	338.81	2235.77
		2574.58	317-358	12/2/2003	334.51	2240.07
		2574.58	317-358	5/10/2004	338.78	2235.8
		2574.58	317-358	9/22/2004	335.51	2239.07
		2574.58	317-358	11/16/2004	337.51	2237.07
		2574.58	317-358	5/16/2005	336.51	2238.07
		2574.58	317-358	11/14/2005	337.18	2237.4
		2574.58	317-358	4/3/2006	336.53	2238.05
		2574.58	317-358	11/13/2006	337.19	2237.39
		2574.58	317-358	4/23/2007	336.44	2238.14
		2574.58	317-358	11/16/2007	335.97	2238.61
		2574.58	317-358	2/20/2008	335.19	2239.39
		2574.58	317-358	4/8/2008	333.89	2240.69
		2574.58	317-358	10/29/2008	333.64	2240.94
		2574.58	317-358	12/12/2008	333.03	2241.55
		2574.58	317-358	9/27/2011	323.9	2250.68
		2574.58	317-358	2/14/2013	320.37	2254.21
		2574.58	317-358	2/5/2015	315.91	2258.67
		2574.58	317-358	2/26/2015	315.5	2259.08
WR-352A	575473	2558.62	420-460	7/24/2001	340.61	2218.01
		2558.62	420-460	11/5/2001	340.46	2218.16

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-352A	575473	2558.62	420-460	2/11/2002	339.87	2218.75
		2558.62	420-460	5/6/2002	340.04	2218.58
		2558.62	420-460	8/5/2002	339.63	2218.99
		2558.62	420-460	11/25/2002	336.7	2221.92
		2558.62	420-460	2/13/2003	338.53	2220.09
		2558.62	420-460	3/17/2003	337.97	2220.65
		2558.62	420-460	4/15/2003	342.62	2216
		2558.62	420-460	4/22/2003	342.54	2216.08
		2558.62	420-460	4/29/2003	342.96	2215.66
		2558.62	420-460	5/6/2003	343.18	2215.44
		2558.62	420-460	5/13/2003	343.39	2215.23
		2558.62	420-460	5/20/2003	343.81	2214.81
		2558.62	420-460	5/27/2003	341.69	2216.93
		2558.62	420-460	6/3/2003	343.36	2215.26
		2558.62	420-460	8/14/2003	342.09	2216.53
		2558.62	420-460	9/23/2003	341.28	2217.34
		2558.62	420-460	12/1/2003	340.56	2218.06
		2558.62	420-460	1/29/2004	340.05	2218.57
		2558.62	420-460	2/25/2004	339.96	2218.66
		2558.62	420-460	3/29/2004	341.49	2217.13
		2558.62	420-460	4/13/2004	341.91	2216.71
		2558.62	420-460	5/10/2004	339.92	2218.7
		2558.62	420-460	6/17/2004	339.7	2218.92
		2558.62	420-460	7/28/2004	339.49	2219.13
		2558.62	420-460	8/24/2004	339	2219.62
		2558.62	420-460	9/21/2004	339.4	2219.22
		2558.62	420-460	10/19/2004	338.81	2219.81
		2558.62	420-460	11/15/2004	338.95	2219.67
		2558.62	420-460	12/20/2004	340.07	2218.55
		2558.62	420-460	1/27/2005	338.97	2219.65
		2558.62	420-460	2/16/2005	339.96	2218.66
		2558.62	420-460	3/14/2005	339.53	2219.09
		2558.62	420-460	4/22/2005	339.79	2218.83
		2558.62	420-460	5/16/2005	338.48	2220.14
		2558.62	420-460	6/10/2005	338.47	2220.15
		2558.62	420-460	7/29/2005	338.57	2220.05
		2558.62	420-460	8/29/2005	338.57	2220.05
		2558.62	420-460	9/19/2005	338.86	2219.76
		2558.62	420-460	10/18/2005	338.47	2220.15
		2558.62	420-460	11/14/2005	337.85	2220.77

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-352A	575473	2558.62	420-460	12/6/2005	337.89	2220.73
		2558.62	420-460	1/23/2006	337.58	2221.04
		2558.62	420-460	2/27/2006	337.97	2220.65
		2558.62	420-460	3/20/2006	337.85	2220.77
		2558.62	420-460	4/3/2006	337.86	2220.76
		2558.62	420-460	5/30/2006	338.11	2220.51
		2558.62	420-460	6/16/2006	338.18	2220.44
		2558.62	420-460	8/31/2006	339.06	2219.56
		2558.62	420-460	9/21/2006	337.5	2221.12
		2558.62	420-460	11/13/2006	336.27	2222.35
		2558.62	420-460	4/23/2007	335.41	2223.21
		2558.62	420-460	8/6/2007	338.29	2220.33
		2558.62	420-460	11/13/2007	337.99	2220.63
		2558.62	420-460	2/20/2008	337.2	2221.42
		2558.62	420-460	4/7/2008	336.97	2221.65
		2558.62	420-460	6/17/2008	333.81	2224.81
		2558.62	420-460	10/28/2008	335.03	2223.59
		2558.62	420-460	9/20/2011	324.41	2234.21
		2558.62	420-460	2/15/2013	317.75	2240.87
		2558.62	420-460	4/1/2013	317.47	2241.15
		2558.62	420-460	6/3/2013	316.6	2242.02
		2558.62	420-460	8/21/2013	316.08	2242.54
		2558.62	420-460	11/18/2013	316.19	2242.43
		2558.62	420-460	2/19/2014	316.28	2242.34
		2558.62	420-460	5/14/2014	315.29	2243.33
		2558.62	420-460	8/21/2014	314.92	2243.7
		2558.62	420-460	11/24/2014	314.61	2244.01
		2558.62	420-460	2/27/2015	313.73	2244.89
WR-353A	575474	2553.1	410-450	7/24/2001	317.84	2235.26
		2553.1	410-450	2/11/2002	318.46	2234.64
		2553.1	410-450	5/6/2002	318.22	2234.88
		2553.1	410-450	8/5/2002	318.51	2234.59
		2553.1	410-450	3/17/2003	318.3	2234.8
		2553.1	410-450	12/2/2003	318.43	2234.67
		2553.1	410-450	5/10/2004	317.51	2235.59
		2553.1	410-450	9/21/2004	316.9	2236.2
		2553.1	410-450	11/15/2004	317.49	2235.61
		2553.1	410-450	5/16/2005	316.38	2236.72
		2553.1	410-450	11/14/2005	317.4	2235.7
		2553.1	410-450	4/3/2006	315.91	2237.19

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-353A	575474	2553.1	410-450	11/13/2006	317.27	2235.83
		2553.1	410-450	4/23/2007	316.31	2236.79
		2553.1	410-450	11/14/2007	315.23	2237.87
		2553.1	410-450	2/20/2008	315.17	2237.93
		2553.1	410-450	4/7/2008	313.2	2239.9
		2553.1	410-450	10/28/2008	313.42	2239.68
		2553.1	410-450	9/20/2011	303.2	2249.9
		2553.1	410-450	2/11/2013	300.78	2252.32
		2553.1	410-450	2/4/2015	298.07	2255.03
		2553.1	410-450	2/26/2015	294.9	2258.2
WR-354A	576420	2564.84	331-381	7/23/2001	347.85	2216.99
		2564.84	331-381	11/5/2001	347.62	2217.22
		2564.84	331-381	2/11/2002	346.92	2217.92
		2564.84	331-381	5/6/2002	346.53	2218.31
		2564.84	331-381	8/5/2002	346.15	2218.69
		2564.84	331-381	11/25/2002	345.92	2218.92
		2564.84	331-381	2/13/2003	345.34	2219.5
		2564.84	331-381	3/17/2003	345.12	2219.72
		2564.84	331-381	4/15/2003	345.78	2219.06
		2564.84	331-381	4/22/2003	345.65	2219.19
		2564.84	331-381	4/29/2003	345.69	2219.15
		2564.84	331-381	5/6/2003	345.79	2219.05
		2564.84	331-381	5/13/2003	345.7	2219.14
		2564.84	331-381	5/20/2003	345.9	2218.94
		2564.84	331-381	5/27/2003	345.91	2218.93
		2564.84	331-381	6/3/2003	345.74	2219.1
		2564.84	331-381	8/14/2003	345.64	2219.2
		2564.84	331-381	9/23/2003	345.29	2219.55
		2564.84	331-381	12/1/2003	345.07	2219.77
		2564.84	331-381	1/29/2004	344.72	2220.12
		2564.84	331-381	2/25/2004	344.5	2220.34
		2564.84	331-381	3/29/2004	345.58	2219.26
		2564.84	331-381	4/13/2004	345.32	2219.52
		2564.84	331-381	5/10/2004	343.79	2221.05
		2564.84	331-381	6/17/2004	343.83	2221.01
		2564.84	331-381	7/28/2004	343.64	2221.2
		2564.84	331-381	8/24/2004	343.44	2221.4
		2564.84	331-381	9/21/2004	343.31	2221.53
		2564.84	331-381	10/19/2004	343.19	2221.65
		2564.84	331-381	11/15/2004	343.55	2221.29

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-354A	576420	2564.84	331-381	12/20/2004	343.86	2220.98
		2564.84	331-381	1/27/2005	342.83	2222.01
		2564.84	331-381	2/16/2005	343.8	2221.04
		2564.84	331-381	3/14/2005	343.47	2221.37
		2564.84	331-381	4/22/2005	343.31	2221.53
		2564.84	331-381	5/16/2005	342.08	2222.76
		2564.84	331-381	6/10/2005	341.94	2222.9
		2564.84	331-381	7/29/2005	342.25	2222.59
		2564.84	331-381	8/29/2005	342.29	2222.55
		2564.84	331-381	9/19/2005	342.47	2222.37
		2564.84	331-381	10/18/2005	342.41	2222.43
		2564.84	331-381	11/14/2005	341.98	2222.86
		2564.84	331-381	12/6/2005	341.84	2223
		2564.84	331-381	1/23/2006	341.68	2223.16
		2564.84	331-381	2/27/2006	341.68	2223.16
		2564.84	331-381	3/20/2006	341.74	2223.1
		2564.84	331-381	4/3/2006	341.59	2223.25
		2564.84	331-381	5/30/2006	341.79	2223.05
		2564.84	331-381	6/16/2006	341.89	2222.95
		2564.84	331-381	8/31/2006	342.71	2222.13
		2564.84	331-381	9/21/2006	342.53	2222.31
		2564.84	331-381	11/13/2006	342.35	2222.49
		2564.84	331-381	2/7/2007	342.78	2222.06
		2564.84	331-381	4/23/2007	341.96	2222.88
		2564.84	331-381	8/6/2007	342.02	2222.82
		2564.84	331-381	11/13/2007	341.93	2222.91
		2564.84	331-381	2/21/2008	340.98	2223.86
		2564.84	331-381	4/9/2008	340.62	2224.22
		2564.84	331-381	7/30/2008	339.4	2225.44
		2564.84	331-381	10/28/2008	339.03	2225.81
		2564.84	331-381	12/17/2009	335.18	2229.66
		2564.84	331-381	8/19/2010	332.78	2232.06
		2564.84	331-381	9/20/2011	329.34	2235.5
		2564.84	331-381	2/12/2013	324.61	2240.23
		2564.84	331-381	4/1/2013	324.31	2240.53
		2564.84	331-381	6/3/2013	323.4	2241.44
		2564.84	331-381	8/21/2013	322.41	2242.43
		2564.84	331-381	11/18/2013	322.55	2242.29
		2564.84	331-381	2/19/2014	322.4	2242.44
		2564.84	331-381	5/14/2014	322.05	2242.79

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-354A	576420	2564.84	331-381	8/20/2014	321.74	2243.1
		2564.84	331-381	11/24/2014	321.44	2243.4
		2564.84	331-381	2/27/2015	320.48	2244.36
WR-358A	577633	2549.91	321-371	7/24/2001	316.54	2233.37
		2549.91	321-371	2/12/2002	316.92	2232.99
		2549.91	321-371	5/6/2002	316.88	2233.03
		2549.91	321-371	8/5/2002	317.04	2232.87
		2549.91	321-371	3/18/2003	316.87	2233.04
		2549.91	321-371	12/2/2003	317.01	2232.9
		2549.91	321-371	5/10/2004	316.16	2233.75
		2549.91	321-371	9/22/2004	316.12	2233.79
		2549.91	321-371	11/16/2004	316.13	2233.78
		2549.91	321-371	5/16/2005	314.93	2234.98
		2549.91	321-371	11/14/2005	315.77	2234.14
		2549.91	321-371	1/23/2006	315.45	2234.46
		2549.91	321-371	4/3/2006	315.04	2234.87
		2549.91	321-371	8/29/2006	315.83	2234.08
		2549.91	321-371	9/21/2006	315.84	2234.07
		2549.91	321-371	11/13/2006	315.68	2234.23
		2549.91	321-371	2/7/2007	315.5	2234.41
		2549.91	321-371	4/23/2007	314.96	2234.95
		2549.91	321-371	8/6/2007	314.73	2235.18
		2549.91	321-371	11/12/2007	314.54	2235.37
		2549.91	321-371	2/20/2008	313.73	2236.18
		2549.91	321-371	4/10/2008	313.46	2236.45
		2549.91	321-371	7/29/2008	312.72	2237.19
		2549.91	321-371	11/6/2008	312.2	2237.71
		2549.91	321-371	12/17/2009	308.23	2241.68
		2549.91	321-371	8/19/2010	306.13	2243.78
		2549.91	321-371	9/23/2011	302.67	2247.24
		2549.91	321-371	2/13/2013	299.21	2250.7
		2549.91	321-371	2/9/2015	294.38	2255.53
		2549.91	321-371	2/25/2015	294.36	2255.55
WR-367A	581353	2600.76	312-407	7/23/2001	360.37	2240.39
		2600.76	312-407	11/5/2001	360.99	2239.77
		2600.76	312-407	2/12/2002	360.78	2239.98
		2600.76	312-407	5/6/2002	360.51	2240.25
		2600.76	312-407	8/6/2002	361.27	2239.49
		2600.76	312-407	3/18/2003	361.43	2239.33
		2600.76	312-407	12/1/2003	360.66	2240.1

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-367A	581353	2600.76	312-407	5/10/2004	359.65	2241.11
		2600.76	312-407	9/22/2004	359.37	2241.39
		2600.76	312-407	11/16/2004	359.38	2241.38
		2600.76	312-407	5/16/2005	358.28	2242.48
		2600.76	312-407	11/14/2005	358.95	2241.81
		2600.76	312-407	4/3/2006	358.33	2242.43
		2600.76	312-407	11/13/2006	359.35	2241.41
		2600.76	312-407	4/23/2007	358.36	2242.4
		2600.76	312-407	11/20/2007	358.03	2242.73
		2600.76	312-407	2/19/2008	357.16	2243.6
		2600.76	312-407	4/7/2008	355.67	2245.09
		2600.76	312-407	10/28/2008	355.89	2244.87
		2600.76	312-407	12/12/2008	355.19	2245.57
		2600.76	312-407	9/20/2011	346.36	2254.4
		2600.76	312-407	2/15/2013	342.87	2257.89
		2600.76	312-407	12/23/2014	338.69	2262.07
		2600.76	312-407	2/4/2015	338.43	2262.33
		2600.76	312-407	2/25/2015	338.34	2262.42
WR-435A	587406	2619.53	330-420	11/5/2001	374.05	2245.48
		2619.53	330-420	2/12/2002	373.42	2246.11
		2619.53	330-420	5/6/2002	373.03	2246.5
		2619.53	330-420	8/6/2002	374.27	2245.26
		2619.53	330-420	3/17/2003	374.01	2245.52
		2619.53	330-420	12/1/2003	373.43	2246.1
		2619.53	330-420	5/10/2004	372.39	2247.14
		2619.53	330-420	9/22/2004	372.26	2247.27
		2619.53	330-420	11/16/2004	372.59	2246.94
		2619.53	330-420	5/16/2005	371.01	2248.52
		2619.53	330-420	11/14/2005	371.9	2247.63
		2619.53	330-420	4/4/2006	371.3	2248.23
		2619.53	330-420	11/13/2006	372.57	2246.96
		2619.53	330-420	4/23/2007	371.33	2248.2
		2619.53	330-420	11/12/2007	371.23	2248.3
		2619.53	330-420	2/21/2008	369.88	2249.65
		2619.53	330-420	4/7/2008	369.28	2250.25
		2619.53	330-420	7/29/2008	368.82	2250.71
		2619.53	330-420	10/28/2008	368.73	2250.8
		2619.53	330-420	12/12/2008	368.09	2251.44
		2619.53	330-420	12/17/2009	365.28	2254.25
		2619.53	330-420	8/19/2010	363.44	2256.09

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-435A	587406	2619.53	330-420	9/20/2011	360.05	2259.48
		2619.53	330-420	2/13/2013	356.31	2263.22
		2619.53	330-420	2/3/2015	352.2	2267.33
		2619.53	330-420	2/25/2015	351.98	2267.55
WR-458A	205404	2542.49	252-420	11/14/2005	314.98	2227.51
		2542.49	252-420	1/23/2006	314.52	2227.97
		2542.49	252-420	2/27/2006	314.42	2228.07
		2542.49	252-420	3/20/2006	314.24	2228.25
		2542.49	252-420	4/3/2006	314.24	2228.25
		2542.49	252-420	5/30/2006	314.57	2227.92
		2542.49	252-420	6/16/2006	314.61	2227.88
		2542.49	252-420	8/31/2006	315.35	2227.14
		2542.49	252-420	9/21/2006	315.34	2227.15
		2542.49	252-420	11/13/2006	314.82	2227.67
		2542.49	252-420	4/23/2007	314.12	2228.37
		2542.49	252-420	8/6/2007	314.2	2228.29
		2542.49	252-420	11/13/2007	314.05	2228.44
		2542.49	252-420	2/21/2008	312.72	2229.77
		2542.49	252-420	4/7/2008	311.02	2231.47
		2542.49	252-420	10/28/2008	311.46	2231.03
		2542.49	252-420	9/23/2011	301.24	2241.25
		2542.49	252-420	2/15/2013	297.35	2245.14
		2542.49	252-420	2/27/2015	293.16	2249.33
WR-459A	205405	2536.51	254-406	11/14/2005	304.25	2232.26
		2536.51	254-406	4/3/2006	303.31	2233.2
		2536.51	254-406	11/13/2006	303.91	2232.6
		2536.51	254-406	4/23/2007	303.15	2233.36
		2536.51	254-406	11/13/2007	302.94	2233.57
		2536.51	254-406	2/21/2008	301.79	2234.72
		2536.51	254-406	4/7/2008	300.66	2235.85
		2536.51	254-406	10/28/2008	300.39	2236.12
		2536.51	254-406	9/23/2011	290.83	2245.68
		2536.51	254-406	2/15/2013	287.59	2248.92
		2536.51	254-406	2/27/2015	282.98	2253.53
WR-702A	910267	2526.33	292-392	2/19/2009	311.9	2214.43
		2526.33	292-392	5/20/2009	313.38	2212.95
		2526.33	292-392	8/19/2009	311.9	2214.43
		2526.33	292-392	10/15/2009	311.15	2215.18
		2526.33	292-392	11/23/2009	310.69	2215.64
		2526.33	292-392	2/18/2010	309.32	2217.01

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Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-702A	910267	2526.33	292-392	5/20/2010	309.07	2217.26
		2526.33	292-392	8/18/2010	307.42	2218.91
		2526.33	292-392	11/16/2010	307	2219.33
		2526.33	292-392	2/22/2011	305.45	2220.88
		2526.33	292-392	9/22/2011	300.77	2225.56
		2526.33	292-392	2/15/2013	298.11	2228.22
		2526.33	292-392	4/2/2013	297.55	2228.78
		2526.33	292-392	6/4/2013	296.96	2229.37
		2526.33	292-392	8/22/2013	296.51	2229.82
		2526.33	292-392	11/19/2013	296.11	2230.22
		2526.33	292-392	2/20/2014	296.27	2230.06
		2526.33	292-392	5/15/2014	296.29	2230.04
		2526.33	292-392	8/20/2014	295.69	2230.64
		2526.33	292-392	11/25/2014	295.28	2231.05
		2526.33	292-392	2/27/2015	294.48	2231.85
WR-703A	910326	2520.74	294-394	5/20/2009	309.48	2211.26
		2520.74	294-394	8/19/2009	307.91	2212.83
		2520.74	294-394	11/23/2009	306.42	2214.32
		2520.74	294-394	2/18/2010	305.43	2215.31
		2520.74	294-394	5/20/2010	304.29	2216.45
		2520.74	294-394	8/18/2010	303.84	2216.9
		2520.74	294-394	11/16/2010	302.86	2217.88
		2520.74	294-394	9/22/2011	295.66	2225.08
		2520.74	294-394	2/15/2013	291.93	2228.81
		2520.74	294-394	4/2/2013	292.59	2228.15
		2520.74	294-394	6/4/2013	291.95	2228.79
		2520.74	294-394	8/22/2013	291.48	2229.26
		2520.74	294-394	11/19/2013	291.13	2229.61
		2520.74	294-394	2/20/2014	291.38	2229.36
		2520.74	294-394	5/15/2014	291.4	2229.34
		2520.74	294-394	8/20/2014	290.71	2230.03
		2520.74	294-394	11/25/2014	290.21	2230.53
		2520.74	294-394	2/27/2015	289.51	2231.23
WR-704A	910363	2521.84	290-350	5/20/2009	312.91	2208.93
		2521.84	290-350	8/19/2009	311.29	2210.55
		2521.84	290-350	11/23/2009	309.89	2211.95
		2521.84	290-350	2/18/2010	308.7	2213.14
		2521.84	290-350	5/20/2010	307.8	2214.04
		2521.84	290-350	8/18/2010	307.64	2214.2
		2521.84	290-350	11/16/2010	306.16	2215.68

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- = data not applicable or available

Appendix A. Groundwater Elevation Data, 2001 through March 2015
Broadway-Pantano WQARF Site
Tucson, Arizona

Well ID	ADWR Reg. No.	Measuring Point Elevation (feet amsl)	Screened Interval (feet below grade)	Date	Depth to Groundwater (feet)	Groundwater Elevation (feet amsl)
WR-704A	910363	2521.84	290-350	9/22/2011	299.72	2222.12
		2521.84	290-350	2/15/2013	296.86	2224.98
		2521.84	290-350	4/2/2013	297.64	2224.2
		2521.84	290-350	4/25/2013	297.41	2224.43
		2521.84	290-350	5/23/2013	297.14	2224.7
		2521.84	290-350	6/4/2013	296.91	2224.93
		2521.84	290-350	7/29/2013	296.47	2225.37
		2521.84	290-350	8/22/2013	295.58	2226.26
		2521.84	290-350	9/11/2013	295.48	2226.36
		2521.84	290-350	10/24/2013	295.58	2226.26
		2521.84	290-350	11/19/2013	295.62	2226.22
		2521.84	290-350	12/19/2013	295.71	2226.13
		2521.84	290-350	1/14/2014	295.3	2226.54
		2521.84	290-350	2/20/2014	295.46	2226.38
		2521.84	290-350	3/10/2014	296.24	2225.6
		2521.84	290-350	4/24/2014	296.33	2225.51
		2521.84	290-350	5/10/2014	295.77	2226.07
		2521.84	290-350	6/6/2014	295.45	2226.39
		2521.84	290-350	6/25/2014	295.27	2226.57
		2521.84	290-350	7/28/2014	295.12	2226.72
		2521.84	290-350	8/20/2014	294.8	2227.04
		2521.84	290-350	9/10/2014	294.64	2227.2
		2521.84	290-350	10/23/2014	294.31	2227.53
		2521.84	290-350	11/25/2014	294.31	2227.53
		2521.84	290-350	12/17/2014	293.87	2227.97
		2521.84	290-350	1/15/2015	293.63	2228.21
		2521.84	290-350	2/27/2015	294.51	2227.33

NOTE: ft amsl - feet above mean sea level
- = data not applicable or available

APPENDIX B

FIELD FORMS AND NOTES

AMEC EARTH & ENVIRONMENTAL, INC. **GOUNDWATER SAMPLING RECORD**

PROJECT: BRAODWAY PANTANO WQARF **AMEC JOB NO:** 14-2014-2029
FIELD PERSONAL: BTC / AEY **FIELD OPERATIONS LEADER:** Alex Yiannakakis

A. Basic Data

Well No.: CVA Date: 12-22-14

Total Well Depth: – Screen Interval: –

Equipment D-Con Prior to Sampling: Yes

Method of Sampling: PDB

Water Level Measuring Device: Solinst Model 101 Serial # 296.49'

B. SAMPLING COLLECTION

Sample ID: BP-CVA-WG-321.5-011215 DUP ID: MS/SD ID:

Date of Sampling: 1/12/15

Time of Sampling: 1420

Static Water Level Below MP: 296.49' Time: 12:10

Depth of PDB/Hydrosleve (ft): 25' ~~Bay~~ Set Depth Below Water Level (ft): 321.5'

Time/Date Installed: 12:20/12-22-14 Time/Date Ends:

Water Characteristics:

Feet of Standing Water in Well:

Installed in old CVA well. 8" well casing with 8" well cap.

WATER LEVEL AT SAMPLING: ~~279~~ 297.34

amec

GROUNDWATER SAMPLING RECORD (CONT.)

C. SAMPLE CONTAINERS, PRESERVATIVES, AND ANALYSIS

Sample Container	Preservative	Analysis Requested
40mL VOA	HCl	8260B

D. TRANSPORT TO LABORATORY

Chain-of-Custody form completed: Yes ✓ No____

Custody Seals Placed on Samples: Yes ✓ No____

QA/QC Samples:____

Samples Kept Cool in Ice Chest: Yes ✓ No____

Laboratory Delivered To (1) TEST AMERICA (2)____

(3)____ (4)____

Method of Delivery (1) HAND (2)____

(3)____ (4)____

Date/Time Delivered (1) 1/13/15 1554 (2)____

(3)____ (4)____

D. COMMENTS

amec

AMEC EARTH & ENVIRONMENTAL, INC. **GOUNDWATER SAMPLING RECORD**

PROJECT: BRAODWAY PANTANO WQARF **AMEC JOB NO:** 14-2014-2029
FIELD PERSONAL: B. COMBS/A. YANAKAKIS **FIELD OPERATIONS LEADER:** ALEX YANAKAKIS

A. Basic Data

Well No.: C-48 Date: 12/22/14

Total Well Depth: ~ Screen Interval: —

Equipment D-Con Prior to Sampling: YES

Method of Sampling: PDB

Water Level Measuring Device: SOLONIST MODEL 101

B. SAMPLING COLLECTION

~~BP-W~~ BP-C-48-WG-300-011215
Sample ID: DUP ID: MS/SD ID:

Date of Sampling: 1/12/15

Time of Sampling: 1340

Static Water Level Below MP: 281.08' Time: 13:00

Depth of PDB/Hydrosleve (ft): ~~25~~ 19' Set Depth Below Water Level (ft): 300'

Time/Date Installed: 13:20/12-22-14 Time/Date Ends:

Water Characteristics: Rusty water

Feet of Standing Water in Well:

Place at 300' due to steel cable length

Water Level @ sampling: 281.83

amec

GROUNDWATER SAMPLING RECORD (CONT.)

C. SAMPLE CONTAINERS, PRESERVATIVES, AND ANALYSIS

Sample Container	Preservative	Analysis Requested
40 mL	HCl	8260B

D. TRANSPORT TO LABORATORY

Chain-of-Custody form completed: Yes ✓ No____

Custody Seals Placed on Samples: Yes ✓ No____

QA/QC Samples:____

Samples Kept Cool in Ice Chest: Yes ✓ No____

Laboratory Delivered To (1) TEST AMERICA (2)____

(3)____ (4)____

Method of Delivery (1) HAND (2)____

(3)____ (4)____

Date/Time Delivered (1) 1/13/15 1554 (2)____

(3)____ (4)____

D. COMMENTS

amec

AMEC EARTH & ENVIRONMENTAL, INC. **GOUNDWATER SAMPLING RECORD**

PROJECT: BRAODWAY PANTANO WQARF **AMEC JOB NO:** 14-2014-2029
FIELD PERSONAL: _____ **FIELD OPERATIONS LEADER:** _____

A. Basic Data

Well No.: R-68A Date: 12-22-14

Total Well Depth: _____ Screen Interval: _____

Equipment D-Con Prior to Sampling: Water level sounder cleaned w/ Alconox + purified H_2O

Method of Sampling: PDBS

Water Level Measuring Device: Solinst

B. SAMPLING COLLECTION

Sample ID: BP-R-68A-WG-342-011315 DUP ID: _____ MS/SD ID: _____

Date of Sampling: 1/13/15

Time of Sampling: 1130

Static Water Level Below MP: 317.04 Time: 14:30

Depth of PDB/Hydrosleve (ft): 25' Set Depth Below Water Level (ft): 342.00

Time/Date Installed: 14:45 12-22-14 Time/Date Ends: _____

Water Characteristics: _____

Feet of Standing Water in Well: _____

well blowing

WATER LEVEL AT SAMPLING: 316.87' BTOC

amec

GROUNDWATER SAMPLING RECORD (CONT.)

C. SAMPLE CONTAINERS, PRESERVATIVES, AND ANALYSIS

Sample Container	Preservative	Analysis Requested
40mL VOA	HCl	8260B

D. TRANSPORT TO LABORATORY

Chain-of-Custody form completed: Yes X No____

Custody Seals Placed on Samples: Yes X No____

QA/QC Samples: —

Samples Kept Cool in Ice Chest: Yes X No____

Laboratory Delivered To (1) TEST AMERICA (2)____

(3)____ (4)____

Method of Delivery (1) HAND (2)____

(3)____ (4)____

Date/Time Delivered (1) 1/13/15 1554 (2)____

(3)____ (4)____

D. COMMENTS

amec

AMEC EARTH & ENVIRONMENTAL, INC. **GOUNDWATER SAMPLING RECORD**

PROJECT: BRAODWAY PANTANO WQARF **AMEC JOB NO:** 14-2014-2029
FIELD PERSONAL: COMBS **FIELD OPERATIONS LEADER:** AEX

A. Basic Data

Well No.: WR-273A Date: 12/23/14

Total Well Depth: Screen Interval: —

Equipment D-Con Prior to Sampling: DECON SOUNDER W/ LIQUINOX & WATER

Method of Sampling: PDB

Water Level Measuring Device: SOLONIST MODEL 101

B. SAMPLING COLLECTION

Sample ID: BP-WR-273A-WG-323-011315 DUP ID: — MS/SD ID: —

Date of Sampling: 011315

Time of Sampling: 1215

Static Water Level Below MP: 298.40 Time: 1332

Depth of PDB/Hydrosleve (ft): 323.40 Set Depth Below Water Level (ft): 25

Time/Date Installed: 12/23/14 1330 Time/Date Ends:

Water Characteristics:

Feet of Standing Water in Well:

TRANSDUCER IN WELL

STATIC DEPTH AT SAMPLING 298.07' BTOC

amec

GROUNDWATER SAMPLING RECORD (CONT.)

C. SAMPLE CONTAINERS, PRESERVATIVES, AND ANALYSIS

Sample Container	Preservative	Analysis Requested
40 mL VOA	HCl	8260B

D. TRANSPORT TO LABORATORY

Chain-of-Custody form completed: Yes X No_____

Custody Seals Placed on Samples: Yes X No_____

QA/QC Samples: —

Samples Kept Cool in Ice Chest: Yes X No_____

Laboratory Delivered To (1) TEST AMERICA (2)_____

(3)_____ (4)_____

Method of Delivery (1) HAND (2)_____

(3)_____ (4)_____

Date/Time Delivered (1) 1/13/15 1554 (2)_____

(3)_____ (4)_____

D. COMMENTS

amec

AMEC EARTH & ENVIRONMENTAL, INC. **GOUNDWATER SAMPLING RECORD**

PROJECT: BRAODWAY PANTANO WQARF **AMEC JOB NO:** 14-2014-2029
FIELD PERSONAL: COMBS **FIELD OPERATIONS LEADER:** AEY

A. Basic Data

Well No.: WR-274A Date: 12/23/14

Total Well Depth: — Screen Interval: —

Equipment D-Con Prior to Sampling: SOUNDER DECONED W/ LIQUINOX & WATER

Method of Sampling: PDB

Water Level Measuring Device: SOLONIST 101

B. SAMPLING COLLECTION

Sample ID: BELOW DUP ID: — MS/SD ID: —

Date of Sampling: 1/13/15

Time of Sampling: BELOW

Static Water Level Below MP: 311.09 Time: ~~BELOW~~

Depth of PDB/Hydrosleve (ft): 316.07 Set Depth Below Water Level (ft): 5

~~3226~~ 326.09 15

336.09 25

Time/Date Installed: 12/23/14 1230 Time/Date Ends:

Water Characteristics:

Feet of Standing Water in Well:

SAMPLE ID: BP-WR-274A-WG-316-011315 SAMPLE TIME: 1040
BP-WR-274A-WG-326-011315 1050
BP-WR-274A-WG-336-011315 1100

STATIC WATER: 310.84' BTOC 1035
AT SAMPLING

amec

GROUNDWATER SAMPLING RECORD (CONT.)

C. SAMPLE CONTAINERS, PRESERVATIVES, AND ANALYSIS

Sample Container	Preservative	Analysis Requested
40mL VOA	HCl	8260B

D. TRANSPORT TO LABORATORY

Chain-of-Custody form completed: Yes X No____

Custody Seals Placed on Samples: Yes X No____

QA/QC Samples:____

Samples Kept Cool in Ice Chest: Yes X No____

Laboratory Delivered To (1) TEST AMERICA (2)____

(3)____ (4)____

Method of Delivery (1) HAND (2)____

(3)____ (4)____

Date/Time Delivered (1) 1/13/15 1554 (2)____

(3)____ (4)____

D. COMMENTS

amec

AMEC EARTH & ENVIRONMENTAL, INC. **GOUNDWATER SAMPLING RECORD**

PROJECT: BRAODWAY PANTANO WQARF **AMEC JOB NO:** 14-2014-2029
FIELD PERSONAL: COMBS **FIELD OPERATIONS LEADER:** ~~COMBS~~ AEY

A. Basic Data

Well No.: WR - 367A Date: 12/23/14

Total Well Depth: Screen Interval:

Equipment D-Con Prior to Sampling: ~~[illegible]~~ WATER LEVEL SOUNDER CLEANED w/ LIQUINOX & WATER

Method of Sampling: PDBS

Water Level Measuring Device: SOLONIST MODEL 101

B. SAMPLING COLLECTION

SHALLOW BP-WR-367A-WG-343.~~0~~-011215
Sample ID: ~~BP-WR-367AWG~~ DUP ID: MS/SD ID:
DEEP BP-WR-367A-WG-363-011215
Date of Sampling: 011215

Time of Sampling: 1245 / 1250

Static Water Level Below MP: 338.69 ~~338.44~~ Time: 11:30

Depth of PDB/Hydrosleve (ft): 343.69 Set Depth Below Water Level (ft): 5

363.69 25

Time/Date Installed: 12/23/14 11:30 Time/Date Ends: ~~[illegible]~~ 1/12/15 1245 1250

Water Characteristics:

Feet of Standing Water in Well:

WATER LEVEL AT SAMPLING: 338.44

ame

GROUNDWATER SAMPLING RECORD (CONT.)

C. SAMPLE CONTAINERS, PRESERVATIVES, AND ANALYSIS

Sample Container	Preservative	Analysis Requested
40 mL	HCl	8260B

D. TRANSPORT TO LABORATORY

Chain-of-Custody form completed: Yes X No____

Custody Seals Placed on Samples: Yes X No____

QA/QC Samples:____

Samples Kept Cool in Ice Chest: Yes X No____

Laboratory Delivered To (1) TEST AMERICA (2)____

(3)____ (4)____

Method of Delivery (1) HAND (2)____

(3)____ (4)____

Date/Time Delivered (1) 1/13/15 1554 (2)____

(3)____ (4)____

D. COMMENTS

amec

WATER LEVEL MEASUREMENT FORM

Project No. 1420142029.3.1	Project Name: Broadway Pantano WQARF
Meter (Type & ID #):	Measuring Point: **TOC**
Field Personnel: BTC/AEY	Field Operations Leader (Alex Yiannakakis

Well ID	Date	Time	Depth to Water (ft BTOC)	Notes/Comments/Condition of Well
BP-1				
BP-7				
BP-8				
BP-9				
BP-10				
BP-11				
BP-15				
BP-19				
BP-20				
BP-22				
BP-23				
BP-24A				
BP-24B				
BP-24C				
BP-25				
C-20B				
C-022A				
C-025B				
C-026B				
C-048A	12-22-14	13:00	281.08	
C-051A/B				
C-058A				
CVA	12-22-14	12:10	296.49	no well cap 8" casing
D-018A				
D-022A				
D-039A				
D-040A				
R-068A	12-22-14	14:30	317.04	
R-069B				
R-124				
R-125				
SE-001				
WR-177A				
WR-181A				
WR-207B				
WR-~~273A~~ 274A	12/23/14	~~311.09~~	311.09	TIME: 1225
WR-~~274A~~ 273A	12/23/14	1335	298.40	TRANSDUCER IN WELL
WR-275A				
WR-353A				
WR-358A				
WR-367A	12/23/14	11:30	358.69	
WR-435A				

Notes:

BTOC = Below top of casing; ID = Identification; TOC = Top of casing; ft = feet

[a]TOC elevations are below ground surface. All other wells presented in this table have TOC elevations that are above ground surface.

[b]Observation well monitored only for groundwater elevations (not sampled).

Signatures

Field Team Leader: _____ Reviewer: _____

WATER LEVEL MEASUREMENT FORM

Project No.	Project Name: Broadway Pantano WQARF
Meter (Type & ID #):	Measuring Point: **TOC**
Field Personnel:	Field Operations Leader (Alex Yiannakakis

Well ID	Date	Time	Depth to Water (ft BTOC)	Notes/Comments/Condition of Well
R-090A				
R-092A				
SJ-001				
SJ-002				
WR-178A				
WR-179A				
WR-180A				
WR-186A				
WR-207A				
WR-352A				
WR-354A				
WR-702A				
WR-703A				
WR-704A				
BP-2				
BP-3				
BP-4				
BP-5				
BP-16				
BP-21				
C-12B				
C-026A				
C-49A/B				
C-056A				
C-124A				
C-125A				
D-021A				
D-041A				
D-049A				
R-091A				
WR-458A				
WR-459A				

Notes:

BTOC = Below top of casing; ID = Identification; TOC = Top of casing; ft = feet

[a]TOC elevations are below ground surface. All other wells presented in this table have TOC elevations that are above ground surface.

[b]Observation well monitored only for groundwater elevations (not sampled).

Signatures

Field Team Leader: _____ Reviewer: _____

DAILY TAILGATE SAFETY MEETING CHECKLIST

Project: ~~20202914~~ 1420142029 Site: BROADWAY FANTANA
Date: Location:

To be reviewed on the first day of site activities and when new workers arrive on site:

Alternate for Health & Safety:
Location of on-site HASP:
Site training requirements: See HASP
Specific medical surveillance requirements: See HASP

Agenda:
During the project, one or more of the agenda items could be selected for the required daily site training.

		Check-off: Date				
		12/22	12/23			
1.	Planned work for this day (discuss)	☑	☑	☐	☐	☐
2.	Physical hazards and controls (discuss/review)	☑	☑	☐	☐	☐
3.	Chemical hazards and controls (discuss/review)	☑	☑	☐	☐	☐
4.	Biological hazards and controls (discuss/review)	☑	☑	☐	☐	☐
5.	Personal protective equipment Modified D	☑	☑	☐	☐	☐
6.	Personal protective equipment required per the hazard assessment:	☑	☑	☐	☐	☐

SPECIFY TYPE	
Protective coveralls	
Safety glasses/goggles	ANSI approved
Hard hat	ANSI approved
Foot protection	Safety toe boots
Work gloves	For moving equipment or drums
Chemical gloves	Nitrile gloves for sampling
Hearing protection	Noisy Equipment
Other	

7.	Review inspection, decontamination, and maintenance procedures and the limitations of the above stated PPE.	☑	☑	☐	☐	☐
8.	Decontamination procedure (discuss/review)	☑	☑	☐	☐	☐
9.	Exclusion zone maintained	☑	☑	☐	☐	☐
10.	Site emergency response plan (discuss/review)	☑	☑	☐	☐	☐
11.	Signs and symptoms of overexposure to chemicals anticipated on site	☑	☑	☐	☐	☐
12.	General health and safety rules	☑	☑	☐	☐	☐
13.	Specific health and safety requirements relating to site activities including: (discuss/review)	☑	☑	☐	☐	☐
14.	Drilling/boring	☑	☑	☐	☐	☐
15.	UST	☐	☐	☐	☐	☐
16.	Excavations (including UG utility locations)	☑	☑	☐	☐	☐
17.	Heavy equipment	☑	☑	☐	☐	☐
18.	Slips, trips, and falls	☑	☑	☐	☐	☐
19.	Lockout/tagout	☐	☐	☐	☐	☐
20.	Working in temperature extremes	☐	☐	☐	☐	☐
21.	Rain or other weather advisories	☐	☐	☐	☐	☐
22.	Other health & safety issues (discuss/note)	☑	☑	☐	☐	☐
	Quality Topics					
23.	Have team members been issued SOPs, site WP, and H&S Plan?	☑	☑	☐	☐	☐
24.	Quality discussed as goal for work day activities including but not limited to:	☑	☑	☐	☐	☐

- Field Variances,
- boring logs,
- sampling logs,
- chains of custody,
- subcontractor management, etc.

DAILY TAILGATE SAFETY MEETING CHECKLIST

I have participated in the daily safety meeting discussing the topics indicated on the reverse and fully understand my responsibility for complying with all health and safety requirements. I have had the opportunity to have my questions on site health and safety issues and procedures answered.

Employee Name	Employee Signature	Date
BRANDON T. COMBS		12/22/14
BRANDON T. COMBS		12/23/14

Alex Viannakis — 12-22-14

Name and Signature of person conducting training — Date

DAILY TAILGATE SAFETY MEETING CHECKLIST

Project: BROADWAY PANTANO Site: BROADWAY PANTANO
Date: 1/12/15 - 1/13/15 ~~Location:~~ PROJECT ~~#~~ 14-2014-2029

To be reviewed on the first day of site activities and when new workers arrive on site:

Alternate for Health & Safety:	
Location of on-site HASP:	
Site training requirements:	See HASP
Specific medical surveillance requirements:	See HASP

Agenda:
During the project, one or more of the agenda items could be selected for the required daily site training.

		Check-off: Date 1/12	1/13			
1.	Planned work for this day (discuss)	☒	☒	☐	☐	☐
2.	Physical hazards and controls (discuss/review)	☒	☒	☐	☐	☐
3.	Chemical hazards and controls (discuss/review)	☒	☒	☐	☐	☐
4.	Biological hazards and controls (discuss/review)	☒	☒	☐	☐	☐
5.	Personal protective equipment Modified D	☒	☒	☐	☐	☐
6.	Personal protective equipment required per the hazard assessment:	☒	☒	☐	☐	☐

SPECIFY TYPE	
Protective coveralls	
Safety glasses/goggles	ANSI approved
Hard hat	ANSI approved
Foot protection	Safety toe boots
Work gloves	For moving equipment or drums
Chemical gloves	Nitrile gloves for sampling
Hearing protection	Noisy Equipment
Other	

7.	Review inspection, decontamination, and maintenance procedures and the limitations of the above stated PPE.	☒	☒	☐	☐	☐
8.	Decontamination procedure (discuss/review)	☒	☒	☐	☐	☐
9.	Exclusion zone maintained	☒	☒	☐	☐	☐
10.	Site emergency response plan (discuss/review)	☒	☒	☐	☐	☐
11.	Signs and symptoms of overexposure to chemicals anticipated on site	☒	☒	☐	☐	☐
12.	General health and safety rules	☒	☒	☐	☐	☐
13.	Specific health and safety requirements relating to site activities including: (discuss/review)	☒	☒	☐	☐	☐
14.	Drilling/boring	☐	☐	☐	☐	☐
15.	UST	☐	☐	☐	☐	☐
16.	Excavations (including UG utility locations)	☐	☐	☐	☐	☐
17.	Heavy equipment	☐	☐	☐	☐	☐
18.	Slips, trips, and falls	☒	☒	☐	☐	☐
19.	Lockout/tagout	☐	☐	☐	☐	☐
20.	Working in temperature extremes	☒	☒	☐	☐	☐
21.	Rain or other weather advisories	☒	☒	☐	☐	☐
22.	Other health & safety issues (discuss/note)	☐	☐	☐	☐	☐
	Quality Topics					
23.	Have team members been issued SOPs, site WP, and H&S Plan?	☒	☒	☐	☐	☐
24.	Quality discussed as goal for work day activities including but not limited to:	☒	☒	☐	☐	☐

- Field Variances,
- boring logs,
- sampling logs,
- chains of custody,
- subcontractor management, etc.

DAILY TAILGATE SAFETY MEETING CHECKLIST

I have participated in the daily safety meeting discussing the topics indicated on the reverse and fully understand my responsibility for complying with all health and safety requirements. I have had the opportunity to have my questions on site health and safety issues and procedures answered.

Employee Name	Employee Signature	Date
BRANDON COMBS		1/12/15
Kyle Keegan		1/12/15
BRANDON COMBS		1/13/15
Kyle Keegan		1/13/15

Name and Signature of person conducting training

Date

DAILY REPORT

Report by BRANDON COMBS

Project Name BROADWAY PANTANO

Project Manager

Job No. 14-2014-2029 Date 1/12/15 - 1/13/15 Day MON - TUES

NAME (AMEC Employee)	CLASS	TVL	FLD WK	STDBY	LAY	REC	TEST*	GRT	MISC	NB*	TOTAL

* SEE CONTRACT OR PROJECT MANAGER FOR APPLICABLE RATES*

SUBCONTRACTED EQUIPMENT				(TO BE BILLED FROM INVOICE)		AMEC EQUIPMENT- UNIT FEE SCHEDULE			
FOR ITEM	FIRM NAME	UNIT TYPE (FT/HRS/DAYS) *	NO. OF UNITS*	PO #	Billable Gas Charge (Attach Receipt)*	ITEM	AMEC EQUIPMENT NO.	BILLABLE UNITS UNIT TYPE (CIRCLE ONE)	BILLABLE UNITS NO. OF UNITS
DRILL RIG #1						PICKUP	180	MILES OR DAILY	1
DRILL RIG #2						PICKUP		MILES OR DAILY*	
BACKHOE						SEISMOGRAPH		LINES	
DOZER						STEAM CLEANER		DAILY	
GENERATOR						WATER TANK		DAILY	
COMPRESSOR						GPS		DAILY	
STEAM CLEANER						CORE BOXES		EACH	
WATER TRUCK						BOTTLED WATER		EACH	
RENTED VEHICLE						PACKER SYSTEM		DAILY	
RENTED VEHICLE						PRESSUREMETER		DAILY	

ADDITIONAL ENVIRONMENTAL FIELD EQUIPMENT ON REVERSE SIDE OF FORM? (CIRCLE ONE) **YES OR NO**

BORING NO.									
INTERVAL DRILLED									
WELL INSTALLED									

REMARKS: Discuss weather & site conditions; difficult drilling conditions; reasons for above Standby, Repair, Misc. and/or NB time.

TRUCK 180 HAS A BROKEN TAILGATE.
ALSO CHECK ENGINE LIGHT BRIEFLY CAME ON
AND TIRE PRESSURE SENSOR

Tailgate Safety Meeting

SIGNATURES:

Location B-P LF Date 12-22-14

Project Client

Access to WR-273A
From Rosewood, turn
into KSung 9' parking
lot to west/south
Hop curve follow dirt
area to well

Access to WR-274A
row gate next to
EP Substation off of
5th st or from BNL

Trip Blank added to
COC

Location Mircle Mile Date

Project / Client

Villa Capri
16:35 Arrive on site Get keys
to well from front office

Go to well to sample
unlock gate. Well is not
17:00 running. Collect sample
anyway from spigot
Water is from holding tank
Samples for nitrate, total chromium & VOCs
Well turned on ~~during~~
before leaving but was pumping
air so did not wait to
collect samples

Trip blank included

Location _____ Date _____

Project / Client _____

Location Broadway Pantano Date 12-22-14

Project / Client Site Tour & Enhanced GW Sampling

8:20 Meet Gretchen W of ADEQ On Site. Inspect Cross Site Gate open, signs tagged

Note access to BNL near south gate
Pedestrians & dogs On-Site

Find R-68A & SVE compound

Tour BSL also. Inspect shallow methane probes
Unable to find MW-5 shallow soil gas probes. Find B-22
WR-367A
Note: need two people to open R-68A

11:00 Buy supplies at Home Depot

11:30 Arrive at CVA well. Well is open. Mike's drilling pulling pump from new well.

Location BP-LF Date 12-22-14

Project / Client

Enhanced WQ Sampling

11:45 Meet Ron w/ CVA
Gives us permission to install PDB. Well driller will place an 8" well cap w/ 2-inch threaded access port.

12:10 Deploy PDB in CVA
25' bwt. WL = 296.49'
Deployed at 321.5'

12:20 Seal well cap.
Get D-I water for decontaminating water level sounder.
Decon water level sounder with Alconox & Water rinse

Location BP-LF Date 12-22-14 9

Project / Client

Enhanced GW Sampling.

13:00 Meet Chuck Fass from Tucson Water.
Place PDB at 300' bgs in C-48A

13:30 Collect water sample from C-51B
Well is running
C-51B 122214
Sample for 8260B

13:45 Collect water sample from C-125A
Tucson water has to turn well on @ 13:50. Let purge for 5 minutes
Sample for 8260B

13:50 Collect sample C-125A-122214

14:45 Set PDB in R-68A @ 342'
WL = 317.04' Secure Site
Locate CR-367A.

Location BROADWAY/PANTANO Date 12/23/14

Project / Client ADEQ

0820 · DROP SAMPLES OFF @ TEST AMERICA FROM PREVIOUS DAY

1020 PICK UP HOSES & FILES FROM ADEQ TUSCAN OFFICE

1130 SET PDB @WR367A

1230 SET PDB @WR274A

SAW A HOMELESS MAN ON SITE, GRABBED LUNCH

1330 SET PDB @ WR-273A

TRANSDUCER IN WELL

1402 OFF SITE HEADED BACK TO PHOENIX

* DROSS SITE

LOCK COMBO (LANDFILL)

~~0472~~ 1100

Location BROADWAY/PANTANO Date 1/12/15

Project / Client ADEQ COMBS/KEEGAN

0700 PICK UP BOTTLE ORDER FROM TEST AMERICA

0730 AT AMEC OFFICE TO PREP AND MEET w/ ALEX. PICK UP iPAD FROM PAUL

1010 PICK UP SOUNDER FROM TERRATECH AND HEAD OUT FROM PHOENIX

12:45 Sampled WR-367A

13:40 Sampled C-48 (City of Tucson opened Gate For Us)

14:20 Sampled CBA

1440 HEAD TO LANDFILL. FRONT GATE DAMAGED AND NEEDED A CROWBAR TO OPEN. FOUND R069B. 20ft NORTH OF BLUE WELL VAULT IN DEPRESSION

Location BROADWAY/PANTANO Date 1/12/15

Project / Client ADEQ

~~1530~~ 1530 HEAD BACK TO PHOENIX

1745 BACK TO PHOENIX

1/13/15

COMBS / KEEGAN

0745 LEAVE PHOENIX
1040 SAMPLE WR-274 SHALLOW
1050 SAMPLE WR-274 MEDIUM
1100 SAMPLE WR-274 DEEP
1130 SAMPLE R-68A
1215 DOWNLOAD TRANSDUCER AT WR-273A, SAMPLE TIME 1215
TRANSDUCER WOULDN'T DOWNLOAD SO HAD TO BE PULLED.
SCOUTED WELLS FOR FEB.
1554 DROP SAMPLES AT TEST AMERICA
1630 RETURN SOUNDER TO TERRATECH.

Location Date

Project / Client

Chain of Custody Record

065115

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

TAL-8210 (0713)

TestAmerica Phoenix
4625 E. Cotton Center Blvd.
Suite 189
Phoenix, AZ 85040
602.437.3340 Fax:

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: JIM CLARKE	Site Contact: A. GU	Date: 12/22/14	COC No:
Company Name:	Tel/Fax: 602-733-6000	Lab Contact: VIC NIELSON	Carrier: COMBS	____ of ____ COCs
Address: 4600 E. WASHINGTON ST #600	Analysis Turnaround Time			Sampler:
City/State/Zip: PHOENIX AZ 85034	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 480-830-3700	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name:	☐ 1 week			
Site: MIRACLE MILE	☐ 2 days			Job / SDG No.:
PO# 1420142030	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	CITRATE	~~TOTAL CR~~	TOTAL CHROMIUM	8260B	Sample Specific Notes:
VillaCapri-122214	122214	1700	G	Aq	1	N	N	1				
VillaCapri-122214	↓	1700			1	N	N			1		
VillaCapri-122214		1700			3						1	
~~T-B01-122214 VOC~~					~~2~~						~~1~~	
T-B-122214	122214				1						1	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for____ Months

Special Instructions/QC Requirements & Comments:

1.4

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:____ Corr'd:____ | Therm ID No.:____

Relinquished by:	Company: ANEC	Date/Time: 12/23/14 0820	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TA	Date/Time: 12/23/14 0820

Chain of Custody Record

065114

TestAmerica Phoenix
4625 E. Cotton Center Blvd.
Suite 189
Phoenix, AZ 85040
Phone: 602.437.3340 Fax:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact:	Project Manager: JIM CLARK	Site Contact: A. YIANNAKAKIS	Date: 12/22/14	COC No:
Company Name: AMEC	Tel/Fax:	Lab Contact: VIC NIELSON	Carrier: COMBS	____ of ____ COCs
Address: 4600 S. WASHINGTON #160	Analysis Turnaround Time			Sampler:
City/State/Zip: PHOENIX AZ 85034	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 480-830-2700	TAT if different from Below ____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: CALL ALEX FOR PO #	☐ 1 week			
Site: BROADWAY SANTANA	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	8260B	Sample Specific Notes:
C-125-122214	12/22/14	1350	G	Aq	3	N	N	1	
C-51B-122214	↓	1350	↓	↓	3	N	N	1	
~~TB01-122214~~					~~2~~			~~1~~	
T-B-122214	12/22/14				1			1	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments: A. YIANNAKAKIS PHONE # IS 520 247-8736 CALL W/ ANY ISSUES 3.3 C

Custody Seals Intact: ☐ Yes ■ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:____ Corr'd:____ | Therm ID No.:____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	AMEC	12/23/14 0820	[signature]		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
			[signature]	TA	12/23/14 (0820)

Chain of Custody Record

TestAmerica

TestAmerica Laboratories, Inc.

TAL-8210 (0713)

Regulatory Program: DW NPDES RCRA Other:

Client Contact	Project Manager: [redacted]	Site Contact: [redacted] B. COMBS	Date: 01/13/15	COC No:
Company Name: AMEC	Tel/Fax:	Lab Contact: S. N	Carrier:	___ of ___ COCs
Address: 4600 E WASHINGTON ST #600	Analysis Turnaround Time			Sampler: COMBS / KEEGAN
City/State/Zip: L. A. 24	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below			Walk-in Client:
Fax:	2 weeks			Lab Sampling:
Project Name: BROADWAY / PANTANO	1 week			
Site: # 14-2014-2029	2 days			Job / SDG No.:
P O #	1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	8260B	Sample Specific Notes:
BP-WR-367A-WG-343-011215	011215	1245	G	Aq	3			X	6 25
BP-WR-367A-WG-363-011215	↓	1250	↓	↓	3			X	DEQ # 60656
BP-C-48-WG-300-011215		1340			3			X	
BP-CVA-WG-321.5-011215		1420			3			X	
BP-WR-274A-WG-316-011315	011315	1040	G	Aq	3			X	DEQ # 57289
BP-WR-274A-WG-326-011315		1050			3			X	DEQ # 57289
BP-WR-274A-WG-336-011315		1100			3			X	DEQ # 57289
BP-R-68A-WG-342-011315		1130			3			X	DEQ # 60650
BP-WR-273A-WG-323-011315		1215			3			X	DEQ # 57289
BP-TB01-011315	011315	1500			1				

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments: MAGER: ALEX YANAKAKIS 520-247 8736 * REPORT MDR 2.4°C

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	AMEC	1/13/15 15	54		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
			[signature]	TA	1-15-15 1554

WATER LEVEL MEASUREMENT FORM

Project No.	Project Name: Broadway Pantano WQARF
Meter (Type & ID #):	Measuring Point: **TOC**
Field Personnel: COMBS/MILLER	Field Operations Leader (Alex Yiannakakis

Well ID	Date	Time	Depth to Water (ft BTOC)	Notes/Comments/Condition of Well
BP-1	2/2/15	1430	298.00	
BP-7	2/2/15	1655	324.09	
BP-8	2/3/15	0800	346.55	
BP-9	2/3/15	0925	319.69	
BP-10	2/3/15	0940	333.85	
BP-11	2/3/15	1005	342.68	
BP-15	2/3/15	0830	342.83	
BP-19	2/2/15	1546	292.11	
BP-20	2/2/15	1407	298.60	
BP-22	2/3/15	1055	339.94	
BP-23	2/5/15	1105	337.80	
BP-24A	2/2/15	1605	315.55	
BP-24B	2/2/15	1635	314.28	
BP-24C	2/3/15	1330	314.25	
BP-25	2/9/15	1515	292.10	
C-20B				
C-022A	2/3/15	1515	332.80	
C-025B				
C-026B				
C-048A/B	2/3/15	1445	281.31	
C-051A/B				
C-058A	2/5/15	1440	311.25	
CVA	2/2/15	1330	296.06	
D-018A				
D-022A	2/3/15	1700	~~[illegible]~~	317.43
D-039A	2/3/15	1605	356.76	
D-040A	2/3/15	1625	~~373.~~	372.97
R-068A	2/9/15	1020	316.86	
R-069B	2/5/15	1355	~~[illegible]~~ 301.71	
R-124				NO ACCESS, PUMP SET
R-125				NO ACCESS. PUMP SET
SE-001	2/2/15	1525	308.49	
WR-177A	2/9/15	1605	327.59	
WR-181A	2/9/15	1535	289.28	
WR-207B	2/9/15	1435	313.70	
WR-273A	2/4/15	1000	298.33	
WR-274A	2/5/15	1335	310.89	
WR-275A	2/5/15	1200	315.91	
WR-353A	2/4/15	1040	298.07	
WR-358A	2/9/15	1500	294.38	
WR-367A	2/4/15	1450	338.43	
WR-435A	2/3/15	1130	352.20	

Notes:

BTOC = Below top of casing; ID = Identification; TOC = Top of casing; ft = feet

[a]TOC elevations are below ground surface. All other wells presented in this table have TOC elevations that are above ground surface.

[b]Observation well monitored only for groundwater elevations (not sampled).

Signatures

Field Team Leader: _____ Reviewer: _____

WATER LEVEL MEASUREMENT FORM

Project No.	Project Name: Broadway Pantano WQARF
Meter (Type & ID #):	Measuring Point: **TOC**
Field Personnel:	Field Operations Leader (Alex Yiannakakis

Well ID	Date	Time	Depth to Water (ft BTOC)	Notes/Comments/Condition of Well
R-090A				
R-092A				
SJ-001				
SJ-002				
WR-178A				
WR-179A				
WR-180A				
WR-186A				
WR-207A			~~318.70~~	
WR-352A				
WR-354A				
WR-702A				
WR-703A				
WR-704A				
BP-2				
BP-3				
BP-4				
BP-5				
BP-16				
BP-21				
C-12B				
C-026A				
C-49A/B				
C-056A				
C-124A				
C-125A				
D-021A	2/3/15	1535	328.95	
D-041A				
D-049A				
R-091A				
WR-458A				
WR-459A				

Notes:

BTOC = Below top of casing; ID = Identification; TOC = Top of casing; ft = feet

[a]TOC elevations are below ground surface. All other wells presented in this table have TOC elevations that are above ground surface.

[b]Observation well monitored only for groundwater elevations (not sampled).

Signatures

Field Team Leader: Reviewer: _____

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** BP-1

Log Date: 2/2/15 Log Time: 1440

Date PDB(s) Deployed: 2/2/15 Matrix: Groundwater

Water Level at Deployment: 298.00

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	323		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO Location/Well ID: BP-7

Log Date: 2/2/15 Log Time: 1700

Date PDB(s) Deployed: 2/2/15 Matrix: Groundwater

Water Level at Deployment: 324.09

Water Level at Sampling: ~~5~~.

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	5	329.09		
	~~25~~	~~349.09~~	OTC	
	~~50~~	~~374.09~~	OTC	
PDB 2	25	349.09		
PDB 3	50	374.09		
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** BP-8

Log Date: 2/3/15 Log Time: 0805

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 346.55

Water Level at Sampling: _____

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	371.55		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** BP-9

Log Date: 2/3/15 Log Time: 0925

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 319.69

Water Level at Sampling:

319
25
344

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	344.69		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** ~~[illegible]~~ BP-10

Log Date: 2/3/15 Log Time: 0940

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 333.85

Water Level at Sampling:

333
25
358

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	358.85		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: B.P. LANDFILL SOUTH **Location/Well ID:** BP-11

Log Date: 2/3/15 Log Time: 1000

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 342.68

Water Level at Sampling: _____

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	85.32	428		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

MOVED PDB DOWN SO IT WOULD BE IN THE MIDDLE OF THE SCREEN INTERVAL

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** BP-15

Log Date: 2/3/15 Log Time: 0830

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 342.83

Water Level at Sampling:

42
125
67

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	367.83		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** B-19

Log Date: 2/2/15 Log Time: 1550

Date PDB(s) Deployed: 2/2/15 Matrix: Groundwater

Water Level at Deployment: 292.11

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	317.11		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** BP-20

Log Date: 2/2/15 Log Time: 142

Date PDB(s) Deployed: ~~1420~~ 2/2/15 Matrix: Groundwater

Water Level at Deployment: 298.60

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25,	323.60		
37	~~50~~	~~348~~		
PDB 2	50	348.60		
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

ADWR# 55208705

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP LANDFILL SOUTH **Location/Well ID:** BP-22

Log Date: 2/3/15 Log Time: 1055

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 339.94

Water Level at Sampling:

339
25
364

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25'	364.94		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP LANDFILL South Location/Well ID: BP-23

Log Date: 2/5/15 Log Time: 1105

Date PDB(s) Deployed: 2/5/15 Matrix: Groundwater

Water Level at Deployment: 337.80

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25'	362.8		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

OBSTRUCTION AT ~ 290 ft

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** BP-24A

Log Date: 2/2/15 Log Time: 1625

Date PDB(s) Deployed: 2/2/15 Matrix: Groundwater

Water Level at Deployment: 315.55

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	15	330.55		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments: DID NOT DEPLOY 2nd PDB SINCE IT WOULD HAVE BEEN OUT OF THE SCREEN INTERVAL

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY PANTANO Location/Well ID: BP-24B

Log Date: 2/2/15 Log Time: 1640

Date PDB(s) Deployed: 2/2/15 Matrix: Groundwater

Water Level at Deployment: 314.28

Water Level at Sampling: _____

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	80.72	395		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

ONLY ONE PDB SET IN MIDDLE OF THE SCREEN INTERVAL

385 - 405

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY / PANTANO **Location/Well ID:** BP 24-C

Log Date: 2/3/15 Log Time: 1330

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 314.25

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	135.75	450		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

LENGTH ADJUST SO PDB WOULD BE SET IN THE SCREEN INTERVAL

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** BP-25

Log Date: 2/9/15 Log Time: 1515

Date PDB(s) Deployed: 2/9/15 Matrix: Groundwater

Water Level at Deployment: 292.10

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	317.10		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Key 3210

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** C-22A

Log Date: 2/3/15 Log Time: 1515

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 332.80

Water Level at Sampling:

332
25
357

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25'	357.80		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO Location/Well ID: C-48 A/B

Log Date: 2/3/15 Log Time: 1445

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 281.31

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	~~24~~'	~~30~~ 305		
	23.69'			
PDB 2				
PDB 3				
PDB 4				
PDB 5				

305
-281
24

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

STEEL CABLE AT C-48. SET DEPTH ADJUSTED TO ACCOMADATE LENGTH OF THE CABLE

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** C-058A

Log Date: 2/5/15 Log Time: 1440

Date PDB(s) Deployed: 2/5/15 Matrix: Groundwater

Water Level at Deployment: 311.25

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25'	336.25		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** CVA

Log Date: 2/2/15 Log Time: 1330

Date PDB(s) Deployed: 2/2/15 Matrix: Groundwater

Water Level at Deployment: 296.06

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25 ft	321.06		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

3/4, 1 1/4, 1 1/2 (SMOOTH)
THREADED
PLUG SIZES FOR CAP

298.60

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** D-021A

Log Date: 2/3/15 Log Time: 1535

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 328.95

Water Level at Sampling:

28.95
25.00
53.95

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25'	353.95		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** D-022A

Log Date: 2/3/15 Log Time: 1700

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 317.43

Water Level at Sampling:

317.43
25.00
342.43

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	342.43		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** D-039

Log Date: 2/3/15 Log Time: 1605

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 356.76

Water Level at Sampling:

356.76
25.00
381.76

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	381.76		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY PANTANO **Location/Well ID:** D-040 A

Log Date: 2/3/15 Log Time: 1625

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 372.97

Water Level at Sampling: _____

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	107.03	480		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

SET DEPTH ADJUST TO BE IN THE SCREEN INTERVAL

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** R-068A

Log Date: 2/9/15 Log Time: 1050

Date PDB(s) Deployed: 2/9/15 Matrix: Groundwater

Water Level at Deployment: 316.86

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	341.86		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

SAMPLED WITH HYDROSLEEVE AT DEPLOYMENT

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** R-69AB

Log Date: 2/5/15 Log Time: 1355

Date PDB(s) Deployed: 2/5/15 Matrix: Groundwater

Water Level at Deployment: 301.71

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	326.71		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** SE-001

Log Date: 2/2/15 Log Time: 1525

Date PDB(s) Deployed: 2/2/15 Matrix: Groundwater

Water Level at Deployment: 308.49

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	~~[illegible]~~ 24	~~[illegible]~~ 332.49		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments: MOVED CLIP UP 5' TO ACCOMADATE PROPER SET DEPTH. SET 24' BWT

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** WR-177A

Log Date: 2/9/15 Log Time: 1605

Date PDB(s) Deployed: 2/9/15 Matrix: Groundwater

Water Level at Deployment: 327.59

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	352.59		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

RED KEY

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** WR-181A

Log Date: 2/9/15 Log Time: 1535

Date PDB(s) Deployed: 2/9/15 Matrix: Groundwater

Water Level at Deployment: 289.28

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	314.28		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** WR-207B

Log Date: 2/9/15 Log Time: 1435

Date PDB(s) Deployed: 2/9/15 Matrix: Groundwater

Water Level at Deployment: 313.70

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25'	338.7		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** WR-273A

Log Date: 2/4/15 Log Time: 1410

Date PDB(s) Deployed: 2/4/15 Matrix: Groundwater

Water Level at Deployment: 298.33

Water Level at Sampling: _____

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	323.33		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

SAMPLED WITH HYDROSLEEVE AT DEPLOYMENT

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP ~~WR-274A~~ **Location/Well ID:** WR-274A

Log Date: 2/5/15 Log Time: 1550

Date PDB(s) Deployed: 2/5/15 Matrix: Groundwater

Water Level at Deployment: 310.89

Water Level at Sampling: _____

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	5	315.89		
PDB 2	15	325.89		
PDB 3	25	335.89		
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

SAMPLED WITH HYDROSLEEVE AT DEPLOYMENT

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** WR-275A

Log Date: 2/9/15 Log Time: 1150

Date PDB(s) Deployed: 2/9/15 Matrix: Groundwater

Water Level at Deployment: 315.91

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	340.91		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

SAMPLED WITH HYDROSLEEVE AT DEPLOYMENT

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** WR-353A

Log Date: 2/9/15 Log Time: 1310

Date PDB(s) Deployed: 2/9/15 Matrix: Groundwater

Water Level at Deployment: 298.07

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	~~25~~	~~325~~.07		
	131.93	430		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

ADJUSTED TO FIT IN SCREEN INTERVAL
SAMPLED WITH HYDROSLEEVE AT DEPLOYMENT

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** WR-358A

Log Date: 2/9/15 Log Time: 1500

Date PDB(s) Deployed: 2/9/15 Matrix: Groundwater

Water Level at Deployment: ~~293.~~ 294.38

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	319.38		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** WR-367A

Log Date: 2/5/15 Log Time: 1240

Date PDB(s) Deployed: 2/5/15 Matrix: Groundwater

Water Level at Deployment: 338.43

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	363.43		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

SAMPLED WITH HYDROSLEEVE AT DEPLOYMENT

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: B.P. **Location/Well ID:** WR-435A

Log Date: 2.3.15 Log Time: 1130

Date PDB(s) Deployed: 2.3.15 Matrix: Groundwater

Water Level at Deployment: 352.20

Water Level at Sampling:

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	377.20		
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Well ID: WR-353A

Sample Date: 2/9/15

Sample Time: ~~1300~~ 1320

Water Level (btoc) 298.07

Sample Depth (bwt) ~~[illegible](bwt)~~ ~~323.07(btoc)~~ ~~[illegible]~~ 131.93(bwt) 430(btoc)

Time	pH	DO (mg/L)	Cond.	Fe	Fe+2	Comments
1320	7.18	4.24	361	0.0	0.0	

Sample ID: WR-353A-430-H-020915

Analysis:

~~8260LL~~
~~Anions,pH,alkalinity~~,hardness
Cation/Metal
~~RSK (Ethane~~, methane, ethene)
~~DOC~~
~~8270~~

Presevative:

HNO_3

QA/QC Yes/No Laboratory: Test America

Chain of Custody Complete: Yes/No

Comments:

- ADJUSTED TO FIT INSIDE SCREEN INTERVAL
TETHER WAS ADJUSTED BY EON PRODUCTS
- WATER WAS CLEAR
- SAMPLED FOR METALS/CATIONS

Project Name: Broadway Pantano Project Number: 14-2014-2029

Well ID: WR-367A

Sample Date: 2/5/15

Sample Time: 1155

Water Level (btoc) 338.43

Sample Depth (bwt) 25', 363.48 (BTOC)

Time	pH	DO (mg/L)	Cond.	Fe	Fe+2	Comments
1155	7.42	3.79	547	1 ppm	0.2 ppm	

Sample ID: WR-367A-363.48-H-020515

Analysis:

	Presevative:
8260LL	HCl 3 x VOA
Anions,pH,alkalinity,hardness, NITRATE, NITRITE	NONE 500mL unpre.
Cation/Metal	NITRIC ACID 500mL poly
RSK (Ethane, methane, ethene)	HCl 3 x VOA
DOC	NONE 4 x AMBER VOA
~~8270~~	

QA/QC Yes/No Laboratory: Test America

Chain of Custody Complete: Yes/No

Comments:

- WATER WAS CLEAR
- FULL SUITE SAMPLE

Project Name: Broadway Pantano Project Number: 14-2014-2029

Well ID: WR-275 A

Sample Date: 2/9/15

Sample Time: 1145

Water Level (btoc) 315.91

Sample Depth (bwt) 25' 340.91 (btoc)

Time	pH	DO (mg/L)	Cond.	Fe	Fe+2	Comments
1145	6.90	4.18	1232	0.0	0.0	

WR-275A-340.91-H-020915-DUP

Sample ID: WR-275A-340.91-H-020915

Analysis:		Presevative:
	~~8260LL~~	~~HCl~~
	~~Anions,pH,alkalinity,hardness~~	~~NONE~~
	Cation/Metal -	HNO_3
	~~RSK (Ethane, methane,~~ ethene)	~~HCl~~
	~~DOC~~	~~NONE~~
	~~8270~~	

QA/QC Yes/No Laboratory: Test America

Chain of Custody Complete: Yes/No

Comments:

WATER WAS CLEAR

SAMPLED FOR METALS/CATIONS

Project Name: Broadway Pantano Project Number: 14-2014-2029

Well ID: R-068A

Sample Date: ~~2/5/15~~ 2/9/15

Sample Time: ~~1808~~ 1030

Water Level (btoc) 316.86

Sample Depth (bwt) 25, 341.86 (btoc)

Time	pH	DO (mg/L)	Cond.	Fe	Fe+2	Comments
~~1808~~ 1030	7.00	5.88	~~809~~ 899	0.0	0.0	

Sample ID: R-068-341.86-H-~~020515~~ 020915

Analysis:		Presevative:
	8260LL	HCl
	Anions,pH,alkalinity,hardness	NONE
	Cation/Metal	NITRIC ACID
	RSK (Ethane, methane, ethene)	HCl
	DOC	NONE
	8270	NONE

QA/QC Yes/No Laboratory: Test America

Chain of Custody Complete: Yes/No

Comments: WATER WAS CLEAR

FULL SUITE SAMPLE AND SVOC

Project Name: Broadway Pantano Project Number: 14-2014-2029

Well ID: WR-273-A

Sample Date: 2/4/15

Sample Time: ~~1300~~ 1315

Water Level (btoc) 298.33

Sample Depth (bwt) 25', 323.33 btoc

Time	pH	DO (mg/L)	Cond.	Fe	Fe+2	Comments
1405	7.22	5.40	591	0	0	

Sample ID: WR-273A-323.33-H-020415

Analysis:		Presevative:	
	8260LL	HCl	3 x 40mL VOAs
	Anions,pH,alkalinity,hardness, NITRATE, NITRITE	NONE	500mL Unpre
	Cation/Metal Fe	NITRIC ACID	
	RSK (Ethane, methane, ethene)	HCl	
	DOC	HCl	40mL VOA
	~~8270~~		
	~~NITRATES~~		

QA/QC Yes/No Laboratory: Test America

Chain of Custody Complete: Yes/No

Comments:

WATER WAS CLEAR

FULL SUITE SAMPLE

Project Name: Broadway Pantano Project Number: 14-2014-2029

Well ID: WR-274A

Sample Date: 2/5/15

Sample Time: 1550

Water Level (btoc) 310.89

Sample Depth (bwt) 25, 335.89 (btoc)

Time	pH	DO (mg/L)	Cond.	Fe	Fe+2	Comments
1550	7.40	4.83	587	~~0.04~~ 0.4	0.4	

Sample ID: WR-274A-335.89-H-020515

Analysis:		Presevative:
	8260LL	HCl
	Anions,pH,alkalinity,hardness	NONE
	Cation/Metal	HNO_3
	RSK (Ethane, methane, ethene)	HCl
	DOC	NONE
	8270	NONE

QA/QC Yes/No Laboratory: Test America

Chain of Custody Complete: Yes/No

Comments: WATER WAS CLEAR

FULL SUITE SAMPLE AND SVOC

amec

Field Water Quality Meter Calibration Form

Client: ADEQ
Site Location: Tucson
Field Team Leader: Eric Milller

Project Name: B.P
Project No.:
Project Manager/Coordinator: Jim Clarke

Date: 2.9.15

Instrument ID: YSI 556

Calibrator: Eric Miller

Beginning Current AmbientTemperature: 70

End Current Ambient Temp.: 70

Calibration Solution:	ORP 240.0	Conductivity 1413	pH 4.01	pH 7.00
Expiration Date	11.18	8.25.15	2.3.16	4.1.6
Manufacturer Lot No.	7065	KCT 140825	2014013065	4404823
Date Opened	9.24.14	9.24.14	9.24.14	9.24.14

	Initial Reading	Adjusted Reading	Time
ORP 240 mV	250.0	240.0	1026
Conductivity 1413 us/cm	1202	1413	1028
pH 4.01	4.03	4.01	1031
pH 7.00	7.01	7.00	1034

DO = 30.15 inHg = 765.8

95.7 / 100.3 %

Signatures:
Field Team Leader: E. Mill Date: 2.9.15

Reviewer/Title: _____ Date: _____

Date of Revision: 7/8/2011

(M:\Eric's Forms\FORMS\Calibration Form)

Field Water Quality Meter Calibration Form

Client: ADEQ
Site Location: TUSOD
Field Team Leader: Eric Milller

Project Name: B.P
Project No.:
Project Manager/Coordinator: Jim Clarke

Date: 2·5·15

Instrument ID: YSI 556

Calibrator: Eric Miller

Beginning Current AmbientTemperature: 65

End Current Ambient Temp.: 65

Calibration Solution:	ORP 240.0	Conductivity 1413	pH 4.01	pH 7.00
Expiration Date	11·18	8·25·15	2·3·16	4·1·6
Manufacturer Lot No.	7065	KCT 140825	2014013065	4404823
Date Opened	9·24·14	9·24·14	9·24·14	9·24·14

	Initial Reading	Adjusted Reading	Time
ORP 240 mV	237.0	240.0	1201
Conductivity 1413 us/cm	1486	1413	1204
pH 4.01	4.10	4.01	1207
pH 7.00	6.94	7.00	1210

DO = 103.4 / 99.9%

Signatures:

Field Team Leader: E. Mill Date: 2·5·15

Reviewer/Title: [signature] Date: 2/5/15

Date of Revision: 7/8/2011

Field Water Quality Meter Calibration Form

Client: ADEQ
Site Location: Tucson
Field Team Leader: Eric Milller

Project Name: BP
Project No.:
Project Manager/Coordinator: Jim Clarke

Date: 2.4.15

Instrument ID: YSI 556

Calibrator: Eric Miller

Beginning Current AmbientTemperature: 65

End Current Ambient Temp.: 65

Calibration Solution:	ORP 240.0	Conductivity 1413	pH 4.01	pH 7.00
Expiration Date	11.18	8.25.15	2.3.16	4.1.16
Manufacturer Lot No.	7065	KCT 140825	2014013065	4404823
Date Opened	9.24.14	9.24.14	9.24.14	9.24.14

	Initial Reading	Adjusted Reading	Time
ORP 240 mV	225.1	240.0	1346
Conductivity 1413 us/cm	1641	1413	1350
pH 4.01	3.93	4.01	1352
pH 7.00	7.12	7.00	1355

DO = 30.13 inHg 765.30 104.91 100.1

Signatures:

Field Team Leader: E. Mill Date: 2.4.15

Reviewer/Title: [signature] Date: 2/4/15

Date of Revision: 7/8/2011

DAILY REPORT

Report by BRANDON COMBS Project Name: ~~Former Williams AFB~~ BROADWAY/PANTANO

Project Manager ALEX YIANNAKAKIS Job No. ~~8029~~ 14-2014-2029-03.06 Date _____ Day 2/2/15 – 2/5/15

* SEE CONTRACT OR PROJECT MANAGER FOR APPLICABLE RATES*

ENVIRONMENTAL FIELD EQUIPMENT / FLEET TRUCK CHARGES

ITEM	AMEC FEE SCHEDULE UNIT RATE	NO OF UNITS	ITEM	AMEC FEE SCHEDULE UNIT RATE	NO OF UNITS
INTERFACE PROBE Serial #: _____	$50/DAY		LANDTEC - LFG DETECTOR** Serial #: _____	$50/MONTH	
INTERFACE PROBE Serial #: _____	$175/WEEK		TOTAL DEPTH WELL METER Serial #: _____	$25/DAY	
YSI - pH, ORP, CONDUCTIVITY, DO METER Serial #: _____	$100/DAY		TOTAL DEPTH WELL METER Serial #: _____	$100/WEEK	
YSI - pH, ORP, CONDUCTIVITY, DO METER Serial #: _____	$350/WEEK		WATER LEVEL SOUNDER Serial #: _____	$25/DAY	
TUBIDITY METER Serial #: _____	$25/DAY		WATER LEVEL SOUNDER Serial #: _____	$100/WEEK	
TUBIDITY METER Serial #: _____	$85/WEEK				
AMEC Truck # 337 Owning Org.: _____	$25/DAY	4	DISPOSABLE BAILERS	$8/EACH	
AMEC Truck # _____ Owning Org.: _____	$250/MONTH		LAND SURVEY EQUIPMENT	$25/DAY	

****Note – FID and 4-gas meter are project equipment and should not be billed back to the project.**
PID is charged monthly and does not need to be recorded unless a second unit is rented.

REMARKS: Discuss weather & site conditions; difficult drilling conditions; reasons for above Standby, Repair, Misc. and/or NB time.

_____

_____

_____

Tailgate.Safety.Meeting_____

_____

COMMENTS:_____

_____

SIGNATURES: _____ (Form Submitter)

_____ (Form Approver)

AMEC ENVIRONMENT & INFRASTRUCTURE, INC. **FORM 2**

DAILY TAILGATE SAFETY MEETING CHECKLIST

Project: 14-2014-2029 Site: BROADWAY PANTANO
Date: 2/2/15 – 2/6/15 Location: TUSCON, AZ

To be reviewed on the first day of site activities and when new workers arrive on site:

Alternate for Health & Safety:
Location of on-site HASP:
Site training requirements: See HASP
Specific medical surveillance requirements: See HASP

Agenda:
During the project, one or more of the agenda items could be selected for the required daily site training.

Check-off: Date

		2/2	2/3	2/4	2/5	2/9
1.	Planned work for this day (discuss)	☒	☒	☒	☒	☒
2.	Physical hazards and controls (discuss/review)	☒	☒	☒	☒	☒
3.	Chemical hazards and controls (discuss/review)	☒	☒	☒	☒	☒
4.	Biological hazards and controls (discuss/review)	☒	☒	☒	☒	☒
5.	Personal protective equipment Modified D	☒	☒	☒	☒	☒
6.	Personal protective equipment required per the hazard assessment:	☒	☒	☒	☒	☒

SPECIFY TYPE	
Protective coveralls	
Safety glasses/goggles	ANSI approved
Hard hat	ANSI approved
Foot protection	Safety toe boots
Work gloves	For moving equipment or drums
Chemical gloves	Nitrile gloves for sampling
Hearing protection	Noisy Equipment
Other	

7.	Review inspection, decontamination, and maintenance procedures and the limitations of the above stated PPE.	☒	☒	☒	☒	☒
8.	Decontamination procedure (discuss/review)	☒	☒	☒	☒	☒
9.	Exclusion zone maintained	☒	☒	☒	☒	☒
10.	Site emergency response plan (discuss/review)	☒	☒	☒	☒	☒
11.	Signs and symptoms of overexposure to chemicals anticipated on site	☒	☒	☒	☒	☒
12.	General health and safety rules	☒	☒	☒	☒	☒
13.	Specific health and safety requirements relating to site activities including: (discuss/review)	☒	☒	☒	☒	☒
14.	Drilling/boring	☐	☐	☐	☐	☐
15.	UST	☐	☐	☐	☐	☐
16.	Excavations (including UG utility locations)	☐	☐	☐	☐	☐
17.	Heavy equipment	☒	☒	☒	☒	☒
18.	Slips, trips, and falls	☒	☒	☒	☒	☒
19.	Lockout/tagout	☐	☐	☐	☐	☐
20.	Working in temperature extremes	☒	☒	☒	☒	☒
21.	Rain or other weather advisories	☒	☒	☒	☒	☒
22.	Other health & safety issues (discuss/note) BUGS & SNAKES	☒	☒	☒	☒	☒
	Quality Topics					
23.	Have team members been issued SOPs, site WP, and H&S Plan?	☒	☒	☒	☒	☒
24.	Quality discussed as goal for work day activities including but not limited to:	☒	☒	☒	☒	☒

- Field Variances,
- boring logs,
- sampling logs,
- chains of custody,
- subcontractor management, etc.

DAILY TAILGATE SAFETY MEETING CHECKLIST

I have participated in the daily safety meeting discussing the topics indicated on the reverse and fully understand my responsibility for complying with all health and safety requirements. I have had the opportunity to have my questions on site health and safety issues and procedures answered.

Employee Name	Employee Signature	Date
BRANDON T. COMBS		2/2/15
ERIC MILLER		2.2.15
BRANDON T. COMBS		2/3/15
ERIC MILLER		2.3.15
ERIC MILLER		2.4.15
BRANDON T. COMBS		2/4/15
ERIC MILLER		2.5.15
BRANDON T. COMBS		2/5/15
BRANDON T. COMBS		2/9/15

Name and Signature of person conducting training

Date

Location Broadway Pantano Date 2.7.15

Project / Client ADEQ

EM + BC

800 - 1300 Prep + Health Safety
↳ Supplies at office
↳ pick up rental H2o meter
↳ pick up YSI
↳ Drive
↳ overview meeting

1300 - 1700 Deploy BAPs (7)

1700 - 1730 Pack equipment

CVA
BP-20, 1, 19, 24A, 24B, 7
SE-001

Em Milk

Location Broadway Pantano Date 2.3.15

Project / Client ADEQ

EM + BC

730 - 800 Prep
↳ Health/Safety

8:00 - 1430 Deploy PDB's

1430 - 1715
↳ Deploy PDB's w/ Chuck F from COT.

1715 - 1745 Pack equip

BP-22 KEY # 2359
BP-11 KEY # 0450
BP-23 KEY # 2359

Location Broadway Pantano Date 2-4-15

Project / Client ADEQ

EM + B.C

830 - 900 Health/Safety
↳ Scope of work
↳ pack used reels/supplies

900 - 1500 Deploy PDB and hydro sleeves

1500 - 1545 Site cleanup
↳ pack equipment

1530 Brandon offsite to deliver samples

1545 - 1800 Drive to Phx

Location B.P Date 2.5.15

Project / Client ADEQ

EM + BC

730 - 950 Drive

950 - 1015 Health/Safety
↳ Scope of work

1015 - 1100 Clear obstruction from BP-23
↳ obstruction ~~is still~~ at 290' was partially broken w/ steel pipe. Was able sample w/ PDB.

1100 - Deploy PDB

Location BROADWAY/PANTANO Date 2/9/15

Project / Client ADEQ

COMBS/MILLER

0730 START OF DAY

1050 SAMPLE R-068 A w/ HYBRASLEEVE FULL SUITE + SVOC

1145 SAMPLE WR-275 A, FULL SUITE, SVOC, DUP BRING WEED WACKER NEXT TIME

1215 SURVEYED THE SITE LOOKING FOR METHANE WELLS. THOSE FOUND ARE MARKED ON MAP

1320 SAMPLED WR-353 A, METALS/CATIONS AT RETREIVAL WE NOTICED A LENGTH OF ROPE HAD BEEN ADDED TO THE TETHER BY EON PRODUCTS. THIS WAS SO THAT THE PDB WOULD BE SET WITHIN THE SCREENED INTERVAL. WE MEASURED THE TETHER TO CONFIRM THAT THE SAMPLE WAS SET AT THE PROPER DEPTH

1435 DEPLOY 207B

1500 DEPLOY 358A. HARD TO FIND SO CHECK THE WELL LOCATION LIST

Location Date

Project / Client

1515 DEPLOY BP-25 TAN BOX ON E. SIDE OF ROAD. UNMARKED

1535 DEPLOY WR-181A

1605 DEPLOY WR-177A

1900 END OF DAY

Feb. 19, 2015 AEY

Alex/Jannakehs Clear, Sunny

10:00 Arrive in Tucson
Meet COTES
George + Tovler

Collect Water levels at WR-703A and WR-704A to compare with Tucson COTES measurements
COTES redeploy PDBs
2 (300ml) after sampling
Use Distilled H_2O from Tucson Water Lab.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Page 1 of 1

Client Name/Address: AMEC FW 4600 E WASHINGTON ST STE 600 PHOENIX AZ 85034

Project/PO Number: 14-2014-2029-3.3

Project Manager: ALEX YIANNAKAKIS

Phone Number: 602 733 6013

Sampler: BC, EM, AY

Fax Number:

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	DOC	8260LL	RSK 175 (SEE LIST)	METALS/CATIONS	ANIONS, pH ALKALINITY HARDNESS	NITRATE, NITRITE (SEE LIST)				Special Instructions
WR-273A-323.33-H-020415	Aq	VOA	4	020415	1315	NONE	X									DEQ# 57288
↓	↓	VOA	3	↓	↓	HCl		X								↓
↓	↓	VOA	3	↓	↓	HCl			X							↓
↓	↓	500mL	1	↓	↓	NONE				X						↓
↓	↓	500mL	1	↓	↓	NONE					X					↓

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
[signature]	2/5/15 0802			same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal X
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time: 2/5/15 0802	Sample Integrity: (Check) intact ____ on ice X

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

2.1°

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Page 1 of 1

Client Name/Address: AMEC 4600 E. WASHINGTON ST SUITE 600 PHOENIX, AZ 85034

Project/PO Number: 14-2014-2029-3.3

Project Manager: ALEX YIANNAKAKIS

Phone Number: 602-733-6013

Sampler: BC, AM

Fax Number:

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	DOC	8260LL	RSK 175 (SEE LIST)	METALS/CATIONS	ANIONS, pH ALKALINITY, HARDNESS	NITRATE, NITRITE (SEE LIST)	8270C SVOC			Special Instructions
WR-367A-363.48-H-020515	Aq	VOA	4	020515	1155	NONE	X									DEQ #60656
		VOA	3			HCl		X								
		VOA	3			HCl			X							
		500mL	1			NITRIC ACID				X						
		500mL	1			NONE					X					
WR-274A-335.89-H-020515	Aq	VOA	4	020515	1550	NONE	X									DEQ #57289
		VOA	3			HCl		X								
		VOA	3			HCl			X							
		500mL	1			NITRIC ACID				X						
		500mL	1			NONE					X					
		1L AMBER	2			NONE							X			
TB	Aq	VOA	1		1400	HCl										
TOC-TB		VOA	1		1400	NONE										

Relinquished By:	Date/Time:	Received By:	Date/Time:
	2/6/15 0957		
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time: 2-6-15 0957

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal ____

Sample Integrity: (Check)
intact ____ on ice X

2.6°C

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Chain of Custody Record

065117

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

TAL-8210 (0713)

TestAmerica Phoenix
4625 E. Cotton Center Blvd.
Suite 189
Phoenix, AZ 85040
602.437.3340 Fax:

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: A. YIANNAKAKIS	Site Contact: B. COMBS	Date: 020915	COC No:
Company Name: AMEC	Tel/Fax: 602-733-6013	Lab Contact: NIC NIELSON	Carrier: L. MILLER	1 of 1 COCs
Address: 4600 E. WASHINGTON ST STE 600	Analysis Turnaround Time			Sampler: ERIC MILLER
City/State/Zip: PHOENIX, AZ 85034	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below STANDARD			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: 14-2014-2029-303	☐ 1 week			
Site:	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	DOC	8260LL	RSK 175	METALS/CATIONS	ANIONS	ALKALINITY HARDNESS	NITRATE/NITRITE (SEE LIST)	8270C SVOC	Sample Specific Notes:
R-068A-341.86-H-020915	020915	1030	G	Aq	4	N	N	X								DLQ # 60650
					3				X							
					3					X						
					1						X					
					1							X				
					2										X	
WR-275A-340.91-H-020915	020915	1145	G	Aq	1						X					DLQ # 57290
WR-275A-340.91-H-020915-DUP					1						X					
WR-353A-430-H-020915	020915	1320	G	Aq	1						X					DLQ # 58990
TRIPBLANK	—	—	—	—	2			XX								

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

1.3°

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ | Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
E. Miller	Amec	2-10-14 858			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
				TA	2/10/14 0858

WATER LEVEL MEASUREMENT FORM

Project No.	Project Name: Broadway Pantano WQARF
Meter (Type & ID #):	Measuring Point: **TOC**
Field Personnel: COMBS / SARGENT	Field Operations Leader (Alex Yiannakakis

Well ID	Date	Time	Depth to Water (ft BTOC)	Notes/Comments/Condition of Well	
BP-1	2/24/15	1548	298.01		
BP-7	2/23/15	1315	324.02		
BP-8	2/23/15	1245	346.37		
BP-9	2/25/15	1231	319.49		
BP-10	2/25/15	1347	333.56		
BP-11	2/25/15	0954	342.55		
BP-15	2/23/15	1157	346.39		
BP-19	2/23/15	1351	292.08		
BP-20	2/24/15	1455	298.64		
BP-22	2/25/15	1130	339.73		
BP-23	2/25/15	1054	337.10		
BP-24A	2/26/15	1631	315.25		
BP-24B	2/23/15	~~[illegible]~~ 1542	314.21		
BP-24C	2/23/15	1608	314.10	trouble sounding well - may have obstruction	
BP-25	2/25/15	1602	292.08		
- C-20B					
C-022A	3/2/15	1120	332.62		chuck
- C-025B					
- C-026B					?
C-048A/B	3/2/15	1040	280.65		chuck
- C-051A/B					chuck
C-058A	3/2/15	1420	311.02		chuck
CVA	2/24/15	1415	295.45		
D-018A	2/24/15	~~[illegible]~~ 1200	329.50	pump was running around 2½ hours	
D-022A	3/2/15	1234	320.31	PDB got stuck -	chuck
D-039A	3/2/15	1302	356.52		chuck
D-040A	3/2/15	1325	372.68		chuck
R-068A	2/26/15	1149	316.64		
R-069B	2/26/15	1229	301.45		
- R-124A	2/24/15	1014	350.62		
- R-125A	2/24/15	1110	333.69		
SE-001	2/24/15	1630	308.40		
WR-177A	2/26/15	1422	321.54		
WR-181A	2/25/15	1428	289.31		
WR-207B	2/23/15	1649	313.67		
WR-273A	2/26/15	1550	297.80		
WR-274A	2/26/15	1317	310.55		
WR-275A	2/26/15	1356	315.50		
WR-353A	2/26/15	1528	294.90		
WR-358A	2/25/15	1529	294.36		
WR-367A	~~[illegible]~~ 2/25/15	1026	338.34		
WR-435A	2/25/15	1156	351.98		

Notes:

BTOC = Below top of casing; ID = Identification; TOC = Top of casing; ft = feet

[a]TOC elevations are below ground surface. All other wells presented in this table have TOC elevations that are above ground surface.

[b]Observation well monitored only for groundwater elevations (not sampled).

Signatures

Field Team Leader: _____ Reviewer: _____

WATER LEVEL MEASUREMENT FORM

Project No.	Project Name: Broadway Pantano WQARF
Meter (Type & ID #):	Measuring Point: **TOC**
Field Personnel:	Field Operations Leader (Alex Yiannakakis

Well ID	Date	Time	Depth to Water (ft BTOC)	Notes/Comments/Condition of Well
R-090A	2/27/15	1152	312.70	unsure of measuring point
X R-092A				restricted access
SJ-001	2/27/15	851	334.85	IN GRAVEL PARKING LOT
SJ-002	2/27/15	918	339.34	pulled transducer (Red Ziptie)
WR-178A	2/27/15	951	315.61	Red key - POOR well condition
WR-179A	2/27/15	836	347.33	POOR well Condition - key 2007
WR-180A	2/27/15	1034	310.55	red key
WR-186A	2/27/15	1231	288.10	red key
? WR-207A X				
WR-352A	2/27/15	1014	313.73	
WR-354A	2/27/15	1116	320.48	
WR-702A	2/27/15	1321	294.48	chain broken on cover
WR-703A	2/27/15	1312	289.51	red key
WR-704A	2/27/15	1321	294.51	doesn't have lock on well
BP-2	2/27/15	1411	301.98	pulled transducer (blue ziptie)
BP-3	2/27/15	1400	298.63	
BP-4	2/27/15	1420	307.88	
BP-5	2/27/15	1021	324.13	
BP-16	2/27/15	[illegible]	342.41	time: 823/possible PDB set
BP-21	2/27/15	1340	298.17	red key - chain broken on cover
C-12B				?
C-026A				
C-49A/B				?
C-056A				?
C-124A				
C-125A				chuck
D-021A	3/2/15	1348	326.78	chuck
D-041A	3/2/15	1541	375.41	red key
D-049A	3/2/15	1559	325.42	used chuck's sounder ?
R-091A	2/27/15	1145	314.14	UNSURE OF MEASURING POINT/DEEP VAULT
WR-458A	2/27/15	1252	293.16	red key
WR-459A	2/27/15	1240	282.98	red key
C-125A	3/2/15	1510	281.03	not on map

Notes:

BTOC = Below top of casing; ID = Identification; TOC = Top of casing; ft = feet

[a]TOC elevations are below ground surface. All other wells presented in this table have TOC elevations that are above ground surface.

[b]Observation well monitored only for groundwater elevations (not sampled).

Signatures

Field Team Leader: _____ Reviewer: _____

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** BP-1

Log Date: 2/2/15 Log Time: 1440

Date PDB(s) Deployed: 2/2/15 Matrix: Groundwater

Water Level at Deployment: 298.00

Water Level at Sampling: 298.01

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	323	BP-1-323-PDB-022415	022415/1548
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO Location/Well ID: BP-7

Log Date: 2/2/15 Log Time: 1700

Date PDB(s) Deployed: 2/2/15 Matrix: Groundwater

Water Level at Deployment: 324.09

Water Level at Sampling: ~~5~~ 324.02

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	5	329.09	BP-7-329.09-PDB-022315	022315/1315
	~~25~~	~~349.09~~	BTC	
	~~50~~	~~374.09~~	BTC	
PDB 2	25	349.09	BP-7-349.09-PDB-022315	022315/1319
PDB 3	50	374.09	BP-7-374.09-PDB-022315	022315/1323
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** BP-8

Log Date: 2/3/15 Log Time: 0805

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 346.55

Water Level at Sampling: 346.39

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	371.55	BP-8-~~346.55~~ 371.55-PDB-022315	022315/1245
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** BP-9

Log Date: 2/3/15 Log Time: 0925

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 319.69

Water Level at Sampling: 319.49

319
25
344

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	344.69	BP-9-344.69-PDB-022515	2/25/15 | 1231
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** ~~BP-9~~ BP-10

Log Date: 2/3/15 Log Time: 0940

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 333.85

Water Level at Sampling: 333.56

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
333 25 358 **PDB 1**	25	358.85	BP-10-358.85-PDB-022515	2/25/15/1347
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: B.P. LANDFILL SOUTH **Location/Well ID:** BP-11

Log Date: 2/3/15 Log Time: 1000

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 342.68

Water Level at Sampling: 342.55

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	85.32	428	BP-11-428-PDB-022515	02/25/15/0954
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

MOVED PDB DOWN SO IT WOULD BE IN THE MIDDLE OF THE SCREEN INTERVAL

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** BP-15

Log Date: 2/3/15 Log Time: 0830

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 342.83

Water Level at Sampling: 342.65

42
75
67

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	367.83	BP-15-~~342.83~~ 367.83 PDB-022315	022315 1157
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** B-19

Log Date: 2/2/15 Log Time: 1550

Date PDB(s) Deployed: 2/2/15 Matrix: Groundwater

Water Level at Deployment: 292.11

Water Level at Sampling: 292.08

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	317.11	BP-19-317.11-PDB-022315	022315/1351
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** BP-20

Log Date: 2/2/15 Log Time: 142

Date PDB(s) Deployed: ~~[illegible]~~ 2/2/15 Matrix: Groundwater

Water Level at Deployment: 298.60

Water Level at Sampling: 298.64

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25, ~~[illegible]~~	323.60	BP-20-323.60-PDB-022415	022415/1450
37	~~50~~	~~348~~		
PDB 2	50	348.60	BP-20-348.60-022415	022415/1455
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

ADWR# 55208705

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP LANDFILL SOUTH **Location/Well ID:** BP-22

Log Date: 2/3/15 Log Time: 1055

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 339.94

Water Level at Sampling: 339.73

339
25
364

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25'	364.94	BP-22-364.94-PDB-022515	2/25/15/1130
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP LANDFILL South Location/Well ID: BP-23

Log Date: 2/5/15 Log Time: 1105

Date PDB(s) Deployed: 2/6/15 Matrix: Groundwater

Water Level at Deployment: 337.80

Water Level at Sampling: 337.10

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25'	362.8	BP-23-362.8-PDB-022515	2/25/15/1154
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

OBSTRUCTION AT ~ 290 ft

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** BP-24A

Log Date: 2/2/15 Log Time: 1625

Date PDB(s) Deployed: 2/2/15 Matrix: Groundwater

Water Level at Deployment: 315.55

Water Level at Sampling: 315.25

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	15	330.55	BP-24A-330.55-PDB-022615	2/24/15/1631
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments: DID NOT DEPLOY 2nd PDB SINCE IT WOULD HAVE BEEN OUT OF THE SCREEN INTERVAL

-needs new bolts.

