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Mr. Chris Saari
Wisconsin Department of Natural Resources
2501 Golf Course Road
Ashland, WI 54806

Subject:
Former Koppers Inc. Superior, WI Facility
Groundwater Natural Attenuation Demonstration Summary Report

ENVIRONMENTAL

Dear Mr. Saari:

On behalf of Beazer East, Inc. (Beazer), the enclosed *Groundwater Natural Attenuation Demonstration Summary Report* presents the results of supplemental groundwater investigation and sampling activities conducted at the Former Koppers Inc. Facility in Superior, Wisconsin (the Site) between April 2013 and January 2014. As requested by WDNR, supplemental groundwater monitoring activities were conducted to evaluate whether current Site conditions (i.e., following completion of the on-property corrective actions) continue to demonstrate the occurrence of natural attenuation of constituents of potential concern (COPCs) in groundwater, and to support WDNR's approval of the natural attenuation remedy for groundwater. The work was conducted in accordance the *Groundwater Natural Attenuation Demonstration Work Plan* (Work Plan; ARCADIS 2012), which was submitted to the Wisconsin Department of Natural Resources (WDNR) on October 12, 2012, and approved by WDNR in a letter to Beazer dated December 7, 2012 (WDNR 2012).

Please contact David Bessingpas of ARCADIS (218.829.4607) or Jane Patarcity of Beazer (412.208.8813) if you have any questions or comments regarding the enclosed report.

Date:
June 12, 2014

Contact:
David Bessingpas

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Our ref:
B0039282.0000.00003

Sincerely,

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Beazer East, Inc.

Groundwater Natural Attenuation Demonstration Summary Report

Former Koppers Inc. Facility
Superior, Wisconsin

June 2014

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Groundwater Natural Attenuation Demonstration Summary Report

Former Koppers Inc. Facility
Superior, Wisconsin

Prepared for:
Beazer East, Inc.

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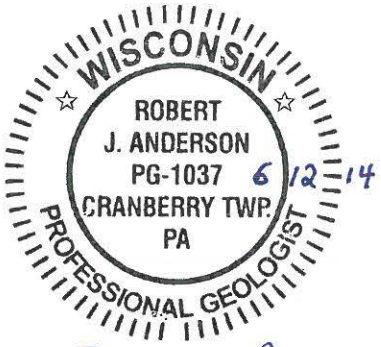
Our Ref.:
B0039282.0000.00003

Date:
June 2014



Robert J. Anderson
6/12/14

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1. Introduction

On behalf of Beazer East, Inc. (Beazer), ARCADIS and Dr. Mark King of Groundwater Insight have prepared this *Groundwater Natural Attenuation Demonstration Summary Report.* The report presents the results of supplemental groundwater investigation and sampling activities conducted at the Former Koppers Inc. Facility in Superior, Wisconsin (the Site) between April 2013 and January 2014, and evaluates those results within the context of the overall Site data record, which spans up to two decades for some wells/parameters. Although previous investigations had demonstrated the ongoing occurrence of natural attenuation (as further discussed in Section 2), WDNR stated in a November 13, 2007 letter and at a May 5, 2009 meeting that additional data would need to be collected to confirm stable or decreasing trends of Site-related constituents of potential concern (COPCs) in groundwater, and that such data would need to be collected following completion of the on-property corrective actions (surface covers installation and drainage ditch lining). The on-property corrective actions were completed in July 2011, as summarized in the *On-Property Corrective Measures Implementation Construction Documentation Report* (ARCADIS 2011).

Supplemental sampling activities were completed in accordance the *Groundwater Natural Attenuation Demonstration Work Plan* (Work Plan; ARCADIS 2012), which was submitted to the Wisconsin Department of Natural Resources (WDNR) on October 12, 2012, and approved by WDNR in a letter to Beazer dated December 7, 2012 (WDNR 2012).