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY PANTANO Location/Well ID: BP-24B

Log Date: 2/2/15 Log Time: 1640

Date PDB(s) Deployed: 2/2/15 Matrix: Groundwater

Water Level at Deployment: 314.28

Water Level at Sampling: 314.21

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	80.72	395	BP-24B-395-PDB-022315	022315/1CAZ
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

ONLY ONE PDB SET IN MIDDLE OF THE SCREEN INTERVAL 385 - 405

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY / PANTANO **Location/Well ID:** BP 24-C

Log Date: 2/3/15 Log Time: 1330

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 314.25

Water Level at Sampling: 314.10

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	135.75	450	BP-24C-450-PDB-022315	022315/1608
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

LENGTH ADJUST SO PDB WOULD BE SET IN THE SCREEN INTERVAL

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** BP-25

Log Date: 2/9/15 Log Time: 1515

Date PDB(s) Deployed: 2/9/15 Matrix: Groundwater

Water Level at Deployment: 292.10

Water Level at Sampling: 292.08

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	317.10	BP-25-317.10-PDB-022515	2/25/15/1602
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Key 3210

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** C-22A

Log Date: 2/3/15 Log Time: 1515

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 332.80

Water Level at Sampling: 332.67

332
25
357

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25'	357.80	C-22A-357.80-PDB-CB0215	3/2/15/1120
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO Location/Well ID: C-48 A/B

Log Date: 2/3/15 Log Time: 1445

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 281.31

Water Level at Sampling: 280.65

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	~~24~~'	~~30~~ 305	C-48A/B-305-PDB-030215	3/2/15/~~0800~~ 1040
	23.69'			
PDB 2				
PDB 3				
PDB 4				
PDB 5				

305
-281
24

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

STEEL CABLE AT C-48. SET DEPTH ADJUSTED TO ACCOMADATE LENGTH OF THE CABLE

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** C-058A

Log Date: 2/5/15 Log Time: 1440

Date PDB(s) Deployed: 2/5/15 Matrix: Groundwater

Water Level at Deployment: 311.25

Water Level at Sampling: 311.02

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25'	336.25	C-058A-336.25-PDB-030215	3/2/15 / 1420
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** CVA

Log Date: 2/2/15 Log Time: 1330

Date PDB(s) Deployed: 2/2/15 Matrix: Groundwater

Water Level at Deployment: 296.06

Water Level at Sampling: 295.45

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25 ft	321.06	CVA-321.06-PDB-022415	02/24/15/1415
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

3/4, 1 1/4, 1 1/2 (SMOOTH)
THREADED
PLUG SIZES FOR CAP

298.60

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** D-021A

Log Date: 2/3/15 Log Time: 1535

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 328.95

Water Level at Sampling: 326.78

28.95
25.00
53.95

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25'	353.95	D-021A-353.95-PDB-030215	3/2/15/1348
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** D-022A

Log Date: 2/3/15 Log Time: 1700

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 317.43

Water Level at Sampling: 320.31 -(FROM TOP)

317.43
25.00
342.43

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	342.43	D-022A-342.43-PDB-030215	3/2/15 / 1234
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** D-039

Log Date: 2/3/15 Log Time: 1605

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 356.76

Water Level at Sampling: 356.52

356.76
25.00
381.76

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	381.76	D-039A-381.76-PDB-030215	3/2/15 / 1302
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY PANTANO **Location/Well ID:** D-040A

Log Date: 2/3/15 Log Time: 1625

Date PDB(s) Deployed: 2/3/15 Matrix: Groundwater

Water Level at Deployment: 372.97

Water Level at Sampling: 372.68

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	107.03	480	D-040A-480-PDB-030215	03/2/15/1325
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

SET DEPTH ADJUST TO BE IN THE SCREEN INTERVAL

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** R-69B

Log Date: 2/5/15 Log Time: 1355

Date PDB(s) Deployed: 2/5/15 Matrix: Groundwater

Water Level at Deployment: 301.71

Water Level at Sampling: 301.45

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	326.71	R-69B-326.71-PDB-022615	2/26/15/12:29
			R-69B-326.71-PDB-022615-DUP	
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC (Yes) No Chain of Custody Complete Yes No

Comments: Duplicate made: R-69B-326.71-PDB-022615

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** SE-001

Log Date: 2/2/15 Log Time: 1525

Date PDB(s) Deployed: 2/2/15 Matrix: Groundwater

Water Level at Deployment: 308.49

Water Level at Sampling: 308.46

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	~~[illegible]~~ 24	~~[illegible]~~ 332.49	SE-001-332.49-PDB-022415	02/24/15 / 1630
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments: MOVED CLIP UP 5' TO ACCOMADATE PROPER SET DEPTH. SET 24' BWT

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** WR-177A

Log Date: 2/9/15 Log Time: 1605

Date PDB(s) Deployed: 2/9/15 Matrix: Groundwater

Water Level at Deployment: 327.59

Water Level at Sampling: 327.54

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	352.59	WR-177A-352.59-PDB-022615	2/26/15/1422
			WR-177A-352.59-PDB-022615-DUP	2/26/15/1422
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC (Yes) No Chain of Custody Complete Yes No

Comments:

RED KEY

duplicate made: WR-177A-352.59-PDB-022615-DUP

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** WR-181A

Log Date: 2/9/15 Log Time: 1535

Date PDB(s) Deployed: 2/9/15 Matrix: Groundwater

Water Level at Deployment: 289.28

Water Level at Sampling: 289.31

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	314.28	WR-181A-314.28-PDB-022515	2/25/15/1428
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** WR-207B

Log Date: 2/9/15 Log Time: 1435

Date PDB(s) Deployed: 2/9/15 Matrix: Groundwater

Water Level at Deployment: 313.70

Water Level at Sampling: 313.67

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25'	338.7	WR-207B-338.7-PDB-022315	022315/1649
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments: Key 2007

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BROADWAY/PANTANO **Location/Well ID:** WR-273A

Log Date: 2/4/15 Log Time: 1410

Date PDB(s) Deployed: 2/4/15 Matrix: Groundwater

Water Level at Deployment: 298.33

Water Level at Sampling: 297.80

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	323.33	WR-273A-323.33-PDB-022615	2/26/15/1550
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

SAMPLED WITH HYDROSLEEVE AT DEPLOYMENT

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP ~~WR-274A~~ **Location/Well ID:** WR-274A

Log Date: 2/5/15 Log Time: 1550

Date PDB(s) Deployed: 2/5/15 Matrix: Groundwater

Water Level at Deployment: 310.89

Water Level at Sampling: 310.55

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	5	315.89	WR-274A-315.89-PDB-022615	2/26/15/1303
				~~2/26/15~~/
PDB 2	15	325.89	WR-274A-325.89-PDB-022615	2/26/15/1311
			WR-274A-325.89-PDB-022615-DUP	2/26/15/1311
PDB 3	25	335.89	WR-274A-335.89-PDB-022615	2/26/15/1314
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC (Yes) No Chain of Custody Complete Yes No

Comments:

SAMPLED WITH HYDROSLEEVE AT DEPLOYMENT

Duplicate on MID: WR-274A-325.89-PDB-022615-DUP.

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** WR-275A

Log Date: 2/9/15 Log Time: 1150

Date PDB(s) Deployed: 2/9/15 Matrix: Groundwater

Water Level at Deployment: 315.91

Water Level at Sampling: 315.50

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	340.91	WR-275A-340.91-PDB-022615	2/26/15 / 1356
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

SAMPLED WITH HYDROSLEEVE AT DEPLOYMENT

duplicate made for accu-test: WR-275A-340.91-PDB-022615

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** WR-353A

Log Date: 2/9/15 Log Time: 1310

Date PDB(s) Deployed: 2/9/15 Matrix: Groundwater

Water Level at Deployment: 298.07

Water Level at Sampling: 294.90

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	~~35~~	~~333~~.07	~~WR-353-430-PDB-022615~~	~~2/26/15/1920~~ SP
	131.93	430	WR-353A-430-PDB-022615	2/26/15/1528
			WR-353A-430-PDB-022615-DUP	2/26/15/1528
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

ADJUSTED TO FIT IN SCREEN INTERVAL
SAMPLED WITH HYDROSLEEVE AT DEPLOYMENT
Duplicate made: WR-353A-430-PDB-022615-DUP

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** WR-358A

Log Date: 2/9/15 Log Time: 1500

Date PDB(s) Deployed: 2/9/15 Matrix: Groundwater

Water Level at Deployment: ~~293.~~ 294.38

Water Level at Sampling: 294.36

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	319.38	WR-358A-319.38-PDB-022515	02/25/15/ 1529
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** R-068A

Log Date: 2/9/15 Log Time: 1050

Date PDB(s) Deployed: 2/9/15 Matrix: Groundwater

Water Level at Deployment: 316.86

Water Level at Sampling: 316.04

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	341.86	R-068A-341.86-PDB-022615	2/26/15/ 1149
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC (Yes) No Chain of Custody Complete Yes No

Comments:

SAMPLED WITH HYDROSLEEVE AT DEPLOYMENT

Same sample ID but sent it to ACCU-test

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: BP **Location/Well ID:** WR-367A

Log Date: 2/5/15 Log Time: 1240

Date PDB(s) Deployed: 2/5/15 Matrix: Groundwater

Water Level at Deployment: 338.43

Water Level at Sampling: 338.34

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	363.43	WR-367A-363.43-PDB-022515	2/25/15 1020
	25	363.43	WR-367A-363.43-PDB-022515-DUP	2/25/15 1020
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC (Yes) No Chain of Custody Complete Yes No

Comments:

SAMPLED WITH HYDROSLEEVE AT DEPLOYMENT

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: B.P. **Location/Well ID:** WR-435A

Log Date: 2.3.15 Log Time: 1130

Date PDB(s) Deployed: 2.3.15 Matrix: Groundwater

Water Level at Deployment: 352.20

Water Level at Sampling: 351.98

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1	25	377.20	WR-435A-377.20-PDB-022515	2/25/15 / 1150
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

FIELD WATER QUALITY METER CALIBRATION FORM

Project No.: 1420142029 BRoadway / Pantano	Project Name: Broadway Pantano Groundwater Well Monitoring
Date: 3/2/15	
Field Personnel:	Field Operations Leader (FOL): Alex Yiannakakis

Instrument & Serial #: **YSI 556 - Serial #**

Instrument & Serial #: **HACH 2100Q - Serial #**

Instrument & Serial #: **Solonist - Serial #**

Calibration Solution:	ORP (240.0 mV)	Conductivity (1413 us/cm)	pH (4.01)	pH (7.00)	NTU (10)	NTU (20)	NTU (100)	NTU (800)
Expiration Date:		12/05/15	2/3/16	4/1/16				
Manufacturer Lot No.:		KCT141205	2014013065	4404823				
Date Opened:		2/24/15	9/24/15	9/24/14				

	Initial Reading	Adjusted Reading	Time
ORP (240.0 mV)	233.3	240.0	1448
Conductivity (1413 us/cm)	1419	1413	1443
pH (4.01)	4.02	4.01	1446
pH (7.00)	6.99	7.00	1445
NTU (10)	~~4.02~~	~~4.~~	
NTU (20)			
NTU (100)			
NTU (800)			

DO %

Time On	1023
Temp	68°F / 20°C
Pressure	761.24 mmHg
Time of Calibration	1040
Initial	520.3
Adjusted	100.3

Signatures

Field Team Leader: _____ Date: 3/2/16

Reviewer: _____ Date: _____

FIELD WATER QUALITY METER CALIBRATION FORM

Project No.: 1420142029 BROADWAY/PANTANO PDB RETREIVAL QA/QC SAMPLE	Project Name: Broadway Pantano Groundwater Well Monitoring
Date: 2/24/2015	
Field Personnel:	Field Operations Leader (FOL): Alex Yiannakakis

Instrument & Serial #: **YSI 556 - Serial #**

Instrument & Serial #: ~~**HACH 2100Q - Serial #**~~

Instrument & Serial #: **Solonist - Serial #**

Calibration Solution:	ORP (240.0 mV)	Conductivity (1413 us/cm)	pH (4.01)	pH (7.00)	NTU (10)	NTU (20)	NTU (100)	NTU (800)
Expiration Date:		12/05/2015	02/03/2016	04/01/2016				
Manufacturer Lot No.:		KCT141205	20140130065	4404823				
Date Opened:		02/24/2015	09/24/2014	09/24/2014				

	Initial Reading	Adjusted Reading	Time
ORP (240.0 mV)	237.6	240	0813
Conductivity (1413 us/cm)	1053	1413	0807
pH (4.01)	3.93	4.01	0811
pH (7.00)	7.20	7.00	0809
NTU (10)			
NTU (20)			
NTU (100)			
NTU (800)			

DO %

Time On	0800
Temp	49°F/9°C
Pressure	761.99 mmHg
Time of Calibration	0838
Initial	549.2
Adjusted	100.3

Signatures

Field Team Leader: _____ Date: _____

Reviewer: _____ Date: _____

GROUNDWATER SAMPLING FIELD DATA FORM

PROJECT: Broadway/Pantano

PROJECT #: 1420142029

Phase/Task:

SITE NAME:

WELL ID: R-124A

SAMPLED BY: COMBS/SARGENT

DATE: 02-24-2015

TD Casing: 5in ft

Screened Interval: 370-410 ft BTOC

Pump Set Depth 410 ft BTCC

Time Pump On: 0933 hours

Time Pump Off: ~~0~~ 1014 hours

Total Time Pumped: ~~101~~ 41 minutes

Static Depth to Water: 348.94 ft BTOC

Depth to Product: — ft BTOC

Water Level at Sampling: 350.62 ft BTOC

Total Purge Volume: 376.5 mL

Time	Temp (°C)	pH	EC (µS/cm)	Turbidity (NTU)	DO mg/L	ORP mV	Q (mLpm)	Purge Volume (mL)	Water Level (ft BTOC)	Comments
		6.98			3.44	201.4				
0939	22.56	~~7.16~~	788		~~5.16~~	~~223.7~~		62	350.52	
0943	23.29	6.90	770		2.86	195.9		93	350.64	
0947	23.02	6.92	773		2.97	195.2		124	350.59	
0950	23.66	6.94	788		3.02	178.1		155	350.60	
0953	22.92	6.92	740			181.2		186	350.51	
										* ~545
1001	21.34	6.93	753		5.10	164.6		253	350.60	
1004	22.84	6.87	766		4.90	176.3		279	350.55	
1007	23.25	6.87	750		4.79	182.0		310	350.62	

Sample ID: ~~R-124A-GRAB~~ R-124A-0-GRAB-022415

Sample Time: 1007

Duplicate ID:

Duplicate Time:

Water Quality Meter Information:

Turbidity Meter Information:

Water Level / Interface Probe Information:

Sample Pump Information:

Additional Notes:

amec

GROUNDWATER SAMPLING FIELD DATA FORM

PROJECT: Broadway/Pantano

PROJECT #: 1420142029

Phase/Task:

SITE NAME:

WELL ID: R-125A

SAMPLED BY: COMBS / SARGENT

DATE: ~~8~~ 2/24/15

TD Casing: 395 ft

Screened Interval: ~~375~~ 370-395 ft BTOC

Pump Set Depth ~~390~~ 395 ft BTCC

Time Pump On: 1039 hours

Time Pump Off: 1110 hours

Total Time Pumped: 31 minutes

Static Depth to Water: 333.60 ft BTOC

Depth to Product: — ft BTOC

Water Level at Sampling: 333.69 ft BTOC

Total Purge Volume: 232.65 mL

Time	Temp (°C)	pH	EC (µS/cm)	Turbidity (NTU)	DO mg/L	ORP mV	Q (mLpm) GPM	Purge Volume (mL)	Water Level (ft BTOC)	Comments
1048	20.88	6.89	765		3.93	166.1	~8	63		
1051	22.61	6.75	766		12.20	169.5		94	339.7	
1058	22.67	6.76	763		11.33	183.3		126	339.79	
1104	22.84	6.76	768		12.27	181.8		157	339.72	
1106	23.11	6.76	769		11.08	187.4		188	339.68	
								219		
								251		
								283		
								314		
										* SOLNIST 3 (CGT)

Sample ID: R-125A-0-GRAB-022415

Sample Time: 1109

Duplicate ID:

Duplicate Time:

Water Quality Meter Information:

Turbidity Meter Information:

Water Level / Interface Probe Information:

Sample Pump Information:

Additional Notes:

amec

GROUNDWATER SAMPLING FIELD DATA FORM

PROJECT: Broadway/Pantano
PROJECT #: 1420142029
Phase/Task:
SITE NAME:

WELL ID: D-018 A
SAMPLED BY: COMBS / SARGENT
DATE: 2/24/15

TD Casing: ft
Screened Interval: ft BTOC
Pump Set Depth ft BTCC 330
Time Pump On: — hours
Time Pump Off: — hours SPIGOT
Total Time Pumped: — minutes

Static Depth to Water: 329.6 ft BTOC
Depth to Product: — ft BTOC
Water Level at Sampling: 329.5 ft BTOC
Total Purge Volume: mL 35L

Time	Temp (°C)	pH	EC (µS/cm)	Turbidity (NTU)	DO mg/L	ORP mV	Q (mLpm)	Purge Volume (mL)	Water Level (ft BTOC)	Comments
1135	22.58	7.39	466	SEE NOTES	5.65	157.7			329.6	1.75 NTU
1140	23.66	7.33	474		4.34	147.0			329.55	
1145	23.12	7.34	472		3.92	149.9			329.55	
1150	23.56	7.33	485		4.27	148.8			329.6	
1155	23.99	7.29	477		4.45	142.0			329.55	
1200	23.50	7.30	485		4.06	153.1			329.5	

Sample ID: D-018A-0-GRAB-022415
Sample Time: 1203
Duplicate ID:
Duplicate Time:
Water Quality Meter Information:
Turbidity Meter Information:
Water Level / Interface Probe Information:
Sample Pump Information:

Additional Notes:

5.05

amec

GROUNDWATER SAMPLING FIELD DATA FORM

PROJECT: Broadway/Pantano

PROJECT #: 1420142029

Phase/Task:

SITE NAME:

WELL ID: C-125A

SAMPLED BY: BC + S.S.

DATE: 1/2/15

TD Casing: ft

Screened Interval: ft BTOC

Pump Set Depth ft BTCC

Time Pump On: 1440 hours

Time Pump Off: 1515 hours

Total Time Pumped: 35 minutes

Static Depth to Water: ft BTOC

Depth to Product: ft BTOC

Water Level at Sampling: 281.03 ft BTOC

Total Purge Volume: mL

Time	Temp (°C)	pH	EC (µS/cm)	Turbidity (NTU)	DO mg/L	ORP mV	Q (mLpm)	Purge Volume (mL)	Water Level (ft BTOC)	Comments
1450	24.3	7.34	348		12.52	205.4	1230			
1455	24.85	7.37	340		10.95	168.6	1230			
1500	24.74	7.40	328		14.94	162.6	1230			
1505	24.60	7.55	338		14.49	151.1	1230			

Sample ID: C-125A-0-GRAB-030215

Sample Time: 1510

Duplicate ID:

Duplicate Time:

Water Quality Meter Information:

Turbidity Meter Information:

Water Level / Interface Probe Information:

Sample Pump Information:

Additional Notes:

amec

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: WR-703A **Location/Well ID:** WR-703A

Log Date: 2-19-15 Log Time: 10:50

Date PDB(s) Deployed: _____ Matrix: Groundwater

Water Level at Deployment: 289.87

Water Level at Sampling: _____ 290.04 (0.17' diff)

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1				
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano Project Number: 14-2014-2029

Site ID: WR-702A **Location/Well ID:** _____

Log Date: 2-19-15 11:15 Log Time: 11:15

Date PDB(s) Deployed: 294.78 Matrix: COTES Groundwater

Water Level at Deployment: ~~294.77~~ 294.98

Water Level at Sampling: _____

	PDB Sample Depth(s)		Sample ID(s)	Sample Date/Time
	bwt	btoc		
PDB 1				
PDB 2				
PDB 3				
PDB 4				
PDB 5				

Analysis: 8260B(LL) Container Type: 3 - 40 ml VOA

Preservative(s): HCl Laboratory: Test America

QA/QC Yes No Chain of Custody Complete Yes No

Comments:

Project Name: Broadway Pantano

Project Number: 14-2014-20

Well ID: SWR-704

Sample Date: 2-19-15

Sample Time: 10:28

Water Level (btoc) 293.90

QA/QC check of water level (0.19' diff) measurement from COTES

Time	pH	DO (mg/L)	Cond.	Fe	Fe+2	Comments

Sample ID:

Analysis:

8260LL	
Anions,pH,alkalinity,hardness	
Cation/Metal	
TOC	
DOC	
8270	

Presevative:

QA/QC Yes/No

Laboratory: Test America

Chain of Custody Complete: Yes/No

Comments:

COT = 294.09 – SOL#3 Sonist

Serial # 31385 – Aeron Instruments 500'

DI water filled PDB (275 ml) from Tucson Lab

Analysis by Accutest

Well ID	Measuring Point Elevation (ft asl)	Date	Time	Depth to Groundwater (feet)	Water Level Measurement Method	Collecting Agency
WR-702A	2529	2/19/2015	11:15	294.78	T	AMEC
WR-702A	2529	2/19/2015	11:10	294.98	T	COT
WR-703A	2525	2/19/2015	10:50	289.87	T	AMEC
WR-703A	2525	2/19/2015	10:45	290.04	T	COT
WR-704A	2526	2/19/2015	10:28	293.9	T	AMEC
WR-704A	2526	2/19/2015	10:25	294.09	T	COT

DAILY TAILGATE SAFETY MEETING CHECKLIST

Project: _____ Site: _____

Date: 2/25/2015 Location: _____

To be reviewed on the first day of site activities and when new workers arrive on site:

Alternate for Health & Safety: _____

Location of on-site HASP: _____

Site training requirements: See HASP

Specific medical surveillance requirements: See HASP

Agenda:

During the project, one or more of the agenda items could be selected for the required daily site training.

Check-off: Date

	2/23	2/24	2/25	2/26	2/27
1. Planned work for this day (discuss)	☒	☒	☒	☒	☒
2. Physical hazards and controls (discuss/review)	☒	☒	☒	☒	☒
3. Chemical hazards and controls (discuss/review)	☒	☒	☒	☒	☒
4. Biological hazards and controls (discuss/review)	☒	☒	☒	☒	☒
5. Personal protective equipment Modified D	☒	☒	☒	☒	☒
6. Personal protective equipment required per the hazard assessment:	☒	☒	☒	☒	☒
7. Review inspection, decontamination, and maintenance procedures and the limitations of the above stated PPE.	☒	☒	☒	☒	☒
8. Decontamination procedure (discuss/review)	☒	☒	☒	☒	☒
9. Exclusion zone maintained	☒	☒	☒	☒	☒
10. Site emergency response plan (discuss/review)	☒	☒	☒	☒	☒
11. Signs and symptoms of overexposure to chemicals anticipated on site	☒	☒	☒	☒	☒
12. General health and safety rules	☒	☒	☒	☒	☒
13. Specific health and safety requirements relating to site activities including: (discuss/review)	☒	☒	☒	☒	☒
14. Drilling/boring	☒	☒	☒	☒	☒
15. UST	☒	☒	☒	☒	☒
16. Excavations (including UG utility locations)	☒	☒	☒	☒	☒
17. Heavy equipment	☒	☒	☒	☒	☒
18. Slips, trips, and falls	☒	☒	☒	☒	☒
19. Lockout/tagout	☒	☒	☒	☒	☒
20. Working in temperature extremes	☒	☒	☒	☒	☒
21. Rain or other weather advisories	☒	☒	☒	☒	☒
22. Other health & safety issues (discuss/note)	☒	☒	☒	☒	☒
Quality Topics					
23. Have team members been issued SOPs, site WP, and H&S Plan?	☒	☒	☒	☒	☒
24. Quality discussed as goal for work day activities including but not limited to:	☒	☒	☒	☒	☒

- Field Variances,
- boring logs,
- sampling logs,
- chains of custody,
- subcontractor management, etc.

Specify Type	
Protective coveralls	
Safety glasses/goggles	ANSI approved
Hard hat	ANSI approved
Foot protection	Safety toe boots
Work gloves	For moving equipment or drums
Chemical gloves	Nitrile gloves for sampling
Hearing protection	Noisy Equipment
Other	

DAILY TAILGATE SAFETY MEETING CHECKLIST

I have participated in the daily safety meeting discussing the topics indicated on the reverse and fully understand my responsibility for complying with all health and safety requirements. I have had the opportunity to have my questions on site health and safety issues and procedures answered.

Employee Name	Employee Signature	Date
Samantha Sargent		2-23-15
Brandon Combs		2-23-15
B. Combs		2/24/15
S. Sargent		2/24/15
B. Combs		2/25/15
S. Sargent		2/25/15
B. Combs		2/26/15
S. Sargent		2/26/15
B. Combs		2/27/15
S. Sargent		2/27/15
B. Combs		3/2/15
S. Sargent		3/2/15

Name and Signature of person conducting training

Date

Location _____ Date 2/19

Project / Client _____

	WR-703A AMEC FW 289.87	COTES 290.04	0.17
	WR-704A 293.90	COTES 294.09	0.19
11:15	WR-702A AMEC FW 294.78	COTES 294.98	0.20

Location _____ Date 2/23

Project / Client _____

1157	BR15 (346.39 ft)
1245	BP-8 (346.39 ft)
1315	BP-7 (324.02 ft)
	PDB1
1319	PDB2
1323	PDB3
1351	BP-19 (292.08 ft)
	• well needs new bolt.
1542	B-24B (314.21 ft)
	B-24C (314.10 ft)
	• had problems sounding 24-B. The line was really wet and seemed to be getting stuck on something.
1649	WR-207B (313.67 ft)

Location _____ Date 2/24

Project / Client _____

124A 348.94 ft

- purge volume =
  (total depth − static depth) * d

d factor Table

Well casing (inch)	3 volumes	5 volumes
4	1.96	3.26
5	3.06	5.10
6	4.40	7.35
8	7.84	13.06

ex) 395 − 333.6 = 61.4 * 3.06 = 311 & 7l

gpm = total gallons / total time

total purge = 186.8436

1 times	102 gal
1.5 times	93 gal
2 times	124 gal
2.5 times	155 gal
3 times	186 gal
3.5 times	217 gal
4 times	248 gal
4.5 times	279 gal
5 times	310

Start flow rate @ 10.58 gal/min
(0933)

@125

1	63 gal
1.5	94 gal
2	126 gal
2.5	157 gal
3	188 gal
3.5	219 gal
4	251 gal
4.5	283 gal
5	314 gal

flow rate @ 9.06
(1039)

Location _____ Date 2/24

Project / Client _____

D018A (1200 − 329.50 ft)
1.75 NTU
- well had been purged for around 2½ hours before we arrived
- static depth: 351 ft
  top: 509 ft
  draw down: 380 ft

1415	CVA − 295.45 ft
1450	BP-20 − 298.64 ft − PDB1
1455	PDB-2
1548	BP-1 − 298.01 ft
1630	SEE-001 − 308.46 ft

Location _____ Date 2/25

Project / Client _____

Time	well	waterlevel depth (ft)
954	BP-11	342.55
1026	WR-367A	338.34
1054	BP-23	337.10
1130	BP-22	339.73
1156	WR-435A	351.98
1231	BP-9	319.49
1347	BP-10	333.54
1428	WR-181A	289.31
1529	WR-358A	294.36
1602	BP-25	292.08

8260 LL (14 day hold time)

Location _____ Date 2/24

Project / Client _____

Time	well name	water depth (ft)	Notes
1149	R-068A	316.64	
1229	R-069B	801.45	
1303	WR-274A	310.55	
1311	PDB1		
1314	PDB2		
1356	PDB3		
1422	WR-275A	315.50	
1528	WR-177A	327.54	
1550	WR-353A	294.90	Big change in water level
1631	WR-273A	297.80	
	BP-24A	315.25	Needs new bolts

Project / Client

Key

Time	Well	water depth (ft)		Notes
823	BP-16	342.41		Possible PDB set
836	WR-179A	343.35		well was in poor condition. Broken handle & hinges.
851	SJ-001	334.85		
918	SS-002	339.34		Pulled transducer (Red Zip tie)
951	WR-178A	315.61	(Red key)	Poor well condition broken hinges
1014	WR-352A	313.73		
1021	~~WR~~ BP-5	324.15		
1034	WR-180A	310.55	(red key)	
1116	WR-354A	320.48		
1145	R-091A	314.14		both were large boxes where the sanding area was unclear
1152	R-090A	312.70		
1231	WR-186A	288.10	(red key)	
1240	WR-459A	282.98	(red key)	
1252	WR-458A	293.16	(red key)	
1312	WR-703A	289.51	(red key)	
1321	WR-704A	294.51		no lock on well
1329	WR-762A	294.48		chain broken on cover
1340	BP-21	298.17	red key	chain broken on cover
1400	BP-3	298.63		
1411	BP-2	301.98		Pulled transducer (blue zip tie)
1420	BP-4	307.88		

Project / Client

Time	Well	depth to H2O (ft)	Notes
1040	C-048A	280.65	From Cracroft's Speedway - head west 2 streets - take right on Beverly - left on Willard (small alley)
1120	C-022A	332.62	Red key
1234	D-022A	320.31	The PDB got stuck. We were forced to remove the top of the well to retrieve it. The PDB was leaking at sampling. The PDB needs to be deployed upside down. The check depth was measured from the top of casing which was 40" tall from ground.
1302	D-039A	356.52	
1325	D-040A	372.68	
1348	D-021A	326.78	
1420	C-058A	311.02	
1510	C-125A	281.83	Purged for 35 mins. The turned off to get a static depth
1541	D-041A	375.42	red key
1559	D-049A	325.42	Used chuck Faas sounder because it can get into the well

Note: C051A

- unable to retrieve data because the well has been turned off for over 30 days due to a water main break. To get a sample, the well must be purged and sampled for bacteria.

Chain of Custody Record

065122

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

TestAmerica Phoenix
4625 E. Cotton Center Blvd.
Suite 189
Phoenix, AZ 85040
602.437.3340 Fax:

OSU-40900

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Alex Yiannakis	Site Contact: Brandon Combs	Date: 3/2/15	COC No:
Company Name: AMEC	Tel/Fax: 520.247.8736	Lab Contact:	Carrier:	___1___ of ___1___ COCs
Address: 4600 E Washington	Analysis Turnaround Time			Sampler: Combs/Sargent
City/State/Zip: Phoenix, AZ 85034	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 520.247.8736	TAT if different from Below STANDARD			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: Broadway/Pantano	☐ 1 week			
Site: Tucson, AZ	☐ 2 days			Job / SDG No.:
P O # 1420142029.3.3	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	8260 LL	Sample Specific Notes:
D-022A-342.43-PDB-030215	3/2/15	1234	G	Aq	3			/	DEQ# 37808 -1
D-039A-381.76-PDB-030215	3/2/15	1302	G					/	DEQ# 37844 -2
C-22A-357.80-PDB-030215	3/2/15	1020	G					/	DEQ# 37796 -3
C-48A/B-305-PDB-030215	3/2/15	1040	G					/	-4
C-125A-0-GRAB-030215	3/2/15	1310	G					/	DEQ# 60668 -5
D-021A-353.75-PDB-030215	3/2/15	1348	G					/	DEQ# 37904 -6
C-058A-336.25-PDB-030215	3/2/15	1420	G					/	DEQ# 37629 -7
D-040A-480-PDB-030215	3/2/15	1325	G					/	DEQ# 37846 -8
TB	3/2/15	1512		Aq	1			/	-9

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

1.1°C

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ | Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	AMEC	3/3/15 1125			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TA	Date/Time: 3-3-15 1125

TestAmerica Phoenix
4625 E. Cotton Center Blvd.
Suite 189
Phoenix, AZ 85040
Phone: 602.437.3340 Fax:

Chain of Custody Record

093258

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Jim Clarke	Site Contact: Alex Yiannekakis	Date: 03/10/15	COC No: 093258
Company Name: AMEC Foster Wheeler	Tel/Fax: (602)733-6013	Lab Contact:	Carrier:	1 of 1 COCs
Address: 4600 E Washington St Suite600	Analysis Turnaround Time			Sampler: Garrett Labor
City/State/Zip: Phoenix / AZ / 85034	☐ CALENDAR DAYS ☒ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below _____			Walk-in Client:
Fax:	☒ 2 weeks			Lab Sampling:
Project Name: Broadway - Pantano	☐ 1 week			
Site: Broadway - Pantano	☐ 2 days			Job / SDG No.:
PO# 1420141202 9	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	8260LL	Sample Specific Notes:
EONTB031015	031015	0920	G	H_2O	3	N	N	Y	
Trip Blank	–	–	–	–	–	Y	Y	N	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other 2

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

2.8°C

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	AMEC	031015 1335	[signature]		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
			[signature]	[signature]	3/12-15 1335

CHAIN OF CUSTODY

ACCUTEST® LABORATORIES

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest NC Job #: C

Client / Reporting Information

Company Name: AMEC / ADEQ	Project Name: Broadway / Pantano
Address: 4000 E Washington	Street:
City: Phoenix State: AZ Zip: 85034	City: Tucson State: AZ
Project Contact: A. Giannakakis	Project #: 14-2014-2029e.3.3
Phone #: 520.247.8736	EMAIL:
Samplers's Name: Sargent / Combs	Client Purchase Order #:

Requested Analysis: 8260 TT

Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	8260 TT	LAB USE ONLY
	R-006A-314.86-PDB-022615	2/26/15	1149	Combs / Sargent	Aq	3	X								X	
	WR-275A-340.91-PDB-022615	2/26/15	1356	Combs / Sargent	Aq	3	X								X	
	WR-273A-323.33-PDB-022615	2/26/15	1550	Combs / Sargent	Aq	3	X								X	
	TB	2/26/15	1551	Combs / Sargent	Aq	3	X								X	

Matrix Codes: WW- Wastewater; GW- Ground Water; SW- Surface Water; SO- Soil; OI-Oil; WP-Wipe; LIQ - Non-aqueous Liquid; AIR; DW- Drinking Water (Perchlorate Only)

Turnaround Time (Business days)

Approved By:/ Date:

- [X] 10 Day Standard
- [ ] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [ ] 1 Day
- [ ] Same Day

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" - Results only
- [ ] Commercial "B" - Results with QC summaries
- [ ] Commerical "B+" - Results, QC, and chromatograms
- [ ] FULT1 - Level 4 data package
- [ ] EDF for Geotracker [ ] EDD Format
- Provide EDF Global ID
- Provide EDF Logcode:

Comments / Remarks

R-006A-314.86-PDB-022615 : DEQ # . 600650
WR-275A-340.91-PDB-022615 : DEQ # 57290
WR-273A-323.33-PDB-022615 : DEQ # 57288

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	3/3/15 1145	1	2		2
Relinquished by: 3	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
Relinquished by: 5	Date Time:	Received By: 5	Custody Seal #		

Appropriate Bottle / Pres. Y / N Headspace Y / N On Ice Y / N Cooler Temp.
Labels match Coc? Y / N Separate Receiving Check List used: Y / N ____oC

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TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Client Name / Address: AMEC/ADEQ 4600 E Washington Phoenix, AZ 85034

Project / PO Number: Broadway Pantano 14-2014-2629.3.3

Project Manager: A. Yamakako

Phone Number: 520-247-8736

Sampler: Surgent / Combs

Fax Number:

Analysis Required: 8260 LL

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	8260 LL	Special Instructions
BP-15-371.55-PDB-022315	Aq	40mL VA	3	2/23/15	1157	HCl	X	DEQ#: 60647
BP-~~15~~-8-371.55-PDB-022315					1245		X	DEQ#: 60643
BP-7-329.09-PDB-022315					1315		X	DEQ#: 60647
BP-7-349.09-PDB-022315					1319		X	DEQ# 60647
BP-7-374.09-PDB-022315					1323		X	DEQ# 60642
BP-19-317.11-PDB-022315					1351		X	DEQ# 60649
BP-24B-395-PDB-022315					1542		X	DEQ# 70459
BP-24C-450-PDB-022315					1608		X	DEQ#: 70460
WR-207B-338.7-PDB-022315					1649		X	DEQ#: 60655
R-124A-0-GRAB-022415				2/24/15	1067		X	
R-125A-0-GRAB-022415					1109		X	
D-018A-0-GRAB-022415					1203		X	DEQ#: 57850
CVA-321.06-PDB-022415					1415		X	
BP-20-323.60-PDB-022415					1450		X	DEQ# 60646

Relinquished By:	Date / Time:	Received By:	Date / Time:	Turnaround Time: (Check)	
[signature]	2/27/15 1733			same day ____	72 hours ____
Relinquished By:	Date / Time:	Received By:	Date / Time:	24 hours ____	5 days ____
				48 hours ____	normal X
Relinquished By:	Date / Time:	Received in Lab By:	Date / Time: 2-27-15 1733	Sample Integrity: (Check)	
				intact ____	on ice X

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

149

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Page 2 of 4

Client Name/Address: AMEC/ADEQ, 4600 E Washington, Phoenix, AZ 85034

Project/PO Number: Broadway/Pantano, 14-2014-2029.3.3

Project Manager: A. Yiannakakis

Phone Number: 520-247-8736

Sampler: Sargent/Combs

Fax Number:

Analysis Required: 8260 LL

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	8260 LL									Special Instructions
BP-20-348.100-PDB-022415	Aq	40ml VOA	3	2/24/15	1455	HCl	X									DEQ#: 61806
BP-1-323-PDB-022415					1548		X									DEQ#: 60637
SEE-001-332.49-PDB-022415					1630		X									DEQ#: 57757
BP-11-428-PDB-022515				2/25/15	0954		X									DEQ#: 60646
WR-367A-363.43-PDB-022515					1026		X									DEQ#: 60636
WR-367A-363.43-PDB-022515-DUP					1026		X									DEQ#: 60636
BP-23-362.8-PDB-022515					1054		X									DEQ#: 60899
BP-22-364.94-PDB-022515					1130		X									DEQ#: 60898
WR-935A-377.20-PDB-022515					1156		X									DEQ#: 60657
BP-9-344.69-PDB-022515					1231		X									DEQ#: 60644
BP-10-358.85-PDB-022515					1347		X									DEQ#: 60645
WR-181A-314.28-PDB-022515					1428		X									DEQ#: 58278
WR-358A-314.38-PDB-022515					1529		X									DEQ#: 58792
BP-25-317.10-PDB-022515					1602		X									DEQ#: 71980

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
[signature]	2/27/15 1733			same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal X
Relinquished By:	Date/Time:	Received in Lab By: [signature]	Date/Time: 2-27-15 1733	Sample Integrity: (Check) intact ____ on ice X

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

1.4°C

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Client Name/Address: AMEC/ADEQ, 4600 E Washington, Phoenix, AZ, 85034

Project/PO Number: Broadway/PANTANO 14-2014-2029.3.3

Project Manager: A. Yiannakakis

Phone Number: 520.247.8736

Sampler: COMBS/SARGENT

Fax Number:

Analysis Required: 8260B LL

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	8260B LL									Special Instructions
R-068A-341.86-PDB-022615	Aq	40ml VOA	3	2/26/15	1149	HCl	X									DEQ#: 60650
~~R-069A-SS~~ R-169B-326.71-PDB-022615					1229		X									DEQ#: 60652
R-169B-326.71-PDB-022615-DUP					1229		X									DEQ#: 60652
WR-274A-325.89-PDB-022615					1311		X									DEQ#: 57289
WR-274A-325.89-PDB-022615-DUP					1311		X									DEQ#: 57289
WR-274A-335.89-PDB-022615					1314		X									DEQ#: 57289
WR-275A-340.91-PDB-022615					1356		X									DEQ#: 57290
WR-177A-352.59-PDB-022615					1422		X									DEQ#: 57291
WR-177A-352.59-PDB-022615-DUP					1422		X									DEQ#: 57291
WR-353A-430-PDB-022615					1528		X									DEQ#: 55790
WR-353A-430-PDB-022615-DUP					1528		X									DEQ#: 55790
WR-273A-323.33-PDB-022615					1550		X									DEQ#: 57290
BP-24A-330.55-PDB-022615					1631		X									DEQ#: 70459
TB-SS			1		1633		X									

Relinquished By: [signature]	Date/Time: 2/27/15 1733	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received in Lab By: [signature]	Date/Time: 2-27-15 1733

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal X

Sample Integrity: (Check)
intact ____ on ice X

1.4°C

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

Client Name/Address: AMEC/ADEQ 4600 E Washington Phoenix AZ 85034

Project/PO Number: BROADWAY/PANTANO 14-214-2029.303

Project Manager: A. Yiannakakis

Phone Number: 520-247-8736

Sampler: Sargent/Combs

Fax Number:

Analysis Required: RCRA (All)

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	RCRA (All)									Special Instructions
WR-274A-315.89-PDB-022615	Aq	40ml VOA	3	2/26/15	1303	HCl	X									DEQ#: 57289

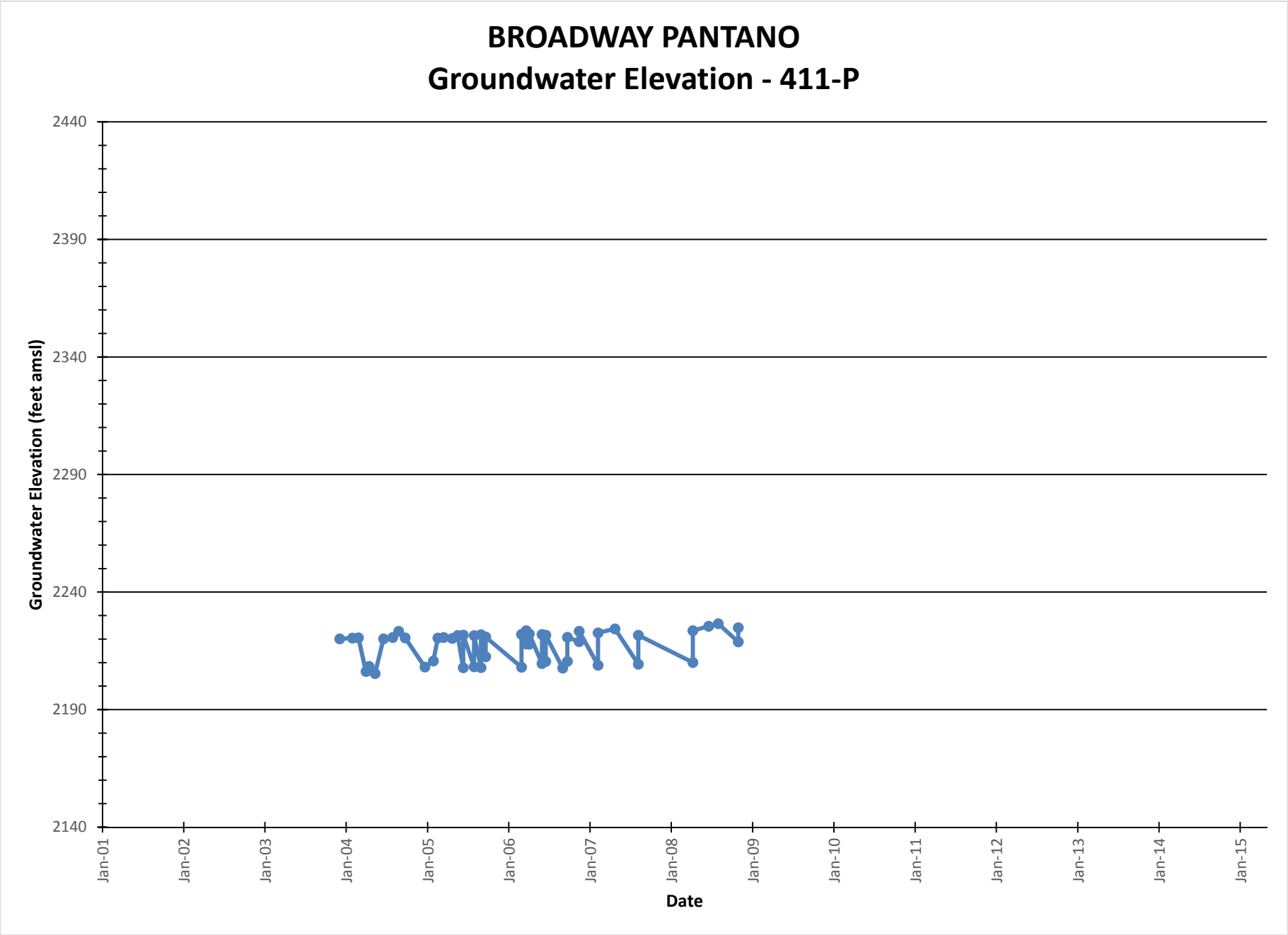
Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
[signature]	2/27/15 1733	[signature]		same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal X
Relinquished By:	Date/Time:	Received in Lab By: [signature]	Date/Time: 2-27-15 1733	Sample Integrity: (Check) intact ____ on ice X

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

1.4°C

APPENDIX C

HYDROGRAPHS, FEB/MARCH 2015


BROADWAY PANTANO
Groundwater Elevation - 411-P
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
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Jan-09
Jan-10
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Jan-12
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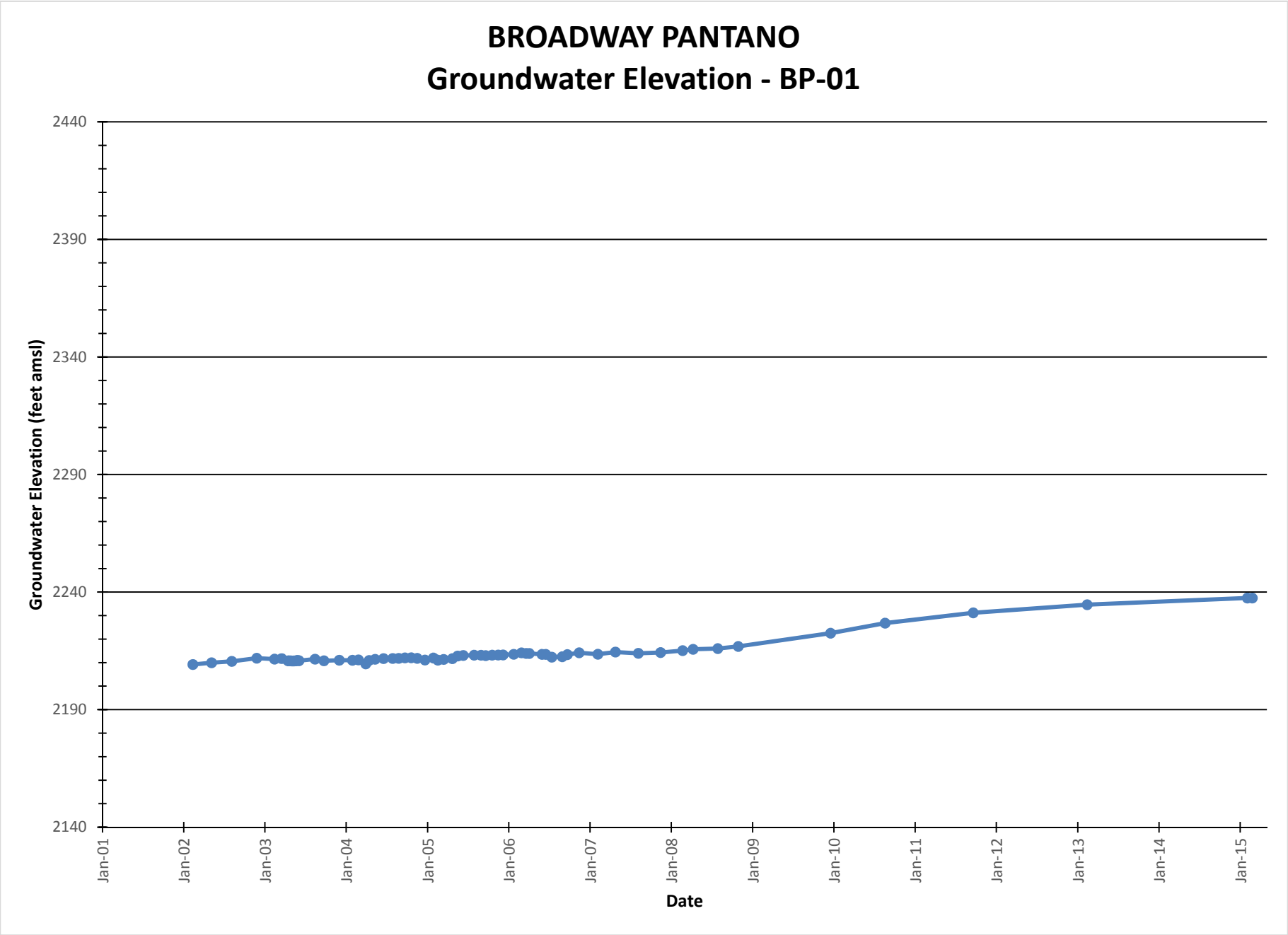
Jan-14
Jan-15
Date


BROADWAY PANTANO
Groundwater Elevation - BP-01
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
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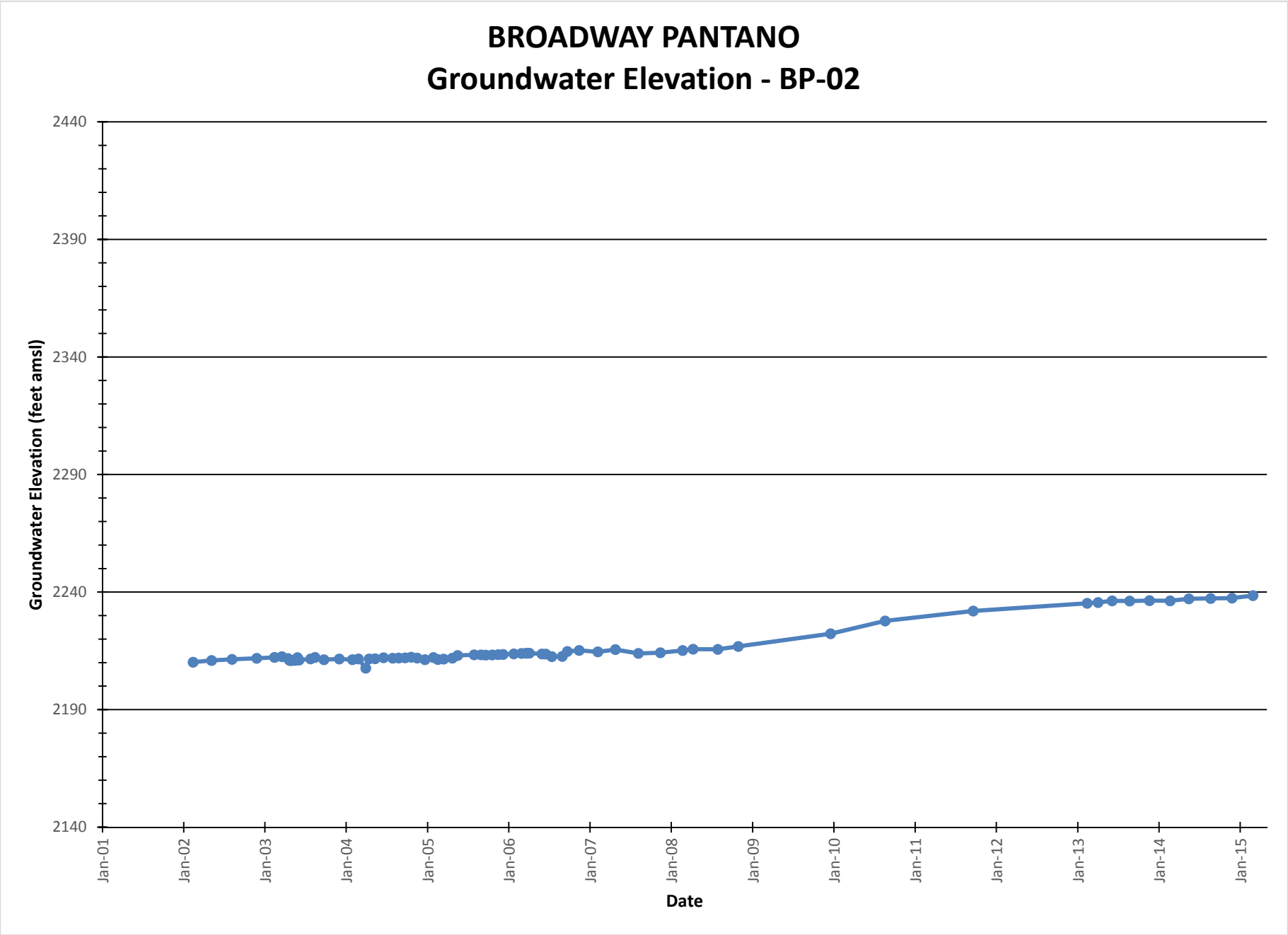
Jan-12
Jan-13
Jan-14
Jan-15
Date


BROADWAY PANTANO
Groundwater Elevation - BP-02
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
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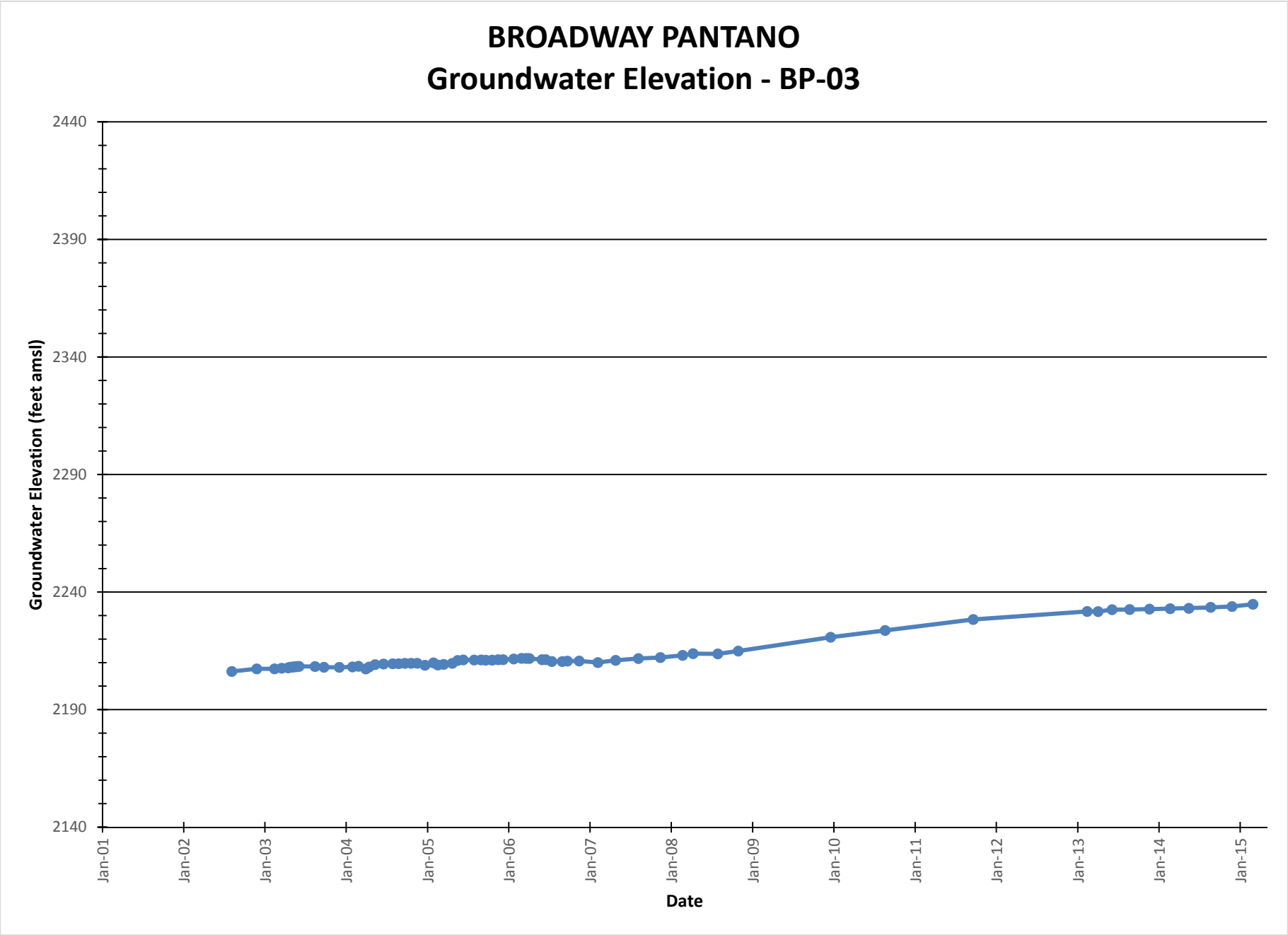
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date


BROADWAY PANTANO
Groundwater Elevation - BP-03
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
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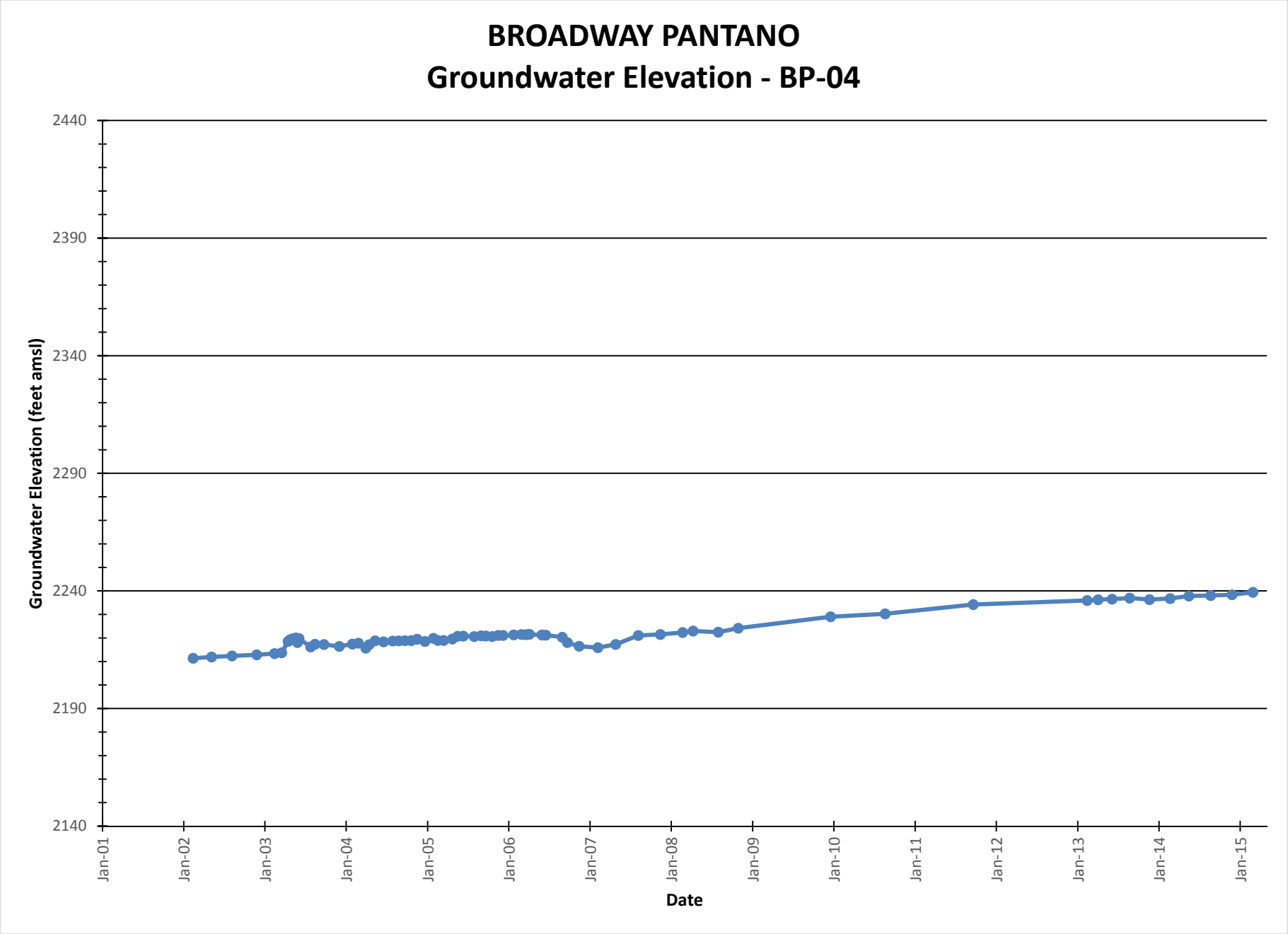
Jan-14
Jan-15
Date


BROADWAY PANTANO
Groundwater Elevation - BP-04
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
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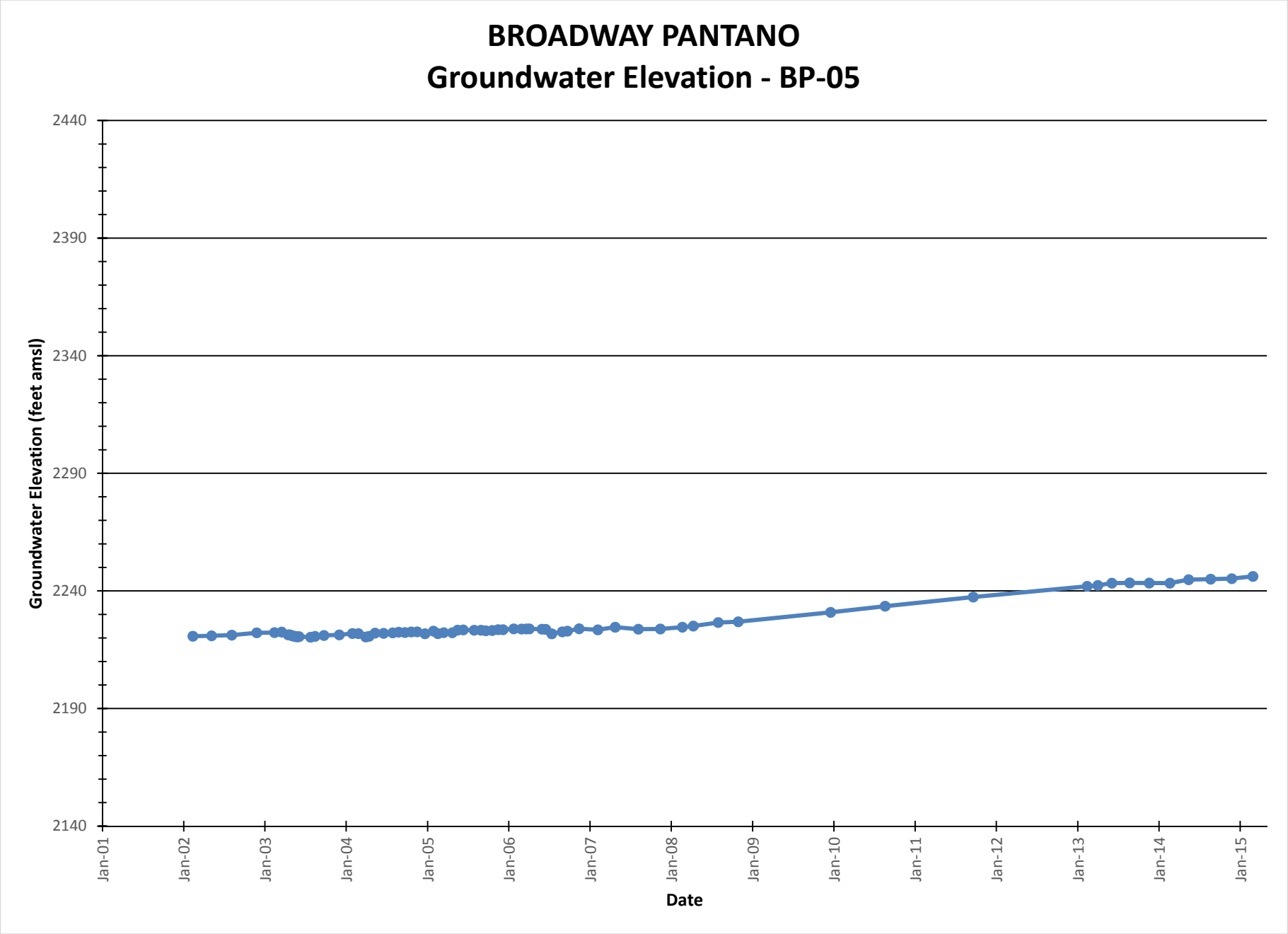
Jan-14
Jan-15
Date


BROADWAY PANTANO
Groundwater Elevation - BP-05
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
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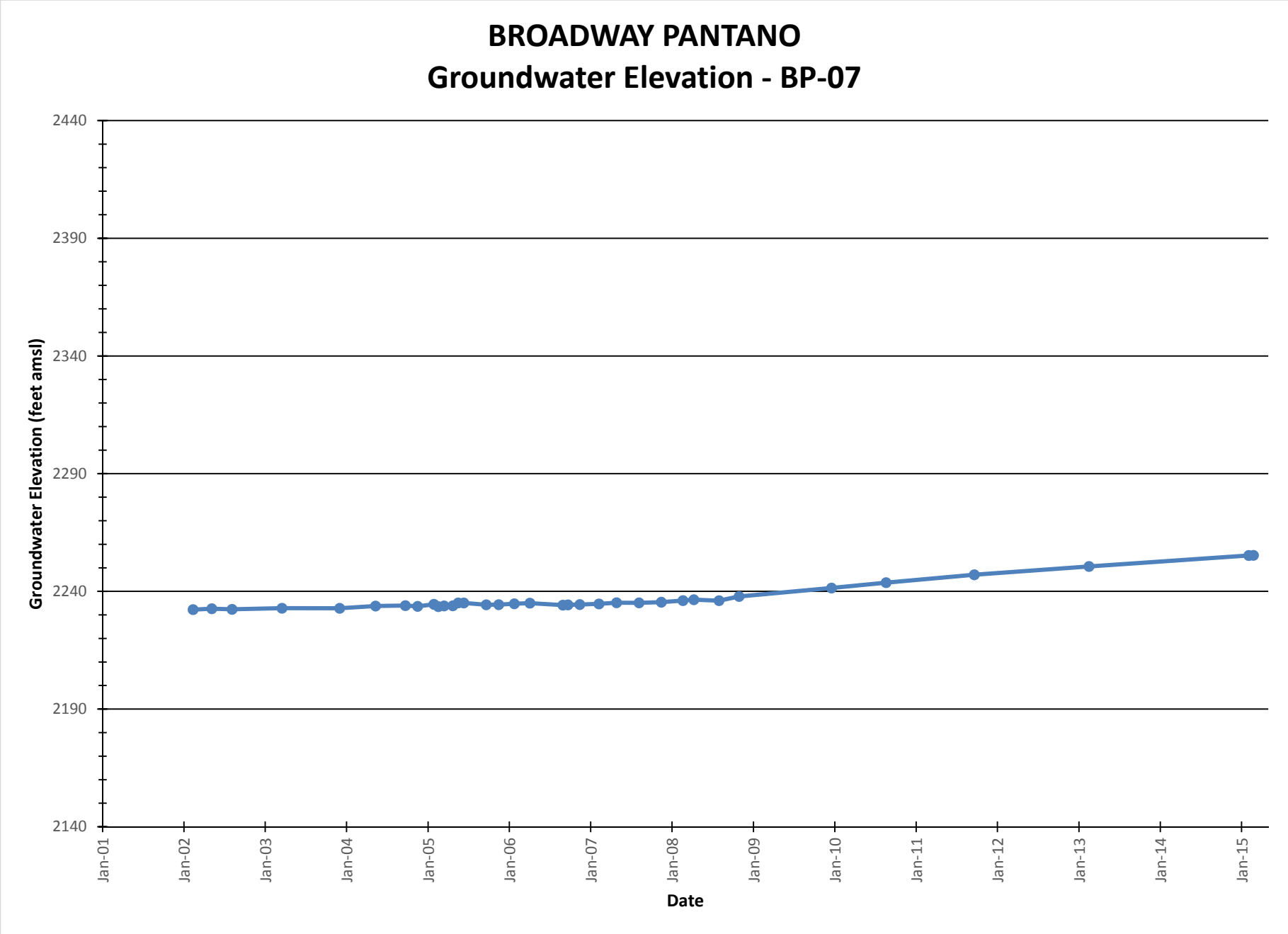
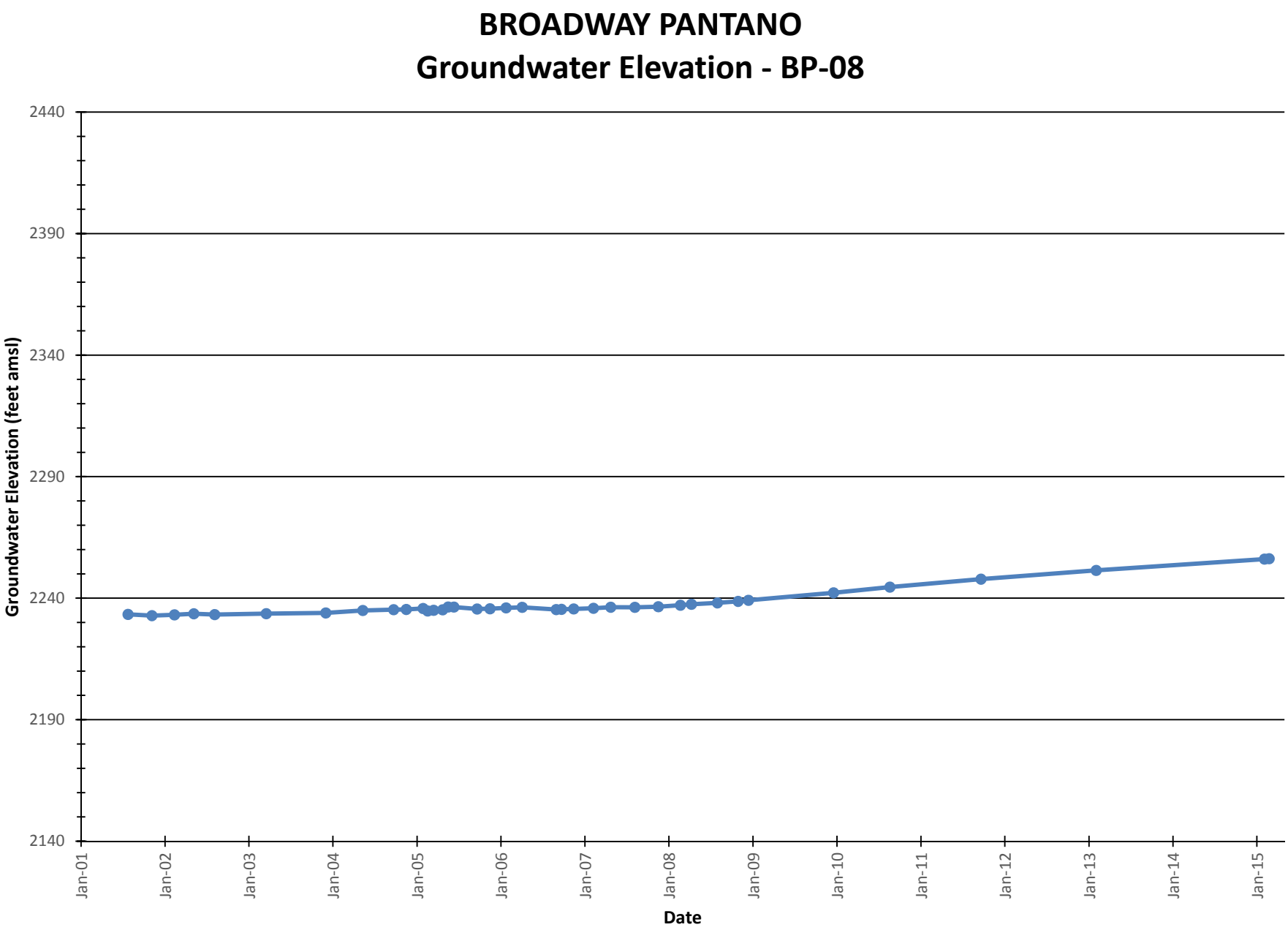
Jan-14
Jan-15
Date


BROADWAY PANTANO
Groundwater Elevation - BP-07
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date


BROADWAY PANTANO
Groundwater Elevation - BP-08
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
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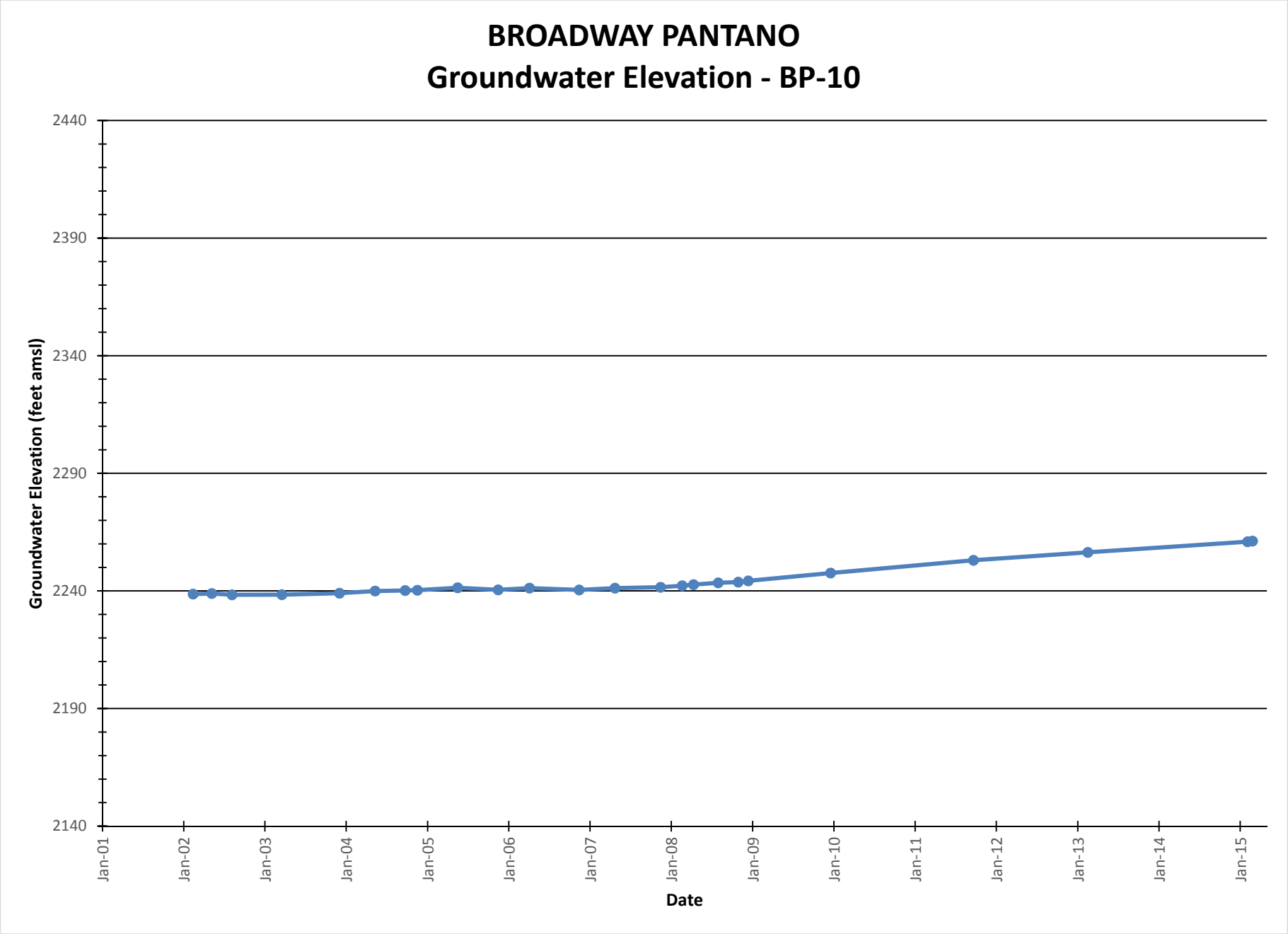
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date


BROADWAY PANTANO
Groundwater Elevation - BP-10
Groundwater Elevation (feet amsl)
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2390
2340
2290
2240
2190
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Jan-01
Jan-02
Jan-03
Jan-04
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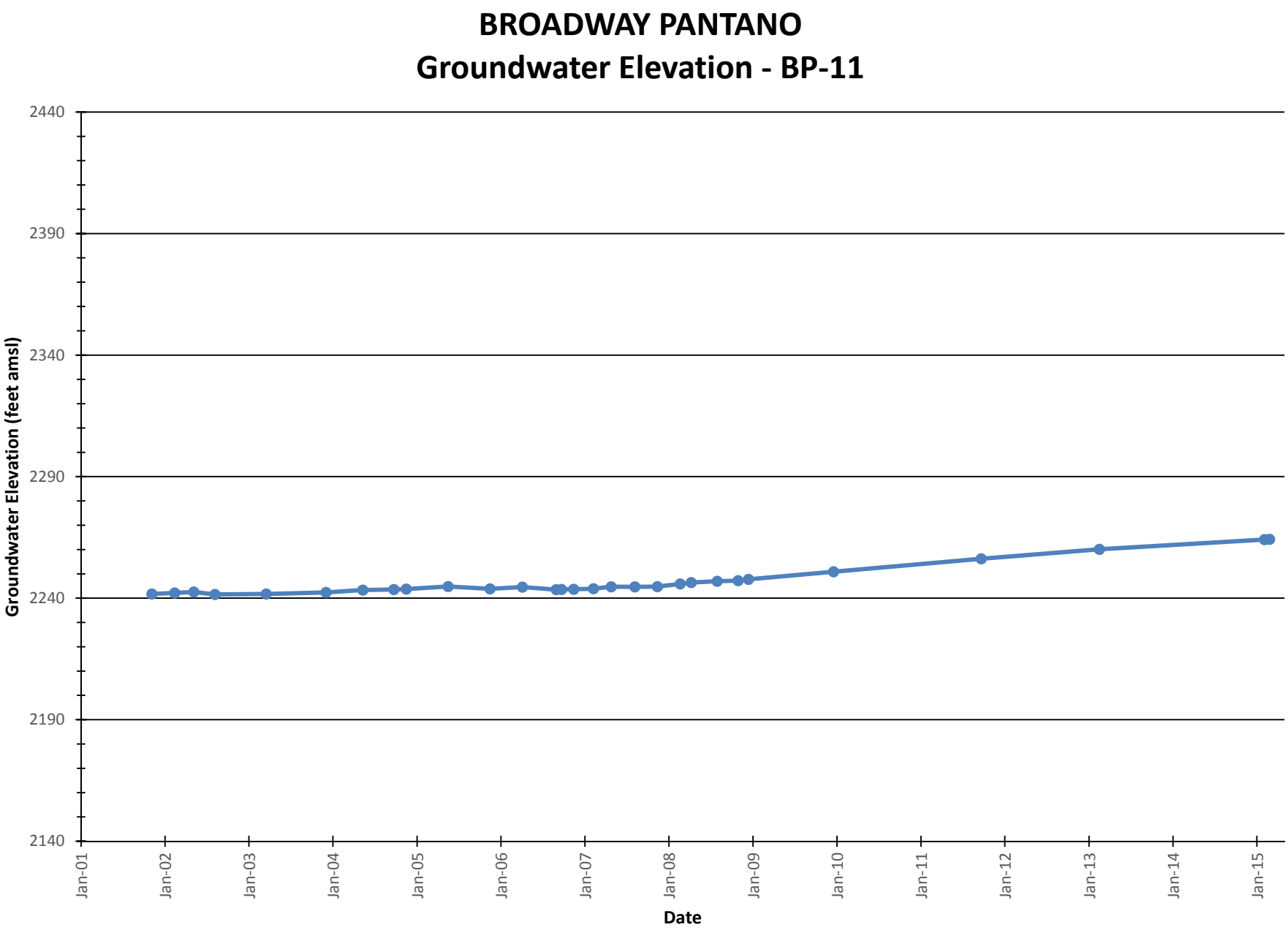
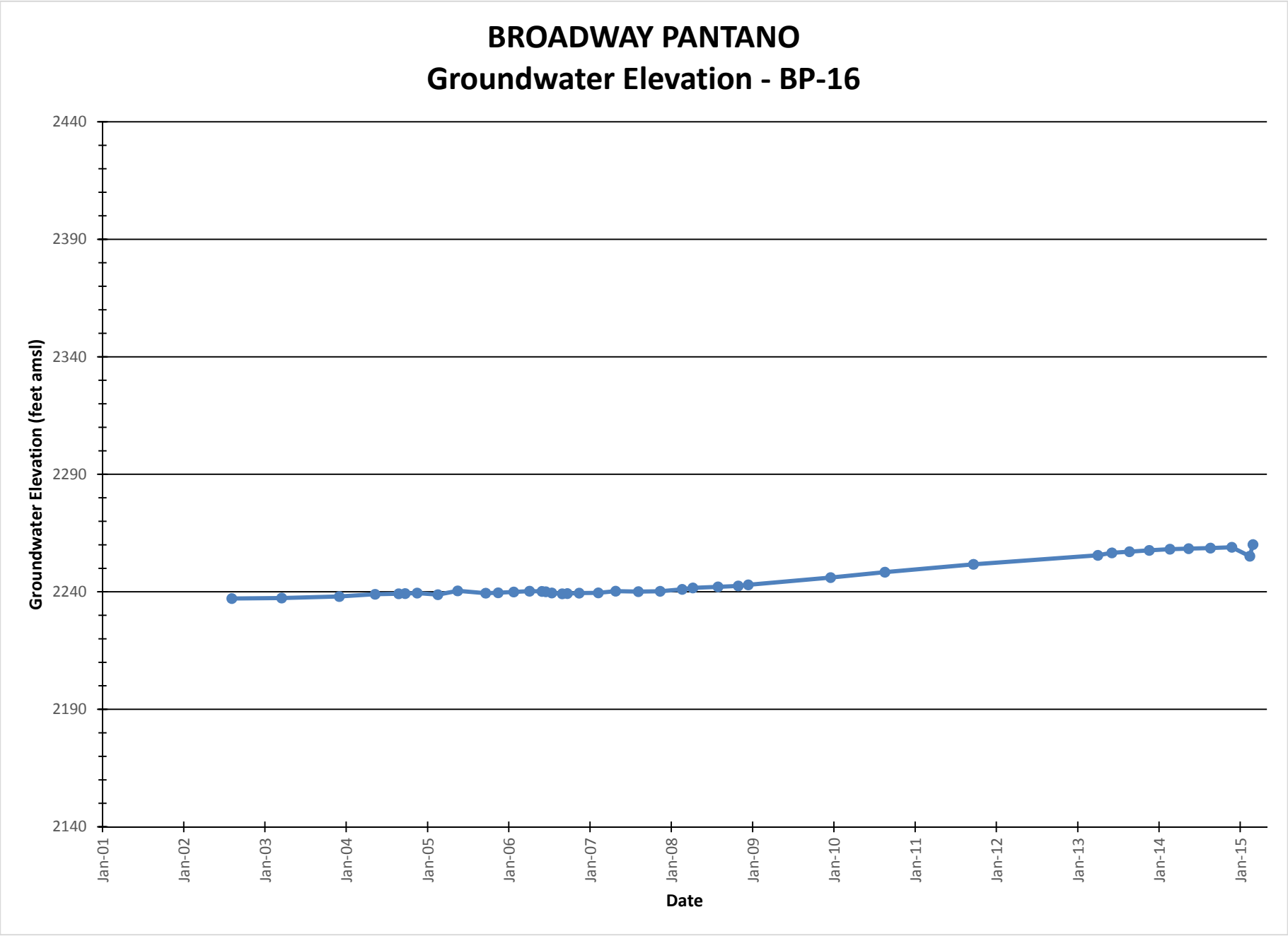
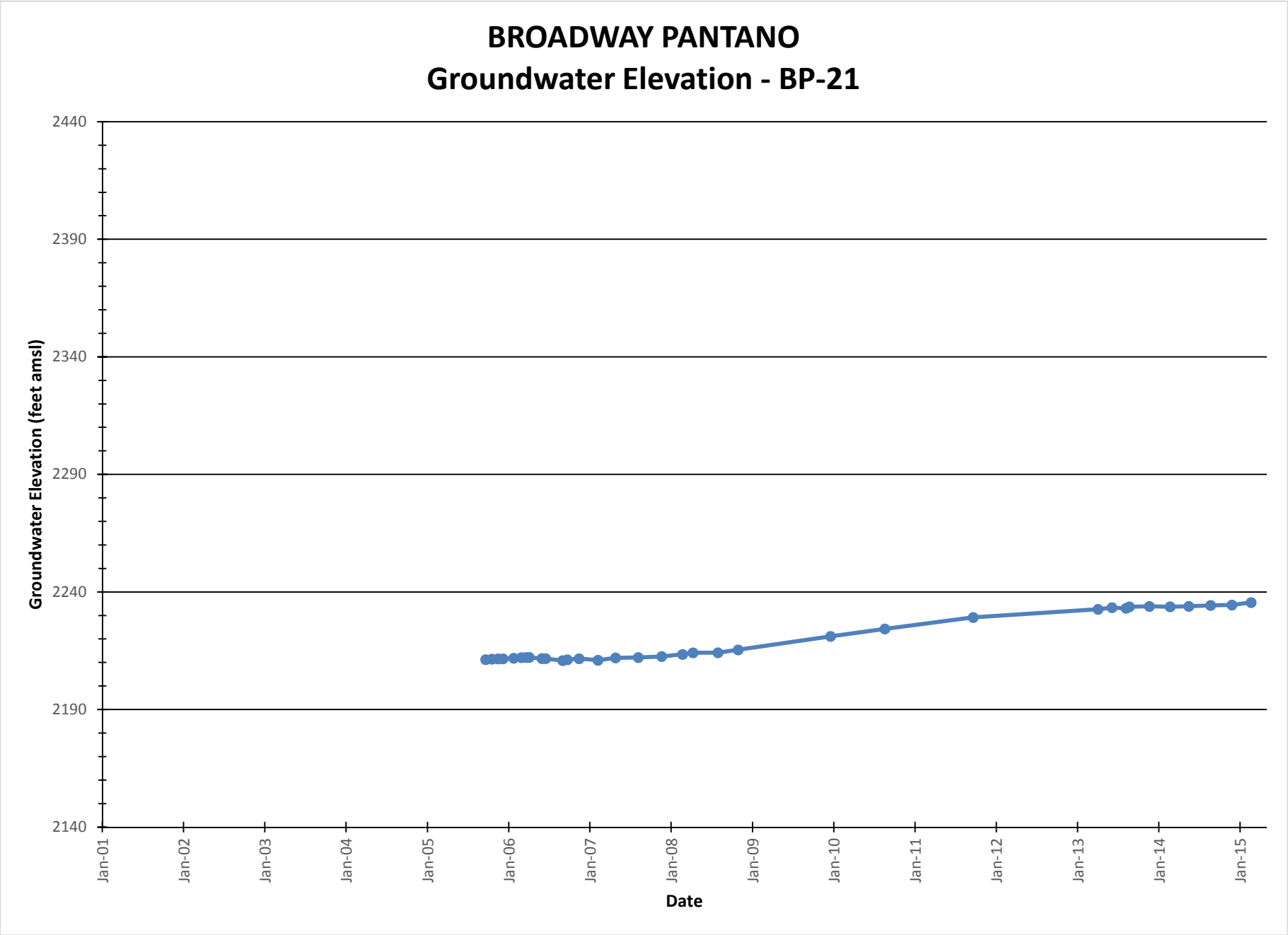
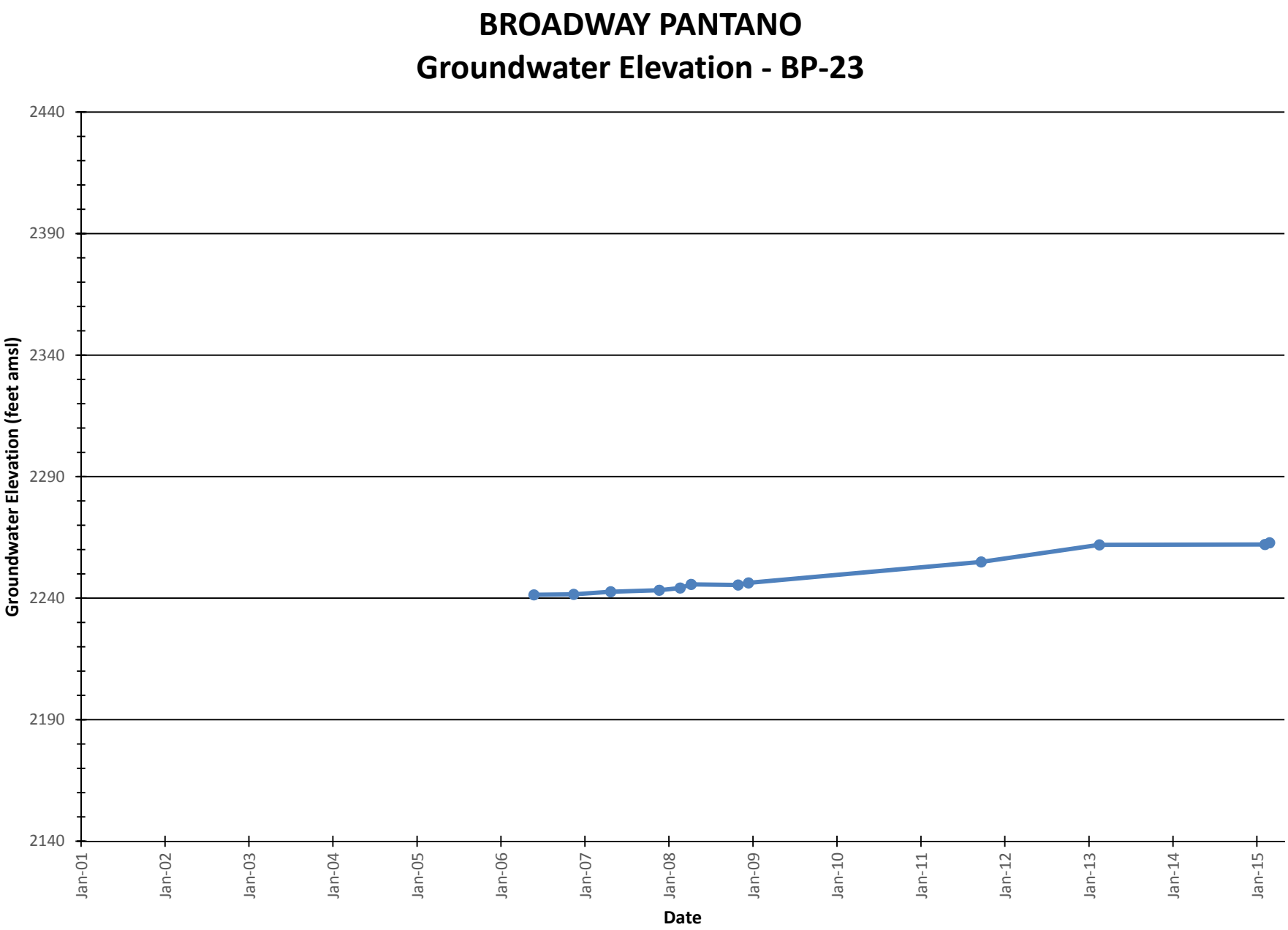
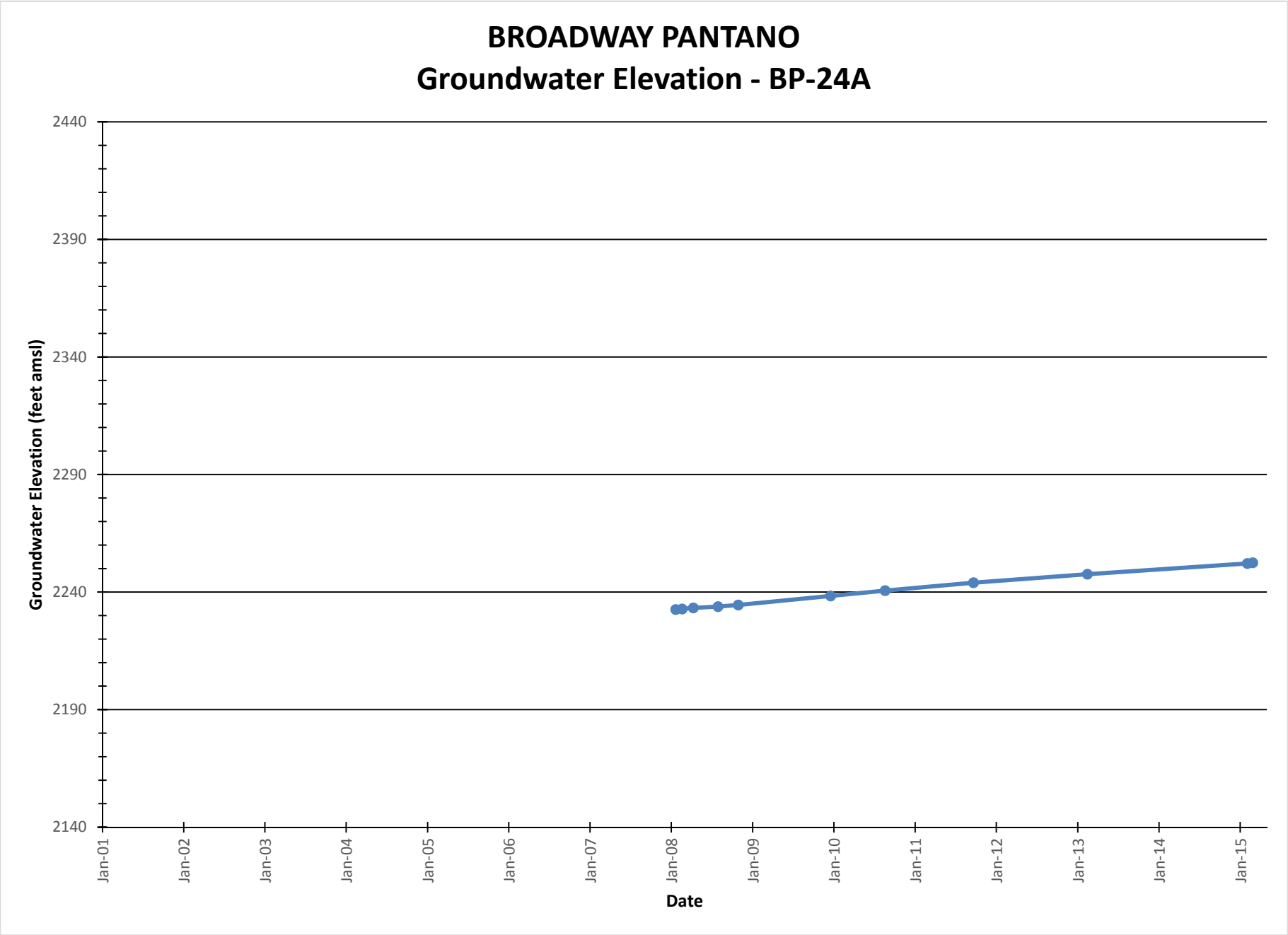
Jan-14
Jan-15
Date

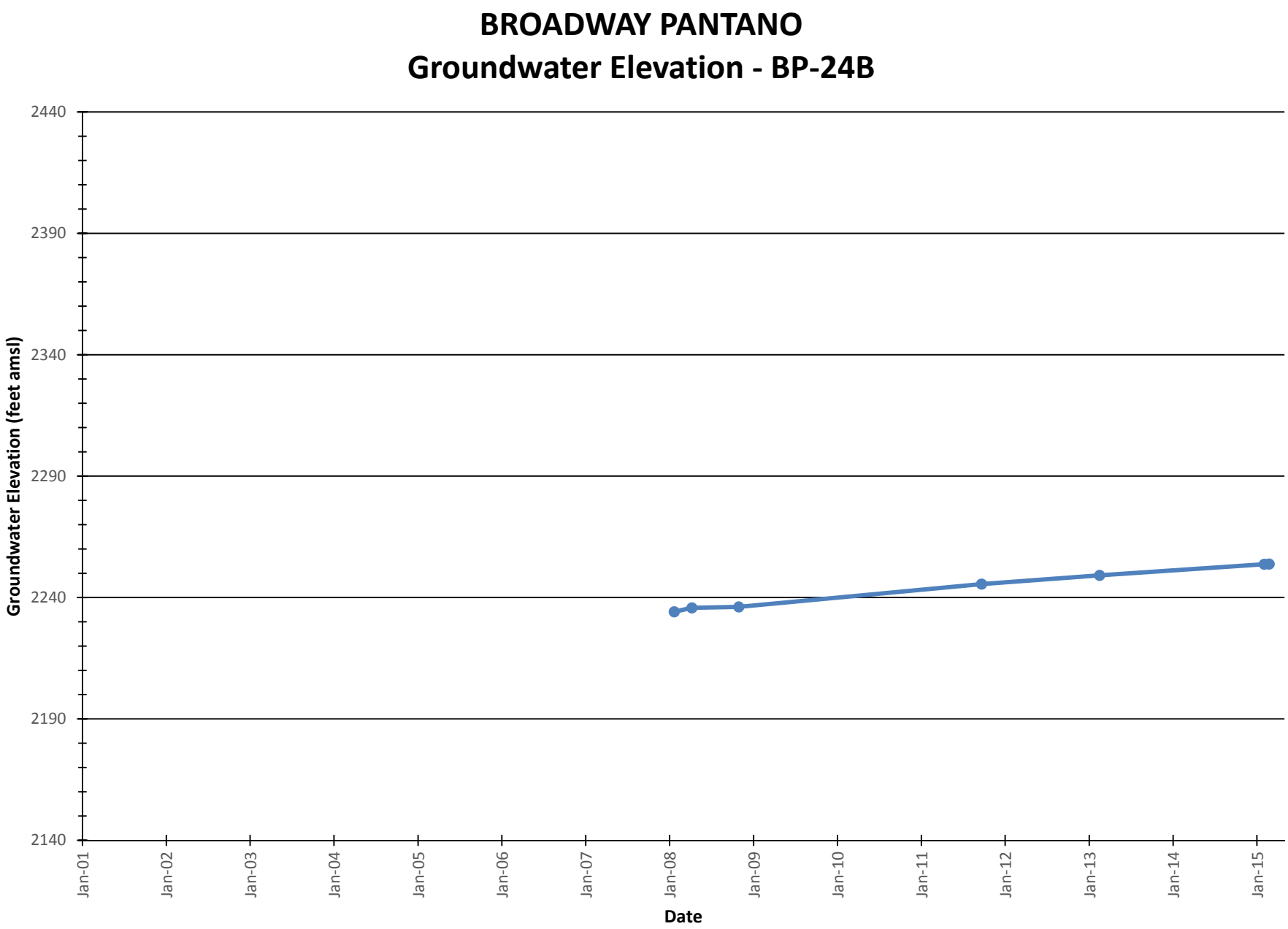

BROADWAY PANTANO
Groundwater Elevation - BP-11
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

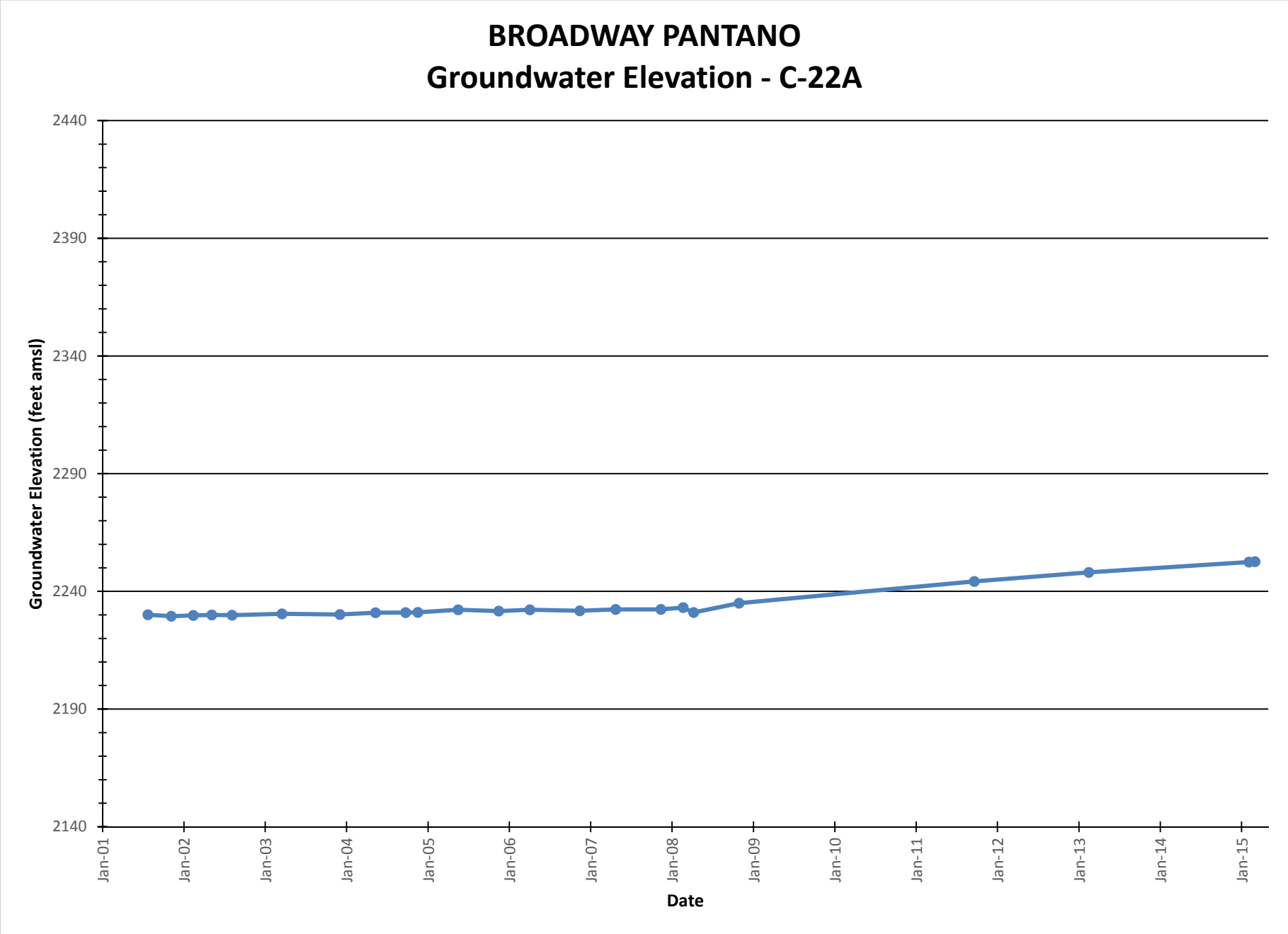

BROADWAY PANTANO
Groundwater Elevation - BP-16
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