2. Background

As presented in the *Focused Corrective Measures Study Report* (Focused CMS; ARCADIS BBL 2007a), natural attenuation is the corrective action approach for addressing groundwater impacts at the Site. Consistent with WDNR regulations and guidance, the approach relies on characterization and documentation to confirm that natural attenuation is occurring prior to WDNR approval of a natural attenuation approach. Data generated from the following sampling programs and investigations has confirmed that concentrations of COPCs in groundwater are stable or decreasing, and that natural attenuation of COPCs is occurring:

1. Routine groundwater monitoring data associated with the closed Resource Conservation and Recovery Act (RCRA) surface impoundments collected since approximately 1982;

2. Data generated as part of RCRA Facility Investigations (RFI) in the 1990s; and

3. Supplemental groundwater investigations performed between 2004 and 2007 (BBL 2006a; BBL 2006b; and ARCADIS BBL 2007b) for the specific purpose of assessing and confirming the occurrence of natural attenuation.

The supplemental groundwater investigation and sampling activities conducted at the Site between April 2013 and January 2014 (as presented in Section 3), provide additional data to support the natural attenuation remedy (as discussed in Section 4).

3. Scope of Work and Results

3.1 Overview

As outlined in the Work Plan, the supplemental groundwater investigation and sampling activities included installation of monitoring well W-16AR, four quarters of water-level monitoring at all Site wells, and four quarters of groundwater sampling and analysis at selected wells. Water-level monitoring and groundwater sampling events were conducted in April/May 2013, July 2013, October 2013, and January 2014. Groundwater monitoring activities were conducted following the procedures established in the Groundwater Monitoring Sampling and Analysis Plan (SAP; RETEC April 2002), including collection of groundwater samples using low-flow techniques.

Various firms supported the field investigation efforts. The installation of monitoring well W-16AR was conducted by Boart Longyear of Schofield, Wisconsin, under the direction of ARCADIS. The replacement monitoring well was surveyed by LHB, Inc. of Duluth, Minnesota. Groundwater gauging and sampling were conducted by Field & Technical Services, LLC (FTS) of Carnegie, Pennsylvania.

Additional details regarding the completed investigation scope of work are provided in the subsections below.

3.2 W-16AR Installation

As discussed in the Work Plan, W-16AR is a replacement well for former well W-16A, which was abandoned prior to initiating the on-property corrective measures construction work in 2010. The replacement monitoring well W-16AR was installed and developed on April 15, 2013.

W-16AR was constructed with 2-inch PVC, and is screened from 4 to 14 feet below grade. A boring/well log, which provides descriptions of recovered soils and additional well construction details, is provided in **Appendix A**. Following installation, W-16AR was developed by surging and purging with a bailer (approximately 6 gallons of water was removed during development). The surveyed location of W-16AR is shown on **Figure 1**.

Disposable personal protective equipment, soil cuttings from monitoring well installation, equipment cleaning fluids, and purge water from well development were containerized in drums and shipped off-Site for disposal.

3.3 Water Level Monitoring

Prior to each of the four groundwater sampling events, water levels were measured at all existing monitoring wells to provide data to assess groundwater flow patterns. The water-level monitoring data is summarized in **Table 1**. Groundwater elevation contour maps were generated using data collected from A-zone (water table/shallow clay) wells during each of the four monitoring events, and are presented on **Figures 2** through **5**.

Figures 2 through **5** depict groundwater flow patterns that are generally consistent with historical observations – overall northerly flow direction with localized distortions due to combined effects of variability in recharge; low hydraulic conductivity of the clay; and interactions with surface water (drainage ditches).

3.4 Groundwater Sampling and Analysis

In accordance with the scope of work outlined in the Work Plan, four consecutive quarterly rounds of groundwater samples were collected from five "source area" monitoring wells (W-10AR2, W-16AR, W-25A, W-30A and W-36A) and four "sentinel" wells (W-04AR, W-26A, W-35A and W-37A). The locations of these monitoring wells are shown on **Figure 1**. Groundwater samples were analyzed for selected COPCs (benzene, polycyclic aromatic hydrocarbons [PAHs], phenolics, and polychlorinated dibenzo-p-dioxins/polychlorinated dibenzofurans (PCDDs/PCDFs), geochemical indicator parameters, and/or microbiological parameters in accordance with the scope outlined in **Table 2**. (Note: The groundwater sampling and analysis scope outlined in the Work Plan was generally consistent with the WDNR-approved natural attenuation demonstration monitoring program that was implemented in 2004 and 2005 (prior to completion of the corrective actions) and WDNR's *Guidance on Natural Attenuation for Petroleum Releases.*)

Analytical data from the four quarterly sampling events are summarized in **Table 3**. Complete laboratory analytical and data validation reports are included in **Appendix B**.