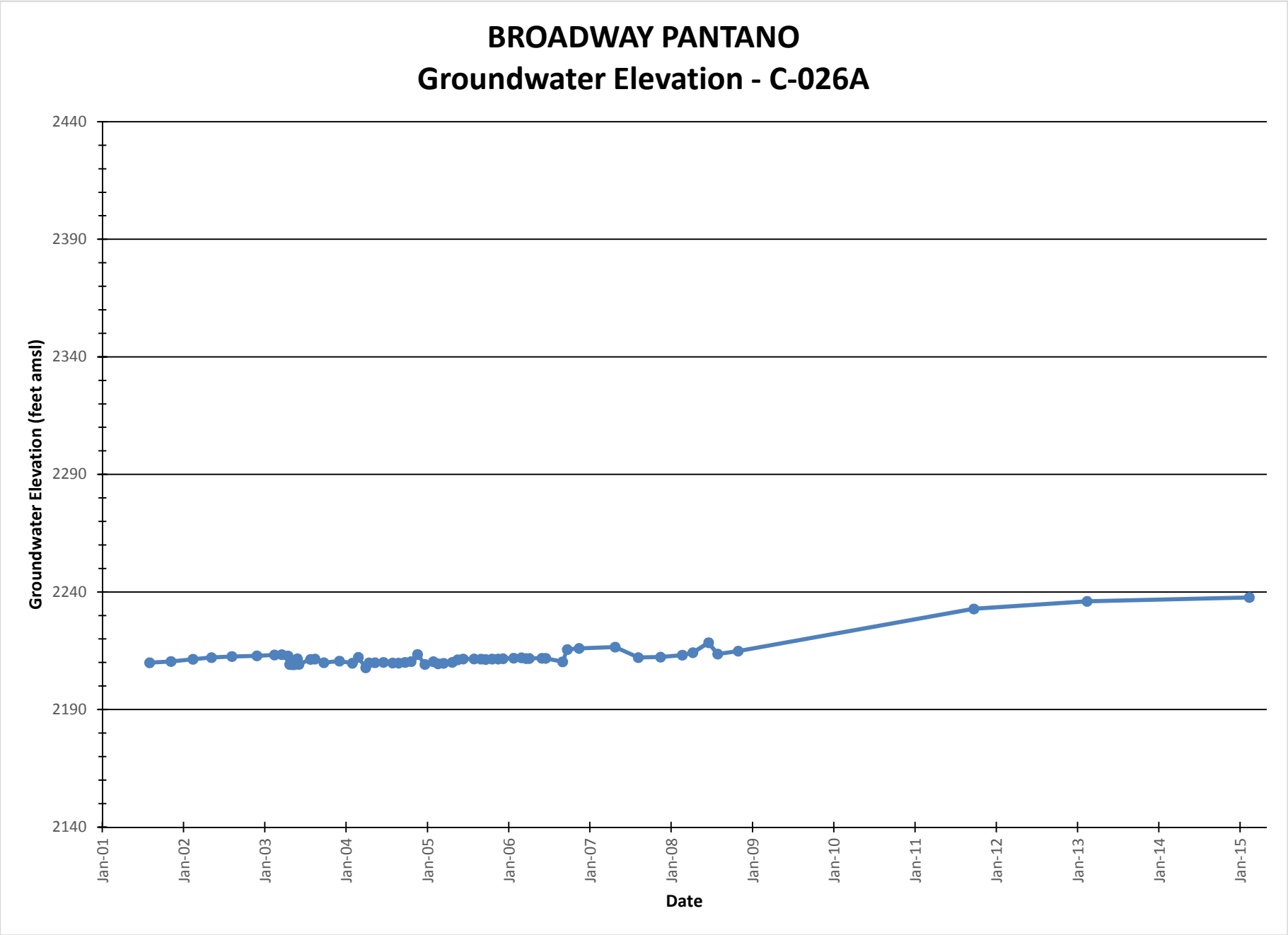

BROADWAY PANTANO
Groundwater Elevation - BP-21
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

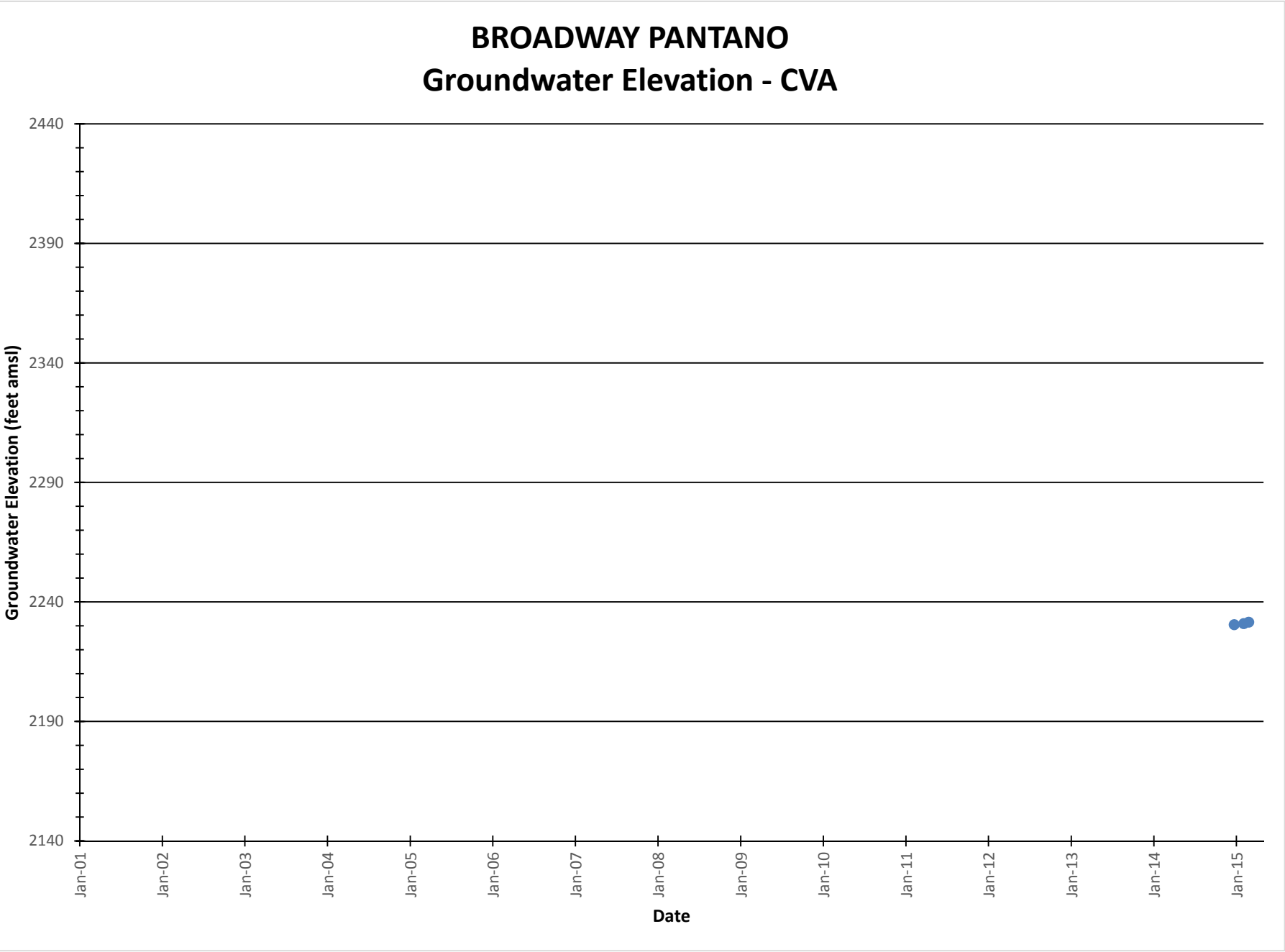

BROADWAY PANTANO
Groundwater Elevation - BP-23
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

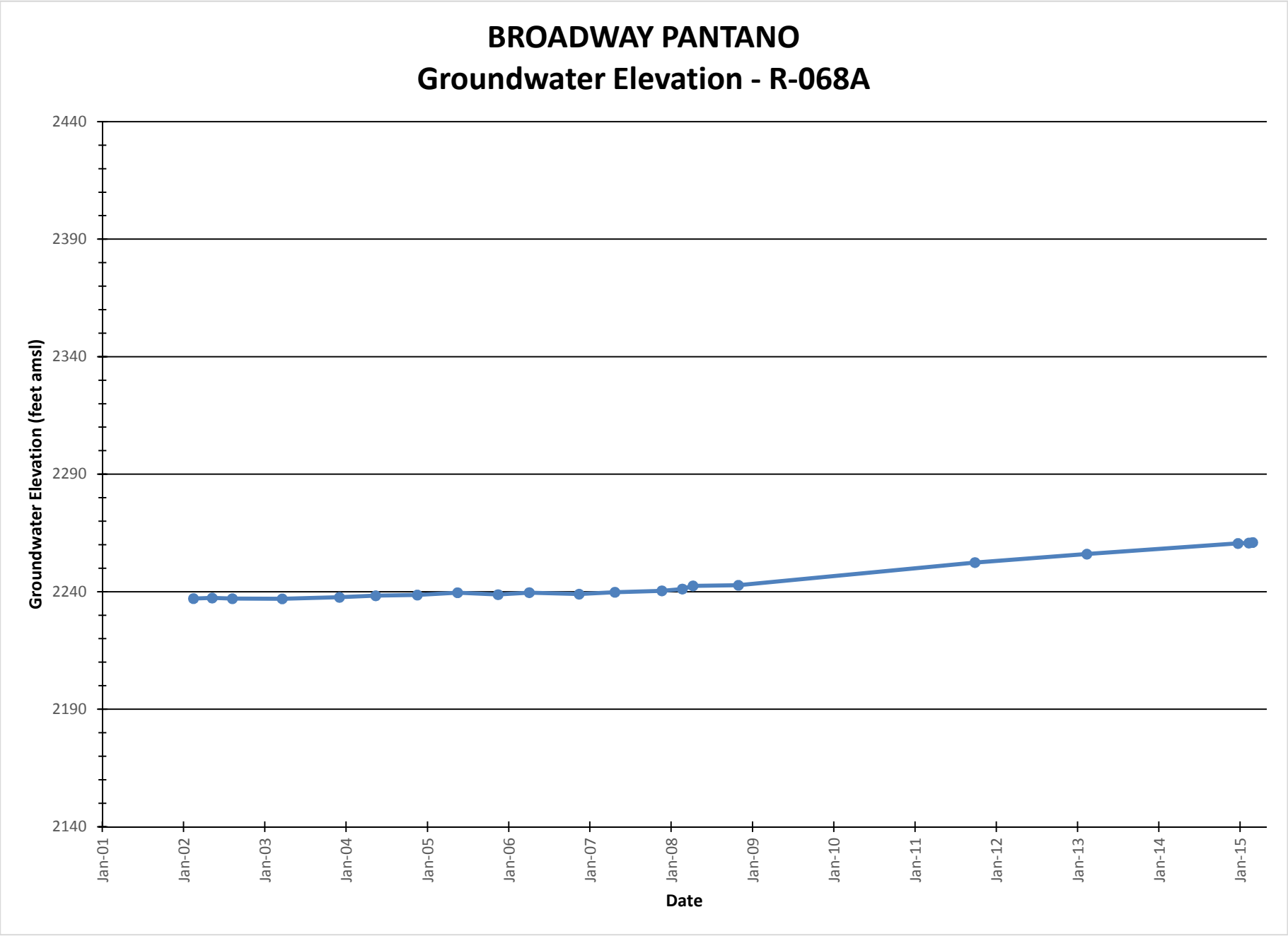

BROADWAY PANTANO
Groundwater Elevation - BP-24A
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

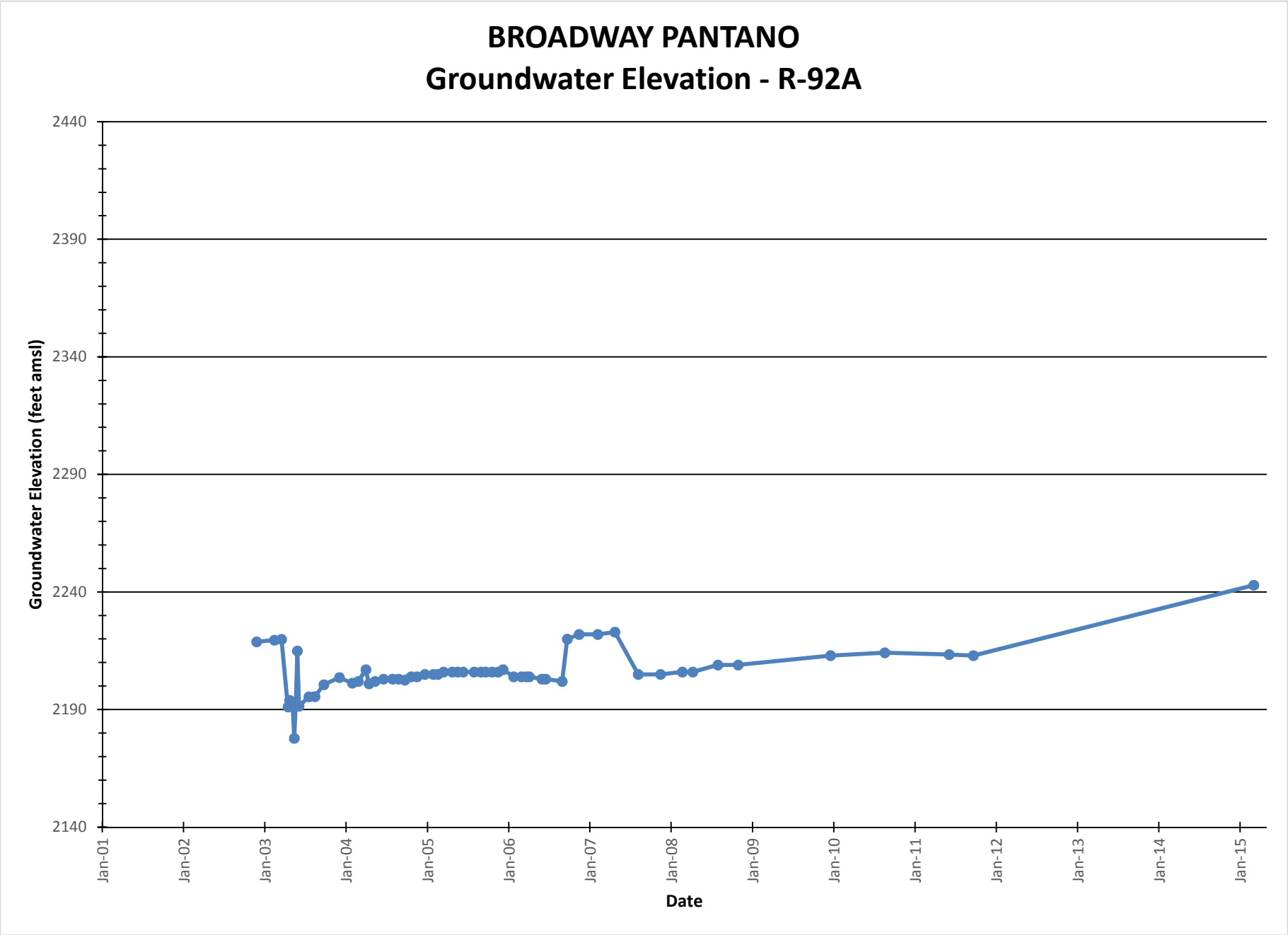

BROADWAY PANTANO
Groundwater Elevation - BP-24B
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

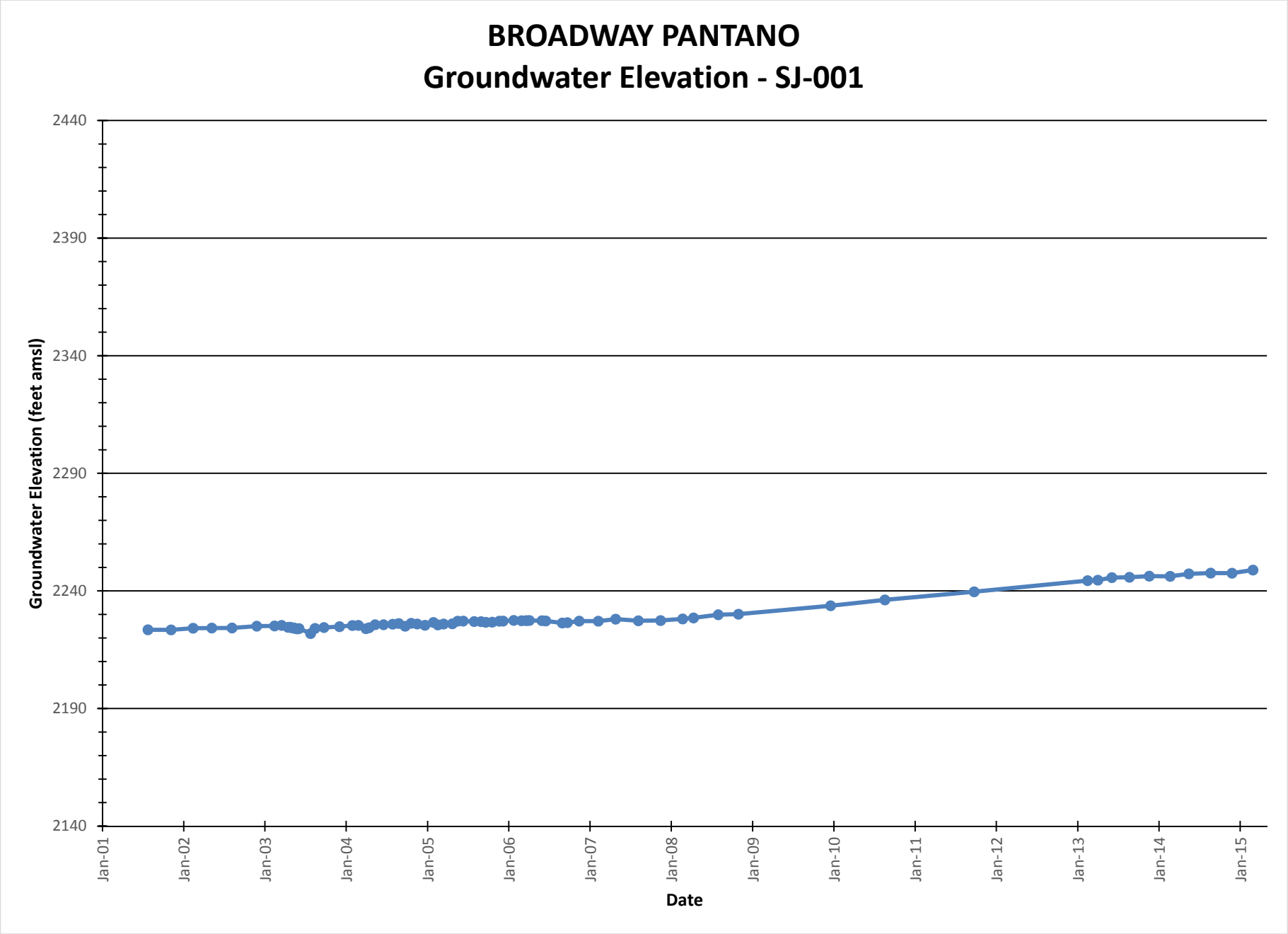

BROADWAY PANTANO
Groundwater Elevation - C-22A
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

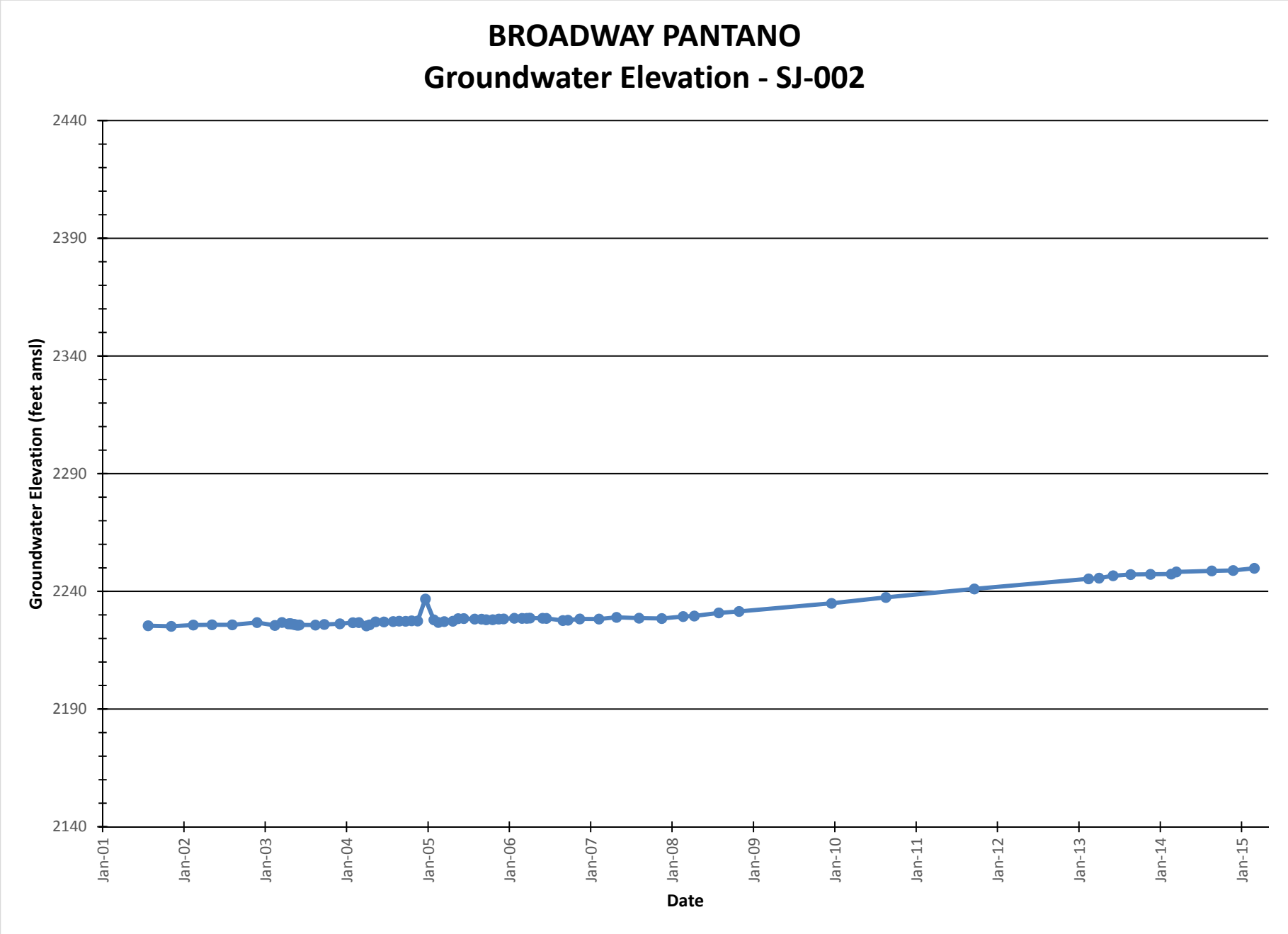

BROADWAY PANTANO
Groundwater Elevation - C-026A
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

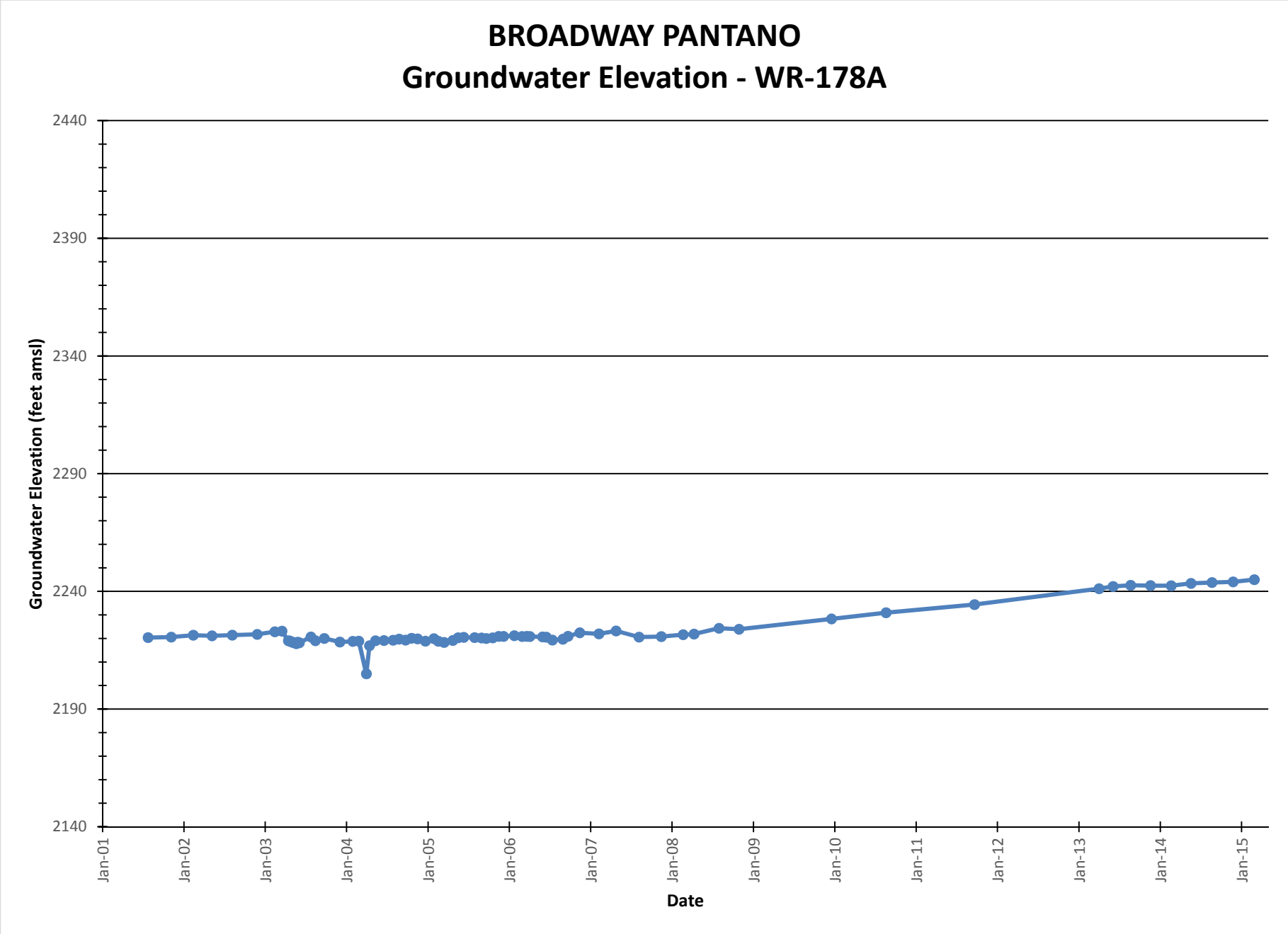

BROADWAY PANTANO
Groundwater Elevation - CVA
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date


BROADWAY PANTANO
Groundwater Elevation - R-068A
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

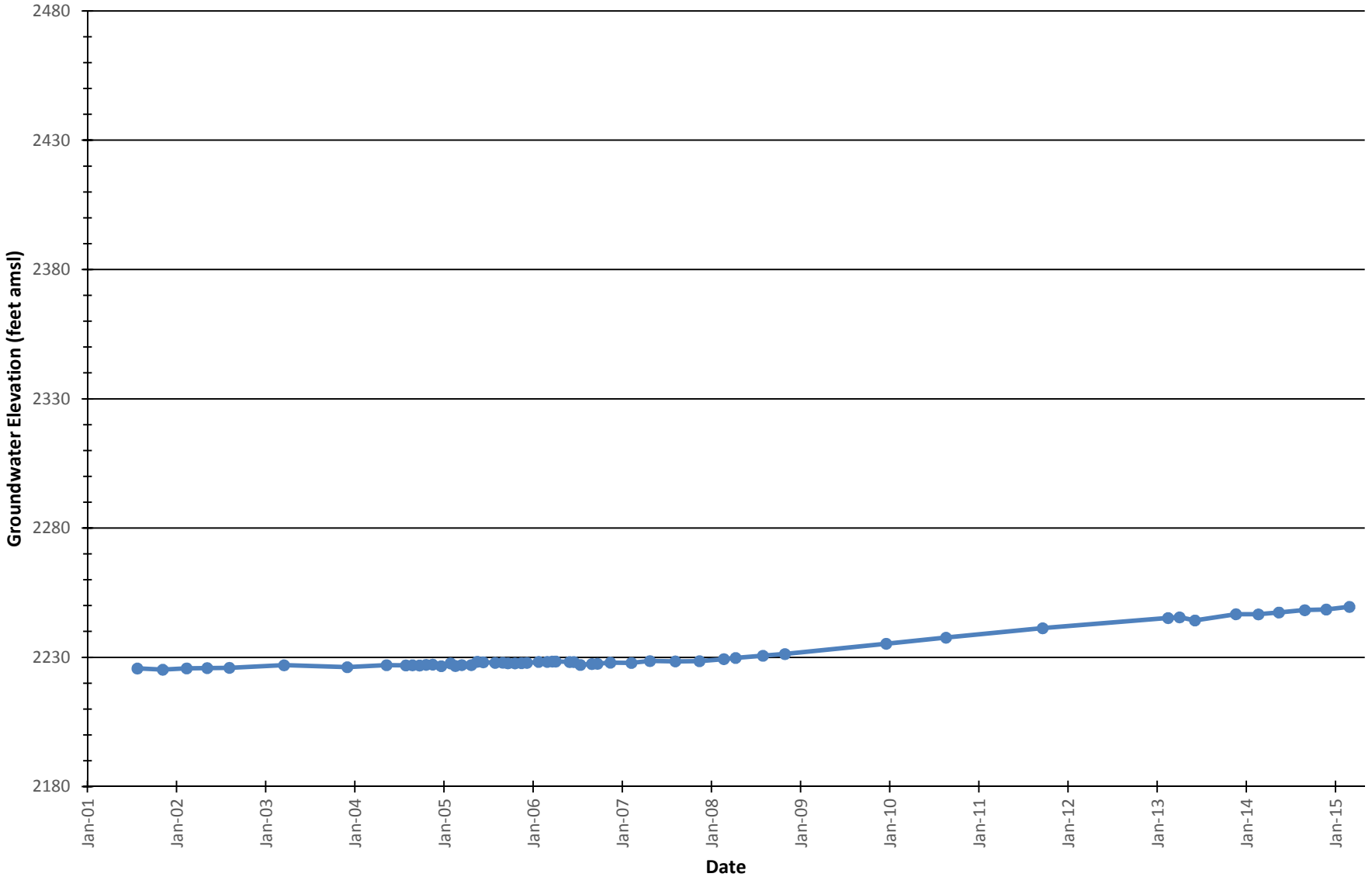

BROADWAY PANTANO
Groundwater Elevation - R-92A
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date


BROADWAY PANTANO
Groundwater Elevation - SJ-001
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

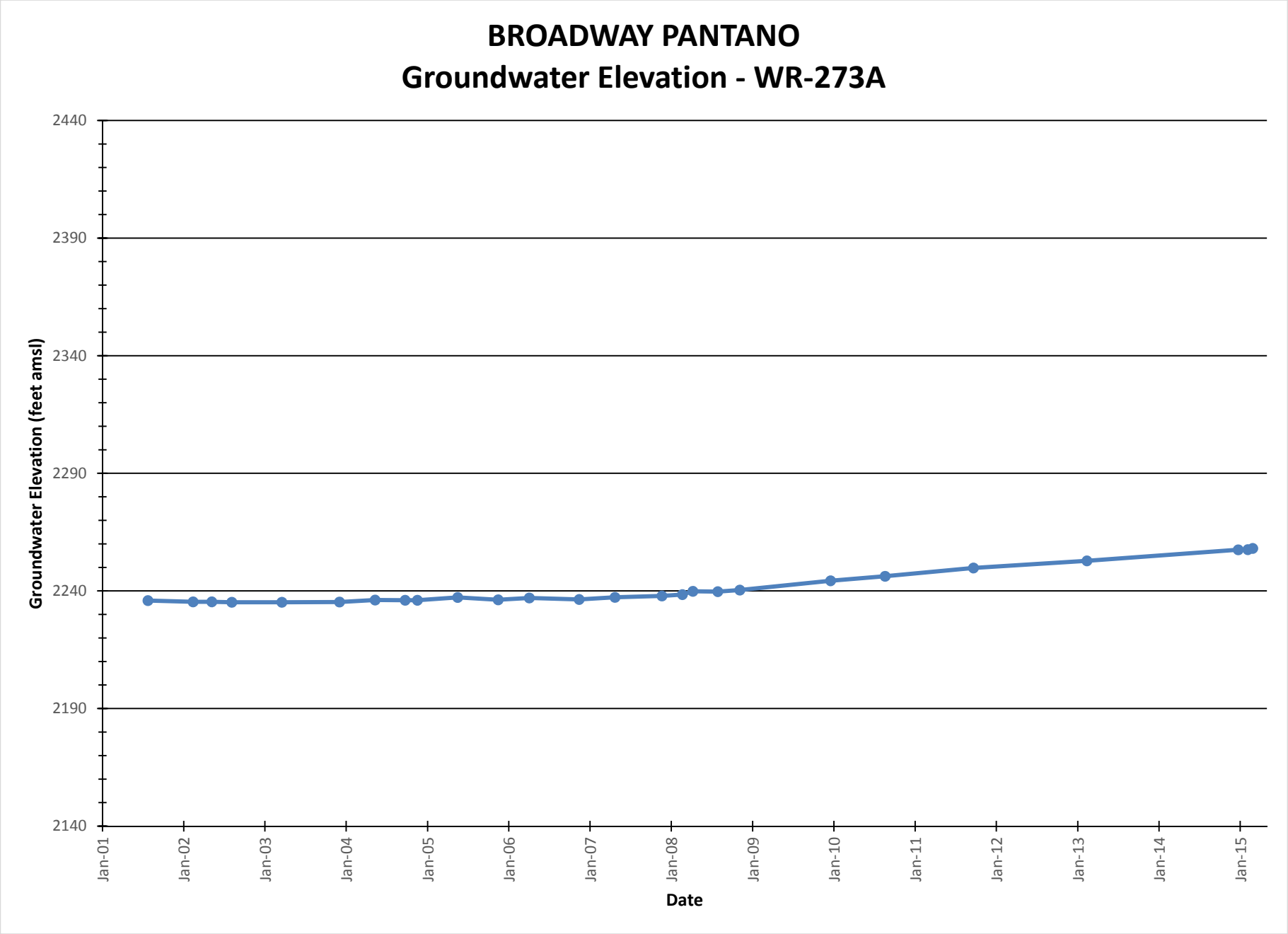

BROADWAY PANTANO
Groundwater Elevation - SJ-002
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

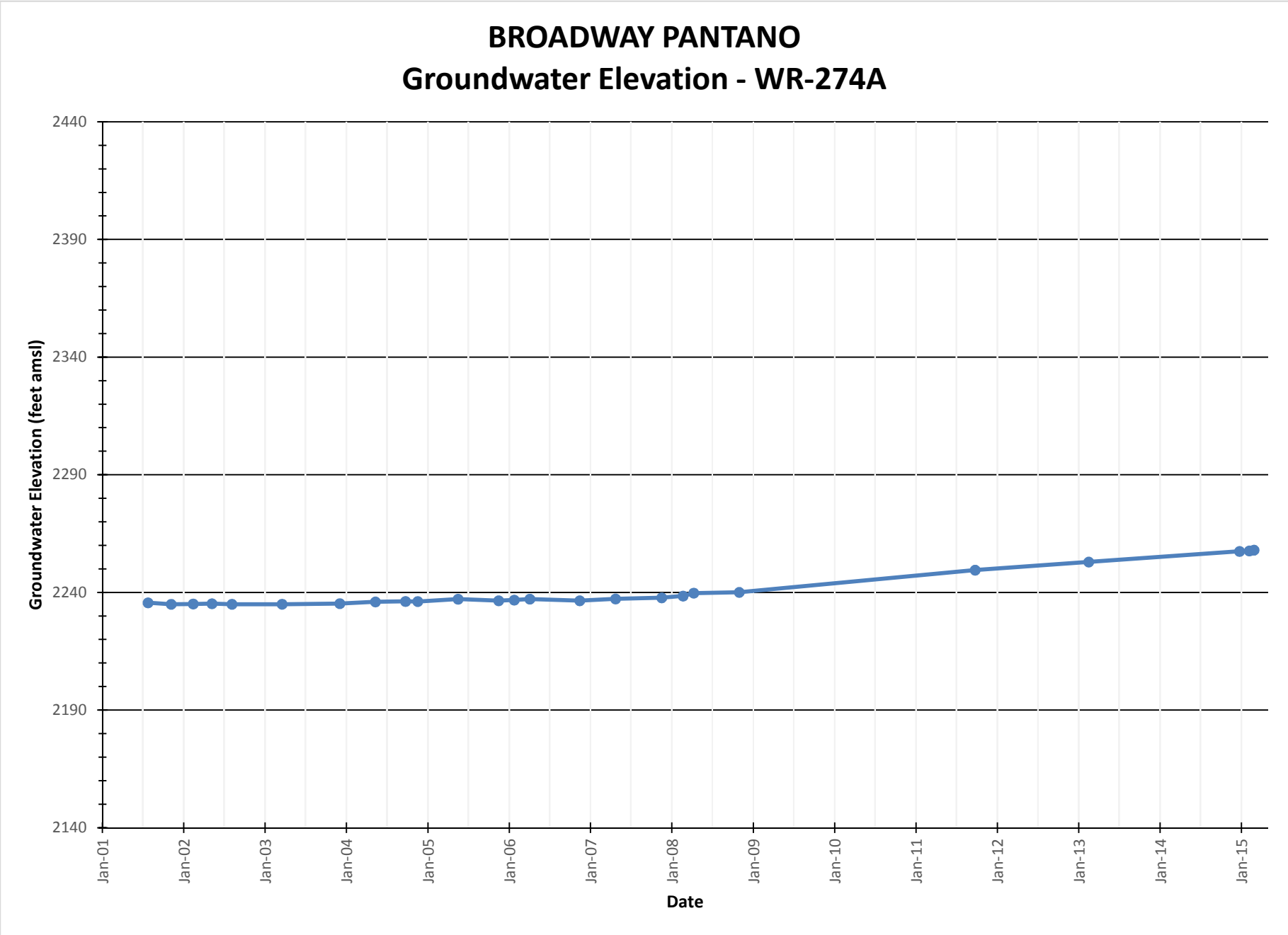

BROADWAY PANTANO
Groundwater Elevation - WR-178A
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

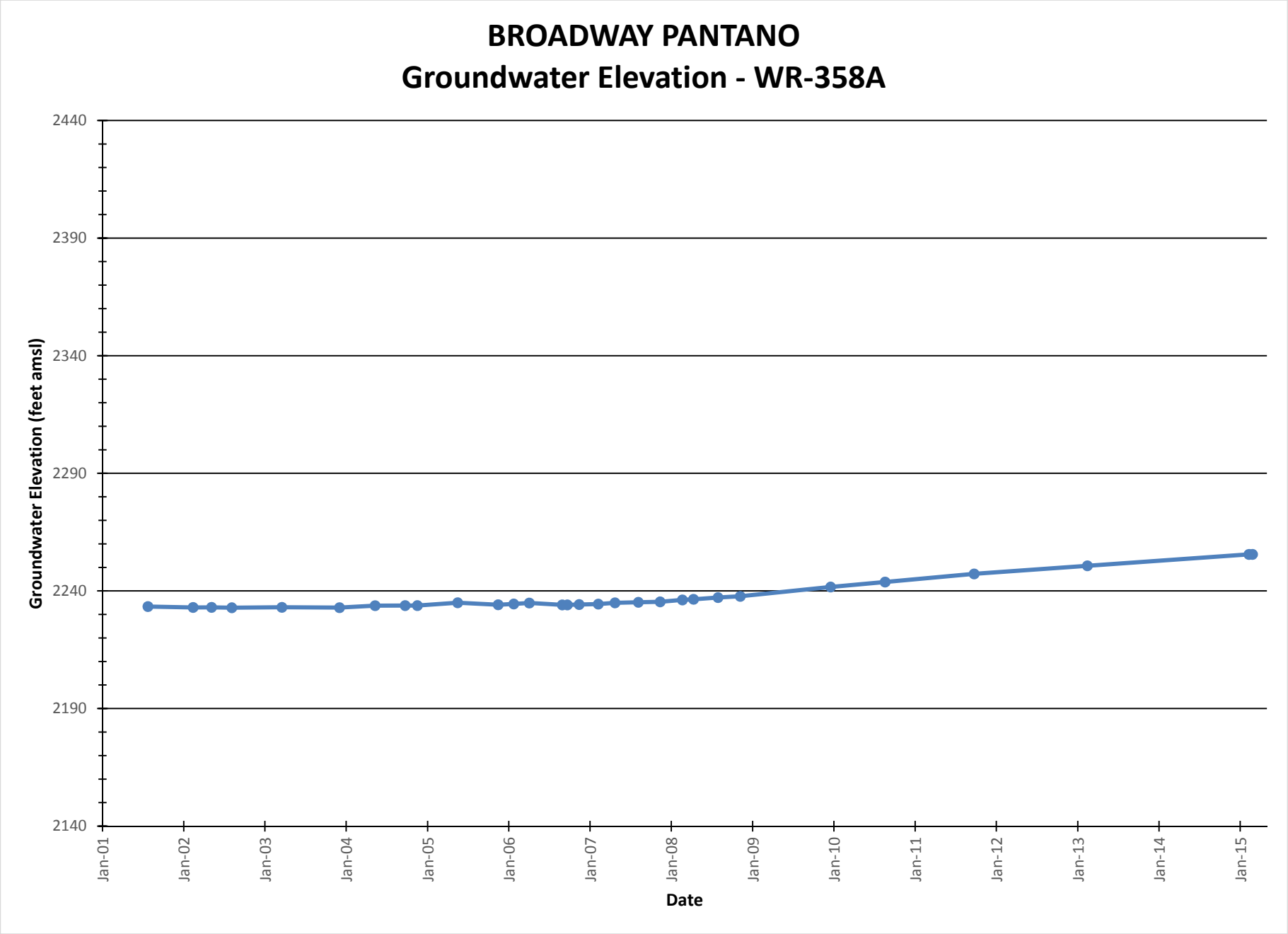
BROADWAY PANTANO
Groundwater Elevation - WR-180A

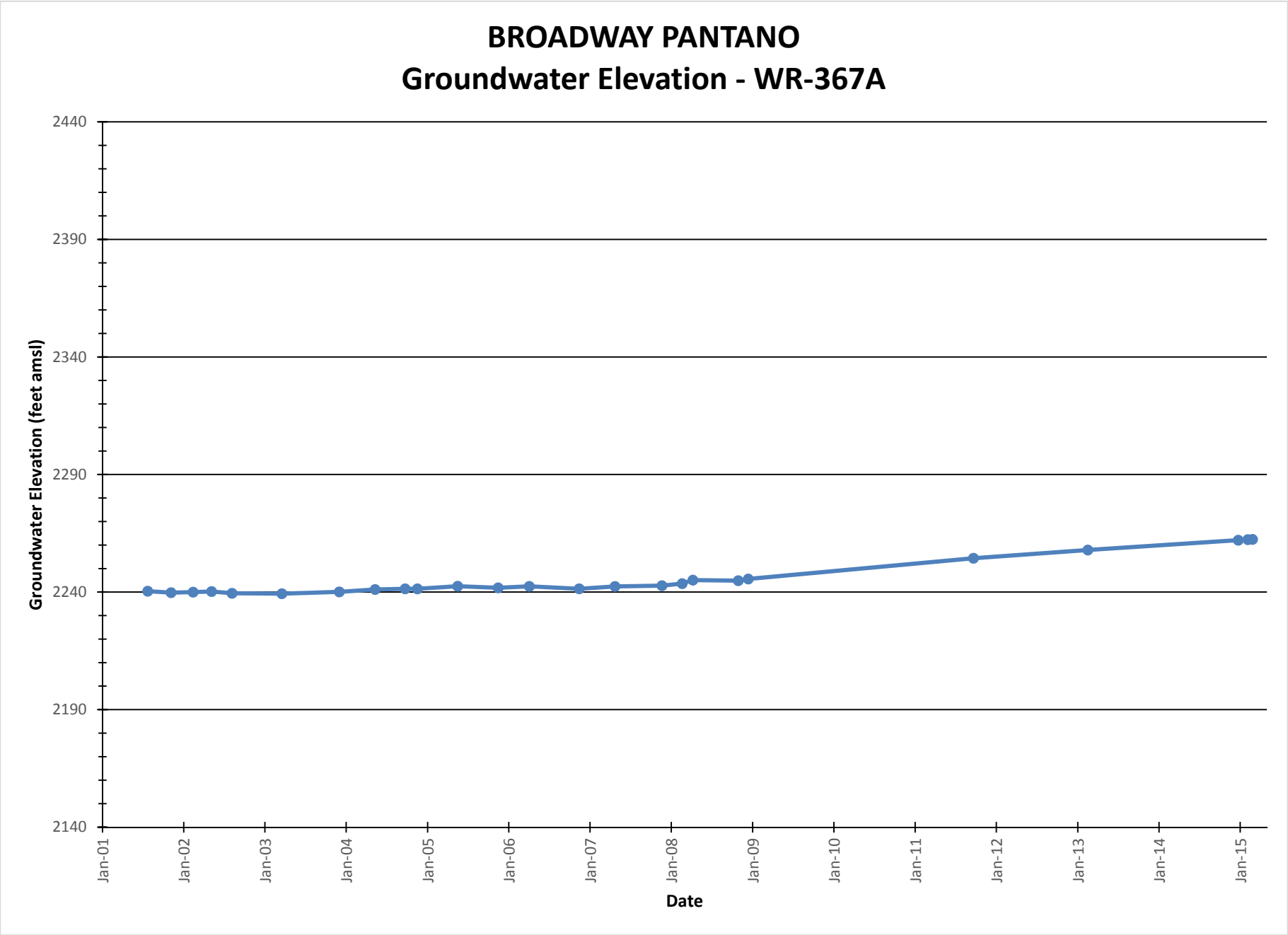


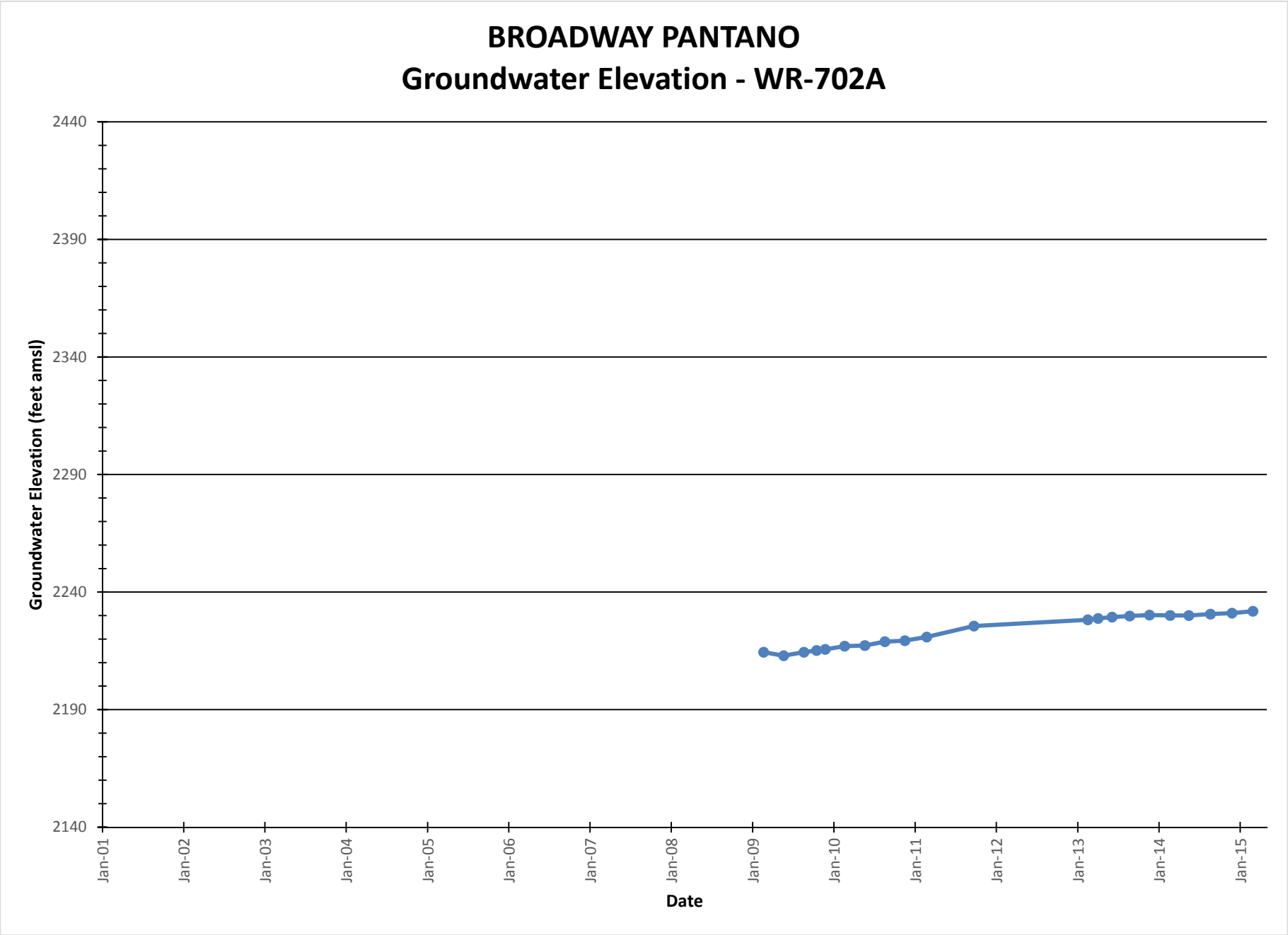
Note: Data point from 8/22/2013 appears as data entry error and excluded from chart.

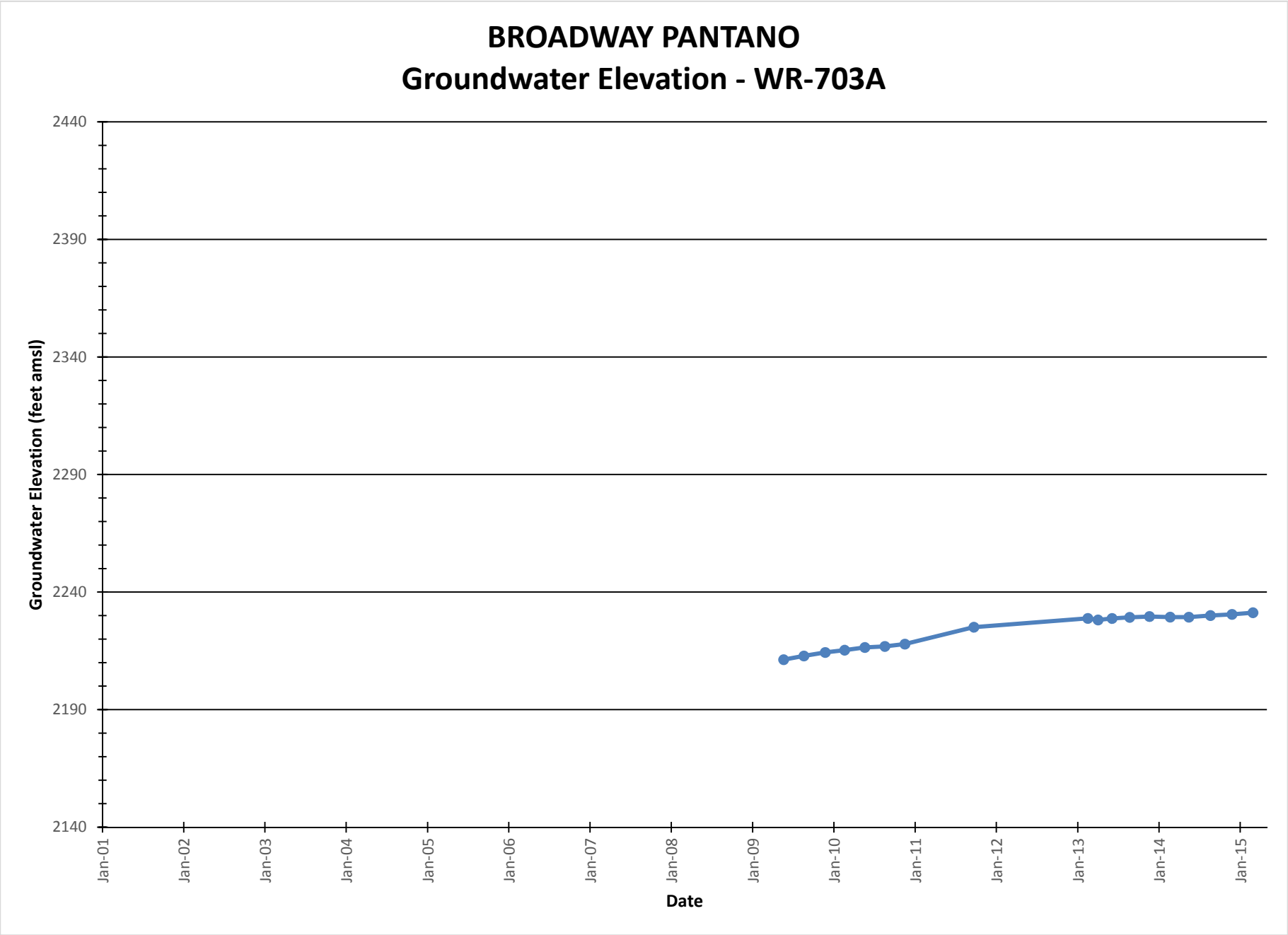

BROADWAY PANTANO
Groundwater Elevation - WR-273A
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

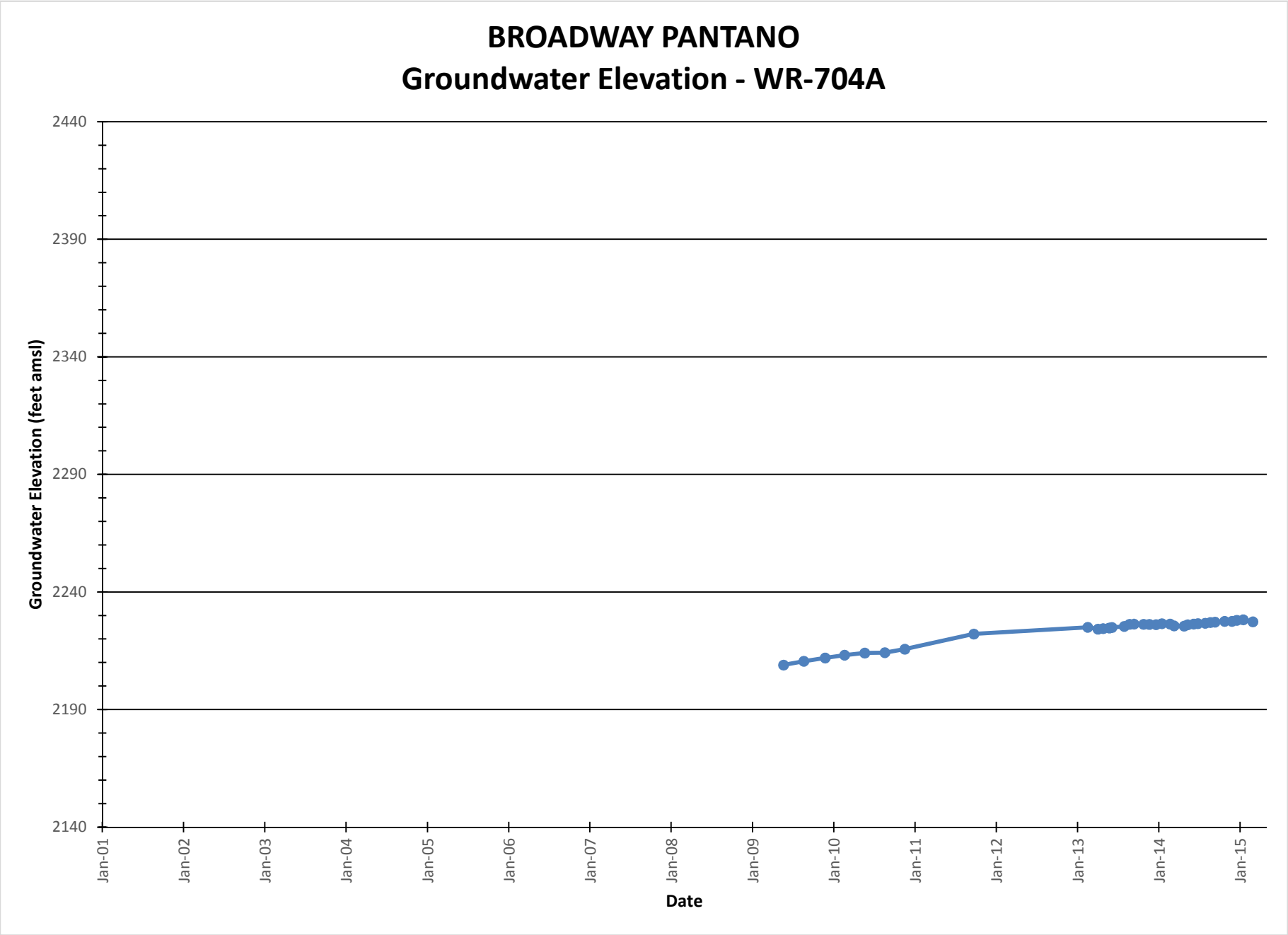

BROADWAY PANTANO
Groundwater Elevation - WR-274A
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date


BROADWAY PANTANO
Groundwater Elevation - WR-358A
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date


BROADWAY PANTANO
Groundwater Elevation - WR-367A
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

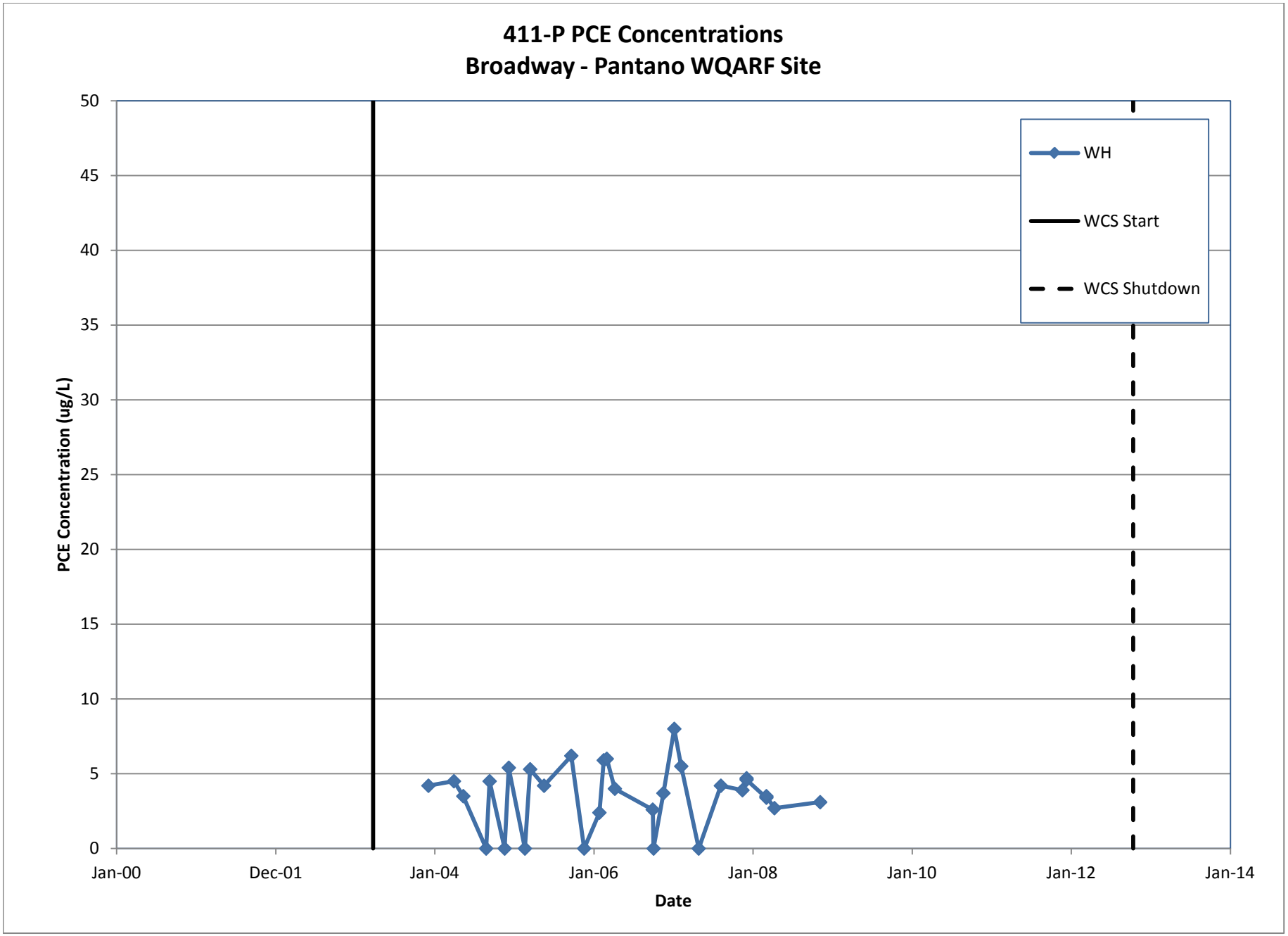

BROADWAY PANTANO
Groundwater Elevation - WR-702A
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

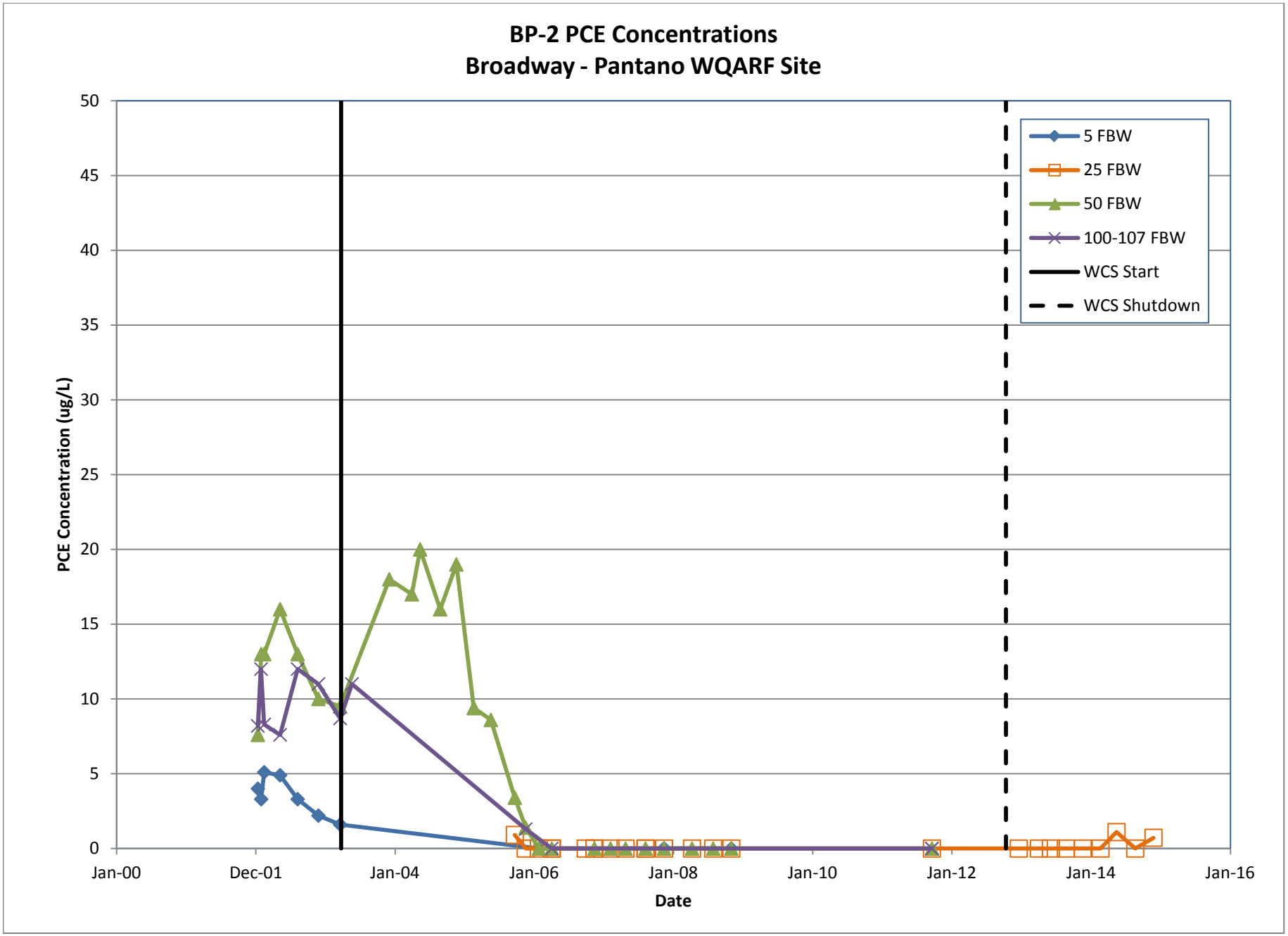

BROADWAY PANTANO
Groundwater Elevation - WR-703A
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

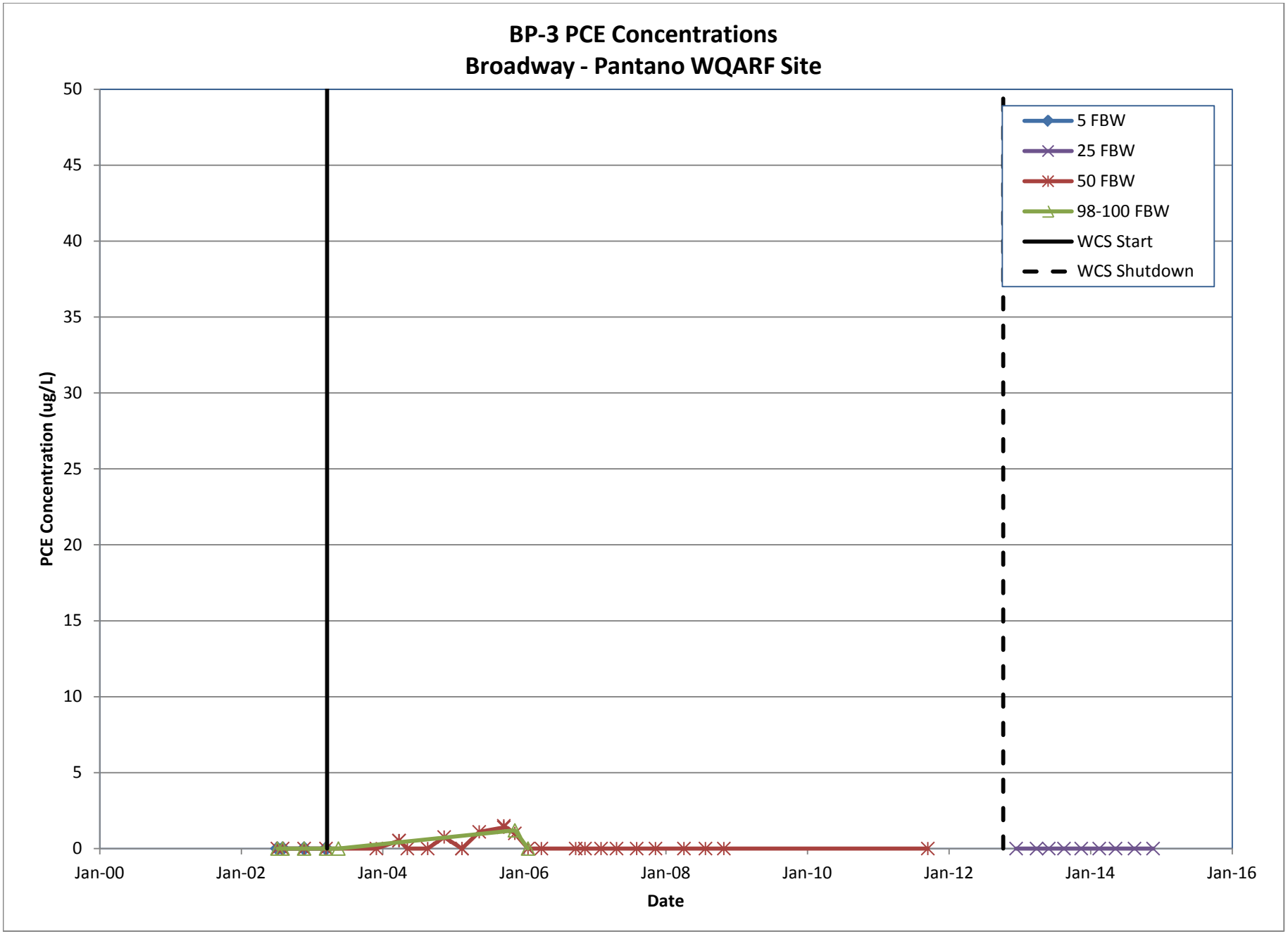

BROADWAY PANTANO
Groundwater Elevation - WR-704A
Groundwater Elevation (feet amsl)
2440
2390
2340
2290
2240
2190
2140
Jan-01
Jan-02
Jan-03
Jan-04
Jan-05
Jan-06
Jan-07
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12
Jan-13
Jan-14
Jan-15
Date

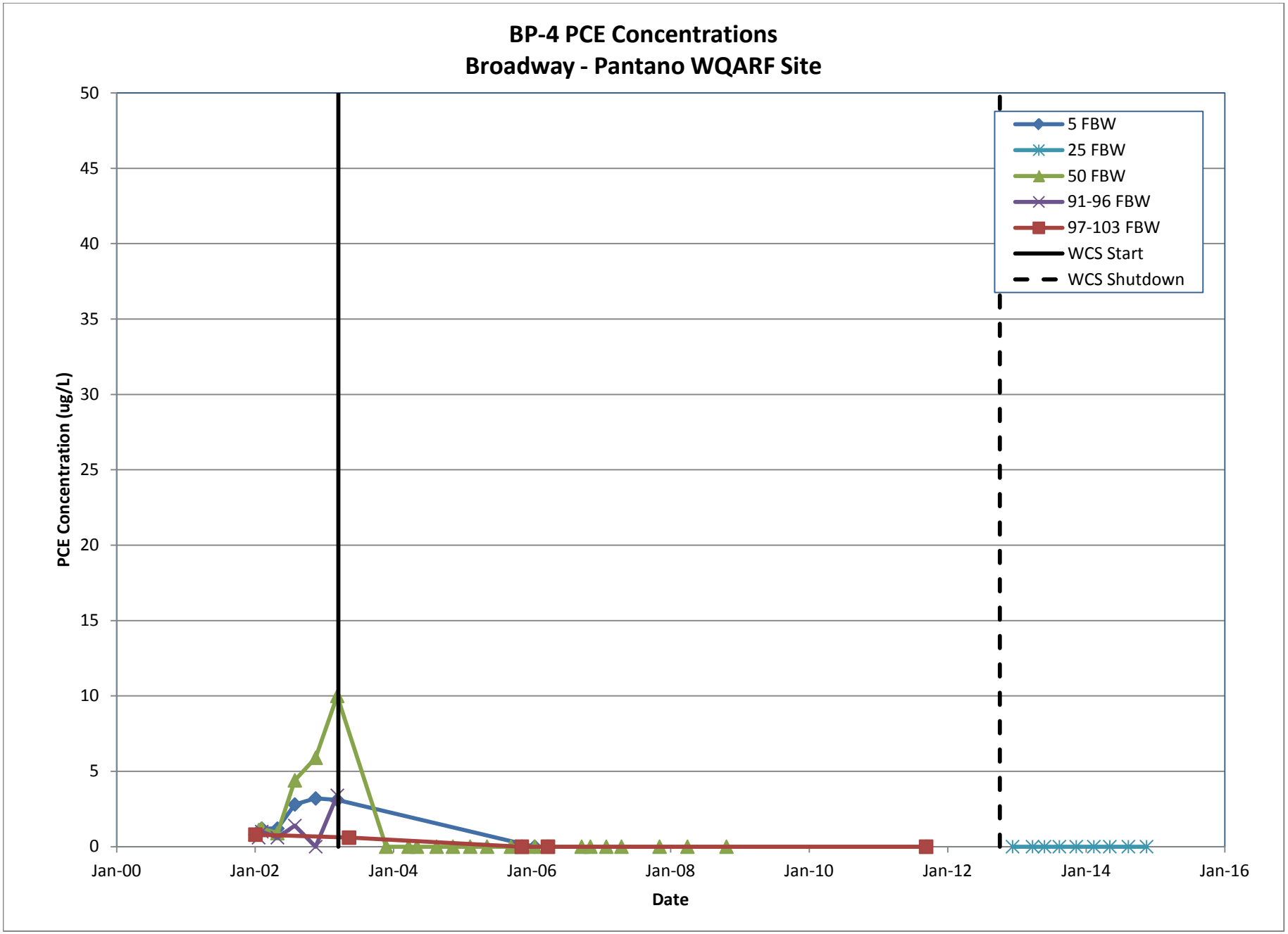
APPENDIX D

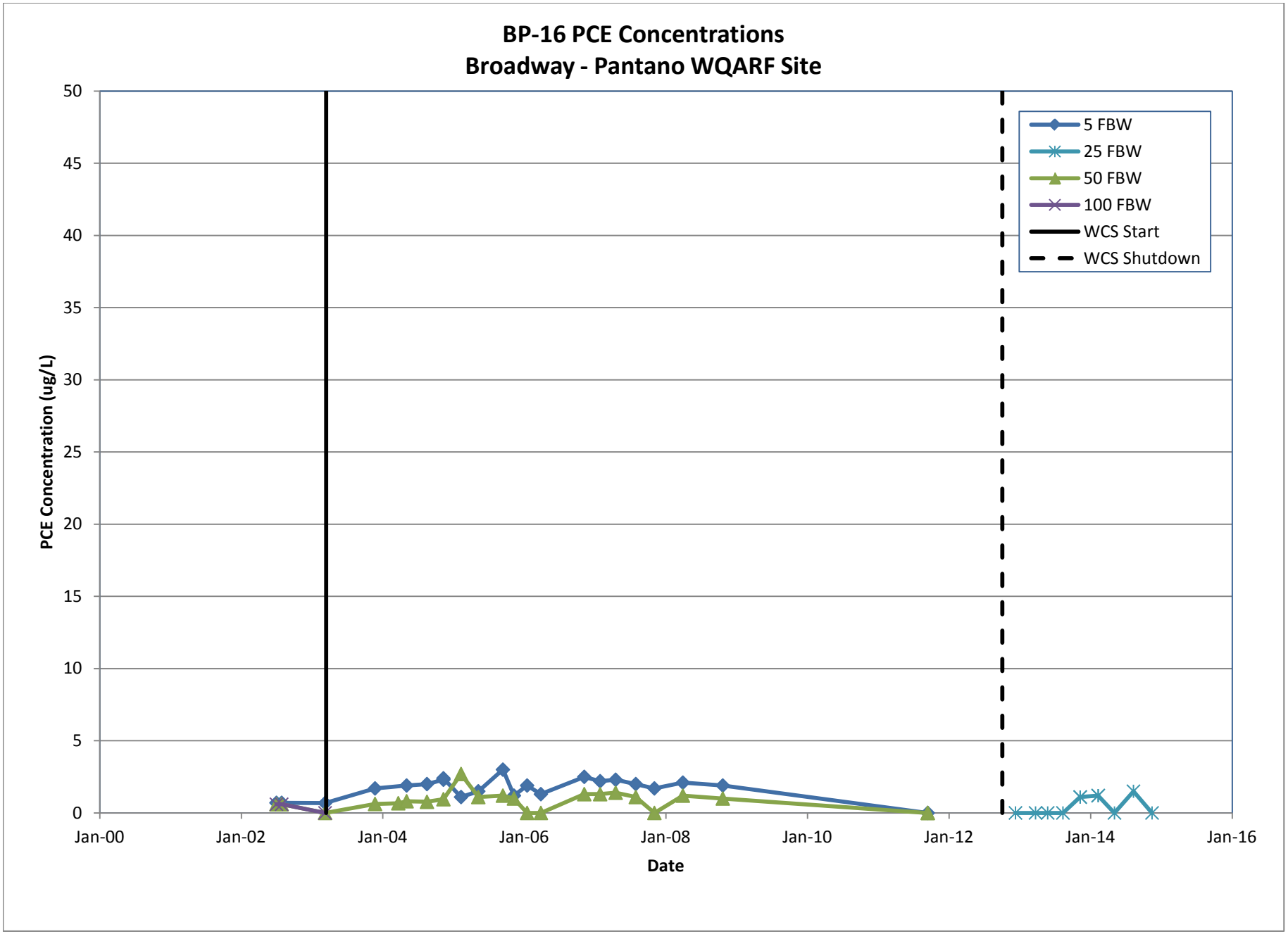
PCE WATER QUALITY TIME SERIES PLOTS, FEB/MARCH 2015

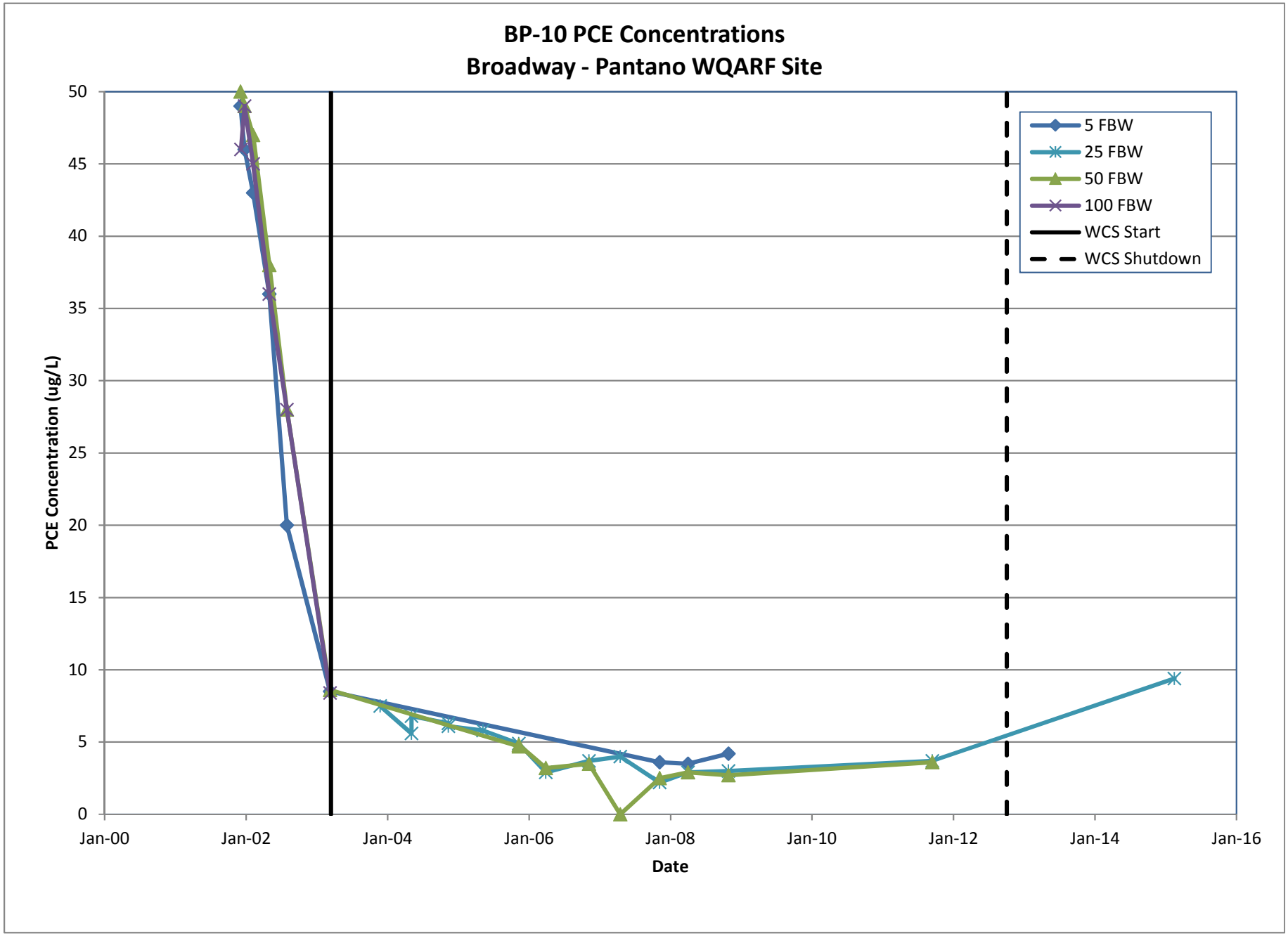

411-P PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Jan-00
Dec-01
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Date
WH
WCS Start
WCS Shutdown

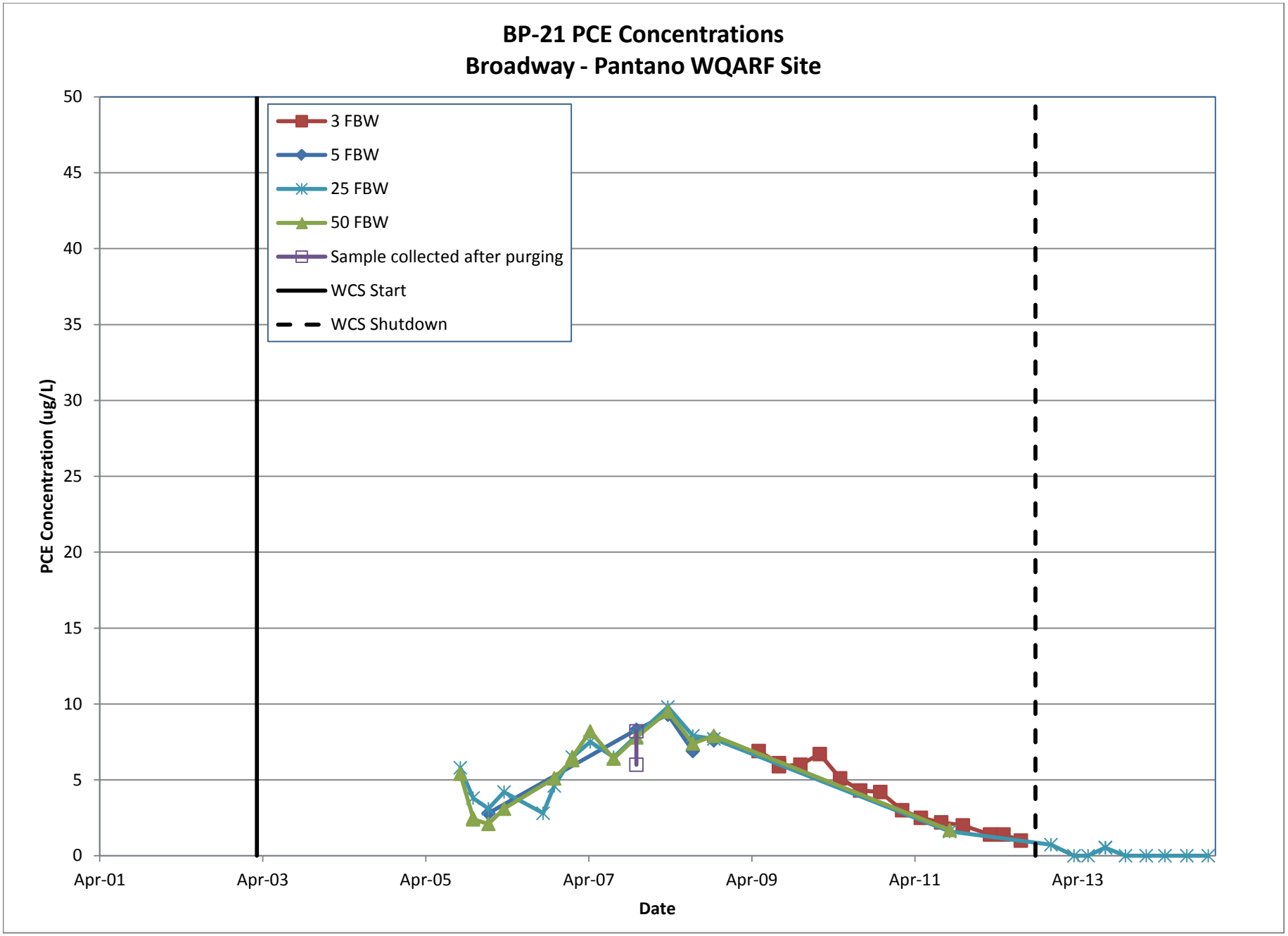

BP-2 PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Jan-00
Dec-01
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Date
5 FBW
25 FBW
50 FBW
100-107 FBW
WCS Start
WCS Shutdown

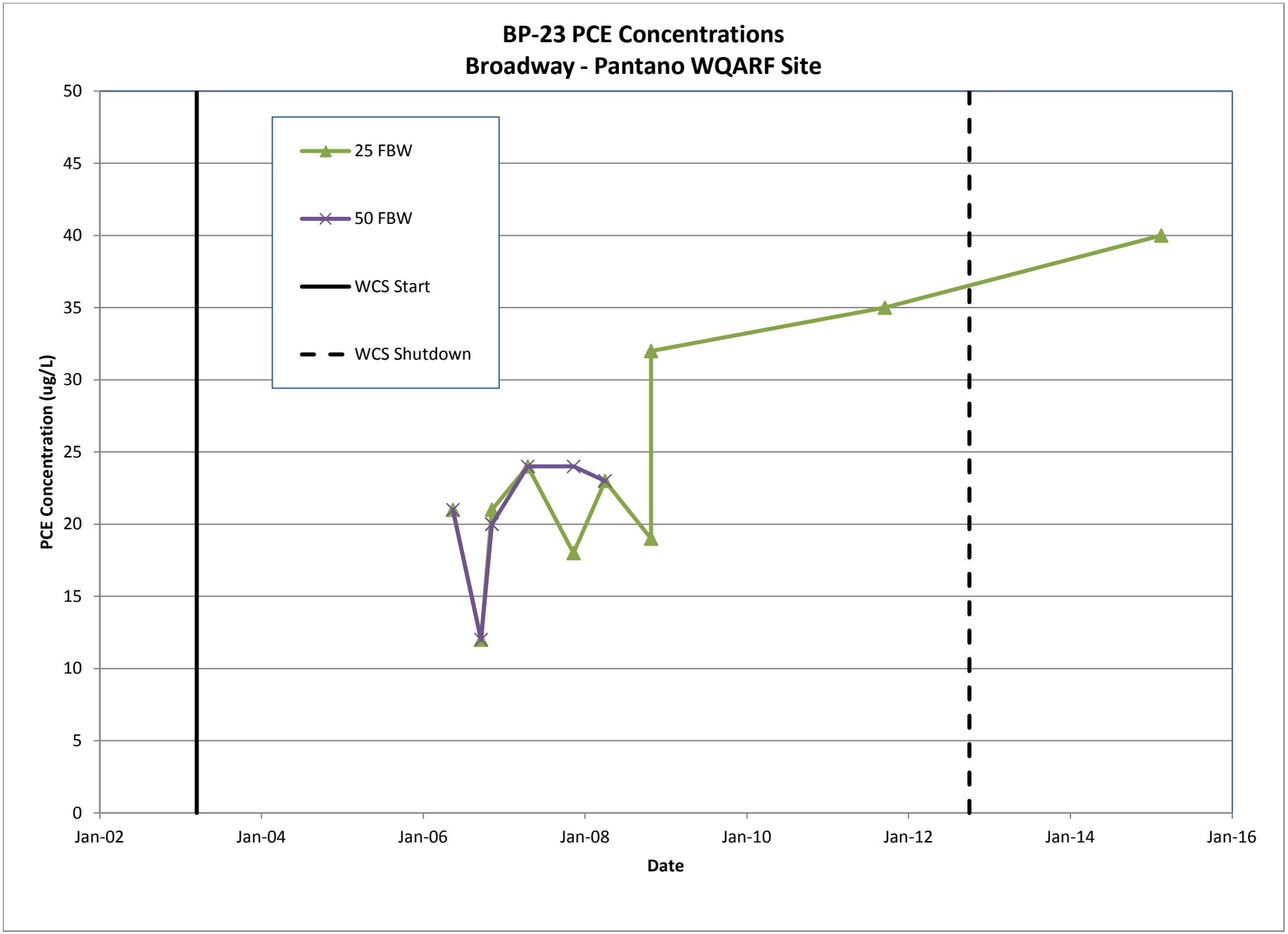

BP-3 PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Date
5 FBW
25 FBW
50 FBW
98-100 FBW
WCS Start
WCS Shutdown

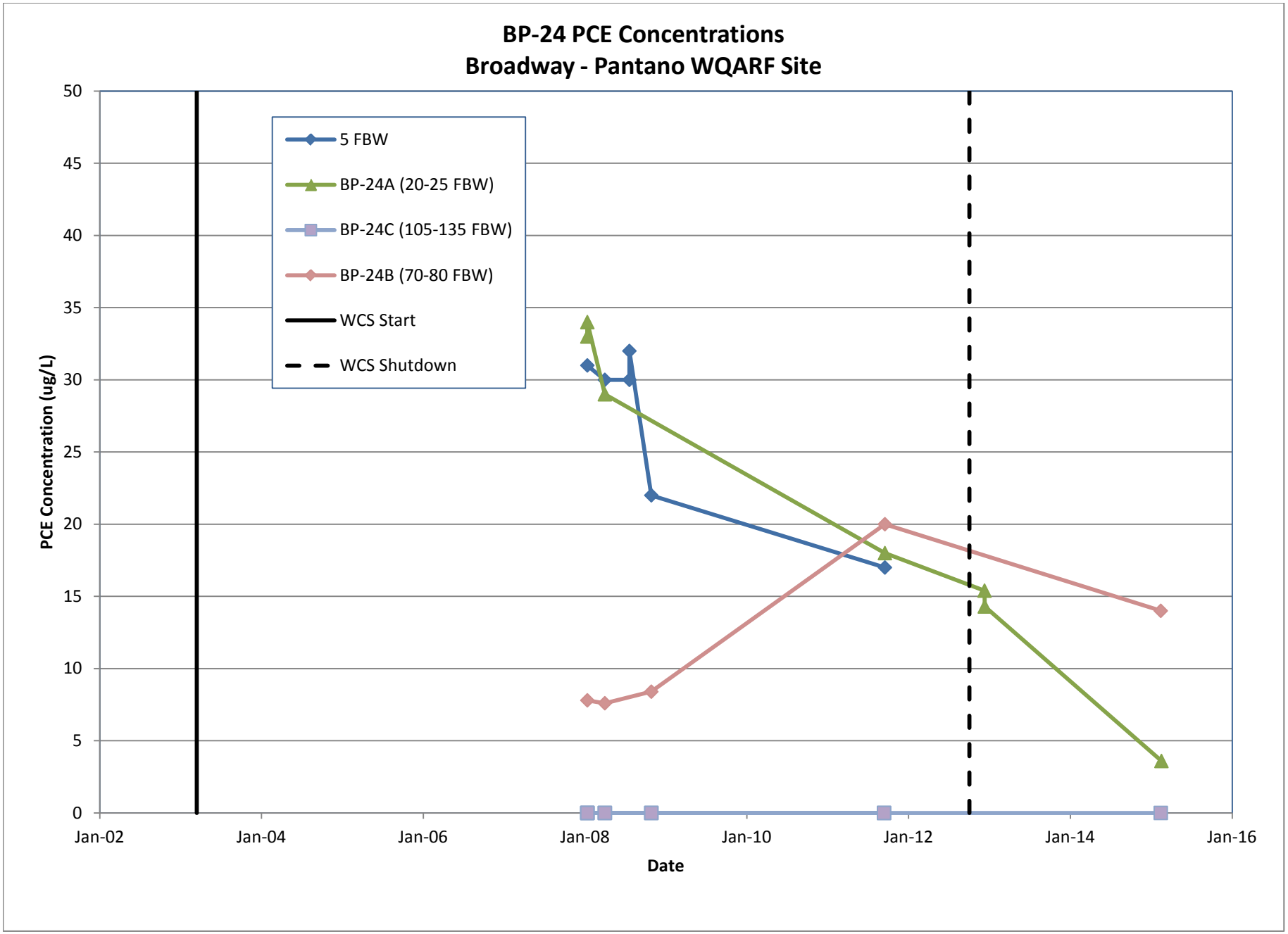

BP-4 PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Date
5 FBW
25 FBW
50 FBW
91-96 FBW
97-103 FBW
WCS Start
WCS Shutdown

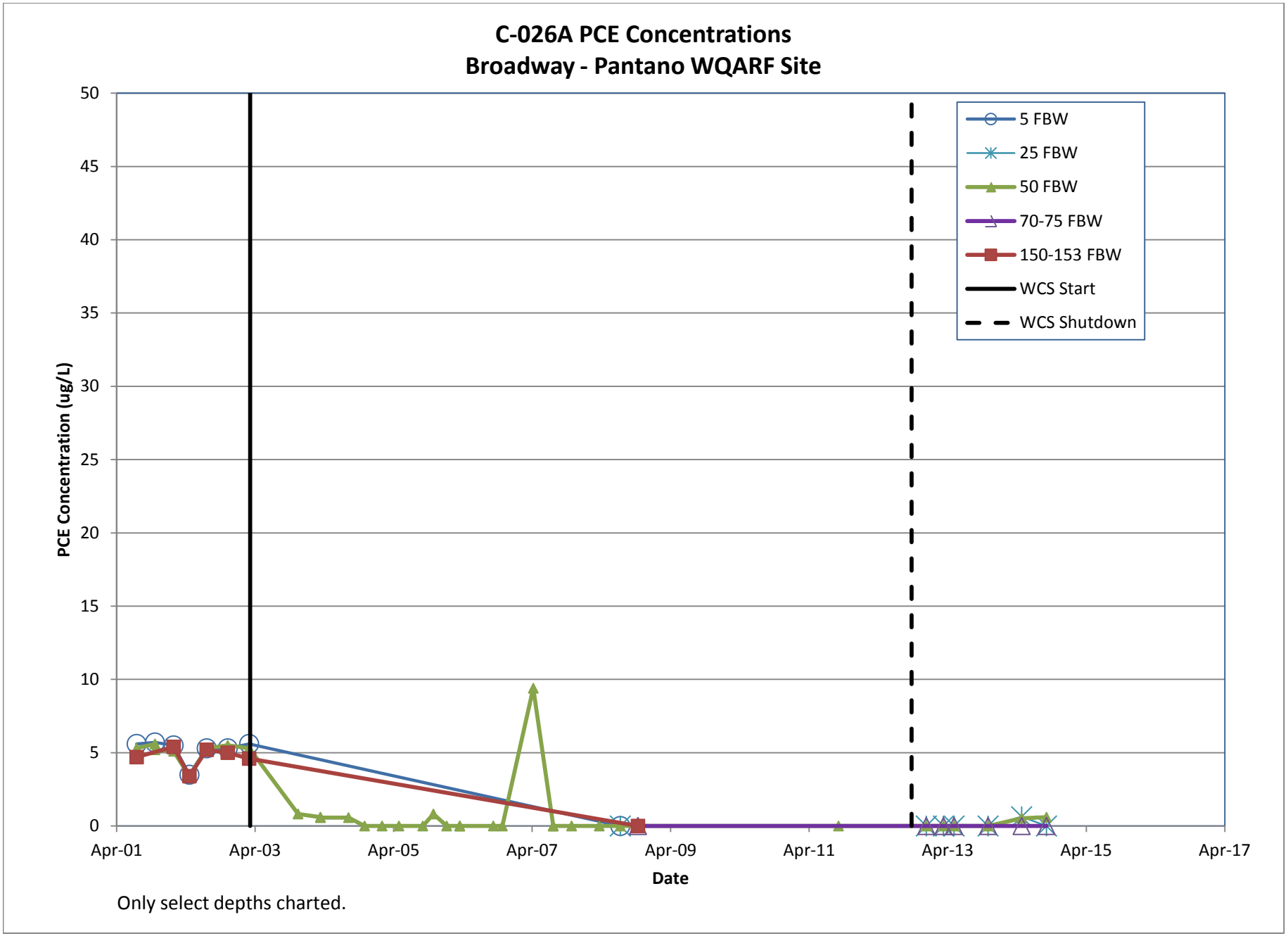

BP-16 PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Date
5 FBW
25 FBW
50 FBW
100 FBW
WCS Start
WCS Shutdown

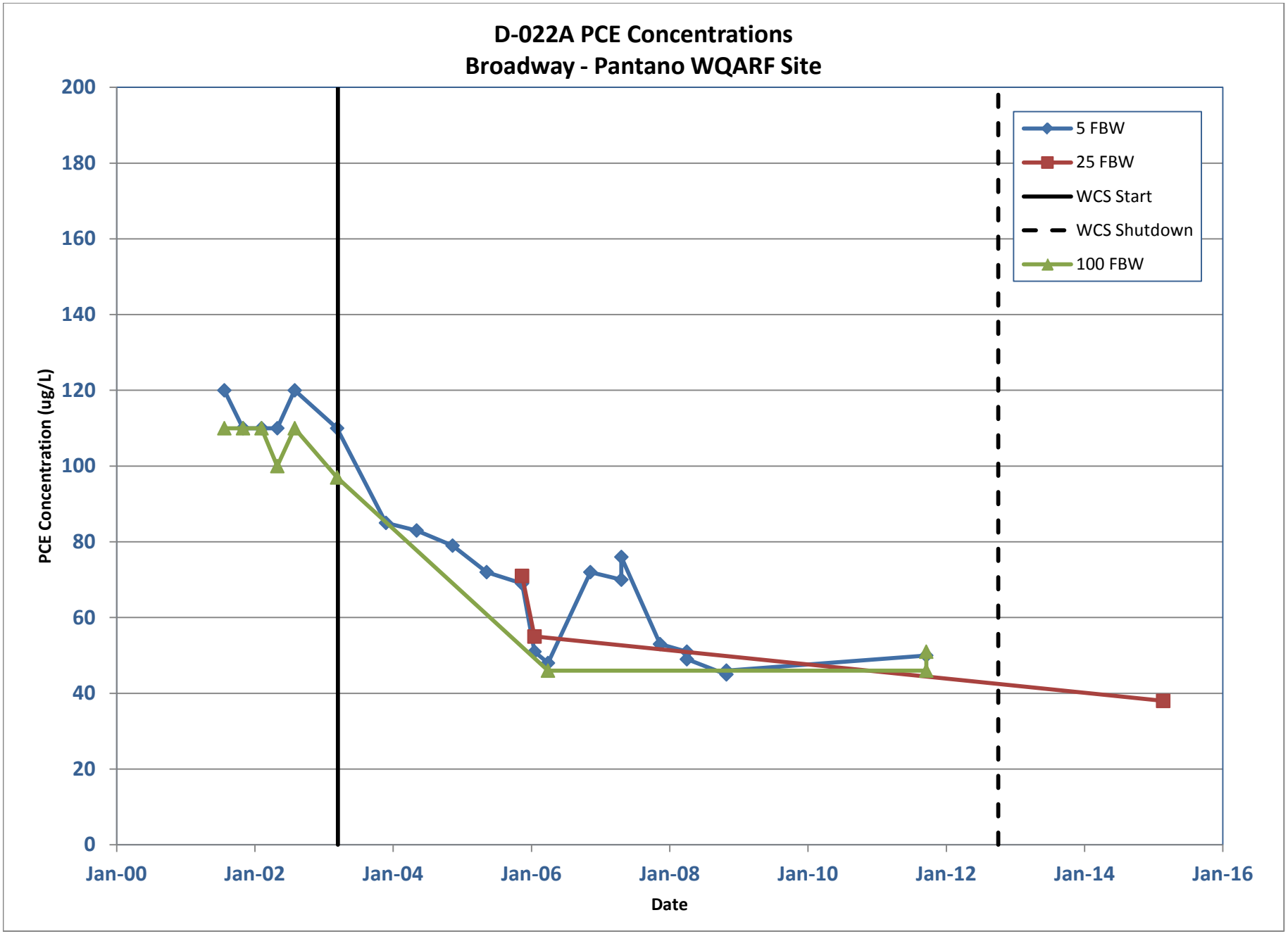

BP-10 PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Date
5 FBW
25 FBW
50 FBW
100 FBW
WCS Start
WCS Shutdown

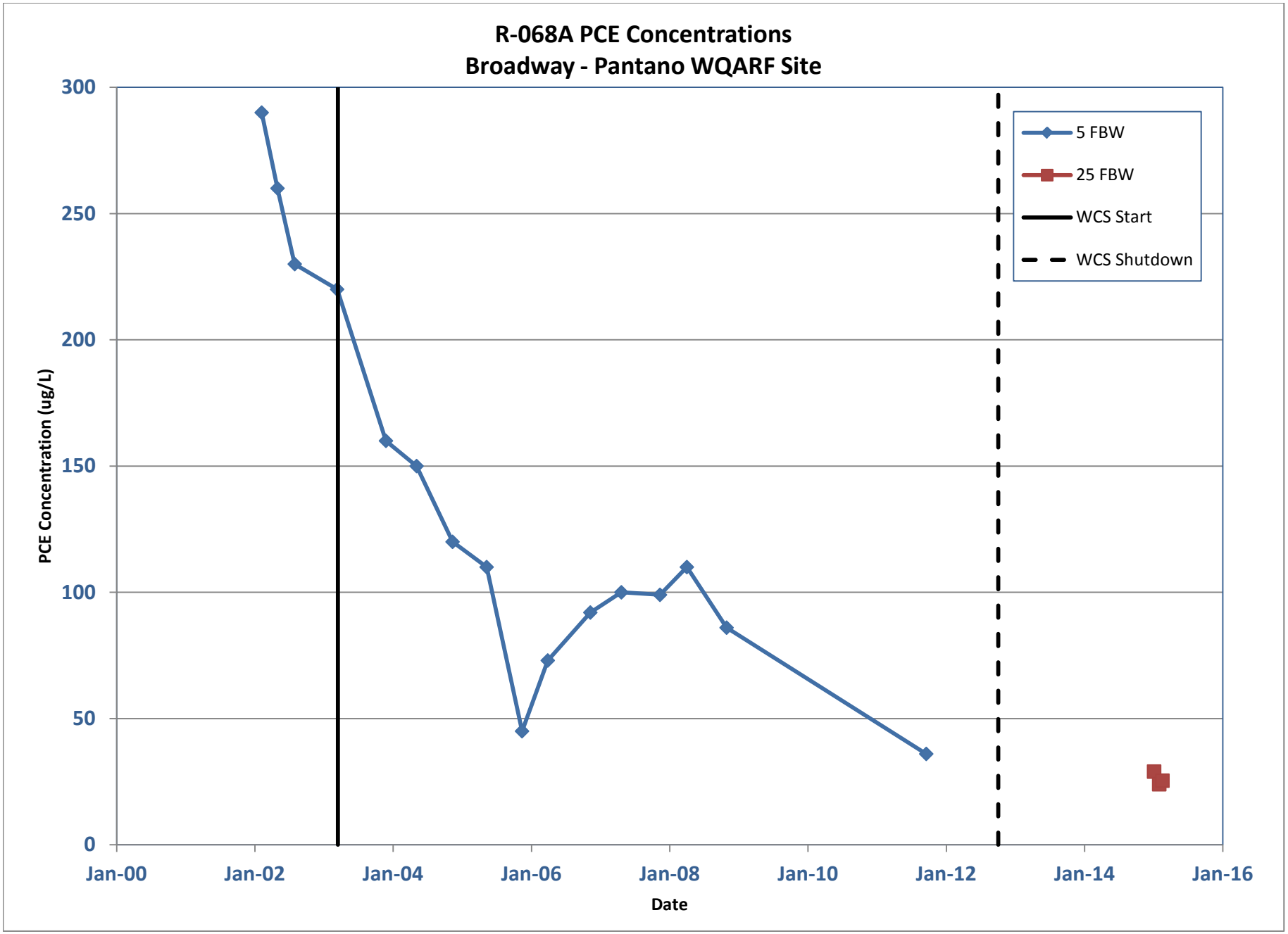

BP-21 PCE Concentrations
Broadway - Pantano WQARF Site
3 FBW
5 FBW
25 FBW
50 FBW
Sample collected after purging
WCS Start
WCS Shutdown
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Apr-01
Apr-03
Apr-05
Apr-07
Apr-09
Apr-11
Apr-13
Date

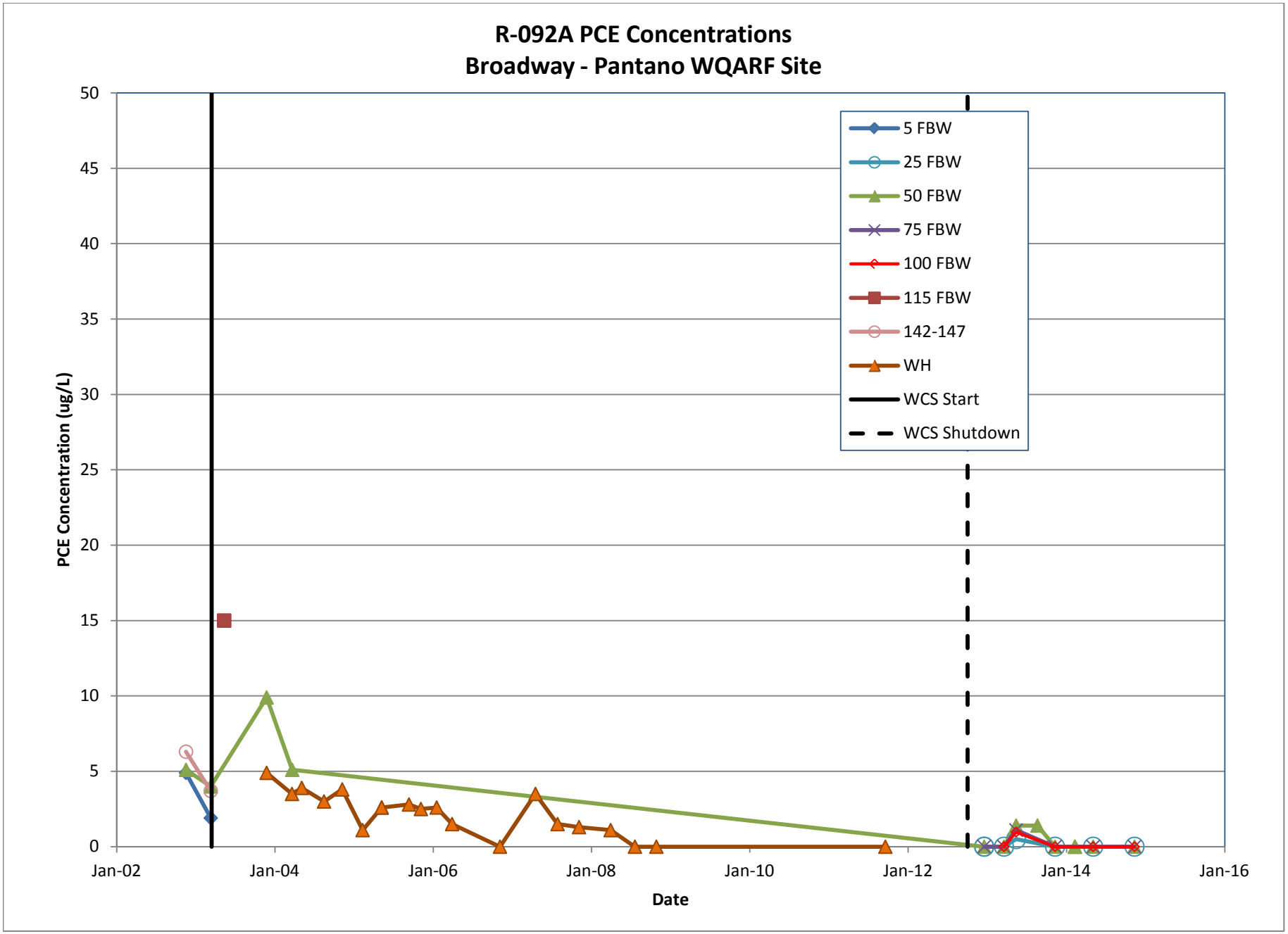

BP-23 PCE Concentrations
Broadway - Pantano WQARF Site
25 FBW
50 FBW
WCS Start
WCS Shutdown
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Date

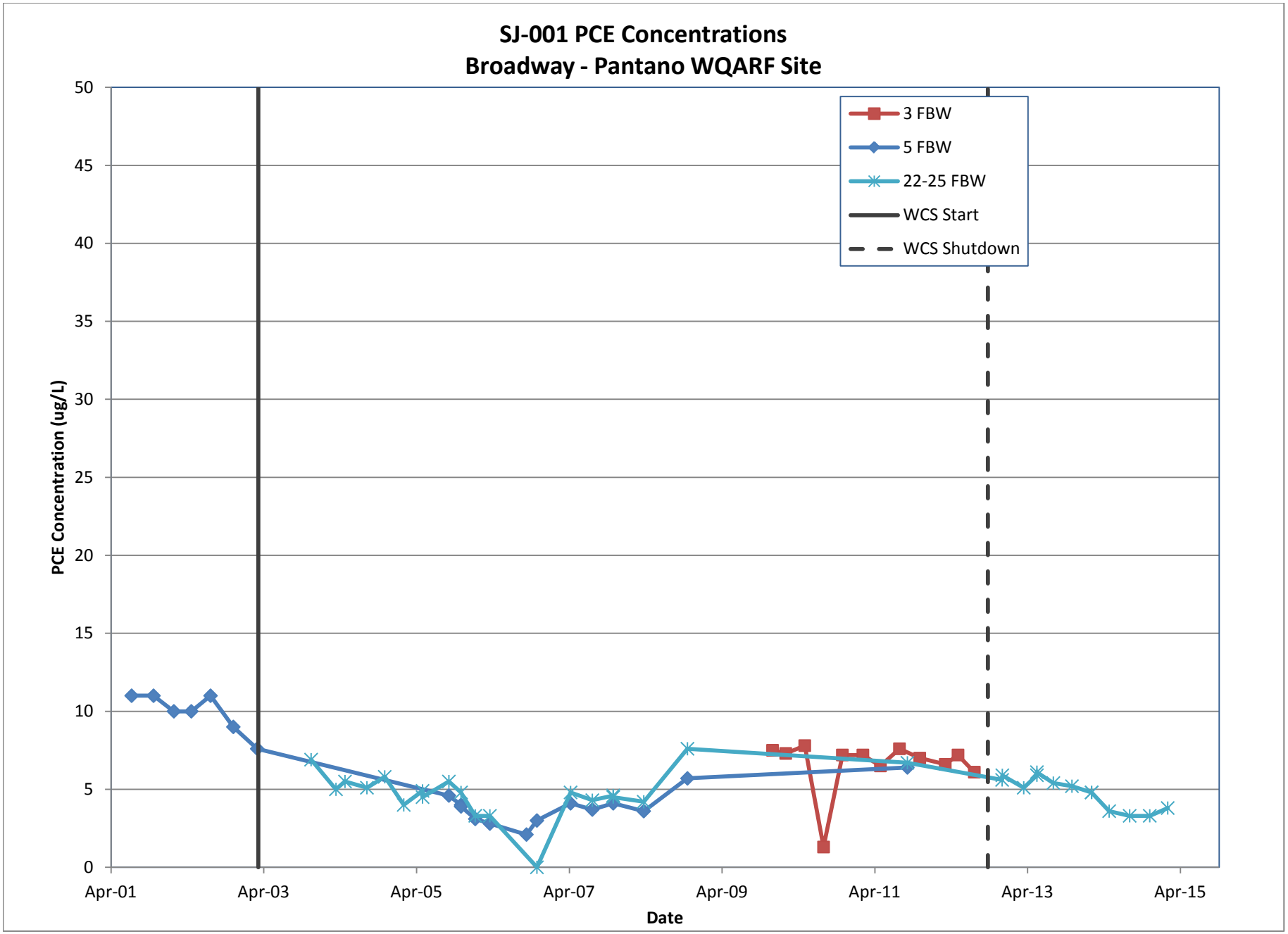

BP-24 PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Date
5 FBW
BP-24A (20-25 FBW)
BP-24C (105-135 FBW)
BP-24B (70-80 FBW)
WCS Start
WCS Shutdown

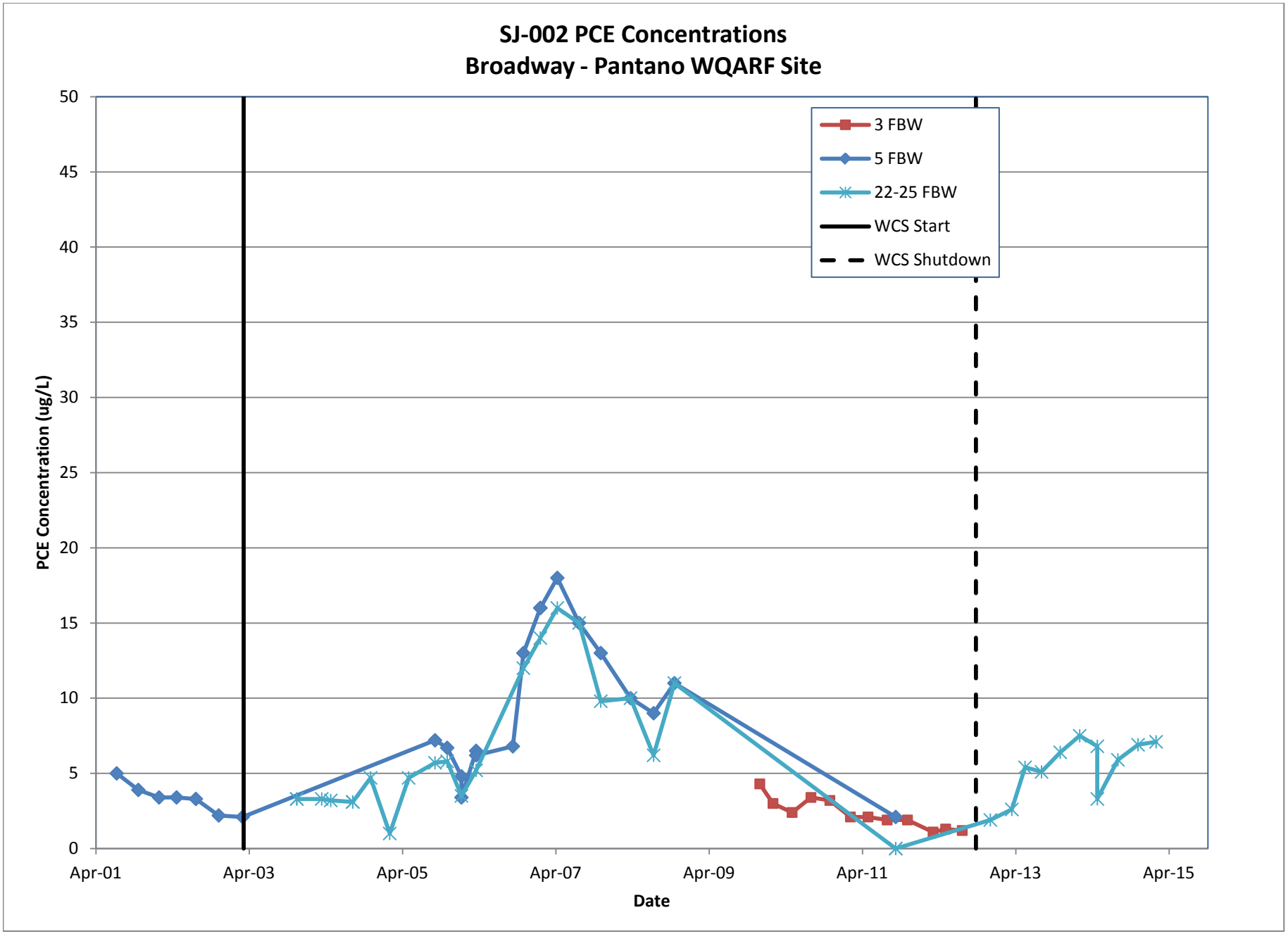

C-026A PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Apr-01
Apr-03
Apr-05
Apr-07
Apr-09
Apr-11
Apr-13
Apr-15
Apr-17
Date
5 FBW
25 FBW
50 FBW
70-75 FBW
150-153 FBW
WCS Start
WCS Shutdown
Only select depths charted.