Disposable personal protective equipment, equipment cleaning fluids, and purge water from sampling were containerized in drums and shipped off-Site for disposal.

4. Natural Attenuation Demonstration

Consistent with WDNR Guidance, the following three lines of evidence were used to evaluate the occurrence of natural attenuation of COPCs in groundwater at the Site:

1. COPC concentration trends;
2. Geochemical indicator parameter data; and
3. Microbiological indicator parameter data.

Data supporting each of these lines of evidence are further discussed below.

4.1 COPC Concentration Trends

To evaluate COPC concentration trends, concentration vs. time graphs for three COPCs (benzene, naphthalene, and pentachlorophenol) were generated for the nine sampled wells. (Note: both historical data and data from April/May 2013 through January 2014 data were utilized.) Per WDNR Guidance, groundwater elevations are plotted along with the concentration data. Graphs are provided in **Appendix C**. For wells where the COPC being graphed was consistently detected, regression lines (generated by Microsoft Excel) are included on the graph to aid in trend interpretations. For wells where the COPC being graphed was predominantly non-detect, regression lines were not included on the graph. The table below summarizes the trends interpreted from the concentration vs. time graphs in **Appendix C**:

Well ID	Benzene	Naphthalene	Pentachlorophenol
"Source Area" Wells			
W-10AR2	Decreasing	Decreasing	Decreasing [1]
W-16AR	Decreasing	Decreasing	Non-detect
W-25A	Non-detect	Non-detect	Decreasing
W-30A	Decreasing	Decreasing	Decreasing [2]
W-36A	Non-detect	Non-detect	Decreasing
"Sentinel" Wells			
W-04AR	Non-detect	Non-detect	Non-detect [3]
W-26A	Non-detect	Non-detect	Non-detect [4]
W-35A	Non-detect	Non-detect	Non-detect
W-37A	Non-detect	Non-detect	Non-detect [5]

Notes:

1. Pentachlorophenol at W-10AR2 not detected since October 2007.
2. Pentachlorophenol at W-30A not detected since April 2007.
3. Pentachlorophenol at W-04AR detected in three samples (August 2001, April 2007, and May 2013); non-detect in other 35 samples.
4. Pentachlorophenol at W-26A detected in one sample (July 2013); non-detect in other five samples.
5. Pentachlorophenol at W-37A detected on one sample (April 2007); non-detect in other five samples.

As indicated in the table above, benzene, naphthalene, and pentachlorophenol trends were decreasing (or concentrations were non-detect) in the five source area wells sampled, and concentrations were generally non-detect in the four sentinel wells sampled. These results are indicative of both plume stability and the ongoing occurrence of natural attenuation.

4.2 Geochemical Indicator Parameters

Data for electron acceptors, metabolic by-products, and other natural attenuation indicators were evaluated to provide an overall indication of COPC biodegradation. The constituent trends were interpreted in the context of the natural attenuation conceptual model, presented graphically on **Figure 6**. The trends are illustrated in a series of scatterplots (**Appendix D**) in which the geochemical indicator parameter concentrations are plotted against benzene, naphthalene and pentachlorophenol concentrations. The data shown on the scatterplots include data from the previous natural attenuation demonstration work conducted from 2004-2005, as well as the most recent data collected from 2013-2014. The table below summarizes the trends interpreted from the geochemical indicator parameter vs. COPC graphs in **Appendix D**, relative to expected trends if natural attenuation is occurring:

Parameter	Expected Behavior in Groundwater, if COPCs are undergoing Natural Attenuation (with Reference to Conceptual Trends Shown in Figure 6)	Are Observed Trends Consistent with Natural Attenuation (with Reference to Observed Trends Shown in Appendix D)?
Dissolved Iron	Dissolved (reduced) iron tends to be elevated at locations where COPCs are elevated, due to the role of iron reduction in biodegradation reactions	Yes
Dissolved Manganese	Dissolved (reduced) manganese tends to be elevated at locations where COPCs are elevated, due to the role of manganese reduction in biodegradation reactions	Yes
Nitrate	Nitrate tends to be lower at locations where COPCs are elevated, due to the utilization of nitrate in biodegradation reactions	Yes
Sulfate	Sulfate tends to be lower at locations where COPCs are elevated, due to the utilization of sulfate in biodegradation reactions	Yes
Methane	Methane tends to be elevated at locations where COPCs are elevated, due to the production of methane in biodegradation reactions	Yes
Alkalinity	Alkalinity tends to be elevated at locations where COPCs are elevated, due to the production of alkalinity in biodegradation reactions	Yes

As indicated in the table above, the geochemical indicator parameter vs. COPC concentration graphs all show trends that are consistent with the occurrence of COPC biodegradation.

4.3 Microbiological Indicator Parameters

Microbiological indicator parameter data were evaluated for differences between microbial populations in background and source area locations. The data were also assessed for a general indication of whether microbes at the Site are capable of biodegrading the COPCs. Samples collected in July 2013 were analyzed using two different Microbial Insights methods: CENSUS DNA analysis of Naphthalene Dioxygenase and Stable Isotope Probing (SIP). A brief description of these analyses and a discussion of the test results is provided below (refer to the Work Plan for additional details regarding on these test methods; refer to **Appendix B** for laboratory reports):

- **CENSUS DNA Analysis for Naphthalene Dioxygenase** – Groundwater samples from nine monitoring wells distributed throughout the Site were analyzed for the naphthalene dioxygenase, a functional gene required for microbial breakdown of naphthalene. As shown in **Table 3**, naphthalene dioxygenase was detected in all nine wells, with values ranging from 3.9 to 318,000 cells per milliliter (cells/mL). These results indicate a Site-wide microbial capability for metabolizing naphthalene.

- **SIP** – In the application conducted herein, ^{13}C-labeled naphthalene was used to track the environmental fate of this PAH, which is one of the COPCs at the Site. In this approach, the labeled compound was placed in carbon beads within a "Bio-Trap" which was then placed below the groundwater level in a well representative of the COPC source zone (W-30A). The Bio-Trap was placed in April 2013 and retrieved and returned to the laboratory in July 2013 where the following tests were conducted:

  - **Phospholipid Fatty Acids (PLFA)** – The ^{13}C content of PLFA in the Bio-Trap was measured to evaluate whether the microbes had incorporated the ^{13}C into microbial biomass, as one of the potential pathways of biodegradation. PLFA are a primary component of the membrane of all living cells including bacteria. PLFA decomposes rapidly upon cell death, so the total amount of PLFA present in a sample is indicative of the viable biomass. When combined with stable isotope analysis, incorporation of ^{13}C into PLFA is a conclusive indicator of biodegradation. In results from the Bio-Trap sample collected at W-30A, total PLFA biomass (10^5 cells/bead) fell within the range considered as "moderate" for biomass. However, the average PLFA ^{13}C value (9,322‰) demonstrates a high level of ^{13}C labeled naphthalene incorporation into the biomass, which is conclusive evidence of biodegradation.

  - **Dissolved Inorganic Carbon (DIC)** – Quantification of ^{13}C enriched DIC in the Bio-Trap was performed to evaluate whether naphthalene biodegradation also occurs along a pathway that proceeds to complete breakdown to carbon dioxide and water. This biodegradation pathway would be in addition to the one whereby carbon from the naphthalene is incorporated into the microbial biomass, as confirmed by the bullet above. Quantification of ^{13}C enriched DIC (8,271‰) confirms that in addition to contributing to microbial biomass, naphthalene biodegradation also occurs along a pathway that proceeds to complete mineralization to carbon dioxide and water.