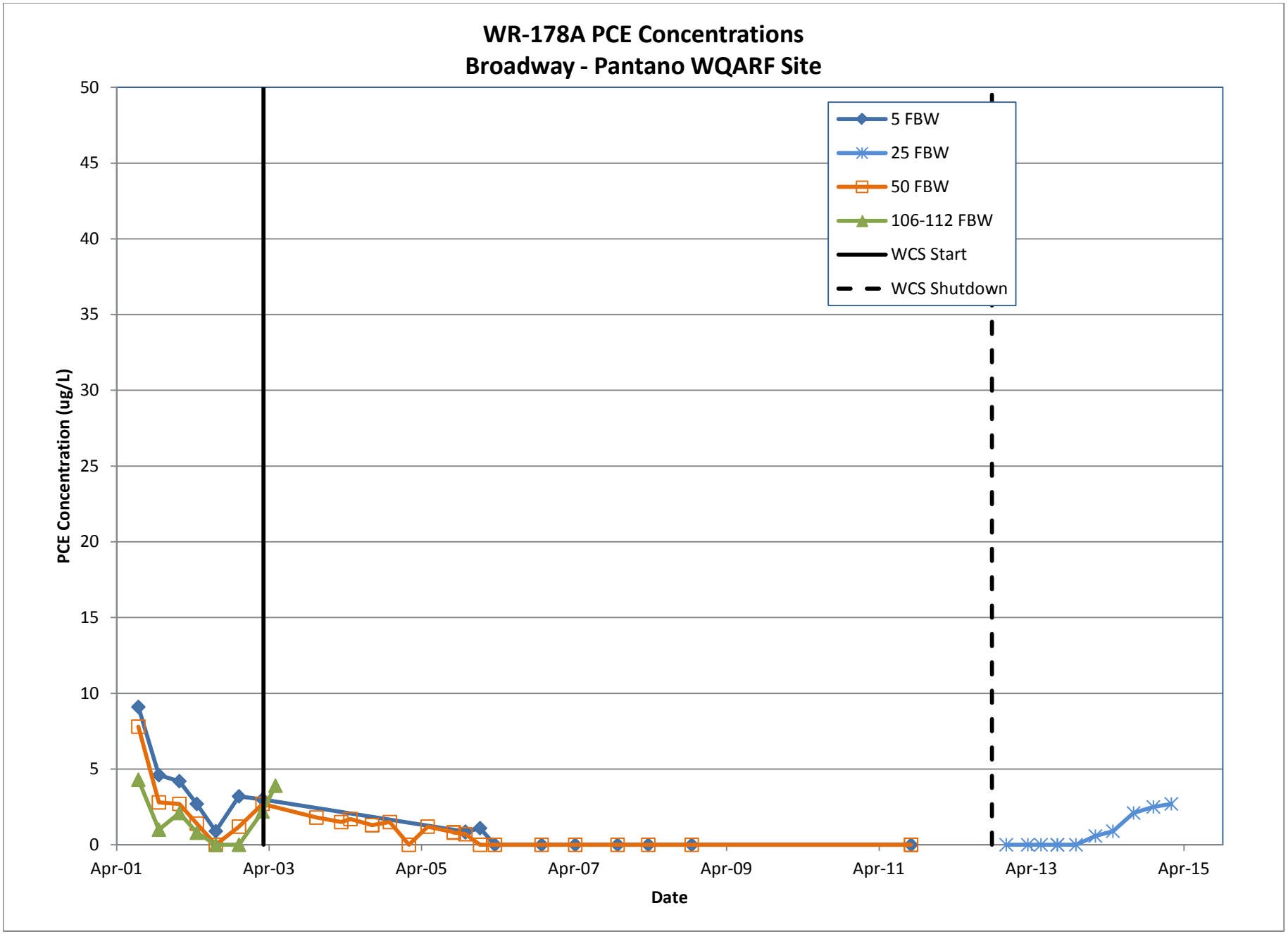

D-022A PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
200
180
160
140
120
100
80
60
40
20
0
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Date
5 FBW
25 FBW
WCS Start
WCS Shutdown
100 FBW

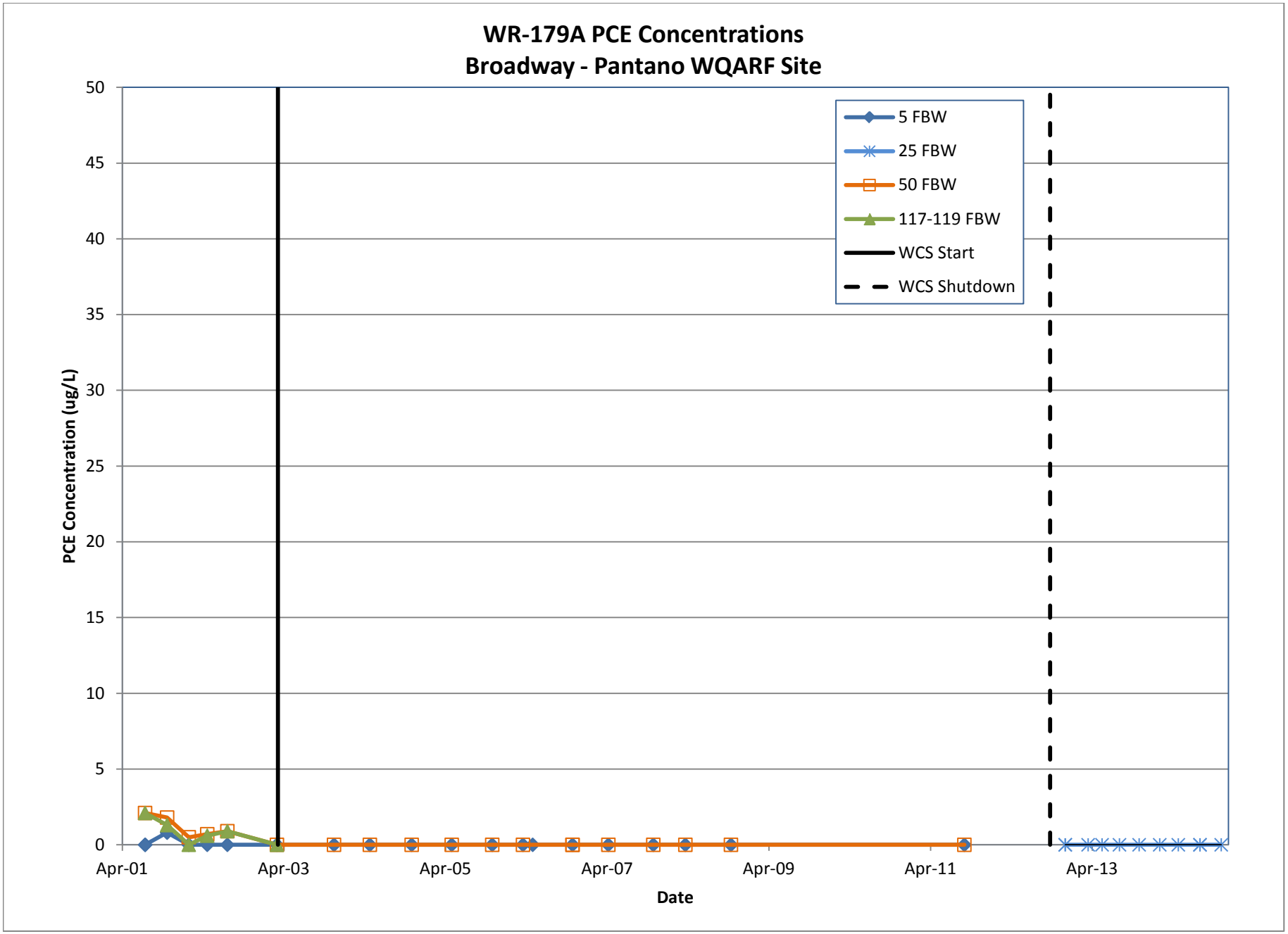

R-068A PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
300
250
200
150
100
50
0
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Date
5 FBW
25 FBW
WCS Start
WCS Shutdown

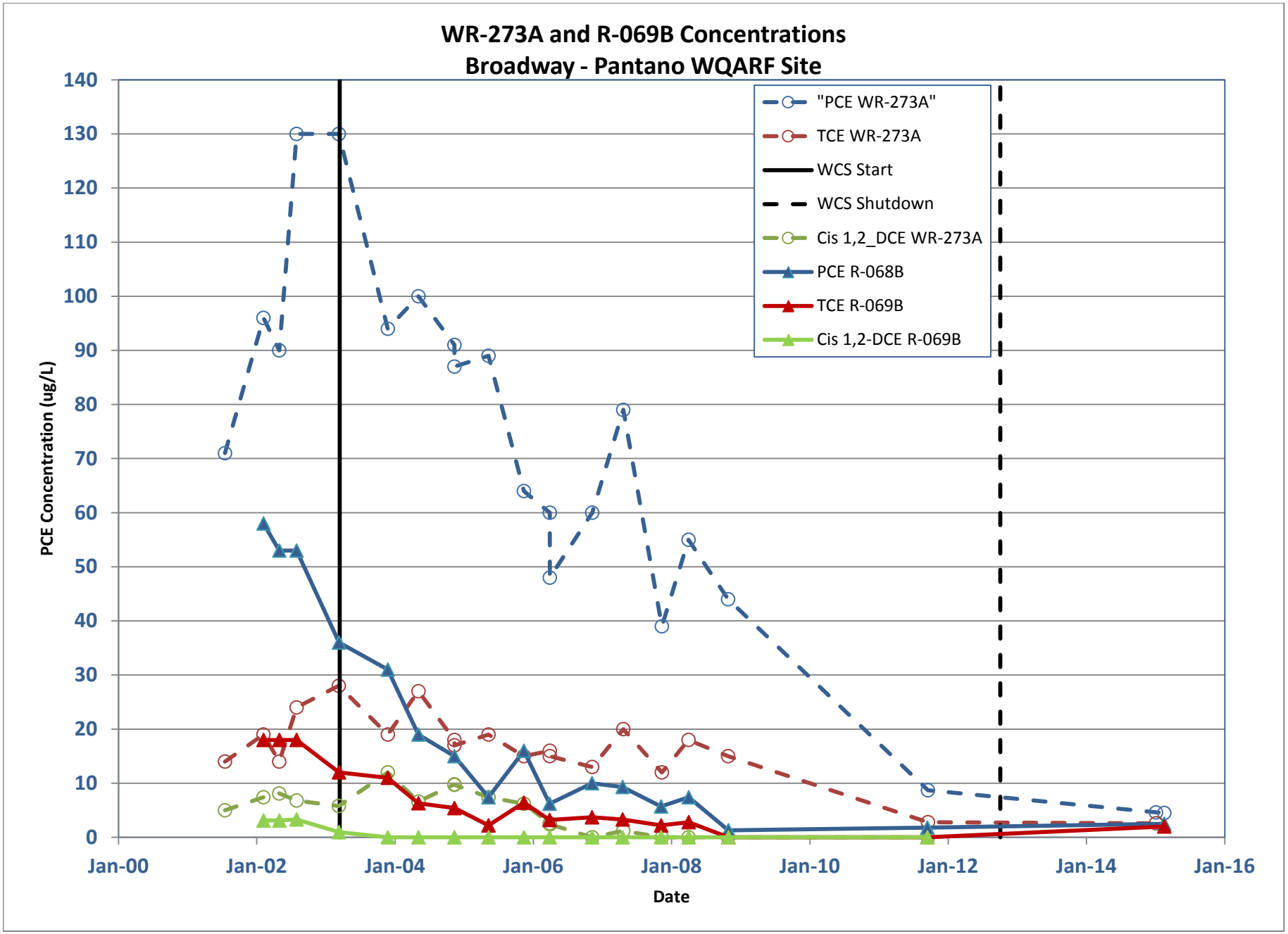

R-092A PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Date
5 FBW
25 FBW
50 FBW
75 FBW
100 FBW
115 FBW
142-147
WH
WCS Start
WCS Shutdown

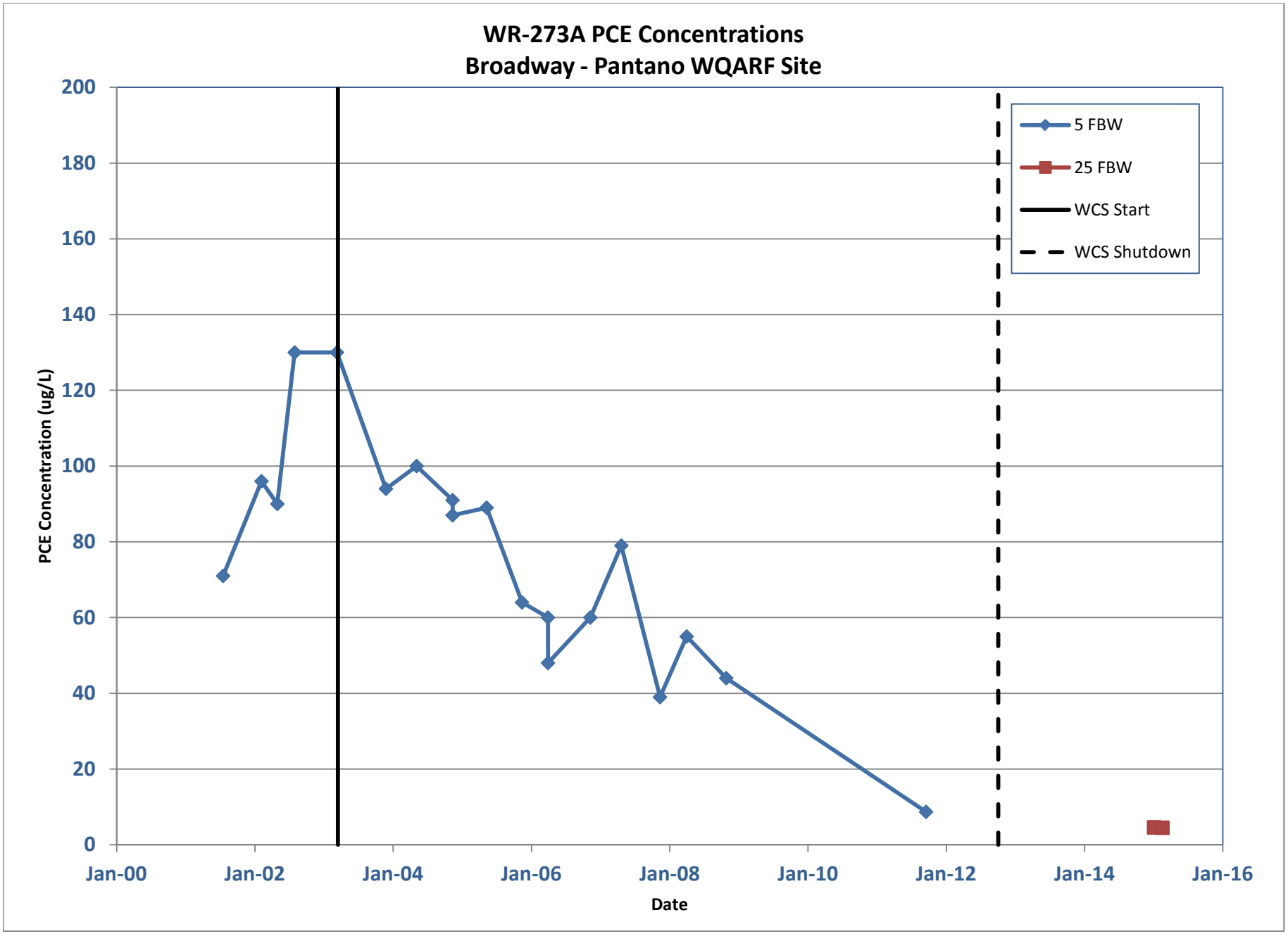

SJ-001 PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Apr-01
Apr-03
Apr-05
Apr-07
Apr-09
Apr-11
Apr-13
Apr-15
Date
3 FBW
5 FBW
22-25 FBW
WCS Start
WCS Shutdown

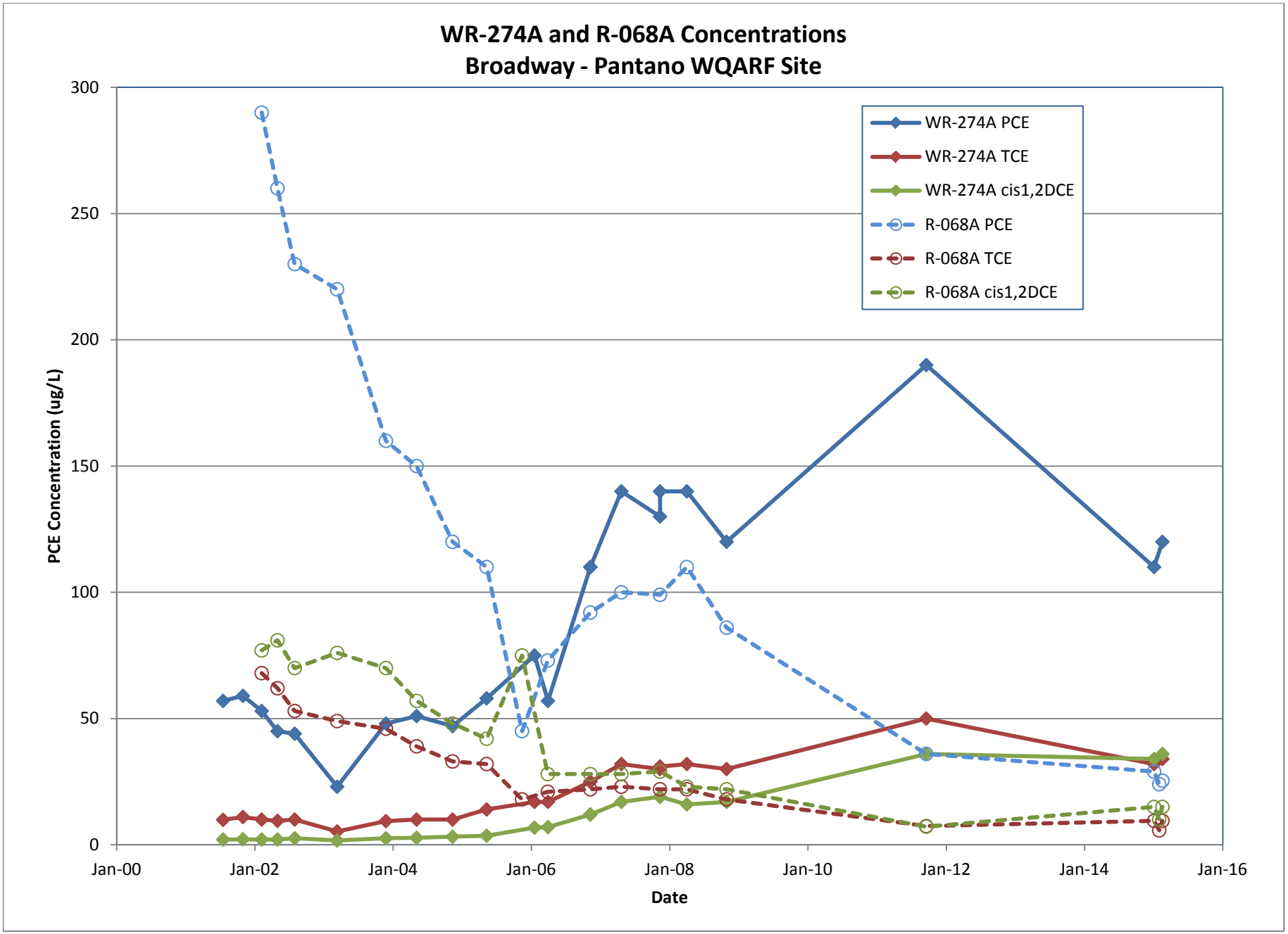

SJ-002 PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Apr-01
Apr-03
Apr-05
Apr-07
Apr-09
Apr-11
Apr-13
Apr-15
Date
3 FBW
5 FBW
22-25 FBW
WCS Start
WCS Shutdown

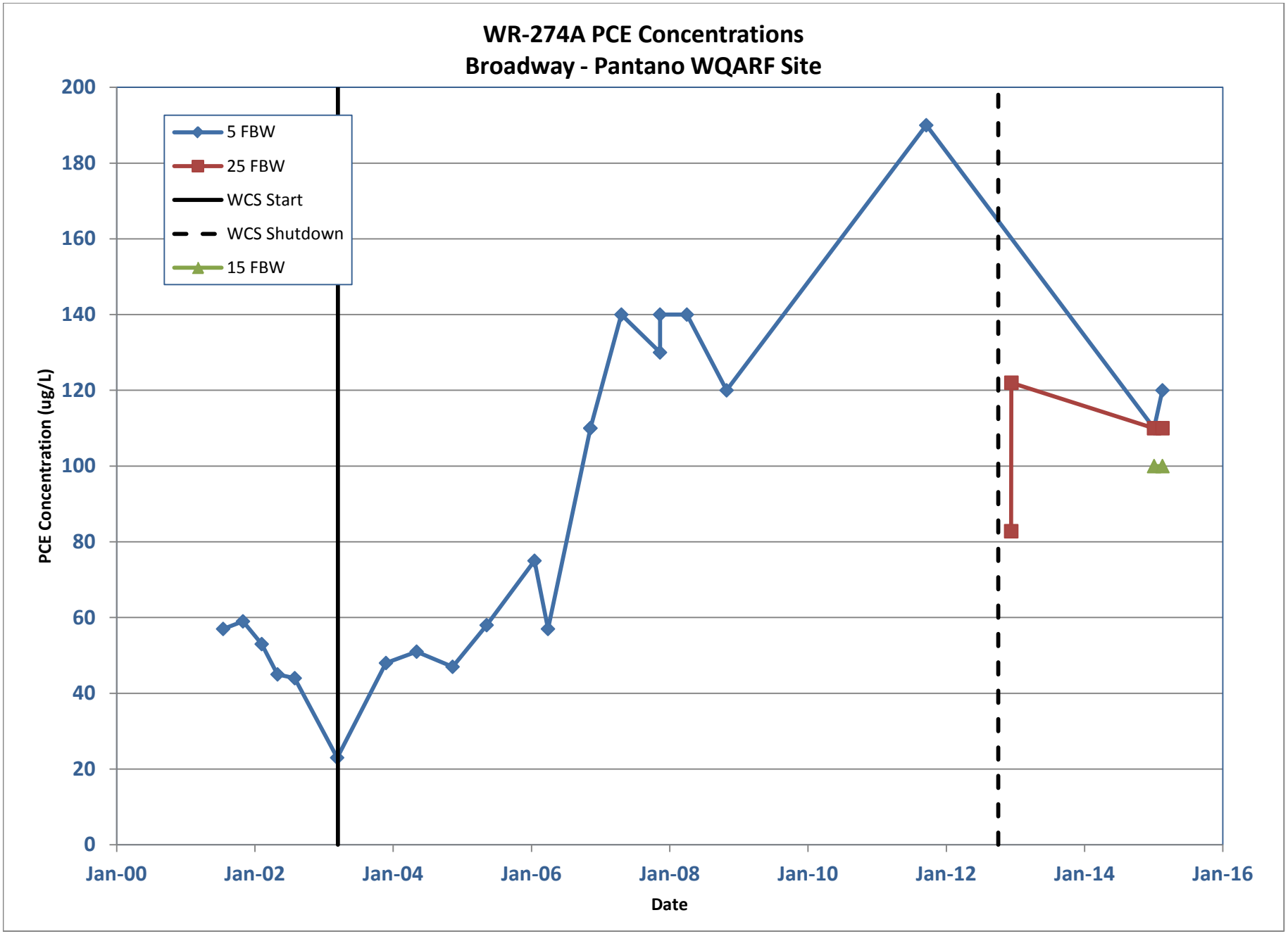

WR-178A PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Apr-01
Apr-03
Apr-05
Apr-07
Apr-09
Apr-11
Apr-13
Apr-15
Date
5 FBW
25 FBW
50 FBW
106-112 FBW
WCS Start
WCS Shutdown

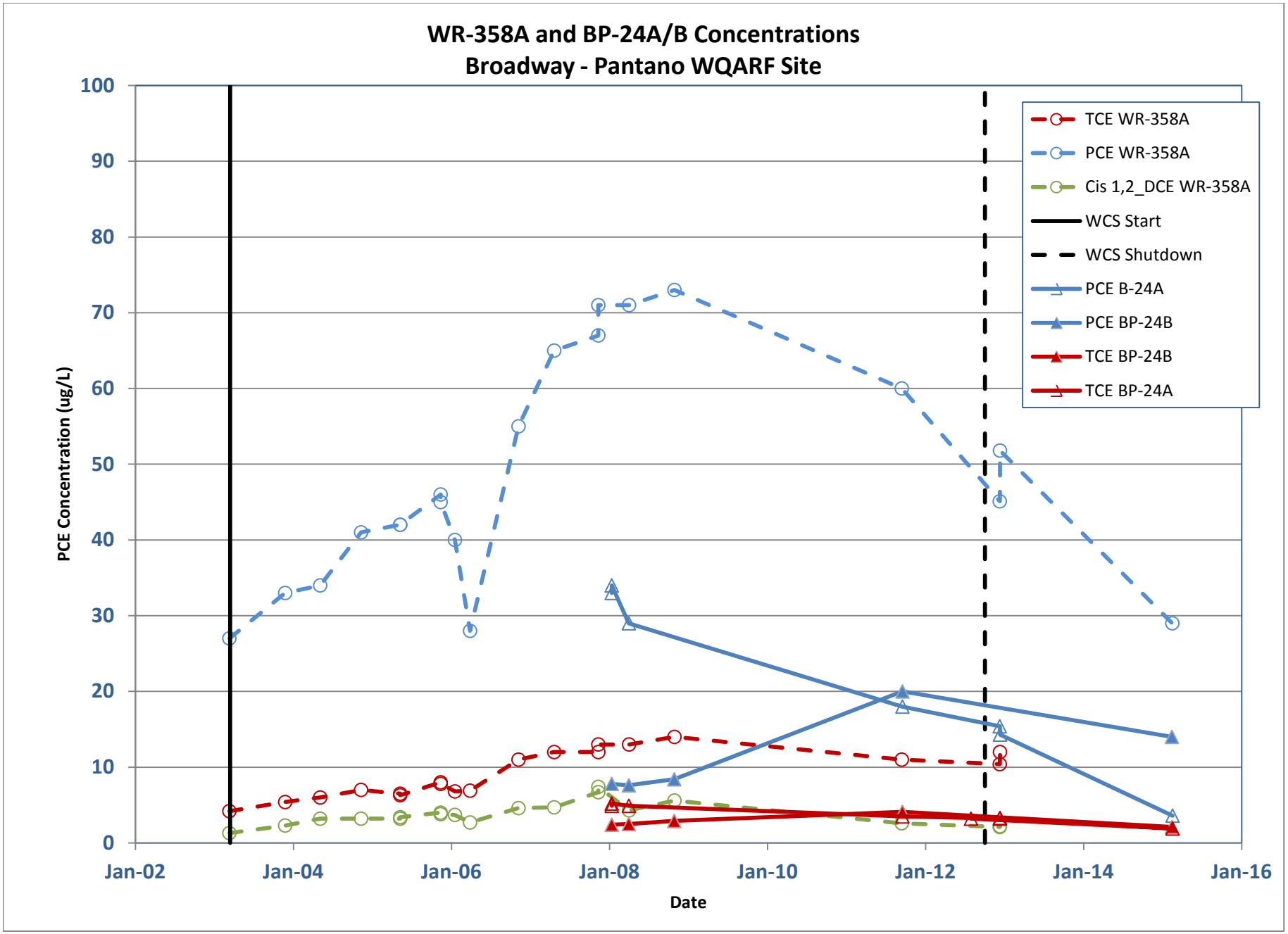

WR-179A PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Apr-01
Apr-03
Apr-05
Apr-07
Apr-09
Apr-11
Apr-13
Date
5 FBW
25 FBW
50 FBW
117-119 FBW
WCS Start
WCS Shutdown

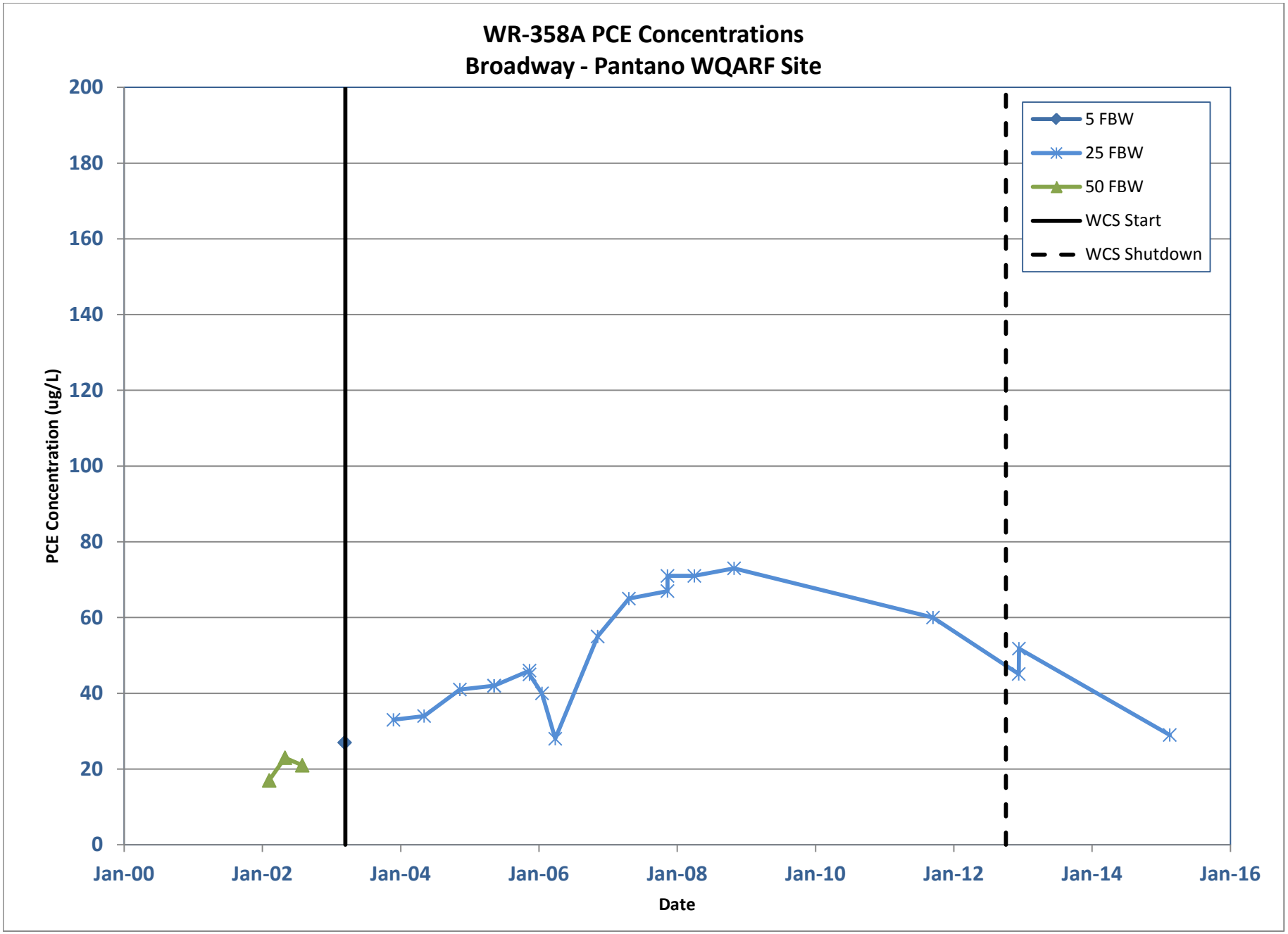

WR-273A and R-069B Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
Date
"PCE WR-273A"
TCE WR-273A
WCS Start
WCS Shutdown
Cis 1,2_DCE WR-273A
PCE R-068B
TCE R-069B
Cis 1,2-DCE R-069B
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16

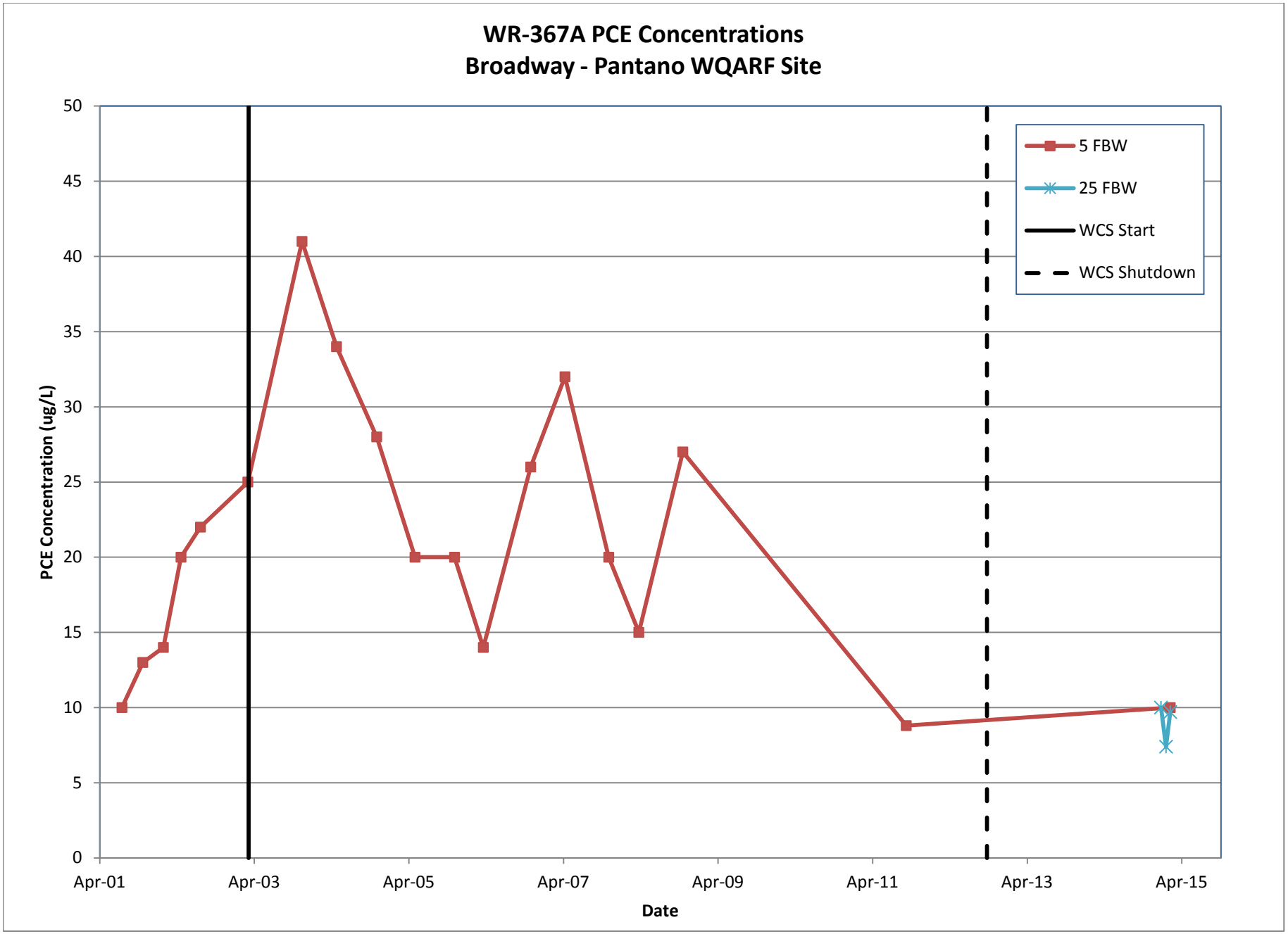

WR-273A PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
200
180
160
140
120
100
80
60
40
20
0
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Date
5 FBW
25 FBW
WCS Start
WCS Shutdown

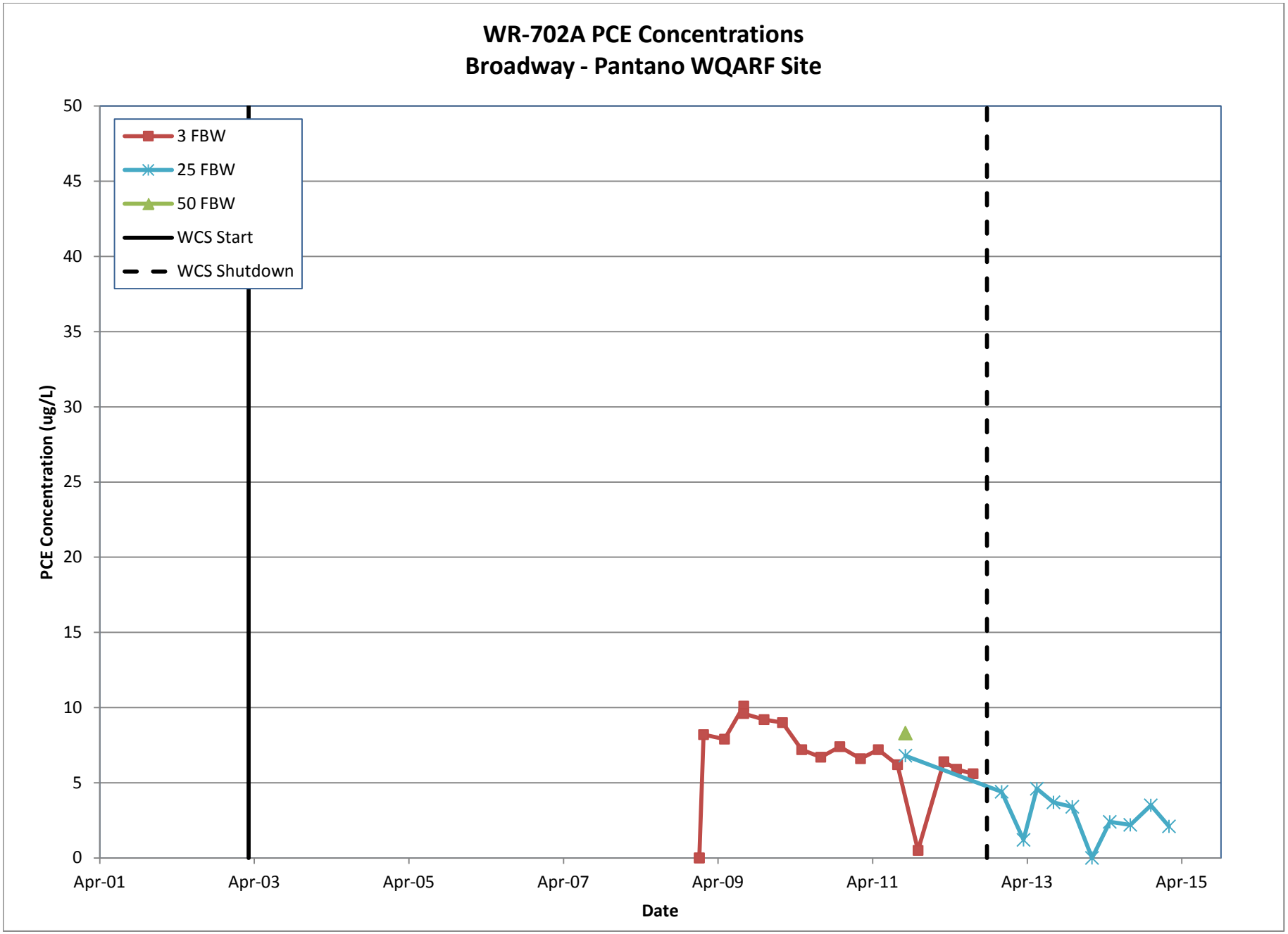

WR-274A and R-068A Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
300
250
200
150
100
50
0
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Date
WR-274A PCE
WR-274A TCE
WR-274A cis1,2DCE
R-068A PCE
R-068A TCE
R-068A cis1,2DCE

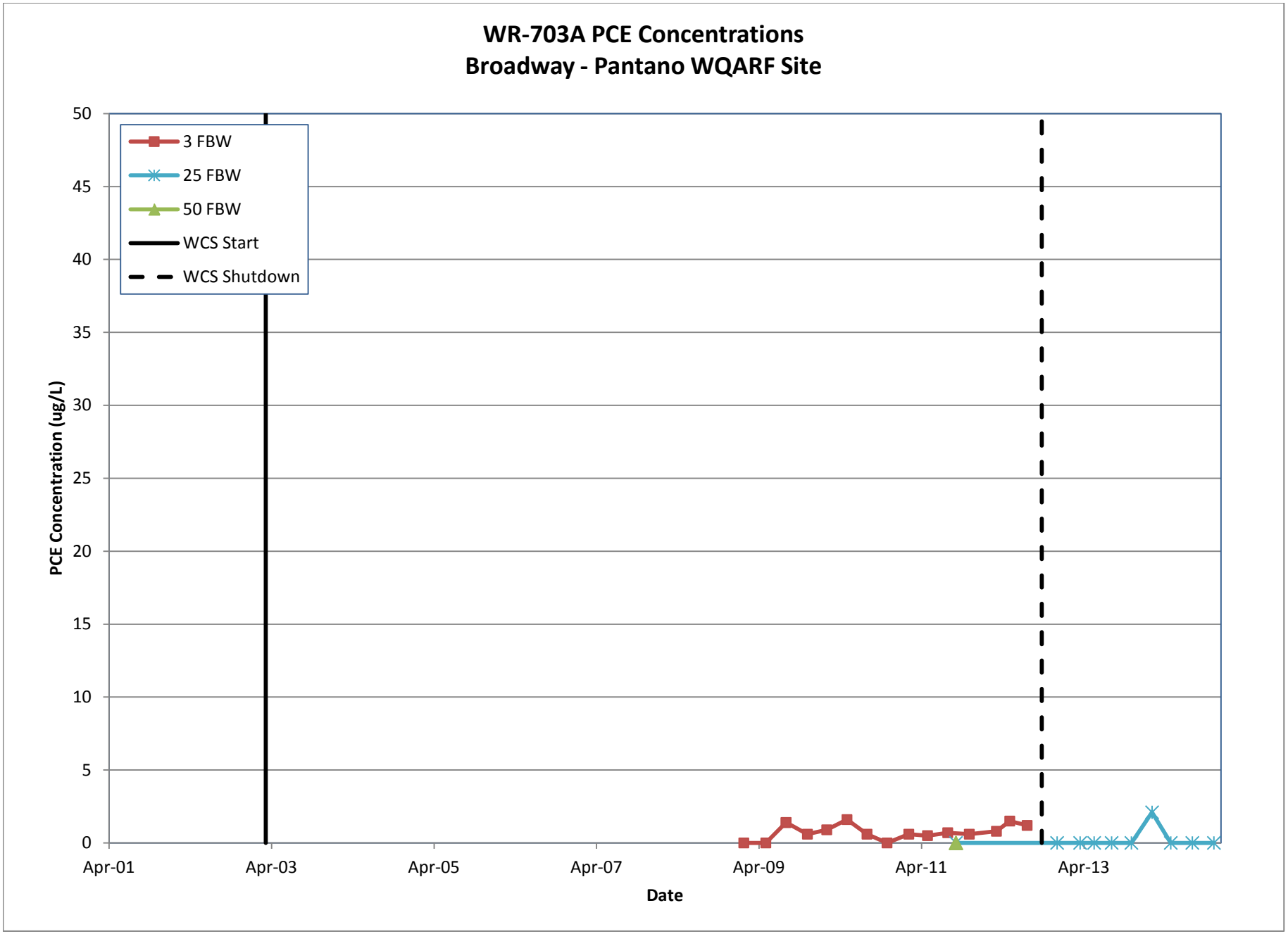

WR-274A PCE Concentrations
Broadway - Pantano WQARF Site
5 FBW
25 FBW
WCS Start
WCS Shutdown
15 FBW
PCE Concentration (ug/L)
200
180
160
140
120
100
80
60
40
20
0
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Date

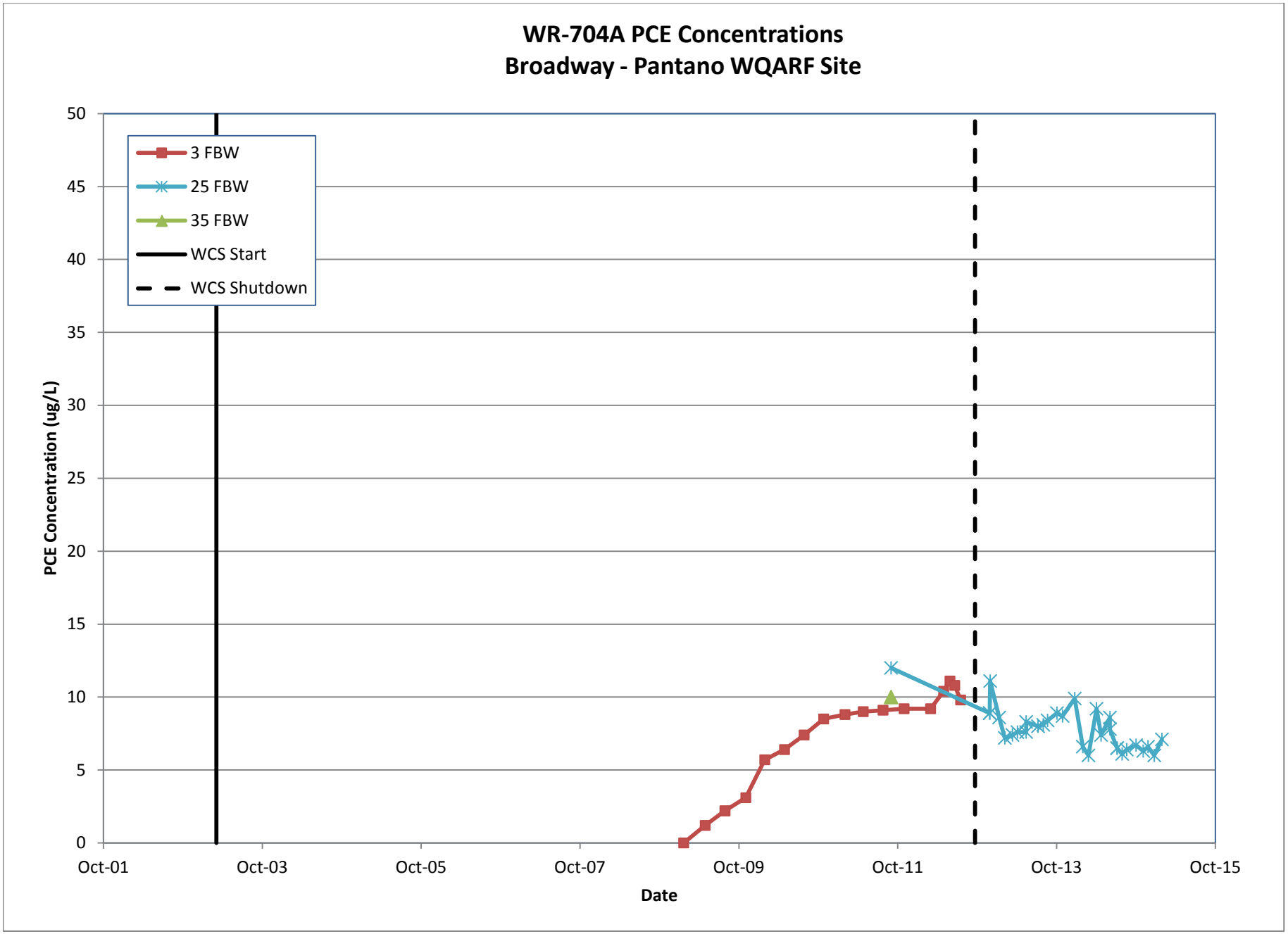

WR-358A and BP-24A/B Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
100
90
80
70
60
50
40
30
20
10
0
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Date
TCE WR-358A
PCE WR-358A
Cis 1,2_DCE WR-358A
WCS Start
WCS Shutdown
PCE B-24A
PCE BP-24B
TCE BP-24B
TCE BP-24A

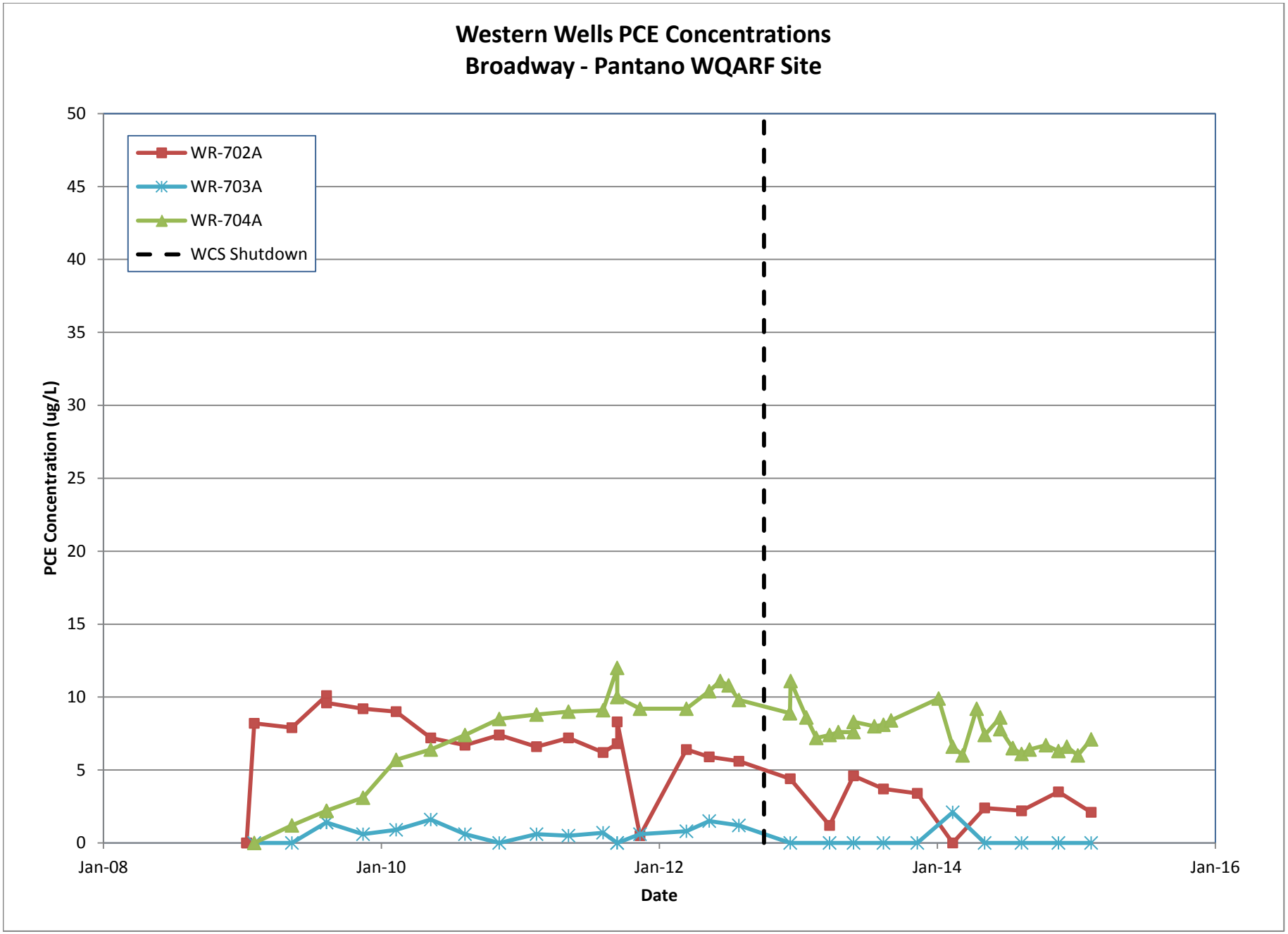

WR-358A PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
200
180
160
140
120
100
80
60
40
20
0
Jan-00
Jan-02
Jan-04
Jan-06
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Date
5 FBW
25 FBW
50 FBW
WCS Start
WCS Shutdown

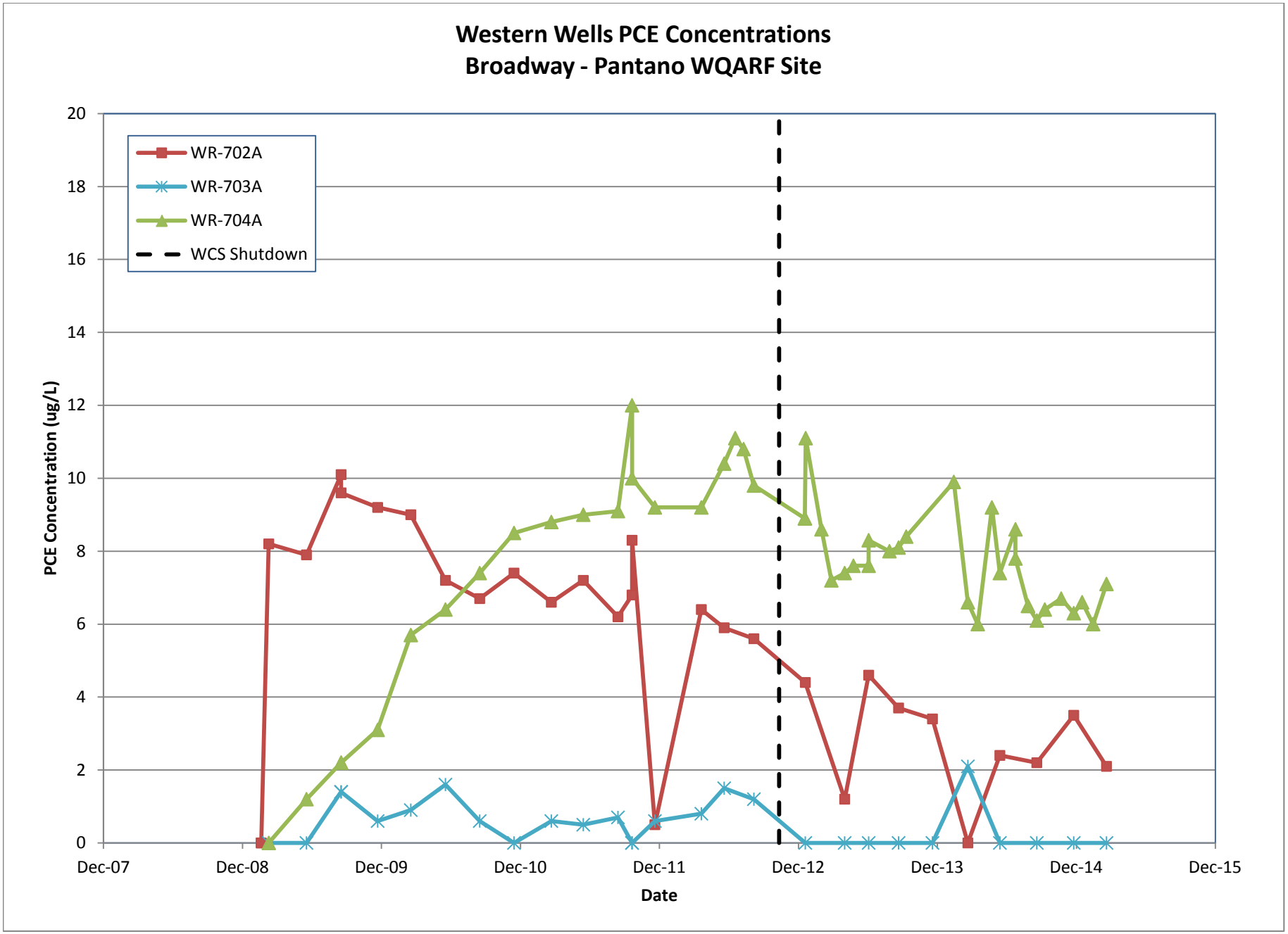

WR-367A PCE Concentrations
Broadway - Pantano WQARF Site
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Apr-01
Apr-03
Apr-05
Apr-07
Apr-09
Apr-11
Apr-13
Apr-15
Date
5 FBW
25 FBW
WCS Start
WCS Shutdown


WR-702A PCE Concentrations
Broadway - Pantano WQARF Site
3 FBW
25 FBW
50 FBW
WCS Start
WCS Shutdown
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Apr-01
Apr-03
Apr-05
Apr-07
Apr-09
Apr-11
Apr-13
Apr-15
Date


WR-703A PCE Concentrations
Broadway - Pantano WQARF Site
3 FBW
25 FBW
50 FBW
WCS Start
WCS Shutdown
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Apr-01
Apr-03
Apr-05
Apr-07
Apr-09
Apr-11
Apr-13
Date


WR-704A PCE Concentrations
Broadway - Pantano WQARF Site
3 FBW
25 FBW
35 FBW
WCS Start
WCS Shutdown
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Oct-01
Oct-03
Oct-05
Oct-07
Oct-09
Oct-11
Oct-13
Oct-15
Date


Western Wells PCE Concentrations
Broadway - Pantano WQARF Site
WR-702A
WR-703A
WR-704A
WCS Shutdown
PCE Concentration (ug/L)
50
45
40
35
30
25
20
15
10
5
0
Jan-08
Jan-10
Jan-12
Jan-14
Jan-16
Date


Western Wells PCE Concentrations
Broadway - Pantano WQARF Site
WR-702A
WR-703A
WR-704A
WCS Shutdown
PCE Concentration (ug/L)
0
2
4
6
8
10
12
14
16
18
20
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Dec-15
Date

APPENDIX E

LABORATORY REPORTS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

TestAmerica Job ID: 550-37362-1
Client Project/Site: Broadway Pantana
Revision: 1

For:
AMEC Foster Wheeler E & I, Inc
4600 E. Washington St
6th Floor
Phoenix, Arizona 85034

Attn: Ailiang Gu

Authorized for release by:
1/14/2015 10:49:53 AM

Vic Nielsen, Project Manager II
(602)437-3340
vic.nielsen@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

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

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

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL.
N1	See case narrative.

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
CFL	Contains Free Liquid
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)

Job ID: 550-37362-1

Laboratory: TestAmerica Phoenix

Narrative

Job Narrative
550-37362-1

Comments
No additional comments.

Receipt
The samples were received on 12/23/2014 8:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.3º C.

GC/MS VOA
Method(s) 8260B: The trip blanks associated with samples 550-37362-1, -2 contained a detection above the reporting limit for chloromethane. All associated samples were non-detect for this compound, therefore, the data is not impacted.

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

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

Sample Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantana

TestAmerica Job ID: 550-37362-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-37362-1	C-125-122214	Water	12/22/14 13:50	12/23/14 08:20
550-37362-2	C-51B-122214	Water	12/22/14 13:30	12/23/14 08:20
550-37362-3	T-B-122214	Water	12/22/14 13:30	12/23/14 08:20

Detection Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantana

TestAmerica Job ID: 550-37362-1

Client Sample ID: C-125-122214 — Lab Sample ID: 550-37362-1

No Detections.

Client Sample ID: C-51B-122214 — Lab Sample ID: 550-37362-2

No Detections.

Client Sample ID: T-B-122214 — Lab Sample ID: 550-37362-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloromethane	33	N1	5.0	0.21	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantana

TestAmerica Job ID: 550-37362-1

Client Sample ID: C-125-122214
Date Collected: 12/22/14 13:50
Date Received: 12/23/14 08:20

Lab Sample ID: 550-37362-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	E8	5.0	0.35	ug/L			12/30/14 23:48	1
1,1,1-Trichloroethane	ND	E8	2.0	0.15	ug/L			12/30/14 23:48	1
1,1,2,2-Tetrachloroethane	ND	E8	2.0	0.33	ug/L			12/30/14 23:48	1
1,1,2-Trichloroethane	ND	E8	2.0	0.31	ug/L			12/30/14 23:48	1
1,1-Dichloroethane	ND	E8	2.0	0.14	ug/L			12/30/14 23:48	1
1,1-Dichloroethene	ND	E8	5.0	0.23	ug/L			12/30/14 23:48	1
1,1-Dichloropropene	ND	E8	2.0	0.20	ug/L			12/30/14 23:48	1
1,2,3-Trichlorobenzene	ND	E8	5.0	0.45	ug/L			12/30/14 23:48	1
1,2,3-Trichloropropane	ND	E8	10	0.78	ug/L			12/30/14 23:48	1
1,2,4-Trichlorobenzene	ND	E8	5.0	0.32	ug/L			12/30/14 23:48	1
1,2,4-Trimethylbenzene	ND	E8	2.0	0.25	ug/L			12/30/14 23:48	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			12/30/14 23:48	1
1,2-Dibromoethane (EDB)	ND	E8	2.0	0.30	ug/L			12/30/14 23:48	1
1,2-Dichlorobenzene	ND	E8	2.0	0.22	ug/L			12/30/14 23:48	1
1,2-Dichloroethane	ND	E8	2.0	0.31	ug/L			12/30/14 23:48	1
1,2-Dichloropropane	ND	E8	2.0	0.23	ug/L			12/30/14 23:48	1
1,3,5-Trimethylbenzene	ND	E8	2.0	0.21	ug/L			12/30/14 23:48	1
1,3-Dichlorobenzene	ND	E8	2.0	0.14	ug/L			12/30/14 23:48	1
1,3-Dichloropropane	ND	E8	2.0	0.23	ug/L			12/30/14 23:48	1
1,4-Dichlorobenzene	ND	E8	2.0	0.17	ug/L			12/30/14 23:48	1
2,2-Dichloropropane	ND	E8	2.0	0.18	ug/L			12/30/14 23:48	1
2-Butanone (MEK)	ND	E8	10	2.2	ug/L			12/30/14 23:48	1
2-Chlorotoluene	ND	E8	5.0	0.17	ug/L			12/30/14 23:48	1
2-Hexanone	ND	E8	10	1.5	ug/L			12/30/14 23:48	1
4-Chlorotoluene	ND	E8	5.0	0.20	ug/L			12/30/14 23:48	1
4-Methyl-2-pentanone (MIBK)	ND	E8	10	1.3	ug/L			12/30/14 23:48	1
Acetone	ND	E8	20	7.3	ug/L			12/30/14 23:48	1
Benzene	ND	E8	2.0	0.12	ug/L			12/30/14 23:48	1
Bromobenzene	ND	E8	5.0	0.14	ug/L			12/30/14 23:48	1
Bromochloromethane	ND	E8	5.0	0.27	ug/L			12/30/14 23:48	1
Bromodichloromethane	ND	E8	2.0	0.23	ug/L			12/30/14 23:48	1
Bromoform	ND	E8	5.0	0.37	ug/L			12/30/14 23:48	1
Bromomethane	ND	E8	5.0	0.67	ug/L			12/30/14 23:48	1
Carbon disulfide	ND	E8	5.0	0.86	ug/L			12/30/14 23:48	1
Carbon tetrachloride	ND	E8	5.0	0.15	ug/L			12/30/14 23:48	1
Chlorobenzene	ND	E8	2.0	0.17	ug/L			12/30/14 23:48	1
Chloroethane	ND	E8	5.0	0.25	ug/L			12/30/14 23:48	1
Chloroform	ND	E8	2.0	0.13	ug/L			12/30/14 23:48	1
Chloromethane	ND	E8	5.0	0.21	ug/L			12/30/14 23:48	1
cis-1,2-Dichloroethene	ND	E8	2.0	0.21	ug/L			12/30/14 23:48	1
cis-1,3-Dichloropropene	ND	E8	2.0	0.14	ug/L			12/30/14 23:48	1
Chlorodibromomethane	ND	E8	2.0	0.22	ug/L			12/30/14 23:48	1
Dibromomethane	ND	E8	2.0	0.26	ug/L			12/30/14 23:48	1
Dichlorodifluoromethane	ND	E8	5.0	0.15	ug/L			12/30/14 23:48	1
Ethylbenzene	ND	E8	2.0	0.32	ug/L			12/30/14 23:48	1
Hexachlorobutadiene	ND	E8	5.0	0.28	ug/L			12/30/14 23:48	1
Iodomethane	ND	E8	2.0	0.21	ug/L			12/30/14 23:48	1
Isopropylbenzene	ND	E8	2.0	0.26	ug/L			12/30/14 23:48	1
m,p-Xylenes	ND	E8	5.0	0.44	ug/L			12/30/14 23:48	1

Client Sample ID: C-125-122214

Lab Sample ID: 550-37362-1

Date Collected: 12/22/14 13:50

Matrix: Water

Date Received: 12/23/14 08:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND	E8	5.0	0.67	ug/L			12/30/14 23:48	1
Methyl tert-butyl ether	ND	E8	1.0	0.22	ug/L			12/30/14 23:48	1
Naphthalene	ND	E8	5.0	0.51	ug/L			12/30/14 23:48	1
n-Butylbenzene	ND	E8	5.0	0.21	ug/L			12/30/14 23:48	1
n-Propylbenzene	ND	E8	2.0	0.21	ug/L			12/30/14 23:48	1
o-Xylene	ND	E8	5.0	0.42	ug/L			12/30/14 23:48	1
p-Isopropyltoluene	ND	E8	2.0	0.21	ug/L			12/30/14 23:48	1
sec-Butylbenzene	ND	E8	5.0	0.23	ug/L			12/30/14 23:48	1
Styrene	ND	E8	2.0	0.17	ug/L			12/30/14 23:48	1
tert-Butylbenzene	ND	E8	5.0	0.25	ug/L			12/30/14 23:48	1
Tetrachloroethene	ND	E8	2.0	0.18	ug/L			12/30/14 23:48	1
Toluene	ND	E8	2.0	0.28	ug/L			12/30/14 23:48	1
trans-1,2-Dichloroethene	ND	E8	2.0	0.29	ug/L			12/30/14 23:48	1
trans-1,3-Dichloropropene	ND	E8	2.0	0.47	ug/L			12/30/14 23:48	1
Trichloroethene	ND	E8	2.0	0.24	ug/L			12/30/14 23:48	1
Trichlorofluoromethane	ND	E8	5.0	0.15	ug/L			12/30/14 23:48	1
Vinyl acetate	ND	E8	25	0.81	ug/L			12/30/14 23:48	1
Vinyl chloride	ND	E8	5.0	0.18	ug/L			12/30/14 23:48	1
Xylenes, Total	ND	E8	10	0.86	ug/L			12/30/14 23:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*110*		*70 - 130*		*12/30/14 23:48*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*		*12/30/14 23:48*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*		*12/30/14 23:48*	*1*

Client Sample ID: C-51B-122214

Lab Sample ID: 550-37362-2

Date Collected: 12/22/14 13:30

Matrix: Water

Date Received: 12/23/14 08:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	E8	5.0	0.35	ug/L			12/31/14 01:26	1
1,1,1-Trichloroethane	ND	E8	2.0	0.15	ug/L			12/31/14 01:26	1
1,1,2,2-Tetrachloroethane	ND	E8	2.0	0.33	ug/L			12/31/14 01:26	1
1,1,2-Trichloroethane	ND	E8	2.0	0.31	ug/L			12/31/14 01:26	1
1,1-Dichloroethane	ND	E8	2.0	0.14	ug/L			12/31/14 01:26	1
1,1-Dichloroethene	ND	E8	5.0	0.23	ug/L			12/31/14 01:26	1
1,1-Dichloropropene	ND	E8	2.0	0.20	ug/L			12/31/14 01:26	1
1,2,3-Trichlorobenzene	ND	E8	5.0	0.45	ug/L			12/31/14 01:26	1
1,2,3-Trichloropropane	ND	E8	10	0.78	ug/L			12/31/14 01:26	1
1,2,4-Trichlorobenzene	ND	E8	5.0	0.32	ug/L			12/31/14 01:26	1
1,2,4-Trimethylbenzene	ND	E8	2.0	0.25	ug/L			12/31/14 01:26	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			12/31/14 01:26	1
1,2-Dibromoethane (EDB)	ND	E8	2.0	0.30	ug/L			12/31/14 01:26	1
1,2-Dichlorobenzene	ND	E8	2.0	0.22	ug/L			12/31/14 01:26	1
1,2-Dichloroethane	ND	E8	2.0	0.31	ug/L			12/31/14 01:26	1
1,2-Dichloropropane	ND	E8	2.0	0.23	ug/L			12/31/14 01:26	1
1,3,5-Trimethylbenzene	ND	E8	2.0	0.21	ug/L			12/31/14 01:26	1
1,3-Dichlorobenzene	ND	E8	2.0	0.14	ug/L			12/31/14 01:26	1
1,3-Dichloropropane	ND	E8	2.0	0.23	ug/L			12/31/14 01:26	1

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantana

TestAmerica Job ID: 550-37362-1

Client Sample ID: C-51B-122214
Date Collected: 12/22/14 13:30
Date Received: 12/23/14 08:20

Lab Sample ID: 550-37362-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND	E8	2.0	0.17	ug/L			12/31/14 01:26	1
2,2-Dichloropropane	ND	E8	2.0	0.18	ug/L			12/31/14 01:26	1
2-Butanone (MEK)	ND	E8	10	2.2	ug/L			12/31/14 01:26	1
2-Chlorotoluene	ND	E8	5.0	0.17	ug/L			12/31/14 01:26	1
2-Hexanone	ND	E8	10	1.5	ug/L			12/31/14 01:26	1
4-Chlorotoluene	ND	E8	5.0	0.20	ug/L			12/31/14 01:26	1
4-Methyl-2-pentanone (MIBK)	ND	E8	10	1.3	ug/L			12/31/14 01:26	1
Acetone	ND	E8	20	7.3	ug/L			12/31/14 01:26	1
Benzene	ND	E8	2.0	0.12	ug/L			12/31/14 01:26	1
Bromobenzene	ND	E8	5.0	0.14	ug/L			12/31/14 01:26	1
Bromochloromethane	ND	E8	5.0	0.27	ug/L			12/31/14 01:26	1
Bromodichloromethane	ND	E8	2.0	0.23	ug/L			12/31/14 01:26	1
Bromoform	ND	E8	5.0	0.37	ug/L			12/31/14 01:26	1
Bromomethane	ND	E8	5.0	0.67	ug/L			12/31/14 01:26	1
Carbon disulfide	ND	E8	5.0	0.86	ug/L			12/31/14 01:26	1
Carbon tetrachloride	ND	E8	5.0	0.15	ug/L			12/31/14 01:26	1
Chlorobenzene	ND	E8	2.0	0.17	ug/L			12/31/14 01:26	1
Chloroethane	ND	E8	5.0	0.25	ug/L			12/31/14 01:26	1
Chloroform	ND	E8	2.0	0.13	ug/L			12/31/14 01:26	1
Chloromethane	ND	E8	5.0	0.21	ug/L			12/31/14 01:26	1
cis-1,2-Dichloroethene	ND	E8	2.0	0.21	ug/L			12/31/14 01:26	1
cis-1,3-Dichloropropene	ND	E8	2.0	0.14	ug/L			12/31/14 01:26	1
Chlorodibromomethane	ND	E8	2.0	0.22	ug/L			12/31/14 01:26	1
Dibromomethane	ND	E8	2.0	0.26	ug/L			12/31/14 01:26	1
Dichlorodifluoromethane	ND	E8	5.0	0.15	ug/L			12/31/14 01:26	1
Ethylbenzene	ND	E8	2.0	0.32	ug/L			12/31/14 01:26	1
Hexachlorobutadiene	ND	E8	5.0	0.28	ug/L			12/31/14 01:26	1
Iodomethane	ND	E8	2.0	0.21	ug/L			12/31/14 01:26	1
Isopropylbenzene	ND	E8	2.0	0.26	ug/L			12/31/14 01:26	1
m,p-Xylenes	ND	E8	5.0	0.44	ug/L			12/31/14 01:26	1
Methylene Chloride	ND	E8	5.0	0.67	ug/L			12/31/14 01:26	1
Methyl tert-butyl ether	ND	E8	1.0	0.22	ug/L			12/31/14 01:26	1
Naphthalene	ND	E8	5.0	0.51	ug/L			12/31/14 01:26	1
n-Butylbenzene	ND	E8	5.0	0.21	ug/L			12/31/14 01:26	1
n-Propylbenzene	ND	E8	2.0	0.21	ug/L			12/31/14 01:26	1
o-Xylene	ND	E8	5.0	0.42	ug/L			12/31/14 01:26	1
p-Isopropyltoluene	ND	E8	2.0	0.21	ug/L			12/31/14 01:26	1
sec-Butylbenzene	ND	E8	5.0	0.23	ug/L			12/31/14 01:26	1
Styrene	ND	E8	2.0	0.17	ug/L			12/31/14 01:26	1
tert-Butylbenzene	ND	E8	5.0	0.25	ug/L			12/31/14 01:26	1
Tetrachloroethene	ND	E8	2.0	0.18	ug/L			12/31/14 01:26	1
Toluene	ND	E8	2.0	0.28	ug/L			12/31/14 01:26	1
trans-1,2-Dichloroethene	ND	E8	2.0	0.29	ug/L			12/31/14 01:26	1
trans-1,3-Dichloropropene	ND	E8	2.0	0.47	ug/L			12/31/14 01:26	1
Trichloroethene	ND	E8	2.0	0.24	ug/L			12/31/14 01:26	1
Trichlorofluoromethane	ND	E8	5.0	0.15	ug/L			12/31/14 01:26	1
Vinyl acetate	ND	E8	25	0.81	ug/L			12/31/14 01:26	1
Vinyl chloride	ND	E8	5.0	0.18	ug/L			12/31/14 01:26	1
Xylenes, Total	ND	E8	10	0.86	ug/L			12/31/14 01:26	1

Client Sample Results

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantana

TestAmerica Job ID: 550-37362-1

Client Sample ID: C-51B-122214

Lab Sample ID: 550-37362-2

Date Collected: 12/22/14 13:30
Matrix: Water
Date Received: 12/23/14 08:20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*111*		*70 - 130*		*12/31/14 01:26*	*1*
Toluene-d8 (Surr)	*107*		*70 - 130*		*12/31/14 01:26*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*		*12/31/14 01:26*	*1*

Client Sample ID: T-B-122214

Lab Sample ID: 550-37362-3

Date Collected: 12/22/14 13:30
Matrix: Water
Date Received: 12/23/14 08:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	E8 N1	5.0	0.35	ug/L			12/30/14 22:43	1
1,1,1-Trichloroethane	ND	E8 N1	2.0	0.15	ug/L			12/30/14 22:43	1
1,1,2,2-Tetrachloroethane	ND	E8 N1	2.0	0.33	ug/L			12/30/14 22:43	1
1,1,2-Trichloroethane	ND	E8 N1	2.0	0.31	ug/L			12/30/14 22:43	1
1,1-Dichloroethane	ND	E8 N1	2.0	0.14	ug/L			12/30/14 22:43	1
1,1-Dichloroethene	ND	E8 N1	5.0	0.23	ug/L			12/30/14 22:43	1
1,1-Dichloropropene	ND	E8 N1	2.0	0.20	ug/L			12/30/14 22:43	1
1,2,3-Trichlorobenzene	ND	E8 N1	5.0	0.45	ug/L			12/30/14 22:43	1
1,2,3-Trichloropropane	ND	E8 N1	10	0.78	ug/L			12/30/14 22:43	1
1,2,4-Trichlorobenzene	ND	E8 N1	5.0	0.32	ug/L			12/30/14 22:43	1
1,2,4-Trimethylbenzene	ND	E8 N1	2.0	0.25	ug/L			12/30/14 22:43	1
1,2-Dibromo-3-Chloropropane	ND	E8 N1	5.0	0.82	ug/L			12/30/14 22:43	1
1,2-Dibromoethane (EDB)	ND	E8 N1	2.0	0.30	ug/L			12/30/14 22:43	1
1,2-Dichlorobenzene	ND	E8 N1	2.0	0.22	ug/L			12/30/14 22:43	1
1,2-Dichloroethane	ND	E8 N1	2.0	0.31	ug/L			12/30/14 22:43	1
1,2-Dichloropropane	ND	E8 N1	2.0	0.23	ug/L			12/30/14 22:43	1
1,3,5-Trimethylbenzene	ND	E8 N1	2.0	0.21	ug/L			12/30/14 22:43	1
1,3-Dichlorobenzene	ND	E8 N1	2.0	0.14	ug/L			12/30/14 22:43	1
1,3-Dichloropropane	ND	E8 N1	2.0	0.23	ug/L			12/30/14 22:43	1
1,4-Dichlorobenzene	ND	E8 N1	2.0	0.17	ug/L			12/30/14 22:43	1
2,2-Dichloropropane	ND	E8 N1	2.0	0.18	ug/L			12/30/14 22:43	1
2-Butanone (MEK)	ND	E8 N1	10	2.2	ug/L			12/30/14 22:43	1
2-Chlorotoluene	ND	E8 N1	5.0	0.17	ug/L			12/30/14 22:43	1
2-Hexanone	ND	E8 N1	10	1.5	ug/L			12/30/14 22:43	1
4-Chlorotoluene	ND	E8 N1	5.0	0.20	ug/L			12/30/14 22:43	1
4-Methyl-2-pentanone (MIBK)	ND	E8 N1	10	1.3	ug/L			12/30/14 22:43	1
Acetone	ND	E8 N1	20	7.3	ug/L			12/30/14 22:43	1
Benzene	ND	E8 N1	2.0	0.12	ug/L			12/30/14 22:43	1
Bromobenzene	ND	E8 N1	5.0	0.14	ug/L			12/30/14 22:43	1
Bromochloromethane	ND	E8 N1	5.0	0.27	ug/L			12/30/14 22:43	1
Bromodichloromethane	ND	E8 N1	2.0	0.23	ug/L			12/30/14 22:43	1
Bromoform	ND	E8 N1	5.0	0.37	ug/L			12/30/14 22:43	1
Bromomethane	ND	E8 N1	5.0	0.67	ug/L			12/30/14 22:43	1
Carbon disulfide	ND	E8 N1	5.0	0.86	ug/L			12/30/14 22:43	1
Carbon tetrachloride	ND	E8 N1	5.0	0.15	ug/L			12/30/14 22:43	1
Chlorobenzene	ND	E8 N1	2.0	0.17	ug/L			12/30/14 22:43	1
Chloroethane	ND	E8 N1	5.0	0.25	ug/L			12/30/14 22:43	1
Chloroform	ND	E8 N1	2.0	0.13	ug/L			12/30/14 22:43	1
Chloromethane	**33**	**N1**	5.0	0.21	ug/L			12/30/14 22:43	1
cis-1,2-Dichloroethene	ND	E8 N1	2.0	0.21	ug/L			12/30/14 22:43	1

Client Sample Results

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantana

TestAmerica Job ID: 550-37362-1

Client Sample ID: T-B-122214

Lab Sample ID: 550-37362-3

Date Collected: 12/22/14 13:30

Matrix: Water

Date Received: 12/23/14 08:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND	E8 N1	2.0	0.14	ug/L			12/30/14 22:43	1
Chlorodibromomethane	ND	E8 N1	2.0	0.22	ug/L			12/30/14 22:43	1
Dibromomethane	ND	E8 N1	2.0	0.26	ug/L			12/30/14 22:43	1
Dichlorodifluoromethane	ND	E8 N1	5.0	0.15	ug/L			12/30/14 22:43	1
Ethylbenzene	ND	E8 N1	2.0	0.32	ug/L			12/30/14 22:43	1
Hexachlorobutadiene	ND	E8 N1	5.0	0.28	ug/L			12/30/14 22:43	1
Iodomethane	ND	E8 N1	2.0	0.21	ug/L			12/30/14 22:43	1
Isopropylbenzene	ND	E8 N1	2.0	0.26	ug/L			12/30/14 22:43	1
m,p-Xylenes	ND	E8 N1	5.0	0.44	ug/L			12/30/14 22:43	1
Methylene Chloride	ND	E8 N1	5.0	0.67	ug/L			12/30/14 22:43	1
Methyl tert-butyl ether	ND	E8 N1	1.0	0.22	ug/L			12/30/14 22:43	1
Naphthalene	ND	E8 N1	5.0	0.51	ug/L			12/30/14 22:43	1
n-Butylbenzene	ND	E8 N1	5.0	0.21	ug/L			12/30/14 22:43	1
n-Propylbenzene	ND	E8 N1	2.0	0.21	ug/L			12/30/14 22:43	1
o-Xylene	ND	E8 N1	5.0	0.42	ug/L			12/30/14 22:43	1
p-Isopropyltoluene	ND	E8 N1	2.0	0.21	ug/L			12/30/14 22:43	1
sec-Butylbenzene	ND	E8 N1	5.0	0.23	ug/L			12/30/14 22:43	1
Styrene	ND	E8 N1	2.0	0.17	ug/L			12/30/14 22:43	1
tert-Butylbenzene	ND	E8 N1	5.0	0.25	ug/L			12/30/14 22:43	1
Tetrachloroethene	ND	E8 N1	2.0	0.18	ug/L			12/30/14 22:43	1
Toluene	ND	E8 N1	2.0	0.28	ug/L			12/30/14 22:43	1
trans-1,2-Dichloroethene	ND	E8 N1	2.0	0.29	ug/L			12/30/14 22:43	1
trans-1,3-Dichloropropene	ND	E8 N1	2.0	0.47	ug/L			12/30/14 22:43	1
Trichloroethene	ND	E8 N1	2.0	0.24	ug/L			12/30/14 22:43	1
Trichlorofluoromethane	ND	E8 N1	5.0	0.15	ug/L			12/30/14 22:43	1
Vinyl acetate	ND	E8 N1	25	0.81	ug/L			12/30/14 22:43	1
Vinyl chloride	ND	E8 N1	5.0	0.18	ug/L			12/30/14 22:43	1
Xylenes, Total	ND	E8 N1	10	0.86	ug/L			12/30/14 22:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*109*		*70 - 130*		*12/30/14 22:43*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*12/30/14 22:43*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 130*		*12/30/14 22:43*	*1*

Surrogate Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantana

TestAmerica Job ID: 550-37362-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
550-37362-1	C-125-122214	110	106	106
550-37362-1 MS	C-125-122214	112	109	110
550-37362-1 MSD	C-125-122214	112	110	109
550-37362-2	C-51B-122214	111	107	106
550-37362-3	T-B-122214	109	105	106
LCS 550-53031/3	Lab Control Sample	118	112	108
LCSD 550-53031/4	Lab Control Sample Dup	118	111	110
MB 550-53031/5	Method Blank	111	106	108

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

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

Lab Sample ID: MB 550-53031/5
Matrix: Water
Analysis Batch: 53031

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	E8	5.0	0.35	ug/L			12/30/14 21:38	1
1,1,1-Trichloroethane	ND	E8	2.0	0.15	ug/L			12/30/14 21:38	1
1,1,2,2-Tetrachloroethane	ND	E8	2.0	0.33	ug/L			12/30/14 21:38	1
1,1,2-Trichloroethane	ND	E8	2.0	0.31	ug/L			12/30/14 21:38	1
1,1-Dichloroethane	ND	E8	2.0	0.14	ug/L			12/30/14 21:38	1
1,1-Dichloroethene	ND	E8	5.0	0.23	ug/L			12/30/14 21:38	1
1,1-Dichloropropene	ND	E8	2.0	0.20	ug/L			12/30/14 21:38	1
1,2,3-Trichlorobenzene	1.22	E4	5.0	0.45	ug/L			12/30/14 21:38	1
1,2,3-Trichloropropane	ND	E8	10	0.78	ug/L			12/30/14 21:38	1
1,2,4-Trichlorobenzene	ND	E8	5.0	0.32	ug/L			12/30/14 21:38	1
1,2,4-Trimethylbenzene	ND	E8	2.0	0.25	ug/L			12/30/14 21:38	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			12/30/14 21:38	1
1,2-Dibromoethane (EDB)	ND	E8	2.0	0.30	ug/L			12/30/14 21:38	1
1,2-Dichlorobenzene	ND	E8	2.0	0.22	ug/L			12/30/14 21:38	1
1,2-Dichloroethane	ND	E8	2.0	0.31	ug/L			12/30/14 21:38	1
1,2-Dichloropropane	ND	E8	2.0	0.23	ug/L			12/30/14 21:38	1
1,3,5-Trimethylbenzene	ND	E8	2.0	0.21	ug/L			12/30/14 21:38	1
1,3-Dichlorobenzene	ND	E8	2.0	0.14	ug/L			12/30/14 21:38	1
1,3-Dichloropropane	ND	E8	2.0	0.23	ug/L			12/30/14 21:38	1
1,4-Dichlorobenzene	ND	E8	2.0	0.17	ug/L			12/30/14 21:38	1
2,2-Dichloropropane	ND	E8	2.0	0.18	ug/L			12/30/14 21:38	1
2-Butanone (MEK)	ND	E8	10	2.2	ug/L			12/30/14 21:38	1
2-Chlorotoluene	ND	E8	5.0	0.17	ug/L			12/30/14 21:38	1
2-Hexanone	ND	E8	10	1.5	ug/L			12/30/14 21:38	1
4-Chlorotoluene	ND	E8	5.0	0.20	ug/L			12/30/14 21:38	1
4-Methyl-2-pentanone (MIBK)	ND	E8	10	1.3	ug/L			12/30/14 21:38	1
Acetone	ND	E8	20	7.3	ug/L			12/30/14 21:38	1
Benzene	ND	E8	2.0	0.12	ug/L			12/30/14 21:38	1
Bromobenzene	ND	E8	5.0	0.14	ug/L			12/30/14 21:38	1
Bromochloromethane	ND	E8	5.0	0.27	ug/L			12/30/14 21:38	1
Bromodichloromethane	ND	E8	2.0	0.23	ug/L			12/30/14 21:38	1
Bromoform	ND	E8	5.0	0.37	ug/L			12/30/14 21:38	1
Bromomethane	ND	E8	5.0	0.67	ug/L			12/30/14 21:38	1
Carbon disulfide	ND	E8	5.0	0.86	ug/L			12/30/14 21:38	1
Carbon tetrachloride	ND	E8	5.0	0.15	ug/L			12/30/14 21:38	1
Chlorobenzene	ND	E8	2.0	0.17	ug/L			12/30/14 21:38	1
Chloroethane	ND	E8	5.0	0.25	ug/L			12/30/14 21:38	1
Chloroform	ND	E8	2.0	0.13	ug/L			12/30/14 21:38	1
Chloromethane	ND	E8	5.0	0.21	ug/L			12/30/14 21:38	1
cis-1,2-Dichloroethene	ND	E8	2.0	0.21	ug/L			12/30/14 21:38	1
cis-1,3-Dichloropropene	ND	E8	2.0	0.14	ug/L			12/30/14 21:38	1
Chlorodibromomethane	ND	E8	2.0	0.22	ug/L			12/30/14 21:38	1
Dibromomethane	ND	E8	2.0	0.26	ug/L			12/30/14 21:38	1
Dichlorodifluoromethane	ND	E8	5.0	0.15	ug/L			12/30/14 21:38	1
Ethylbenzene	ND	E8	2.0	0.32	ug/L			12/30/14 21:38	1
Hexachlorobutadiene	0.602	E4	5.0	0.28	ug/L			12/30/14 21:38	1
Iodomethane	ND	E8	2.0	0.21	ug/L			12/30/14 21:38	1
Isopropylbenzene	ND	E8	2.0	0.26	ug/L			12/30/14 21:38	1

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

Lab Sample ID: MB 550-53031/5
Matrix: Water
Analysis Batch: 53031

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m,p-Xylenes	ND	E8	5.0	0.44	ug/L			12/30/14 21:38	1
Methylene Chloride	ND	E8	5.0	0.67	ug/L			12/30/14 21:38	1
Methyl tert-butyl ether	ND	E8	1.0	0.22	ug/L			12/30/14 21:38	1
Naphthalene	ND	E8	5.0	0.51	ug/L			12/30/14 21:38	1
n-Butylbenzene	ND	E8	5.0	0.21	ug/L			12/30/14 21:38	1
n-Propylbenzene	ND	E8	2.0	0.21	ug/L			12/30/14 21:38	1
o-Xylene	ND	E8	5.0	0.42	ug/L			12/30/14 21:38	1
p-Isopropyltoluene	ND	E8	2.0	0.21	ug/L			12/30/14 21:38	1
sec-Butylbenzene	ND	E8	5.0	0.23	ug/L			12/30/14 21:38	1
Styrene	ND	E8	2.0	0.17	ug/L			12/30/14 21:38	1
tert-Butylbenzene	ND	E8	5.0	0.25	ug/L			12/30/14 21:38	1
Tetrachloroethene	ND	E8	2.0	0.18	ug/L			12/30/14 21:38	1
Toluene	ND	E8	2.0	0.28	ug/L			12/30/14 21:38	1
trans-1,2-Dichloroethene	ND	E8	2.0	0.29	ug/L			12/30/14 21:38	1
trans-1,3-Dichloropropene	ND	E8	2.0	0.47	ug/L			12/30/14 21:38	1
Trichloroethene	ND	E8	2.0	0.24	ug/L			12/30/14 21:38	1
Trichlorofluoromethane	ND	E8	5.0	0.15	ug/L			12/30/14 21:38	1
Vinyl acetate	ND	E8	25	0.81	ug/L			12/30/14 21:38	1
Vinyl chloride	ND	E8	5.0	0.18	ug/L			12/30/14 21:38	1
Xylenes, Total	ND	E8	10	0.86	ug/L			12/30/14 21:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*111*		*70 - 130*		*12/30/14 21:38*	*1*
Toluene-d8 (Surr)	*106*		*70 - 130*		*12/30/14 21:38*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*		*12/30/14 21:38*	*1*

Lab Sample ID: LCS 550-53031/3
Matrix: Water
Analysis Batch: 53031

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	30.1		ug/L		120	70 - 130
1,1,1-Trichloroethane	25.0	27.9		ug/L		112	71 - 131
1,1,2,2-Tetrachloroethane	25.0	28.6		ug/L		114	70 - 130
1,1,2-Trichloroethane	25.0	30.8		ug/L		123	70 - 130
1,1-Dichloroethane	25.0	29.2		ug/L		117	70 - 130
1,1-Dichloroethene	25.0	30.8		ug/L		123	63 - 131
1,1-Dichloropropene	25.0	28.5		ug/L		114	70 - 130
1,2,3-Trichlorobenzene	25.0	28.7		ug/L		115	79 - 139
1,2,3-Trichloropropane	25.0	28.0		ug/L		112	70 - 130
1,2,4-Trichlorobenzene	25.0	30.1		ug/L		120	80 - 137
1,2,4-Trimethylbenzene	25.0	29.5		ug/L		118	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	25.7		ug/L		103	63 - 146
1,2-Dibromoethane (EDB)	25.0	30.0		ug/L		120	70 - 130
1,2-Dichlorobenzene	25.0	29.7		ug/L		119	70 - 130
1,2-Dichloroethane	25.0	29.8		ug/L		119	66 - 139
1,2-Dichloropropane	25.0	30.4		ug/L		122	70 - 130
1,3,5-Trimethylbenzene	25.0	29.3		ug/L		117	70 - 130

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

Lab Sample ID: LCS 550-53031/3
Matrix: Water
Analysis Batch: 53031

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	25.0	29.4		ug/L		118	70 - 130
1,3-Dichloropropane	25.0	30.7		ug/L		123	70 - 130
1,4-Dichlorobenzene	25.0	29.7		ug/L		119	70 - 130
2,2-Dichloropropane	25.0	28.1		ug/L		112	69 - 139
2-Butanone (MEK)	25.0	27.2		ug/L		109	53 - 150
2-Chlorotoluene	25.0	29.0		ug/L		116	70 - 130
2-Hexanone	25.0	23.1		ug/L		92	55 - 142
4-Chlorotoluene	25.0	29.0		ug/L		116	70 - 130
4-Methyl-2-pentanone (MIBK)	25.0	25.0		ug/L		100	64 - 142
Acetone	25.0	24.9		ug/L		99	38 - 150
Benzene	25.0	27.9		ug/L		112	70 - 130
Bromobenzene	25.0	29.7		ug/L		119	70 - 130
Bromochloromethane	25.0	30.8		ug/L		123	70 - 130
Bromodichloromethane	25.0	30.2		ug/L		121	70 - 130
Bromoform	25.0	25.7		ug/L		103	69 - 129
Bromomethane	25.0	29.5		ug/L		118	57 - 138
Carbon disulfide	25.0	27.5		ug/L		110	64 - 145
Carbon tetrachloride	25.0	27.8		ug/L		111	70 - 143
Chlorobenzene	25.0	28.4		ug/L		114	70 - 130
Chloroethane	25.0	28.4		ug/L		114	66 - 131
Chloroform	25.0	29.9		ug/L		120	70 - 130
Chloromethane	25.0	28.0		ug/L		112	56 - 129
cis-1,2-Dichloroethene	25.0	31.3		ug/L		125	70 - 130
cis-1,3-Dichloropropene	25.0	30.8		ug/L		123	70 - 130
Chlorodibromomethane	25.0	28.9		ug/L		115	70 - 130
Dibromomethane	25.0	28.5		ug/L		114	70 - 130
Dichlorodifluoromethane	25.0	26.1		ug/L		104	46 - 144
Ethylbenzene	25.0	29.3		ug/L		117	70 - 130
Hexachlorobutadiene	25.0	29.3		ug/L		117	76 - 145
Iodomethane	25.0	29.2		ug/L		117	70 - 130
Isopropylbenzene	25.0	28.7		ug/L		115	88 - 141
m,p-Xylenes	25.0	29.7		ug/L		119	70 - 130
Methylene Chloride	25.0	31.3		ug/L		125	63 - 128
Methyl tert-butyl ether	25.0	31.6		ug/L		126	70 - 130
Naphthalene	25.0	25.6		ug/L		102	78 - 143
n-Butylbenzene	25.0	28.5		ug/L		114	70 - 130
n-Propylbenzene	25.0	29.0		ug/L		116	70 - 130
o-Xylene	25.0	28.3		ug/L		113	70 - 130
p-Isopropyltoluene	25.0	29.0		ug/L		116	70 - 130
sec-Butylbenzene	25.0	29.7		ug/L		119	70 - 130
Styrene	25.0	29.7		ug/L		119	70 - 130
tert-Butylbenzene	25.0	29.6		ug/L		118	70 - 130
Tetrachloroethene	25.0	28.2		ug/L		113	70 - 130
Toluene	25.0	28.3		ug/L		113	70 - 130
trans-1,2-Dichloroethene	25.0	31.7		ug/L		127	69 - 127
trans-1,3-Dichloropropene	25.0	29.0		ug/L		116	70 - 130
Trichloroethene	25.0	30.0		ug/L		120	70 - 130
Trichlorofluoromethane	25.0	28.8		ug/L		115	69 - 150

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

Lab Sample ID: LCS 550-53031/3
Matrix: Water
Analysis Batch: 53031

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl acetate	25.0	24.5	E4	ug/L		98	67 - 148
Vinyl chloride	25.0	29.1		ug/L		116	65 - 137
Xylenes, Total	50.0	58.0		ug/L		116	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*118*		*70 - 130*
Toluene-d8 (Surr)	*112*		*70 - 130*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 550-53031/4
Matrix: Water
Analysis Batch: 53031

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	30.2		ug/L		121	70 - 130	0	20
1,1,1-Trichloroethane	25.0	28.4		ug/L		114	71 - 131	2	20
1,1,2,2-Tetrachloroethane	25.0	30.8		ug/L		123	70 - 130	8	20
1,1,2-Trichloroethane	25.0	32.1		ug/L		128	70 - 130	4	20
1,1-Dichloroethane	25.0	29.7		ug/L		119	70 - 130	2	20
1,1-Dichloroethene	25.0	29.7		ug/L		119	63 - 131	4	22
1,1-Dichloropropene	25.0	27.9		ug/L		112	70 - 130	2	20
1,2,3-Trichlorobenzene	25.0	27.3		ug/L		109	79 - 139	5	20
1,2,3-Trichloropropane	25.0	28.8		ug/L		115	70 - 130	3	20
1,2,4-Trichlorobenzene	25.0	28.7		ug/L		115	80 - 137	5	20
1,2,4-Trimethylbenzene	25.0	30.0		ug/L		120	70 - 130	2	20
1,2-Dibromo-3-Chloropropane	25.0	26.7		ug/L		107	63 - 146	4	22
1,2-Dibromoethane (EDB)	25.0	30.2		ug/L		121	70 - 130	1	20
1,2-Dichlorobenzene	25.0	30.2		ug/L		121	70 - 130	2	20
1,2-Dichloroethane	25.0	29.9		ug/L		120	66 - 139	0	20
1,2-Dichloropropane	25.0	30.2		ug/L		121	70 - 130	1	20
1,3,5-Trimethylbenzene	25.0	29.3		ug/L		117	70 - 130	0	20
1,3-Dichlorobenzene	25.0	30.2		ug/L		121	70 - 130	3	20
1,3-Dichloropropane	25.0	30.7		ug/L		123	70 - 130	0	20
1,4-Dichlorobenzene	25.0	30.2		ug/L		121	70 - 130	2	20
2,2-Dichloropropane	25.0	30.6		ug/L		122	69 - 139	9	20
2-Butanone (MEK)	25.0	27.1		ug/L		108	53 - 150	1	35
2-Chlorotoluene	25.0	29.4		ug/L		118	70 - 130	2	20
2-Hexanone	25.0	23.5		ug/L		94	55 - 142	2	35
4-Chlorotoluene	25.0	29.2		ug/L		117	70 - 130	0	20
4-Methyl-2-pentanone (MIBK)	25.0	26.3		ug/L		105	64 - 142	5	25
Acetone	25.0	24.6		ug/L		98	38 - 150	1	35
Benzene	25.0	27.8		ug/L		111	70 - 130	1	20
Bromobenzene	25.0	30.9		ug/L		123	70 - 130	4	20
Bromochloromethane	25.0	30.7		ug/L		123	70 - 130	0	20
Bromodichloromethane	25.0	30.8		ug/L		123	70 - 130	2	20
Bromoform	25.0	27.3		ug/L		109	69 - 129	6	20
Bromomethane	25.0	29.3		ug/L		117	57 - 138	0	20
Carbon disulfide	25.0	27.0		ug/L		108	64 - 145	2	33

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

Lab Sample ID: LCSD 550-53031/4
Matrix: Water
Analysis Batch: 53031

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Carbon tetrachloride	25.0	28.1		ug/L		112	70 - 143	1	20
Chlorobenzene	25.0	28.2		ug/L		113	70 - 130	1	20
Chloroethane	25.0	27.8		ug/L		111	66 - 131	2	20
Chloroform	25.0	29.5		ug/L		118	70 - 130	1	20
Chloromethane	25.0	27.6		ug/L		110	56 - 129	2	20
cis-1,2-Dichloroethene	25.0	30.9		ug/L		123	70 - 130	1	20
cis-1,3-Dichloropropene	25.0	31.1		ug/L		125	70 - 130	1	20
Chlorodibromomethane	25.0	29.2		ug/L		117	70 - 130	1	20
Dibromomethane	25.0	28.7		ug/L		115	70 - 130	1	20
Dichlorodifluoromethane	25.0	26.2		ug/L		105	46 - 144	0	23
Ethylbenzene	25.0	28.9		ug/L		116	70 - 130	1	20
Hexachlorobutadiene	25.0	27.2		ug/L		109	76 - 145	8	20
Iodomethane	25.0	29.5		ug/L		118	70 - 130	1	20
Isopropylbenzene	25.0	29.1		ug/L		116	88 - 141	1	20
m,p-Xylenes	25.0	29.4		ug/L		117	70 - 130	1	20
Methylene Chloride	25.0	31.5		ug/L		126	63 - 128	0	21
Methyl tert-butyl ether	25.0	31.8		ug/L		127	70 - 130	1	20
Naphthalene	25.0	24.7		ug/L		99	78 - 143	4	20
n-Butylbenzene	25.0	28.1		ug/L		112	70 - 130	1	20
n-Propylbenzene	25.0	28.9		ug/L		116	70 - 130	0	20
o-Xylene	25.0	28.1		ug/L		112	70 - 130	1	20
p-Isopropyltoluene	25.0	28.6		ug/L		115	70 - 130	1	20
sec-Butylbenzene	25.0	29.6		ug/L		118	70 - 130	1	20
Styrene	25.0	29.4		ug/L		117	70 - 130	1	20
tert-Butylbenzene	25.0	29.5		ug/L		118	70 - 130	0	20
Tetrachloroethene	25.0	27.8		ug/L		111	70 - 130	1	20
Toluene	25.0	28.5		ug/L		114	70 - 130	1	20
trans-1,2-Dichloroethene	25.0	30.0		ug/L		120	69 - 127	5	20
trans-1,3-Dichloropropene	25.0	30.6		ug/L		122	70 - 130	6	20
Trichloroethene	25.0	29.3		ug/L		117	70 - 130	2	20
Trichlorofluoromethane	25.0	28.5		ug/L		114	69 - 150	1	22
Vinyl acetate	25.0	26.8		ug/L		107	67 - 148	9	22
Vinyl chloride	25.0	28.6		ug/L		114	65 - 137	2	20
Xylenes, Total	50.0	57.5		ug/L		115	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*118*		*70 - 130*
Toluene-d8 (Surr)	*111*		*70 - 130*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 550-37362-1 MS
Matrix: Water
Analysis Batch: 53031

Client Sample ID: C-125-122214
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND	E8	25.0	30.7		ug/L		123	70 - 130
1,1,1-Trichloroethane	ND	E8	25.0	29.1		ug/L		117	64 - 138
1,1,2,2-Tetrachloroethane	ND	E8	25.0	32.1		ug/L		128	63 - 137

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

Lab Sample ID: 550-37362-1 MS
Matrix: Water
Analysis Batch: 53031

Client Sample ID: C-125-122214
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	ND	E8	25.0	31.5		ug/L		126	63 - 132
1,1-Dichloroethane	ND	E8	25.0	27.9		ug/L		112	62 - 130
1,1-Dichloroethene	ND	E8	25.0	31.0		ug/L		124	57 - 137
1,1-Dichloropropene	ND	E8	25.0	30.2		ug/L		121	64 - 134
1,2,3-Trichlorobenzene	ND	E8	25.0	28.7		ug/L		115	74 - 139
1,2,3-Trichloropropane	ND	E8	25.0	30.6		ug/L		123	68 - 130
1,2,4-Trichlorobenzene	ND	E8	25.0	29.4		ug/L		118	74 - 138
1,2,4-Trimethylbenzene	ND	E8	25.0	29.7		ug/L		119	63 - 135
1,2-Dibromo-3-Chloropropane	ND	E8	25.0	28.8		ug/L		115	53 - 145
1,2-Dibromoethane (EDB)	ND	E8	25.0	32.1		ug/L		128	70 - 130
1,2-Dichlorobenzene	ND	E8	25.0	31.3		ug/L		125	70 - 130
1,2-Dichloroethane	ND	E8	25.0	29.4		ug/L		118	54 - 147
1,2-Dichloropropane	ND	E8	25.0	29.4		ug/L		117	68 - 126
1,3,5-Trimethylbenzene	ND	E8	25.0	29.6		ug/L		119	66 - 137
1,3-Dichlorobenzene	ND	E8	25.0	29.9		ug/L		120	70 - 130
1,3-Dichloropropane	ND	E8	25.0	31.8		ug/L		127	68 - 129
1,4-Dichlorobenzene	ND	E8	25.0	30.2		ug/L		121	70 - 130
2,2-Dichloropropane	ND	E8	25.0	28.4		ug/L		114	60 - 146
2-Butanone (MEK)	ND	E8	25.0	19.5		ug/L		78	31 - 143
2-Chlorotoluene	ND	E8	25.0	29.7		ug/L		119	71 - 131
2-Hexanone	ND	E8	25.0	18.7		ug/L		75	40 - 142
4-Chlorotoluene	ND	E8	25.0	29.9		ug/L		119	70 - 130
4-Methyl-2-pentanone (MIBK)	ND	E8	25.0	26.5		ug/L		106	52 - 143
Acetone	ND	E8	25.0	11.9	E4	ug/L		47	29 - 139
Benzene	ND	E8	25.0	28.0		ug/L		112	68 - 131
Bromobenzene	ND	E8	25.0	31.0		ug/L		124	70 - 130
Bromochloromethane	ND	E8	25.0	29.1		ug/L		117	64 - 132
Bromodichloromethane	ND	E8	25.0	31.2		ug/L		125	63 - 138
Bromoform	ND	E8	25.0	27.5		ug/L		110	60 - 128
Bromomethane	ND	E8	25.0	27.6		ug/L		110	47 - 144
Carbon disulfide	ND	E8	25.0	26.5		ug/L		106	45 - 150
Carbon tetrachloride	ND	E8	25.0	30.8		ug/L		123	65 - 147
Chlorobenzene	ND	E8	25.0	29.1		ug/L		116	70 - 130
Chloroethane	ND	E8	25.0	27.1		ug/L		109	57 - 139
Chloroform	ND	E8	25.0	29.3		ug/L		117	63 - 131
Chloromethane	ND	E8	25.0	25.9		ug/L		104	47 - 134
cis-1,2-Dichloroethene	ND	E8	25.0	29.8		ug/L		119	65 - 127
cis-1,3-Dichloropropene	ND	E8	25.0	30.7		ug/L		123	63 - 135
Chlorodibromomethane	ND	E8	25.0	30.2		ug/L		121	65 - 134
Dibromomethane	ND	E8	25.0	29.4		ug/L		118	66 - 136
Dichlorodifluoromethane	ND	E8	25.0	28.8		ug/L		115	40 - 148
Ethylbenzene	ND	E8	25.0	29.7		ug/L		119	74 - 134
Hexachlorobutadiene	ND	E8	25.0	31.7		ug/L		127	69 - 150
Iodomethane	ND	E8	25.0	28.1		ug/L		112	53 - 150
Isopropylbenzene	ND	E8	25.0	30.1		ug/L		120	80 - 146
m,p-Xylenes	ND	E8	25.0	29.7		ug/L		119	58 - 138
Methylene Chloride	ND	E8	25.0	29.3		ug/L		117	55 - 133
Methyl tert-butyl ether	ND	E8	25.0	29.6		ug/L		118	67 - 138

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

Lab Sample ID: 550-37362-1 MS
Matrix: Water
Analysis Batch: 53031

Client Sample ID: C-125-122214
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	ND	E8	25.0	26.0		ug/L		104	67 - 146
n-Butylbenzene	ND	E8	25.0	29.5		ug/L		118	69 - 140
n-Propylbenzene	ND	E8	25.0	29.8		ug/L		119	74 - 140
o-Xylene	ND	E8	25.0	29.0		ug/L		116	66 - 137
p-Isopropyltoluene	ND	E8	25.0	30.2		ug/L		121	70 - 133
sec-Butylbenzene	ND	E8	25.0	31.5		ug/L		126	72 - 136
Styrene	ND	E8	25.0	29.8		ug/L		119	43 - 144
tert-Butylbenzene	ND	E8	25.0	30.7		ug/L		123	74 - 135
Tetrachloroethene	ND	E8	25.0	29.9		ug/L		119	67 - 131
Toluene	ND	E8	25.0	28.7		ug/L		115	65 - 138
trans-1,2-Dichloroethene	ND	E8	25.0	29.0		ug/L		116	62 - 131
trans-1,3-Dichloropropene	ND	E8	25.0	29.7		ug/L		119	58 - 136
Trichloroethene	ND	E8	25.0	30.5		ug/L		122	66 - 132
Trichlorofluoromethane	ND	E8	25.0	30.4		ug/L		122	62 - 150
Vinyl acetate	ND	E8	25.0	24.9	E4	ug/L		100	47 - 150
Vinyl chloride	ND	E8	25.0	28.4		ug/L		113	55 - 146
Xylenes, Total	ND	E8	50.0	58.7		ug/L		117	68 - 131

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*112*		*70 - 130*
Toluene-d8 (Surr)	*109*		*70 - 130*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*

Lab Sample ID: 550-37362-1 MSD
Matrix: Water
Analysis Batch: 53031

Client Sample ID: C-125-122214
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND	E8	25.0	31.3		ug/L		125	70 - 130	2	30
1,1,1-Trichloroethane	ND	E8	25.0	29.3		ug/L		117	64 - 138	1	35
1,1,2,2-Tetrachloroethane	ND	E8	25.0	31.1		ug/L		124	63 - 137	3	32
1,1,2-Trichloroethane	ND	E8	25.0	32.1		ug/L		128	63 - 132	2	35
1,1-Dichloroethane	ND	E8	25.0	28.1		ug/L		112	62 - 130	0	34
1,1-Dichloroethene	ND	E8	25.0	30.6		ug/L		123	57 - 137	1	35
1,1-Dichloropropene	ND	E8	25.0	29.6		ug/L		118	64 - 134	2	34
1,2,3-Trichlorobenzene	ND	E8	25.0	30.6		ug/L		123	74 - 139	6	26
1,2,3-Trichloropropane	ND	E8	25.0	29.3		ug/L		117	68 - 130	4	32
1,2,4-Trichlorobenzene	ND	E8	25.0	31.0		ug/L		124	74 - 138	5	26
1,2,4-Trimethylbenzene	ND	E8	25.0	29.7		ug/L		119	63 - 135	0	31
1,2-Dibromo-3-Chloropropane	ND	E8	25.0	28.7		ug/L		115	53 - 145	0	35
1,2-Dibromoethane (EDB)	ND	E8	25.0	32.3		ug/L		129	70 - 130	1	33
1,2-Dichlorobenzene	ND	E8	25.0	31.2		ug/L		125	70 - 130	0	27
1,2-Dichloroethane	ND	E8	25.0	29.3		ug/L		117	54 - 147	1	35
1,2-Dichloropropane	ND	E8	25.0	29.3		ug/L		117	68 - 126	0	32
1,3,5-Trimethylbenzene	ND	E8	25.0	30.1		ug/L		121	66 - 137	2	30
1,3-Dichlorobenzene	ND	E8	25.0	30.8		ug/L		123	70 - 130	3	28
1,3-Dichloropropane	ND	E8	25.0	31.2		ug/L		125	68 - 129	2	33
1,4-Dichlorobenzene	ND	E8	25.0	30.8		ug/L		123	70 - 130	2	26

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

Lab Sample ID: 550-37362-1 MSD
Matrix: Water
Analysis Batch: 53031

Client Sample ID: C-125-122214
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,2-Dichloropropane	ND	E8	25.0	28.6		ug/L		115	60 - 146	1	35
2-Butanone (MEK)	ND	E8	25.0	19.9		ug/L		80	31 - 143	2	35
2-Chlorotoluene	ND	E8	25.0	29.8		ug/L		119	71 - 131	0	29
2-Hexanone	ND	E8	25.0	17.8		ug/L		71	40 - 142	5	35
4-Chlorotoluene	ND	E8	25.0	29.9		ug/L		120	70 - 130	0	28
4-Methyl-2-pentanone (MIBK)	ND	E8	25.0	26.3		ug/L		105	52 - 143	1	35
Acetone	ND	E8	25.0	12.0	E4	ug/L		48	29 - 139	1	35
Benzene	ND	E8	25.0	28.0		ug/L		112	68 - 131	0	32
Bromobenzene	ND	E8	25.0	30.7		ug/L		123	70 - 130	1	28
Bromochloromethane	ND	E8	25.0	29.7		ug/L		119	64 - 132	2	35
Bromodichloromethane	ND	E8	25.0	30.8		ug/L		123	63 - 138	1	31
Bromoform	ND	E8	25.0	27.7		ug/L		111	60 - 128	1	31
Bromomethane	ND	E8	25.0	26.9		ug/L		108	47 - 144	3	35
Carbon disulfide	ND	E8	25.0	26.4		ug/L		105	45 - 150	0	35
Carbon tetrachloride	ND	E8	25.0	31.5		ug/L		126	65 - 147	2	35
Chlorobenzene	ND	E8	25.0	29.2		ug/L		117	70 - 130	1	30
Chloroethane	ND	E8	25.0	26.5		ug/L		106	57 - 139	2	35
Chloroform	ND	E8	25.0	29.0		ug/L		116	63 - 131	1	33
Chloromethane	ND	E8	25.0	25.6		ug/L		103	47 - 134	1	35
cis-1,2-Dichloroethene	ND	E8	25.0	29.2		ug/L		117	65 - 127	2	34
cis-1,3-Dichloropropene	ND	E8	25.0	31.1		ug/L		124	63 - 135	1	35
Chlorodibromomethane	ND	E8	25.0	30.5		ug/L		122	65 - 134	1	33
Dibromomethane	ND	E8	25.0	28.9		ug/L		116	66 - 136	2	35
Dichlorodifluoromethane	ND	E8	25.0	29.6		ug/L		118	40 - 148	3	35
Ethylbenzene	ND	E8	25.0	30.1		ug/L		120	74 - 134	1	32
Hexachlorobutadiene	ND	E8	25.0	33.3		ug/L		133	69 - 150	5	32
Iodomethane	ND	E8	25.0	28.1		ug/L		112	53 - 150	0	35
Isopropylbenzene	ND	E8	25.0	30.3		ug/L		121	80 - 146	1	32
m,p-Xylenes	ND	E8	25.0	30.3		ug/L		121	58 - 138	2	29
Methylene Chloride	ND	E8	25.0	29.3		ug/L		117	55 - 133	0	35
Methyl tert-butyl ether	ND	E8	25.0	29.9		ug/L		120	67 - 138	1	21
Naphthalene	ND	E8	25.0	27.9		ug/L		112	67 - 146	7	32
n-Butylbenzene	ND	E8	25.0	29.5		ug/L		118	69 - 140	0	32
n-Propylbenzene	ND	E8	25.0	29.7		ug/L		119	74 - 140	0	32
o-Xylene	ND	E8	25.0	29.4		ug/L		117	66 - 137	1	26
p-Isopropyltoluene	ND	E8	25.0	30.6		ug/L		122	70 - 133	1	32
sec-Butylbenzene	ND	E8	25.0	32.1		ug/L		128	72 - 136	2	33
Styrene	ND	E8	25.0	29.9		ug/L		120	43 - 144	0	35
tert-Butylbenzene	ND	E8	25.0	31.3		ug/L		125	74 - 135	2	32
Tetrachloroethene	ND	E8	25.0	29.7		ug/L		119	67 - 131	1	31
Toluene	ND	E8	25.0	29.0		ug/L		116	65 - 138	1	33
trans-1,2-Dichloroethene	ND	E8	25.0	29.5		ug/L		118	62 - 131	2	35
trans-1,3-Dichloropropene	ND	E8	25.0	30.0		ug/L		120	58 - 136	1	35
Trichloroethene	ND	E8	25.0	29.8		ug/L		119	66 - 132	2	29
Trichlorofluoromethane	ND	E8	25.0	30.6		ug/L		122	62 - 150	1	35
Vinyl acetate	ND	E8	25.0	24.5	E4	ug/L		98	47 - 150	1	35
Vinyl chloride	ND	E8	25.0	29.0		ug/L		116	55 - 146	2	35
Xylenes, Total	ND	E8	50.0	59.7		ug/L		119	68 - 131	2	31

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

Lab Sample ID: 550-37362-1 MSD
Matrix: Water
Analysis Batch: 53031

Client Sample ID: C-125-122214
Prep Type: Total/NA

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Dibromofluoromethane (Surr)	112		70 - 130
Toluene-d8 (Surr)	110		70 - 130
4-Bromofluorobenzene (Surr)	109		70 - 130

QC Association Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantana

TestAmerica Job ID: 550-37362-1

GC/MS VOA

Analysis Batch: 53031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-37362-1	C-125-122214	Total/NA	Water	8260B	
550-37362-1 MS	C-125-122214	Total/NA	Water	8260B	
550-37362-1 MSD	C-125-122214	Total/NA	Water	8260B	
550-37362-2	C-51B-122214	Total/NA	Water	8260B	
550-37362-3	T-B-122214	Total/NA	Water	8260B	
LCS 550-53031/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 550-53031/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 550-53031/5	Method Blank	Total/NA	Water	8260B	

Lab Chronicle

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantana

TestAmerica Job ID: 550-37362-1

Client Sample ID: C-125-122214

Lab Sample ID: 550-37362-1
Date Collected: 12/22/14 13:50
Matrix: Water
Date Received: 12/23/14 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	53031	12/30/14 23:48	EMA	TAL PHX

Client Sample ID: C-51B-122214

Lab Sample ID: 550-37362-2
Date Collected: 12/22/14 13:30
Matrix: Water
Date Received: 12/23/14 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	53031	12/31/14 01:26	EMA	TAL PHX

Client Sample ID: T-B-122214

Lab Sample ID: 550-37362-3
Date Collected: 12/22/14 13:30
Matrix: Water
Date Received: 12/23/14 08:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	53031	12/30/14 22:43	EMA	TAL PHX

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Certification Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantana

TestAmerica Job ID: 550-37362-1

Laboratory: TestAmerica Phoenix

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arizona	State Program	9	AZ0728	06-09-15

Analysis Method	Prep Method	Matrix	Analyte

Method Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantana

TestAmerica Job ID: 550-37362-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PHX

Protocol References:

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

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Chain of Custody Record

065114

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

TestAmerica Phoenix
4625 E. Cotton Center Blvd.
Suite 189
Phoenix, AZ 85040
Phone: 602.437.3340 Fax:

STU-37362

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: JIM CLARKE	Site Contact: A. YIANNAKAKIS	Date: 12/22/14	COC No:
Company Name: AMEC	Tel/Fax:	Lab Contact: VIC NIELSON	Carrier: COMBS	_____ of _____ COCs
Address: 4600 E. WASHINGTON St #600	Analysis Turnaround Time			Sampler:
City/State/Zip: PHOENIX, AZ 85034	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 480-830-3700	TAT if different from Below _____			
Fax:	☐ 2 weeks			
Project Name: CALL ALEX FOR PO #	☐ 1 week			
Site: BROADWAY PANTANA	☐ 2 days			
PO#	☐ 1 day			

550-37362 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	8260B	Sample Specific Notes:
C-125-122214	12/22/14	1350	G	Aq	3	N	N	1	-1
C-51B-122214	↓	1350	↓	↓	3	N	N	1	-2
~~TB01-122214 STC~~					~~2~~			~~1~~	
T-B-122214	12/22/14				1			1	-3

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments: A. YIANNAKAKIS PHONE # IS 520-247-8736. CALL w/ ANY ISSUES

3.3

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	AMEC	12/23/14 0820			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TL	Date/Time: 12/23/14 0820

Login Sample Receipt Checklist

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 550-37362-1

Login Number: 37362

List Source: TestAmerica Phoenix

List Number: 1

Creator: Shoemaker, Cory M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	Check done at department level as required.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

TestAmerica Job ID: 550-38312-1
Client Project/Site: Broadway Pantano

For:
AMEC Foster Wheeler E & I, Inc
4600 E. Washington St
6th Floor
Phoenix, Arizona 85034

Attn: Mr. Alex Yiannakakis

Authorized for release by:
1/20/2015 3:59:10 PM

Vic Nielsen, Project Manager II
(602)437-3340
vic.nielsen@testamericainc.com

LINKS

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www.testamericainc.com

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

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

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL.
M2	Matrix spike recovery was low, the associated blank spike recovery was acceptable.

GC/MS VOA TICs

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
T4	Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

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
CFL	Contains Free Liquid
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)

Job ID: 550-38312-1

Laboratory: TestAmerica Phoenix

Narrative

Job Narrative
550-38312-1

Comments
No additional comments.

Receipt
The samples were received on 1/13/2015 3:54 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4º C.

GC/MS VOA
Method(s) 8260B: The method blank for batch 54037 contained 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene, Naphthalene, and Hexachlorobutadiene above the method detection limit. These target analytes concentration were less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. Data qualified with an E4 flag.

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

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

Sample Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-38312-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-38312-1	BP-WR-367A-WG-343-011215	Water	01/12/15 12:45	01/13/15 15:54
550-38312-2	BP-WR-367A-WG-363-011215	Water	01/12/15 12:50	01/13/15 15:54
550-38312-3	BP-C-48-WG-300-011215	Water	01/12/15 13:40	01/13/15 15:54
550-38312-4	BP-CVA-WG-321.5-011215	Water	01/12/15 14:20	01/13/15 15:54
550-38312-5	BP-WR-274A-WG-316-011315	Water	01/13/15 10:40	01/13/15 15:54
550-38312-6	BP-WR-274A-WG-326-011315	Water	01/13/15 10:50	01/13/15 15:54
550-38312-7	BP-WR-274A-WG-336-011315	Water	01/13/15 11:00	01/13/15 15:54
550-38312-8	BP-R-68A-WG-342-011315	Water	01/13/15 11:30	01/13/15 15:54
550-38312-9	BP-WR-273A-WG-323-011315	Water	01/13/15 12:15	01/13/15 15:54
550-38312-10	BP-TB01-011315	Water	01/13/15 15:00	01/13/15 15:54

Detection Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-38312-1

Client Sample ID: BP-WR-367A-WG-343-011215 — Lab Sample ID: 550-38312-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	21	M2	10	7.3	ug/L	1		8260B	Total/NA
Dichlorodifluoromethane	1.7		0.50	0.15	ug/L	1		8260B	Total/NA
Naphthalene	0.60	E4	2.5	0.51	ug/L	1		8260B	Total/NA
Tetrachloroethene	10		0.50	0.18	ug/L	1		8260B	Total/NA
1,2,3-Trichlorobenzene	0.59	E4	1.0	0.45	ug/L	1		8260B	Total/NA
Trichloroethene	0.41	E4	0.50	0.24	ug/L	1		8260B	Total/NA

Client Sample ID: BP-WR-367A-WG-363-011215 — Lab Sample ID: 550-38312-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	22		10	7.3	ug/L	1		8260B	Total/NA
Dichlorodifluoromethane	1.9		0.50	0.15	ug/L	1		8260B	Total/NA
Hexachlorobutadiene	0.42	E4	1.0	0.28	ug/L	1		8260B	Total/NA
Naphthalene	0.78	E4	2.5	0.51	ug/L	1		8260B	Total/NA
Tetrachloroethene	9.7		0.50	0.18	ug/L	1		8260B	Total/NA
1,2,3-Trichlorobenzene	0.77	E4	1.0	0.45	ug/L	1		8260B	Total/NA
1,2,4-Trichlorobenzene	0.39	E4	1.0	0.32	ug/L	1		8260B	Total/NA
Trichloroethene	0.47	E4	0.50	0.24	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	0.20	E4	0.50	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: BP-C-48-WG-300-011215 — Lab Sample ID: 550-38312-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	18		10	7.3	ug/L	1		8260B	Total/NA

Client Sample ID: BP-CVA-WG-321.5-011215 — Lab Sample ID: 550-38312-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	18		10	7.3	ug/L	1		8260B	Total/NA

Client Sample ID: BP-WR-274A-WG-316-011315 — Lab Sample ID: 550-38312-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	19		10	7.3	ug/L	1		8260B	Total/NA
Benzene	0.16	E4	0.50	0.12	ug/L	1		8260B	Total/NA
Chloroform	0.51		0.50	0.13	ug/L	1		8260B	Total/NA
1,4-Dichlorobenzene	0.69		0.50	0.17	ug/L	1		8260B	Total/NA
Dichlorodifluoromethane	4.5		0.50	0.15	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	0.35	E4	0.50	0.14	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	34		0.50	0.21	ug/L	1		8260B	Total/NA
1,2-Dichloropropane	0.93		0.50	0.23	ug/L	1		8260B	Total/NA
Tetrachloroethene	110		0.50	0.18	ug/L	1		8260B	Total/NA
Trichloroethene	32		0.50	0.24	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	0.57		0.50	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: BP-WR-274A-WG-326-011315 — Lab Sample ID: 550-38312-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	20		10	7.3	ug/L	1		8260B	Total/NA
Benzene	0.25	E4	0.50	0.12	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-38312-1

Client Sample ID: BP-WR-274A-WG-326-011315 (Continued) — Lab Sample ID: 550-38312-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.45	E4	0.50	0.13	ug/L	1		8260B	Total/NA
1,4-Dichlorobenzene	0.70		0.50	0.17	ug/L	1		8260B	Total/NA
Dichlorodifluoromethane	4.2		0.50	0.15	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	33		0.50	0.21	ug/L	1		8260B	Total/NA
1,2-Dichloropropane	0.87		0.50	0.23	ug/L	1		8260B	Total/NA
Tetrachloroethene	100		0.50	0.18	ug/L	1		8260B	Total/NA
Trichloroethene	32		0.50	0.24	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	0.55		0.50	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: BP-WR-274A-WG-336-011315 — Lab Sample ID: 550-38312-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	25		10	7.3	ug/L	1		8260B	Total/NA
Benzene	0.29	E4	0.50	0.12	ug/L	1		8260B	Total/NA
Chloroform	0.52		0.50	0.13	ug/L	1		8260B	Total/NA
1,4-Dichlorobenzene	0.74		0.50	0.17	ug/L	1		8260B	Total/NA
Dichlorodifluoromethane	4.5		0.50	0.15	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	36		0.50	0.21	ug/L	1		8260B	Total/NA
1,2-Dichloropropane	0.93		0.50	0.23	ug/L	1		8260B	Total/NA
Tetrachloroethene	110		0.50	0.18	ug/L	1		8260B	Total/NA
Trichloroethene	35		0.50	0.24	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	0.61		0.50	0.15	ug/L	1		8260B	Total/NA

Client Sample ID: BP-R-68A-WG-342-011315 — Lab Sample ID: 550-38312-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	21		10	7.3	ug/L	1		8260B	Total/NA
Chloroform	0.64		0.50	0.13	ug/L	1		8260B	Total/NA
1,4-Dichlorobenzene	1.2		0.50	0.17	ug/L	1		8260B	Total/NA
Dichlorodifluoromethane	0.70		0.50	0.15	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	15		0.50	0.21	ug/L	1		8260B	Total/NA
1,2-Dichloropropane	0.62		0.50	0.23	ug/L	1		8260B	Total/NA
Tetrachloroethene	29		0.50	0.18	ug/L	1		8260B	Total/NA
Trichloroethene	9.5		0.50	0.24	ug/L	1		8260B	Total/NA

Client Sample ID: BP-WR-273A-WG-323-011315 — Lab Sample ID: 550-38312-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	20		10	7.3	ug/L	1		8260B	Total/NA
Dichlorodifluoromethane	1.1		0.50	0.15	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	1.4		0.50	0.21	ug/L	1		8260B	Total/NA
Tetrachloroethene	4.6		0.50	0.18	ug/L	1		8260B	Total/NA
Trichloroethene	2.4		0.50	0.24	ug/L	1		8260B	Total/NA

Client Sample ID: BP-TB01-011315 — Lab Sample ID: 550-38312-10

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-38312-1

Client Sample ID: BP-WR-367A-WG-343-011215

Lab Sample ID: 550-38312-1

Date Collected: 01/12/15 12:45

Matrix: Water

Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**21**	**M2**	10	7.3	ug/L			01/15/15 09:46	1
Benzene	ND	E8	0.50	0.12	ug/L			01/15/15 09:46	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 09:46	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			01/15/15 09:46	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			01/15/15 09:46	1
Bromoform	ND	E8	1.0	0.37	ug/L			01/15/15 09:46	1
Bromomethane	ND	E8	1.0	0.67	ug/L			01/15/15 09:46	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			01/15/15 09:46	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 09:46	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			01/15/15 09:46	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 09:46	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			01/15/15 09:46	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			01/15/15 09:46	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 09:46	1
Chloroethane	ND	E8	1.0	0.25	ug/L			01/15/15 09:46	1
Chloroform	ND	E8	0.50	0.13	ug/L			01/15/15 09:46	1
Chloromethane	ND	E8	1.0	0.21	ug/L			01/15/15 09:46	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			01/15/15 09:46	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			01/15/15 09:46	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			01/15/15 09:46	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			01/15/15 09:46	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			01/15/15 09:46	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			01/15/15 09:46	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			01/15/15 09:46	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 09:46	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 09:46	1
Dichlorodifluoromethane	**1.7**		0.50	0.15	ug/L			01/15/15 09:46	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			01/15/15 09:46	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 09:46	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			01/15/15 09:46	1
cis-1,2-Dichloroethene	ND	E8	0.50	0.21	ug/L			01/15/15 09:46	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			01/15/15 09:46	1
1,2-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 09:46	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 09:46	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			01/15/15 09:46	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			01/15/15 09:46	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			01/15/15 09:46	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			01/15/15 09:46	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			01/15/15 09:46	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			01/15/15 09:46	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			01/15/15 09:46	1
Iodomethane	ND	E8	2.5	0.21	ug/L			01/15/15 09:46	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			01/15/15 09:46	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			01/15/15 09:46	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			01/15/15 09:46	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			01/15/15 09:46	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			01/15/15 09:46	1
Naphthalene	**0.60**	**E4**	2.5	0.51	ug/L			01/15/15 09:46	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 09:46	1

Client Sample ID: BP-WR-367A-WG-343-011215

Lab Sample ID: 550-38312-1

Date Collected: 01/12/15 12:45

Matrix: Water

Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND	E8	0.50	0.17	ug/L			01/15/15 09:46	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			01/15/15 09:46	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			01/15/15 09:46	1
Tetrachloroethene	**10**		0.50	0.18	ug/L			01/15/15 09:46	1
Toluene	ND	E8	0.50	0.28	ug/L			01/15/15 09:46	1
1,2,3-Trichlorobenzene	**0.59**	**E4**	1.0	0.45	ug/L			01/15/15 09:46	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			01/15/15 09:46	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			01/15/15 09:46	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 09:46	1
Trichloroethene	**0.41**	**E4**	0.50	0.24	ug/L			01/15/15 09:46	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			01/15/15 09:46	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			01/15/15 09:46	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 09:46	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 09:46	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			01/15/15 09:46	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			01/15/15 09:46	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			01/15/15 09:46	1
Butadiene	ND	E8	2.0	1.7	ug/L			01/15/15 09:46	1
Hexane	ND	E8	2.0	1.6	ug/L			01/15/15 09:46	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*01/15/15 09:46*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*01/15/15 09:46*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*01/15/15 09:46*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*01/15/15 09:46*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*01/15/15 09:46*	*1*
2-ethoxy-2-methyl butane TIC	*ND*	*E8 T4*	*ug/L*			*919-94-8*		*01/15/15 09:46*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*01/15/15 09:46*	*1*
Toluene-d8 (Surr)	*93*		*70 - 130*		*01/15/15 09:46*	*1*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*		*01/15/15 09:46*	*1*

Client Sample ID: BP-WR-367A-WG-363-011215

Lab Sample ID: 550-38312-2

Date Collected: 01/12/15 12:50

Matrix: Water

Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**22**		10	7.3	ug/L			01/15/15 11:25	1
Benzene	ND	E8	0.50	0.12	ug/L			01/15/15 11:25	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 11:25	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			01/15/15 11:25	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			01/15/15 11:25	1
Bromoform	ND	E8	1.0	0.37	ug/L			01/15/15 11:25	1
Bromomethane	ND	E8	1.0	0.67	ug/L			01/15/15 11:25	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			01/15/15 11:25	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 11:25	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			01/15/15 11:25	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 11:25	1

Client Sample ID: BP-WR-367A-WG-363-011215
Date Collected: 01/12/15 12:50
Date Received: 01/13/15 15:54

Lab Sample ID: 550-38312-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND	E8	1.0	0.86	ug/L			01/15/15 11:25	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			01/15/15 11:25	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 11:25	1
Chloroethane	ND	E8	1.0	0.25	ug/L			01/15/15 11:25	1
Chloroform	ND	E8	0.50	0.13	ug/L			01/15/15 11:25	1
Chloromethane	ND	E8	1.0	0.21	ug/L			01/15/15 11:25	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			01/15/15 11:25	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			01/15/15 11:25	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			01/15/15 11:25	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			01/15/15 11:25	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			01/15/15 11:25	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			01/15/15 11:25	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			01/15/15 11:25	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 11:25	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 11:25	1
Dichlorodifluoromethane	**1.9**		0.50	0.15	ug/L			01/15/15 11:25	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			01/15/15 11:25	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 11:25	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			01/15/15 11:25	1
cis-1,2-Dichloroethene	ND	E8	0.50	0.21	ug/L			01/15/15 11:25	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			01/15/15 11:25	1
1,2-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 11:25	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 11:25	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			01/15/15 11:25	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			01/15/15 11:25	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			01/15/15 11:25	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			01/15/15 11:25	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			01/15/15 11:25	1
Hexachlorobutadiene	**0.42**	**E4**	1.0	0.28	ug/L			01/15/15 11:25	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			01/15/15 11:25	1
Iodomethane	ND	E8	2.5	0.21	ug/L			01/15/15 11:25	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			01/15/15 11:25	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			01/15/15 11:25	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			01/15/15 11:25	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			01/15/15 11:25	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			01/15/15 11:25	1
Naphthalene	**0.78**	**E4**	2.5	0.51	ug/L			01/15/15 11:25	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 11:25	1
Styrene	ND	E8	0.50	0.17	ug/L			01/15/15 11:25	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			01/15/15 11:25	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			01/15/15 11:25	1
Tetrachloroethene	**9.7**		0.50	0.18	ug/L			01/15/15 11:25	1
Toluene	ND	E8	0.50	0.28	ug/L			01/15/15 11:25	1
1,2,3-Trichlorobenzene	**0.77**	**E4**	1.0	0.45	ug/L			01/15/15 11:25	1
1,2,4-Trichlorobenzene	**0.39**	**E4**	1.0	0.32	ug/L			01/15/15 11:25	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			01/15/15 11:25	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 11:25	1
Trichloroethene	**0.47**	**E4**	0.50	0.24	ug/L			01/15/15 11:25	1
Trichlorofluoromethane	**0.20**	**E4**	0.50	0.15	ug/L			01/15/15 11:25	1

Client Sample ID: BP-WR-367A-WG-363-011215

Lab Sample ID: 550-38312-2

Date Collected: 01/12/15 12:50

Matrix: Water

Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			01/15/15 11:25	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 11:25	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 11:25	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			01/15/15 11:25	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			01/15/15 11:25	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			01/15/15 11:25	1
Butadiene	ND	E8	2.0	1.7	ug/L			01/15/15 11:25	1
Hexane	ND	E8	2.0	1.6	ug/L			01/15/15 11:25	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*01/15/15 11:25*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*01/15/15 11:25*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*01/15/15 11:25*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*01/15/15 11:25*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*01/15/15 11:25*	*1*
2-ethoxy-2-methyl butane TIC	*ND*	*E8 T4*	*ug/L*			*919-94-8*		*01/15/15 11:25*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*93*		*70 - 130*		*01/15/15 11:25*	*1*
Toluene-d8 (Surr)	*91*		*70 - 130*		*01/15/15 11:25*	*1*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*		*01/15/15 11:25*	*1*

Client Sample ID: BP-C-48-WG-300-011215

Lab Sample ID: 550-38312-3

Date Collected: 01/12/15 13:40

Matrix: Water

Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**18**		10	7.3	ug/L			01/15/15 11:57	1
Benzene	ND	E8	0.50	0.12	ug/L			01/15/15 11:57	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 11:57	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			01/15/15 11:57	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			01/15/15 11:57	1
Bromoform	ND	E8	1.0	0.37	ug/L			01/15/15 11:57	1
Bromomethane	ND	E8	1.0	0.67	ug/L			01/15/15 11:57	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			01/15/15 11:57	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 11:57	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			01/15/15 11:57	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 11:57	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			01/15/15 11:57	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			01/15/15 11:57	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 11:57	1
Chloroethane	ND	E8	1.0	0.25	ug/L			01/15/15 11:57	1
Chloroform	ND	E8	0.50	0.13	ug/L			01/15/15 11:57	1
Chloromethane	ND	E8	1.0	0.21	ug/L			01/15/15 11:57	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			01/15/15 11:57	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			01/15/15 11:57	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			01/15/15 11:57	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			01/15/15 11:57	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			01/15/15 11:57	1

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-38312-1

Client Sample ID: BP-C-48-WG-300-011215
Date Collected: 01/12/15 13:40
Date Received: 01/13/15 15:54

Lab Sample ID: 550-38312-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND	E8	0.50	0.26	ug/L			01/15/15 11:57	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			01/15/15 11:57	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 11:57	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 11:57	1
Dichlorodifluoromethane	ND	E8	0.50	0.15	ug/L			01/15/15 11:57	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			01/15/15 11:57	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 11:57	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			01/15/15 11:57	1
cis-1,2-Dichloroethene	ND	E8	0.50	0.21	ug/L			01/15/15 11:57	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			01/15/15 11:57	1
1,2-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 11:57	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 11:57	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			01/15/15 11:57	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			01/15/15 11:57	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			01/15/15 11:57	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			01/15/15 11:57	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			01/15/15 11:57	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			01/15/15 11:57	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			01/15/15 11:57	1
Iodomethane	ND	E8	2.5	0.21	ug/L			01/15/15 11:57	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			01/15/15 11:57	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			01/15/15 11:57	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			01/15/15 11:57	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			01/15/15 11:57	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			01/15/15 11:57	1
Naphthalene	ND	E8	2.5	0.51	ug/L			01/15/15 11:57	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 11:57	1
Styrene	ND	E8	0.50	0.17	ug/L			01/15/15 11:57	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			01/15/15 11:57	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			01/15/15 11:57	1
Tetrachloroethene	ND	E8	0.50	0.18	ug/L			01/15/15 11:57	1
Toluene	ND	E8	0.50	0.28	ug/L			01/15/15 11:57	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			01/15/15 11:57	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			01/15/15 11:57	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			01/15/15 11:57	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 11:57	1
Trichloroethene	ND	E8	0.50	0.24	ug/L			01/15/15 11:57	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			01/15/15 11:57	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			01/15/15 11:57	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 11:57	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 11:57	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			01/15/15 11:57	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			01/15/15 11:57	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			01/15/15 11:57	1
Butadiene	ND	E8	2.0	1.7	ug/L			01/15/15 11:57	1
Hexane	ND	E8	2.0	1.6	ug/L			01/15/15 11:57	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*01/15/15 11:57*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*01/15/15 11:57*	*1*

Client Sample ID: BP-C-48-WG-300-011215

Lab Sample ID: 550-38312-3

Date Collected: 01/12/15 13:40

Matrix: Water

Date Received: 01/13/15 15:54

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

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
4-Ethyltoluene TIC	ND	E8 T4	ug/L			622-96-8		01/15/15 11:57	1
Methyl cyclohexane TIC	ND	E8 T4	ug/L			108-87-2		01/15/15 11:57	1
Propene TIC	ND	E8 T4	ug/L			115-07-1		01/15/15 11:57	1
2-ethoxy-2-methyl butane TIC	ND	E8 T4	ug/L			919-94-8		01/15/15 11:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	98		70 - 130		01/15/15 11:57	1
Toluene-d8 (Surr)	94		70 - 130		01/15/15 11:57	1
4-Bromofluorobenzene (Surr)	88		70 - 130		01/15/15 11:57	1

Client Sample ID: BP-CVA-WG-321.5-011215

Lab Sample ID: 550-38312-4

Date Collected: 01/12/15 14:20

Matrix: Water

Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	18		10	7.3	ug/L			01/15/15 12:30	1
Benzene	ND	E8	0.50	0.12	ug/L			01/15/15 12:30	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 12:30	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			01/15/15 12:30	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			01/15/15 12:30	1
Bromoform	ND	E8	1.0	0.37	ug/L			01/15/15 12:30	1
Bromomethane	ND	E8	1.0	0.67	ug/L			01/15/15 12:30	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			01/15/15 12:30	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 12:30	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			01/15/15 12:30	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 12:30	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			01/15/15 12:30	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			01/15/15 12:30	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 12:30	1
Chloroethane	ND	E8	1.0	0.25	ug/L			01/15/15 12:30	1
Chloroform	ND	E8	0.50	0.13	ug/L			01/15/15 12:30	1
Chloromethane	ND	E8	1.0	0.21	ug/L			01/15/15 12:30	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			01/15/15 12:30	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			01/15/15 12:30	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			01/15/15 12:30	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			01/15/15 12:30	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			01/15/15 12:30	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			01/15/15 12:30	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			01/15/15 12:30	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 12:30	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 12:30	1
Dichlorodifluoromethane	ND	E8	0.50	0.15	ug/L			01/15/15 12:30	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			01/15/15 12:30	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 12:30	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			01/15/15 12:30	1
cis-1,2-Dichloroethene	ND	E8	0.50	0.21	ug/L			01/15/15 12:30	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			01/15/15 12:30	1
1,2-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 12:30	1

Client Sample ID: BP-CVA-WG-321.5-011215

Lab Sample ID: 550-38312-4

Date Collected: 01/12/15 14:20

Matrix: Water

Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 12:30	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			01/15/15 12:30	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			01/15/15 12:30	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			01/15/15 12:30	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			01/15/15 12:30	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			01/15/15 12:30	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			01/15/15 12:30	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			01/15/15 12:30	1
Iodomethane	ND	E8	2.5	0.21	ug/L			01/15/15 12:30	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			01/15/15 12:30	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			01/15/15 12:30	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			01/15/15 12:30	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			01/15/15 12:30	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			01/15/15 12:30	1
Naphthalene	ND	E8	2.5	0.51	ug/L			01/15/15 12:30	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 12:30	1
Styrene	ND	E8	0.50	0.17	ug/L			01/15/15 12:30	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			01/15/15 12:30	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			01/15/15 12:30	1
Tetrachloroethene	ND	E8	0.50	0.18	ug/L			01/15/15 12:30	1
Toluene	ND	E8	0.50	0.28	ug/L			01/15/15 12:30	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			01/15/15 12:30	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			01/15/15 12:30	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			01/15/15 12:30	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 12:30	1
Trichloroethene	ND	E8	0.50	0.24	ug/L			01/15/15 12:30	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			01/15/15 12:30	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			01/15/15 12:30	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 12:30	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 12:30	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			01/15/15 12:30	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			01/15/15 12:30	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			01/15/15 12:30	1
Butadiene	ND	E8	2.0	1.7	ug/L			01/15/15 12:30	1
Hexane	ND	E8	2.0	1.6	ug/L			01/15/15 12:30	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*01/15/15 12:30*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*01/15/15 12:30*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*01/15/15 12:30*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*01/15/15 12:30*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*01/15/15 12:30*	*1*
2-ethoxy-2-methyl butane TIC	*ND*	*E8 T4*	*ug/L*			*919-94-8*		*01/15/15 12:30*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*01/15/15 12:30*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*01/15/15 12:30*	*1*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*		*01/15/15 12:30*	*1*

Client Sample Results

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-38312-1

Client Sample ID: BP-WR-274A-WG-316-011315

Lab Sample ID: 550-38312-5

Date Collected: 01/13/15 10:40
Matrix: Water
Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**19**		10	7.3	ug/L			01/15/15 13:02	1
Benzene	**0.16**	**E4**	0.50	0.12	ug/L			01/15/15 13:02	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 13:02	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			01/15/15 13:02	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			01/15/15 13:02	1
Bromoform	ND	E8	1.0	0.37	ug/L			01/15/15 13:02	1
Bromomethane	ND	E8	1.0	0.67	ug/L			01/15/15 13:02	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			01/15/15 13:02	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 13:02	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			01/15/15 13:02	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 13:02	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			01/15/15 13:02	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			01/15/15 13:02	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 13:02	1
Chloroethane	ND	E8	1.0	0.25	ug/L			01/15/15 13:02	1
Chloroform	**0.51**		0.50	0.13	ug/L			01/15/15 13:02	1
Chloromethane	ND	E8	1.0	0.21	ug/L			01/15/15 13:02	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			01/15/15 13:02	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			01/15/15 13:02	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			01/15/15 13:02	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			01/15/15 13:02	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			01/15/15 13:02	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			01/15/15 13:02	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			01/15/15 13:02	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 13:02	1
1,4-Dichlorobenzene	**0.69**		0.50	0.17	ug/L			01/15/15 13:02	1
Dichlorodifluoromethane	**4.5**		0.50	0.15	ug/L			01/15/15 13:02	1
1,1-Dichloroethane	**0.35**	**E4**	0.50	0.14	ug/L			01/15/15 13:02	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 13:02	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			01/15/15 13:02	1
cis-1,2-Dichloroethene	**34**		0.50	0.21	ug/L			01/15/15 13:02	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			01/15/15 13:02	1
1,2-Dichloropropane	**0.93**		0.50	0.23	ug/L			01/15/15 13:02	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 13:02	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			01/15/15 13:02	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			01/15/15 13:02	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			01/15/15 13:02	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			01/15/15 13:02	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			01/15/15 13:02	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			01/15/15 13:02	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			01/15/15 13:02	1
Iodomethane	ND	E8	2.5	0.21	ug/L			01/15/15 13:02	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			01/15/15 13:02	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			01/15/15 13:02	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			01/15/15 13:02	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			01/15/15 13:02	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			01/15/15 13:02	1
Naphthalene	ND	E8	2.5	0.51	ug/L			01/15/15 13:02	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 13:02	1

Client Sample ID: BP-WR-274A-WG-316-011315

Lab Sample ID: 550-38312-5

Date Collected: 01/13/15 10:40

Matrix: Water

Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND	E8	0.50	0.17	ug/L			01/15/15 13:02	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			01/15/15 13:02	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			01/15/15 13:02	1
Tetrachloroethene	**110**		0.50	0.18	ug/L			01/15/15 13:02	1
Toluene	ND	E8	0.50	0.28	ug/L			01/15/15 13:02	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			01/15/15 13:02	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			01/15/15 13:02	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			01/15/15 13:02	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 13:02	1
Trichloroethene	**32**		0.50	0.24	ug/L			01/15/15 13:02	1
Trichlorofluoromethane	**0.57**		0.50	0.15	ug/L			01/15/15 13:02	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			01/15/15 13:02	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 13:02	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 13:02	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			01/15/15 13:02	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			01/15/15 13:02	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			01/15/15 13:02	1
Butadiene	ND	E8	2.0	1.7	ug/L			01/15/15 13:02	1
Hexane	ND	E8	2.0	1.6	ug/L			01/15/15 13:02	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*01/15/15 13:02*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*01/15/15 13:02*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*01/15/15 13:02*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*01/15/15 13:02*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*01/15/15 13:02*	*1*
2-ethoxy-2-methyl butane TIC	*ND*	*E8 T4*	*ug/L*			*919-94-8*		*01/15/15 13:02*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*01/15/15 13:02*	*1*
Toluene-d8 (Surr)	*93*		*70 - 130*		*01/15/15 13:02*	*1*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*		*01/15/15 13:02*	*1*

Client Sample ID: BP-WR-274A-WG-326-011315

Lab Sample ID: 550-38312-6

Date Collected: 01/13/15 10:50

Matrix: Water

Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**20**		10	7.3	ug/L			01/15/15 13:35	1
Benzene	**0.25**	**E4**	0.50	0.12	ug/L			01/15/15 13:35	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 13:35	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			01/15/15 13:35	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			01/15/15 13:35	1
Bromoform	ND	E8	1.0	0.37	ug/L			01/15/15 13:35	1
Bromomethane	ND	E8	1.0	0.67	ug/L			01/15/15 13:35	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			01/15/15 13:35	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 13:35	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			01/15/15 13:35	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 13:35	1

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-38312-1

Client Sample ID: BP-WR-274A-WG-326-011315
Date Collected: 01/13/15 10:50
Date Received: 01/13/15 15:54

Lab Sample ID: 550-38312-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND	E8	1.0	0.86	ug/L			01/15/15 13:35	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			01/15/15 13:35	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 13:35	1
Chloroethane	ND	E8	1.0	0.25	ug/L			01/15/15 13:35	1
Chloroform	**0.45**	**E4**	0.50	0.13	ug/L			01/15/15 13:35	1
Chloromethane	ND	E8	1.0	0.21	ug/L			01/15/15 13:35	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			01/15/15 13:35	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			01/15/15 13:35	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			01/15/15 13:35	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			01/15/15 13:35	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			01/15/15 13:35	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			01/15/15 13:35	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			01/15/15 13:35	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 13:35	1
1,4-Dichlorobenzene	**0.70**		0.50	0.17	ug/L			01/15/15 13:35	1
Dichlorodifluoromethane	**4.2**		0.50	0.15	ug/L			01/15/15 13:35	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			01/15/15 13:35	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 13:35	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			01/15/15 13:35	1
cis-1,2-Dichloroethene	**33**		0.50	0.21	ug/L			01/15/15 13:35	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			01/15/15 13:35	1
1,2-Dichloropropane	**0.87**		0.50	0.23	ug/L			01/15/15 13:35	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 13:35	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			01/15/15 13:35	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			01/15/15 13:35	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			01/15/15 13:35	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			01/15/15 13:35	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			01/15/15 13:35	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			01/15/15 13:35	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			01/15/15 13:35	1
Iodomethane	ND	E8	2.5	0.21	ug/L			01/15/15 13:35	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			01/15/15 13:35	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			01/15/15 13:35	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			01/15/15 13:35	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			01/15/15 13:35	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			01/15/15 13:35	1
Naphthalene	ND	E8	2.5	0.51	ug/L			01/15/15 13:35	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 13:35	1
Styrene	ND	E8	0.50	0.17	ug/L			01/15/15 13:35	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			01/15/15 13:35	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			01/15/15 13:35	1
Tetrachloroethene	**100**		0.50	0.18	ug/L			01/15/15 13:35	1
Toluene	ND	E8	0.50	0.28	ug/L			01/15/15 13:35	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			01/15/15 13:35	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			01/15/15 13:35	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			01/15/15 13:35	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 13:35	1
Trichloroethene	**32**		0.50	0.24	ug/L			01/15/15 13:35	1
Trichlorofluoromethane	**0.55**		0.50	0.15	ug/L			01/15/15 13:35	1

Client Sample ID: BP-WR-274A-WG-326-011315

Lab Sample ID: 550-38312-6

Date Collected: 01/13/15 10:50

Matrix: Water

Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			01/15/15 13:35	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 13:35	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 13:35	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			01/15/15 13:35	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			01/15/15 13:35	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			01/15/15 13:35	1
Butadiene	ND	E8	2.0	1.7	ug/L			01/15/15 13:35	1
Hexane	ND	E8	2.0	1.6	ug/L			01/15/15 13:35	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*01/15/15 13:35*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*01/15/15 13:35*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*01/15/15 13:35*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*01/15/15 13:35*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*01/15/15 13:35*	*1*
2-ethoxy-2-methyl butane TIC	*ND*	*E8 T4*	*ug/L*			*919-94-8*		*01/15/15 13:35*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*01/15/15 13:35*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*01/15/15 13:35*	*1*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*		*01/15/15 13:35*	*1*

Client Sample ID: BP-WR-274A-WG-336-011315

Lab Sample ID: 550-38312-7

Date Collected: 01/13/15 11:00

Matrix: Water

Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**25**		10	7.3	ug/L			01/15/15 14:08	1
Benzene	**0.29**	**E4**	0.50	0.12	ug/L			01/15/15 14:08	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 14:08	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			01/15/15 14:08	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			01/15/15 14:08	1
Bromoform	ND	E8	1.0	0.37	ug/L			01/15/15 14:08	1
Bromomethane	ND	E8	1.0	0.67	ug/L			01/15/15 14:08	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			01/15/15 14:08	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 14:08	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			01/15/15 14:08	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 14:08	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			01/15/15 14:08	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			01/15/15 14:08	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 14:08	1
Chloroethane	ND	E8	1.0	0.25	ug/L			01/15/15 14:08	1
Chloroform	**0.52**		0.50	0.13	ug/L			01/15/15 14:08	1
Chloromethane	ND	E8	1.0	0.21	ug/L			01/15/15 14:08	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			01/15/15 14:08	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			01/15/15 14:08	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			01/15/15 14:08	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			01/15/15 14:08	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			01/15/15 14:08	1

Client Sample ID: BP-WR-274A-WG-336-011315

Lab Sample ID: 550-38312-7

Date Collected: 01/13/15 11:00

Matrix: Water

Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND	E8	0.50	0.26	ug/L			01/15/15 14:08	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			01/15/15 14:08	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 14:08	1
1,4-Dichlorobenzene	**0.74**		0.50	0.17	ug/L			01/15/15 14:08	1
Dichlorodifluoromethane	**4.5**		0.50	0.15	ug/L			01/15/15 14:08	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			01/15/15 14:08	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 14:08	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			01/15/15 14:08	1
cis-1,2-Dichloroethene	**36**		0.50	0.21	ug/L			01/15/15 14:08	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			01/15/15 14:08	1
1,2-Dichloropropane	**0.93**		0.50	0.23	ug/L			01/15/15 14:08	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 14:08	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			01/15/15 14:08	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			01/15/15 14:08	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			01/15/15 14:08	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			01/15/15 14:08	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			01/15/15 14:08	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			01/15/15 14:08	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			01/15/15 14:08	1
Iodomethane	ND	E8	2.5	0.21	ug/L			01/15/15 14:08	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			01/15/15 14:08	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			01/15/15 14:08	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			01/15/15 14:08	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			01/15/15 14:08	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			01/15/15 14:08	1
Naphthalene	ND	E8	2.5	0.51	ug/L			01/15/15 14:08	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 14:08	1
Styrene	ND	E8	0.50	0.17	ug/L			01/15/15 14:08	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			01/15/15 14:08	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			01/15/15 14:08	1
Tetrachloroethene	**110**		0.50	0.18	ug/L			01/15/15 14:08	1
Toluene	ND	E8	0.50	0.28	ug/L			01/15/15 14:08	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			01/15/15 14:08	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			01/15/15 14:08	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			01/15/15 14:08	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 14:08	1
Trichloroethene	**35**		0.50	0.24	ug/L			01/15/15 14:08	1
Trichlorofluoromethane	**0.61**		0.50	0.15	ug/L			01/15/15 14:08	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			01/15/15 14:08	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 14:08	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 14:08	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			01/15/15 14:08	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			01/15/15 14:08	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			01/15/15 14:08	1
Butadiene	ND	E8	2.0	1.7	ug/L			01/15/15 14:08	1
Hexane	ND	E8	2.0	1.6	ug/L			01/15/15 14:08	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*01/15/15 14:08*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*01/15/15 14:08*	*1*

Client Sample ID: BP-WR-274A-WG-336-011315

Lab Sample ID: 550-38312-7

Date Collected: 01/13/15 11:00

Matrix: Water

Date Received: 01/13/15 15:54

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

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
4-Ethyltoluene TIC	ND	E8 T4	ug/L			622-96-8		01/15/15 14:08	1
Methyl cyclohexane TIC	ND	E8 T4	ug/L			108-87-2		01/15/15 14:08	1
Propene TIC	ND	E8 T4	ug/L			115-07-1		01/15/15 14:08	1
2-ethoxy-2-methyl butane TIC	ND	E8 T4	ug/L			919-94-8		01/15/15 14:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	100		70 - 130		01/15/15 14:08	1
Toluene-d8 (Surr)	94		70 - 130		01/15/15 14:08	1
4-Bromofluorobenzene (Surr)	88		70 - 130		01/15/15 14:08	1

Client Sample ID: BP-R-68A-WG-342-011315

Lab Sample ID: 550-38312-8

Date Collected: 01/13/15 11:30

Matrix: Water

Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**21**		10	7.3	ug/L			01/15/15 14:40	1
Benzene	ND	E8	0.50	0.12	ug/L			01/15/15 14:40	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 14:40	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			01/15/15 14:40	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			01/15/15 14:40	1
Bromoform	ND	E8	1.0	0.37	ug/L			01/15/15 14:40	1
Bromomethane	ND	E8	1.0	0.67	ug/L			01/15/15 14:40	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			01/15/15 14:40	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 14:40	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			01/15/15 14:40	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 14:40	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			01/15/15 14:40	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			01/15/15 14:40	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 14:40	1
Chloroethane	ND	E8	1.0	0.25	ug/L			01/15/15 14:40	1
Chloroform	**0.64**		0.50	0.13	ug/L			01/15/15 14:40	1
Chloromethane	ND	E8	1.0	0.21	ug/L			01/15/15 14:40	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			01/15/15 14:40	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			01/15/15 14:40	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			01/15/15 14:40	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			01/15/15 14:40	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			01/15/15 14:40	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			01/15/15 14:40	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			01/15/15 14:40	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 14:40	1
1,4-Dichlorobenzene	**1.2**		0.50	0.17	ug/L			01/15/15 14:40	1
Dichlorodifluoromethane	**0.70**		0.50	0.15	ug/L			01/15/15 14:40	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			01/15/15 14:40	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 14:40	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			01/15/15 14:40	1
cis-1,2-Dichloroethene	**15**		0.50	0.21	ug/L			01/15/15 14:40	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			01/15/15 14:40	1
1,2-Dichloropropane	**0.62**		0.50	0.23	ug/L			01/15/15 14:40	1

Client Sample ID: BP-R-68A-WG-342-011315

Lab Sample ID: 550-38312-8

Date Collected: 01/13/15 11:30

Matrix: Water

Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 14:40	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			01/15/15 14:40	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			01/15/15 14:40	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			01/15/15 14:40	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			01/15/15 14:40	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			01/15/15 14:40	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			01/15/15 14:40	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			01/15/15 14:40	1
Iodomethane	ND	E8	2.5	0.21	ug/L			01/15/15 14:40	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			01/15/15 14:40	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			01/15/15 14:40	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			01/15/15 14:40	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			01/15/15 14:40	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			01/15/15 14:40	1
Naphthalene	ND	E8	2.5	0.51	ug/L			01/15/15 14:40	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 14:40	1
Styrene	ND	E8	0.50	0.17	ug/L			01/15/15 14:40	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			01/15/15 14:40	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			01/15/15 14:40	1
Tetrachloroethene	**29**		0.50	0.18	ug/L			01/15/15 14:40	1
Toluene	ND	E8	0.50	0.28	ug/L			01/15/15 14:40	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			01/15/15 14:40	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			01/15/15 14:40	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			01/15/15 14:40	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 14:40	1
Trichloroethene	**9.5**		0.50	0.24	ug/L			01/15/15 14:40	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			01/15/15 14:40	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			01/15/15 14:40	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 14:40	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 14:40	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			01/15/15 14:40	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			01/15/15 14:40	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			01/15/15 14:40	1
Butadiene	ND	E8	2.0	1.7	ug/L			01/15/15 14:40	1
Hexane	ND	E8	2.0	1.6	ug/L			01/15/15 14:40	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*01/15/15 14:40*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*01/15/15 14:40*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*01/15/15 14:40*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*01/15/15 14:40*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*01/15/15 14:40*	*1*
2-ethoxy-2-methyl butane TIC	*ND*	*E8 T4*	*ug/L*			*919-94-8*		*01/15/15 14:40*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*01/15/15 14:40*	*1*
Toluene-d8 (Surr)	*93*		*70 - 130*		*01/15/15 14:40*	*1*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*		*01/15/15 14:40*	*1*

Client Sample Results

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-38312-1

Client Sample ID: BP-WR-273A-WG-323-011315

Lab Sample ID: 550-38312-9

Date Collected: 01/13/15 12:15
Matrix: Water
Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**20**		10	7.3	ug/L			01/15/15 15:13	1
Benzene	ND	E8	0.50	0.12	ug/L			01/15/15 15:13	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 15:13	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			01/15/15 15:13	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			01/15/15 15:13	1
Bromoform	ND	E8	1.0	0.37	ug/L			01/15/15 15:13	1
Bromomethane	ND	E8	1.0	0.67	ug/L			01/15/15 15:13	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			01/15/15 15:13	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 15:13	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			01/15/15 15:13	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 15:13	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			01/15/15 15:13	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			01/15/15 15:13	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 15:13	1
Chloroethane	ND	E8	1.0	0.25	ug/L			01/15/15 15:13	1
Chloroform	ND	E8	0.50	0.13	ug/L			01/15/15 15:13	1
Chloromethane	ND	E8	1.0	0.21	ug/L			01/15/15 15:13	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			01/15/15 15:13	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			01/15/15 15:13	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			01/15/15 15:13	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			01/15/15 15:13	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			01/15/15 15:13	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			01/15/15 15:13	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			01/15/15 15:13	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 15:13	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 15:13	1
Dichlorodifluoromethane	**1.1**		0.50	0.15	ug/L			01/15/15 15:13	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			01/15/15 15:13	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 15:13	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			01/15/15 15:13	1
cis-1,2-Dichloroethene	**1.4**		0.50	0.21	ug/L			01/15/15 15:13	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			01/15/15 15:13	1
1,2-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 15:13	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 15:13	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			01/15/15 15:13	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			01/15/15 15:13	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			01/15/15 15:13	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			01/15/15 15:13	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			01/15/15 15:13	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			01/15/15 15:13	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			01/15/15 15:13	1
Iodomethane	ND	E8	2.5	0.21	ug/L			01/15/15 15:13	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			01/15/15 15:13	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			01/15/15 15:13	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			01/15/15 15:13	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			01/15/15 15:13	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			01/15/15 15:13	1
Naphthalene	ND	E8	2.5	0.51	ug/L			01/15/15 15:13	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 15:13	1

Client Sample ID: BP-WR-273A-WG-323-011315

Lab Sample ID: 550-38312-9

Date Collected: 01/13/15 12:15

Matrix: Water

Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND	E8	0.50	0.17	ug/L			01/15/15 15:13	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			01/15/15 15:13	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			01/15/15 15:13	1
Tetrachloroethene	**4.6**		0.50	0.18	ug/L			01/15/15 15:13	1
Toluene	ND	E8	0.50	0.28	ug/L			01/15/15 15:13	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			01/15/15 15:13	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			01/15/15 15:13	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			01/15/15 15:13	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 15:13	1
Trichloroethene	**2.4**		0.50	0.24	ug/L			01/15/15 15:13	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			01/15/15 15:13	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			01/15/15 15:13	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 15:13	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 15:13	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			01/15/15 15:13	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			01/15/15 15:13	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			01/15/15 15:13	1
Butadiene	ND	E8	2.0	1.7	ug/L			01/15/15 15:13	1
Hexane	ND	E8	2.0	1.6	ug/L			01/15/15 15:13	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*01/15/15 15:13*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*01/15/15 15:13*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*01/15/15 15:13*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*01/15/15 15:13*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*01/15/15 15:13*	*1*
2-ethoxy-2-methyl butane TIC	*ND*	*E8 T4*	*ug/L*			*919-94-8*		*01/15/15 15:13*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*98*		*70 - 130*		*01/15/15 15:13*	*1*
Toluene-d8 (Surr)	*92*		*70 - 130*		*01/15/15 15:13*	*1*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*		*01/15/15 15:13*	*1*

Client Sample ID: BP-TB01-011315

Lab Sample ID: 550-38312-10

Date Collected: 01/13/15 15:00

Matrix: Water

Date Received: 01/13/15 15:54

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	E8	10	7.3	ug/L			01/15/15 08:28	1
Benzene	ND	E8	0.50	0.12	ug/L			01/15/15 08:28	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 08:28	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			01/15/15 08:28	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			01/15/15 08:28	1
Bromoform	ND	E8	1.0	0.37	ug/L			01/15/15 08:28	1
Bromomethane	ND	E8	1.0	0.67	ug/L			01/15/15 08:28	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			01/15/15 08:28	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 08:28	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			01/15/15 08:28	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 08:28	1

Client Sample ID: BP-TB01-011315
Date Collected: 01/13/15 15:00
Date Received: 01/13/15 15:54

Lab Sample ID: 550-38312-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND	E8	1.0	0.86	ug/L			01/15/15 08:28	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			01/15/15 08:28	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 08:28	1
Chloroethane	ND	E8	1.0	0.25	ug/L			01/15/15 08:28	1
Chloroform	ND	E8	0.50	0.13	ug/L			01/15/15 08:28	1
Chloromethane	ND	E8	1.0	0.21	ug/L			01/15/15 08:28	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			01/15/15 08:28	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			01/15/15 08:28	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			01/15/15 08:28	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			01/15/15 08:28	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			01/15/15 08:28	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			01/15/15 08:28	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			01/15/15 08:28	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 08:28	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 08:28	1
Dichlorodifluoromethane	ND	E8	0.50	0.15	ug/L			01/15/15 08:28	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			01/15/15 08:28	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 08:28	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			01/15/15 08:28	1
cis-1,2-Dichloroethene	ND	E8	0.50	0.21	ug/L			01/15/15 08:28	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			01/15/15 08:28	1
1,2-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 08:28	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 08:28	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			01/15/15 08:28	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			01/15/15 08:28	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			01/15/15 08:28	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			01/15/15 08:28	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			01/15/15 08:28	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			01/15/15 08:28	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			01/15/15 08:28	1
Iodomethane	ND	E8	2.5	0.21	ug/L			01/15/15 08:28	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			01/15/15 08:28	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			01/15/15 08:28	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			01/15/15 08:28	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			01/15/15 08:28	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			01/15/15 08:28	1
Naphthalene	ND	E8	2.5	0.51	ug/L			01/15/15 08:28	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 08:28	1
Styrene	ND	E8	0.50	0.17	ug/L			01/15/15 08:28	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			01/15/15 08:28	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			01/15/15 08:28	1
Tetrachloroethene	ND	E8	0.50	0.18	ug/L			01/15/15 08:28	1
Toluene	ND	E8	0.50	0.28	ug/L			01/15/15 08:28	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			01/15/15 08:28	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			01/15/15 08:28	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			01/15/15 08:28	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 08:28	1
Trichloroethene	ND	E8	0.50	0.24	ug/L			01/15/15 08:28	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			01/15/15 08:28	1

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-38312-1

Client Sample ID: BP-TB01-011315
Date Collected: 01/13/15 15:00
Date Received: 01/13/15 15:54

Lab Sample ID: 550-38312-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			01/15/15 08:28	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 08:28	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 08:28	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			01/15/15 08:28	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			01/15/15 08:28	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			01/15/15 08:28	1
Butadiene	ND	E8	2.0	1.7	ug/L			01/15/15 08:28	1
Hexane	ND	E8	2.0	1.6	ug/L			01/15/15 08:28	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*01/15/15 08:28*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*01/15/15 08:28*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*01/15/15 08:28*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*01/15/15 08:28*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*01/15/15 08:28*	*1*
2-ethoxy-2-methyl butane TIC	*ND*	*E8 T4*	*ug/L*			*919-94-8*		*01/15/15 08:28*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*01/15/15 08:28*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*01/15/15 08:28*	*1*
4-Bromofluorobenzene (Surr)	*89*		*70 - 130*		*01/15/15 08:28*	*1*

Surrogate Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-38312-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
550-38312-1	BP-WR-367A-WG-343-011215	98	93	88
550-38312-1 MS	BP-WR-367A-WG-343-011215	83	81	86
550-38312-1 MSD	BP-WR-367A-WG-343-011215	90	86	88
550-38312-2	BP-WR-367A-WG-363-011215	93	91	89
550-38312-3	BP-C-48-WG-300-011215	98	94	88
550-38312-4	BP-CVA-WG-321.5-011215	97	94	90
550-38312-5	BP-WR-274A-WG-316-011315	98	93	87
550-38312-6	BP-WR-274A-WG-326-011315	96	94	89
550-38312-7	BP-WR-274A-WG-336-011315	100	94	88
550-38312-8	BP-R-68A-WG-342-011315	97	93	90
550-38312-9	BP-WR-273A-WG-323-011315	98	92	90
550-38312-10	BP-TB01-011315	97	96	89
LCS 550-54037/3	Lab Control Sample	86	84	87
LCSD 550-54037/18	Lab Control Sample Dup	94	92	95
MB 550-54037/5	Method Blank	95	92	91

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

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

Lab Sample ID: MB 550-54037/5
Matrix: Water
Analysis Batch: 54037

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	E8	10	7.3	ug/L			01/15/15 07:54	1
Benzene	ND	E8	0.50	0.12	ug/L			01/15/15 07:54	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 07:54	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			01/15/15 07:54	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			01/15/15 07:54	1
Bromoform	ND	E8	1.0	0.37	ug/L			01/15/15 07:54	1
Bromomethane	ND	E8	1.0	0.67	ug/L			01/15/15 07:54	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			01/15/15 07:54	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 07:54	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			01/15/15 07:54	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 07:54	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			01/15/15 07:54	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			01/15/15 07:54	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 07:54	1
Chloroethane	ND	E8	1.0	0.25	ug/L			01/15/15 07:54	1
Chloroform	ND	E8	0.50	0.13	ug/L			01/15/15 07:54	1
Chloromethane	ND	E8	1.0	0.21	ug/L			01/15/15 07:54	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			01/15/15 07:54	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			01/15/15 07:54	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			01/15/15 07:54	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			01/15/15 07:54	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			01/15/15 07:54	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			01/15/15 07:54	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			01/15/15 07:54	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			01/15/15 07:54	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			01/15/15 07:54	1
Dichlorodifluoromethane	ND	E8	0.50	0.15	ug/L			01/15/15 07:54	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			01/15/15 07:54	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 07:54	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			01/15/15 07:54	1
cis-1,2-Dichloroethene	ND	E8	0.50	0.21	ug/L			01/15/15 07:54	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			01/15/15 07:54	1
1,2-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 07:54	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			01/15/15 07:54	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			01/15/15 07:54	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			01/15/15 07:54	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			01/15/15 07:54	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			01/15/15 07:54	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			01/15/15 07:54	1
Hexachlorobutadiene	0.498	E4	1.0	0.28	ug/L			01/15/15 07:54	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			01/15/15 07:54	1
Iodomethane	ND	E8	2.5	0.21	ug/L			01/15/15 07:54	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			01/15/15 07:54	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			01/15/15 07:54	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			01/15/15 07:54	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			01/15/15 07:54	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			01/15/15 07:54	1
Naphthalene	0.815	E4	2.5	0.51	ug/L			01/15/15 07:54	1

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

Lab Sample ID: MB 550-54037/5
Matrix: Water
Analysis Batch: 54037

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 07:54	1
Styrene	ND	E8	0.50	0.17	ug/L			01/15/15 07:54	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			01/15/15 07:54	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			01/15/15 07:54	1
Tetrachloroethene	ND	E8	0.50	0.18	ug/L			01/15/15 07:54	1
Toluene	ND	E8	0.50	0.28	ug/L			01/15/15 07:54	1
1,2,3-Trichlorobenzene	0.791	E4	1.0	0.45	ug/L			01/15/15 07:54	1
1,2,4-Trichlorobenzene	0.408	E4	1.0	0.32	ug/L			01/15/15 07:54	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			01/15/15 07:54	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			01/15/15 07:54	1
Trichloroethene	ND	E8	0.50	0.24	ug/L			01/15/15 07:54	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			01/15/15 07:54	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			01/15/15 07:54	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			01/15/15 07:54	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			01/15/15 07:54	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			01/15/15 07:54	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			01/15/15 07:54	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			01/15/15 07:54	1
Butadiene	ND	E8	2.0	1.7	ug/L			01/15/15 07:54	1
Hexane	ND	E8	2.0	1.6	ug/L			01/15/15 07:54	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*01/15/15 07:54*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*01/15/15 07:54*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*01/15/15 07:54*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*01/15/15 07:54*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*01/15/15 07:54*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*95*		*70 - 130*		*01/15/15 07:54*	*1*
Toluene-d8 (Surr)	*92*		*70 - 130*		*01/15/15 07:54*	*1*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*		*01/15/15 07:54*	*1*

Lab Sample ID: LCS 550-54037/3
Matrix: Water
Analysis Batch: 54037

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	25.0	21.0		ug/L		84	38 - 150
Benzene	25.0	24.8		ug/L		99	70 - 130
Bromobenzene	25.0	25.3		ug/L		101	70 - 130
Chlorobromomethane	25.0	24.8		ug/L		99	70 - 130
Dichlorobromomethane	25.0	26.1		ug/L		104	70 - 130
Bromoform	25.0	28.9		ug/L		115	69 - 129
Bromomethane	25.0	22.8		ug/L		91	57 - 138
2-Butanone (MEK)	25.0	21.6		ug/L		87	53 - 150
n-Butylbenzene	25.0	27.5		ug/L		110	70 - 130

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

Lab Sample ID: LCS 550-54037/3
Matrix: Water
Analysis Batch: 54037

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
sec-Butylbenzene	25.0	27.6		ug/L		110	70 - 130
Carbon disulfide	25.0	24.9		ug/L		99	64 - 145
Carbon tetrachloride	25.0	30.1		ug/L		120	70 - 143
Chlorobenzene	25.0	25.4		ug/L		101	70 - 130
Chloroethane	25.0	24.0		ug/L		96	66 - 131
Chloroform	25.0	25.5		ug/L		102	70 - 130
Chloromethane	25.0	21.8		ug/L		87	56 - 129
2-Chlorotoluene	25.0	26.1		ug/L		104	70 - 130
4-Chlorotoluene	25.0	26.0		ug/L		104	70 - 130
Chlorodibromomethane	25.0	28.0		ug/L		112	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	27.8		ug/L		111	63 - 146
Ethylene Dibromide	25.0	24.6		ug/L		98	70 - 130
Dibromomethane	25.0	23.4		ug/L		94	70 - 130
1,2-Dichlorobenzene	25.0	25.1		ug/L		100	70 - 130
1,3-Dichlorobenzene	25.0	26.0		ug/L		104	70 - 130
1,4-Dichlorobenzene	25.0	25.5		ug/L		102	70 - 130
Dichlorodifluoromethane	25.0	20.3		ug/L		81	46 - 144
1,1-Dichloroethane	25.0	24.1		ug/L		97	70 - 130
1,2-Dichloroethane	25.0	23.6		ug/L		94	66 - 139
1,1-Dichloroethene	25.0	25.8		ug/L		103	63 - 131
cis-1,2-Dichloroethene	25.0	24.4		ug/L		98	70 - 130
trans-1,2-Dichloroethene	25.0	24.8		ug/L		99	69 - 127
1,2-Dichloropropane	25.0	23.8		ug/L		95	70 - 130
1,3-Dichloropropane	25.0	24.1		ug/L		96	70 - 130
2,2-Dichloropropane	25.0	27.7		ug/L		111	69 - 139
1,1-Dichloropropene	25.0	25.5		ug/L		102	70 - 130
cis-1,3-Dichloropropene	25.0	25.4		ug/L		102	70 - 130
trans-1,3-Dichloropropene	25.0	24.4		ug/L		98	70 - 130
Ethylbenzene	25.0	26.2		ug/L		105	70 - 130
Hexachlorobutadiene	25.0	28.6		ug/L		114	76 - 145
2-Hexanone	25.0	20.1		ug/L		80	55 - 150
Iodomethane	25.0	25.1		ug/L		100	70 - 130
Isopropylbenzene	25.0	26.3		ug/L		105	88 - 141
4-Isopropyltoluene	25.0	27.7		ug/L		111	70 - 130
Methylene Chloride	25.0	24.1		ug/L		96	63 - 128
4-Methyl-2-pentanone (MIBK)	25.0	20.5		ug/L		82	64 - 142
Methyl tert-butyl ether	25.0	22.9		ug/L		92	70 - 130
Naphthalene	25.0	24.1		ug/L		96	78 - 143
N-Propylbenzene	25.0	26.6		ug/L		106	70 - 130
Styrene	25.0	26.4		ug/L		105	70 - 130
1,1,1,2-Tetrachloroethane	25.0	27.9		ug/L		112	70 - 130
1,1,2,2-Tetrachloroethane	25.0	24.5		ug/L		98	70 - 130
Tetrachloroethene	25.0	26.9		ug/L		108	70 - 130
Toluene	25.0	25.6		ug/L		103	70 - 130
1,2,3-Trichlorobenzene	25.0	24.6		ug/L		99	79 - 139
1,2,4-Trichlorobenzene	25.0	26.2		ug/L		105	80 - 137
1,1,1-Trichloroethane	25.0	27.2		ug/L		109	71 - 131
1,1,2-Trichloroethane	25.0	23.9		ug/L		96	70 - 130

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

Lab Sample ID: LCS 550-54037/3
Matrix: Water
Analysis Batch: 54037

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichloroethene	25.0	25.6		ug/L		103	70 - 130
Trichlorofluoromethane	25.0	26.2		ug/L		105	69 - 150
1,2,3-Trichloropropane	25.0	24.7		ug/L		99	70 - 130
1,2,4-Trimethylbenzene	25.0	27.1		ug/L		108	70 - 130
1,3,5-Trimethylbenzene	25.0	26.8		ug/L		107	70 - 130
Vinyl acetate	25.0	23.3		ug/L		93	67 - 148
Vinyl chloride	25.0	23.5		ug/L		94	65 - 137
Xylenes, Total	50.0	53.2		ug/L		106	70 - 130
Butadiene	25.0	26.2		ug/L		105	12 - 150
Hexane	25.0	25.7		ug/L		103	54 - 132
m-Xylene & p-Xylene	25.0	26.3		ug/L		105	70 - 130
o-Xylene	25.0	26.9		ug/L		108	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*86*		*70 - 130*
Toluene-d8 (Surr)	*84*		*70 - 130*
4-Bromofluorobenzene (Surr)	*87*		*70 - 130*

Lab Sample ID: LCSD 550-54037/18
Matrix: Water
Analysis Batch: 54037

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	25.0	20.3		ug/L		81	38 - 150	3	35
Benzene	25.0	25.0		ug/L		100	70 - 130	1	20
Bromobenzene	25.0	25.9		ug/L		104	70 - 130	3	20
Chlorobromomethane	25.0	24.7		ug/L		99	70 - 130	0	20
Dichlorobromomethane	25.0	26.3		ug/L		105	70 - 130	1	20
Bromoform	25.0	29.3		ug/L		117	69 - 129	2	20
Bromomethane	25.0	22.0		ug/L		88	57 - 138	4	20
2-Butanone (MEK)	25.0	20.8		ug/L		83	53 - 150	4	35
n-Butylbenzene	25.0	27.1		ug/L		108	70 - 130	2	20
sec-Butylbenzene	25.0	27.6		ug/L		110	70 - 130	0	20
Carbon disulfide	25.0	24.7		ug/L		99	64 - 145	1	33
Carbon tetrachloride	25.0	29.6		ug/L		118	70 - 143	2	20
Chlorobenzene	25.0	25.5		ug/L		102	70 - 130	0	20
Chloroethane	25.0	24.3		ug/L		97	66 - 131	1	20
Chloroform	25.0	25.1		ug/L		100	70 - 130	2	20
Chloromethane	25.0	21.1		ug/L		85	56 - 129	3	20
2-Chlorotoluene	25.0	26.4		ug/L		106	70 - 130	1	20
4-Chlorotoluene	25.0	26.1		ug/L		104	70 - 130	1	20
Chlorodibromomethane	25.0	28.3		ug/L		113	70 - 130	1	20
1,2-Dibromo-3-Chloropropane	25.0	27.0		ug/L		108	63 - 146	3	22
Ethylene Dibromide	25.0	25.3		ug/L		101	70 - 130	3	20
Dibromomethane	25.0	23.9		ug/L		96	70 - 130	2	20
1,2-Dichlorobenzene	25.0	25.6		ug/L		103	70 - 130	2	20
1,3-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130	1	20
1,4-Dichlorobenzene	25.0	25.7		ug/L		103	70 - 130	1	20

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

Lab Sample ID: LCSD 550-54037/18
Matrix: Water
Analysis Batch: 54037

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dichlorodifluoromethane	25.0	20.4		ug/L		82	46 - 144	0	23
1,1-Dichloroethane	25.0	24.3		ug/L		97	70 - 130	1	20
1,2-Dichloroethane	25.0	23.8		ug/L		95	66 - 139	1	20
1,1-Dichloroethene	25.0	25.2		ug/L		101	63 - 131	2	22
cis-1,2-Dichloroethene	25.0	24.5		ug/L		98	70 - 130	0	20
trans-1,2-Dichloroethene	25.0	24.2		ug/L		97	69 - 127	3	20
1,2-Dichloropropane	25.0	23.5		ug/L		94	70 - 130	1	20
1,3-Dichloropropane	25.0	24.5		ug/L		98	70 - 130	2	20
2,2-Dichloropropane	25.0	26.9		ug/L		108	69 - 139	3	20
1,1-Dichloropropene	25.0	24.9		ug/L		100	70 - 130	2	20
cis-1,3-Dichloropropene	25.0	25.6		ug/L		103	70 - 130	1	20
trans-1,3-Dichloropropene	25.0	24.2		ug/L		97	70 - 130	1	20
Ethylbenzene	25.0	26.5		ug/L		106	70 - 130	1	20
Hexachlorobutadiene	25.0	27.6		ug/L		110	76 - 145	4	20
2-Hexanone	25.0	19.7		ug/L		79	55 - 150	2	35
Iodomethane	25.0	24.7		ug/L		99	70 - 130	1	20
Isopropylbenzene	25.0	26.3		ug/L		105	88 - 141	0	20
4-Isopropyltoluene	25.0	27.9		ug/L		111	70 - 130	0	20
Methylene Chloride	25.0	24.4		ug/L		98	63 - 128	1	21
4-Methyl-2-pentanone (MIBK)	25.0	19.5		ug/L		78	64 - 142	5	25
Methyl tert-butyl ether	25.0	22.7		ug/L		91	70 - 130	1	20
Naphthalene	25.0	22.4		ug/L		90	78 - 143	7	20
N-Propylbenzene	25.0	26.5		ug/L		106	70 - 130	0	20
Styrene	25.0	26.5		ug/L		106	70 - 130	1	20
1,1,1,2-Tetrachloroethane	25.0	27.9		ug/L		112	70 - 130	0	20
1,1,2,2-Tetrachloroethane	25.0	25.0		ug/L		100	70 - 130	2	20
Tetrachloroethene	25.0	27.3		ug/L		109	70 - 130	2	20
Toluene	25.0	25.5		ug/L		102	70 - 130	0	20
1,2,3-Trichlorobenzene	25.0	23.9		ug/L		96	79 - 139	3	20
1,2,4-Trichlorobenzene	25.0	25.1		ug/L		101	80 - 137	4	20
1,1,1-Trichloroethane	25.0	26.7		ug/L		107	71 - 131	2	20
1,1,2-Trichloroethane	25.0	24.4		ug/L		97	70 - 130	2	20
Trichloroethene	25.0	25.4		ug/L		102	70 - 130	1	20
Trichlorofluoromethane	25.0	25.5		ug/L		102	69 - 150	3	22
1,2,3-Trichloropropane	25.0	24.5		ug/L		98	70 - 130	1	20
1,2,4-Trimethylbenzene	25.0	27.0		ug/L		108	70 - 130	0	20
1,3,5-Trimethylbenzene	25.0	27.0		ug/L		108	70 - 130	1	20
Vinyl acetate	25.0	22.7		ug/L		91	67 - 148	3	22
Vinyl chloride	25.0	23.0		ug/L		92	65 - 137	2	20
Xylenes, Total	50.0	53.7		ug/L		107	70 - 130	1	20
Butadiene	25.0	25.0		ug/L		100	12 - 150	5	35
Hexane	25.0	24.7		ug/L		99	54 - 132	4	28
m-Xylene & p-Xylene	25.0	26.8		ug/L		107	70 - 130	2	20
o-Xylene	25.0	26.9		ug/L		108	70 - 130	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*94*		*70 - 130*
Toluene-d8 (Surr)	*92*		*70 - 130*

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

Lab Sample ID: LCSD 550-54037/18
Matrix: Water
Analysis Batch: 54037

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

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*

Lab Sample ID: 550-38312-1 MS
Matrix: Water
Analysis Batch: 54037

Client Sample ID: BP-WR-367A-WG-343-011215
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	21	M2	25.0	26.5	M2	ug/L		21	29 - 139
Benzene	ND	E8	25.0	24.4		ug/L		98	68 - 131
Bromobenzene	ND	E8	25.0	25.2		ug/L		101	70 - 130
Chlorobromomethane	ND	E8	25.0	24.5		ug/L		98	64 - 132
Dichlorobromomethane	ND	E8	25.0	26.4		ug/L		106	63 - 138
Bromoform	ND	E8	25.0	29.6		ug/L		119	60 - 128
Bromomethane	ND	E8	25.0	22.1		ug/L		89	47 - 144
2-Butanone (MEK)	ND	E8	25.0	16.7		ug/L		67	31 - 143
n-Butylbenzene	ND	E8	25.0	25.3		ug/L		101	69 - 140
sec-Butylbenzene	ND	E8	25.0	25.9		ug/L		103	72 - 136
Carbon disulfide	ND	E8	25.0	24.1		ug/L		97	45 - 150
Carbon tetrachloride	ND	E8	25.0	28.7		ug/L		115	65 - 147
Chlorobenzene	ND	E8	25.0	25.1		ug/L		100	70 - 130
Chloroethane	ND	E8	25.0	23.3		ug/L		93	57 - 139
Chloroform	ND	E8	25.0	25.4		ug/L		102	63 - 131
Chloromethane	ND	E8	25.0	20.4		ug/L		82	47 - 134
2-Chlorotoluene	ND	E8	25.0	24.9		ug/L		100	71 - 131
4-Chlorotoluene	ND	E8	25.0	24.7		ug/L		99	70 - 130
Chlorodibromomethane	ND	E8	25.0	28.6		ug/L		114	65 - 134
1,2-Dibromo-3-Chloropropane	ND	E8	25.0	27.4		ug/L		110	53 - 145
Ethylene Dibromide	ND	E8	25.0	25.9		ug/L		104	70 - 130
Dibromomethane	ND	E8	25.0	24.8		ug/L		99	66 - 136
1,2-Dichlorobenzene	ND	E8	25.0	25.0		ug/L		100	70 - 130
1,3-Dichlorobenzene	ND	E8	25.0	25.3		ug/L		101	70 - 130
1,4-Dichlorobenzene	ND	E8	25.0	24.8		ug/L		99	70 - 130
Dichlorodifluoromethane	1.7		25.0	20.1		ug/L		74	40 - 148
1,1-Dichloroethane	ND	E8	25.0	23.6		ug/L		94	62 - 130
1,2-Dichloroethane	ND	E8	25.0	24.1		ug/L		97	54 - 147
1,1-Dichloroethene	ND	E8	25.0	24.8		ug/L		99	57 - 137
cis-1,2-Dichloroethene	ND	E8	25.0	23.9		ug/L		96	65 - 127
trans-1,2-Dichloroethene	ND	E8	25.0	24.3		ug/L		97	62 - 131
1,2-Dichloropropane	ND	E8	25.0	23.8		ug/L		95	68 - 126
1,3-Dichloropropane	ND	E8	25.0	25.1		ug/L		100	68 - 129
2,2-Dichloropropane	ND	E8	25.0	26.3		ug/L		105	60 - 146
1,1-Dichloropropene	ND	E8	25.0	24.6		ug/L		98	64 - 134
cis-1,3-Dichloropropene	ND	E8	25.0	25.5		ug/L		102	63 - 135
trans-1,3-Dichloropropene	ND	E8	25.0	24.2		ug/L		97	58 - 136
Ethylbenzene	ND	E8	25.0	25.3		ug/L		101	74 - 134
Hexachlorobutadiene	ND	E8	25.0	26.4		ug/L		106	69 - 150
2-Hexanone	ND	E8	25.0	16.4		ug/L		65	40 - 142
Iodomethane	ND	E8	25.0	24.4		ug/L		98	53 - 150

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

Lab Sample ID: 550-38312-1 MS
Matrix: Water
Analysis Batch: 54037

Client Sample ID: BP-WR-367A-WG-343-011215
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropylbenzene	ND	E8	25.0	24.7		ug/L		99	80 - 146
4-Isopropyltoluene	ND	E8	25.0	25.9		ug/L		104	70 - 133
Methylene Chloride	ND	E8	25.0	24.2		ug/L		97	55 - 133
4-Methyl-2-pentanone (MIBK)	ND	E8	25.0	21.3		ug/L		85	52 - 143
Methyl tert-butyl ether	ND	E8	25.0	23.7		ug/L		95	67 - 138
Naphthalene	0.60	E4	25.0	24.3		ug/L		95	67 - 146
N-Propylbenzene	ND	E8	25.0	24.9		ug/L		100	74 - 140
Styrene	ND	E8	25.0	26.2		ug/L		105	43 - 144
1,1,1,2-Tetrachloroethane	ND	E8	25.0	28.0		ug/L		112	70 - 130
1,1,2,2-Tetrachloroethane	ND	E8	25.0	25.4		ug/L		102	63 - 137
Tetrachloroethene	10		25.0	33.6		ug/L		94	67 - 131
Toluene	ND	E8	25.0	24.8		ug/L		99	65 - 138
1,2,3-Trichlorobenzene	0.59	E4	25.0	24.3		ug/L		95	74 - 139
1,2,4-Trichlorobenzene	ND	E8	25.0	25.0		ug/L		100	74 - 138
1,1,1-Trichloroethane	ND	E8	25.0	25.9		ug/L		104	64 - 138
1,1,2-Trichloroethane	ND	E8	25.0	24.8		ug/L		99	63 - 132
Trichloroethene	0.41	E4	25.0	25.0		ug/L		98	66 - 132
Trichlorofluoromethane	ND	E8	25.0	24.9		ug/L		99	62 - 150
1,2,3-Trichloropropane	ND	E8	25.0	25.1		ug/L		100	68 - 130
1,2,4-Trimethylbenzene	ND	E8	25.0	25.5		ug/L		102	63 - 135
1,3,5-Trimethylbenzene	ND	E8	25.0	25.4		ug/L		102	66 - 137
Vinyl acetate	ND	E8	25.0	24.5		ug/L		98	47 - 150
Vinyl chloride	ND	E8	25.0	22.8		ug/L		91	55 - 146
Xylenes, Total	ND	E8	50.0	51.3		ug/L		103	68 - 131
Butadiene	ND	E8	25.0	24.1		ug/L		97	10 - 150
Hexane	ND	E8	25.0	24.3		ug/L		97	46 - 139
m-Xylene & p-Xylene	ND	E8	25.0	25.4		ug/L		101	58 - 138
o-Xylene	ND	E8	25.0	25.9		ug/L		104	66 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*83*		*70 - 130*
Toluene-d8 (Surr)	*81*		*70 - 130*
4-Bromofluorobenzene (Surr)	*86*		*70 - 130*