- **Naphthalene Dioxygenase** – The Bio-Trap was analyzed for the presence of naphthalene dioxygenase, the functional gene required for microbial breakdown of naphthalene. Naphthalene dioxygenase was detected at a concentration of 1,730 cells/bead. The qualitative conclusion from this information is that some of the microbes present in the Bio-Trap possess the functional gene required for naphthalene biodegradation. This conclusion is consistent with the conclusions in the preceding two bullets.

- **Loss of ^{13}C from the Bio-Trap** – The labeled compound remaining in the Bio-Trap was analyzed to confirm that there was indeed a decrease in ^{13}C naphthalene from the beginning to the end of the deployment period. A direct mass balance against the increase in ^{13}C naphthalene in the biomass and in DIC is complicated because, by design, the Bio-Trap interacts with its immediate environment. Microbes and chemical constituents may enter the Bio-Trap, and some outward leakage of microbes, DIC and ^{13}C naphthalene may occur. However, it can at least be said that the change in Bio-Trap ^{13}C content is consistent with the observed microbial and DIC increases. Bio-Trap ^{13}C naphthalene decreased from a pre-deployment value of 97±17 micrograms per bead (µg/bead) to a post-deployment value of ^{13}C naphthalene at 31±5 µg/bead.

The SIP results show that microbes at the Site are capable of biodegrading the COPC targeted in this work (naphthalene). They also show conclusive evidence that biodegradation is actively occurring at a location representative of the source zone (W-30A).

5. Summary and Conclusions

As presented in the Focused CMS (ARCADIS BBL 2007a), natural attenuation is the corrective action approach for addressing groundwater impacts at the Site. Consistent with WDNR regulations and guidance, the approach relies on characterization and documentation to confirm that natural attenuation is occurring prior to WDNR approval of a natural attenuation approach. Data generated from the following sampling programs and investigations has confirmed that concentrations of COPCs in groundwater are stable or decreasing, and that natural attenuation of COPCs is occurring:

1. Routine groundwater monitoring data associated with the closed Resource Conservation and Recovery Act (RCRA) surface impoundments collected since approximately 1982;

2. Data generated as part of RCRA Facility Investigations (RFI) in the 1990s; and

3. Supplemental groundwater investigations performed between 2004 and 2007 (BBL 2006a; BBL 2006b; and ARCADIS BBL 2007b) for the specific purpose of assessing and confirming the occurrence of natural attenuation.

As requested by WDNR, supplemental groundwater monitoring activities were conducted to evaluate whether current Site conditions (i.e., following completion of the on-property corrective actions) continue to demonstrate the occurrence of natural attenuation of COPCs in groundwater, and to support WDNR's approval of the natural attenuation remedy for groundwater. Work was conducted from April 2013 through January 2014, in accordance with a WDNR-approved Work Plan, and included installation of monitoring well W-16AR, quarterly water-level monitoring at all Site wells, and quarterly groundwater sampling at nine wells for selected COPCs, geochemical indicator parameters, and/or microbiological indicator parameters.

Evaluation of the recent (April 2013 through January 2014) and historical groundwater data indicates the occurrence of environmentally significant natural attenuation of COPCs in groundwater at the Site, which is caused, in part, by biodegradation. This conclusion is supported by the following three lines of evidence:

- COPC concentrations in source area wells are decreasing or non-detect, indicating that natural attenuation is occurring (in addition, COPC concentrations in sentinel wells are primarily non-detect, with some sporadic detections);

- Data for electron acceptors, metabolic by-products, and other geochemical indicator parameters are consistent with the occurrence of COPC biodegradation and natural attenuation; and

- Data for microbiological indicator parameters indicate that *in situ* microbial populations at the Site have the capability to degrade COPCs, and provide clear evidence that COPC biodegradation is occurring.