Lab Sample ID: 550-38312-1 MSD
Matrix: Water
Analysis Batch: 54037

Client Sample ID: BP-WR-367A-WG-343-011215
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	21	M2	25.0	26.7	M2	ug/L		22	29 - 139	1	35
Benzene	ND	E8	25.0	23.6		ug/L		94	68 - 131	3	32
Bromobenzene	ND	E8	25.0	24.6		ug/L		98	70 - 130	3	28
Chlorobromomethane	ND	E8	25.0	24.0		ug/L		96	64 - 132	2	35
Dichlorobromomethane	ND	E8	25.0	25.0		ug/L		100	63 - 138	5	31
Bromoform	ND	E8	25.0	28.3		ug/L		113	60 - 128	5	31
Bromomethane	ND	E8	25.0	22.3		ug/L		89	47 - 144	1	35
2-Butanone (MEK)	ND	E8	25.0	16.5		ug/L		66	31 - 143	1	35
n-Butylbenzene	ND	E8	25.0	25.1		ug/L		100	69 - 140	1	32

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

Lab Sample ID: 550-38312-1 MSD
Matrix: Water
Analysis Batch: 54037

Client Sample ID: BP-WR-367A-WG-343-011215
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
sec-Butylbenzene	ND	E8	25.0	25.5		ug/L		102	72 - 136	2	33
Carbon disulfide	ND	E8	25.0	23.6		ug/L		95	45 - 150	2	35
Carbon tetrachloride	ND	E8	25.0	28.1		ug/L		112	65 - 147	2	35
Chlorobenzene	ND	E8	25.0	24.2		ug/L		97	70 - 130	3	30
Chloroethane	ND	E8	25.0	23.7		ug/L		95	57 - 139	2	35
Chloroform	ND	E8	25.0	24.5		ug/L		98	63 - 131	4	33
Chloromethane	ND	E8	25.0	21.0		ug/L		84	47 - 134	3	35
2-Chlorotoluene	ND	E8	25.0	24.5		ug/L		98	71 - 131	2	29
4-Chlorotoluene	ND	E8	25.0	24.3		ug/L		97	70 - 130	2	28
Chlorodibromomethane	ND	E8	25.0	27.2		ug/L		109	65 - 134	5	33
1,2-Dibromo-3-Chloropropane	ND	E8	25.0	26.0		ug/L		104	53 - 145	5	35
Ethylene Dibromide	ND	E8	25.0	24.9		ug/L		100	70 - 130	4	33
Dibromomethane	ND	E8	25.0	23.4		ug/L		94	66 - 136	6	35
1,2-Dichlorobenzene	ND	E8	25.0	24.7		ug/L		99	70 - 130	1	27
1,3-Dichlorobenzene	ND	E8	25.0	24.5		ug/L		98	70 - 130	3	28
1,4-Dichlorobenzene	ND	E8	25.0	24.2		ug/L		97	70 - 130	2	26
Dichlorodifluoromethane	1.7		25.0	20.5		ug/L		75	40 - 148	2	35
1,1-Dichloroethane	ND	E8	25.0	23.6		ug/L		94	62 - 130	0	34
1,2-Dichloroethane	ND	E8	25.0	23.5		ug/L		94	54 - 147	3	35
1,1-Dichloroethene	ND	E8	25.0	24.8		ug/L		99	57 - 137	0	35
cis-1,2-Dichloroethene	ND	E8	25.0	23.5		ug/L		94	65 - 127	2	34
trans-1,2-Dichloroethene	ND	E8	25.0	22.7		ug/L		91	62 - 131	7	35
1,2-Dichloropropane	ND	E8	25.0	22.6		ug/L		91	68 - 126	5	32
1,3-Dichloropropane	ND	E8	25.0	23.5		ug/L		94	68 - 129	6	33
2,2-Dichloropropane	ND	E8	25.0	24.8		ug/L		99	60 - 146	6	35
1,1-Dichloropropene	ND	E8	25.0	24.0		ug/L		96	64 - 134	2	34
cis-1,3-Dichloropropene	ND	E8	25.0	24.8		ug/L		99	63 - 135	3	35
trans-1,3-Dichloropropene	ND	E8	25.0	23.3		ug/L		93	58 - 136	4	35
Ethylbenzene	ND	E8	25.0	24.5		ug/L		98	74 - 134	3	32
Hexachlorobutadiene	ND	E8	25.0	25.6		ug/L		102	69 - 150	3	32
2-Hexanone	ND	E8	25.0	15.3		ug/L		61	40 - 142	7	35
Iodomethane	ND	E8	25.0	23.9		ug/L		95	53 - 150	2	35
Isopropylbenzene	ND	E8	25.0	24.3		ug/L		97	80 - 146	1	32
4-Isopropyltoluene	ND	E8	25.0	25.5		ug/L		102	70 - 133	2	32
Methylene Chloride	ND	E8	25.0	23.8		ug/L		95	55 - 133	2	35
4-Methyl-2-pentanone (MIBK)	ND	E8	25.0	20.2		ug/L		81	52 - 143	5	35
Methyl tert-butyl ether	ND	E8	25.0	23.1		ug/L		93	67 - 138	2	21
Naphthalene	0.60	E4	25.0	23.3		ug/L		91	67 - 146	4	29
N-Propylbenzene	ND	E8	25.0	24.5		ug/L		98	74 - 140	2	32
Styrene	ND	E8	25.0	24.7		ug/L		99	43 - 144	6	35
1,1,1,2-Tetrachloroethane	ND	E8	25.0	26.7		ug/L		107	70 - 130	5	30
1,1,2,2-Tetrachloroethane	ND	E8	25.0	24.8		ug/L		99	63 - 137	2	32
Tetrachloroethene	10		25.0	34.2		ug/L		96	67 - 131	2	31
Toluene	ND	E8	25.0	24.1		ug/L		96	65 - 138	3	33
1,2,3-Trichlorobenzene	0.59	E4	25.0	23.4		ug/L		91	74 - 139	4	26
1,2,4-Trichlorobenzene	ND	E8	25.0	24.0		ug/L		96	74 - 138	4	26
1,1,1-Trichloroethane	ND	E8	25.0	25.3		ug/L		101	64 - 138	2	35
1,1,2-Trichloroethane	ND	E8	25.0	24.2		ug/L		97	63 - 132	3	35

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

Lab Sample ID: 550-38312-1 MSD
Matrix: Water
Analysis Batch: 54037

Client Sample ID: BP-WR-367A-WG-343-011215
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichloroethene	0.41	E4	25.0	24.2		ug/L		95	66 - 132	3	29
Trichlorofluoromethane	ND	E8	25.0	24.3		ug/L		97	62 - 150	3	35
1,2,3-Trichloropropane	ND	E8	25.0	24.5		ug/L		98	68 - 130	2	32
1,2,4-Trimethylbenzene	ND	E8	25.0	25.2		ug/L		101	63 - 135	1	31
1,3,5-Trimethylbenzene	ND	E8	25.0	25.2		ug/L		101	66 - 137	1	30
Vinyl acetate	ND	E8	25.0	22.5		ug/L		90	47 - 150	9	35
Vinyl chloride	ND	E8	25.0	22.7		ug/L		91	55 - 146	1	35
Xylenes, Total	ND	E8	50.0	49.8		ug/L		100	68 - 131	3	31
Butadiene	ND	E8	25.0	25.1		ug/L		101	10 - 150	4	35
Hexane	ND	E8	25.0	23.7		ug/L		95	46 - 139	3	35
m-Xylene & p-Xylene	ND	E8	25.0	24.5		ug/L		98	58 - 138	3	29
o-Xylene	ND	E8	25.0	25.3		ug/L		101	66 - 137	3	26

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*90*		*70 - 130*
Toluene-d8 (Surr)	*86*		*70 - 130*
4-Bromofluorobenzene (Surr)	*88*		*70 - 130*

QC Association Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-38312-1

GC/MS VOA

Analysis Batch: 54037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-38312-1	BP-WR-367A-WG-343-011215	Total/NA	Water	8260B	
550-38312-1 MS	BP-WR-367A-WG-343-011215	Total/NA	Water	8260B	
550-38312-1 MSD	BP-WR-367A-WG-343-011215	Total/NA	Water	8260B	
550-38312-2	BP-WR-367A-WG-363-011215	Total/NA	Water	8260B	
550-38312-3	BP-C-48-WG-300-011215	Total/NA	Water	8260B	
550-38312-4	BP-CVA-WG-321.5-011215	Total/NA	Water	8260B	
550-38312-5	BP-WR-274A-WG-316-011315	Total/NA	Water	8260B	
550-38312-6	BP-WR-274A-WG-326-011315	Total/NA	Water	8260B	
550-38312-7	BP-WR-274A-WG-336-011315	Total/NA	Water	8260B	
550-38312-8	BP-R-68A-WG-342-011315	Total/NA	Water	8260B	
550-38312-9	BP-WR-273A-WG-323-011315	Total/NA	Water	8260B	
550-38312-10	BP-TB01-011315	Total/NA	Water	8260B	
LCS 550-54037/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 550-54037/18	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 550-54037/5	Method Blank	Total/NA	Water	8260B	

Lab Chronicle

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-38312-1

Client Sample ID: BP-WR-367A-WG-343-011215 — Lab Sample ID: 550-38312-1

Date Collected: 01/12/15 12:45 — **Matrix: Water**
Date Received: 01/13/15 15:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	54037	01/15/15 09:46	UT	TAL PHX

Client Sample ID: BP-WR-367A-WG-363-011215 — Lab Sample ID: 550-38312-2

Date Collected: 01/12/15 12:50 — **Matrix: Water**
Date Received: 01/13/15 15:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	54037	01/15/15 11:25	UT	TAL PHX

Client Sample ID: BP-C-48-WG-300-011215 — Lab Sample ID: 550-38312-3

Date Collected: 01/12/15 13:40 — **Matrix: Water**
Date Received: 01/13/15 15:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	54037	01/15/15 11:57	UT	TAL PHX

Client Sample ID: BP-CVA-WG-321.5-011215 — Lab Sample ID: 550-38312-4

Date Collected: 01/12/15 14:20 — **Matrix: Water**
Date Received: 01/13/15 15:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	54037	01/15/15 12:30	UT	TAL PHX

Client Sample ID: BP-WR-274A-WG-316-011315 — Lab Sample ID: 550-38312-5

Date Collected: 01/13/15 10:40 — **Matrix: Water**
Date Received: 01/13/15 15:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	54037	01/15/15 13:02	UT	TAL PHX

Client Sample ID: BP-WR-274A-WG-326-011315 — Lab Sample ID: 550-38312-6

Date Collected: 01/13/15 10:50 — **Matrix: Water**
Date Received: 01/13/15 15:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	54037	01/15/15 13:35	UT	TAL PHX

Lab Chronicle

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-38312-1

Client Sample ID: BP-WR-274A-WG-336-011315 — Lab Sample ID: 550-38312-7

Date Collected: 01/13/15 11:00 — **Matrix: Water**
Date Received: 01/13/15 15:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	54037	01/15/15 14:08	UT	TAL PHX

Client Sample ID: BP-R-68A-WG-342-011315 — Lab Sample ID: 550-38312-8

Date Collected: 01/13/15 11:30 — **Matrix: Water**
Date Received: 01/13/15 15:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	54037	01/15/15 14:40	UT	TAL PHX

Client Sample ID: BP-WR-273A-WG-323-011315 — Lab Sample ID: 550-38312-9

Date Collected: 01/13/15 12:15 — **Matrix: Water**
Date Received: 01/13/15 15:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	54037	01/15/15 15:13	UT	TAL PHX

Client Sample ID: BP-TB01-011315 — Lab Sample ID: 550-38312-10

Date Collected: 01/13/15 15:00 — **Matrix: Water**
Date Received: 01/13/15 15:54

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	54037	01/15/15 08:28	UT	TAL PHX

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Certification Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-38312-1

Laboratory: TestAmerica Phoenix

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arizona	State Program	9	AZ0728	06-09-15

Analysis Method	Prep Method	Matrix	Analyte

Method Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-38312-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PHX

Protocol References:

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

Laboratory References:

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

TestAmerica Phoenix
4625 E. Cotton Center Blvd.
Suite 189
Phoenix, AZ 85040
Phone: 602.437.3340 Fax:

Chain of Custody Record

036311

550-38312

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: [redacted]	Site Contact: ~~AMEC~~ B. COMBS	Date: 01/13/15	COC No:
Company Name: AMEC	Tel/Fax:	Lab Contact: VIC NIELSON	Carrier:	1 of 1 COCs
Address: 4600 E. WASHINGTON ST #600	Analysis Turnaround Time			Sampler: COMBS / KEEGAN
City/State/Zip: PHOENIX, AZ 85034	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone:	TAT if different from Below _____			Walk-in Client:
Fax:	☐ 2 weeks			Lab Sampling:
Project Name: BROADWAY / PANTANO	☐ 1 week			
~~Site~~ # 14-2014-2029	☐ 2 days			Job / SDG No.:
P O #	☐ 1 day			

550-38312 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	8260B		Sample Specific Notes:
BP-WR-367A-WG-343-011215	011215	1245	G	Aq	3			X	-01	DEQ# 60656
BP-WR-367A-WG-363-011215	↓	1250	↓	↓	3			X	-02	DEQ# 60656
BP-C-48-WG-300-011215	↓	1340	↓	↓	3			X	-03	
BP-CVA-WG-321.5-011215	↓	1420	↓	↓	3			X	-04	
BP-WR-274A-WG-316-011315	011315	1040	G	Aq	3			X	-05	DEQ# 57289
BP-WR-274A-WG-326-011315	↓	1050	↓	↓	3			X	-06	DEQ# 57289
BP-WR-274A-WG-336-011315	↓	1100	↓	↓	3			X	-07	DEQ# 57289
BP-R-68A-WG-342-011315	↓	1130	↓	↓	3			X	-08	DEQ# 60650
BP-WR-273A-WG-323-011315	↓	1215	↓	↓	3			X	-09	DEQ# 57288
BP-TB01-011315	011315	1500			1				-10	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments: MANAGER: ALEX YANAKAKIS 520-247-8736 * REPORT MDR 2.4°C

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	AMEC	1/13/15 15	54		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: [signature]	Company: TA	Date/Time: 1-13-15 1554

Login Sample Receipt Checklist

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 550-38312-1

Login Number: 38312

List Source: TestAmerica Phoenix

List Number: 1

Creator: Gravlin, Andrea

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

TestAmerica Job ID: 550-39671-1
Client Project/Site: 14-2014-2029-3.3

For:
AMEC Foster Wheeler E & I, Inc
4600 E. Washington St
6th Floor
Phoenix, Arizona 85034

Attn: Mr. Alex Yiannakakis

Authorized for release by:
2/28/2015 12:43:03 PM

Vic Nielsen, Project Manager II
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LINKS

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Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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

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

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
R6	LFB/LFBD RPD exceeded method control limit. Recovery met acceptance criteria.
B1	Target analyte detected in method blank at or above the method reporting limit.
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL.
V1	CCV recovery was above method acceptance limits. The analyte was not detected in the sample.

GC/MS VOA TICs

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
T4	Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

GC/MS Semi VOA

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
L5	The associated blank spike recovery was above laboratory/method acceptance limits. This analyte was not detected in the sample.
L4	The associated blank spike recovery was below method acceptance limits.

GC VOA

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.

HPLC/IC

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL.

Metals

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL.
B1	Target analyte detected in method blank at or above the method reporting limit.

General Chemistry

Qualifier	Qualifier Description
H5	This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL.
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.

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
CFL	Contains Free Liquid
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

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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)

Job ID: 550-39671-1

Laboratory: TestAmerica Phoenix

Narrative

Job Narrative
550-39671-1

Comments
No additional comments.

Receipt
The samples were received on 2/6/2015 9:57 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6º C.

GC/MS VOA
Method(s) 8260B: The method blank for batch 56263 contained 1,2,4-Trimethylbenzene above the reporting limit (RL). All samples with no hits will be reported with a B1 qualifier. Samples with hits will be re-analyzed, see batch 56263.

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

GC/MS Semi VOA
Method(s) 8270C: A deviation from the Standard Operating Procedure (SOP) occurred. The Reporting Limit (RL) for the target Benzyl Alcohol was elevated from 10 ug/L to 20 ug/L. There was difficulty detecting this analyte at the original RL level due to the matrix effect of the samples analyzed previous to the new calbration.

Method(s) 3510C, 8270C: The analyte n-Nitrosodiphenylamine in the Laboratory Control Sample (LCS) and Laboratory Control Sample Duplicate (LCSD) was recovered outside control limits. This analyte was biased low in the LCS and LCSD and was not detected in the associated sample. The data has been reported per PM instructions with the L4 data qualifier.

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

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

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

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

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

Organic Prep
Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 56120.

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

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

Sample Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39671-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-39671-1	WR-367A-363.48-H-020515	Water	02/05/15 11:55	02/06/15 09:57
550-39671-2	WR-274A-335.89-H-020515	Water	02/05/15 15:50	02/06/15 09:57
550-39671-3	TB	Water	02/05/15 14:00	02/06/15 09:57

Detection Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39671-1

Client Sample ID: WR-367A-363.48-H-020515 — Lab Sample ID: 550-39671-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dichlorodifluoromethane	2.0		0.50	0.15	ug/L	1		8260B	Total/NA
Tetrachloroethene	7.4		0.50	0.18	ug/L	1		8260B	Total/NA
Trichloroethene	0.41	E4	0.50	0.24	ug/L	1		8260B	Total/NA
1,2,4-Trimethylbenzene	0.40	B1 E4	0.50	0.25	ug/L	1		8260B	Total/NA
Methane (FID)	0.011		0.00099	0.00025	mg/L	1		RSK-175	Total/NA
Chloride	6.6		2.0	0.29	mg/L	1		300.0	Total/NA
Fluoride	0.14	E4	0.40	0.040	mg/L	1		300.0	Total/NA
Nitrate as N	3.3		0.10	0.051	mg/L	1		300.0	Total/NA
Sulfate	41		2.0	0.21	mg/L	1		300.0	Total/NA
Arsenic	0.0070	E4	0.10	0.0062	mg/L	1		6010B	Total/NA
Barium	0.19		0.010	0.0020	mg/L	1		6010B	Total/NA
Calcium	72		2.0	0.069	mg/L	1		6010B	Total/NA
Chromium	0.0022	E4	0.010	0.0010	mg/L	1		6010B	Total/NA
Lead	0.0060	B1 E4	0.015	0.0026	mg/L	1		6010B	Total/NA
Magnesium	6.8		2.0	0.050	mg/L	1		6010B	Total/NA
Hardness as calcium carbonate	210		13	13	mg/L	1		SM 2340B	Total/NA
Alkalinity as CaCO3	230		6.0	6.0	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	230		6.0	6.0	mg/L	1		SM 2320B	Total/NA
pH	7.54	H5	1.68	1.68	SU	1		SM 4500 H+ B	Total/NA
Temperature	24.1	H5	0.100	0.100	Degrees C	1		SM 4500 H+ B	Total/NA
Dissolved Organic Carbon	0.56	E4	1.0	0.34	mg/L	1		SM 5310B	Dissolved

Client Sample ID: WR-274A-335.89-H-020515 — Lab Sample ID: 550-39671-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.27	E4	0.50	0.12	ug/L	1		8260B	Total/NA
Chloroform	0.43	E4	0.50	0.13	ug/L	1		8260B	Total/NA
Dichlorodifluoromethane	4.8		0.50	0.15	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	0.33	E4 R6	0.50	0.14	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	30		0.50	0.21	ug/L	1		8260B	Total/NA
1,2-Dichloropropane	0.94		0.50	0.23	ug/L	1		8260B	Total/NA
Tetrachloroethene	83		0.50	0.18	ug/L	1		8260B	Total/NA
Trichloroethene	23		0.50	0.24	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	0.49	E4	0.50	0.15	ug/L	1		8260B	Total/NA
1,2,4-Trimethylbenzene	0.42	B1 E4	0.50	0.25	ug/L	1		8260B	Total/NA
Methane (FID)	0.0027		0.00099	0.00025	mg/L	1		RSK-175	Total/NA
Bromide	0.15	E4	0.50	0.051	mg/L	1		300.0	Total/NA
Chloride	10		2.0	0.29	mg/L	1		300.0	Total/NA
Fluoride	0.11	E4	0.40	0.040	mg/L	1		300.0	Total/NA
Nitrate as N	0.93		0.10	0.051	mg/L	1		300.0	Total/NA
Sulfate	28		2.0	0.21	mg/L	1		300.0	Total/NA
Barium	0.32		0.010	0.0020	mg/L	1		6010B	Total/NA
Calcium	99		2.0	0.069	mg/L	1		6010B	Total/NA
Chromium	0.0071	E4	0.010	0.0010	mg/L	1		6010B	Total/NA
Lead	0.0040	B1 E4	0.015	0.0026	mg/L	1		6010B	Total/NA
Magnesium	11		2.0	0.050	mg/L	1		6010B	Total/NA
Hardness as calcium carbonate	290		13	13	mg/L	1		SM 2340B	Total/NA
Alkalinity as CaCO3	410		6.0	6.0	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	410		6.0	6.0	mg/L	1		SM 2320B	Total/NA
pH	7.19	H5	1.68	1.68	SU	1		SM 4500 H+ B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: WR-274A-335.89-H-020515 (Continued) — Lab Sample ID: 550-39671-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Temperature	23.7	H5	0.100	0.100	Degrees C	1		SM 4500 H+ B	Total/NA
Total Organic Carbon	1.0		1.0	0.34	mg/L	1		SM 5310B	Total/NA

Client Sample ID: TB — Lab Sample ID: 550-39671-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,3,5-Trimethylbenzene	0.21	E4	0.50	0.21	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: WR-367A-363.48-H-020515

Lab Sample ID: 550-39671-1

Date Collected: 02/05/15 11:55

Matrix: Water

Date Received: 02/06/15 09:57

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	E8	10	7.3	ug/L			02/13/15 07:56	1
Benzene	ND	E8	0.50	0.12	ug/L			02/13/15 07:56	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			02/13/15 07:56	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			02/13/15 07:56	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			02/13/15 07:56	1
Bromoform	ND	E8	1.0	0.37	ug/L			02/13/15 07:56	1
Bromomethane	ND	E8	1.0	0.67	ug/L			02/13/15 07:56	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			02/13/15 07:56	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			02/13/15 07:56	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			02/13/15 07:56	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			02/13/15 07:56	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			02/13/15 07:56	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			02/13/15 07:56	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			02/13/15 07:56	1
Chloroethane	ND	E8	1.0	0.25	ug/L			02/13/15 07:56	1
Chloroform	ND	E8	0.50	0.13	ug/L			02/13/15 07:56	1
Chloromethane	ND	E8	1.0	0.21	ug/L			02/13/15 07:56	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			02/13/15 07:56	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			02/13/15 07:56	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			02/13/15 07:56	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			02/13/15 07:56	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			02/13/15 07:56	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			02/13/15 07:56	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			02/13/15 07:56	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			02/13/15 07:56	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			02/13/15 07:56	1
Dichlorodifluoromethane	**2.0**		0.50	0.15	ug/L			02/13/15 07:56	1
1,1-Dichloroethane	ND	E8 R6	0.50	0.14	ug/L			02/13/15 07:56	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			02/13/15 07:56	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			02/13/15 07:56	1
cis-1,2-Dichloroethene	ND	E8	0.50	0.21	ug/L			02/13/15 07:56	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			02/13/15 07:56	1
1,2-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/13/15 07:56	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/13/15 07:56	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			02/13/15 07:56	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			02/13/15 07:56	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			02/13/15 07:56	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			02/13/15 07:56	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			02/13/15 07:56	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			02/13/15 07:56	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			02/13/15 07:56	1
Iodomethane	ND	E8	2.5	0.21	ug/L			02/13/15 07:56	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			02/13/15 07:56	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			02/13/15 07:56	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			02/13/15 07:56	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			02/13/15 07:56	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			02/13/15 07:56	1
Naphthalene	ND	E8	2.5	0.51	ug/L			02/13/15 07:56	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			02/13/15 07:56	1

Client Sample ID: WR-367A-363.48-H-020515

Lab Sample ID: 550-39671-1

Date Collected: 02/05/15 11:55

Matrix: Water

Date Received: 02/06/15 09:57

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND	E8	0.50	0.17	ug/L			02/13/15 07:56	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			02/13/15 07:56	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			02/13/15 07:56	1
Tetrachloroethene	**7.4**		0.50	0.18	ug/L			02/13/15 07:56	1
Toluene	ND	E8	0.50	0.28	ug/L			02/13/15 07:56	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			02/13/15 07:56	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			02/13/15 07:56	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			02/13/15 07:56	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			02/13/15 07:56	1
Trichloroethene	**0.41**	**E4**	0.50	0.24	ug/L			02/13/15 07:56	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			02/13/15 07:56	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			02/13/15 07:56	1
1,2,4-Trimethylbenzene	**0.40**	**B1 E4**	0.50	0.25	ug/L			02/13/15 07:56	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			02/13/15 07:56	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			02/13/15 07:56	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			02/13/15 07:56	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			02/13/15 07:56	1
Butadiene	ND	E8	2.0	1.7	ug/L			02/13/15 07:56	1
Hexane	ND	E8	2.0	1.6	ug/L			02/13/15 07:56	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*02/13/15 07:56*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*02/13/15 07:56*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*02/13/15 07:56*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*02/13/15 07:56*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*02/13/15 07:56*	*1*
2-ethoxy-2-methyl butane TIC	*ND*	*E8 T4*	*ug/L*			*919-94-8*		*02/13/15 07:56*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*104*		*70 - 130*		*02/13/15 07:56*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*02/13/15 07:56*	*1*
4-Bromofluorobenzene (Surr)	*83*		*70 - 130*		*02/13/15 07:56*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND	E8	0.0020	0.00050	mg/L			02/09/15 17:32	1
Ethene	ND	E8	0.0028	0.00053	mg/L			02/09/15 17:32	1
Methane (FID)	**0.011**		0.00099	0.00025	mg/L			02/09/15 17:32	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND	E8	0.50	0.051	mg/L			02/06/15 16:50	1
Chloride	**6.6**		2.0	0.29	mg/L			02/06/15 16:50	1
Fluoride	**0.14**	**E4**	0.40	0.040	mg/L			02/06/15 16:50	1
Nitrate as N	**3.3**		0.10	0.051	mg/L			02/06/15 16:50	1
Nitrite as N	ND	E8	0.10	0.032	mg/L			02/06/15 16:50	1
Sulfate	**41**		2.0	0.21	mg/L			02/06/15 16:50	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.0070**	**E4**	0.10	0.0062	mg/L		02/09/15 07:55	02/10/15 21:21	1

Client Sample ID: WR-367A-363.48-H-020515

Lab Sample ID: 550-39671-1

Date Collected: 02/05/15 11:55

Matrix: Water

Date Received: 02/06/15 09:57

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	**0.19**		0.010	0.0020	mg/L		02/09/15 07:55	02/10/15 21:21	1
Cadmium	ND	E8	0.0010	0.00040	mg/L		02/09/15 07:55	02/10/15 21:21	1
Calcium	**72**		2.0	0.069	mg/L		02/09/15 07:55	02/10/15 21:21	1
Chromium	**0.0022**	**E4**	0.010	0.0010	mg/L		02/09/15 07:55	02/10/15 21:21	1
Lead	**0.0060**	**B1 E4**	0.015	0.0026	mg/L		02/09/15 07:55	02/10/15 21:21	1
Magnesium	**6.8**		2.0	0.050	mg/L		02/09/15 07:55	02/10/15 21:21	1
Selenium	ND	E8	0.10	0.0076	mg/L		02/09/15 07:55	02/10/15 21:21	1
Silver	ND	E8	0.010	0.00050	mg/L		02/09/15 07:55	02/10/15 21:21	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	E8	0.00050	0.000030	mg/L		02/09/15 08:30	02/09/15 12:40	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**210**		13	13	mg/L			02/12/15 20:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**230**		6.0	6.0	mg/L			02/10/15 08:41	1
Bicarbonate Alkalinity as CaCO3	**230**		6.0	6.0	mg/L			02/10/15 08:41	1
Carbonate Alkalinity as CaCO3	ND		6.0	6.0	mg/L			02/10/15 08:41	1
Alkalinity, Phenolphthalein	ND		6.0	6.0	mg/L			02/10/15 08:41	1
Hydroxide Alkalinity as CaCO3	ND		6.0	6.0	mg/L			02/10/15 08:41	1
pH	**7.54**	**H5**	1.68	1.68	SU			02/06/15 13:23	1
Temperature	**24.1**	**H5**	0.100	0.100	Degrees C			02/06/15 13:23	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	**0.56**	**E4**	1.0	0.34	mg/L			02/27/15 17:52	1

Client Sample ID: WR-274A-335.89-H-020515

Lab Sample ID: 550-39671-2

Date Collected: 02/05/15 15:50

Matrix: Water

Date Received: 02/06/15 09:57

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	E8	10	7.3	ug/L			02/13/15 08:28	1
Benzene	**0.27**	**E4**	0.50	0.12	ug/L			02/13/15 08:28	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			02/13/15 08:28	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			02/13/15 08:28	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			02/13/15 08:28	1
Bromoform	ND	E8	1.0	0.37	ug/L			02/13/15 08:28	1
Bromomethane	ND	E8	1.0	0.67	ug/L			02/13/15 08:28	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			02/13/15 08:28	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			02/13/15 08:28	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			02/13/15 08:28	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			02/13/15 08:28	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			02/13/15 08:28	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			02/13/15 08:28	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			02/13/15 08:28	1

Client Sample ID: WR-274A-335.89-H-020515

Lab Sample ID: 550-39671-2

Date Collected: 02/05/15 15:50

Matrix: Water

Date Received: 02/06/15 09:57

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	E8	1.0	0.25	ug/L			02/13/15 08:28	1
Chloroform	**0.43**	**E4**	0.50	0.13	ug/L			02/13/15 08:28	1
Chloromethane	ND	E8	1.0	0.21	ug/L			02/13/15 08:28	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			02/13/15 08:28	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			02/13/15 08:28	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			02/13/15 08:28	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			02/13/15 08:28	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			02/13/15 08:28	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			02/13/15 08:28	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			02/13/15 08:28	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			02/13/15 08:28	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			02/13/15 08:28	1
Dichlorodifluoromethane	**4.8**		0.50	0.15	ug/L			02/13/15 08:28	1
1,1-Dichloroethane	**0.33**	**E4 R6**	0.50	0.14	ug/L			02/13/15 08:28	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			02/13/15 08:28	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			02/13/15 08:28	1
cis-1,2-Dichloroethene	**30**		0.50	0.21	ug/L			02/13/15 08:28	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			02/13/15 08:28	1
1,2-Dichloropropane	**0.94**		0.50	0.23	ug/L			02/13/15 08:28	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/13/15 08:28	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			02/13/15 08:28	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			02/13/15 08:28	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			02/13/15 08:28	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			02/13/15 08:28	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			02/13/15 08:28	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			02/13/15 08:28	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			02/13/15 08:28	1
Iodomethane	ND	E8	2.5	0.21	ug/L			02/13/15 08:28	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			02/13/15 08:28	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			02/13/15 08:28	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			02/13/15 08:28	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			02/13/15 08:28	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			02/13/15 08:28	1
Naphthalene	ND	E8	2.5	0.51	ug/L			02/13/15 08:28	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			02/13/15 08:28	1
Styrene	ND	E8	0.50	0.17	ug/L			02/13/15 08:28	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			02/13/15 08:28	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			02/13/15 08:28	1
Tetrachloroethene	**83**		0.50	0.18	ug/L			02/13/15 08:28	1
Toluene	ND	E8	0.50	0.28	ug/L			02/13/15 08:28	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			02/13/15 08:28	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			02/13/15 08:28	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			02/13/15 08:28	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			02/13/15 08:28	1
Trichloroethene	**23**		0.50	0.24	ug/L			02/13/15 08:28	1
Trichlorofluoromethane	**0.49**	**E4**	0.50	0.15	ug/L			02/13/15 08:28	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			02/13/15 08:28	1
1,2,4-Trimethylbenzene	**0.42**	**B1 E4**	0.50	0.25	ug/L			02/13/15 08:28	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			02/13/15 08:28	1

Client Sample ID: WR-274A-335.89-H-020515

Lab Sample ID: 550-39671-2

Date Collected: 02/05/15 15:50

Matrix: Water

Date Received: 02/06/15 09:57

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl acetate	ND	E8	2.0	0.81	ug/L			02/13/15 08:28	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			02/13/15 08:28	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			02/13/15 08:28	1
Butadiene	ND	E8	2.0	1.7	ug/L			02/13/15 08:28	1
Hexane	ND	E8	2.0	1.6	ug/L			02/13/15 08:28	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*02/13/15 08:28*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*02/13/15 08:28*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*02/13/15 08:28*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*02/13/15 08:28*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*02/13/15 08:28*	*1*
2-ethoxy-2-methyl butane TIC	*ND*	*E8 T4*	*ug/L*			*919-94-8*		*02/13/15 08:28*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*02/13/15 08:28*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*02/13/15 08:28*	*1*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*		*02/13/15 08:28*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND	E8	10	2.5	ug/L		02/11/15 14:49	02/13/15 01:22	1
Phenol	ND	E8	10	3.8	ug/L		02/11/15 14:49	02/13/15 01:22	1
2-Chlorophenol	ND	E8	10	3.8	ug/L		02/11/15 14:49	02/13/15 01:22	1
1,3-Dichlorobenzene	ND	E8	10	3.3	ug/L		02/11/15 14:49	02/13/15 01:22	1
1,4-Dichlorobenzene	ND	E8	10	3.2	ug/L		02/11/15 14:49	02/13/15 01:22	1
1,2-Dichlorobenzene	ND	E8	10	2.8	ug/L		02/11/15 14:49	02/13/15 01:22	1
Benzyl alcohol	ND	E8 L5	20	4.1	ug/L		02/11/15 14:49	02/13/15 01:22	1
2-Methylphenol	ND	E8	10	3.0	ug/L		02/11/15 14:49	02/13/15 01:22	1
Hexachloroethane	ND	E8	10	3.8	ug/L		02/11/15 14:49	02/13/15 01:22	1
N-Nitrosodi-n-propylamine	ND	E8	10	3.1	ug/L		02/11/15 14:49	02/13/15 01:22	1
3 & 4 Methylphenol	ND	E8	10	5.7	ug/L		02/11/15 14:49	02/13/15 01:22	1
Nitrobenzene	ND	E8	10	2.4	ug/L		02/11/15 14:49	02/13/15 01:22	1
Isophorone	ND	E8	10	2.6	ug/L		02/11/15 14:49	02/13/15 01:22	1
2-Nitrophenol	ND	E8	15	5.7	ug/L		02/11/15 14:49	02/13/15 01:22	1
2,4-Dimethylphenol	ND	E8	10	5.2	ug/L		02/11/15 14:49	02/13/15 01:22	1
Benzoic acid	ND	E8	25	13	ug/L		02/11/15 14:49	02/13/15 01:22	1
Bis(2-chloroethoxy)methane	ND	E8	10	2.8	ug/L		02/11/15 14:49	02/13/15 01:22	1
2,4-Dichlorophenol	ND	E8	10	3.3	ug/L		02/11/15 14:49	02/13/15 01:22	1
1,2,4-Trichlorobenzene	ND	E8	10	3.5	ug/L		02/11/15 14:49	02/13/15 01:22	1
Naphthalene	ND	E8	10	2.7	ug/L		02/11/15 14:49	02/13/15 01:22	1
4-Chloroaniline	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/13/15 01:22	1
Hexachlorobutadiene	ND	E8	10	5.6	ug/L		02/11/15 14:49	02/13/15 01:22	1
4-Chloro-3-methylphenol	ND	E8	10	2.8	ug/L		02/11/15 14:49	02/13/15 01:22	1
2-Methylnaphthalene	ND	E8	10	2.7	ug/L		02/11/15 14:49	02/13/15 01:22	1
Hexachlorocyclopentadiene	ND	E8	10	6.9	ug/L		02/11/15 14:49	02/13/15 01:22	1
2,4,6-Trichlorophenol	ND	E8	20	2.8	ug/L		02/11/15 14:49	02/13/15 01:22	1
2,4,5-Trichlorophenol	ND	E8	20	2.6	ug/L		02/11/15 14:49	02/13/15 01:22	1
2-Chloronaphthalene	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/13/15 01:22	1
2-Nitroaniline	ND	E8	10	7.2	ug/L		02/11/15 14:49	02/13/15 01:22	1

Client Sample ID: WR-274A-335.89-H-020515

Lab Sample ID: 550-39671-2

Date Collected: 02/05/15 15:50

Matrix: Water

Date Received: 02/06/15 09:57

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND	E8	10	2.1	ug/L		02/11/15 14:49	02/13/15 01:22	1
Dimethyl phthalate	ND	E8	20	4.9	ug/L		02/11/15 14:49	02/13/15 01:22	1
2,6-Dinitrotoluene	ND	E8	10	5.8	ug/L		02/11/15 14:49	02/13/15 01:22	1
Acenaphthene	ND	E8	10	2.1	ug/L		02/11/15 14:49	02/13/15 01:22	1
3-Nitroaniline	ND	E8	10	6.4	ug/L		02/11/15 14:49	02/13/15 01:22	1
2,4-Dinitrophenol	ND	E8	50	19	ug/L		02/11/15 14:49	02/13/15 01:22	1
Dibenzofuran	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/13/15 01:22	1
2,4-Dinitrotoluene	ND	E8	10	7.9	ug/L		02/11/15 14:49	02/13/15 01:22	1
4-Nitrophenol	ND	E8	25	9.2	ug/L		02/11/15 14:49	02/13/15 01:22	1
Fluorene	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/13/15 01:22	1
4-Chlorophenyl phenyl ether	ND	E8	10	2.4	ug/L		02/11/15 14:49	02/13/15 01:22	1
Diethyl phthalate	ND	E8	10	2.5	ug/L		02/11/15 14:49	02/13/15 01:22	1
4-Nitroaniline	ND	E8	10	3.2	ug/L		02/11/15 14:49	02/13/15 01:22	1
4,6-Dinitro-2-methylphenol	ND	E8	50	18	ug/L		02/11/15 14:49	02/13/15 01:22	1
N-Nitrosodiphenylamine	ND	E8 L4	10	2.4	ug/L		02/11/15 14:49	02/13/15 01:22	1
1,2-Diphenylhydrazine(as Azobenzene)	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/13/15 01:22	1
4-Bromophenyl phenyl ether	ND	E8	10	2.7	ug/L		02/11/15 14:49	02/13/15 01:22	1
Hexachlorobenzene	ND	E8	10	2.4	ug/L		02/11/15 14:49	02/13/15 01:22	1
Pentachlorophenol	ND	E8	50	14	ug/L		02/11/15 14:49	02/13/15 01:22	1
Phenanthrene	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/13/15 01:22	1
Anthracene	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/13/15 01:22	1
Di-n-butyl phthalate	ND	E8	10	2.4	ug/L		02/11/15 14:49	02/13/15 01:22	1
Fluoranthene	ND	E8	10	2.6	ug/L		02/11/15 14:49	02/13/15 01:22	1
Pyrene	ND	E8	10	2.1	ug/L		02/11/15 14:49	02/13/15 01:22	1
Butyl benzyl phthalate	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/13/15 01:22	1
3,3'-Dichlorobenzidine	ND	E8	10	3.1	ug/L		02/11/15 14:49	02/13/15 01:22	1
Chrysene	ND	E8	10	2.3	ug/L		02/11/15 14:49	02/13/15 01:22	1
Bis(2-ethylhexyl) phthalate	ND	E8	10	2.9	ug/L		02/11/15 14:49	02/13/15 01:22	1
Di-n-octyl phthalate	ND	E8	10	2.4	ug/L		02/11/15 14:49	02/13/15 01:22	1
Benzo[b]fluoranthene	ND	E8	10	2.1	ug/L		02/11/15 14:49	02/13/15 01:22	1
Benzo[k]fluoranthene	ND	E8	10	2.6	ug/L		02/11/15 14:49	02/13/15 01:22	1
Benzo[a]pyrene	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/13/15 01:22	1
Indeno[1,2,3-cd]pyrene	ND	E8	10	3.5	ug/L		02/11/15 14:49	02/13/15 01:22	1
Dibenz(a,h)anthracene	ND	E8	10	4.1	ug/L		02/11/15 14:49	02/13/15 01:22	1
Benzo[g,h,i]perylene	ND	E8	10	3.5	ug/L		02/11/15 14:49	02/13/15 01:22	1
Benzo[a]anthracene	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/13/15 01:22	1
bis (2-chloroisopropyl) ether	ND	E8	10	2.9	ug/L		02/11/15 14:49	02/13/15 01:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*55*		*40 - 91*	*02/11/15 14:49*	*02/13/15 01:22*	*1*
Nitrobenzene-d5 (Surr)	*64*		*22 - 116*	*02/11/15 14:49*	*02/13/15 01:22*	*1*
2-Fluorophenol (Surr)	*40*		*10 - 78*	*02/11/15 14:49*	*02/13/15 01:22*	*1*
2,4,6-Tribromophenol (Surr)	*68*		*14 - 122*	*02/11/15 14:49*	*02/13/15 01:22*	*1*
p-Terphenyl-d14 (Surr)	*59*		*10 - 117*	*02/11/15 14:49*	*02/13/15 01:22*	*1*
Phenol-d5 (Surr)	*25*		*10 - 51*	*02/11/15 14:49*	*02/13/15 01:22*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND	E8	0.0020	0.00050	mg/L			02/09/15 17:45	1

Client Sample ID: WR-274A-335.89-H-020515

Lab Sample ID: 550-39671-2

Date Collected: 02/05/15 15:50

Matrix: Water

Date Received: 02/06/15 09:57

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethene	ND	E8	0.0028	0.00053	mg/L			02/09/15 17:45	1
Methane (FID)	**0.0027**		0.00099	0.00025	mg/L			02/09/15 17:45	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**0.15**	**E4**	0.50	0.051	mg/L			02/06/15 17:26	1
Chloride	**10**		2.0	0.29	mg/L			02/06/15 17:26	1
Fluoride	**0.11**	**E4**	0.40	0.040	mg/L			02/06/15 17:26	1
Nitrate as N	**0.93**		0.10	0.051	mg/L			02/06/15 17:26	1
Nitrite as N	ND	E8	0.10	0.032	mg/L			02/06/15 17:26	1
Sulfate	**28**		2.0	0.21	mg/L			02/06/15 17:26	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND	E8	0.10	0.0062	mg/L		02/09/15 07:55	02/10/15 21:24	1
Barium	**0.32**		0.010	0.0020	mg/L		02/09/15 07:55	02/10/15 21:24	1
Cadmium	ND	E8	0.0010	0.00040	mg/L		02/09/15 07:55	02/10/15 21:24	1
Calcium	**99**		2.0	0.069	mg/L		02/09/15 07:55	02/10/15 21:24	1
Chromium	**0.0071**	**E4**	0.010	0.0010	mg/L		02/09/15 07:55	02/10/15 21:24	1
Lead	**0.0040**	**B1 E4**	0.015	0.0026	mg/L		02/09/15 07:55	02/10/15 21:24	1
Magnesium	**11**		2.0	0.050	mg/L		02/09/15 07:55	02/10/15 21:24	1
Selenium	ND	E8	0.10	0.0076	mg/L		02/09/15 07:55	02/10/15 21:24	1
Silver	ND	E8	0.010	0.00050	mg/L		02/09/15 07:55	02/10/15 21:24	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	E8	0.00050	0.000030	mg/L		02/09/15 08:30	02/09/15 12:41	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**290**		13	13	mg/L			02/12/15 20:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**410**		6.0	6.0	mg/L			02/18/15 17:18	1
Bicarbonate Alkalinity as CaCO3	**410**		6.0	6.0	mg/L			02/18/15 17:18	1
Carbonate Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/18/15 17:18	1
Alkalinity, Phenolphthalein	ND	E8	6.0	6.0	mg/L			02/18/15 17:18	1
Hydroxide Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/18/15 17:18	1
pH	**7.19**	**H5**	1.68	1.68	SU			02/06/15 13:23	1
Temperature	**23.7**	**H5**	0.100	0.100	Degrees C			02/06/15 13:23	1
Total Organic Carbon	**1.0**		1.0	0.34	mg/L			02/25/15 03:47	1

Client Sample ID: TB

Lab Sample ID: 550-39671-3

Date Collected: 02/05/15 14:00

Matrix: Water

Date Received: 02/06/15 09:57

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	E8	10	7.3	ug/L			02/13/15 00:22	1
Benzene	ND	E8	0.50	0.12	ug/L			02/13/15 00:22	1

Client Sample ID: TB

Lab Sample ID: 550-39671-3

Date Collected: 02/05/15 14:00

Matrix: Water

Date Received: 02/06/15 09:57

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromobenzene	ND	E8	0.50	0.14	ug/L			02/13/15 00:22	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			02/13/15 00:22	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			02/13/15 00:22	1
Bromoform	ND	E8	1.0	0.37	ug/L			02/13/15 00:22	1
Bromomethane	ND	E8	1.0	0.67	ug/L			02/13/15 00:22	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			02/13/15 00:22	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			02/13/15 00:22	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			02/13/15 00:22	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			02/13/15 00:22	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			02/13/15 00:22	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			02/13/15 00:22	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			02/13/15 00:22	1
Chloroethane	ND	E8	1.0	0.25	ug/L			02/13/15 00:22	1
Chloroform	ND	E8	0.50	0.13	ug/L			02/13/15 00:22	1
Chloromethane	ND	E8	1.0	0.21	ug/L			02/13/15 00:22	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			02/13/15 00:22	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			02/13/15 00:22	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			02/13/15 00:22	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			02/13/15 00:22	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			02/13/15 00:22	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			02/13/15 00:22	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			02/13/15 00:22	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			02/13/15 00:22	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			02/13/15 00:22	1
Dichlorodifluoromethane	ND	E8	0.50	0.15	ug/L			02/13/15 00:22	1
1,1-Dichloroethane	ND	E8 R6	0.50	0.14	ug/L			02/13/15 00:22	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			02/13/15 00:22	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			02/13/15 00:22	1
cis-1,2-Dichloroethene	ND	E8	0.50	0.21	ug/L			02/13/15 00:22	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			02/13/15 00:22	1
1,2-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/13/15 00:22	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/13/15 00:22	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			02/13/15 00:22	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			02/13/15 00:22	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			02/13/15 00:22	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			02/13/15 00:22	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			02/13/15 00:22	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			02/13/15 00:22	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			02/13/15 00:22	1
Iodomethane	ND	E8	2.5	0.21	ug/L			02/13/15 00:22	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			02/13/15 00:22	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			02/13/15 00:22	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			02/13/15 00:22	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			02/13/15 00:22	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			02/13/15 00:22	1
Naphthalene	ND	E8	2.5	0.51	ug/L			02/13/15 00:22	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			02/13/15 00:22	1
Styrene	ND	E8	0.50	0.17	ug/L			02/13/15 00:22	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			02/13/15 00:22	1

Client Sample ID: TB

Lab Sample ID: 550-39671-3

Date Collected: 02/05/15 14:00

Matrix: Water

Date Received: 02/06/15 09:57

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			02/13/15 00:22	1
Tetrachloroethene	ND	E8	0.50	0.18	ug/L			02/13/15 00:22	1
Toluene	ND	E8	0.50	0.28	ug/L			02/13/15 00:22	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			02/13/15 00:22	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			02/13/15 00:22	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			02/13/15 00:22	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			02/13/15 00:22	1
Trichloroethene	ND	E8	0.50	0.24	ug/L			02/13/15 00:22	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			02/13/15 00:22	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			02/13/15 00:22	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			02/14/15 11:51	1
1,3,5-Trimethylbenzene	**0.21**	**E4**	0.50	0.21	ug/L			02/13/15 00:22	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			02/13/15 00:22	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			02/13/15 00:22	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			02/13/15 00:22	1
Butadiene	ND	E8	2.0	1.7	ug/L			02/13/15 00:22	1
Hexane	ND	E8	2.0	1.6	ug/L			02/13/15 00:22	1
2-ethoxy-2-methyl butane TIC	ND	E8	10	10	ug/L			02/14/15 11:51	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*02/13/15 00:22*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*02/13/15 00:22*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*02/13/15 00:22*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*02/13/15 00:22*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*02/13/15 00:22*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*100*		*70 - 130*		*02/13/15 00:22*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*		*02/14/15 11:51*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*02/13/15 00:22*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*02/14/15 11:51*	*1*
4-Bromofluorobenzene (Surr)	*85*		*70 - 130*		*02/13/15 00:22*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*02/14/15 11:51*	*1*

Surrogate Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39671-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
550-39671-1	WR-367A-363.48-H-020515	104	99	83
550-39671-2	WR-274A-335.89-H-020515	102	100	84
550-39671-3	TB	100	99	85
550-39671-3	TB	102	104	101
LCS 550-56263/3	Lab Control Sample	90	93	90
LCS 550-56363/3	Lab Control Sample	99	109	104
LCSD 550-56263/4	Lab Control Sample Dup	93	95	91
LCSD 550-56363/4	Lab Control Sample Dup	100	107	98
MB 550-56263/5	Method Blank	96	99	84
MB 550-56363/5	Method Blank	103	108	102

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	NBZ	2FP	TBP	TPH	PHL
Lab Sample ID	Client Sample ID	(40-91)	(22-116)	(10-78)	(14-122)	(10-117)	(10-51)
550-39671-2	WR-274A-335.89-H-020515	55	64	40	68	59	25
LCS 550-56120/2-A	Lab Control Sample	61	64	39	82	78	26
LCSD 550-56120/3-A	Lab Control Sample Dup	65	73	49	82	68	33
MB 550-56120/1-A	Method Blank	61	68	44	72	82	29

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
NBZ = Nitrobenzene-d5 (Surr)
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
TPH = p-Terphenyl-d14 (Surr)
PHL = Phenol-d5 (Surr)

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

Lab Sample ID: MB 550-56263/5
Matrix: Water
Analysis Batch: 56263

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	E8	10	7.3	ug/L			02/12/15 22:45	1
Benzene	ND	E8	0.50	0.12	ug/L			02/12/15 22:45	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			02/12/15 22:45	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			02/12/15 22:45	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			02/12/15 22:45	1
Bromoform	ND	E8	1.0	0.37	ug/L			02/12/15 22:45	1
Bromomethane	ND	E8	1.0	0.67	ug/L			02/12/15 22:45	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			02/12/15 22:45	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			02/12/15 22:45	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			02/12/15 22:45	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			02/12/15 22:45	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			02/12/15 22:45	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			02/12/15 22:45	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			02/12/15 22:45	1
Chloroethane	ND	E8	1.0	0.25	ug/L			02/12/15 22:45	1
Chloroform	ND	E8	0.50	0.13	ug/L			02/12/15 22:45	1
Chloromethane	ND	E8	1.0	0.21	ug/L			02/12/15 22:45	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			02/12/15 22:45	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			02/12/15 22:45	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			02/12/15 22:45	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			02/12/15 22:45	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			02/12/15 22:45	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			02/12/15 22:45	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			02/12/15 22:45	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			02/12/15 22:45	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			02/12/15 22:45	1
Dichlorodifluoromethane	ND	E8	0.50	0.15	ug/L			02/12/15 22:45	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			02/12/15 22:45	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			02/12/15 22:45	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			02/12/15 22:45	1
cis-1,2-Dichloroethene	ND	E8	0.50	0.21	ug/L			02/12/15 22:45	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			02/12/15 22:45	1
1,2-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/12/15 22:45	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/12/15 22:45	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			02/12/15 22:45	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			02/12/15 22:45	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			02/12/15 22:45	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			02/12/15 22:45	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			02/12/15 22:45	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			02/12/15 22:45	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			02/12/15 22:45	1
Iodomethane	ND	E8	2.5	0.21	ug/L			02/12/15 22:45	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			02/12/15 22:45	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			02/12/15 22:45	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			02/12/15 22:45	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			02/12/15 22:45	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			02/12/15 22:45	1
Naphthalene	ND	E8	2.5	0.51	ug/L			02/12/15 22:45	1

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

Lab Sample ID: MB 550-56263/5
Matrix: Water
Analysis Batch: 56263

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			02/12/15 22:45	1
Styrene	ND	E8	0.50	0.17	ug/L			02/12/15 22:45	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			02/12/15 22:45	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			02/12/15 22:45	1
Tetrachloroethene	ND	E8	0.50	0.18	ug/L			02/12/15 22:45	1
Toluene	ND	E8	0.50	0.28	ug/L			02/12/15 22:45	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			02/12/15 22:45	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			02/12/15 22:45	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			02/12/15 22:45	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			02/12/15 22:45	1
Trichloroethene	ND	E8	0.50	0.24	ug/L			02/12/15 22:45	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			02/12/15 22:45	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			02/12/15 22:45	1
1,2,4-Trimethylbenzene	0.657	B1	0.50	0.25	ug/L			02/12/15 22:45	1
1,3,5-Trimethylbenzene	0.237	E4	0.50	0.21	ug/L			02/12/15 22:45	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			02/12/15 22:45	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			02/12/15 22:45	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			02/12/15 22:45	1
Butadiene	ND	E8	2.0	1.7	ug/L			02/12/15 22:45	1
Hexane	ND	E8	2.0	1.6	ug/L			02/12/15 22:45	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*02/12/15 22:45*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*02/12/15 22:45*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*02/12/15 22:45*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*02/12/15 22:45*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*02/12/15 22:45*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*02/12/15 22:45*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*02/12/15 22:45*	*1*
4-Bromofluorobenzene (Surr)	*84*		*70 - 130*		*02/12/15 22:45*	*1*

Lab Sample ID: LCS 550-56263/3
Matrix: Water
Analysis Batch: 56263

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	25.0	18.7		ug/L		75	38 - 150
Benzene	25.0	25.3		ug/L		101	70 - 130
Bromobenzene	25.0	23.4		ug/L		94	70 - 130
Chlorobromomethane	25.0	22.2		ug/L		89	70 - 130
Dichlorobromomethane	25.0	22.0		ug/L		88	70 - 130
Bromoform	25.0	18.4		ug/L		73	69 - 129
Bromomethane	25.0	25.1		ug/L		100	57 - 138
2-Butanone (MEK)	25.0	18.6		ug/L		74	53 - 150
n-Butylbenzene	25.0	25.2		ug/L		101	70 - 130

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

Lab Sample ID: LCS 550-56263/3
Matrix: Water
Analysis Batch: 56263

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
sec-Butylbenzene	25.0	25.4		ug/L		102	70 - 130
Carbon disulfide	25.0	24.9		ug/L		100	64 - 145
Carbon tetrachloride	25.0	22.7		ug/L		91	70 - 143
Chlorobenzene	25.0	24.7		ug/L		99	70 - 130
Chloroethane	25.0	26.7		ug/L		107	66 - 131
Chloroform	25.0	24.0		ug/L		96	70 - 130
Chloromethane	25.0	27.6		ug/L		110	56 - 129
2-Chlorotoluene	25.0	24.7		ug/L		99	70 - 130
4-Chlorotoluene	25.0	24.5		ug/L		98	70 - 130
Chlorodibromomethane	25.0	20.6		ug/L		82	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	19.2		ug/L		77	63 - 146
Ethylene Dibromide	25.0	23.8		ug/L		95	70 - 130
Dibromomethane	25.0	23.4		ug/L		94	70 - 130
1,2-Dichlorobenzene	25.0	23.7		ug/L		95	70 - 130
1,3-Dichlorobenzene	25.0	23.9		ug/L		96	70 - 130
1,4-Dichlorobenzene	25.0	23.5		ug/L		94	70 - 130
Dichlorodifluoromethane	25.0	24.5		ug/L		98	46 - 144
1,1-Dichloroethane	25.0	23.0		ug/L		92	70 - 130
1,2-Dichloroethane	25.0	24.3		ug/L		97	66 - 139
1,1-Dichloroethene	25.0	24.8		ug/L		99	63 - 131
cis-1,2-Dichloroethene	25.0	25.0		ug/L		100	70 - 130
trans-1,2-Dichloroethene	25.0	23.7		ug/L		95	69 - 127
1,2-Dichloropropane	25.0	25.3		ug/L		101	70 - 130
1,3-Dichloropropane	25.0	24.6		ug/L		98	70 - 130
2,2-Dichloropropane	25.0	25.1		ug/L		101	69 - 139
1,1-Dichloropropene	25.0	24.7		ug/L		99	70 - 130
cis-1,3-Dichloropropene	25.0	23.3		ug/L		93	70 - 130
trans-1,3-Dichloropropene	25.0	21.4		ug/L		85	70 - 130
Ethylbenzene	25.0	25.3		ug/L		101	70 - 130
Hexachlorobutadiene	25.0	20.9		ug/L		83	76 - 145
2-Hexanone	25.0	16.7		ug/L		67	55 - 150
Iodomethane	25.0	21.3		ug/L		85	70 - 130
Isopropylbenzene	25.0	24.5		ug/L		98	88 - 141
4-Isopropyltoluene	25.0	23.7		ug/L		95	70 - 130
Methylene Chloride	25.0	24.4		ug/L		98	63 - 128
4-Methyl-2-pentanone (MIBK)	25.0	21.5		ug/L		86	64 - 142
Methyl tert-butyl ether	25.0	23.9		ug/L		95	70 - 130
Naphthalene	25.0	21.5		ug/L		86	78 - 143
N-Propylbenzene	25.0	25.0		ug/L		100	70 - 130
Styrene	25.0	23.7		ug/L		95	70 - 130
1,1,1,2-Tetrachloroethane	25.0	21.6		ug/L		86	70 - 130
1,1,2,2-Tetrachloroethane	25.0	23.6		ug/L		94	70 - 130
Tetrachloroethene	25.0	24.1		ug/L		97	70 - 130
Toluene	25.0	24.1		ug/L		96	70 - 130
1,2,3-Trichlorobenzene	25.0	20.9		ug/L		84	79 - 139
1,2,4-Trichlorobenzene	25.0	21.3		ug/L		85	80 - 137
1,1,1-Trichloroethane	25.0	24.2		ug/L		97	71 - 131
1,1,2-Trichloroethane	25.0	23.0		ug/L		92	70 - 130

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

Lab Sample ID: LCS 550-56263/3
Matrix: Water
Analysis Batch: 56263

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichloroethene	25.0	24.5		ug/L		98	70 - 130
Trichlorofluoromethane	25.0	24.4		ug/L		98	69 - 150
1,2,3-Trichloropropane	25.0	23.6		ug/L		94	70 - 130
1,2,4-Trimethylbenzene	25.0	24.2		ug/L		97	70 - 130
1,3,5-Trimethylbenzene	25.0	24.3		ug/L		97	70 - 130
Vinyl acetate	25.0	23.0		ug/L		92	67 - 148
Vinyl chloride	25.0	26.0		ug/L		104	65 - 137
Xylenes, Total	50.0	48.1		ug/L		96	70 - 130
Butadiene	25.0	27.7		ug/L		111	12 - 150
Hexane	25.0	26.6		ug/L		106	54 - 132
m-Xylene & p-Xylene	25.0	23.4		ug/L		94	70 - 130
o-Xylene	25.0	24.7		ug/L		99	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*90*		*70 - 130*
Toluene-d8 (Surr)	*93*		*70 - 130*
4-Bromofluorobenzene (Surr)	*90*		*70 - 130*

Lab Sample ID: LCSD 550-56263/4
Matrix: Water
Analysis Batch: 56263

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	25.0	19.8		ug/L		79	38 - 150	6	35
Benzene	25.0	25.4		ug/L		102	70 - 130	1	20
Bromobenzene	25.0	24.3		ug/L		97	70 - 130	4	20
Chlorobromomethane	25.0	22.7		ug/L		91	70 - 130	3	20
Dichlorobromomethane	25.0	22.5		ug/L		90	70 - 130	2	20
Bromoform	25.0	19.5		ug/L		78	69 - 129	6	20
Bromomethane	25.0	25.1		ug/L		100	57 - 138	0	20
2-Butanone (MEK)	25.0	20.6		ug/L		83	53 - 150	11	35
n-Butylbenzene	25.0	25.3		ug/L		101	70 - 130	1	20
sec-Butylbenzene	25.0	26.0		ug/L		104	70 - 130	2	20
Carbon disulfide	25.0	24.6		ug/L		98	64 - 145	1	33
Carbon tetrachloride	25.0	23.7		ug/L		95	70 - 143	4	20
Chlorobenzene	25.0	24.1		ug/L		97	70 - 130	2	20
Chloroethane	25.0	27.0		ug/L		108	66 - 131	1	20
Chloroform	25.0	24.9		ug/L		100	70 - 130	4	20
Chloromethane	25.0	27.0		ug/L		108	56 - 129	2	20
2-Chlorotoluene	25.0	25.4		ug/L		102	70 - 130	3	20
4-Chlorotoluene	25.0	25.0		ug/L		100	70 - 130	2	20
Chlorodibromomethane	25.0	21.2		ug/L		85	70 - 130	3	20
1,2-Dibromo-3-Chloropropane	25.0	19.2		ug/L		77	63 - 146	0	22
Ethylene Dibromide	25.0	23.5		ug/L		94	70 - 130	1	20
Dibromomethane	25.0	24.0		ug/L		96	70 - 130	3	20
1,2-Dichlorobenzene	25.0	23.5		ug/L		94	70 - 130	1	20
1,3-Dichlorobenzene	25.0	24.0		ug/L		96	70 - 130	0	20
1,4-Dichlorobenzene	25.0	23.5		ug/L		94	70 - 130	0	20

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

Lab Sample ID: LCSD 550-56263/4
Matrix: Water
Analysis Batch: 56263

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dichlorodifluoromethane	25.0	25.0		ug/L		100	46 - 144	2	23
1,1-Dichloroethane	25.0	30.3	R6	ug/L		121	70 - 130	27	20
1,2-Dichloroethane	25.0	24.4		ug/L		98	66 - 139	1	20
1,1-Dichloroethene	25.0	25.0		ug/L		100	63 - 131	1	22
cis-1,2-Dichloroethene	25.0	25.5		ug/L		102	70 - 130	2	20
trans-1,2-Dichloroethene	25.0	24.0		ug/L		96	69 - 127	1	20
1,2-Dichloropropane	25.0	25.3		ug/L		101	70 - 130	0	20
1,3-Dichloropropane	25.0	24.6		ug/L		98	70 - 130	0	20
2,2-Dichloropropane	25.0	24.6		ug/L		98	69 - 139	2	20
1,1-Dichloropropene	25.0	25.5		ug/L		102	70 - 130	3	20
cis-1,3-Dichloropropene	25.0	23.5		ug/L		94	70 - 130	1	20
trans-1,3-Dichloropropene	25.0	21.9		ug/L		87	70 - 130	2	20
Ethylbenzene	25.0	25.0		ug/L		100	70 - 130	2	20
Hexachlorobutadiene	25.0	20.3		ug/L		81	76 - 145	3	20
2-Hexanone	25.0	18.8		ug/L		75	55 - 150	12	35
Iodomethane	25.0	21.6		ug/L		86	70 - 130	1	20
Isopropylbenzene	25.0	25.6		ug/L		102	88 - 141	5	20
4-Isopropyltoluene	25.0	24.1		ug/L		97	70 - 130	2	20
Methylene Chloride	25.0	22.7		ug/L		91	63 - 128	7	21
4-Methyl-2-pentanone (MIBK)	25.0	23.2		ug/L		93	64 - 142	7	25
Methyl tert-butyl ether	25.0	24.4		ug/L		98	70 - 130	2	20
Naphthalene	25.0	20.7		ug/L		83	78 - 143	4	20
N-Propylbenzene	25.0	25.7		ug/L		103	70 - 130	3	20
Styrene	25.0	23.7		ug/L		95	70 - 130	0	20
1,1,1,2-Tetrachloroethane	25.0	21.9		ug/L		87	70 - 130	1	20
1,1,2,2-Tetrachloroethane	25.0	25.1		ug/L		100	70 - 130	6	20
Tetrachloroethene	25.0	24.0		ug/L		96	70 - 130	0	20
Toluene	25.0	24.2		ug/L		97	70 - 130	1	20
1,2,3-Trichlorobenzene	25.0	20.4		ug/L		82	79 - 139	2	20
1,2,4-Trichlorobenzene	25.0	20.7		ug/L		83	80 - 137	3	20
1,1,1-Trichloroethane	25.0	25.0		ug/L		100	71 - 131	3	20
1,1,2-Trichloroethane	25.0	23.9		ug/L		96	70 - 130	4	20
Trichloroethene	25.0	22.9		ug/L		92	70 - 130	7	20
Trichlorofluoromethane	25.0	25.0		ug/L		100	69 - 150	3	22
1,2,3-Trichloropropane	25.0	25.5		ug/L		102	70 - 130	8	20
1,2,4-Trimethylbenzene	25.0	24.6		ug/L		98	70 - 130	2	20
1,3,5-Trimethylbenzene	25.0	24.7		ug/L		99	70 - 130	1	20
Vinyl acetate	25.0	27.8		ug/L		111	67 - 148	19	22
Vinyl chloride	25.0	26.4		ug/L		105	65 - 137	1	20
Xylenes, Total	50.0	49.4		ug/L		99	70 - 130	3	20
Butadiene	25.0	27.5		ug/L		110	12 - 150	1	35
Hexane	25.0	27.5		ug/L		110	54 - 132	3	28
m-Xylene & p-Xylene	25.0	25.0		ug/L		100	70 - 130	7	20
o-Xylene	25.0	24.4		ug/L		98	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*93*		*70 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

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

Lab Sample ID: LCSD 550-56263/4
Matrix: Water
Analysis Batch: 56263

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	91		70 - 130

Lab Sample ID: MB 550-56363/5
Matrix: Water
Analysis Batch: 56363

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	E8	10	7.3	ug/L			02/14/15 11:18	1
Benzene	ND	E8	0.50	0.12	ug/L			02/14/15 11:18	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			02/14/15 11:18	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			02/14/15 11:18	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			02/14/15 11:18	1
Bromoform	ND	E8	1.0	0.37	ug/L			02/14/15 11:18	1
Bromomethane	ND	E8	1.0	0.67	ug/L			02/14/15 11:18	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			02/14/15 11:18	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			02/14/15 11:18	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			02/14/15 11:18	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			02/14/15 11:18	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			02/14/15 11:18	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			02/14/15 11:18	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			02/14/15 11:18	1
Chloroethane	ND	E8	1.0	0.25	ug/L			02/14/15 11:18	1
Chloroform	ND	E8	0.50	0.13	ug/L			02/14/15 11:18	1
Chloromethane	ND	E8	1.0	0.21	ug/L			02/14/15 11:18	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			02/14/15 11:18	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			02/14/15 11:18	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			02/14/15 11:18	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			02/14/15 11:18	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			02/14/15 11:18	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			02/14/15 11:18	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			02/14/15 11:18	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			02/14/15 11:18	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			02/14/15 11:18	1
Dichlorodifluoromethane	ND	E8	0.50	0.15	ug/L			02/14/15 11:18	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			02/14/15 11:18	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			02/14/15 11:18	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			02/14/15 11:18	1
cis-1,2-Dichloroethene	ND	E8	0.50	0.21	ug/L			02/14/15 11:18	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			02/14/15 11:18	1
1,2-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/14/15 11:18	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/14/15 11:18	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			02/14/15 11:18	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			02/14/15 11:18	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			02/14/15 11:18	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			02/14/15 11:18	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			02/14/15 11:18	1
Hexachlorobutadiene	ND	E8 V1	1.0	0.28	ug/L			02/14/15 11:18	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			02/14/15 11:18	1

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

Lab Sample ID: MB 550-56363/5
Matrix: Water
Analysis Batch: 56363

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iodomethane	ND	E8	2.5	0.21	ug/L			02/14/15 11:18	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			02/14/15 11:18	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			02/14/15 11:18	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			02/14/15 11:18	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			02/14/15 11:18	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			02/14/15 11:18	1
Naphthalene	1.00	E4	2.5	0.51	ug/L			02/14/15 11:18	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			02/14/15 11:18	1
Styrene	ND	E8	0.50	0.17	ug/L			02/14/15 11:18	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			02/14/15 11:18	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			02/14/15 11:18	1
Tetrachloroethene	ND	E8	0.50	0.18	ug/L			02/14/15 11:18	1
Toluene	ND	E8	0.50	0.28	ug/L			02/14/15 11:18	1
1,2,3-Trichlorobenzene	0.502	E4	1.0	0.45	ug/L			02/14/15 11:18	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			02/14/15 11:18	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			02/14/15 11:18	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			02/14/15 11:18	1
Trichloroethene	ND	E8	0.50	0.24	ug/L			02/14/15 11:18	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			02/14/15 11:18	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			02/14/15 11:18	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			02/14/15 11:18	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			02/14/15 11:18	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			02/14/15 11:18	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			02/14/15 11:18	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			02/14/15 11:18	1
Butadiene	ND	E8	2.0	1.7	ug/L			02/14/15 11:18	1
Hexane	ND	E8	2.0	1.6	ug/L			02/14/15 11:18	1
2-ethoxy-2-methyl butane TIC	ND	E8	10	10	ug/L			02/14/15 11:18	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*02/14/15 11:18*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*02/14/15 11:18*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*02/14/15 11:18*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*02/14/15 11:18*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*02/14/15 11:18*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*103*		*70 - 130*		*02/14/15 11:18*	*1*
Toluene-d8 (Surr)	*108*		*70 - 130*		*02/14/15 11:18*	*1*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*		*02/14/15 11:18*	*1*

Lab Sample ID: LCS 550-56363/3
Matrix: Water
Analysis Batch: 56363

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	25.0	25.8		ug/L		103	38 - 150

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

Lab Sample ID: LCS 550-56363/3
Matrix: Water
Analysis Batch: 56363

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	25.7		ug/L		103	70 - 130
Bromobenzene	25.0	27.2		ug/L		109	70 - 130
Chlorobromomethane	25.0	25.5		ug/L		102	70 - 130
Dichlorobromomethane	25.0	26.6		ug/L		106	70 - 130
Bromoform	25.0	25.4		ug/L		102	69 - 129
Bromomethane	25.0	26.5		ug/L		106	57 - 138
2-Butanone (MEK)	25.0	21.8		ug/L		87	53 - 150
n-Butylbenzene	25.0	26.8		ug/L		107	70 - 130
sec-Butylbenzene	25.0	27.7		ug/L		111	70 - 130
Carbon disulfide	25.0	29.0		ug/L		116	64 - 145
Carbon tetrachloride	25.0	27.6		ug/L		111	70 - 143
Chlorobenzene	25.0	26.0		ug/L		104	70 - 130
Chloroethane	25.0	27.3		ug/L		109	66 - 131
Chloroform	25.0	27.1		ug/L		108	70 - 130
Chloromethane	25.0	25.9		ug/L		104	56 - 129
2-Chlorotoluene	25.0	26.5		ug/L		106	70 - 130
4-Chlorotoluene	25.0	27.0		ug/L		108	70 - 130
Chlorodibromomethane	25.0	25.6		ug/L		102	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	22.6		ug/L		90	63 - 146
Ethylene Dibromide	25.0	27.0		ug/L		108	70 - 130
Dibromomethane	25.0	24.0		ug/L		96	70 - 130
1,2-Dichlorobenzene	25.0	24.5		ug/L		98	70 - 130
1,3-Dichlorobenzene	25.0	25.7		ug/L		103	70 - 130
1,4-Dichlorobenzene	25.0	26.4		ug/L		106	70 - 130
Dichlorodifluoromethane	25.0	26.7		ug/L		107	46 - 144
1,1-Dichloroethane	25.0	27.6		ug/L		110	70 - 130
1,2-Dichloroethane	25.0	25.8		ug/L		103	66 - 139
1,1-Dichloroethene	25.0	27.0		ug/L		108	63 - 131
cis-1,2-Dichloroethene	25.0	25.7		ug/L		103	70 - 130
trans-1,2-Dichloroethene	25.0	27.1		ug/L		108	69 - 127
1,2-Dichloropropane	25.0	26.3		ug/L		105	70 - 130
1,3-Dichloropropane	25.0	25.7		ug/L		103	70 - 130
2,2-Dichloropropane	25.0	26.3		ug/L		105	69 - 139
1,1-Dichloropropene	25.0	28.8		ug/L		115	70 - 130
cis-1,3-Dichloropropene	25.0	26.3		ug/L		105	70 - 130
trans-1,3-Dichloropropene	25.0	25.3		ug/L		101	70 - 130
Ethylbenzene	25.0	27.5		ug/L		110	70 - 130
Hexachlorobutadiene	25.0	29.8	V1	ug/L		119	76 - 145
2-Hexanone	25.0	24.7		ug/L		99	55 - 150
Iodomethane	25.0	27.5		ug/L		110	70 - 130
Isopropylbenzene	25.0	27.6		ug/L		111	88 - 141
4-Isopropyltoluene	25.0	27.0		ug/L		108	70 - 130
Methylene Chloride	25.0	28.1		ug/L		112	63 - 128
4-Methyl-2-pentanone (MIBK)	25.0	20.8		ug/L		83	64 - 142
Methyl tert-butyl ether	25.0	24.1		ug/L		97	70 - 130
Naphthalene	25.0	22.5		ug/L		90	78 - 143
N-Propylbenzene	25.0	27.5		ug/L		110	70 - 130
Styrene	25.0	24.6		ug/L		99	70 - 130

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

Lab Sample ID: LCS 550-56363/3
Matrix: Water
Analysis Batch: 56363

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	26.1		ug/L		104	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.3		ug/L		101	70 - 130
Tetrachloroethene	25.0	29.4		ug/L		118	70 - 130
Toluene	25.0	27.4		ug/L		110	70 - 130
1,2,3-Trichlorobenzene	25.0	24.6		ug/L		98	79 - 139
1,2,4-Trichlorobenzene	25.0	24.7		ug/L		99	80 - 137
1,1,1-Trichloroethane	25.0	27.1		ug/L		108	71 - 131
1,1,2-Trichloroethane	25.0	24.8		ug/L		99	70 - 130
Trichloroethene	25.0	26.9		ug/L		108	70 - 130
Trichlorofluoromethane	25.0	27.4		ug/L		110	69 - 150
1,2,3-Trichloropropane	25.0	23.5		ug/L		94	70 - 130
1,2,4-Trimethylbenzene	25.0	27.3		ug/L		109	70 - 130
1,3,5-Trimethylbenzene	25.0	26.9		ug/L		107	70 - 130
Vinyl acetate	25.0	22.4		ug/L		90	67 - 148
Vinyl chloride	25.0	28.0		ug/L		112	65 - 137
Xylenes, Total	50.0	52.4		ug/L		105	70 - 130
Butadiene	25.0	26.4		ug/L		105	12 - 150
Hexane	25.0	26.6		ug/L		106	54 - 132
m-Xylene & p-Xylene	25.0	26.2		ug/L		105	70 - 130
o-Xylene	25.0	26.2		ug/L		105	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*99*		*70 - 130*
Toluene-d8 (Surr)	*109*		*70 - 130*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*

Lab Sample ID: LCSD 550-56363/4
Matrix: Water
Analysis Batch: 56363

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	25.0	18.7		ug/L		75	38 - 150	32	35
Benzene	25.0	25.6		ug/L		102	70 - 130	1	20
Bromobenzene	25.0	28.2		ug/L		113	70 - 130	4	20
Chlorobromomethane	25.0	25.1		ug/L		101	70 - 130	1	20
Dichlorobromomethane	25.0	25.7		ug/L		103	70 - 130	3	20
Bromoform	25.0	27.7		ug/L		111	69 - 129	9	20
Bromomethane	25.0	26.0		ug/L		104	57 - 138	2	20
2-Butanone (MEK)	25.0	18.2		ug/L		73	53 - 150	18	35
n-Butylbenzene	25.0	28.1		ug/L		112	70 - 130	5	20
sec-Butylbenzene	25.0	28.9		ug/L		115	70 - 130	4	20
Carbon disulfide	25.0	29.8		ug/L		119	64 - 145	3	33
Carbon tetrachloride	25.0	27.1		ug/L		108	70 - 143	2	20
Chlorobenzene	25.0	26.2		ug/L		105	70 - 130	1	20
Chloroethane	25.0	27.7		ug/L		111	66 - 131	1	20
Chloroform	25.0	26.7		ug/L		107	70 - 130	2	20
Chloromethane	25.0	25.1		ug/L		100	56 - 129	3	20
2-Chlorotoluene	25.0	27.9		ug/L		112	70 - 130	5	20

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

Lab Sample ID: LCSD 550-56363/4
Matrix: Water
Analysis Batch: 56363

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chlorotoluene	25.0	29.2		ug/L		117	70 - 130	8	20
Chlorodibromomethane	25.0	24.0		ug/L		96	70 - 130	6	20
1,2-Dibromo-3-Chloropropane	25.0	20.0		ug/L		80	63 - 146	12	22
Ethylene Dibromide	25.0	25.4		ug/L		102	70 - 130	6	20
Dibromomethane	25.0	23.6		ug/L		95	70 - 130	1	20
1,2-Dichlorobenzene	25.0	26.8		ug/L		107	70 - 130	9	20
1,3-Dichlorobenzene	25.0	27.8		ug/L		111	70 - 130	8	20
1,4-Dichlorobenzene	25.0	27.1		ug/L		108	70 - 130	2	20
Dichlorodifluoromethane	25.0	25.8		ug/L		103	46 - 144	4	23
1,1-Dichloroethane	25.0	27.3		ug/L		109	70 - 130	1	20
1,2-Dichloroethane	25.0	25.0		ug/L		100	66 - 139	3	20
1,1-Dichloroethene	25.0	27.7		ug/L		111	63 - 131	3	22
cis-1,2-Dichloroethene	25.0	25.2		ug/L		101	70 - 130	2	20
trans-1,2-Dichloroethene	25.0	26.4		ug/L		106	69 - 127	2	20
1,2-Dichloropropane	25.0	25.6		ug/L		102	70 - 130	3	20
1,3-Dichloropropane	25.0	25.4		ug/L		102	70 - 130	1	20
2,2-Dichloropropane	25.0	27.8		ug/L		111	69 - 139	6	20
1,1-Dichloropropene	25.0	27.8		ug/L		111	70 - 130	4	20
cis-1,3-Dichloropropene	25.0	24.0		ug/L		96	70 - 130	9	20
trans-1,3-Dichloropropene	25.0	24.9		ug/L		100	70 - 130	1	20
Ethylbenzene	25.0	26.9		ug/L		108	70 - 130	2	20
Hexachlorobutadiene	25.0	30.0	V1	ug/L		120	76 - 145	1	20
2-Hexanone	25.0	17.1	R6	ug/L		69	55 - 150	36	35
Iodomethane	25.0	27.6		ug/L		110	70 - 130	0	20
Isopropylbenzene	25.0	28.6		ug/L		114	88 - 141	3	20
4-Isopropyltoluene	25.0	27.5		ug/L		110	70 - 130	2	20
Methylene Chloride	25.0	27.3		ug/L		109	63 - 128	3	21
4-Methyl-2-pentanone (MIBK)	25.0	20.0		ug/L		80	64 - 142	4	25
Methyl tert-butyl ether	25.0	22.8		ug/L		91	70 - 130	6	20
Naphthalene	25.0	22.2		ug/L		89	78 - 143	1	20
N-Propylbenzene	25.0	28.7		ug/L		115	70 - 130	4	20
Styrene	25.0	24.3		ug/L		97	70 - 130	1	20
1,1,1,2-Tetrachloroethane	25.0	26.8		ug/L		107	70 - 130	2	20
1,1,2,2-Tetrachloroethane	25.0	25.1		ug/L		100	70 - 130	1	20
Tetrachloroethene	25.0	28.8		ug/L		115	70 - 130	2	20
Toluene	25.0	27.0		ug/L		108	70 - 130	1	20
1,2,3-Trichlorobenzene	25.0	24.7		ug/L		99	79 - 139	1	20
1,2,4-Trichlorobenzene	25.0	25.1		ug/L		101	80 - 137	2	20
1,1,1-Trichloroethane	25.0	27.4		ug/L		110	71 - 131	1	20
1,1,2-Trichloroethane	25.0	24.6		ug/L		99	70 - 130	1	20
Trichloroethene	25.0	27.1		ug/L		108	70 - 130	1	20
Trichlorofluoromethane	25.0	27.0		ug/L		108	69 - 150	2	22
1,2,3-Trichloropropane	25.0	23.8		ug/L		95	70 - 130	1	20
1,2,4-Trimethylbenzene	25.0	28.6		ug/L		114	70 - 130	5	20
1,3,5-Trimethylbenzene	25.0	28.8		ug/L		115	70 - 130	7	20
Vinyl acetate	25.0	21.6		ug/L		86	67 - 148	4	22
Vinyl chloride	25.0	26.7		ug/L		107	65 - 137	5	20
Xylenes, Total	50.0	51.6		ug/L		103	70 - 130	2	20

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

Lab Sample ID: LCSD 550-56363/4
Matrix: Water
Analysis Batch: 56363

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Butadiene			25.0	26.0		ug/L		104	12 - 150	1	35
Hexane			25.0	29.8		ug/L		119	54 - 132	11	28
m-Xylene & p-Xylene			25.0	27.5		ug/L		110	70 - 130	5	20
o-Xylene			25.0	24.1		ug/L		96	70 - 130	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*100*		*70 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*
4-Bromofluorobenzene (Surr)	*98*		*70 - 130*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 550-56120/1-A
Matrix: Water
Analysis Batch: 56174

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 56120

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND	E8	10	2.5	ug/L		02/11/15 14:49	02/12/15 19:49	1
Phenol	ND	E8	10	3.8	ug/L		02/11/15 14:49	02/12/15 19:49	1
2-Chlorophenol	ND	E8	10	3.8	ug/L		02/11/15 14:49	02/12/15 19:49	1
1,3-Dichlorobenzene	ND	E8	10	3.3	ug/L		02/11/15 14:49	02/12/15 19:49	1
1,4-Dichlorobenzene	ND	E8	10	3.2	ug/L		02/11/15 14:49	02/12/15 19:49	1
1,2-Dichlorobenzene	ND	E8	10	2.8	ug/L		02/11/15 14:49	02/12/15 19:49	1
Benzyl alcohol	ND	E8	20	4.1	ug/L		02/11/15 14:49	02/12/15 19:49	1
2-Methylphenol	ND	E8	10	3.0	ug/L		02/11/15 14:49	02/12/15 19:49	1
Hexachloroethane	ND	E8	10	3.8	ug/L		02/11/15 14:49	02/12/15 19:49	1
N-Nitrosodi-n-propylamine	ND	E8	10	3.1	ug/L		02/11/15 14:49	02/12/15 19:49	1
3 & 4 Methylphenol	ND	E8	10	5.7	ug/L		02/11/15 14:49	02/12/15 19:49	1
Nitrobenzene	ND	E8	10	2.4	ug/L		02/11/15 14:49	02/12/15 19:49	1
Isophorone	ND	E8	10	2.6	ug/L		02/11/15 14:49	02/12/15 19:49	1
2-Nitrophenol	ND	E8	15	5.7	ug/L		02/11/15 14:49	02/12/15 19:49	1
2,4-Dimethylphenol	ND	E8	10	5.2	ug/L		02/11/15 14:49	02/12/15 19:49	1
Benzoic acid	ND	E8	25	13	ug/L		02/11/15 14:49	02/12/15 19:49	1
Bis(2-chloroethoxy)methane	ND	E8	10	2.8	ug/L		02/11/15 14:49	02/12/15 19:49	1
2,4-Dichlorophenol	ND	E8	10	3.3	ug/L		02/11/15 14:49	02/12/15 19:49	1
1,2,4-Trichlorobenzene	ND	E8	10	3.5	ug/L		02/11/15 14:49	02/12/15 19:49	1
Naphthalene	ND	E8	10	2.7	ug/L		02/11/15 14:49	02/12/15 19:49	1
4-Chloroaniline	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/12/15 19:49	1
Hexachlorobutadiene	ND	E8	10	5.6	ug/L		02/11/15 14:49	02/12/15 19:49	1
4-Chloro-3-methylphenol	ND	E8	10	2.8	ug/L		02/11/15 14:49	02/12/15 19:49	1
2-Methylnaphthalene	ND	E8	10	2.7	ug/L		02/11/15 14:49	02/12/15 19:49	1
Hexachlorocyclopentadiene	ND	E8	10	6.9	ug/L		02/11/15 14:49	02/12/15 19:49	1
2,4,6-Trichlorophenol	ND	E8	20	2.8	ug/L		02/11/15 14:49	02/12/15 19:49	1
2,4,5-Trichlorophenol	ND	E8	20	2.6	ug/L		02/11/15 14:49	02/12/15 19:49	1
2-Chloronaphthalene	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/12/15 19:49	1
2-Nitroaniline	ND	E8	10	7.2	ug/L		02/11/15 14:49	02/12/15 19:49	1
Acenaphthylene	ND	E8	10	2.1	ug/L		02/11/15 14:49	02/12/15 19:49	1
Dimethyl phthalate	ND	E8	20	4.9	ug/L		02/11/15 14:49	02/12/15 19:49	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 550-56120/1-A
Matrix: Water
Analysis Batch: 56174

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 56120

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND	E8	10	5.8	ug/L		02/11/15 14:49	02/12/15 19:49	1
Acenaphthene	ND	E8	10	2.1	ug/L		02/11/15 14:49	02/12/15 19:49	1
3-Nitroaniline	ND	E8	10	6.4	ug/L		02/11/15 14:49	02/12/15 19:49	1
2,4-Dinitrophenol	ND	E8	50	19	ug/L		02/11/15 14:49	02/12/15 19:49	1
Dibenzofuran	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/12/15 19:49	1
2,4-Dinitrotoluene	ND	E8	10	7.9	ug/L		02/11/15 14:49	02/12/15 19:49	1
4-Nitrophenol	ND	E8	25	9.2	ug/L		02/11/15 14:49	02/12/15 19:49	1
Fluorene	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/12/15 19:49	1
4-Chlorophenyl phenyl ether	ND	E8	10	2.4	ug/L		02/11/15 14:49	02/12/15 19:49	1
Diethyl phthalate	ND	E8	10	2.5	ug/L		02/11/15 14:49	02/12/15 19:49	1
4-Nitroaniline	ND	E8	10	3.2	ug/L		02/11/15 14:49	02/12/15 19:49	1
4,6-Dinitro-2-methylphenol	ND	E8	50	18	ug/L		02/11/15 14:49	02/12/15 19:49	1
N-Nitrosodiphenylamine	ND	E8	10	2.4	ug/L		02/11/15 14:49	02/12/15 19:49	1
1,2-Diphenylhydrazine(as Azobenzene)	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/12/15 19:49	1
4-Bromophenyl phenyl ether	ND	E8	10	2.7	ug/L		02/11/15 14:49	02/12/15 19:49	1
Hexachlorobenzene	ND	E8	10	2.4	ug/L		02/11/15 14:49	02/12/15 19:49	1
Pentachlorophenol	ND	E8	50	14	ug/L		02/11/15 14:49	02/12/15 19:49	1
Phenanthrene	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/12/15 19:49	1
Anthracene	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/12/15 19:49	1
Di-n-butyl phthalate	ND	E8	10	2.4	ug/L		02/11/15 14:49	02/12/15 19:49	1
Fluoranthene	ND	E8	10	2.6	ug/L		02/11/15 14:49	02/12/15 19:49	1
Pyrene	ND	E8	10	2.1	ug/L		02/11/15 14:49	02/12/15 19:49	1
Butyl benzyl phthalate	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/12/15 19:49	1
3,3'-Dichlorobenzidine	ND	E8	10	3.1	ug/L		02/11/15 14:49	02/12/15 19:49	1
Chrysene	ND	E8	10	2.3	ug/L		02/11/15 14:49	02/12/15 19:49	1
Bis(2-ethylhexyl) phthalate	ND	E8	10	2.9	ug/L		02/11/15 14:49	02/12/15 19:49	1
Di-n-octyl phthalate	ND	E8	10	2.4	ug/L		02/11/15 14:49	02/12/15 19:49	1
Benzo[b]fluoranthene	ND	E8	10	2.1	ug/L		02/11/15 14:49	02/12/15 19:49	1
Benzo[k]fluoranthene	ND	E8	10	2.6	ug/L		02/11/15 14:49	02/12/15 19:49	1
Benzo[a]pyrene	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/12/15 19:49	1
Indeno[1,2,3-cd]pyrene	ND	E8	10	3.5	ug/L		02/11/15 14:49	02/12/15 19:49	1
Dibenz(a,h)anthracene	ND	E8	10	4.1	ug/L		02/11/15 14:49	02/12/15 19:49	1
Benzo[g,h,i]perylene	ND	E8	10	3.5	ug/L		02/11/15 14:49	02/12/15 19:49	1
Benzo[a]anthracene	ND	E8	10	2.2	ug/L		02/11/15 14:49	02/12/15 19:49	1
bis (2-chloroisopropyl) ether	ND	E8	10	2.9	ug/L		02/11/15 14:49	02/12/15 19:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*61*		*40 - 91*	*02/11/15 14:49*	*02/12/15 19:49*	*1*
Nitrobenzene-d5 (Surr)	*68*		*22 - 116*	*02/11/15 14:49*	*02/12/15 19:49*	*1*
2-Fluorophenol (Surr)	*44*		*10 - 78*	*02/11/15 14:49*	*02/12/15 19:49*	*1*
2,4,6-Tribromophenol (Surr)	*72*		*14 - 122*	*02/11/15 14:49*	*02/12/15 19:49*	*1*
p-Terphenyl-d14 (Surr)	*82*		*10 - 117*	*02/11/15 14:49*	*02/12/15 19:49*	*1*
Phenol-d5 (Surr)	*29*		*10 - 51*	*02/11/15 14:49*	*02/12/15 19:49*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-56120/2-A
Matrix: Water
Analysis Batch: 56174

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 56120

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bis(2-chloroethyl)ether	80.0	50.1		ug/L		63	45 - 93
Phenol	80.0	25.0		ug/L		31	20 - 50
2-Chlorophenol	80.0	48.7		ug/L		61	45 - 88
1,3-Dichlorobenzene	80.0	36.3		ug/L		45	17 - 86
1,4-Dichlorobenzene	80.0	37.8		ug/L		47	19 - 86
1,2-Dichlorobenzene	80.0	38.6		ug/L		48	22 - 87
Benzyl alcohol	80.0	80.1	L5	ug/L		100	35 - 99
2-Methylphenol	80.0	38.2		ug/L		48	44 - 82
Hexachloroethane	120	49.7		ug/L		41	10 - 89
N-Nitrosodi-n-propylamine	80.0	53.9		ug/L		67	51 - 95
3 & 4 Methylphenol	80.0	38.6		ug/L		48	43 - 80
Nitrobenzene	80.0	50.7		ug/L		63	52 - 94
Isophorone	80.0	54.7		ug/L		68	55 - 92
2-Nitrophenol	80.0	50.6		ug/L		63	52 - 93
2,4-Dimethylphenol	80.0	46.5		ug/L		58	40 - 84
Benzoic acid	200	31.6		ug/L		16	10 - 58
Bis(2-chloroethoxy)methane	80.0	51.6		ug/L		64	52 - 92
2,4-Dichlorophenol	80.0	51.2		ug/L		64	52 - 92
1,2,4-Trichlorobenzene	120	62.1		ug/L		52	21 - 94
Naphthalene	80.0	50.8		ug/L		64	39 - 88
4-Chloroaniline	80.0	64.3		ug/L		80	42 - 100
Hexachlorobutadiene	80.0	39.6		ug/L		50	10 - 95
4-Chloro-3-methylphenol	80.0	48.9		ug/L		61	55 - 93
2-Methylnaphthalene	80.0	52.8		ug/L		66	38 - 92
Hexachlorocyclopentadiene	80.0	40.5		ug/L		51	10 - 82
2,4,6-Trichlorophenol	80.0	56.6		ug/L		71	55 - 94
2,4,5-Trichlorophenol	80.0	54.0		ug/L		67	53 - 97
2-Chloronaphthalene	120	83.2		ug/L		69	36 - 98
2-Nitroaniline	80.0	61.4		ug/L		77	58 - 98
Acenaphthylene	80.0	56.7		ug/L		71	47 - 92
Dimethyl phthalate	120	87.7		ug/L		73	59 - 94
2,6-Dinitrotoluene	80.0	61.2		ug/L		76	58 - 100
Acenaphthene	80.0	58.2		ug/L		73	46 - 94
3-Nitroaniline	80.0	71.7		ug/L		90	56 - 100
2,4-Dinitrophenol	160	111		ug/L		69	51 - 100
Dibenzofuran	80.0	60.9		ug/L		76	51 - 95
2,4-Dinitrotoluene	80.0	64.0		ug/L		80	60 - 101
4-Nitrophenol	160	58.8		ug/L		37	22 - 55
Fluorene	80.0	60.2		ug/L		75	52 - 96
4-Chlorophenyl phenyl ether	80.0	61.4		ug/L		77	47 - 98
Diethyl phthalate	80.0	62.9		ug/L		79	58 - 98
4-Nitroaniline	80.0	66.5		ug/L		83	55 - 106
4,6-Dinitro-2-methylphenol	160	128		ug/L		80	61 - 95
N-Nitrosodiphenylamine	80.0	46.0	L4	ug/L		57	60 - 98
1,2-Diphenylhydrazine(as Azobenzene)	80.0	64.3		ug/L		80	52 - 97
4-Bromophenyl phenyl ether	80.0	62.1		ug/L		78	51 - 98
Hexachlorobenzene	80.0	59.9		ug/L		75	45 - 102

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 550-56120/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56174 — **Prep Batch: 56120**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pentachlorophenol	160	129		ug/L		81	39 - 104
Phenanthrene	80.0	67.7		ug/L		85	54 - 98
Anthracene	80.0	66.7		ug/L		83	54 - 98
Di-n-butyl phthalate	80.0	73.1		ug/L		91	56 - 102
Fluoranthene	80.0	69.4		ug/L		87	55 - 99
Pyrene	80.0	69.9		ug/L		87	54 - 98
Butyl benzyl phthalate	80.0	64.5		ug/L		81	56 - 101
3,3'-Dichlorobenzidine	80.0	57.8		ug/L		72	33 - 108
Chrysene	80.0	69.3		ug/L		87	55 - 99
Bis(2-ethylhexyl) phthalate	80.0	64.9		ug/L		81	57 - 103
Di-n-octyl phthalate	80.0	62.4		ug/L		78	46 - 103
Benzo[b]fluoranthene	80.0	63.8		ug/L		80	49 - 98
Benzo[k]fluoranthene	80.0	60.6		ug/L		76	50 - 104
Benzo[a]pyrene	80.0	66.5		ug/L		83	52 - 99
Indeno[1,2,3-cd]pyrene	80.0	65.5		ug/L		82	55 - 101
Dibenz(a,h)anthracene	80.0	66.0		ug/L		82	56 - 101
Benzo[g,h,i]perylene	80.0	66.4		ug/L		83	56 - 101
Benzo[a]anthracene	80.0	65.3		ug/L		82	56 - 97
bis (2-chloroisopropyl) ether	80.0	55.4		ug/L		69	44 - 92

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*61*		*40 - 91*
Nitrobenzene-d5 (Surr)	*64*		*22 - 116*
2-Fluorophenol (Surr)	*39*		*10 - 78*
2,4,6-Tribromophenol (Surr)	*82*		*14 - 122*
p-Terphenyl-d14 (Surr)	*78*		*10 - 117*
Phenol-d5 (Surr)	*26*		*10 - 51*

Lab Sample ID: LCSD 550-56120/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56174 — **Prep Batch: 56120**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bis(2-chloroethyl)ether	80.0	60.4		ug/L		75	45 - 93	19	29
Phenol	80.0	23.2		ug/L		29	20 - 50	7	36
2-Chlorophenol	80.0	59.6		ug/L		75	45 - 88	20	32
1,3-Dichlorobenzene	80.0	46.9		ug/L		59	17 - 86	25	35
1,4-Dichlorobenzene	80.0	45.5		ug/L		57	19 - 86	18	35
1,2-Dichlorobenzene	80.0	45.1		ug/L		56	22 - 87	15	35
Benzyl alcohol	80.0	98.1	L5	ug/L		123	35 - 99	20	32
2-Methylphenol	80.0	46.0		ug/L		58	44 - 82	18	29
Hexachloroethane	120	62.9		ug/L		52	10 - 89	23	35
N-Nitrosodi-n-propylamine	80.0	61.8		ug/L		77	51 - 95	14	29
3 & 4 Methylphenol	80.0	45.2		ug/L		56	43 - 80	16	30
Nitrobenzene	80.0	59.8		ug/L		75	52 - 94	16	31
Isophorone	80.0	58.4		ug/L		73	55 - 92	7	27
2-Nitrophenol	80.0	59.6		ug/L		74	52 - 93	16	32
2,4-Dimethylphenol	80.0	53.1		ug/L		66	40 - 84	13	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 550-56120/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56174 — **Prep Batch: 56120**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzoic acid	200	33.1		ug/L		17	10 - 58	5	35
Bis(2-chloroethoxy)methane	80.0	58.3		ug/L		73	52 - 92	12	30
2,4-Dichlorophenol	80.0	61.3		ug/L		77	52 - 92	18	32
1,2,4-Trichlorobenzene	120	75.7		ug/L		63	21 - 94	20	35
Naphthalene	80.0	58.9		ug/L		74	39 - 88	15	33
4-Chloroaniline	80.0	74.6		ug/L		93	42 - 100	15	31
Hexachlorobutadiene	80.0	48.1		ug/L		60	10 - 95	19	35
4-Chloro-3-methylphenol	80.0	52.6		ug/L		66	55 - 93	7	27
2-Methylnaphthalene	80.0	58.3		ug/L		73	38 - 92	10	33
Hexachlorocyclopentadiene	80.0	47.0		ug/L		59	10 - 82	15	35
2,4,6-Trichlorophenol	80.0	60.8		ug/L		76	55 - 94	7	26
2,4,5-Trichlorophenol	80.0	58.0		ug/L		73	53 - 97	7	26
2-Chloronaphthalene	120	89.8		ug/L		75	36 - 98	8	33
2-Nitroaniline	80.0	62.4		ug/L		78	58 - 98	2	25
Acenaphthylene	80.0	57.9		ug/L		72	47 - 92	2	26
Dimethyl phthalate	120	87.7		ug/L		73	59 - 94	0	22
2,6-Dinitrotoluene	80.0	57.6		ug/L		72	58 - 100	6	24
Acenaphthene	80.0	60.1		ug/L		75	46 - 94	3	29
3-Nitroaniline	80.0	73.1		ug/L		91	56 - 100	2	23
2,4-Dinitrophenol	160	103		ug/L		65	51 - 100	7	31
Dibenzofuran	80.0	61.9		ug/L		77	51 - 95	2	27
2,4-Dinitrotoluene	80.0	63.2		ug/L		79	60 - 101	1	24
4-Nitrophenol	160	56.2		ug/L		35	22 - 55	4	28
Fluorene	80.0	59.4		ug/L		74	52 - 96	1	25
4-Chlorophenyl phenyl ether	80.0	62.5		ug/L		78	47 - 98	2	29
Diethyl phthalate	80.0	60.0		ug/L		75	58 - 98	5	22
4-Nitroaniline	80.0	64.8		ug/L		81	55 - 106	3	27
4,6-Dinitro-2-methylphenol	160	121		ug/L		76	61 - 95	6	22
N-Nitrosodiphenylamine	80.0	44.5	L4	ug/L		56	60 - 98	3	20
1,2-Diphenylhydrazine(as Azobenzene)	80.0	64.4		ug/L		80	52 - 97	0	24
4-Bromophenyl phenyl ether	80.0	61.0		ug/L		76	51 - 98	2	28
Hexachlorobenzene	80.0	59.1		ug/L		74	45 - 102	1	30
Pentachlorophenol	160	116		ug/L		72	39 - 104	11	25
Phenanthrene	80.0	64.6		ug/L		81	54 - 98	5	26
Anthracene	80.0	64.6		ug/L		81	54 - 98	3	29
Di-n-butyl phthalate	80.0	68.8		ug/L		86	56 - 102	6	25
Fluoranthene	80.0	66.9		ug/L		84	55 - 99	4	28
Pyrene	80.0	67.4		ug/L		84	54 - 98	4	20
Butyl benzyl phthalate	80.0	61.7		ug/L		77	56 - 101	4	27
3,3'-Dichlorobenzidine	80.0	60.4		ug/L		75	33 - 108	4	32
Chrysene	80.0	69.1		ug/L		86	55 - 99	0	28
Bis(2-ethylhexyl) phthalate	80.0	63.9		ug/L		80	57 - 103	2	30
Di-n-octyl phthalate	80.0	60.5		ug/L		76	46 - 103	3	30
Benzo[b]fluoranthene	80.0	63.3		ug/L		79	49 - 98	1	30
Benzo[k]fluoranthene	80.0	61.5		ug/L		77	50 - 104	1	31
Benzo[a]pyrene	80.0	65.6		ug/L		82	52 - 99	1	31
Indeno[1,2,3-cd]pyrene	80.0	66.8		ug/L		83	55 - 101	2	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 550-56120/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56174 — **Prep Batch: 56120**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dibenz(a,h)anthracene	80.0	65.1		ug/L		81	56 - 101	1	29
Benzo[g,h,i]perylene	80.0	68.1		ug/L		85	56 - 101	3	29
Benzo[a]anthracene	80.0	65.1		ug/L		81	56 - 97	0	31
bis (2-chloroisopropyl) ether	80.0	65.5		ug/L		82	44 - 92	17	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*65*		*40 - 91*
Nitrobenzene-d5 (Surr)	*73*		*22 - 116*
2-Fluorophenol (Surr)	*49*		*10 - 78*
2,4,6-Tribromophenol (Surr)	*82*		*14 - 122*
p-Terphenyl-d14 (Surr)	*68*		*10 - 117*
Phenol-d5 (Surr)	*33*		*10 - 51*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 440-234991/9 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234991