These results are consistent with the results of the previous natural attenuation demonstration sampling conducted in 2004-2005. In addition, the occurrence of natural attenuation identified at the Site is a result of ambient and prevailing conditions, and is therefore expected to be sustainable for the foreseeable future.

In conclusion, numerous investigations have been conducted, in accordance with WDNR-approved work plans and WDNR guidance, to thoroughly evaluate the occurrence of natural attenuation of COPCs in groundwater at the Site. The resulting data set provides clear evidence that natural attenuation is occurring, based on three lines of evidence: 1) decreasing COPC trends, 2) geochemical indicator parameter trends indicative of biodegradation, and 3) microbial studies that show *in situ* microbial populations at the Site have the capability to degrade COPCs. As such, the natural attenuation remedy for groundwater at the Site remains viable and appropriate.

6. References

ARCADIS. 2011. *On-Property Corrective Measures Implementation Construction Documentation Report*. September 2011.

ARCADIS. 2012. *Groundwater Natural Attenuation Demonstration Work Plan*. October 12, 2012.

ARCADIS BBL. 2007a. *Focused Corrective Measures Study*. July 2007.

ARCADIS BBL. 2007b. Letter from Robert Anderson (ARCADIS BBL) to James Hosch (WDNR): *Summary of Supplemental Groundwater Investigations*. September 18, 2007.

BBL. 2006a. Letter from Robert Anderson (BBL) to James Hosch (WDNR): *Summary of Supplemental Groundwater Monitoring and Natural Attenuation Evaluation*. January 24, 2006.

BBL. 2006b. Letter from Robert Anderson (BBL) to James Hosch (WDNR): *Responses to WDNR's February 27, 2006 Comments on the Groundwater Natural Attenuation Evaluation*. April 27, 2006.

RETEC. 2012. *Groundwater Monitoring Sampling and Analysis Plan*. April 2012.

WDNR, 2012. Letter to Beazer: *Notice to Proceed – Groundwater Natural Attenuation Demonstration Work Plan. December 7, 2012.*

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Tables

Table 1 - Water-Level Monitoring Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Well ID	Date	TOC Elevation (feet AMSL)	Depth to Bottom (feet bTOC)	Depth to Water (feet bTOC)	Groundwater Elevation (feet AMSL)
W-02C	4/28/2013	672.37	44.12	11.40	660.97
W-02C	7/11/2013	672.37	44.13	12.53	659.84
W-02C	10/7/2013	672.37	44.15	11.44	660.93
W-02C	1/14/2014	672.37	44.19	11.23	661.14
W-04AR	4/28/2013	676.24	13.70	3.45	672.79
W-04AR	7/11/2013	676.24	13.74	4.61	671.63
W-04AR	10/7/2013	676.24	13.72	3.45	672.79
W-04AR	1/14/2014	676.24	13.72	6.02	670.22
W-05CR	4/28/2013	674.69	41.48	13.53	661.16
W-05CR	7/11/2013	674.69	41.50	13.68	661.01
W-05CR	10/7/2013	674.69	41.48	13.59	661.10
W-05CR	1/14/2014	674.69	41.47	13.75	660.94
W-06A	4/28/2013	673.65	13.13	4.14	669.51
W-06A	7/11/2013	673.65	13.15	4.28	669.37
W-06A	10/7/2013	673.65	13.12	3.34	670.31
W-06A	1/14/2014	673.65	13.12	3.92	669.73
W-06C	4/28/2013	674.28	44.18	13.21	661.07
W-06C	7/11/2013	674.28	44.19	13.39	660.89
W-06C	10/7/2013	674.28	44.15	13.26	661.02
W-06C	1/14/2014	674.28	44.18	12.70	661.58
W-08A	4/28/2013	676.21	15.22	3.00	673.21
W-08A	7/11/2013	676.21	15.23	2.56	673.65
W-08A	10/7/2013	676.21	15.21	2.89	673.32
W-08A	1/14/2014	676.21	15.19	4.62	671.59
W-09C	4/28/2013	673.16	47.85	12.07	661.09
W-09C	7/11/2013	673.16	47.87	12.24	660.92
W-09C	10/7/2013	673.16	47.86	12.10	661.06
W-09C	1/14/2014	673.16	47.90	12.78	660.38
W-10AR2	4/28/2013	677.09	17.46	12.01	665.08
W-10AR2	7/11/2013	677.09	17.51	6.47	670.62
W-10AR2	10/7/2013	677.09	17.45	9.90	667.19
W-10AR2	1/14/2014	677.09	17.48	8.82	668.27
W-11A	4/28/2013	676.40	16.55	4.41	671.99
W-11A	7/11/2013	676.40	16.56	4.68	671.72
W-11A	10/7/2013	676.40	16.55	3.43	672.97
W-11A	1/14/2014	676.40	16.55	7.28	669.12
W-12A	4/28/2013	677.11	13.32	8.52	668.59
W-12A	7/11/2013	677.11	13.34	5.29	671.82
W-12A	10/7/2013	677.11	13.31	3.31	673.80
W-12A	1/14/2014	677.11	13.31	5.87	671.24
W-12CR	4/28/2013	677.39	47.66	16.36	661.03
W-12CR	7/11/2013	677.39	47.64	16.49	660.90
W-12CR	10/7/2013	677.39	47.66	16.40	660.99
W-12CR	1/14/2014	677.39	47.66	15.81	661.58
W-14A	4/28/2013	678.61	16.41	4.38	674.23
W-14A	7/11/2013	678.61	16.42	4.69	673.92
W-14A	10/7/2013	678.61	16.38	3.80	674.81
W-14A	1/14/2014	678.61	16.42	5.10	673.51
W-14B	4/28/2013	677.60	38.58	5.49	672.11
W-14B	7/11/2013	677.60	38.54	6.25	671.35
W-14B	10/7/2013	677.60	38.57	6.14	671.46
W-14B	1/14/2014	677.60	38.60	5.28	672.32