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND	E8	0.0020	0.00050	mg/L			02/09/15 13:11	1
Ethene	ND	E8	0.0028	0.00053	mg/L			02/09/15 13:11	1
Methane (FID)	ND	E8	0.00099	0.00025	mg/L			02/09/15 13:11	1
Methane (TCD)	ND	E8	1.0	0.50	mg/L			02/09/15 13:11	1

Lab Sample ID: LCS 440-234991/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234991

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane (TCD)	4.19	4.11		mg/L		98	80 - 120

Lab Sample ID: LCS 440-234991/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234991

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	0.157	0.172		mg/L		110	80 - 120
Ethene	0.147	0.162		mg/L		111	80 - 120
Methane (FID)	0.0839	0.0889		mg/L		106	80 - 120

Lab Sample ID: LCSD 440-234991/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234991

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane (TCD)	4.19	3.91		mg/L		93	80 - 120	5	20

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCSD 440-234991/8 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234991

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	0.157	0.163		mg/L		103	80 - 120	6	20
Ethene	0.147	0.154		mg/L		105	80 - 120	6	20
Methane (FID)	0.0839	0.0820		mg/L		98	80 - 120	8	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 550-55863/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55863

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND	E8	0.50	0.051	mg/L			02/06/15 14:22	1
Chloride	ND	E8	2.0	0.29	mg/L			02/06/15 14:22	1
Fluoride	ND	E8	0.40	0.040	mg/L			02/06/15 14:22	1
Nitrate as N	ND	E8	0.10	0.051	mg/L			02/06/15 14:22	1
Nitrite as N	ND	E8	0.10	0.032	mg/L			02/06/15 14:22	1
Sulfate	ND	E8	2.0	0.21	mg/L			02/06/15 14:22	1

Lab Sample ID: LCS 550-55863/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55863

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	4.00	3.95		mg/L		99	90 - 110
Chloride	20.0	20.0		mg/L		100	90 - 110
Fluoride	4.00	4.06		mg/L		101	90 - 110
Nitrate as N	4.00	4.06		mg/L		102	90 - 110
Nitrite as N	4.00	4.02		mg/L		100	90 - 110
Sulfate	20.0	20.7		mg/L		104	90 - 110

Lab Sample ID: LCSD 550-55863/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55863

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	4.00	3.97		mg/L		99	90 - 110	0	20
Chloride	20.0	20.0		mg/L		100	90 - 110	0	20
Fluoride	4.00	4.06		mg/L		102	90 - 110	0	20
Nitrate as N	4.00	4.08		mg/L		102	90 - 110	0	20
Nitrite as N	4.00	4.01		mg/L		100	90 - 110	0	20
Sulfate	20.0	20.8		mg/L		104	90 - 110	1	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 550-55840/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56063 — **Prep Batch: 55840**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND	E8	0.10	0.0062	mg/L		02/09/15 07:55	02/10/15 21:02	1
Barium	ND	E8	0.010	0.0020	mg/L		02/09/15 07:55	02/10/15 21:02	1
Cadmium	ND	E8	0.0010	0.00040	mg/L		02/09/15 07:55	02/10/15 21:02	1
Calcium	ND	E8	2.0	0.069	mg/L		02/09/15 07:55	02/10/15 21:02	1
Chromium	ND	E8	0.010	0.0010	mg/L		02/09/15 07:55	02/10/15 21:02	1
Lead	0.00296	E4	0.015	0.0026	mg/L		02/09/15 07:55	02/10/15 21:02	1
Magnesium	ND	E8	2.0	0.050	mg/L		02/09/15 07:55	02/10/15 21:02	1
Selenium	ND	E8	0.10	0.0076	mg/L		02/09/15 07:55	02/10/15 21:02	1
Silver	ND	E8	0.010	0.00050	mg/L		02/09/15 07:55	02/10/15 21:02	1

Lab Sample ID: LCS 550-55840/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56063 — **Prep Batch: 55840**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.02		mg/L		102	87 - 113
Barium	1.00	0.983		mg/L		98	89 - 116
Cadmium	1.00	1.01		mg/L		101	89 - 112
Calcium	21.0	20.9		mg/L		100	88 - 109
Chromium	1.00	0.981		mg/L		98	88 - 112
Lead	1.00	0.957		mg/L		96	88 - 116
Magnesium	21.0	20.5		mg/L		98	90 - 110
Selenium	1.00	1.06		mg/L		106	87 - 121
Silver	0.0750	0.0728		mg/L		97	79 - 119

Lab Sample ID: LCSD 550-55840/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56063 — **Prep Batch: 55840**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.00	1.03		mg/L		103	87 - 113	2	20
Barium	1.00	0.997		mg/L		100	89 - 116	1	20
Cadmium	1.00	1.02		mg/L		102	89 - 112	1	20
Calcium	21.0	21.3		mg/L		101	88 - 109	2	20
Chromium	1.00	0.996		mg/L		100	88 - 112	2	20
Lead	1.00	0.970		mg/L		97	88 - 116	1	20
Magnesium	21.0	20.8		mg/L		99	90 - 110	1	20
Selenium	1.00	1.08		mg/L		108	87 - 121	2	20
Silver	0.0750	0.0735		mg/L		98	79 - 119	1	20

Lab Sample ID: 550-39671-1 MS — **Client Sample ID: WR-367A-363.48-H-020515**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56063 — **Prep Batch: 55840**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.0070	E4	1.00	1.04		mg/L		104	75 - 125
Barium	0.19		1.00	1.16		mg/L		97	75 - 125
Cadmium	ND	E8	1.00	1.01		mg/L		101	75 - 125
Calcium	72		21.0	91.6		mg/L		94	75 - 125

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 550-39671-1 MS — **Client Sample ID: WR-367A-363.48-H-020515**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56063 — **Prep Batch: 55840**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	0.0022	E4	1.00	0.986		mg/L		98	75 - 125
Lead	0.0060	E4 B1	1.00	0.956		mg/L		95	75 - 125
Magnesium	6.8		21.0	27.1		mg/L		97	75 - 125
Selenium	ND	E8	1.00	1.08		mg/L		108	75 - 125
Silver	ND	E8	0.0750	0.0743		mg/L		99	75 - 125

Lab Sample ID: 550-39671-1 MSD — **Client Sample ID: WR-367A-363.48-H-020515**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56063 — **Prep Batch: 55840**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.0070	E4	1.00	1.04		mg/L		103	75 - 125	0	20
Barium	0.19		1.00	1.16		mg/L		97	75 - 125	0	20
Cadmium	ND	E8	1.00	1.01		mg/L		101	75 - 125	0	20
Calcium	72		21.0	92.6		mg/L		99	75 - 125	1	20
Chromium	0.0022	E4	1.00	0.981		mg/L		98	75 - 125	1	20
Lead	0.0060	E4 B1	1.00	0.952		mg/L		95	75 - 125	0	20
Magnesium	6.8		21.0	27.4		mg/L		98	75 - 125	1	20
Selenium	ND	E8	1.00	1.07		mg/L		107	75 - 125	1	20
Silver	ND	E8	0.0750	0.0737		mg/L		98	75 - 125	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 550-55859/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55894 — **Prep Batch: 55859**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	E8	0.00050	0.000030	mg/L		02/09/15 08:30	02/09/15 12:30	1

Lab Sample ID: LCS 550-55859/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55894 — **Prep Batch: 55859**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0100	0.00951		mg/L		95	80 - 120

Lab Sample ID: LCSD 550-55859/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55894 — **Prep Batch: 55859**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0100	0.00961		mg/L		96	80 - 120	1	20

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: 550-39671-1 MS — **Client Sample ID: WR-367A-363.48-H-020515**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55894 — **Prep Batch: 55859**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	ND	E8	0.0100	0.00927		mg/L		93	75 - 125		

Lab Sample ID: 550-39671-1 MSD — **Client Sample ID: WR-367A-363.48-H-020515**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55894 — **Prep Batch: 55859**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND	E8	0.0100	0.00908		mg/L		91	75 - 125	2	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 550-55994/63 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55994

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/10/15 04:49	1
Bicarbonate Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/10/15 04:49	1
Carbonate Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/10/15 04:49	1
Alkalinity, Phenolphthalein	ND	E8	6.0	6.0	mg/L			02/10/15 04:49	1
Hydroxide Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/10/15 04:49	1

Lab Sample ID: LCS 550-55994/62 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55994

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Alkalinity as CaCO3	250	250		mg/L		100	90 - 110		

Lab Sample ID: LCSD 550-55994/76 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55994

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity as CaCO3	250	251		mg/L		100	90 - 110	0	20

Lab Sample ID: MB 550-56675/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56675

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/18/15 16:04	1
Bicarbonate Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/18/15 16:04	1
Carbonate Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/18/15 16:04	1
Alkalinity, Phenolphthalein	ND	E8	6.0	6.0	mg/L			02/18/15 16:04	1
Hydroxide Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/18/15 16:04	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 550-56675/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56675

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	250	240		mg/L		96	90 - 110

Lab Sample ID: LCSD 550-56675/20 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56675

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity as CaCO3	250	254		mg/L		102	90 - 110	6	20

Method: SM 4500 H+ B - pH

Lab Sample ID: LCSSRM 550-55772/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55772

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.020		SU		100.3	98.5 - 101.5

Lab Sample ID: LCSSRM 550-55772/12 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55772

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.010		SU		100.1	98.5 - 101.5

Method: SM 5310B - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 550-57260/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 57480

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	ND	E8	1.0	0.34	mg/L			02/27/15 09:06	1

Lab Sample ID: LCS 550-57480/63 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 57480

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dissolved Organic Carbon	20.0	20.6		mg/L		103	90 - 110

Lab Sample ID: LCSD 550-57480/64 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 57480

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dissolved Organic Carbon	20.0	21.8		mg/L		109	90 - 110	6	20

Method: SM 5310B - Organic Carbon, Dissolved (DOC) (Continued)

Lab Sample ID: 550-39671-1 MS — **Client Sample ID: WR-367A-363.48-H-020515**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 57480

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Dissolved Organic Carbon	0.56	E4	20.0	21.1		mg/L		103	90 - 110		

Lab Sample ID: 550-39671-1 MSD — **Client Sample ID: WR-367A-363.48-H-020515**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 57480

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dissolved Organic Carbon	0.56	E4	20.0	21.4		mg/L		104	90 - 110	1	20

QC Association Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39671-1

GC/MS VOA

Analysis Batch: 56263

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-1	WR-367A-363.48-H-020515	Total/NA	Water	8260B	
550-39671-2	WR-274A-335.89-H-020515	Total/NA	Water	8260B	
550-39671-3	TB	Total/NA	Water	8260B	
LCS 550-56263/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 550-56263/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 550-56263/5	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 56363

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-3	TB	Total/NA	Water	8260B	
LCS 550-56363/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 550-56363/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 550-56363/5	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 56120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-2	WR-274A-335.89-H-020515	Total/NA	Water	3510C	
LCS 550-56120/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 550-56120/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 550-56120/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 56174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-2	WR-274A-335.89-H-020515	Total/NA	Water	8270C	56120
LCS 550-56120/2-A	Lab Control Sample	Total/NA	Water	8270C	56120
LCSD 550-56120/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	56120
MB 550-56120/1-A	Method Blank	Total/NA	Water	8270C	56120

GC VOA

Analysis Batch: 234991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-1	WR-367A-363.48-H-020515	Total/NA	Water	RSK-175	
550-39671-2	WR-274A-335.89-H-020515	Total/NA	Water	RSK-175	
LCS 440-234991/5	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 440-234991/7	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 440-234991/6	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 440-234991/8	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 440-234991/9	Method Blank	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 55863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-1	WR-367A-363.48-H-020515	Total/NA	Water	300.0	
550-39671-2	WR-274A-335.89-H-020515	Total/NA	Water	300.0	
LCS 550-55863/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-55863/6	Lab Control Sample Dup	Total/NA	Water	300.0	

HPLC/IC (Continued)

Analysis Batch: 55863 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 550-55863/2	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 55840

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-1	WR-367A-363.48-H-020515	Total/NA	Water	3005A	
550-39671-1 MS	WR-367A-363.48-H-020515	Total/NA	Water	3005A	
550-39671-1 MSD	WR-367A-363.48-H-020515	Total/NA	Water	3005A	
550-39671-2	WR-274A-335.89-H-020515	Total/NA	Water	3005A	
LCS 550-55840/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 550-55840/3-A	Lab Control Sample Dup	Total/NA	Water	3005A	
MB 550-55840/1-A	Method Blank	Total/NA	Water	3005A	

Prep Batch: 55859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-1	WR-367A-363.48-H-020515	Total/NA	Water	7470A	
550-39671-1 MS	WR-367A-363.48-H-020515	Total/NA	Water	7470A	
550-39671-1 MSD	WR-367A-363.48-H-020515	Total/NA	Water	7470A	
550-39671-2	WR-274A-335.89-H-020515	Total/NA	Water	7470A	
LCS 550-55859/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 550-55859/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	
MB 550-55859/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 55894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-1	WR-367A-363.48-H-020515	Total/NA	Water	7470A	55859
550-39671-1 MS	WR-367A-363.48-H-020515	Total/NA	Water	7470A	55859
550-39671-1 MSD	WR-367A-363.48-H-020515	Total/NA	Water	7470A	55859
550-39671-2	WR-274A-335.89-H-020515	Total/NA	Water	7470A	55859
LCS 550-55859/2-A	Lab Control Sample	Total/NA	Water	7470A	55859
LCSD 550-55859/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	55859
MB 550-55859/1-A	Method Blank	Total/NA	Water	7470A	55859

Analysis Batch: 56063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-1	WR-367A-363.48-H-020515	Total/NA	Water	6010B	55840
550-39671-1 MS	WR-367A-363.48-H-020515	Total/NA	Water	6010B	55840
550-39671-1 MSD	WR-367A-363.48-H-020515	Total/NA	Water	6010B	55840
550-39671-2	WR-274A-335.89-H-020515	Total/NA	Water	6010B	55840
LCS 550-55840/2-A	Lab Control Sample	Total/NA	Water	6010B	55840
LCSD 550-55840/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	55840
MB 550-55840/1-A	Method Blank	Total/NA	Water	6010B	55840

Analysis Batch: 56266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-1	WR-367A-363.48-H-020515	Total/NA	Water	SM 2340B	
550-39671-2	WR-274A-335.89-H-020515	Total/NA	Water	SM 2340B	

QC Association Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39671-1

General Chemistry

Analysis Batch: 55772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-1	WR-367A-363.48-H-020515	Total/NA	Water	SM 4500 H+ B	
550-39671-2	WR-274A-335.89-H-020515	Total/NA	Water	SM 4500 H+ B	
LCSSRM 550-55772/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
LCSSRM 550-55772/12	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 55994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-1	WR-367A-363.48-H-020515	Total/NA	Water	SM 2320B	
LCS 550-55994/62	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 550-55994/76	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
MB 550-55994/63	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 56675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-2	WR-274A-335.89-H-020515	Total/NA	Water	SM 2320B	
LCS 550-56675/6	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 550-56675/20	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
MB 550-56675/7	Method Blank	Total/NA	Water	SM 2320B	

Filtration Batch: 57260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-1	WR-367A-363.48-H-020515	Dissolved	Water	Filtration	
550-39671-1 MS	WR-367A-363.48-H-020515	Dissolved	Water	Filtration	
550-39671-1 MSD	WR-367A-363.48-H-020515	Dissolved	Water	Filtration	
MB 550-57260/1-A	Method Blank	Dissolved	Water	Filtration	

Analysis Batch: 57266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-2	WR-274A-335.89-H-020515	Total/NA	Water	SM 5310B	

Analysis Batch: 57480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39671-1	WR-367A-363.48-H-020515	Dissolved	Water	SM 5310B	57260
550-39671-1 MS	WR-367A-363.48-H-020515	Dissolved	Water	SM 5310B	57260
550-39671-1 MSD	WR-367A-363.48-H-020515	Dissolved	Water	SM 5310B	57260
LCS 550-57480/63	Lab Control Sample	Dissolved	Water	SM 5310B	
LCSD 550-57480/64	Lab Control Sample Dup	Dissolved	Water	SM 5310B	
MB 550-57260/1-A	Method Blank	Dissolved	Water	SM 5310B	57260

Lab Chronicle

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39671-1

Client Sample ID: WR-367A-363.48-H-020515

Lab Sample ID: 550-39671-1

Date Collected: 02/05/15 11:55

Matrix: Water

Date Received: 02/06/15 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	56263	02/13/15 07:56	UT	TAL PHX
Total/NA	Analysis	RSK-175		1	234991	02/09/15 17:32	EI	TAL IRV
Total/NA	Analysis	300.0		1	55863	02/06/15 16:50	YAF	TAL PHX
Total/NA	Prep	3005A			55840	02/09/15 07:55	SGO	TAL PHX
Total/NA	Analysis	6010B		1	56063	02/10/15 21:21	AJC	TAL PHX
Total/NA	Prep	7470A			55859	02/09/15 08:30	JRC	TAL PHX
Total/NA	Analysis	7470A		1	55894	02/09/15 12:40	JRC	TAL PHX
Total/NA	Analysis	SM 2340B		1	56266	02/12/15 20:35	SLS	TAL PHX
Total/NA	Analysis	SM 2320B		1	55994	02/10/15 08:41	CDC	TAL PHX
Total/NA	Analysis	SM 4500 H+ B		1	55772	02/06/15 13:23	CDC	TAL PHX
Dissolved	Filtration	Filtration			57260	02/10/15 12:00	KLH	TAL PHX
Dissolved	Analysis	SM 5310B		1	57480	02/27/15 17:52	AMR	TAL PHX

Client Sample ID: WR-274A-335.89-H-020515

Lab Sample ID: 550-39671-2

Date Collected: 02/05/15 15:50

Matrix: Water

Date Received: 02/06/15 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	56263	02/13/15 08:28	UT	TAL PHX
Total/NA	Prep	3510C			56120	02/11/15 14:49	CPA	TAL PHX
Total/NA	Analysis	8270C		1	56174	02/13/15 01:22	CLL	TAL PHX
Total/NA	Analysis	RSK-175		1	234991	02/09/15 17:45	EI	TAL IRV
Total/NA	Analysis	300.0		1	55863	02/06/15 17:26	YAF	TAL PHX
Total/NA	Prep	3005A			55840	02/09/15 07:55	SGO	TAL PHX
Total/NA	Analysis	6010B		1	56063	02/10/15 21:24	AJC	TAL PHX
Total/NA	Prep	7470A			55859	02/09/15 08:30	JRC	TAL PHX
Total/NA	Analysis	7470A		1	55894	02/09/15 12:41	JRC	TAL PHX
Total/NA	Analysis	SM 2340B		1	56266	02/12/15 20:35	SLS	TAL PHX
Total/NA	Analysis	SM 2320B		1	56675	02/18/15 17:18	BCB	TAL PHX
Total/NA	Analysis	SM 4500 H+ B		1	55772	02/06/15 13:23	CDC	TAL PHX
Total/NA	Analysis	SM 5310B		1	57266	02/25/15 03:47	AMR	TAL PHX

Client Sample ID: TB

Lab Sample ID: 550-39671-3

Date Collected: 02/05/15 14:00

Matrix: Water

Date Received: 02/06/15 09:57

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	56363	02/14/15 11:51	PS	TAL PHX
Total/NA	Analysis	8260B		1	56263	02/13/15 00:22	UT	TAL PHX

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Laboratory: TestAmerica Phoenix

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arizona	State Program	9	AZ0728	06-09-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	2-ethoxy-2-methyl butane TIC
8270C	3510C	Water	1,2,4-Trichlorobenzene
8270C	3510C	Water	1,2-Dichlorobenzene
8270C	3510C	Water	1,2-Diphenylhydrazine(as Azobenzene)
8270C	3510C	Water	1,3-Dichlorobenzene
8270C	3510C	Water	1,4-Dichlorobenzene
8270C	3510C	Water	2,4,5-Trichlorophenol
8270C	3510C	Water	2,4,6-Trichlorophenol
8270C	3510C	Water	2,4-Dichlorophenol
8270C	3510C	Water	2,4-Dimethylphenol
8270C	3510C	Water	2,4-Dinitrophenol
8270C	3510C	Water	2,4-Dinitrotoluene
8270C	3510C	Water	2,6-Dinitrotoluene
8270C	3510C	Water	2-Chloronaphthalene
8270C	3510C	Water	2-Chlorophenol
8270C	3510C	Water	2-Methylnaphthalene
8270C	3510C	Water	2-Methylphenol
8270C	3510C	Water	2-Nitroaniline
8270C	3510C	Water	2-Nitrophenol
8270C	3510C	Water	3 & 4 Methylphenol
8270C	3510C	Water	3,3'-Dichlorobenzidine
8270C	3510C	Water	3-Nitroaniline
8270C	3510C	Water	4,6-Dinitro-2-methylphenol
8270C	3510C	Water	4-Bromophenyl phenyl ether
8270C	3510C	Water	4-Chloro-3-methylphenol
8270C	3510C	Water	4-Chloroaniline
8270C	3510C	Water	4-Chlorophenyl phenyl ether
8270C	3510C	Water	4-Nitroaniline
8270C	3510C	Water	4-Nitrophenol
8270C	3510C	Water	Acenaphthene
8270C	3510C	Water	Acenaphthylene
8270C	3510C	Water	Anthracene
8270C	3510C	Water	Benzo[a]anthracene
8270C	3510C	Water	Benzo[a]pyrene
8270C	3510C	Water	Benzo[b]fluoranthene
8270C	3510C	Water	Benzo[g,h,i]perylene
8270C	3510C	Water	Benzo[k]fluoranthene
8270C	3510C	Water	Benzoic acid
8270C	3510C	Water	Benzyl alcohol
8270C	3510C	Water	bis (2-chloroisopropyl) ether
8270C	3510C	Water	Bis(2-chloroethoxy)methane
8270C	3510C	Water	Bis(2-chloroethyl)ether
8270C	3510C	Water	Bis(2-ethylhexyl) phthalate
8270C	3510C	Water	Butyl benzyl phthalate
8270C	3510C	Water	Chrysene
8270C	3510C	Water	Dibenz(a,h)anthracene

Laboratory: TestAmerica Phoenix (Continued)

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arizona	State Program	9	AZ0728	06-09-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270C	3510C	Water	Dibenzofuran
8270C	3510C	Water	Diethyl phthalate
8270C	3510C	Water	Dimethyl phthalate
8270C	3510C	Water	Di-n-butyl phthalate
8270C	3510C	Water	Di-n-octyl phthalate
8270C	3510C	Water	Fluoranthene
8270C	3510C	Water	Fluorene
8270C	3510C	Water	Hexachlorobenzene
8270C	3510C	Water	Hexachlorobutadiene
8270C	3510C	Water	Hexachlorocyclopentadiene
8270C	3510C	Water	Hexachloroethane
8270C	3510C	Water	Indeno[1,2,3-cd]pyrene
8270C	3510C	Water	Isophorone
8270C	3510C	Water	Naphthalene
8270C	3510C	Water	Nitrobenzene
8270C	3510C	Water	N-Nitrosodi-n-propylamine
8270C	3510C	Water	N-Nitrosodiphenylamine
8270C	3510C	Water	Pentachlorophenol
8270C	3510C	Water	Phenanthrene
8270C	3510C	Water	Phenol
8270C	3510C	Water	Pyrene

Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-15
Arizona	State Program	9	AZ0671	10-13-15
California	LA Cty Sanitation Districts	9	10256	01-31-16 *
California	State Program	9	2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-15 *
Hawaii	State Program	9	N/A	01-29-16
Nevada	State Program	9	CA015312007A	07-31-15
New Mexico	State Program	6	N/A	01-29-15 *
Northern Mariana Islands	State Program	9	MP0002	01-29-15 *
Oregon	NELAP	10	4005	01-29-16
USDA	Federal		P330-09-00080	06-06-15

* Certification renewal pending - certification considered valid.

Method Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39671-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PHX
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL PHX
RSK-175	Dissolved Gases (GC)	RSK	TAL IRV
300.0	Anions, Ion Chromatography	MCAWW	TAL PHX
6010B	Metals (ICP)	SW846	TAL PHX
7470A	Mercury (CVAA)	SW846	TAL PHX
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	TAL PHX
SM 2320B	Alkalinity	SM	TAL PHX
SM 4500 H+ B	pH	SM	TAL PHX
SM 5310B	Organic Carbon, Dissolved (DOC)	SM	TAL PHX
SM 5310B	Organic Carbon, Total (TOC)	SM	TAL PHX

Protocol References:

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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 IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

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TAL-0013-550 (10/10)

CHAIN OF CUSTODY FORM

PO 39671

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 4
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

550-39671 Chain of Custody

2/28/2015

Page 1 of 1

Client Name/Address: AMEC 4600 E. WASHINGTON ST SUITE 600 PHOENIX, AZ 85034

Project/PO Number: 14-2014-2029-3.3

Project Manager: ALEX YIANNAKAKIS

Phone Number: 602-733-6013

Sampler: BC, AM

Fax Number:

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	DOC	8260LL	RSK 175 (SEE LIST)	METALS/CATIONS	ANIONS, pH ALKALINITY, HARDNESS	NITRATE, NITRITE (SEE LIST)	8270C SVOC			Special Instructions
WR-367A-363.48-H-020515	Aq	VOA	4	020515	1155	NONE	X									DEQ # 60656
-1		VOA	3			HCl		X								
		VOA	3			HCl			X							
		500mL	1			NITRIC ACID				X						
		500mL	1			NONE					X					
WR-274A-335.89-H-020515	Aq	VOA	4	020515	1550	NONE	(X)									DEQ # 57289
-2		VOA	3			HCl		X								
		VOA	3			HCl			X							
		500mL	1			NITRIC ACID				X						
		500mL	1			NONE					X					
		1L AMBER	2			NONE							X			
TB -3	Aq	VOA	1		1400	HCl										(X) TOC PER
TOC-TB		VOA	1		1400	NONE										ALEX Y. 2/6/15
																X

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)	
	2/6/15 0957			same day ____	72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____	5 days ____
				48 hours ____	normal ____
Relinquished By:	Date/Time:	Received in Lab By:	Date/Time: 2-6-15 0957	Sample Integrity: (Check) intact ____	on ice X

2.6°C

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Login Sample Receipt Checklist

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 550-39671-1

Login Number: 39671

List Source: TestAmerica Phoenix

List Number: 1

Creator: Shoemaker, Cory M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	Check done at department level as required.

Login Sample Receipt Checklist

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 550-39671-1

Login Number: 39671
List Number: 2
Creator: Ornelas, Olga

List Source: TestAmerica Irvine
List Creation: 02/09/15 03:12 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 550-39671-1

Login Number: 39671
List Number: 3
Creator: Ornelas, Olga

List Source: TestAmerica Irvine
List Creation: 02/09/15 03:14 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

TestAmerica Job ID: 550-39836-1
Client Project/Site: 14-2014-2029-3.3

For:
AMEC Foster Wheeler E & I, Inc
4600 E. Washington St
6th Floor
Phoenix, Arizona 85034

Attn: Mr. Alex Yiannakakis

Authorized for release by:
3/5/2015 3:43:08 PM

Vic Nielsen, Project Manager II
(602)437-3340
vic.nielsen@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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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
L5	The associated blank spike recovery was above laboratory/method acceptance limits. This analyte was not detected in the sample.
R6	LFB/LFBD RPD exceeded method control limit. Recovery met acceptance criteria.
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL.
N1	See case narrative.

GC/MS VOA TICs

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
T4	Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

GC/MS Semi VOA

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
L4	The associated blank spike recovery was below method acceptance limits.
R6	LFB/LFBD RPD exceeded method control limit. Recovery met acceptance criteria.
L3	The associated blank spike recovery was above method acceptance limits.
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL.

GC VOA

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.

HPLC/IC

Qualifier	Qualifier Description
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL.
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.

Metals

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike was acceptable.

General Chemistry

Qualifier	Qualifier Description
H5	This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL.

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
CFL	Contains Free Liquid
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

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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)

Job ID: 550-39836-1

Laboratory: TestAmerica Phoenix

Narrative

Job Narrative
550-39836-1

Comments
No additional comments.

Receipt
The samples were received on 2/10/2015 8:58 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.3º C.

GC/MS VOA
Method(s) 8260B: The surrogates Toluene-d8 failed outside of laboratory limits in the laboratory control sample (LCS) and laboratory control spikes duplicate (LCSD) high. All other QC and samples recovered within limits, all data reported.
Data qualified with N1 flag.

Method(s) 8260B: The method blank for batchs 56538 and 56563 contained 1,2,4-Trichlorobenzene and Naphthalene above the method detection limit. These target analytes concentration were less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed. Data qualified with E4 flag.

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

GC/MS Semi VOA
Method(s) 8270C: Hexachlorocyclopentadiene was outside control limits in the continuing calibration verification (CCV) associated with batch 236642. This compound is not classified as a Calibration Check Compound (CCC) in the reference method, and the laboratory defaults to in-house and/or project-specific criteria for evaluation. A standard was run at the reporting limit for this compound to demonstrate sufficient instrument sensitivity. The compound is reportable from this batch as it was not detected in the following affected samples:

Method(s) 8270C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 236459. The LCs was performed in duplicate to provide precision for the batch.

Method(s) 8270C: The laboratory control sample duplicate (LCSD) for batch 236459 recovered outside control limits for the following analytes: Benzo(g,h,i)perylene. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8270C: The laboratory control sample duplicate (LCSD) for batch 236459 recovered outside control limits low for the following analytes: 3,3-Dichlorobenzidine, 3-Nitroaniline, 4-Chloroaniline and Aniline. Holding times had expired, therefore, samples were not re-extracted. Results for these compounds may be biased low and are reported for informational purposes only. LCS recoveries are all within acceptable limits. (LCSD 440-236459/3-A)

Method(s) 8270C: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 236459 recovered outside control limits for the following analytes: 3,3-Dichlorobenzidine, 3-Nitroaniline, 4-Chloroaniline, 4-Nitroaniline, Aniline and Benzidine.

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

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

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

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

Job ID: 550-39836-1 (Continued)

Laboratory: TestAmerica Phoenix (Continued)

General Chemistry

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

Organic Prep

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

VOA Prep

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

Sample Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39836-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-39836-1	R-068A-341.86-H-020915	Water	02/09/15 10:30	02/10/15 08:58
550-39836-2	WR-275A-340.91-H-020915	Water	02/09/15 11:45	02/10/15 08:58
550-39836-3	WR-275A-340.91-H-020915-Dup	Water	02/09/15 11:45	02/10/15 08:58
550-39836-4	WR-353A-430-H-020915	Water	02/09/15 13:20	02/10/15 08:58
550-39836-5	Trip Blank	Water	02/09/15 10:30	02/10/15 08:58

Detection Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39836-1

Client Sample ID: R-068A-341.86-H-020915 — Lab Sample ID: 550-39836-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.43	E4	0.50	0.13	ug/L	1		8260B	Total/NA
1,4-Dichlorobenzene	0.99		0.50	0.17	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	10		0.50	0.21	ug/L	1		8260B	Total/NA
1,2-Dichloropropane	0.47	E4	0.50	0.23	ug/L	1		8260B	Total/NA
Tetrachloroethene	24		0.50	0.18	ug/L	1		8260B	Total/NA
Trichloroethene	5.7		0.50	0.24	ug/L	1		8260B	Total/NA
Nitrate as N	3.0		0.10	0.051	mg/L	1		300.0	Total/NA
Chloride	21		2.0	0.29	mg/L	1		300.0	Total/NA
Fluoride	0.076	E4	0.40	0.040	mg/L	1		300.0	Total/NA
Sulfate	40		2.0	0.21	mg/L	1		300.0	Total/NA
Barium	0.33		0.010	0.0020	mg/L	1		6010B	Total/NA
Calcium	110		2.0	0.069	mg/L	1		6010B	Total/NA
Chromium	0.0035	E4	0.010	0.0010	mg/L	1		6010B	Total/NA
Lead	0.0063	E4	0.015	0.0026	mg/L	1		6010B	Total/NA
Magnesium	11		2.0	0.050	mg/L	1		6010B	Total/NA
Hardness as calcium carbonate	320		13	13	mg/L	1		SM 2340B	Total/NA
Alkalinity as CaCO3	320		6.0	6.0	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	320		6.0	6.0	mg/L	1		SM 2320B	Total/NA
pH	7.18	H5	1.68	1.68	SU	1		SM 4500 H+ B	Total/NA
Temperature	15.1	H5	0.100	0.100	Degrees C	1		SM 4500 H+ B	Total/NA
Dissolved Organic Carbon	0.90	E4	1.0	0.34	mg/L	1		SM 5310B	Dissolved

Client Sample ID: WR-275A-340.91-H-020915 — Lab Sample ID: 550-39836-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.18		0.010	0.0020	mg/L	1		6010B	Total/NA
Calcium	160		2.0	0.069	mg/L	1		6010B	Total/NA
Chromium	0.0012	E4	0.010	0.0010	mg/L	1		6010B	Total/NA
Magnesium	17		2.0	0.050	mg/L	1		6010B	Total/NA
Hardness as calcium carbonate	470		13	13	mg/L	1		SM 2340B	Total/NA

Client Sample ID: WR-275A-340.91-H-020915-Dup — Lab Sample ID: 550-39836-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.17		0.010	0.0020	mg/L	1		6010B	Total/NA
Calcium	160		2.0	0.069	mg/L	1		6010B	Total/NA
Magnesium	16		2.0	0.050	mg/L	1		6010B	Total/NA
Hardness as calcium carbonate	470		13	13	mg/L	1		SM 2340B	Total/NA

Client Sample ID: WR-353A-430-H-020915 — Lab Sample ID: 550-39836-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.080		0.010	0.0020	mg/L	1		6010B	Total/NA
Calcium	32		2.0	0.069	mg/L	1		6010B	Total/NA
Chromium	0.0035	E4	0.010	0.0010	mg/L	1		6010B	Total/NA
Magnesium	3.0		2.0	0.050	mg/L	1		6010B	Total/NA
Hardness as calcium carbonate	92		13	13	mg/L	1		SM 2340B	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 550-39836-5

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39836-1

Client Sample ID: Trip Blank (Continued)

Lab Sample ID: 550-39836-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Organic Carbon	0.89	E4	1.0	0.34	mg/L	1		SM 5310B	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39836-1

Client Sample ID: R-068A-341.86-H-020915

Lab Sample ID: 550-39836-1

Date Collected: 02/09/15 10:30

Matrix: Water

Date Received: 02/10/15 08:58

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	E8	10	7.3	ug/L			02/18/15 11:42	1
Benzene	ND	E8	0.50	0.12	ug/L			02/18/15 11:42	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			02/18/15 11:42	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			02/18/15 11:42	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			02/18/15 11:42	1
Bromoform	ND	E8	1.0	0.37	ug/L			02/18/15 11:42	1
Bromomethane	ND	E8	1.0	0.67	ug/L			02/18/15 11:42	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			02/18/15 11:42	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			02/18/15 11:42	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			02/18/15 11:42	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			02/18/15 11:42	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			02/18/15 11:42	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			02/18/15 11:42	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			02/18/15 11:42	1
Chloroethane	ND	E8	1.0	0.25	ug/L			02/18/15 11:42	1
Chloroform	**0.43**	**E4**	0.50	0.13	ug/L			02/18/15 11:42	1
Chloromethane	ND	E8	1.0	0.21	ug/L			02/18/15 11:42	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			02/18/15 11:42	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			02/18/15 11:42	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			02/18/15 11:42	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			02/18/15 11:42	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			02/18/15 11:42	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			02/18/15 11:42	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			02/18/15 11:42	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			02/18/15 11:42	1
1,4-Dichlorobenzene	**0.99**		0.50	0.17	ug/L			02/18/15 11:42	1
Dichlorodifluoromethane	ND	E8	0.50	0.15	ug/L			02/18/15 11:42	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			02/18/15 11:42	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			02/18/15 11:42	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			02/18/15 11:42	1
cis-1,2-Dichloroethene	**10**		0.50	0.21	ug/L			02/18/15 11:42	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			02/18/15 11:42	1
1,2-Dichloropropane	**0.47**	**E4**	0.50	0.23	ug/L			02/18/15 11:42	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/18/15 11:42	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			02/18/15 11:42	1
1,1-Dichloropropene	ND	E8 L5	0.50	0.20	ug/L			02/18/15 11:42	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			02/18/15 11:42	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			02/18/15 11:42	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			02/18/15 11:42	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			02/18/15 11:42	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			02/18/15 11:42	1
Iodomethane	ND	E8	2.5	0.21	ug/L			02/18/15 11:42	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			02/18/15 11:42	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			02/18/15 11:42	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			02/18/15 11:42	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			02/18/15 11:42	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			02/18/15 11:42	1
Naphthalene	ND	E8	2.5	0.51	ug/L			02/18/15 11:42	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			02/18/15 11:42	1

Client Sample ID: R-068A-341.86-H-020915

Lab Sample ID: 550-39836-1

Date Collected: 02/09/15 10:30

Matrix: Water

Date Received: 02/10/15 08:58

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND	E8	0.50	0.17	ug/L			02/18/15 11:42	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			02/18/15 11:42	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			02/18/15 11:42	1
Tetrachloroethene	**24**		0.50	0.18	ug/L			02/18/15 11:42	1
Toluene	ND	E8	0.50	0.28	ug/L			02/18/15 11:42	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			02/18/15 11:42	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			02/18/15 11:42	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			02/18/15 11:42	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			02/18/15 11:42	1
Trichloroethene	**5.7**		0.50	0.24	ug/L			02/18/15 11:42	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			02/18/15 11:42	1
1,2,3-Trichloropropane	ND	E8 R6	2.0	0.78	ug/L			02/18/15 11:42	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			02/18/15 11:42	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			02/18/15 11:42	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			02/18/15 11:42	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			02/18/15 11:42	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			02/18/15 11:42	1
Butadiene	ND	E8	2.0	1.7	ug/L			02/18/15 11:42	1
Hexane	ND	E8 L5	2.0	1.6	ug/L			02/18/15 11:42	1
2-ethoxy-2-methyl butane TIC	ND	E8	10	10	ug/L			02/18/15 11:42	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*02/18/15 11:42*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*02/18/15 11:42*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*02/18/15 11:42*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*02/18/15 11:42*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*02/18/15 11:42*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*108*		*70 - 130*		*02/18/15 11:42*	*1*
Toluene-d8 (Surr)	*113*		*70 - 130*		*02/18/15 11:42*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*02/18/15 11:42*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
1,2-Dichlorobenzene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
1,2-Diphenylhydrazine(as Azobenzene)	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
1,3-Dichlorobenzene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
1,4-Dichlorobenzene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
2,4,5-Trichlorophenol	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
2,4,6-Trichlorophenol	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
2,4-Dichlorophenol	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
2,4-Dimethylphenol	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
2,4-Dinitrophenol	ND	E8	41	21	ug/L		02/13/15 17:29	02/15/15 22:19	1
2,4-Dinitrotoluene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
2,6-Dinitrotoluene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
2-Chloronaphthalene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
2-Chlorophenol	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1

Client Sample ID: R-068A-341.86-H-020915
Date Collected: 02/09/15 10:30
Date Received: 02/10/15 08:58

Lab Sample ID: 550-39836-1
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
2-Methylphenol	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
2-Nitroaniline	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
2-Nitrophenol	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
3,3'-Dichlorobenzidine	ND	E8 L4 R6	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
3-Nitroaniline	ND	E8 L4 R6	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
4,6-Dinitro-2-methylphenol	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
4-Bromophenyl phenyl ether	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
4-Chloro-3-methylphenol	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
4-Chloroaniline	ND	E8 L4 R6	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
4-Chlorophenyl phenyl ether	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
3-Methylphenol + 4-Methylphenol	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
4-Nitroaniline	ND	E8 R6	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
4-Nitrophenol	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
Acenaphthene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Acenaphthylene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Aniline	ND	E8 L4 R6	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Anthracene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Benzidine	ND	E8 R6	41	21	ug/L		02/13/15 17:29	02/15/15 22:19	1
Benzo[a]anthracene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Benzo[a]pyrene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Benzo[b]fluoranthene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Benzo[g,h,i]perylene	ND	E8 L3	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Benzo[k]fluoranthene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Benzoic acid	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
Benzyl alcohol	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
Bis(2-chloroethoxy)methane	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Bis(2-chloroethyl)ether	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Bis(2-ethylhexyl) phthalate	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
Butyl benzyl phthalate	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
Chrysene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Dibenz(a,h)anthracene	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
Dibenzofuran	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Diethyl phthalate	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Dimethyl phthalate	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Di-n-butyl phthalate	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
Di-n-octyl phthalate	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
Fluoranthene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Fluorene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Hexachlorobenzene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Hexachlorobutadiene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Hexachlorocyclopentadiene	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
Hexachloroethane	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Indeno[1,2,3-cd]pyrene	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
Isophorone	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Naphthalene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Nitrobenzene	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
N-Nitrosodi-n-propylamine	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
N-Nitrosodiphenylamine	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1

Client Sample Results

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39836-1

Client Sample ID: R-068A-341.86-H-020915

Lab Sample ID: 550-39836-1

Date Collected: 02/09/15 10:30
Matrix: Water
Date Received: 02/10/15 08:58

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pentachlorophenol	ND	E8	21	10	ug/L		02/13/15 17:29	02/15/15 22:19	1
Phenanthrene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Phenol	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
Pyrene	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
bis (2-chloroisopropyl) ether	ND	E8	10	5.1	ug/L		02/13/15 17:29	02/15/15 22:19	1
N-Nitrosodimethylamine	ND	E8	21	2.6	ug/L		02/13/15 17:29	02/15/15 22:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*55*		*50 - 120*	*02/13/15 17:29*	*02/15/15 22:19*	*1*
2-Fluorophenol (Surr)	*61*		*30 - 120*	*02/13/15 17:29*	*02/15/15 22:19*	*1*
2,4,6-Tribromophenol (Surr)	*88*		*40 - 120*	*02/13/15 17:29*	*02/15/15 22:19*	*1*
Nitrobenzene-d5 (Surr)	*72*		*45 - 120*	*02/13/15 17:29*	*02/15/15 22:19*	*1*
Terphenyl-d14 (Surr)	*85*		*37 - 144*	*02/13/15 17:29*	*02/15/15 22:19*	*1*
Phenol-d6 (Surr)	*71*		*35 - 120*	*02/13/15 17:29*	*02/15/15 22:19*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND	E8	0.0020	0.00050	mg/L			02/17/15 14:52	1
Ethene	ND	E8	0.0028	0.00053	mg/L			02/17/15 14:52	1
Methane (FID)	ND	E8	0.00099	0.00025	mg/L			02/17/15 14:52	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	**3.0**		0.10	0.051	mg/L			02/10/15 13:38	1
Nitrite as N	ND	E8	0.10	0.032	mg/L			02/10/15 13:38	1
Chloride	**21**		2.0	0.29	mg/L			02/10/15 13:38	1
Fluoride	**0.076**	**E4**	0.40	0.040	mg/L			02/10/15 13:38	1
Sulfate	**40**		2.0	0.21	mg/L			02/10/15 13:38	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND	E8	0.10	0.0062	mg/L		02/10/15 12:01	02/13/15 19:04	1
Barium	**0.33**		0.010	0.0020	mg/L		02/10/15 12:01	02/13/15 19:04	1
Cadmium	ND	E8	0.0010	0.00040	mg/L		02/10/15 12:01	02/13/15 19:04	1
Calcium	**110**		2.0	0.069	mg/L		02/10/15 12:01	02/13/15 19:04	1
Chromium	**0.0035**	**E4**	0.010	0.0010	mg/L		02/10/15 12:01	02/13/15 19:04	1
Lead	**0.0063**	**E4**	0.015	0.0026	mg/L		02/10/15 12:01	02/13/15 19:04	1
Magnesium	**11**		2.0	0.050	mg/L		02/10/15 12:01	02/13/15 19:04	1
Selenium	ND	E8	0.10	0.0076	mg/L		02/10/15 12:01	02/13/15 19:04	1
Silver	ND	E8	0.010	0.00050	mg/L		02/10/15 12:01	02/13/15 19:04	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	E8	0.00050	0.000030	mg/L		02/17/15 09:29	02/17/15 12:14	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**320**		13	13	mg/L			02/18/15 19:03	1

Client Sample ID: R-068A-341.86-H-020915

Lab Sample ID: 550-39836-1

Date Collected: 02/09/15 10:30

Matrix: Water

Date Received: 02/10/15 08:58

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	320		6.0	6.0	mg/L			02/18/15 19:07	1
Bicarbonate Alkalinity as CaCO3	320		6.0	6.0	mg/L			02/18/15 19:07	1
Carbonate Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/18/15 19:07	1
Alkalinity, Phenolphthalein	ND	E8	6.0	6.0	mg/L			02/18/15 19:07	1
Hydroxide Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/18/15 19:07	1
pH	7.18	H5	1.68	1.68	SU			02/10/15 19:24	1
Temperature	15.1	H5	0.100	0.100	Degrees C			02/10/15 19:24	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	0.90	E4	1.0	0.34	mg/L			02/27/15 11:15	1

Client Sample ID: WR-275A-340.91-H-020915

Lab Sample ID: 550-39836-2

Date Collected: 02/09/15 11:45

Matrix: Water

Date Received: 02/10/15 08:58

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND	E8	0.10	0.0062	mg/L		02/10/15 12:01	02/13/15 19:08	1
Barium	0.18		0.010	0.0020	mg/L		02/10/15 12:01	02/13/15 19:08	1
Cadmium	ND	E8	0.0010	0.00040	mg/L		02/10/15 12:01	02/13/15 19:08	1
Calcium	160		2.0	0.069	mg/L		02/10/15 12:01	02/13/15 19:08	1
Chromium	0.0012	E4	0.010	0.0010	mg/L		02/10/15 12:01	02/13/15 19:08	1
Lead	ND	E8	0.015	0.0026	mg/L		02/10/15 12:01	02/13/15 19:08	1
Magnesium	17		2.0	0.050	mg/L		02/10/15 12:01	02/13/15 19:08	1
Selenium	ND	E8	0.10	0.0076	mg/L		02/10/15 12:01	02/13/15 19:08	1
Silver	ND	E8	0.010	0.00050	mg/L		02/10/15 12:01	02/13/15 19:08	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	E8	0.00050	0.000030	mg/L		02/17/15 09:29	02/17/15 12:16	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	470		13	13	mg/L			02/18/15 19:03	1

Client Sample ID: WR-275A-340.91-H-020915-Dup

Lab Sample ID: 550-39836-3

Date Collected: 02/09/15 11:45

Matrix: Water

Date Received: 02/10/15 08:58

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND	E8	0.10	0.0062	mg/L		02/10/15 12:01	02/13/15 19:11	1
Barium	0.17		0.010	0.0020	mg/L		02/10/15 12:01	02/13/15 19:11	1
Cadmium	ND	E8	0.0010	0.00040	mg/L		02/10/15 12:01	02/13/15 19:11	1
Calcium	160		2.0	0.069	mg/L		02/10/15 12:01	02/13/15 19:11	1
Chromium	ND	E8	0.010	0.0010	mg/L		02/10/15 12:01	02/13/15 19:11	1
Lead	ND	E8	0.015	0.0026	mg/L		02/10/15 12:01	02/13/15 19:11	1
Magnesium	16		2.0	0.050	mg/L		02/10/15 12:01	02/13/15 19:11	1
Selenium	ND	E8	0.10	0.0076	mg/L		02/10/15 12:01	02/13/15 19:11	1
Silver	ND	E8	0.010	0.00050	mg/L		02/10/15 12:01	02/13/15 19:11	1

Client Sample ID: WR-275A-340.91-H-020915-Dup

Lab Sample ID: 550-39836-3

Date Collected: 02/09/15 11:45

Matrix: Water

Date Received: 02/10/15 08:58

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	E8	0.00050	0.000030	mg/L		02/17/15 09:29	02/17/15 12:18	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**470**		13	13	mg/L			02/18/15 19:03	1

Client Sample ID: WR-353A-430-H-020915

Lab Sample ID: 550-39836-4

Date Collected: 02/09/15 13:20

Matrix: Water

Date Received: 02/10/15 08:58

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND	E8	0.10	0.0062	mg/L		02/10/15 12:01	02/13/15 19:14	1
Barium	**0.080**		0.010	0.0020	mg/L		02/10/15 12:01	02/13/15 19:14	1
Cadmium	ND	E8	0.0010	0.00040	mg/L		02/10/15 12:01	02/13/15 19:14	1
Calcium	**32**		2.0	0.069	mg/L		02/10/15 12:01	02/13/15 19:14	1
Chromium	**0.0035**	**E4**	0.010	0.0010	mg/L		02/10/15 12:01	02/13/15 19:14	1
Lead	ND	E8	0.015	0.0026	mg/L		02/10/15 12:01	02/13/15 19:14	1
Magnesium	**3.0**		2.0	0.050	mg/L		02/10/15 12:01	02/13/15 19:14	1
Selenium	ND	E8	0.10	0.0076	mg/L		02/10/15 12:01	02/13/15 19:14	1
Silver	ND	E8	0.010	0.00050	mg/L		02/10/15 12:01	02/13/15 19:14	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	E8	0.00050	0.000030	mg/L		02/17/15 09:29	02/17/15 12:19	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	**92**		13	13	mg/L			02/18/15 19:03	1

Client Sample ID: Trip Blank

Lab Sample ID: 550-39836-5

Date Collected: 02/09/15 10:30

Matrix: Water

Date Received: 02/10/15 08:58

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	E8	10	7.3	ug/L			02/18/15 14:27	1
Benzene	ND	E8	0.50	0.12	ug/L			02/18/15 14:27	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			02/18/15 14:27	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			02/18/15 14:27	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			02/18/15 14:27	1
Bromoform	ND	E8	1.0	0.37	ug/L			02/18/15 14:27	1
Bromomethane	ND	E8	1.0	0.67	ug/L			02/18/15 14:27	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			02/18/15 14:27	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			02/18/15 14:27	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			02/18/15 14:27	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			02/18/15 14:27	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			02/18/15 14:27	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			02/18/15 14:27	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			02/18/15 14:27	1
Chloroethane	ND	E8	1.0	0.25	ug/L			02/18/15 14:27	1

Client Sample ID: Trip Blank

Lab Sample ID: 550-39836-5

Date Collected: 02/09/15 10:30

Matrix: Water

Date Received: 02/10/15 08:58

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND	E8	0.50	0.13	ug/L			02/18/15 14:27	1
Chloromethane	ND	E8	1.0	0.21	ug/L			02/18/15 14:27	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			02/18/15 14:27	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			02/18/15 14:27	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			02/18/15 14:27	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			02/18/15 14:27	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			02/18/15 14:27	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			02/18/15 14:27	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			02/18/15 14:27	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			02/18/15 14:27	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			02/18/15 14:27	1
Dichlorodifluoromethane	ND	E8	0.50	0.15	ug/L			02/18/15 14:27	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			02/18/15 14:27	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			02/18/15 14:27	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			02/18/15 14:27	1
cis-1,2-Dichloroethene	ND	E8	0.50	0.21	ug/L			02/18/15 14:27	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			02/18/15 14:27	1
1,2-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/18/15 14:27	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/18/15 14:27	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			02/18/15 14:27	1
1,1-Dichloropropene	ND	E8 L5	0.50	0.20	ug/L			02/18/15 14:27	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			02/18/15 14:27	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			02/18/15 14:27	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			02/18/15 14:27	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			02/18/15 14:27	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			02/18/15 14:27	1
Iodomethane	ND	E8	2.5	0.21	ug/L			02/18/15 14:27	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			02/18/15 14:27	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			02/18/15 14:27	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			02/18/15 14:27	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			02/18/15 14:27	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			02/18/15 14:27	1
Naphthalene	ND	E8	2.5	0.51	ug/L			02/18/15 14:27	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			02/18/15 14:27	1
Styrene	ND	E8	0.50	0.17	ug/L			02/18/15 14:27	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			02/18/15 14:27	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			02/18/15 14:27	1
Tetrachloroethene	ND	E8	0.50	0.18	ug/L			02/18/15 14:27	1
Toluene	ND	E8	0.50	0.28	ug/L			02/18/15 14:27	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			02/18/15 14:27	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			02/18/15 14:27	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			02/18/15 14:27	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			02/18/15 14:27	1
Trichloroethene	ND	E8	0.50	0.24	ug/L			02/18/15 14:27	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			02/18/15 14:27	1
1,2,3-Trichloropropane	ND	E8 R6	2.0	0.78	ug/L			02/18/15 14:27	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			02/18/15 14:27	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			02/18/15 14:27	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			02/18/15 14:27	1

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39836-1

Client Sample ID: Trip Blank

Lab Sample ID: 550-39836-5

Date Collected: 02/09/15 10:30

Matrix: Water

Date Received: 02/10/15 08:58

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND	E8	0.50	0.18	ug/L			02/18/15 14:27	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			02/18/15 14:27	1
Butadiene	ND	E8	2.0	1.7	ug/L			02/18/15 14:27	1
Hexane	ND	E8 L5	2.0	1.6	ug/L			02/18/15 14:27	1
2-ethoxy-2-methyl butane TIC	ND	E8	10	10	ug/L			02/18/15 14:27	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*02/18/15 14:27*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*02/18/15 14:27*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*02/18/15 14:27*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*02/18/15 14:27*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*02/18/15 14:27*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*117*		*70 - 130*		*02/18/15 14:27*	*1*
Toluene-d8 (Surr)	*113*		*70 - 130*		*02/18/15 14:27*	*1*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*		*02/18/15 14:27*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	**0.89**	**E4**	1.0	0.34	mg/L			02/25/15 11:03	1

Surrogate Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39836-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
550-39836-1	R-068A-341.86-H-020915	108	113	101
550-39836-1 MS	R-068A-341.86-H-020915	96	97	94
550-39836-1 MSD	R-068A-341.86-H-020915	105	101	93
550-39836-5	Trip Blank	117	113	110
LCS 550-56538/3	Lab Control Sample	120	137 N1	125
LCSD 550-56538/4	Lab Control Sample Dup	123	133 N1	127
MB 550-56538/5	Method Blank	96	102	108

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		FBP	2FP	TBP	NBZ	TPH	PHL
Lab Sample ID	Client Sample ID	(50-120)	(30-120)	(40-120)	(45-120)	(37-144)	(35-120)
550-39836-1	R-068A-341.86-H-020915	55	61	88	72	85	71
LCS 440-236459/2-A	Lab Control Sample	79	54	95	72	81	66
LCSD 440-236459/3-A	Lab Control Sample Dup	85	62	102	82	87	70
MB 440-236459/1-A	Method Blank	81	70	97	75	85	73

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
TPH = Terphenyl-d14 (Surr)
PHL = Phenol-d6 (Surr)

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

Lab Sample ID: MB 550-56538/5
Matrix: Water
Analysis Batch: 56538

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	E8	10	7.3	ug/L			02/18/15 10:35	1
Benzene	ND	E8	0.50	0.12	ug/L			02/18/15 10:35	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			02/18/15 10:35	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			02/18/15 10:35	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			02/18/15 10:35	1
Bromoform	ND	E8	1.0	0.37	ug/L			02/18/15 10:35	1
Bromomethane	ND	E8	1.0	0.67	ug/L			02/18/15 10:35	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			02/18/15 10:35	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			02/18/15 10:35	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			02/18/15 10:35	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			02/18/15 10:35	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			02/18/15 10:35	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			02/18/15 10:35	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			02/18/15 10:35	1
Chloroethane	ND	E8	1.0	0.25	ug/L			02/18/15 10:35	1
Chloroform	ND	E8	0.50	0.13	ug/L			02/18/15 10:35	1
Chloromethane	ND	E8	1.0	0.21	ug/L			02/18/15 10:35	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			02/18/15 10:35	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			02/18/15 10:35	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			02/18/15 10:35	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			02/18/15 10:35	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			02/18/15 10:35	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			02/18/15 10:35	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			02/18/15 10:35	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			02/18/15 10:35	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			02/18/15 10:35	1
Dichlorodifluoromethane	ND	E8	0.50	0.15	ug/L			02/18/15 10:35	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			02/18/15 10:35	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			02/18/15 10:35	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			02/18/15 10:35	1
cis-1,2-Dichloroethene	ND	E8	0.50	0.21	ug/L			02/18/15 10:35	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			02/18/15 10:35	1
1,2-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/18/15 10:35	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/18/15 10:35	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			02/18/15 10:35	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			02/18/15 10:35	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			02/18/15 10:35	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			02/18/15 10:35	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			02/18/15 10:35	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			02/18/15 10:35	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			02/18/15 10:35	1
Iodomethane	ND	E8	2.5	0.21	ug/L			02/18/15 10:35	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			02/18/15 10:35	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			02/18/15 10:35	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			02/18/15 10:35	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			02/18/15 10:35	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			02/18/15 10:35	1
Naphthalene	1.92	E4	2.5	0.51	ug/L			02/18/15 10:35	1

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

Lab Sample ID: MB 550-56538/5
Matrix: Water
Analysis Batch: 56538

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			02/18/15 10:35	1
Styrene	ND	E8	0.50	0.17	ug/L			02/18/15 10:35	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			02/18/15 10:35	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			02/18/15 10:35	1
Tetrachloroethene	ND	E8	0.50	0.18	ug/L			02/18/15 10:35	1
Toluene	ND	E8	0.50	0.28	ug/L			02/18/15 10:35	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			02/18/15 10:35	1
1,2,4-Trichlorobenzene	0.592	E4	1.0	0.32	ug/L			02/18/15 10:35	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			02/18/15 10:35	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			02/18/15 10:35	1
Trichloroethene	ND	E8	0.50	0.24	ug/L			02/18/15 10:35	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			02/18/15 10:35	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			02/18/15 10:35	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			02/18/15 10:35	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			02/18/15 10:35	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			02/18/15 10:35	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			02/18/15 10:35	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			02/18/15 10:35	1
Butadiene	ND	E8	2.0	1.7	ug/L			02/18/15 10:35	1
Hexane	ND	E8	2.0	1.6	ug/L			02/18/15 10:35	1
2-ethoxy-2-methyl butane TIC	ND	E8	10	10	ug/L			02/18/15 10:35	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*02/18/15 10:35*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*02/18/15 10:35*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*02/18/15 10:35*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*02/18/15 10:35*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*02/18/15 10:35*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*96*		*70 - 130*		*02/18/15 10:35*	*1*
Toluene-d8 (Surr)	*102*		*70 - 130*		*02/18/15 10:35*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*		*02/18/15 10:35*	*1*

Lab Sample ID: LCS 550-56538/3
Matrix: Water
Analysis Batch: 56538

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	25.0	24.0		ug/L		96	38 - 150
Benzene	25.0	27.9		ug/L		112	70 - 130
Bromobenzene	25.0	28.8		ug/L		115	70 - 130
Chlorobromomethane	25.0	24.5		ug/L		98	70 - 130
Dichlorobromomethane	25.0	27.8		ug/L		111	70 - 130
Bromoform	25.0	27.9		ug/L		112	69 - 129
Bromomethane	25.0	25.3		ug/L		101	57 - 138
2-Butanone (MEK)	25.0	20.0		ug/L		80	53 - 150

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

Lab Sample ID: LCS 550-56538/3
Matrix: Water
Analysis Batch: 56538

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
n-Butylbenzene	25.0	28.9		ug/L		116	70 - 130
sec-Butylbenzene	25.0	31.0		ug/L		124	70 - 130
Carbon disulfide	25.0	29.5		ug/L		118	64 - 145
Carbon tetrachloride	25.0	30.9		ug/L		124	70 - 143
Chlorobenzene	25.0	26.8		ug/L		107	70 - 130
Chloroethane	25.0	26.8		ug/L		107	66 - 131
Chloroform	25.0	26.8		ug/L		107	70 - 130
Chloromethane	25.0	24.6		ug/L		98	56 - 129
2-Chlorotoluene	25.0	30.1		ug/L		120	70 - 130
4-Chlorotoluene	25.0	29.6		ug/L		118	70 - 130
Chlorodibromomethane	25.0	26.6		ug/L		106	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	22.5		ug/L		90	63 - 146
Ethylene Dibromide	25.0	26.8		ug/L		107	70 - 130
Dibromomethane	25.0	25.9		ug/L		103	70 - 130
1,2-Dichlorobenzene	25.0	26.6		ug/L		107	70 - 130
1,3-Dichlorobenzene	25.0	28.7		ug/L		115	70 - 130
1,4-Dichlorobenzene	25.0	26.6		ug/L		107	70 - 130
Dichlorodifluoromethane	25.0	22.1		ug/L		89	46 - 144
1,1-Dichloroethane	25.0	27.8		ug/L		111	70 - 130
1,2-Dichloroethane	25.0	26.2		ug/L		105	66 - 139
1,1-Dichloroethene	25.0	28.5		ug/L		114	63 - 131
cis-1,2-Dichloroethene	25.0	25.8		ug/L		103	70 - 130
trans-1,2-Dichloroethene	25.0	29.4		ug/L		117	69 - 127
1,2-Dichloropropane	25.0	28.5		ug/L		114	70 - 130
1,3-Dichloropropane	25.0	28.1		ug/L		112	70 - 130
2,2-Dichloropropane	25.0	28.1		ug/L		113	69 - 139
1,1-Dichloropropene	25.0	31.9		ug/L		128	70 - 130
cis-1,3-Dichloropropene	25.0	27.4		ug/L		110	70 - 130
trans-1,3-Dichloropropene	25.0	26.5		ug/L		106	70 - 130
Ethylbenzene	25.0	29.9		ug/L		120	70 - 130
Hexachlorobutadiene	25.0	29.3		ug/L		117	76 - 145
2-Hexanone	25.0	22.2		ug/L		89	55 - 150
Iodomethane	25.0	27.4		ug/L		109	70 - 130
Isopropylbenzene	25.0	31.8		ug/L		127	88 - 141
4-Isopropyltoluene	25.0	28.8		ug/L		115	70 - 130
Methylene Chloride	25.0	28.0		ug/L		112	63 - 128
4-Methyl-2-pentanone (MIBK)	25.0	23.4		ug/L		94	64 - 142
Methyl tert-butyl ether	25.0	24.3		ug/L		97	70 - 130
Naphthalene	25.0	25.0		ug/L		100	78 - 143
N-Propylbenzene	25.0	32.1		ug/L		128	70 - 130
Styrene	25.0	26.4		ug/L		106	70 - 130
1,1,1,2-Tetrachloroethane	25.0	28.2		ug/L		113	70 - 130
1,1,2,2-Tetrachloroethane	25.0	27.5		ug/L		110	70 - 130
Tetrachloroethene	25.0	31.2		ug/L		125	70 - 130
Toluene	25.0	29.0		ug/L		116	70 - 130
1,2,3-Trichlorobenzene	25.0	25.8		ug/L		103	79 - 139
1,2,4-Trichlorobenzene	25.0	24.8		ug/L		99	80 - 137
1,1,1-Trichloroethane	25.0	28.5		ug/L		114	71 - 131

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

Lab Sample ID: LCS 550-56538/3
Matrix: Water
Analysis Batch: 56538

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	25.0	25.2		ug/L		101	70 - 130
Trichloroethene	25.0	30.2		ug/L		121	70 - 130
Trichlorofluoromethane	25.0	26.6		ug/L		106	69 - 150
1,2,3-Trichloropropane	25.0	27.3		ug/L		109	70 - 130
1,2,4-Trimethylbenzene	25.0	31.5		ug/L		126	70 - 130
1,3,5-Trimethylbenzene	25.0	30.1		ug/L		120	70 - 130
Vinyl acetate	25.0	24.1		ug/L		96	67 - 148
Vinyl chloride	25.0	26.1		ug/L		104	65 - 137
Xylenes, Total	50.0	53.7		ug/L		107	70 - 130
Butadiene	25.0	25.0		ug/L		100	12 - 150
Hexane	25.0	26.1		ug/L		104	54 - 132
m-Xylene & p-Xylene	25.0	27.2		ug/L		109	70 - 130
o-Xylene	25.0	26.5		ug/L		106	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*120*		*70 - 130*
Toluene-d8 (Surr)	*137*	*N1*	*70 - 130*
4-Bromofluorobenzene (Surr)	*125*		*70 - 130*

Lab Sample ID: LCSD 550-56538/4
Matrix: Water
Analysis Batch: 56538

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	25.0	22.3		ug/L		89	38 - 150	7	35
Benzene	25.0	29.9		ug/L		119	70 - 130	7	20
Bromobenzene	25.0	27.1		ug/L		109	70 - 130	6	20
Chlorobromomethane	25.0	26.5		ug/L		106	70 - 130	8	20
Dichlorobromomethane	25.0	28.7		ug/L		115	70 - 130	3	20
Bromoform	25.0	25.3		ug/L		101	69 - 129	10	20
Bromomethane	25.0	25.7		ug/L		103	57 - 138	2	20
2-Butanone (MEK)	25.0	20.2		ug/L		81	53 - 150	1	35
n-Butylbenzene	25.0	30.8		ug/L		123	70 - 130	6	20
sec-Butylbenzene	25.0	31.4		ug/L		126	70 - 130	1	20
Carbon disulfide	25.0	32.1		ug/L		128	64 - 145	8	33
Carbon tetrachloride	25.0	32.2		ug/L		129	70 - 143	4	20
Chlorobenzene	25.0	27.7		ug/L		111	70 - 130	3	20
Chloroethane	25.0	29.0		ug/L		116	66 - 131	8	20
Chloroform	25.0	29.0		ug/L		116	70 - 130	8	20
Chloromethane	25.0	25.8		ug/L		103	56 - 129	5	20
2-Chlorotoluene	25.0	30.4		ug/L		122	70 - 130	1	20
4-Chlorotoluene	25.0	29.2		ug/L		117	70 - 130	1	20
Chlorodibromomethane	25.0	25.4		ug/L		101	70 - 130	5	20
1,2-Dibromo-3-Chloropropane	25.0	19.8		ug/L		79	63 - 146	13	22
Ethylene Dibromide	25.0	26.7		ug/L		107	70 - 130	0	20
Dibromomethane	25.0	26.7		ug/L		107	70 - 130	3	20
1,2-Dichlorobenzene	25.0	25.8		ug/L		103	70 - 130	3	20
1,3-Dichlorobenzene	25.0	28.5		ug/L		114	70 - 130	1	20

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

Lab Sample ID: LCSD 550-56538/4
Matrix: Water
Analysis Batch: 56538

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	25.0	27.7		ug/L		111	70 - 130	4	20
Dichlorodifluoromethane	25.0	24.5		ug/L		98	46 - 144	10	23
1,1-Dichloroethane	25.0	30.1		ug/L		121	70 - 130	8	20
1,2-Dichloroethane	25.0	27.0		ug/L		108	66 - 139	3	20
1,1-Dichloroethene	25.0	32.1		ug/L		128	63 - 131	12	22
cis-1,2-Dichloroethene	25.0	29.1		ug/L		116	70 - 130	12	20
trans-1,2-Dichloroethene	25.0	30.4		ug/L		122	69 - 127	4	20
1,2-Dichloropropane	25.0	30.2		ug/L		121	70 - 130	6	20
1,3-Dichloropropane	25.0	27.4		ug/L		109	70 - 130	3	20
2,2-Dichloropropane	25.0	32.0		ug/L		128	69 - 139	13	20
1,1-Dichloropropene	25.0	34.3	L5	ug/L		137	70 - 130	7	20
cis-1,3-Dichloropropene	25.0	27.0		ug/L		108	70 - 130	1	20
trans-1,3-Dichloropropene	25.0	27.1		ug/L		109	70 - 130	2	20
Ethylbenzene	25.0	30.6		ug/L		123	70 - 130	2	20
Hexachlorobutadiene	25.0	33.6		ug/L		135	76 - 145	14	20
2-Hexanone	25.0	18.6		ug/L		75	55 - 150	17	35
Iodomethane	25.0	28.9		ug/L		116	70 - 130	5	20
Isopropylbenzene	25.0	31.7		ug/L		127	88 - 141	0	20
4-Isopropyltoluene	25.0	29.7		ug/L		119	70 - 130	3	20
Methylene Chloride	25.0	29.4		ug/L		117	63 - 128	5	21
4-Methyl-2-pentanone (MIBK)	25.0	20.8		ug/L		83	64 - 142	12	25
Methyl tert-butyl ether	25.0	24.5		ug/L		98	70 - 130	1	20
Naphthalene	25.0	22.4		ug/L		90	78 - 143	11	20
N-Propylbenzene	25.0	31.8		ug/L		127	70 - 130	1	20
Styrene	25.0	25.7		ug/L		103	70 - 130	3	20
1,1,1,2-Tetrachloroethane	25.0	27.5		ug/L		110	70 - 130	2	20
1,1,2,2-Tetrachloroethane	25.0	24.0		ug/L		96	70 - 130	13	20
Tetrachloroethene	25.0	32.1		ug/L		128	70 - 130	3	20
Toluene	25.0	31.9		ug/L		128	70 - 130	10	20
1,2,3-Trichlorobenzene	25.0	23.5		ug/L		94	79 - 139	9	20
1,2,4-Trichlorobenzene	25.0	25.6		ug/L		102	80 - 137	3	20
1,1,1-Trichloroethane	25.0	31.7		ug/L		127	71 - 131	11	20
1,1,2-Trichloroethane	25.0	24.8		ug/L		99	70 - 130	2	20
Trichloroethene	25.0	31.9		ug/L		128	70 - 130	5	20
Trichlorofluoromethane	25.0	29.5		ug/L		118	69 - 150	10	22
1,2,3-Trichloropropane	25.0	21.5	R6	ug/L		86	70 - 130	23	20
1,2,4-Trimethylbenzene	25.0	30.3		ug/L		121	70 - 130	4	20
1,3,5-Trimethylbenzene	25.0	30.3		ug/L		121	70 - 130	1	20
Vinyl acetate	25.0	24.1		ug/L		96	67 - 148	0	22
Vinyl chloride	25.0	28.2		ug/L		113	65 - 137	8	20
Xylenes, Total	50.0	56.6		ug/L		113	70 - 130	5	20
Butadiene	25.0	28.2		ug/L		113	12 - 150	12	35
Hexane	25.0	33.8	L5	ug/L		135	54 - 132	26	28
m-Xylene & p-Xylene	25.0	30.4		ug/L		122	70 - 130	11	20
o-Xylene	25.0	26.2		ug/L		105	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*123*		*70 - 130*

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

Lab Sample ID: LCSD 550-56538/4
Matrix: Water
Analysis Batch: 56538

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

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*133*	*N1*	*70 - 130*
4-Bromofluorobenzene (Surr)	*127*		*70 - 130*

Lab Sample ID: 550-39836-1 MS
Matrix: Water
Analysis Batch: 56538

Client Sample ID: R-068A-341.86-H-020915
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND	E8	25.0	11.6		ug/L		47	29 - 139
Benzene	ND	E8	25.0	25.9		ug/L		103	68 - 131
Bromobenzene	ND	E8	25.0	28.7		ug/L		115	70 - 130
Chlorobromomethane	ND	E8	25.0	26.7		ug/L		107	64 - 132
Dichlorobromomethane	ND	E8	25.0	27.8		ug/L		111	63 - 138
Bromoform	ND	E8	25.0	27.8		ug/L		111	60 - 128
Bromomethane	ND	E8	25.0	26.1		ug/L		104	47 - 144
2-Butanone (MEK)	ND	E8	25.0	14.8		ug/L		59	31 - 143
n-Butylbenzene	ND	E8	25.0	26.0		ug/L		104	69 - 140
sec-Butylbenzene	ND	E8	25.0	28.6		ug/L		114	72 - 136
Carbon disulfide	ND	E8	25.0	29.1		ug/L		116	45 - 150
Carbon tetrachloride	ND	E8	25.0	28.6		ug/L		114	65 - 147
Chlorobenzene	ND	E8	25.0	26.2		ug/L		105	70 - 130
Chloroethane	ND	E8	25.0	29.1		ug/L		117	57 - 139
Chloroform	0.43	E4	25.0	27.9		ug/L		110	63 - 131
Chloromethane	ND	E8	25.0	24.9		ug/L		99	47 - 134
2-Chlorotoluene	ND	E8	25.0	28.3		ug/L		113	71 - 131
4-Chlorotoluene	ND	E8	25.0	27.7		ug/L		111	70 - 130
Chlorodibromomethane	ND	E8	25.0	25.7		ug/L		103	65 - 134
1,2-Dibromo-3-Chloropropane	ND	E8	25.0	24.2		ug/L		97	53 - 145
Ethylene Dibromide	ND	E8	25.0	26.5		ug/L		106	70 - 130
Dibromomethane	ND	E8	25.0	25.6		ug/L		103	66 - 136
1,2-Dichlorobenzene	ND	E8	25.0	27.2		ug/L		109	70 - 130
1,3-Dichlorobenzene	ND	E8	25.0	27.2		ug/L		109	70 - 130
1,4-Dichlorobenzene	0.99		25.0	28.0		ug/L		108	70 - 130
Dichlorodifluoromethane	ND	E8	25.0	27.0		ug/L		108	40 - 148
1,1-Dichloroethane	ND	E8	25.0	27.1		ug/L		108	62 - 130
1,2-Dichloroethane	ND	E8	25.0	28.8		ug/L		115	54 - 147
1,1-Dichloroethene	ND	E8	25.0	29.2		ug/L		117	57 - 137
cis-1,2-Dichloroethene	10		25.0	37.4		ug/L		109	65 - 127
trans-1,2-Dichloroethene	ND	E8	25.0	26.4		ug/L		105	62 - 131
1,2-Dichloropropane	0.47	E4	25.0	28.8		ug/L		113	68 - 126
1,3-Dichloropropane	ND	E8	25.0	26.3		ug/L		105	68 - 129
2,2-Dichloropropane	ND	E8	25.0	26.8		ug/L		107	60 - 146
1,1-Dichloropropene	ND	E8 L5	25.0	29.3		ug/L		117	64 - 134
cis-1,3-Dichloropropene	ND	E8	25.0	26.2		ug/L		105	63 - 135
trans-1,3-Dichloropropene	ND	E8	25.0	26.7		ug/L		107	58 - 136
Ethylbenzene	ND	E8	25.0	26.8		ug/L		107	74 - 134
Hexachlorobutadiene	ND	E8	25.0	30.6		ug/L		122	69 - 150
2-Hexanone	ND	E8	25.0	15.2		ug/L		61	40 - 142

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

Lab Sample ID: 550-39836-1 MS — **Client Sample ID: R-068A-341.86-H-020915**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56538

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iodomethane	ND	E8	25.0	27.9		ug/L		112	53 - 150
Isopropylbenzene	ND	E8	25.0	29.8		ug/L		119	80 - 146
4-Isopropyltoluene	ND	E8	25.0	27.0		ug/L		108	70 - 133
Methylene Chloride	ND	E8	25.0	27.4		ug/L		110	55 - 133
4-Methyl-2-pentanone (MIBK)	ND	E8	25.0	20.4		ug/L		81	52 - 143
Methyl tert-butyl ether	ND	E8	25.0	25.6		ug/L		102	67 - 138
Naphthalene	ND	E8	25.0	23.5		ug/L		94	67 - 146
N-Propylbenzene	ND	E8	25.0	28.5		ug/L		114	74 - 140
Styrene	ND	E8	25.0	23.5		ug/L		94	43 - 144
1,1,1,2-Tetrachloroethane	ND	E8	25.0	27.4		ug/L		110	70 - 130
1,1,2,2-Tetrachloroethane	ND	E8	25.0	27.9		ug/L		112	63 - 137
Tetrachloroethene	24		25.0	49.8		ug/L		103	67 - 131
Toluene	ND	E8	25.0	26.6		ug/L		106	65 - 138
1,2,3-Trichlorobenzene	ND	E8	25.0	25.8		ug/L		103	74 - 139
1,2,4-Trichlorobenzene	ND	E8	25.0	25.0		ug/L		100	74 - 138
1,1,1-Trichloroethane	ND	E8	25.0	28.8		ug/L		115	64 - 138
1,1,2-Trichloroethane	ND	E8	25.0	25.0		ug/L		100	63 - 132
Trichloroethene	5.7		25.0	32.9		ug/L		109	66 - 132
Trichlorofluoromethane	ND	E8	25.0	29.1		ug/L		117	62 - 150
1,2,3-Trichloropropane	ND	E8 R6	25.0	25.9		ug/L		104	68 - 130
1,2,4-Trimethylbenzene	ND	E8	25.0	28.0		ug/L		112	63 - 135
1,3,5-Trimethylbenzene	ND	E8	25.0	28.3		ug/L		113	66 - 137
Vinyl acetate	ND	E8	25.0	22.3		ug/L		89	47 - 150
Vinyl chloride	ND	E8	25.0	26.4		ug/L		106	55 - 146
Xylenes, Total	ND	E8	50.0	48.9		ug/L		98	68 - 131
Butadiene	ND	E8	25.0	26.4		ug/L		106	10 - 150
Hexane	ND	E8 L5	25.0	31.0		ug/L		124	46 - 139
m-Xylene & p-Xylene	ND	E8	25.0	24.5		ug/L		98	58 - 138
o-Xylene	ND	E8	25.0	24.4		ug/L		97	66 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*96*		*70 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*

Lab Sample ID: 550-39836-1 MSD — **Client Sample ID: R-068A-341.86-H-020915**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56538

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND	E8	25.0	10.2		ug/L		41	29 - 139	13	35
Benzene	ND	E8	25.0	25.8		ug/L		103	68 - 131	0	32
Bromobenzene	ND	E8	25.0	27.7		ug/L		111	70 - 130	3	28
Chlorobromomethane	ND	E8	25.0	28.1		ug/L		112	64 - 132	5	35
Dichlorobromomethane	ND	E8	25.0	29.2		ug/L		117	63 - 138	5	31
Bromoform	ND	E8	25.0	26.3		ug/L		105	60 - 128	6	31
Bromomethane	ND	E8	25.0	26.8		ug/L		107	47 - 144	3	35
2-Butanone (MEK)	ND	E8	25.0	13.2		ug/L		53	31 - 143	11	35

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

Lab Sample ID: 550-39836-1 MSD
Matrix: Water
Analysis Batch: 56538

Client Sample ID: R-068A-341.86-H-020915
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
n-Butylbenzene	ND	E8	25.0	24.7		ug/L		99	69 - 140	5	32
sec-Butylbenzene	ND	E8	25.0	26.9		ug/L		108	72 - 136	6	33
Carbon disulfide	ND	E8	25.0	30.3		ug/L		121	45 - 150	4	35
Carbon tetrachloride	ND	E8	25.0	27.8		ug/L		111	65 - 147	3	35
Chlorobenzene	ND	E8	25.0	25.3		ug/L		101	70 - 130	4	30
Chloroethane	ND	E8	25.0	28.8		ug/L		115	57 - 139	1	35
Chloroform	0.43	E4	25.0	30.1		ug/L		118	63 - 131	7	33
Chloromethane	ND	E8	25.0	26.0		ug/L		104	47 - 134	5	35
2-Chlorotoluene	ND	E8	25.0	26.9		ug/L		108	71 - 131	5	29
4-Chlorotoluene	ND	E8	25.0	26.6		ug/L		107	70 - 130	4	28
Chlorodibromomethane	ND	E8	25.0	26.4		ug/L		106	65 - 134	3	33
1,2-Dibromo-3-Chloropropane	ND	E8	25.0	20.3		ug/L		81	53 - 145	18	35
Ethylene Dibromide	ND	E8	25.0	24.8		ug/L		99	70 - 130	6	33
Dibromomethane	ND	E8	25.0	26.5		ug/L		106	66 - 136	3	35
1,2-Dichlorobenzene	ND	E8	25.0	27.1		ug/L		108	70 - 130	1	27
1,3-Dichlorobenzene	ND	E8	25.0	26.5		ug/L		106	70 - 130	2	28
1,4-Dichlorobenzene	0.99		25.0	27.3		ug/L		105	70 - 130	2	26
Dichlorodifluoromethane	ND	E8	25.0	27.8		ug/L		111	40 - 148	3	35
1,1-Dichloroethane	ND	E8	25.0	29.7		ug/L		119	62 - 130	9	34
1,2-Dichloroethane	ND	E8	25.0	31.2		ug/L		125	54 - 147	8	35
1,1-Dichloroethene	ND	E8	25.0	30.8		ug/L		123	57 - 137	5	35
cis-1,2-Dichloroethene	10		25.0	39.4		ug/L		116	65 - 127	5	34
trans-1,2-Dichloroethene	ND	E8	25.0	27.7		ug/L		111	62 - 131	5	35
1,2-Dichloropropane	0.47	E4	25.0	29.2		ug/L		115	68 - 126	1	32
1,3-Dichloropropane	ND	E8	25.0	26.3		ug/L		105	68 - 129	0	33
2,2-Dichloropropane	ND	E8	25.0	27.8		ug/L		111	60 - 146	4	35
1,1-Dichloropropene	ND	E8 L5	25.0	28.5		ug/L		114	64 - 134	3	34
cis-1,3-Dichloropropene	ND	E8	25.0	24.3		ug/L		97	63 - 135	7	35
trans-1,3-Dichloropropene	ND	E8	25.0	27.2		ug/L		109	58 - 136	2	35
Ethylbenzene	ND	E8	25.0	26.0		ug/L		104	74 - 134	3	32
Hexachlorobutadiene	ND	E8	25.0	26.6		ug/L		107	69 - 150	14	32
2-Hexanone	ND	E8	25.0	13.8		ug/L		55	40 - 142	10	35
Iodomethane	ND	E8	25.0	29.9		ug/L		120	53 - 150	7	35
Isopropylbenzene	ND	E8	25.0	27.8		ug/L		111	80 - 146	7	32
4-Isopropyltoluene	ND	E8	25.0	26.7		ug/L		107	70 - 133	1	32
Methylene Chloride	ND	E8	25.0	31.2		ug/L		125	55 - 133	13	35
4-Methyl-2-pentanone (MIBK)	ND	E8	25.0	19.7		ug/L		79	52 - 143	3	35
Methyl tert-butyl ether	ND	E8	25.0	25.7		ug/L		103	67 - 138	1	21
Naphthalene	ND	E8	25.0	21.4		ug/L		86	67 - 146	9	29
N-Propylbenzene	ND	E8	25.0	26.7		ug/L		107	74 - 140	7	32
Styrene	ND	E8	25.0	22.7		ug/L		91	43 - 144	3	35
1,1,1,2-Tetrachloroethane	ND	E8	25.0	27.6		ug/L		110	70 - 130	1	30
1,1,2,2-Tetrachloroethane	ND	E8	25.0	23.8		ug/L		95	63 - 137	16	32
Tetrachloroethene	24		25.0	48.8		ug/L		99	67 - 131	2	31
Toluene	ND	E8	25.0	27.2		ug/L		109	65 - 138	2	33
1,2,3-Trichlorobenzene	ND	E8	25.0	24.3		ug/L		97	74 - 139	6	26
1,2,4-Trichlorobenzene	ND	E8	25.0	24.2		ug/L		97	74 - 138	3	26
1,1,1-Trichloroethane	ND	E8	25.0	30.1		ug/L		120	64 - 138	4	35

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

Lab Sample ID: 550-39836-1 MSD — **Client Sample ID: R-068A-341.86-H-020915**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56538

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,2-Trichloroethane	ND	E8	25.0	25.5		ug/L		102	63 - 132	2	35
Trichloroethene	5.7		25.0	33.1		ug/L		109	66 - 132	0	29
Trichlorofluoromethane	ND	E8	25.0	30.3		ug/L		121	62 - 150	4	35
1,2,3-Trichloropropane	ND	E8 R6	25.0	21.5		ug/L		86	68 - 130	19	32
1,2,4-Trimethylbenzene	ND	E8	25.0	27.6		ug/L		110	63 - 135	2	31
1,3,5-Trimethylbenzene	ND	E8	25.0	28.0		ug/L		112	66 - 137	1	30
Vinyl acetate	ND	E8	25.0	22.4		ug/L		89	47 - 150	0	35
Vinyl chloride	ND	E8	25.0	27.5		ug/L		110	55 - 146	4	35
Xylenes, Total	ND	E8	50.0	49.8		ug/L		100	68 - 131	2	31
Butadiene	ND	E8	25.0	27.4		ug/L		110	10 - 150	4	35
Hexane	ND	E8 L5	25.0	32.1		ug/L		128	46 - 139	3	35
m-Xylene & p-Xylene	ND	E8	25.0	24.9		ug/L		100	58 - 138	2	29
o-Xylene	ND	E8	25.0	24.9		ug/L		100	66 - 137	2	26

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*105*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-236459/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236620 — **Prep Batch: 236459**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
1,2-Dichlorobenzene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
1,2-Diphenylhydrazine(as Azobenzene)	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
1,3-Dichlorobenzene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
1,4-Dichlorobenzene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
2,4,5-Trichlorophenol	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
2,4,6-Trichlorophenol	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
2,4-Dichlorophenol	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
2,4-Dimethylphenol	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
2,4-Dinitrophenol	ND	E8	40	20	ug/L		02/13/15 17:29	02/15/15 16:01	1
2,4-Dinitrotoluene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
2,6-Dinitrotoluene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
2-Chloronaphthalene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
2-Chlorophenol	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
2-Methylnaphthalene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
2-Methylphenol	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
2-Nitroaniline	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
2-Nitrophenol	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
3,3'-Dichlorobenzidine	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
3-Nitroaniline	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
4,6-Dinitro-2-methylphenol	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-236459/1-A
Matrix: Water
Analysis Batch: 236620

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 236459

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Bromophenyl phenyl ether	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
4-Chloro-3-methylphenol	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
4-Chloroaniline	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
4-Chlorophenyl phenyl ether	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
3-Methylphenol + 4-Methylphenol	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
4-Nitroaniline	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
4-Nitrophenol	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
Acenaphthene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Acenaphthylene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Aniline	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Anthracene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Benzidine	ND	E8	40	20	ug/L		02/13/15 17:29	02/15/15 16:01	1
Benzo[a]anthracene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Benzo[a]pyrene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Benzo[b]fluoranthene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Benzo[g,h,i]perylene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Benzo[k]fluoranthene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Benzoic acid	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
Benzyl alcohol	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
Bis(2-chloroethoxy)methane	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Bis(2-chloroethyl)ether	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Bis(2-ethylhexyl) phthalate	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
Butyl benzyl phthalate	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
Chrysene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Dibenz(a,h)anthracene	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
Dibenzofuran	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Diethyl phthalate	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Dimethyl phthalate	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Di-n-butyl phthalate	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
Di-n-octyl phthalate	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
Fluoranthene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Fluorene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Hexachlorobenzene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Hexachlorobutadiene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Hexachlorocyclopentadiene	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
Hexachloroethane	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Indeno[1,2,3-cd]pyrene	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
Isophorone	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Naphthalene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Nitrobenzene	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
N-Nitrosodi-n-propylamine	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
N-Nitrosodiphenylamine	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Pentachlorophenol	ND	E8	20	10	ug/L		02/13/15 17:29	02/15/15 16:01	1
Phenanthrene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Phenol	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
Pyrene	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
bis (2-chloroisopropyl) ether	ND	E8	10	5.0	ug/L		02/13/15 17:29	02/15/15 16:01	1
N-Nitrosodimethylamine	ND	E8	20	2.5	ug/L		02/13/15 17:29	02/15/15 16:01	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-236459/1-A
Matrix: Water
Analysis Batch: 236620

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 236459

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	81		50 - 120	02/13/15 17:29	02/15/15 16:01	1
2-Fluorophenol (Surr)	70		30 - 120	02/13/15 17:29	02/15/15 16:01	1
2,4,6-Tribromophenol (Surr)	97		40 - 120	02/13/15 17:29	02/15/15 16:01	1
Nitrobenzene-d5 (Surr)	75		45 - 120	02/13/15 17:29	02/15/15 16:01	1
Terphenyl-d14 (Surr)	85		37 - 144	02/13/15 17:29	02/15/15 16:01	1
Phenol-d6 (Surr)	73		35 - 120	02/13/15 17:29	02/15/15 16:01	1

Lab Sample ID: LCS 440-236459/2-A
Matrix: Water
Analysis Batch: 236620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 236459

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	100	64.9		ug/L		65	25 - 84
1,2-Dichlorobenzene	100	59.5		ug/L		59	24 - 85
1,2-Diphenylhydrazine(as Azobenzene)	100	87.1		ug/L		87	44 - 113
1,3-Dichlorobenzene	100	55.5		ug/L		56	20 - 80
1,4-Dichlorobenzene	100	57.1		ug/L		57	22 - 81
2,4,5-Trichlorophenol	100	87.1		ug/L		87	24 - 121
2,4,6-Trichlorophenol	100	87.8		ug/L		88	20 - 121
2,4-Dichlorophenol	100	77.8		ug/L		78	23 - 113
2,4-Dimethylphenol	100	69.5		ug/L		70	39 - 94
2,4-Dinitrophenol	100	89.1		ug/L		89	23 - 134
2,4-Dinitrotoluene	100	102		ug/L		102	54 - 115
2,6-Dinitrotoluene	100	97.0		ug/L		97	50 - 115
2-Chloronaphthalene	100	80.0		ug/L		80	34 - 102
2-Chlorophenol	100	65.4		ug/L		65	20 - 106
2-Methylnaphthalene	100	80.8		ug/L		81	34 - 98
2-Methylphenol	100	67.2		ug/L		67	36 - 103
2-Nitroaniline	100	89.7		ug/L		90	48 - 111
2-Nitrophenol	100	84.0		ug/L		84	20 - 117
3,3'-Dichlorobenzidine	100	67.8		ug/L		68	22 - 97
3-Nitroaniline	100	97.1		ug/L		97	51 - 116
4,6-Dinitro-2-methylphenol	100	97.6		ug/L		98	28 - 139
4-Bromophenyl phenyl ether	100	85.6		ug/L		86	42 - 113
4-Chloro-3-methylphenol	100	90.2		ug/L		90	44 - 110
4-Chloroaniline	100	89.0		ug/L		89	42 - 109
4-Chlorophenyl phenyl ether	100	90.0		ug/L		90	38 - 115
3-Methylphenol + 4-Methylphenol	100	75.8		ug/L		76	35 - 106
4-Nitroaniline	100	97.2		ug/L		97	50 - 116
4-Nitrophenol	100	85.8		ug/L		86	26 - 132
Acenaphthene	100	86.2		ug/L		86	37 - 107
Acenaphthylene	100	89.9		ug/L		90	39 - 107
Aniline	100	68.5		ug/L		68	27 - 115
Anthracene	100	91.5		ug/L		92	42 - 120
Benzidine	100	64.9		ug/L		65	5 - 150
Benzo[a]anthracene	100	88.6		ug/L		89	42 - 115
Benzo[a]pyrene	100	96.7		ug/L		97	41 - 117

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-236459/2-A
Matrix: Water
Analysis Batch: 236620

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 236459

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[b]fluoranthene	100	89.7		ug/L		90	36 - 113
Benzo[g,h,i]perylene	100	110		ug/L		110	37 - 115
Benzo[k]fluoranthene	100	106		ug/L		106	42 - 122
Benzoic acid	100	65.6		ug/L		66	15 - 121
Benzyl alcohol	100	72.0		ug/L		72	39 - 106
Bis(2-chloroethoxy)methane	100	79.7		ug/L		80	47 - 104
Bis(2-chloroethyl)ether	100	68.5		ug/L		68	42 - 99
Bis(2-ethylhexyl) phthalate	100	84.3		ug/L		84	43 - 124
Butyl benzyl phthalate	100	86.1		ug/L		86	44 - 122
Chrysene	100	90.5		ug/L		90	42 - 118
Dibenz(a,h)anthracene	100	106		ug/L		106	40 - 114
Dibenzofuran	100	88.2		ug/L		88	37 - 113
Diethyl phthalate	100	93.3		ug/L		93	51 - 120
Dimethyl phthalate	100	90.1		ug/L		90	49 - 113
Di-n-butyl phthalate	100	93.2		ug/L		93	47 - 125
Di-n-octyl phthalate	100	86.0		ug/L		86	42 - 125
Fluoranthene	100	99.6		ug/L		100	44 - 119
Fluorene	100	91.6		ug/L		92	39 - 116
Hexachlorobenzene	100	86.9		ug/L		87	43 - 112
Hexachlorobutadiene	100	60.5		ug/L		61	14 - 77
Hexachlorocyclopentadiene	100	57.8		ug/L		58	10 - 77
Hexachloroethane	100	52.6		ug/L		53	13 - 75
Indeno[1,2,3-cd]pyrene	100	103		ug/L		103	35 - 116
Isophorone	100	85.6		ug/L		86	48 - 107
Naphthalene	100	72.6		ug/L		73	33 - 95
Nitrobenzene	100	69.1		ug/L		69	42 - 99
N-Nitrosodi-n-propylamine	100	81.5		ug/L		81	44 - 111
N-Nitrosodiphenylamine	100	86.7		ug/L		87	46 - 116
Pentachlorophenol	100	86.6		ug/L		87	26 - 136
Phenanthrene	100	89.0		ug/L		89	43 - 120
Phenol	100	63.1		ug/L		63	25 - 99
Pyrene	100	85.1		ug/L		85	43 - 119
bis (2-chloroisopropyl) ether	100	66.5		ug/L		66	38 - 104
N-Nitrosodimethylamine	100	60.5		ug/L		61	35 - 96

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*79*		*50 - 120*
2-Fluorophenol (Surr)	*54*		*30 - 120*
2,4,6-Tribromophenol (Surr)	*95*		*40 - 120*
Nitrobenzene-d5 (Surr)	*72*		*45 - 120*
Terphenyl-d14 (Surr)	*81*		*37 - 144*
Phenol-d6 (Surr)	*66*		*35 - 120*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 440-236459/3-A
Matrix: Water
Analysis Batch: 236620

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 236459

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	100	74.2		ug/L		74	25 - 84	13	35
1,2-Dichlorobenzene	100	70.3		ug/L		70	24 - 85	17	35
1,2-Diphenylhydrazine(as Azobenzene)	100	89.0		ug/L		89	44 - 113	2	35
1,3-Dichlorobenzene	100	67.0		ug/L		67	20 - 80	19	35
1,4-Dichlorobenzene	100	68.3		ug/L		68	22 - 81	18	35
2,4,5-Trichlorophenol	100	94.7		ug/L		95	24 - 121	8	35
2,4,6-Trichlorophenol	100	93.6		ug/L		94	20 - 121	6	35
2,4-Dichlorophenol	100	83.2		ug/L		83	23 - 113	7	35
2,4-Dimethylphenol	100	83.6		ug/L		84	39 - 94	18	35
2,4-Dinitrophenol	100	97.9		ug/L		98	23 - 134	9	35
2,4-Dinitrotoluene	100	107		ug/L		107	54 - 115	5	35
2,6-Dinitrotoluene	100	103		ug/L		103	50 - 115	6	35
2-Chloronaphthalene	100	86.0		ug/L		86	34 - 102	7	35
2-Chlorophenol	100	75.8		ug/L		76	20 - 106	15	35
2-Methylnaphthalene	100	84.6		ug/L		85	34 - 98	5	35
2-Methylphenol	100	77.1		ug/L		77	36 - 103	14	35
2-Nitroaniline	100	92.8		ug/L		93	48 - 111	3	35
2-Nitrophenol	100	92.4		ug/L		92	20 - 117	10	35
3,3'-Dichlorobenzidine	100	ND	E8 L4 R6	ug/L		0.5	22 - 97	197	35
3-Nitroaniline	100	11.7	E4 L4 R6	ug/L		12	51 - 116	157	35
4,6-Dinitro-2-methylphenol	100	106		ug/L		106	28 - 139	8	35
4-Bromophenyl phenyl ether	100	92.1		ug/L		92	42 - 113	7	35
4-Chloro-3-methylphenol	100	89.3		ug/L		89	44 - 110	1	35
4-Chloroaniline	100	ND	E8 L4 R6	ug/L		3	42 - 109	186	35
4-Chlorophenyl phenyl ether	100	95.1		ug/L		95	38 - 115	6	35
3-Methylphenol + 4-Methylphenol	100	80.9		ug/L		81	35 - 106	7	35
4-Nitroaniline	100	58.8	R6	ug/L		59	50 - 116	49	35
4-Nitrophenol	100	92.6		ug/L		93	26 - 132	8	35
Acenaphthene	100	90.6		ug/L		91	37 - 107	5	35
Acenaphthylene	100	93.4		ug/L		93	39 - 107	4	35
Aniline	100	24.9	L4 R6	ug/L		25	27 - 115	93	35
Anthracene	100	94.8		ug/L		95	42 - 120	3	35
Benzidine	100	43.4	R6	ug/L		43	5 - 150	40	35
Benzo[a]anthracene	100	93.9		ug/L		94	42 - 115	6	35
Benzo[a]pyrene	100	102		ug/L		102	41 - 117	5	35
Benzo[b]fluoranthene	100	96.5		ug/L		96	36 - 113	7	35
Benzo[g,h,i]perylene	100	118	L3	ug/L		118	37 - 115	8	35
Benzo[k]fluoranthene	100	113		ug/L		113	42 - 122	6	35
Benzoic acid	100	65.0		ug/L		65	15 - 121	1	35
Benzyl alcohol	100	77.5		ug/L		77	39 - 106	7	35
Bis(2-chloroethoxy)methane	100	82.1		ug/L		82	47 - 104	3	35
Bis(2-chloroethyl)ether	100	78.0		ug/L		78	42 - 99	13	35
Bis(2-ethylhexyl) phthalate	100	89.7		ug/L		90	43 - 124	6	35
Butyl benzyl phthalate	100	91.9		ug/L		92	44 - 122	7	35
Chrysene	100	96.1		ug/L		96	42 - 118	6	35
Dibenz(a,h)anthracene	100	112		ug/L		112	40 - 114	6	35
Dibenzofuran	100	93.0		ug/L		93	37 - 113	5	35

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 440-236459/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236620 — **Prep Batch: 236459**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diethyl phthalate	100	95.9		ug/L		96	51 - 120	3	35
Dimethyl phthalate	100	95.0		ug/L		95	49 - 113	5	35
Di-n-butyl phthalate	100	98.9		ug/L		99	47 - 125	6	35
Di-n-octyl phthalate	100	92.1		ug/L		92	42 - 125	7	35
Fluoranthene	100	103		ug/L		103	44 - 119	4	35
Fluorene	100	94.2		ug/L		94	39 - 116	3	35
Hexachlorobenzene	100	93.5		ug/L		94	43 - 112	7	35
Hexachlorobutadiene	100	65.4		ug/L		65	14 - 77	8	35
Hexachlorocyclopentadiene	100	67.2		ug/L		67	10 - 77	15	35
Hexachloroethane	100	59.4		ug/L		59	13 - 75	12	35
Indeno[1,2,3-cd]pyrene	100	115		ug/L		115	35 - 116	11	35
Isophorone	100	86.2		ug/L		86	48 - 107	1	35
Naphthalene	100	82.4		ug/L		82	33 - 95	13	35
Nitrobenzene	100	82.0		ug/L		82	42 - 99	17	35
N-Nitrosodi-n-propylamine	100	82.9		ug/L		83	44 - 111	2	35
N-Nitrosodiphenylamine	100	69.2		ug/L		69	46 - 116	23	35
Pentachlorophenol	100	94.0		ug/L		94	26 - 136	8	35
Phenanthrene	100	93.7		ug/L		94	43 - 120	5	35
Phenol	100	68.5		ug/L		69	25 - 99	8	35
Pyrene	100	91.4		ug/L		91	43 - 119	7	35
bis (2-chloroisopropyl) ether	100	75.7		ug/L		76	38 - 104	13	35
N-Nitrosodimethylamine	100	76.4		ug/L		76	35 - 96	23	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*85*		*50 - 120*
2-Fluorophenol (Surr)	*62*		*30 - 120*
2,4,6-Tribromophenol (Surr)	*102*		*40 - 120*
Nitrobenzene-d5 (Surr)	*82*		*45 - 120*
Terphenyl-d14 (Surr)	*87*		*37 - 144*
Phenol-d6 (Surr)	*70*		*35 - 120*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 440-236759/8 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236759

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND	E8	0.0020	0.00050	mg/L			02/17/15 12:59	1
Ethene	ND	E8	0.0028	0.00053	mg/L			02/17/15 12:59	1
Methane (FID)	ND	E8	0.00099	0.00025	mg/L			02/17/15 12:59	1
Methane (TCD)	ND	E8	1.0	0.50	mg/L			02/17/15 12:59	1

Method: RSK-175 - Dissolved Gases (GC) (Continued)

Lab Sample ID: LCS 440-236759/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236759

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane (TCD)	4.19	4.37		mg/L		104	80 - 120

Lab Sample ID: LCS 440-236759/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236759

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	0.157	0.181		mg/L		115	80 - 120
Ethene	0.147	0.171		mg/L		117	80 - 120
Methane (FID)	0.0839	0.0901		mg/L		107	80 - 120

Lab Sample ID: LCSD 440-236759/5 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236759

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane (TCD)	4.19	4.04		mg/L		96	80 - 120	8	20

Lab Sample ID: LCSD 440-236759/7 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 236759

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	0.157	0.170		mg/L		108	80 - 120	6	20
Ethene	0.147	0.161		mg/L		110	80 - 120	6	20
Methane (FID)	0.0839	0.0848		mg/L		101	80 - 120	6	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 550-56116/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56116

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND	E8	0.10	0.051	mg/L			02/10/15 08:18	1
Nitrite as N	ND	E8	0.10	0.032	mg/L			02/10/15 08:18	1
Chloride	ND	E8	2.0	0.29	mg/L			02/10/15 08:18	1
Fluoride	ND	E8	0.40	0.040	mg/L			02/10/15 08:18	1
Sulfate	ND	E8	2.0	0.21	mg/L			02/10/15 08:18	1

Lab Sample ID: LCS 550-56116/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56116

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	4.00	4.06		mg/L		102	90 - 110
Nitrite as N	4.00	4.01		mg/L		100	90 - 110
Chloride	20.0	19.3		mg/L		97	90 - 110
Fluoride	4.00	3.97		mg/L		99	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 550-56116/5
Matrix: Water
Analysis Batch: 56116

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	20.0	20.8		mg/L		104	90 - 110

Lab Sample ID: LCSD 550-56116/6
Matrix: Water
Analysis Batch: 56116

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	4.00	4.06		mg/L		101	90 - 110	0	20
Nitrite as N	4.00	4.05		mg/L		101	90 - 110	1	20
Chloride	20.0	19.4		mg/L		97	90 - 110	0	20
Fluoride	4.00	4.00		mg/L		100	90 - 110	1	20
Sulfate	20.0	20.9		mg/L		104	90 - 110	0	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 550-55970/1-A
Matrix: Water
Analysis Batch: 56412

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 55970

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND	E8	0.10	0.0062	mg/L		02/10/15 12:01	02/13/15 18:47	1
Barium	ND	E8	0.010	0.0020	mg/L		02/10/15 12:01	02/13/15 18:47	1
Cadmium	ND	E8	0.0010	0.00040	mg/L		02/10/15 12:01	02/13/15 18:47	1
Calcium	ND	E8	2.0	0.069	mg/L		02/10/15 12:01	02/13/15 18:47	1
Chromium	ND	E8	0.010	0.0010	mg/L		02/10/15 12:01	02/13/15 18:47	1
Lead	ND	E8	0.015	0.0026	mg/L		02/10/15 12:01	02/13/15 18:47	1
Magnesium	ND	E8	2.0	0.050	mg/L		02/10/15 12:01	02/13/15 18:47	1
Selenium	ND	E8	0.10	0.0076	mg/L		02/10/15 12:01	02/13/15 18:47	1
Silver	ND	E8	0.010	0.00050	mg/L		02/10/15 12:01	02/13/15 18:47	1

Lab Sample ID: LCS 550-55970/2-A
Matrix: Water
Analysis Batch: 56412

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 55970

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.00	1.03		mg/L		103	87 - 113
Barium	1.00	0.986		mg/L		99	89 - 116
Cadmium	1.00	1.01		mg/L		101	89 - 112
Calcium	21.0	20.8		mg/L		99	88 - 109
Chromium	1.00	0.996		mg/L		100	88 - 112
Lead	1.00	0.992		mg/L		99	88 - 116
Magnesium	21.0	20.6		mg/L		98	90 - 110
Selenium	1.00	1.03		mg/L		103	87 - 121
Silver	0.0750	0.0731		mg/L		97	79 - 119

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCSD 550-55970/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56412 — **Prep Batch: 55970**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.00	1.03		mg/L		103	87 - 113	1	20
Barium	1.00	0.993		mg/L		99	89 - 116	1	20
Cadmium	1.00	1.01		mg/L		101	89 - 112	0	20
Calcium	21.0	20.9		mg/L		100	88 - 109	1	20
Chromium	1.00	0.994		mg/L		99	88 - 112	0	20
Lead	1.00	0.989		mg/L		99	88 - 116	0	20
Magnesium	21.0	20.9		mg/L		99	90 - 110	1	20
Selenium	1.00	1.04		mg/L		104	87 - 121	1	20
Silver	0.0750	0.0731		mg/L		97	79 - 119	0	20

Lab Sample ID: 550-39836-1 MS — **Client Sample ID: R-068A-341.86-H-020915**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56412 — **Prep Batch: 55970**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND	E8	1.00	1.08		mg/L		108	75 - 125
Barium	0.33		1.00	1.32		mg/L		99	75 - 125
Cadmium	ND	E8	1.00	1.03		mg/L		103	75 - 125
Calcium	110		21.0	124	M3	mg/L		76	75 - 125
Chromium	0.0035	E4	1.00	1.01		mg/L		101	75 - 125
Lead	0.0063	E4	1.00	1.01		mg/L		100	75 - 125
Magnesium	11		21.0	31.8		mg/L		99	75 - 125
Selenium	ND	E8	1.00	1.05		mg/L		105	75 - 125
Silver	ND	E8	0.0750	0.0753		mg/L		100	75 - 125

Lab Sample ID: 550-39836-1 MSD — **Client Sample ID: R-068A-341.86-H-020915**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56412 — **Prep Batch: 55970**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND	E8	1.00	1.07		mg/L		107	75 - 125	1	20
Barium	0.33		1.00	1.29		mg/L		97	75 - 125	2	20
Cadmium	ND	E8	1.00	1.01		mg/L		101	75 - 125	2	20
Calcium	110		21.0	126	M3	mg/L		84	75 - 125	1	20
Chromium	0.0035	E4	1.00	0.992		mg/L		99	75 - 125	2	20
Lead	0.0063	E4	1.00	0.988		mg/L		98	75 - 125	2	20
Magnesium	11		21.0	31.9		mg/L		99	75 - 125	0	20
Selenium	ND	E8	1.00	1.05		mg/L		105	75 - 125	0	20
Silver	ND	E8	0.0750	0.0742		mg/L		99	75 - 125	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 550-56427/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56478 — **Prep Batch: 56427**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND	E8	0.00050	0.000030	mg/L		02/17/15 09:29	02/17/15 12:05	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 550-56427/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56478 — **Prep Batch: 56427**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0100	0.00905		mg/L		91	80 - 120

Lab Sample ID: LCSD 550-56427/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56478 — **Prep Batch: 56427**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0100	0.00923		mg/L		92	80 - 120	2	20

Lab Sample ID: 550-39836-1 MS — **Client Sample ID: R-068A-341.86-H-020915**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56478 — **Prep Batch: 56427**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND	E8	0.0100	0.00905		mg/L		91	75 - 125

Lab Sample ID: 550-39836-1 MSD — **Client Sample ID: R-068A-341.86-H-020915**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56478 — **Prep Batch: 56427**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND	E8	0.0100	0.00920		mg/L		92	75 - 125	2	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 550-56675/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56675

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/18/15 16:04	1
Bicarbonate Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/18/15 16:04	1
Carbonate Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/18/15 16:04	1
Alkalinity, Phenolphthalein	ND	E8	6.0	6.0	mg/L			02/18/15 16:04	1
Hydroxide Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/18/15 16:04	1

Lab Sample ID: LCS 550-56675/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56675

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	250	240		mg/L		96	90 - 110

Lab Sample ID: LCSD 550-56675/20 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56675

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity as CaCO3	250	254		mg/L		102	90 - 110	6	20

Method: SM 4500 H+ B - pH

Lab Sample ID: LCSSRM 550-56041/12 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56041

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.000		SU		100.0	98.5 - 101.5

Lab Sample ID: LCSSRM 550-56041/23 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 56041

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.000		SU		100.0	98.5 - 101.5

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 550-57266/35 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 57266

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND	E8	1.0	0.34	mg/L			02/25/15 02:27	1

Lab Sample ID: LCS 550-57266/36 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 57266

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	20.0	19.8		mg/L		99	90 - 110

Lab Sample ID: LCSD 550-57266/37 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 57266

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	20.0	19.9		mg/L		99	90 - 110	0	20

Method: SM 5310B - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 550-57260/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 57480

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	ND	E8	1.0	0.34	mg/L			02/27/15 09:06	1

Lab Sample ID: LCS 550-57480/63 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 57480

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dissolved Organic Carbon	20.0	20.6		mg/L		103	90 - 110

Method: SM 5310B - Organic Carbon, Dissolved (DOC) (Continued)

Lab Sample ID: LCSD 550-57480/64
Matrix: Water
Analysis Batch: 57480

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dissolved Organic Carbon			20.0	21.8		mg/L		109	90 - 110	6	20

QC Association Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39836-1

GC/MS VOA

Analysis Batch: 56538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39836-1	R-068A-341.86-H-020915	Total/NA	Water	8260B	
550-39836-1 MS	R-068A-341.86-H-020915	Total/NA	Water	8260B	
550-39836-1 MSD	R-068A-341.86-H-020915	Total/NA	Water	8260B	
550-39836-5	Trip Blank	Total/NA	Water	8260B	
LCS 550-56538/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 550-56538/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 550-56538/5	Method Blank	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 236459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39836-1	R-068A-341.86-H-020915	Total/NA	Water	3520C	
LCS 440-236459/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-236459/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	
MB 440-236459/1-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 236620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-236459/2-A	Lab Control Sample	Total/NA	Water	8270C	236459
LCSD 440-236459/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	236459
MB 440-236459/1-A	Method Blank	Total/NA	Water	8270C	236459

Analysis Batch: 236642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39836-1	R-068A-341.86-H-020915	Total/NA	Water	8270C	236459

GC VOA

Analysis Batch: 236759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39836-1	R-068A-341.86-H-020915	Total/NA	Water	RSK-175	
LCS 440-236759/4	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 440-236759/6	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 440-236759/5	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 440-236759/7	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 440-236759/8	Method Blank	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 56116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39836-1	R-068A-341.86-H-020915	Total/NA	Water	300.0	
LCS 550-56116/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-56116/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 550-56116/2	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 55970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39836-1	R-068A-341.86-H-020915	Total/NA	Water	3005A	
550-39836-1 MS	R-068A-341.86-H-020915	Total/NA	Water	3005A	
550-39836-1 MSD	R-068A-341.86-H-020915	Total/NA	Water	3005A	
550-39836-2	WR-275A-340.91-H-020915	Total/NA	Water	3005A	
550-39836-3	WR-275A-340.91-H-020915-Dup	Total/NA	Water	3005A	
550-39836-4	WR-353A-430-H-020915	Total/NA	Water	3005A	
LCS 550-55970/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 550-55970/3-A	Lab Control Sample Dup	Total/NA	Water	3005A	
MB 550-55970/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 56412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39836-1	R-068A-341.86-H-020915	Total/NA	Water	6010B	55970
550-39836-1 MS	R-068A-341.86-H-020915	Total/NA	Water	6010B	55970
550-39836-1 MSD	R-068A-341.86-H-020915	Total/NA	Water	6010B	55970
550-39836-2	WR-275A-340.91-H-020915	Total/NA	Water	6010B	55970
550-39836-3	WR-275A-340.91-H-020915-Dup	Total/NA	Water	6010B	55970
550-39836-4	WR-353A-430-H-020915	Total/NA	Water	6010B	55970
LCS 550-55970/2-A	Lab Control Sample	Total/NA	Water	6010B	55970
LCSD 550-55970/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	55970
MB 550-55970/1-A	Method Blank	Total/NA	Water	6010B	55970

Prep Batch: 56427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39836-1	R-068A-341.86-H-020915	Total/NA	Water	7470A	
550-39836-1 MS	R-068A-341.86-H-020915	Total/NA	Water	7470A	
550-39836-1 MSD	R-068A-341.86-H-020915	Total/NA	Water	7470A	
550-39836-2	WR-275A-340.91-H-020915	Total/NA	Water	7470A	
550-39836-3	WR-275A-340.91-H-020915-Dup	Total/NA	Water	7470A	
550-39836-4	WR-353A-430-H-020915	Total/NA	Water	7470A	
LCS 550-56427/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 550-56427/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	
MB 550-56427/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 56478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39836-1	R-068A-341.86-H-020915	Total/NA	Water	7470A	56427
550-39836-1 MS	R-068A-341.86-H-020915	Total/NA	Water	7470A	56427
550-39836-1 MSD	R-068A-341.86-H-020915	Total/NA	Water	7470A	56427
550-39836-2	WR-275A-340.91-H-020915	Total/NA	Water	7470A	56427
550-39836-3	WR-275A-340.91-H-020915-Dup	Total/NA	Water	7470A	56427
550-39836-4	WR-353A-430-H-020915	Total/NA	Water	7470A	56427
LCS 550-56427/2-A	Lab Control Sample	Total/NA	Water	7470A	56427
LCSD 550-56427/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	56427
MB 550-56427/1-A	Method Blank	Total/NA	Water	7470A	56427

Analysis Batch: 56617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39836-1	R-068A-341.86-H-020915	Total/NA	Water	SM 2340B	
550-39836-2	WR-275A-340.91-H-020915	Total/NA	Water	SM 2340B	
550-39836-3	WR-275A-340.91-H-020915-Dup	Total/NA	Water	SM 2340B	

Metals (Continued)

Analysis Batch: 56617 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39836-4	WR-353A-430-H-020915	Total/NA	Water	SM 2340B	

General Chemistry

Analysis Batch: 56041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39836-1	R-068A-341.86-H-020915	Total/NA	Water	SM 4500 H+ B	
LCSSRM 550-56041/12	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
LCSSRM 550-56041/23	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 56675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39836-1	R-068A-341.86-H-020915	Total/NA	Water	SM 2320B	
LCS 550-56675/6	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 550-56675/20	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
MB 550-56675/7	Method Blank	Total/NA	Water	SM 2320B	

Filtration Batch: 57260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39836-1	R-068A-341.86-H-020915	Dissolved	Water	Filtration	
MB 550-57260/1-A	Method Blank	Dissolved	Water	Filtration	

Analysis Batch: 57266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39836-5	Trip Blank	Total/NA	Water	SM 5310B	
LCS 550-57266/36	Lab Control Sample	Total/NA	Water	SM 5310B	
LCSD 550-57266/37	Lab Control Sample Dup	Total/NA	Water	SM 5310B	
MB 550-57266/35	Method Blank	Total/NA	Water	SM 5310B	

Analysis Batch: 57480

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39836-1	R-068A-341.86-H-020915	Dissolved	Water	SM 5310B	57260
LCS 550-57480/63	Lab Control Sample	Dissolved	Water	SM 5310B	
LCSD 550-57480/64	Lab Control Sample Dup	Dissolved	Water	SM 5310B	
MB 550-57260/1-A	Method Blank	Dissolved	Water	SM 5310B	57260

Lab Chronicle

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39836-1

Client Sample ID: R-068A-341.86-H-020915

Lab Sample ID: 550-39836-1

Date Collected: 02/09/15 10:30
Matrix: Water
Date Received: 02/10/15 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	56538	02/18/15 11:42	UT	TAL PHX
Total/NA	Prep	3520C			236459	02/13/15 17:29	AK	TAL IRV
Total/NA	Analysis	8270C		1	236642	02/15/15 22:19	AI	TAL IRV
Total/NA	Analysis	RSK-175		1	236759	02/17/15 14:52	EI	TAL IRV
Total/NA	Analysis	300.0		1	56116	02/10/15 13:38	YAF	TAL PHX
Total/NA	Prep	3005A			55970	02/10/15 12:01	SGO	TAL PHX
Total/NA	Analysis	6010B		1	56412	02/13/15 19:04	AJC	TAL PHX
Total/NA	Prep	7470A			56427	02/17/15 09:29	JRC	TAL PHX
Total/NA	Analysis	7470A		1	56478	02/17/15 12:14	JRC	TAL PHX
Total/NA	Analysis	SM 2340B		1	56617	02/18/15 19:03	SLS	TAL PHX
Total/NA	Analysis	SM 2320B		1	56675	02/18/15 19:07	BCB	TAL PHX
Total/NA	Analysis	SM 4500 H+ B		1	56041	02/10/15 19:24	CDC	TAL PHX
Dissolved	Filtration	Filtration			57260	02/10/15 12:00	KLH	TAL PHX
Dissolved	Analysis	SM 5310B		1	57480	02/27/15 11:15	AMR	TAL PHX

Client Sample ID: WR-275A-340.91-H-020915

Lab Sample ID: 550-39836-2

Date Collected: 02/09/15 11:45
Matrix: Water
Date Received: 02/10/15 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			55970	02/10/15 12:01	SGO	TAL PHX
Total/NA	Analysis	6010B		1	56412	02/13/15 19:08	AJC	TAL PHX
Total/NA	Prep	7470A			56427	02/17/15 09:29	JRC	TAL PHX
Total/NA	Analysis	7470A		1	56478	02/17/15 12:16	JRC	TAL PHX
Total/NA	Analysis	SM 2340B		1	56617	02/18/15 19:03	SLS	TAL PHX

Client Sample ID: WR-275A-340.91-H-020915-Dup

Lab Sample ID: 550-39836-3

Date Collected: 02/09/15 11:45
Matrix: Water
Date Received: 02/10/15 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			55970	02/10/15 12:01	SGO	TAL PHX
Total/NA	Analysis	6010B		1	56412	02/13/15 19:11	AJC	TAL PHX
Total/NA	Prep	7470A			56427	02/17/15 09:29	JRC	TAL PHX
Total/NA	Analysis	7470A		1	56478	02/17/15 12:18	JRC	TAL PHX
Total/NA	Analysis	SM 2340B		1	56617	02/18/15 19:03	SLS	TAL PHX

Lab Chronicle

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39836-1

Client Sample ID: WR-353A-430-H-020915

Lab Sample ID: 550-39836-4

Date Collected: 02/09/15 13:20
Matrix: Water
Date Received: 02/10/15 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3005A			55970	02/10/15 12:01	SGO	TAL PHX
Total/NA	Analysis	6010B		1	56412	02/13/15 19:14	AJC	TAL PHX
Total/NA	Prep	7470A			56427	02/17/15 09:29	JRC	TAL PHX
Total/NA	Analysis	7470A		1	56478	02/17/15 12:19	JRC	TAL PHX
Total/NA	Analysis	SM 2340B		1	56617	02/18/15 19:03	SLS	TAL PHX

Client Sample ID: Trip Blank

Lab Sample ID: 550-39836-5

Date Collected: 02/09/15 10:30
Matrix: Water
Date Received: 02/10/15 08:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	56538	02/18/15 14:27	UT	TAL PHX
Total/NA	Analysis	SM 5310B		1	57266	02/25/15 11:03	AMR	TAL PHX

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Certification Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39836-1

Laboratory: TestAmerica Phoenix

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arizona	State Program	9	AZ0728	06-09-15

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	2-ethoxy-2-methyl butane TIC

Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-15
Arizona	State Program	9	AZ0671	10-13-15
California	LA Cty Sanitation Districts	9	10256	01-31-16 *
Guam	State Program	9	Cert. No. 12.002r	01-23-16
Hawaii	State Program	9	N/A	01-29-16
Nevada	State Program	9	CA015312007A	07-31-15
New Mexico	State Program	6	N/A	01-29-15 *
Northern Mariana Islands	State Program	9	MP0002	01-29-15 *
Oregon	NELAP	10	4005	01-29-16
USDA	Federal		P330-09-00080	06-06-15

* Certification renewal pending - certification considered valid.

Method Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: 14-2014-2029-3.3

TestAmerica Job ID: 550-39836-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PHX
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
RSK-175	Dissolved Gases (GC)	RSK	TAL IRV
300.0	Anions, Ion Chromatography	MCAWW	TAL PHX
6010B	Metals (ICP)	SW846	TAL PHX
7470A	Mercury (CVAA)	SW846	TAL PHX
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	TAL PHX
SM 2320B	Alkalinity	SM	TAL PHX
SM 4500 H+ B	pH	SM	TAL PHX
SM 5310B	Organic Carbon, Total (TOC)	SM	TAL PHX
SM 5310B	Organic Carbon, Dissolved (DOC)	SM	TAL PHX

Protocol References:

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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 IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Chain of Custody Record

065117

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

TestAmerica Phoenix
4625 E. Cotton Center Blvd.
Suite 189
Phoenix, AZ 85040
Phone: 602.437.3340 Fax:

550-39836

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact			
Company Name: AMEC	Project Manager: A. YIANNAKAKIS	Site Contact: B. COMBS	Date: 020915
Address: 4600 E. WASHINGTON ST STE 600	Tel/Fax: 602-733-6013	Lab Contact: V. NIELSON	Carrier: E. MILLER
City/State/Zip: PHOENIX, AZ 85034	Analysis Turnaround Time		COC No: 1 of 1 COCs
Phone:	☐ CALENDAR DAYS ☐ WORKING DAYS		Sampler: Eric Miller
Fax:	TAT if different from Below		For Lab Use Only:
Project Name: 14-2014-2029-303	☐ 2 weeks		
Site:	☐ 1 week		
P O #	☐ 2 days		
	☐ 1 day		

550-39836 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	DOC	8260LL	RSK 175	METALS/CATIONS	ANIONS, pH	ALKALINITY, HARDNESS	NITRATE/NITRITE (SEE LIST)	8270C SVOC	Sample Specific Notes:
R-068A-341.86-H-020915 -1	020915	1030	G	Aq	4	N	N	X								DEQ # 60650
					3				X							
					3					X						
					1						X					
					1							X				
					2										X	
WR-275A-340.91-H-020915 -2	020915	1145	G	Aq	1						X					DEQ # 57290
WR-275A-340.91-H-020915 -DUP 3					1						X					
WR-353A-430-H-020915 -4	020915	1320	G	Aq	1						X					DEQ # 58790
Trip Blank -6	–	–	–	–	2			X								

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☐ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:

1.3°

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	AMEC	2-12-15	[signature]		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
			[signature]	YR	2/10/15 0858

IN THE 500 mL UNPRESERVED BOTTLE TEST FOR THE FOLLOWING:

ANIONS
pH
ALKALINITY
HARDNESS
NITRATE
NITRITE

RSK 175 TEST FOR THE FOLLOWING:

METHANE
ETHANE
~~EH~~
ETHENE

Login Sample Receipt Checklist

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 550-39836-1

Login Number: 39836

List Source: TestAmerica Phoenix

List Number: 1

Creator: Shoemaker, Cory M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	Check done at department level as required.

Login Sample Receipt Checklist

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 550-39836-1

Login Number: 39836
List Number: 2
Creator: Chy, Jonathan

List Source: TestAmerica Irvine
List Creation: 02/12/15 04:36 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Phoenix
4625 East Cotton Ctr Blvd
Suite 189
Phoenix, AZ 85040
Tel: (602)437-3340

TestAmerica Job ID: 550-39555-1
Client Project/Site: Broadway Pantano

For:
AMEC Foster Wheeler E & I, Inc
4600 E. Washington St
6th Floor
Phoenix, Arizona 85034

Attn: Mr. Alex Yiannakakis

Authorized for release by:
2/27/2015 1:08:32 PM

Vic Nielsen, Project Manager II
(602)437-3340
vic.nielsen@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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www.testamericainc.com

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

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

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL.

GC/MS VOA TICs

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
T4	Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

GC VOA

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.

HPLC/IC

Qualifier	Qualifier Description
E4	Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL) but above MDL.
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.

Metals

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.

General Chemistry

Qualifier	Qualifier Description
E8	Analyte reported to MDL per project specification. Target analyte was not detected in the sample.
H5	This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.

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
CFL	Contains Free Liquid
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)

Job ID: 550-39555-1

Laboratory: TestAmerica Phoenix

Narrative

Job Narrative
550-39555-1

Comments
No additional comments.

Receipt
The samples were received on 2/5/2015 8:02 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.

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

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

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

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

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

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

Sample Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-39555-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-39555-1	WR-273A-323.33-H-020415	Water	02/04/15 13:15	02/05/15 08:02
550-39555-2	Trip Blank	Water	02/04/15 13:15	02/05/15 08:02

Detection Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-39555-1

Client Sample ID: WR-273A-323.33-H-020415 — Lab Sample ID: 550-39555-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dichlorodifluoromethane	1.0		0.50	0.15	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	1.1		0.50	0.21	ug/L	1		8260B	Total/NA
Naphthalene	0.61	E4	2.5	0.51	ug/L	1		8260B	Total/NA
Tetrachloroethene	3.9		0.50	0.18	ug/L	1		8260B	Total/NA
Toluene	0.31	E4	0.50	0.28	ug/L	1		8260B	Total/NA
Trichloroethene	1.8		0.50	0.24	ug/L	1		8260B	Total/NA
1,2,4-Trimethylbenzene	0.28	E4	0.50	0.25	ug/L	1		8260B	Total/NA
Bromide	0.071	E4	0.50	0.051	mg/L	1		300.0	Total/NA
Chloride	3.8		2.0	0.29	mg/L	1		300.0	Total/NA
Fluoride	0.077	E4	0.40	0.040	mg/L	1		300.0	Total/NA
Nitrate as N	1.8		0.10	0.051	mg/L	1		300.0	Total/NA
Sulfate	27		2.0	0.21	mg/L	1		300.0	Total/NA
Iron	0.34		0.10	0.012	mg/L	1		6010B	Total/NA
Calcium	71		2.0	0.069	mg/L	1		6010B	Total/NA
Magnesium	6.4		2.0	0.050	mg/L	1		6010B	Total/NA
Hardness as calcium carbonate	200		13	13	mg/L	1		SM 2340B	Total/NA
Alkalinity as CaCO3	250		6.0	6.0	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	250		6.0	6.0	mg/L	1		SM 2320B	Total/NA
pH	7.32	H5	1.68	1.68	SU	1		SM 4500 H+ B	Total/NA
Temperature	21.2	H5	0.100	0.100	Degrees C	1		SM 4500 H+ B	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 550-39555-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-39555-1

Client Sample ID: WR-273A-323.33-H-020415

Lab Sample ID: 550-39555-1

Date Collected: 02/04/15 13:15

Matrix: Water

Date Received: 02/05/15 08:02

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	E8	10	7.3	ug/L			02/10/15 09:17	1
Benzene	ND	E8	0.50	0.12	ug/L			02/10/15 09:17	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			02/10/15 09:17	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			02/10/15 09:17	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			02/10/15 09:17	1
Bromoform	ND	E8	1.0	0.37	ug/L			02/10/15 09:17	1
Bromomethane	ND	E8	1.0	0.67	ug/L			02/10/15 09:17	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			02/10/15 09:17	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			02/10/15 09:17	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			02/10/15 09:17	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			02/10/15 09:17	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			02/10/15 09:17	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			02/10/15 09:17	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			02/10/15 09:17	1
Chloroethane	ND	E8	1.0	0.25	ug/L			02/10/15 09:17	1
Chloroform	ND	E8	0.50	0.13	ug/L			02/10/15 09:17	1
Chloromethane	ND	E8	1.0	0.21	ug/L			02/10/15 09:17	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			02/10/15 09:17	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			02/10/15 09:17	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			02/10/15 09:17	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			02/10/15 09:17	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			02/10/15 09:17	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			02/10/15 09:17	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			02/10/15 09:17	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			02/10/15 09:17	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			02/10/15 09:17	1
Dichlorodifluoromethane	**1.0**		0.50	0.15	ug/L			02/10/15 09:17	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			02/10/15 09:17	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			02/10/15 09:17	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			02/10/15 09:17	1
cis-1,2-Dichloroethene	**1.1**		0.50	0.21	ug/L			02/10/15 09:17	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			02/10/15 09:17	1
1,2-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/10/15 09:17	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/10/15 09:17	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			02/10/15 09:17	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			02/10/15 09:17	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			02/10/15 09:17	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			02/10/15 09:17	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			02/10/15 09:17	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			02/10/15 09:17	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			02/10/15 09:17	1
Iodomethane	ND	E8	2.5	0.21	ug/L			02/10/15 09:17	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			02/10/15 09:17	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			02/10/15 09:17	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			02/10/15 09:17	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			02/10/15 09:17	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			02/10/15 09:17	1
Naphthalene	**0.61**	**E4**	2.5	0.51	ug/L			02/10/15 09:17	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			02/10/15 09:17	1

Client Sample ID: WR-273A-323.33-H-020415

Lab Sample ID: 550-39555-1

Date Collected: 02/04/15 13:15

Matrix: Water

Date Received: 02/05/15 08:02

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND	E8	0.50	0.17	ug/L			02/10/15 09:17	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			02/10/15 09:17	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			02/10/15 09:17	1
Tetrachloroethene	**3.9**		0.50	0.18	ug/L			02/10/15 09:17	1
Toluene	**0.31**	**E4**	0.50	0.28	ug/L			02/10/15 09:17	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			02/10/15 09:17	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			02/10/15 09:17	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			02/10/15 09:17	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			02/10/15 09:17	1
Trichloroethene	**1.8**		0.50	0.24	ug/L			02/10/15 09:17	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			02/10/15 09:17	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			02/10/15 09:17	1
1,2,4-Trimethylbenzene	**0.28**	**E4**	0.50	0.25	ug/L			02/10/15 09:17	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			02/10/15 09:17	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			02/10/15 09:17	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			02/10/15 09:17	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			02/10/15 09:17	1
Butadiene	ND	E8	2.0	1.7	ug/L			02/10/15 09:17	1
Hexane	ND	E8	2.0	1.6	ug/L			02/10/15 09:17	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*02/10/15 09:17*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*02/10/15 09:17*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*02/10/15 09:17*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*02/10/15 09:17*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*02/10/15 09:17*	*1*
2-ethoxy-2-methyl butane TIC	*ND*	*E8 T4*	*ug/L*			*919-94-8*		*02/10/15 09:17*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*02/10/15 09:17*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*02/10/15 09:17*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*02/10/15 09:17*	*1*

Method: RSK-175 - Dissolved Gases (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND	E8	0.0020	0.00050	mg/L			02/09/15 17:19	1
Ethene	ND	E8	0.0028	0.00053	mg/L			02/09/15 17:19	1
Methane (FID)	ND	E8	0.00099	0.00025	mg/L			02/09/15 17:19	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**0.071**	**E4**	0.50	0.051	mg/L			02/06/15 09:50	1
Chloride	**3.8**		2.0	0.29	mg/L			02/06/15 09:50	1
Fluoride	**0.077**	**E4**	0.40	0.040	mg/L			02/06/15 09:50	1
Nitrate as N	**1.8**		0.10	0.051	mg/L			02/06/15 09:50	1
Nitrite as N	ND	E8	0.10	0.032	mg/L			02/06/15 09:50	1
Sulfate	**27**		2.0	0.21	mg/L			02/06/15 09:50	1

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**0.34**		0.10	0.012	mg/L		02/06/15 07:01	02/10/15 10:52	1

Client Sample Results

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-39555-1

Client Sample ID: WR-273A-323.33-H-020415

Lab Sample ID: 550-39555-1
Date Collected: 02/04/15 13:15
Matrix: Water
Date Received: 02/05/15 08:02

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	71		2.0	0.069	mg/L		02/06/15 07:01	02/10/15 10:52	1
Magnesium	6.4		2.0	0.050	mg/L		02/06/15 07:01	02/10/15 10:52	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	200		13	13	mg/L			02/12/15 20:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	250		6.0	6.0	mg/L			02/10/15 04:29	1
Bicarbonate Alkalinity as CaCO3	250		6.0	6.0	mg/L			02/10/15 04:29	1
Carbonate Alkalinity as CaCO3	ND		6.0	6.0	mg/L			02/10/15 04:29	1
Alkalinity, Phenolphthalein	ND		6.0	6.0	mg/L			02/10/15 04:29	1
Hydroxide Alkalinity as CaCO3	ND		6.0	6.0	mg/L			02/10/15 04:29	1
pH	7.32	H5	1.68	1.68	SU			02/05/15 13:50	1
Temperature	21.2	H5	0.100	0.100	Degrees C			02/05/15 13:50	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	ND	E8	1.0	0.65	mg/L			02/17/15 14:54	1

Client Sample ID: Trip Blank

Lab Sample ID: 550-39555-2
Date Collected: 02/04/15 13:15
Matrix: Water
Date Received: 02/05/15 08:02

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	E8	10	7.3	ug/L			02/10/15 03:12	1
Benzene	ND	E8	0.50	0.12	ug/L			02/10/15 03:12	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			02/10/15 03:12	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			02/10/15 03:12	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			02/10/15 03:12	1
Bromoform	ND	E8	1.0	0.37	ug/L			02/10/15 03:12	1
Bromomethane	ND	E8	1.0	0.67	ug/L			02/10/15 03:12	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			02/10/15 03:12	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			02/10/15 03:12	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			02/10/15 03:12	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			02/10/15 03:12	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			02/10/15 03:12	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			02/10/15 03:12	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			02/10/15 03:12	1
Chloroethane	ND	E8	1.0	0.25	ug/L			02/10/15 03:12	1
Chloroform	ND	E8	0.50	0.13	ug/L			02/10/15 03:12	1
Chloromethane	ND	E8	1.0	0.21	ug/L			02/10/15 03:12	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			02/10/15 03:12	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			02/10/15 03:12	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			02/10/15 03:12	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			02/10/15 03:12	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			02/10/15 03:12	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			02/10/15 03:12	1

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-39555-1

Client Sample ID: Trip Blank
Date Collected: 02/04/15 13:15
Date Received: 02/05/15 08:02

Lab Sample ID: 550-39555-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			02/10/15 03:12	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			02/10/15 03:12	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			02/10/15 03:12	1
Dichlorodifluoromethane	ND	E8	0.50	0.15	ug/L			02/10/15 03:12	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			02/10/15 03:12	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			02/10/15 03:12	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			02/10/15 03:12	1
cis-1,2-Dichloroethene	ND	E8	0.50	0.21	ug/L			02/10/15 03:12	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			02/10/15 03:12	1
1,2-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/10/15 03:12	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/10/15 03:12	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			02/10/15 03:12	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			02/10/15 03:12	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			02/10/15 03:12	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			02/10/15 03:12	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			02/10/15 03:12	1
Hexachlorobutadiene	ND	E8	1.0	0.28	ug/L			02/10/15 03:12	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			02/10/15 03:12	1
Iodomethane	ND	E8	2.5	0.21	ug/L			02/10/15 03:12	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			02/10/15 03:12	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			02/10/15 03:12	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			02/10/15 03:12	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			02/10/15 03:12	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			02/10/15 03:12	1
Naphthalene	ND	E8	2.5	0.51	ug/L			02/10/15 03:12	1
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			02/10/15 03:12	1
Styrene	ND	E8	0.50	0.17	ug/L			02/10/15 03:12	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			02/10/15 03:12	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			02/10/15 03:12	1
Tetrachloroethene	ND	E8	0.50	0.18	ug/L			02/10/15 03:12	1
Toluene	ND	E8	0.50	0.28	ug/L			02/10/15 03:12	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			02/10/15 03:12	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			02/10/15 03:12	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			02/10/15 03:12	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			02/10/15 03:12	1
Trichloroethene	ND	E8	0.50	0.24	ug/L			02/10/15 03:12	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			02/10/15 03:12	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			02/10/15 03:12	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			02/10/15 03:12	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			02/10/15 03:12	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			02/10/15 03:12	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			02/10/15 03:12	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			02/10/15 03:12	1
Butadiene	ND	E8	2.0	1.7	ug/L			02/10/15 03:12	1
Hexane	ND	E8	2.0	1.6	ug/L			02/10/15 03:12	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*02/10/15 03:12*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*02/10/15 03:12*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*02/10/15 03:12*	*1*

Client Sample ID: Trip Blank

Lab Sample ID: 550-39555-2

Date Collected: 02/04/15 13:15

Matrix: Water

Date Received: 02/05/15 08:02

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

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Methyl cyclohexane TIC	ND	E8 T4	ug/L			108-87-2		02/10/15 03:12	1
Propene TIC	ND	E8 T4	ug/L			115-07-1		02/10/15 03:12	1
2-ethoxy-2-methyl butane TIC	ND	E8 T4	ug/L			919-94-8		02/10/15 03:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	99		70 - 130		02/10/15 03:12	1
Toluene-d8 (Surr)	100		70 - 130		02/10/15 03:12	1
4-Bromofluorobenzene (Surr)	94		70 - 130		02/10/15 03:12	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	ND	E8	1.0	0.65	mg/L			02/17/15 14:36	1

Surrogate Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-39555-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
550-39555-1	WR-273A-323.33-H-020415	97	100	95
550-39555-2	Trip Blank	99	100	94
LCS 550-55920/3	Lab Control Sample	101	100	101
LCSD 550-55920/4	Lab Control Sample Dup	98	101	100
MB 550-55920/5	Method Blank	97	100	95

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

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

Lab Sample ID: MB 550-55920/5
Matrix: Water
Analysis Batch: 55920

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND	E8	10	7.3	ug/L			02/10/15 00:27	1
Benzene	ND	E8	0.50	0.12	ug/L			02/10/15 00:27	1
Bromobenzene	ND	E8	0.50	0.14	ug/L			02/10/15 00:27	1
Chlorobromomethane	ND	E8	0.50	0.27	ug/L			02/10/15 00:27	1
Dichlorobromomethane	ND	E8	0.50	0.23	ug/L			02/10/15 00:27	1
Bromoform	ND	E8	1.0	0.37	ug/L			02/10/15 00:27	1
Bromomethane	ND	E8	1.0	0.67	ug/L			02/10/15 00:27	1
2-Butanone (MEK)	ND	E8	5.0	2.2	ug/L			02/10/15 00:27	1
n-Butylbenzene	ND	E8	0.50	0.21	ug/L			02/10/15 00:27	1
sec-Butylbenzene	ND	E8	0.50	0.23	ug/L			02/10/15 00:27	1
tert-Butylbenzene	ND	E8	0.50	0.25	ug/L			02/10/15 00:27	1
Carbon disulfide	ND	E8	1.0	0.86	ug/L			02/10/15 00:27	1
Carbon tetrachloride	ND	E8	0.50	0.15	ug/L			02/10/15 00:27	1
Chlorobenzene	ND	E8	0.50	0.17	ug/L			02/10/15 00:27	1
Chloroethane	ND	E8	1.0	0.25	ug/L			02/10/15 00:27	1
Chloroform	ND	E8	0.50	0.13	ug/L			02/10/15 00:27	1
Chloromethane	ND	E8	1.0	0.21	ug/L			02/10/15 00:27	1
2-Chlorotoluene	ND	E8	0.50	0.17	ug/L			02/10/15 00:27	1
4-Chlorotoluene	ND	E8	0.50	0.20	ug/L			02/10/15 00:27	1
Chlorodibromomethane	ND	E8	0.50	0.22	ug/L			02/10/15 00:27	1
1,2-Dibromo-3-Chloropropane	ND	E8	5.0	0.82	ug/L			02/10/15 00:27	1
Ethylene Dibromide	ND	E8	0.50	0.30	ug/L			02/10/15 00:27	1
Dibromomethane	ND	E8	0.50	0.26	ug/L			02/10/15 00:27	1
1,2-Dichlorobenzene	ND	E8	0.50	0.22	ug/L			02/10/15 00:27	1
1,3-Dichlorobenzene	ND	E8	0.50	0.14	ug/L			02/10/15 00:27	1
1,4-Dichlorobenzene	ND	E8	0.50	0.17	ug/L			02/10/15 00:27	1
Dichlorodifluoromethane	ND	E8	0.50	0.15	ug/L			02/10/15 00:27	1
1,1-Dichloroethane	ND	E8	0.50	0.14	ug/L			02/10/15 00:27	1
1,2-Dichloroethane	ND	E8	0.50	0.31	ug/L			02/10/15 00:27	1
1,1-Dichloroethene	ND	E8	0.50	0.23	ug/L			02/10/15 00:27	1
cis-1,2-Dichloroethene	ND	E8	0.50	0.21	ug/L			02/10/15 00:27	1
trans-1,2-Dichloroethene	ND	E8	0.50	0.29	ug/L			02/10/15 00:27	1
1,2-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/10/15 00:27	1
1,3-Dichloropropane	ND	E8	0.50	0.23	ug/L			02/10/15 00:27	1
2,2-Dichloropropane	ND	E8	1.0	0.18	ug/L			02/10/15 00:27	1
1,1-Dichloropropene	ND	E8	0.50	0.20	ug/L			02/10/15 00:27	1
cis-1,3-Dichloropropene	ND	E8	0.50	0.14	ug/L			02/10/15 00:27	1
trans-1,3-Dichloropropene	ND	E8	0.50	0.47	ug/L			02/10/15 00:27	1
Ethylbenzene	ND	E8	0.50	0.32	ug/L			02/10/15 00:27	1
Hexachlorobutadiene	0.490	E4	1.0	0.28	ug/L			02/10/15 00:27	1
2-Hexanone	ND	E8	5.0	1.5	ug/L			02/10/15 00:27	1
Iodomethane	ND	E8	2.5	0.21	ug/L			02/10/15 00:27	1
Isopropylbenzene	ND	E8	0.50	0.26	ug/L			02/10/15 00:27	1
4-Isopropyltoluene	ND	E8	0.50	0.21	ug/L			02/10/15 00:27	1
Methylene Chloride	ND	E8	1.0	0.67	ug/L			02/10/15 00:27	1
4-Methyl-2-pentanone (MIBK)	ND	E8	2.5	1.3	ug/L			02/10/15 00:27	1
Methyl tert-butyl ether	ND	E8	0.50	0.22	ug/L			02/10/15 00:27	1
Naphthalene	ND	E8	2.5	0.51	ug/L			02/10/15 00:27	1

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

Lab Sample ID: MB 550-55920/5
Matrix: Water
Analysis Batch: 55920

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND	E8	0.50	0.21	ug/L			02/10/15 00:27	1
Styrene	ND	E8	0.50	0.17	ug/L			02/10/15 00:27	1
1,1,1,2-Tetrachloroethane	ND	E8	0.50	0.35	ug/L			02/10/15 00:27	1
1,1,2,2-Tetrachloroethane	ND	E8	0.50	0.33	ug/L			02/10/15 00:27	1
Tetrachloroethene	ND	E8	0.50	0.18	ug/L			02/10/15 00:27	1
Toluene	ND	E8	0.50	0.28	ug/L			02/10/15 00:27	1
1,2,3-Trichlorobenzene	ND	E8	1.0	0.45	ug/L			02/10/15 00:27	1
1,2,4-Trichlorobenzene	ND	E8	1.0	0.32	ug/L			02/10/15 00:27	1
1,1,1-Trichloroethane	ND	E8	0.50	0.15	ug/L			02/10/15 00:27	1
1,1,2-Trichloroethane	ND	E8	0.50	0.31	ug/L			02/10/15 00:27	1
Trichloroethene	ND	E8	0.50	0.24	ug/L			02/10/15 00:27	1
Trichlorofluoromethane	ND	E8	0.50	0.15	ug/L			02/10/15 00:27	1
1,2,3-Trichloropropane	ND	E8	2.0	0.78	ug/L			02/10/15 00:27	1
1,2,4-Trimethylbenzene	ND	E8	0.50	0.25	ug/L			02/10/15 00:27	1
1,3,5-Trimethylbenzene	ND	E8	0.50	0.21	ug/L			02/10/15 00:27	1
Vinyl acetate	ND	E8	2.0	0.81	ug/L			02/10/15 00:27	1
Vinyl chloride	ND	E8	0.50	0.18	ug/L			02/10/15 00:27	1
Xylenes, Total	ND	E8	1.5	0.86	ug/L			02/10/15 00:27	1
Butadiene	ND	E8	2.0	1.7	ug/L			02/10/15 00:27	1
Hexane	ND	E8	2.0	1.6	ug/L			02/10/15 00:27	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*110-82-7*		*02/10/15 00:27*	*1*
Dicyclopentadiene TIC	*ND*	*E8 T4*	*ug/L*			*77-73-6*		*02/10/15 00:27*	*1*
4-Ethyltoluene TIC	*ND*	*E8 T4*	*ug/L*			*622-96-8*		*02/10/15 00:27*	*1*
Methyl cyclohexane TIC	*ND*	*E8 T4*	*ug/L*			*108-87-2*		*02/10/15 00:27*	*1*
Propene TIC	*ND*	*E8 T4*	*ug/L*			*115-07-1*		*02/10/15 00:27*	*1*
2-ethoxy-2-methyl butane TIC	*ND*	*E8 T4*	*ug/L*			*919-94-8*		*02/10/15 00:27*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*97*		*70 - 130*		*02/10/15 00:27*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*02/10/15 00:27*	*1*
4-Bromofluorobenzene (Surr)	*95*		*70 - 130*		*02/10/15 00:27*	*1*

Lab Sample ID: LCS 550-55920/3
Matrix: Water
Analysis Batch: 55920

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	25.0	32.3		ug/L		129	38 - 150
Benzene	25.0	24.9		ug/L		99	70 - 130
Bromobenzene	25.0	26.8		ug/L		107	70 - 130
Chlorobromomethane	25.0	26.8		ug/L		107	70 - 130
Dichlorobromomethane	25.0	25.6		ug/L		103	70 - 130
Bromoform	25.0	26.4		ug/L		106	69 - 129
Bromomethane	25.0	23.4		ug/L		94	57 - 138
2-Butanone (MEK)	25.0	27.4		ug/L		109	53 - 150

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

Lab Sample ID: LCS 550-55920/3
Matrix: Water
Analysis Batch: 55920

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
n-Butylbenzene	25.0	26.6		ug/L		106	70 - 130
sec-Butylbenzene	25.0	27.0		ug/L		108	70 - 130
Carbon disulfide	25.0	24.6		ug/L		98	64 - 145
Carbon tetrachloride	25.0	25.0		ug/L		100	70 - 143
Chlorobenzene	25.0	24.8		ug/L		99	70 - 130
Chloroethane	25.0	25.1		ug/L		100	66 - 131
Chloroform	25.0	25.5		ug/L		102	70 - 130
Chloromethane	25.0	25.0		ug/L		100	56 - 129
2-Chlorotoluene	25.0	26.2		ug/L		105	70 - 130
4-Chlorotoluene	25.0	26.4		ug/L		106	70 - 130
Chlorodibromomethane	25.0	24.8		ug/L		99	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	26.6		ug/L		107	63 - 146
Ethylene Dibromide	25.0	25.8		ug/L		103	70 - 130
Dibromomethane	25.0	25.6		ug/L		102	70 - 130
1,2-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130
1,3-Dichlorobenzene	25.0	25.8		ug/L		103	70 - 130
1,4-Dichlorobenzene	25.0	25.6		ug/L		102	70 - 130
Dichlorodifluoromethane	25.0	26.5		ug/L		106	46 - 144
1,1-Dichloroethane	25.0	25.3		ug/L		101	70 - 130
1,2-Dichloroethane	25.0	25.4		ug/L		101	66 - 139
1,1-Dichloroethene	25.0	24.2		ug/L		97	63 - 131
cis-1,2-Dichloroethene	25.0	25.0		ug/L		100	70 - 130
trans-1,2-Dichloroethene	25.0	24.5		ug/L		98	69 - 127
1,2-Dichloropropane	25.0	26.1		ug/L		104	70 - 130
1,3-Dichloropropane	25.0	25.6		ug/L		102	70 - 130
2,2-Dichloropropane	25.0	26.2		ug/L		105	69 - 139
1,1-Dichloropropene	25.0	25.1		ug/L		100	70 - 130
cis-1,3-Dichloropropene	25.0	26.2		ug/L		105	70 - 130
trans-1,3-Dichloropropene	25.0	25.8		ug/L		103	70 - 130
Ethylbenzene	25.0	25.5		ug/L		102	70 - 130
Hexachlorobutadiene	25.0	24.3		ug/L		97	76 - 145
2-Hexanone	25.0	30.9		ug/L		124	55 - 150
Iodomethane	25.0	25.7		ug/L		103	70 - 130
Isopropylbenzene	25.0	27.1		ug/L		108	88 - 141
4-Isopropyltoluene	25.0	26.5		ug/L		106	70 - 130
Methylene Chloride	25.0	24.9		ug/L		100	63 - 128
4-Methyl-2-pentanone (MIBK)	25.0	25.5		ug/L		102	64 - 142
Methyl tert-butyl ether	25.0	25.2		ug/L		101	70 - 130
Naphthalene	25.0	24.7		ug/L		99	78 - 143
N-Propylbenzene	25.0	26.6		ug/L		107	70 - 130
Styrene	25.0	25.7		ug/L		103	70 - 130
1,1,1,2-Tetrachloroethane	25.0	25.3		ug/L		101	70 - 130
1,1,2,2-Tetrachloroethane	25.0	26.3		ug/L		105	70 - 130
Tetrachloroethene	25.0	25.3		ug/L		101	70 - 130
Toluene	25.0	25.1		ug/L		100	70 - 130
1,2,3-Trichlorobenzene	25.0	24.5		ug/L		98	79 - 139
1,2,4-Trichlorobenzene	25.0	24.7		ug/L		99	80 - 137
1,1,1-Trichloroethane	25.0	25.2		ug/L		101	71 - 131

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

Lab Sample ID: LCS 550-55920/3
Matrix: Water
Analysis Batch: 55920

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloroethane	25.0	25.4		ug/L		102	70 - 130
Trichloroethene	25.0	25.7		ug/L		103	70 - 130
Trichlorofluoromethane	25.0	25.4		ug/L		102	69 - 150
1,2,3-Trichloropropane	25.0	26.2		ug/L		105	70 - 130
1,2,4-Trimethylbenzene	25.0	26.8		ug/L		107	70 - 130
1,3,5-Trimethylbenzene	25.0	26.8		ug/L		107	70 - 130
Vinyl acetate	25.0	25.0		ug/L		100	67 - 148
Vinyl chloride	25.0	25.5		ug/L		102	65 - 137
Xylenes, Total	50.0	52.5		ug/L		105	70 - 130
Butadiene	25.0	25.0		ug/L		100	12 - 150
Hexane	25.0	24.8		ug/L		99	54 - 132
m-Xylene & p-Xylene	25.0	26.1		ug/L		104	70 - 130
o-Xylene	25.0	26.4		ug/L		105	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*101*		*70 - 130*
Toluene-d8 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*

Lab Sample ID: LCSD 550-55920/4
Matrix: Water
Analysis Batch: 55920

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	25.0	30.9		ug/L		124	38 - 150	4	35
Benzene	25.0	25.1		ug/L		100	70 - 130	1	20
Bromobenzene	25.0	26.6		ug/L		106	70 - 130	1	20
Chlorobromomethane	25.0	26.5		ug/L		106	70 - 130	1	20
Dichlorobromomethane	25.0	25.0		ug/L		100	70 - 130	2	20
Bromoform	25.0	24.9		ug/L		99	69 - 129	6	20
Bromomethane	25.0	24.0		ug/L		96	57 - 138	3	20
2-Butanone (MEK)	25.0	27.3		ug/L		109	53 - 150	0	35
n-Butylbenzene	25.0	27.4		ug/L		110	70 - 130	3	20
sec-Butylbenzene	25.0	27.7		ug/L		111	70 - 130	3	20
Carbon disulfide	25.0	25.7		ug/L		103	64 - 145	4	33
Carbon tetrachloride	25.0	25.5		ug/L		102	70 - 143	2	20
Chlorobenzene	25.0	25.1		ug/L		100	70 - 130	1	20
Chloroethane	25.0	25.7		ug/L		103	66 - 131	2	20
Chloroform	25.0	25.0		ug/L		100	70 - 130	2	20
Chloromethane	25.0	25.9		ug/L		103	56 - 129	3	20
2-Chlorotoluene	25.0	26.3		ug/L		105	70 - 130	0	20
4-Chlorotoluene	25.0	27.0		ug/L		108	70 - 130	2	20
Chlorodibromomethane	25.0	24.3		ug/L		97	70 - 130	2	20
1,2-Dibromo-3-Chloropropane	25.0	23.6		ug/L		94	63 - 146	12	22
Ethylene Dibromide	25.0	24.7		ug/L		99	70 - 130	4	20
Dibromomethane	25.0	25.8		ug/L		103	70 - 130	1	20
1,2-Dichlorobenzene	25.0	25.5		ug/L		102	70 - 130	3	20
1,3-Dichlorobenzene	25.0	25.8		ug/L		103	70 - 130	0	20

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

Lab Sample ID: LCSD 550-55920/4
Matrix: Water
Analysis Batch: 55920

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	25.0	25.8		ug/L		103	70 - 130	1	20
Dichlorodifluoromethane	25.0	27.6		ug/L		110	46 - 144	4	23
1,1-Dichloroethane	25.0	25.1		ug/L		100	70 - 130	1	20
1,2-Dichloroethane	25.0	24.7		ug/L		99	66 - 139	3	20
1,1-Dichloroethene	25.0	25.2		ug/L		101	63 - 131	4	22
cis-1,2-Dichloroethene	25.0	25.7		ug/L		103	70 - 130	3	20
trans-1,2-Dichloroethene	25.0	24.6		ug/L		99	69 - 127	1	20
1,2-Dichloropropane	25.0	25.9		ug/L		104	70 - 130	1	20
1,3-Dichloropropane	25.0	24.9		ug/L		100	70 - 130	3	20
2,2-Dichloropropane	25.0	26.8		ug/L		107	69 - 139	2	20
1,1-Dichloropropene	25.0	25.8		ug/L		103	70 - 130	3	20
cis-1,3-Dichloropropene	25.0	25.5		ug/L		102	70 - 130	3	20
trans-1,3-Dichloropropene	25.0	25.2		ug/L		101	70 - 130	3	20
Ethylbenzene	25.0	25.7		ug/L		103	70 - 130	1	20
Hexachlorobutadiene	25.0	25.2		ug/L		101	76 - 145	4	20
2-Hexanone	25.0	28.7		ug/L		115	55 - 150	7	35
Iodomethane	25.0	26.2		ug/L		105	70 - 130	2	20
Isopropylbenzene	25.0	27.4		ug/L		110	88 - 141	1	20
4-Isopropyltoluene	25.0	27.2		ug/L		109	70 - 130	3	20
Methylene Chloride	25.0	25.6		ug/L		102	63 - 128	3	21
4-Methyl-2-pentanone (MIBK)	25.0	23.6		ug/L		94	64 - 142	8	25
Methyl tert-butyl ether	25.0	23.9		ug/L		96	70 - 130	5	20
Naphthalene	25.0	24.1		ug/L		97	78 - 143	2	20
N-Propylbenzene	25.0	27.3		ug/L		109	70 - 130	2	20
Styrene	25.0	25.9		ug/L		104	70 - 130	1	20
1,1,1,2-Tetrachloroethane	25.0	25.6		ug/L		102	70 - 130	1	20
1,1,2,2-Tetrachloroethane	25.0	25.0		ug/L		100	70 - 130	5	20
Tetrachloroethene	25.0	25.8		ug/L		103	70 - 130	2	20
Toluene	25.0	25.6		ug/L		103	70 - 130	2	20
1,2,3-Trichlorobenzene	25.0	24.3		ug/L		97	79 - 139	0	20
1,2,4-Trichlorobenzene	25.0	24.9		ug/L		100	80 - 137	1	20
1,1,1-Trichloroethane	25.0	25.8		ug/L		103	71 - 131	2	20
1,1,2-Trichloroethane	25.0	25.1		ug/L		100	70 - 130	1	20
Trichloroethene	25.0	26.3		ug/L		105	70 - 130	2	20
Trichlorofluoromethane	25.0	26.8		ug/L		107	69 - 150	5	22
1,2,3-Trichloropropane	25.0	24.5		ug/L		98	70 - 130	6	20
1,2,4-Trimethylbenzene	25.0	27.2		ug/L		109	70 - 130	2	20
1,3,5-Trimethylbenzene	25.0	27.4		ug/L		110	70 - 130	2	20
Vinyl acetate	25.0	22.4		ug/L		90	67 - 148	11	22
Vinyl chloride	25.0	26.7		ug/L		107	65 - 137	5	20
Xylenes, Total	50.0	52.7		ug/L		105	70 - 130	0	20
Butadiene	25.0	26.7		ug/L		107	12 - 150	7	35
Hexane	25.0	25.4		ug/L		101	54 - 132	2	28
m-Xylene & p-Xylene	25.0	26.2		ug/L		105	70 - 130	0	20
o-Xylene	25.0	26.5		ug/L		106	70 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*98*		*70 - 130*

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

Lab Sample ID: LCSD 550-55920/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55920

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

Method: RSK-175 - Dissolved Gases (GC)

Lab Sample ID: MB 440-234991/9 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234991

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethane	ND	E8	0.0020	0.00050	mg/L			02/09/15 13:11	1
Ethene	ND	E8	0.0028	0.00053	mg/L			02/09/15 13:11	1
Methane (FID)	ND	E8	0.00099	0.00025	mg/L			02/09/15 13:11	1
Methane (TCD)	ND	E8	1.0	0.50	mg/L			02/09/15 13:11	1

Lab Sample ID: LCS 440-234991/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234991

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methane (TCD)	4.19	4.11		mg/L		98	80 - 120

Lab Sample ID: LCS 440-234991/7 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234991

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethane	0.157	0.172		mg/L		110	80 - 120
Ethene	0.147	0.162		mg/L		111	80 - 120
Methane (FID)	0.0839	0.0889		mg/L		106	80 - 120

Lab Sample ID: LCSD 440-234991/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234991

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methane (TCD)	4.19	3.91		mg/L		93	80 - 120	5	20

Lab Sample ID: LCSD 440-234991/8 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 234991

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethane	0.157	0.163		mg/L		103	80 - 120	6	20
Ethene	0.147	0.154		mg/L		105	80 - 120	6	20
Methane (FID)	0.0839	0.0820		mg/L		98	80 - 120	8	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 550-55855/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55855

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND	E8	0.50	0.051	mg/L			02/06/15 01:26	1
Chloride	ND	E8	2.0	0.29	mg/L			02/06/15 01:26	1
Fluoride	ND	E8	0.40	0.040	mg/L			02/06/15 01:26	1
Nitrate as N	ND	E8	0.10	0.051	mg/L			02/06/15 01:26	1
Nitrite as N	ND	E8	0.10	0.032	mg/L			02/06/15 01:26	1
Sulfate	ND	E8	2.0	0.21	mg/L			02/06/15 01:26	1

Lab Sample ID: LCS 550-55856/38 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55856

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	4.00	4.00		mg/L		100	90 - 110
Chloride	20.0	19.2		mg/L		96	90 - 110
Fluoride	4.00	3.98		mg/L		99	90 - 110
Nitrate as N	4.00	4.03		mg/L		101	90 - 110
Nitrite as N	4.00	4.00		mg/L		100	90 - 110
Sulfate	20.0	20.7		mg/L		103	90 - 110

Lab Sample ID: LCSD 550-55856/39 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55856

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	4.00	4.01		mg/L		100	90 - 110	0	20
Chloride	20.0	19.3		mg/L		96	90 - 110	0	20
Fluoride	4.00	3.97		mg/L		99	90 - 110	0	20
Nitrate as N	4.00	4.05		mg/L		101	90 - 110	0	20
Nitrite as N	4.00	4.04		mg/L		101	90 - 110	1	20
Sulfate	20.0	20.8		mg/L		104	90 - 110	0	20

Lab Sample ID: MB 550-55863/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55863

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND	E8	0.50	0.051	mg/L			02/06/15 14:22	1
Chloride	ND	E8	2.0	0.29	mg/L			02/06/15 14:22	1
Fluoride	ND	E8	0.40	0.040	mg/L			02/06/15 14:22	1
Nitrate as N	ND	E8	0.10	0.051	mg/L			02/06/15 14:22	1
Nitrite as N	ND	E8	0.10	0.032	mg/L			02/06/15 14:22	1
Sulfate	ND	E8	2.0	0.21	mg/L			02/06/15 14:22	1

Lab Sample ID: LCS 550-55863/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55863

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	4.00	3.95		mg/L		99	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 550-55863/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55863

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	20.0	20.0		mg/L		100	90 - 110
Fluoride	4.00	4.06		mg/L		101	90 - 110
Nitrate as N	4.00	4.06		mg/L		102	90 - 110
Nitrite as N	4.00	4.02		mg/L		100	90 - 110
Sulfate	20.0	20.7		mg/L		104	90 - 110

Lab Sample ID: LCSD 550-55863/6 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55863

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	4.00	3.97		mg/L		99	90 - 110	0	20
Chloride	20.0	20.0		mg/L		100	90 - 110	0	20
Fluoride	4.00	4.06		mg/L		102	90 - 110	0	20
Nitrate as N	4.00	4.08		mg/L		102	90 - 110	0	20
Nitrite as N	4.00	4.01		mg/L		100	90 - 110	0	20
Sulfate	20.0	20.8		mg/L		104	90 - 110	1	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 550-55724/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55998 — **Prep Batch: 55724**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND	E8	0.10	0.012	mg/L		02/06/15 07:01	02/10/15 10:33	1
Calcium	ND	E8	2.0	0.069	mg/L		02/06/15 07:01	02/10/15 10:33	1
Magnesium	ND	E8	2.0	0.050	mg/L		02/06/15 07:01	02/10/15 10:33	1

Lab Sample ID: LCS 550-55724/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55998 — **Prep Batch: 55724**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	1.00	1.03		mg/L		103	82 - 109
Calcium	21.0	21.4		mg/L		102	88 - 109
Magnesium	21.0	20.9		mg/L		100	90 - 110

Lab Sample ID: LCSD 550-55724/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55998 — **Prep Batch: 55724**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	1.00	1.02		mg/L		102	82 - 109	1	20
Calcium	21.0	21.1		mg/L		101	88 - 109	1	20
Magnesium	21.0	20.8		mg/L		99	90 - 110	0	20

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 550-39555-1 MS — **Client Sample ID: WR-273A-323.33-H-020415**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55998 — **Prep Batch: 55724**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Iron	0.34		1.00	1.36		mg/L		102	75 - 125		
Calcium	71		21.0	87.7		mg/L		79	75 - 125		
Magnesium	6.4		21.0	26.8		mg/L		97	75 - 125		

Lab Sample ID: 550-39555-1 MSD — **Client Sample ID: WR-273A-323.33-H-020415**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55998 — **Prep Batch: 55724**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	0.34		1.00	1.23		mg/L		89	75 - 125	10	20
Calcium	71		21.0	88.8		mg/L		84	75 - 125	1	20
Magnesium	6.4		21.0	27.0		mg/L		98	75 - 125	1	20

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 550-55994/35 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55994

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/09/15 23:53	1
Bicarbonate Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/09/15 23:53	1
Carbonate Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/09/15 23:53	1
Alkalinity, Phenolphthalein	ND	E8	6.0	6.0	mg/L			02/09/15 23:53	1
Hydroxide Alkalinity as CaCO3	ND	E8	6.0	6.0	mg/L			02/09/15 23:53	1

Lab Sample ID: LCS 550-55994/34 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55994

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	250	248		mg/L		99	90 - 110

Lab Sample ID: LCSD 550-55994/48 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55994

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity as CaCO3	250	244		mg/L		98	90 - 110	2	20

Method: SM 4500 H+ B - pH

Lab Sample ID: LCSSRM 550-55665/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55665

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	6.990		SU		99.9	98.5 - 101.5

Method: SM 4500 H+ B - pH (Continued)

Lab Sample ID: LCSSRM 550-55665/12 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55665

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.010		SU		100.1	98.5 - 101.5

Lab Sample ID: 550-39555-1 DU — **Client Sample ID: WR-273A-323.33-H-020415**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 55665

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.32	H5	7.300	H5	SU		0.3	5
Temperature	21.2	H5	20.70	H5	Degrees C		2	5

Method: SM 5310B - Organic Carbon, Dissolved (DOC)

Lab Sample ID: MB 440-236989/9 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 236989

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	ND	E8	1.0	0.65	mg/L			02/17/15 14:18	1

Lab Sample ID: LCS 440-236989/8 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 236989

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dissolved Organic Carbon	10.0	10.5		mg/L		105	90 - 110

Lab Sample ID: 550-39555-1 MS — **Client Sample ID: WR-273A-323.33-H-020415**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 236989

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Dissolved Organic Carbon	ND	E8	5.00	5.67		mg/L		113	80 - 120

Lab Sample ID: 550-39555-1 MSD — **Client Sample ID: WR-273A-323.33-H-020415**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 236989

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dissolved Organic Carbon	ND	E8	5.00	5.68		mg/L		114	80 - 120	0	20

QC Association Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-39555-1

GC/MS VOA

Analysis Batch: 55920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39555-1	WR-273A-323.33-H-020415	Total/NA	Water	8260B	
550-39555-2	Trip Blank	Total/NA	Water	8260B	
LCS 550-55920/3	Lab Control Sample	Total/NA	Water	8260B	
LCSD 550-55920/4	Lab Control Sample Dup	Total/NA	Water	8260B	
MB 550-55920/5	Method Blank	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 234991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39555-1	WR-273A-323.33-H-020415	Total/NA	Water	RSK-175	
LCS 440-234991/5	Lab Control Sample	Total/NA	Water	RSK-175	
LCS 440-234991/7	Lab Control Sample	Total/NA	Water	RSK-175	
LCSD 440-234991/6	Lab Control Sample Dup	Total/NA	Water	RSK-175	
LCSD 440-234991/8	Lab Control Sample Dup	Total/NA	Water	RSK-175	
MB 440-234991/9	Method Blank	Total/NA	Water	RSK-175	

HPLC/IC

Analysis Batch: 55855

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39555-1	WR-273A-323.33-H-020415	Total/NA	Water	300.0	
MB 550-55855/2	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 55856

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 550-55856/38	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-55856/39	Lab Control Sample Dup	Total/NA	Water	300.0	

Analysis Batch: 55863

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 550-55863/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 550-55863/6	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 550-55863/2	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 55724

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39555-1	WR-273A-323.33-H-020415	Total/NA	Water	3005A	
550-39555-1 MS	WR-273A-323.33-H-020415	Total/NA	Water	3005A	
550-39555-1 MSD	WR-273A-323.33-H-020415	Total/NA	Water	3005A	
LCS 550-55724/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 550-55724/3-A	Lab Control Sample Dup	Total/NA	Water	3005A	
MB 550-55724/1-A	Method Blank	Total/NA	Water	3005A	

Analysis Batch: 55998

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39555-1	WR-273A-323.33-H-020415	Total/NA	Water	6010B	55724
550-39555-1 MS	WR-273A-323.33-H-020415	Total/NA	Water	6010B	55724

Metals (Continued)

Analysis Batch: 55998 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39555-1 MSD	WR-273A-323.33-H-020415	Total/NA	Water	6010B	55724
LCS 550-55724/2-A	Lab Control Sample	Total/NA	Water	6010B	55724
LCSD 550-55724/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	55724
MB 550-55724/1-A	Method Blank	Total/NA	Water	6010B	55724

Analysis Batch: 56266

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39555-1	WR-273A-323.33-H-020415	Total/NA	Water	SM 2340B	

General Chemistry

Analysis Batch: 55665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39555-1	WR-273A-323.33-H-020415	Total/NA	Water	SM 4500 H+ B	
550-39555-1 DU	WR-273A-323.33-H-020415	Total/NA	Water	SM 4500 H+ B	
LCSSRM 550-55665/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
LCSSRM 550-55665/12	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 55994

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39555-1	WR-273A-323.33-H-020415	Total/NA	Water	SM 2320B	
LCS 550-55994/34	Lab Control Sample	Total/NA	Water	SM 2320B	
LCSD 550-55994/48	Lab Control Sample Dup	Total/NA	Water	SM 2320B	
MB 550-55994/35	Method Blank	Total/NA	Water	SM 2320B	

Analysis Batch: 236989

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-39555-1	WR-273A-323.33-H-020415	Dissolved	Water	SM 5310B	
550-39555-1 MS	WR-273A-323.33-H-020415	Dissolved	Water	SM 5310B	
550-39555-1 MSD	WR-273A-323.33-H-020415	Dissolved	Water	SM 5310B	
550-39555-2	Trip Blank	Dissolved	Water	SM 5310B	
LCS 440-236989/8	Lab Control Sample	Dissolved	Water	SM 5310B	
MB 440-236989/9	Method Blank	Dissolved	Water	SM 5310B	

Lab Chronicle

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-39555-1

Client Sample ID: WR-273A-323.33-H-020415

Lab Sample ID: 550-39555-1

Date Collected: 02/04/15 13:15

Matrix: Water

Date Received: 02/05/15 08:02

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	55920	02/10/15 09:17	RPV	TAL PHX
Total/NA	Analysis	RSK-175		1	234991	02/09/15 17:19	EI	TAL IRV
Total/NA	Analysis	300.0		1	55855	02/06/15 09:50	YAF	TAL PHX
Total/NA	Prep	3005A			55724	02/06/15 07:01	SGO	TAL PHX
Total/NA	Analysis	6010B		1	55998	02/10/15 10:52	AJC	TAL PHX
Total/NA	Analysis	SM 2340B		1	56266	02/12/15 20:35	SLS	TAL PHX
Total/NA	Analysis	SM 2320B		1	55994	02/10/15 04:29	CDC	TAL PHX
Total/NA	Analysis	SM 4500 H+ B		1	55665	02/05/15 13:50	CDC	TAL PHX
Dissolved	Analysis	SM 5310B		1	236989	02/17/15 14:54	YZ	TAL IRV

Client Sample ID: Trip Blank

Lab Sample ID: 550-39555-2

Date Collected: 02/04/15 13:15

Matrix: Water

Date Received: 02/05/15 08:02

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	55920	02/10/15 03:12	RPV	TAL PHX
Dissolved	Analysis	SM 5310B		1	236989	02/17/15 14:36	YZ	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

Certification Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-39555-1

Laboratory: TestAmerica Phoenix

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Arizona	State Program	9	AZ0728	06-09-15

Analysis Method	Prep Method	Matrix	Analyte

Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-15
Arizona	State Program	9	AZ0671	10-13-15
California	LA Cty Sanitation Districts	9	10256	01-31-16 *
California	State Program	9	2706	06-30-16
Guam	State Program	9	Cert. No. 12.002r	01-23-15 *
Hawaii	State Program	9	N/A	01-29-16
Nevada	State Program	9	CA015312007A	07-31-15
New Mexico	State Program	6	N/A	01-29-15 *
Northern Mariana Islands	State Program	9	MP0002	01-29-15 *
Oregon	NELAP	10	4005	01-29-16
USDA	Federal		P330-09-00080	06-06-15

* Certification renewal pending - certification considered valid.

Method Summary

Client: AMEC Foster Wheeler E & I, Inc
Project/Site: Broadway Pantano

TestAmerica Job ID: 550-39555-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PHX
RSK-175	Dissolved Gases (GC)	RSK	TAL IRV
300.0	Anions, Ion Chromatography	MCAWW	TAL PHX
6010B	Metals (ICP)	SW846	TAL PHX
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	TAL PHX
SM 2320B	Alkalinity	SM	TAL PHX
SM 4500 H+ B	pH	SM	TAL PHX
SM 5310B	Organic Carbon, Dissolved (DOC)	SM	TAL IRV

Protocol References:

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

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

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 IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PHX = TestAmerica Phoenix, 4625 East Cotton Ctr Blvd, Suite 189, Phoenix, AZ 85040, TEL (602)437-3340

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013-550 (10/10)

OTU-39555

CHAIN OF CUSTODY FORM

[ ] Phoenix - 4625 E. Cotton Center Blvd., Suite 189, Phoenix, AZ 85040 (602) 437-3340 FAX (602) 454-9303
[ ] Tucson - 1870 W. Prince Road, Suite 59, Tucson, AZ 85705 (520) 807-3801 FAX (520) 807-3803
[ ] Las Vegas - 6000 S Eastern Ave., Suite 5E, Las Vegas, NV 89119 (702) 429-1264

2/27/2015

Client Name/Address: AMEC FW, 4600 E. WASHINGTON ST Ste 600, PHOENIX, AZ 85034

Project/PO Number: 14-2014-2029-3.3

Project Manager: ALEX YIANNAKAKIS

Phone Number: 602 733 6013

Sampler: BC, EM, AY

Fax Number:

550-39555 Chain of Custody

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	DOC	8260LL	RSK 175 (SEE LIST)	METALS/CATIONS Fe	ANIONS, pH ALKALINITY, HARDNESS	NITRATE, NITRITE (SEE LIST)				Special Instructions
WR-273A-323.33-H-020415	Aq	VOA	4	020415	1315	NONE	X									DEQ# 57288 Y
		VOA	3			HCl		X								
		VOA	3			HCl			X							
		500mL	1			NONE				X						
		500mL	1			NONE					X					

-2

Relinquished By:	Date/Time:	Received By:	Date/Time:	Turnaround Time: (Check)
[signature]	2/5/15 0802	[signature]		same day ____ 72 hours ____
Relinquished By:	Date/Time:	Received By:	Date/Time:	24 hours ____ 5 days ____
				48 hours ____ normal X
Relinquished By:	Date/Time:	Received in Lab By: [signature]	Date/Time: 2/5/15 0802	Sample Integrity: (Check) intact ____ on ice X

2.1°

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

IN THE 500 mL UNPRESERVED BOTTLE TEST FOR THE FOLLOWING:

ANIONS
pH
ALKALINITY
HARDNESS
NITRATE
NITRITE

RSK 175 TEST FOR THE FOLLOWING:

METHANE
ETHANE
~~EH~~
ETHENE

Login Sample Receipt Checklist

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 550-39555-1

Login Number: 39555

List Source: TestAmerica Phoenix

List Number: 1

Creator: Shoemaker, Cory M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	Check done at department level as required.

Login Sample Receipt Checklist

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 550-39555-1

Login Number: 39555
List Number: 2
Creator: Ornelas, Olga

List Source: TestAmerica Irvine
List Creation: 02/09/15 03:12 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: AMEC Foster Wheeler E & I, Inc

Job Number: 550-39555-1

Login Number: 39555
List Number: 3
Creator: Ornelas, Olga

List Source: TestAmerica Irvine
List Creation: 02/09/15 03:14 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	

APPENDIX F

DATA VERIFICATION SHEETS

LABORATORY REPORT GOAL: DECEMBER 2014 WATER QUALITY
DATA VERIFICATION

Data verification precedes data validation and is a systematic process for evaluating whether data have been generated with acceptable quality control (QC), as defined in the Project Quality Assurance Project Plan (QAPP).

The items listed below were evaluated, along with completeness of supporting documentation. This is a cursory review of the laboratory's QC and may suggest that a more thorough validation is needed.

Completed	Review Item
X	**1. Case Narrative** Have any anomalies, deficiencies, and QC problems been identified in the case narrative? **Yes** If yes, what corrective action, if any, was taken? **None needed**
X	**2. Chain-of-Custody Documentation** Are the original chain-of-custody forms with identification numbers and laboratory receipt signatures present? **Yes**
X	**3. Sample Analytical Results** Are sample analysis results included for environmental samples, with Quantitation limits (include dilutions and re-analysis)? **Yes**
X	**4. QC Summary** Is the following information included:
X	a. Method blanks, continuing calibration blanks, and preparation blanks. **Yes**
X	b. Surrogate percent recoveries. **Yes**
X	c. Internal standard percent recoveries. **Yes**
X	d. Matrix spike percent recoveries. **Yes**
X	e. Laboratory duplicate sample relative percent recoveries. **Yes**
X	f. Laboratory QC check sample, laboratory control sample recoveries. **Yes**
X	g. Field duplicates, if identified, reproducibility will be evaluated. **Yes**
X	h. Acceptance criteria, if not already established by the method/data quality objective (DQ). **Yes**
X	i. Definitions for any laboratory data qualifiers used. **Yes**
X	**5. Specifically review the following:**
X	a. Was check for timeliness and errors conducted, including requested deliverables, preservation, holding times, and chain-of-custody? **Yes**
X	b. Was a duplicate sample/matrix spike/matrix spike duplicate/post digest spike reviewed against precision and accuracy criteria specified by the method or by project data quality objectives (DQOs)? **Yes**
X	c. Were compound quantitation and reported detection limits reviewed, checking reporting limits against contract required limits? **Yes**

X	**6. Does the Verification Report include the following information:**
NA	a. Case narrative including, but not limited to, an overall summary of data acceptability and comparison to DQOs and data quality initiatives, a list of recommended changes, a summary of all laboratory contracts, in which communications with the laboratory, if any, would be identified, and any other problems associated with the actual analysis which might impact the sample integrity or data quality? **NA**
X	b. Tabulated summary of all data results supplied electronically by e-mail or on CD in a commonly used software format? **Yes**

Data Verification for:
Broadway-Pantano WQARF

TestAmerica Job ID 550-37362-1
Sample IDs: C-125-122214
C-51B-122214
T-B-122214

Completed by:
Theresa Price
Environmental Scientist
Amec Foster Wheeler Environment & Infrastructure
February 6, 2015

LABORATORY REPORT GOAL: FEBRUARY 4, 2015 GROUNDWATER SAMPLES
DATA VERIFICATION

Data verification precedes data validation and is a systematic process for evaluating whether data have been generated with acceptable quality control (QC), as defined in the Project Quality Assurance Project Plan (QAPP).

The items listed below were evaluated, along with completeness of supporting documentation. This is a cursory review of the laboratory's QC and may suggest that a more thorough validation is needed.

Completed	Review Item
X	**1. Case Narrative** Have any anomalies, deficiencies, and QC problems been identified in the case narrative? **No** If yes, what corrective action, if any, was taken? **Not applicable.**
X	**2. Chain-of-Custody Documentation** Are the original chain-of-custody forms with identification numbers and laboratory receipt signatures present? **Yes**
X	**3. Sample Analytical Results** Are sample analysis results included for environmental samples, with Quantitation limits (include dilutions and re-analysis)? **Yes**
	4. QC Summary Is the following information included:
X	a. Method blanks, continuing calibration blanks, and preparation blanks. **Yes**
X	b. Surrogate percent recoveries. **Yes**
X	c. Internal standard percent recoveries. **Yes**
X	d. Matrix spike percent recoveries. **Yes**
X	e. Laboratory duplicate sample relative percent recoveries. **Yes**
X	f. Laboratory QC check sample, laboratory control sample recoveries. **Yes**
	g. Field duplicates, if identified, reproducibility will be evaluated. **No** **Field duplicates not identified.**
X	h. Acceptance criteria, if not already established by the method/data quality objective (DQ). **Yes**
X	i. Definitions for any laboratory data qualifiers used. **Yes**
	5. Specifically review the following:
X	a. Was check for timeliness and errors conducted, including requested deliverables, preservation, holding times, and chain-of-custody? **Yes**
X	b. Was a duplicate sample/matrix spike/matrix spike duplicate/post digest spike reviewed against precision and accuracy criteria specified by the method or by project data quality objectives (DQOs)? **Yes. Laboratory control samples and laboratory control sample duplicates were used, no matrix spike duplicate samples were evaluated.**

X	c. Were compound quantitation and reported detection limits reviewed, checking reporting limits against contract required limits? **Yes.**
	6. Does the Verification Report include the following information:
NA	a. Case narrative including, but not limited to, an overall summary of data acceptability and comparison to DQOs and data quality initiatives, a list of recommended changes, a summary of all laboratory contracts, in which communications with the laboratory, if any, would be identified, and any other problems associated with the actual analysis which might impact the sample integrity or data quality? **Not applicable.**
X	b. Tabulated summary of all data results supplied electronically by e-mail or on CD in a commonly used software format? **Yes**

Data Verification for:
Broadway-Pantano WQARF

TestAmerica Job ID: 550-39555-1
Sample IDs: WR-273A-323.33-H-020415 (DEQ 57288)
Trip Blank

Completed by:
Theresa Price
Environmental Scientist
Amec Foster Wheeler Environment & Infrastructure
March 6, 2015

LABORATORY REPORT GOAL: FEBRUARY 5, 2015 GROUNDWATER SAMPLES
DATA VERIFICATION

Data verification precedes data validation and is a systematic process for evaluating whether data have been generated with acceptable quality control (QC), as defined in the Project Quality Assurance Project Plan (QAPP).

The items listed below were evaluated, along with completeness of supporting documentation. This is a cursory review of the laboratory's QC and may suggest that a more thorough validation is needed.

Completed	Review Item
X	**1. Case Narrative** Have any anomalies, deficiencies, and QC problems been identified in the case narrative? **Yes** If yes, what corrective action, if any, was taken? *Method 8260B - method blank contained 1,2,4-Trimethylbenzene above the RL. All samples with no hits will be reported with a B1 qualifier. Samples with hits will be re-analyzed. Method 8270C - a deviation from the SOP occurred, RL for target was elevated; was difficulty detecting this analyte at the original RL level due to the matrix effect of the samples analyzed previous to the new calibration. Methods 3510C, 8270C – one analyte in the laboratory control sample and laboratory control sample duplicate was recovered outside control limits; this analyte was not detected in the associated sample; data has been reported per PM instructions with the L4 data qualifier. Method 3510C – insufficient sample volume to perform a MS/MSD/DUP.*
X	**2. Chain-of-Custody Documentation** Are the original chain-of-custody forms with identification numbers and laboratory receipt signatures present? **Yes**
X	**3. Sample Analytical Results** Are sample analysis results included for environmental samples, with Quantitation limits (include dilutions and re-analysis)? **Yes**
	4. QC Summary Is the following information included:
X	a. Method blanks, continuing calibration blanks, and preparation blanks. **Yes**
X	b. Surrogate percent recoveries. **Yes**
X	c. Internal standard percent recoveries. **Yes**
X	d. Matrix spike percent recoveries. **Yes**
X	e. Laboratory duplicate sample relative percent recoveries. **Yes**
X	f. Laboratory QC check sample, laboratory control sample recoveries. **Yes**
	g. Field duplicates, if identified, reproducibility will be evaluated. **No** **Field duplicates not identified.**
X	h. Acceptance criteria, if not already established by the method/data quality objective (DQ). **Yes**
X	i. Definitions for any laboratory data qualifiers used. **Yes**

	5. Specifically review the following:
X	a. Was check for timeliness and errors conducted, including requested deliverables, preservation, holding times, and chain-of-custody? **Yes**
X	b. Was a duplicate sample/matrix spike/matrix spike duplicate/post digest spike reviewed against precision and accuracy criteria specified by the method or by project data quality objectives (DQOs)? **Yes. Laboratory control samples and laboratory control sample duplicates were used, no MS/MSD samples were evaluated.**
X	c. Were compound quantitation and reported detection limits reviewed, checking reporting limits against contract required limits? **Yes.**
	6. Does the Verification Report include the following information:
NA	a. Case narrative including, but not limited to, an overall summary of data acceptability and comparison to DQOs and data quality initiatives, a list of recommended changes, a summary of all laboratory contracts, in which communications with the laboratory, if any, would be identified, and any other problems associated with the actual analysis which might impact the sample integrity or data quality? **Not applicable.**
X	b. Tabulated summary of all data results supplied electronically by e-mail or on CD in a commonly used software format? **Yes**

Data Verification for:
Broadway-Pantano WQARF

TestAmerica Job ID: 550-39671-1

Sample IDs:	WR-367A-363.48-H-020515	(DEQ # 60656)
	WR-274A-335.89-H-020515	(DEQ # 57289)
	TB	

Completed by:
Theresa Price
Environmental Scientist
Amec Foster Wheeler Environment & Infrastructure
March 6, 2015

LABORATORY REPORT GOAL: FEBRUARY 9, 2015 GROUNDWATER SAMPLES
DATA VERIFICATION

Data verification precedes data validation and is a systematic process for evaluating whether data have been generated with acceptable quality control (QC), as defined in the Project Quality Assurance Project Plan (QAPP).

The items listed below were evaluated, along with completeness of supporting documentation. This is a cursory review of the laboratory's QC and may suggest that a more thorough validation is needed.

Completed	Review Item
X	**1. Case Narrative** Have any anomalies, deficiencies, and QC problems been identified in the case narrative? **Yes** If yes, what corrective action, if any, was taken? *Method 8260B – surrogates Toluene-d8 failed outside of laboratory limits in laboratory control sample and laboratory control spikes duplicate high. All other QC and samples recovered within limits, all data reported; data qualified with N1 flag. Method blank contained 1,2,4-Trimethylbenzene and Napthalene above the MDL. These target analytes concentrations were less than the RL; therefore, re-extraction and/or analysis of samples was not performed; Data qualified with E4 flag.* *Method 8270C – Hexachlorocyclopentadience was outside control limits in the continuing calibration verification for one batch. This compound is not classified as a Calibration Check Compound in the reference method, and the laboratory defaults to in-house and/or preject-specific criteria for evaluation. A standard was run at the RL for this compound to demonstrate sufficient instrument sensitivity. Insufficient sample volume to perform a MS/MSD/DUP. The LCS was performed in duplicate to provide precision for the batch. Several analytes (see Test Results) in the laboratory control sample and laboratory control sample duplicate was recovered outside control limits.*
X	**2. Chain-of-Custody Documentation** Are the original chain-of-custody forms with identification numbers and laboratory receipt signatures present? **Yes**
X	**3. Sample Analytical Results** Are sample analysis results included for environmental samples, with Quantitation limits (include dilutions and re-analysis)? **Yes**
	4. QC Summary Is the following information included:
X	a. Method blanks, continuing calibration blanks, and preparation blanks. **Yes**
X	b. Surrogate percent recoveries. **Yes**
X	c. Internal standard percent recoveries. **Yes**
X	d. Matrix spike percent recoveries. **Yes**
X	e. Laboratory duplicate sample relative percent recoveries. **Yes**

X	f. Laboratory QC check sample, laboratory control sample recoveries. **Yes**
X	g. Field duplicates, if identified, reproducibility will be evaluated. **Yes**
X	h. Acceptance criteria, if not already established by the method/data quality objective (DQ). **Yes**
X	i. Definitions for any laboratory data qualifiers used. **Yes**
	5. Specifically review the following:
X	a. Was check for timeliness and errors conducted, including requested deliverables, preservation, holding times, and chain-of-custody? **Yes**
X	b. Was a duplicate sample/matrix spike/matrix spike duplicate/post digest spike reviewed against precision and accuracy criteria specified by the method or by project data quality objectives (DQOs)? **Yes. Laboratory control samples and laboratory control sample duplicates were used, no matrix spike duplicate samples were evaluated.**
X	c. Were compound quantitation and reported detection limits reviewed, checking reporting limits against contract required limits? **Yes.**
	6. Does the Verification Report include the following information:
NA	a. Case narrative including, but not limited to, an overall summary of data acceptability and comparison to DQOs and data quality initiatives, a list of recommended changes, a summary of all laboratory contracts, in which communications with the laboratory, if any, would be identified, and any other problems associated with the actual analysis which might impact the sample integrity or data quality? **Not applicable.**
X	b. Tabulated summary of all data results supplied electronically by e-mail or on CD in a commonly used software format? **Yes**

Data Verification for:
Broadway-Pantano WQARF

TestAmerica Job ID: 550-39836-1
Sample IDs: R-068A-341.86-H-020915
WR-275A-340.91-H-020915
WR-275A-340.91-H-020915-Dup
WR-353A-430-H-020915
Trip Blank

Completed by:
Theresa Price
Environmental Scientist
Amec Foster Wheeler Environment & Infrastructure
March 6, 2015

LABORATORY REPORT GOAL: FEBRUARY 23-26, 2015 GROUNDWATER SAMPLES
DATA VERIFICATION

Data verification precedes data validation and is a systematic process for evaluating whether data have been generated with acceptable quality control (QC), as defined in the Project Quality Assurance Project Plan (QAPP).

The items listed below were evaluated, along with completeness of supporting documentation. This is a cursory review of the laboratory's QC and may suggest that a more thorough validation is needed.

Completed	Review Item
X	**1. Case Narrative** Have any anomalies, deficiencies, and QC problems been identified in the case narrative? **Yes** If yes, what corrective action, if any, was taken? *Method 8260B – method blank for batch 58018 contained Methylene Chloride above the RL. None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples was not performed; data qualified with B1 flag.* *Method 8260B – method blank for analytical batch 58037 contained 1,2,3-Trichlorobenzene, and Napthalene above the RL. None of the samples associated with this method blank contained the target compounds; therefore, re-extraction and/or re-analysis of samples was not performed. The method blank will be reported with a B1 qualifier.*
X	**2. Chain-of-Custody Documentation** Are the original chain-of-custody forms with identification numbers and laboratory receipt signatures present? **Yes**
X	**3. Sample Analytical Results** Are sample analysis results included for environmental samples, with Quantitation limits (include dilutions and re-analysis)? **Yes**
	4. QC Summary Is the following information included:
X	a. Method blanks, continuing calibration blanks, and preparation blanks. **Yes**
X	b. Surrogate percent recoveries. **Yes**
X	c. Internal standard percent recoveries. **Yes**
X	d. Matrix spike percent recoveries. **Yes**
X	e. Laboratory duplicate sample relative percent recoveries. **Yes**
X	f. Laboratory QC check sample, laboratory control sample recoveries. **Yes**
X	g. Field duplicates, if identified, reproducibility will be evaluated. **Yes**
X	h. Acceptance criteria, if not already established by the method/data quality objective (DQ). **Yes**
X	i. Definitions for any laboratory data qualifiers used. **Yes**
	5. Specifically review the following:

X	a. Was check for timeliness and errors conducted, including requested deliverables, preservation, holding times, and chain-of-custody? **Yes**
X	b. Was a duplicate sample/matrix spike/matrix spike duplicate/post digest spike reviewed against precision and accuracy criteria specified by the method or by project data quality objectives (DQOs)? **Yes.**
X	c. Were compound quantitation and reported detection limits reviewed, checking reporting limits against contract required limits? **Yes.**
	6. Does the Verification Report include the following information:
NA	a. Case narrative including, but not limited to, an overall summary of data acceptability and comparison to DQOs and data quality initiatives, a list of recommended changes, a summary of all laboratory contracts, in which communications with the laboratory, if any, would be identified, and any other problems associated with the actual analysis which might impact the sample integrity or data quality? **Not applicable.**
X	b. Tabulated summary of all data results supplied electronically by e-mail or on CD in a commonly used software format? **Yes**

Data Verification for: Broadway-Pantano WQARF
TestAmerica Job ID: 550-40810-1

Sample IDs:

BP-15-371.55-PDB-022315
BP-8-371.55-PDB-022315
BP-7-329.09-PDB-022315
BP-7-349.09-PDB-022315
BP-7-374.09-PDB-022315
BP-19-317.11-PDB-022315
BP-24B-395-PDB-022315
BP-24C-450-PDB-022315
WR-207B-338.7-PDB-022315
R-124A-0-GRAB-022415
R-125A-0-GRAB-022415
D-018A-0-GRAB-022415
CVA-321.06-PDB-022415
BP-20-323.60-PDB-022415
BP-20-348.60-PDB-022415
BP-1-323-PDB-022415
SEE-001-332.49-PDB-022415
BP-11-428-PDB-022515
WR-367A-363.43-PDB-022515
WR-367A-363.43-PDB-022515-DUP
BP-23-362.8-PDB-022515
BP-22-364.94-PDB-022515
WR-435A-37.20-PDB-022515
BP-9-344.69-PDB-022515
BP-10-358.85-PDB-022515
WR-181A-314.28-PDB-022515
WR-358A-319.38-PDB-022515
BP-25-317.10-PDB-022515
R-068A-341.85-PDB-022615
R-69B-326.71-PDB-022615
R-69B-236.71-PDB-022615-DUP
WR-274A-325.89-PDB-022615
WR-274A-325.89-PDB-022615-DUP
WR-274A-335.89-PDB-022615
WR-275A-340.91-PDB-022615
WR-177A-352.59-PDB-022615
WR-177A-352.59-PDB-022615-DUP
WR-353A-430-PDB-022615
WR-353A-430-PDB-022615-DUP
WR-273A-323.33-PDB-022615
BP-24A-350.55-PDB-022615
WR-274A-315.89-PDB-022615
Trip Blank

Completed by:
Theresa Price
Environmental Scientist
Amec Foster Wheeler Environment & Infrastructure
March 19, 2015

LABORATORY REPORT GOAL: February 26, 2015 GROUNDWATER SAMPLES
DATA VERIFICATION

Data verification precedes data validation and is a systematic process for evaluating whether data have been generated with acceptable quality control (QC), as defined in the Project Quality Assurance Project Plan (QAPP).

The items listed below were evaluated, along with completeness of supporting documentation. This is a cursory review of the laboratory's QC and may suggest that a more thorough validation is needed.

Completed	Review Item
X	**1. Case Narrative** Have any anomalies, deficiencies, and QC problems been identified in the case narrative? **Yes** If yes, what corrective action, if any, was taken? *Method 8260B – matrix spike recovery(s) for benzene are outside control limits due to high level in sample relative to spike amount. This did not impact results as benzene was not reported above the detection limit for any of the samples.*
X	**2. Chain-of-Custody Documentation** Are the original chain-of-custody forms with identification numbers and laboratory receipt signatures present? **Yes**
X	**3. Sample Analytical Results** Are sample analysis results included for environmental samples, with Quantitation limits (include dilutions and re-analysis)? **Yes**
	4. QC Summary Is the following information included:
X	a. Method blanks, continuing calibration blanks, and preparation blanks. **Yes**
X	b. Surrogate percent recoveries. **Yes**
X	c. Internal standard percent recoveries. **Yes**
X	d. Matrix spike percent recoveries. **Yes**
X	e. Laboratory duplicate sample relative percent recoveries. **Yes**
X	f. Laboratory QC check sample, laboratory control sample recoveries. **Yes**
NA	g. Field duplicates, if identified, reproducibility will be evaluated. **Not applicable.**
X	h. Acceptance criteria, if not already established by the method/data quality objective (DQ). **Yes**
X	i. Definitions for any laboratory data qualifiers used. **Yes**
	5. Specifically review the following:
X	a. Was check for timeliness and errors conducted, including requested deliverables, preservation, holding times, and chain-of-custody? **Yes**
X	b. Was a duplicate sample/matrix spike/matrix spike duplicate/post digest spike reviewed against precision and accuracy criteria specified by the method or by project data quality objectives (DQOs)? **Yes.**

X	c. Were compound quantitation and reported detection limits reviewed, checking reporting limits against contract required limits? **Yes.**
	6. Does the Verification Report include the following information:
NA	a. Case narrative including, but not limited to, an overall summary of data acceptability and comparison to DQOs and data quality initiatives, a list of recommended changes, a summary of all laboratory contracts, in which communications with the laboratory, if any, would be identified, and any other problems associated with the actual analysis which might impact the sample integrity or data quality? **Not applicable.**
X	b. Tabulated summary of all data results supplied electronically by e-mail or on CD in a commonly used software format? **Yes**

Data Verification for: Broadway-Pantano WQARF

Accutest Laboratories Job ID: C38760

Sample IDs:
R-068A-314.86-PDB-022615
WR-275A-340.91-PDB-022615
WR-273A-323.33-PDB-022615
Trip Blank

Completed by:
Alex Yiannakakis
Environmental Scientist
Amec Foster Wheeler Environment & Infrastructure
March 20, 2015

LABORATORY REPORT GOAL: JANUARY 2015 GROUNDWATER SAMPLES
DATA VERIFICATION

Data verification precedes data validation and is a systematic process for evaluating whether data have been generated with acceptable quality control (QC), as defined in the Project Quality Assurance Project Plan (QAPP).

The items listed below were evaluated, along with completeness of supporting documentation. This is a cursory review of the laboratory's QC and may suggest that a more thorough validation is needed.

Completed	Review Item
X	**1. Case Narrative** Have any anomalies, deficiencies, and QC problems been identified in the case narrative? **Yes** If yes, what corrective action, if any, was taken? **None needed.** *Method blank contained compounds above the MDL and less than the RL; therefore, re-extraction and/or re-analysis of samples was not performed. Data qualified with an E4 flag.*
X	**2. Chain-of-Custody Documentation** Are the original chain-of-custody forms with identification numbers and laboratory receipt signatures present? **Yes**
X	**3. Sample Analytical Results** Are sample analysis results included for environmental samples, with Quantitation limits (include dilutions and re-analysis)? **Yes**
X	**4. QC Summary** Is the following information included:
X	a. Method blanks, continuing calibration blanks, and preparation blanks. **Yes**
X	b. Surrogate percent recoveries. **Yes**
X	c. Internal standard percent recoveries. **Yes**
X	d. Matrix spike percent recoveries. **Yes**
X	e. Laboratory duplicate sample relative percent recoveries. **Yes**
X	f. Laboratory QC check sample, laboratory control sample recoveries. **Yes**
X	g. Field duplicates, if identified, reproducibility will be evaluated. **Yes**
X	h. Acceptance criteria, if not already established by the method/data quality objective (DQ). **Yes**
X	i. Definitions for any laboratory data qualifiers used. **Yes**
X	**5. Specifically review the following:**
X	a. Was check for timeliness and errors conducted, including requested deliverables, preservation, holding times, and chain-of-custody? **Yes**
X	b. Was a duplicate sample/matrix spike/matrix spike duplicate/post digest spike reviewed against precision and accuracy criteria specified by the method or by project data quality objectives (DQOs)? **Yes**

X	c. Were compound quantitation and reported detection limits reviewed, checking reporting limits against contract required limits? **Yes**
X	**6. Does the Verification Report include the following information:**
NA	a. Case narrative including, but not limited to, an overall summary of data acceptability and comparison to DQOs and data quality initiatives, a list of recommended changes, a summary of all laboratory contracts, in which communications with the laboratory, if any, would be identified, and any other problems associated with the actual analysis which might impact the sample integrity or data quality? **NA**
X	b. Tabulated summary of all data results supplied electronically by e-mail or on CD in a commonly used software format? **Yes**

Data Verification for:
Broadway-Pantano WQARF

TestAmerica Job ID: 550-38312-1
Sample IDs: BP-WR-367A-WG-343-0111215
BP-WR-367A-WG-363-0111215
BP-C-48-WG-300-011215
BP-CVA-WG-321.5-011215
BP-WR-274A-WG-316-011315
BP-WR-274A-WG-326-011315
BP-WR-274A-WG-336-011315
BP-R-68A-WG-342-011315
BP-WR-273A-WG-323-011315
BP-TB01-011315

Completed by:
Theresa Price
Environmental Scientist
Amec Foster Wheeler Environment & Infrastructure
February 6, 2015

LABORATORY REPORT GOAL: MARCH 2, 2015 GROUNDWATER SAMPLES
DATA VERIFICATION

Data verification precedes data validation and is a systematic process for evaluating whether data have been generated with acceptable quality control (QC), as defined in the Project Quality Assurance Project Plan (QAPP).

The items listed below were evaluated, along with completeness of supporting documentation. This is a cursory review of the laboratory's QC and may suggest that a more thorough validation is needed.

Completed	Review Item
X	**1. Case Narrative** Have any anomalies, deficiencies, and QC problems been identified in the case narrative? **Yes** If yes, what corrective action, if any, was taken? *Method 8260B – method blank for batch 58183 contained 1,2,3-Trichlorobenzene, n-Butylbenzene, and Napthalene above the RL. These compounds were non-detect in the samples.* *Method 8260B – method blank for batch 58249 contained 1,2,3-Trichlorobenzene above the RL. None of the samples associated with this method blank contained the target compound; re-extraction/re-analysis of samples not performed; data qualified B1 flag.* *Method 8260B – internal standard (ISTD) response for TBA-d9 for sample 550-40900-B-2 was outside acceptance criteria. The ISTD does not correspond to any of the requested target compounds; data flagged E6.*
X	**2. Chain-of-Custody Documentation** Are the original chain-of-custody forms with identification numbers and laboratory receipt signatures present? **Yes**
X	**3. Sample Analytical Results** Are sample analysis results included for environmental samples, with Quantitation limits (include dilutions and re-analysis)? **Yes**
	4. QC Summary Is the following information included:
X	a. Method blanks, continuing calibration blanks, and preparation blanks. **Yes**
X	b. Surrogate percent recoveries. **Yes**
X	c. Internal standard percent recoveries. **Yes**
X	d. Matrix spike percent recoveries. **Yes**
X	e. Laboratory duplicate sample relative percent recoveries. **Yes**
X	f. Laboratory QC check sample, laboratory control sample recoveries. **Yes**
NA	g. Field duplicates, if identified, reproducibility will be evaluated. **Not applicable.**
X	h. Acceptance criteria, if not already established by the method/data quality objective (DQ). **Yes**
X	i. Definitions for any laboratory data qualifiers used. **Yes**
	5. Specifically review the following:

X	a. Was check for timeliness and errors conducted, including requested deliverables, preservation, holding times, and chain-of-custody? **Yes**
X	b. Was a duplicate sample/matrix spike/matrix spike duplicate/post digest spike reviewed against precision and accuracy criteria specified by the method or by project data quality objectives (DQOs)? **Yes.**
X	c. Were compound quantitation and reported detection limits reviewed, checking reporting limits against contract required limits? **Yes.**
	6. Does the Verification Report include the following information:
NA	a. Case narrative including, but not limited to, an overall summary of data acceptability and comparison to DQOs and data quality initiatives, a list of recommended changes, a summary of all laboratory contracts, in which communications with the laboratory, if any, would be identified, and any other problems associated with the actual analysis which might impact the sample integrity or data quality? **Not applicable.**
X	b. Tabulated summary of all data results supplied electronically by e-mail or on CD in a commonly used software format? **Yes**

Data Verification for: Broadway-Pantano WQARF

TestAmerica Job ID: 550-40900-1

Sample IDs:
D-022A-342.43-PDB-030215
D-039A-381.76-PDB-030215
C-22A-357.80-PDB-030215
C-48A/B-305-PDB-030215
C-125A-0-GRAB-030415
D-021A-353.75-PDB-030215
C-058A-336.25-PDB-030215
D-040A-480-PDB-030215
Trip Blank

Completed by:
Theresa Price
Environmental Scientist
Amec Foster Wheeler Environment & Infrastructure
March 19, 2015