Table 1 - Water-Level Monitoring Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Well ID	Date	TOC Elevation (feet AMSL)	Depth to Bottom (feet bTOC)	Depth to Water (feet bTOC)	Groundwater Elevation (feet AMSL)
W-16AR	4/28/2013	675.37	17.02	10.43	664.94
W-16AR	7/11/2013	675.37	17.11	4.83	670.54
W-16AR	10/7/2013	675.37	17.02	4.20	671.17
W-16AR	1/15/2014	675.37	17.08	5.03	670.34
W-18D	4/28/2013	674.79	202.03	45.50	629.29
W-18D	7/11/2013	674.79	202.12	45.25	629.54
W-18D	10/7/2013	674.79	202.01	46.46	628.33
W-18D	1/14/2014	674.79	202.03	45.69	629.10
W-19A	4/28/2013	675.50	15.36	3.19	672.31
W-19A	7/11/2013	675.50	15.39	4.60	670.90
W-19A	10/7/2013	675.50	15.36	3.97	671.53
W-19A	1/14/2014	675.50	15.40	5.29	670.21
W-19C	4/28/2013	674.96	44.19	13.98	660.98
W-19C	7/11/2013	674.96	44.22	14.16	660.80
W-19C	10/7/2013	674.96	44.20	15.02	659.94
W-19C	1/14/2014	674.96	44.25	13.42	661.54
W-20AR	4/28/2013	674.72	15.97	5.24	669.48
W-20AR	7/11/2013	674.72	15.94	5.86	668.86
W-20AR	10/7/2013	674.72	15.98	5.55	669.17
W-20AR	1/14/2014	674.72	15.97	6.21	668.51
W-21A	4/28/2013	674.09	15.48	8.75	665.34
W-21A	7/11/2013	674.09	15.46	4.61	669.48
W-21A	10/7/2013	674.09	15.50	3.60	670.49
W-21A	1/14/2014	674.09	15.47	4.79	669.30
W-21B	4/28/2013	674.61	37.39	8.89	665.72
W-21B	7/11/2013	674.61	37.41	9.05	665.56
W-21B	10/7/2013	674.61	37.40	8.77	665.84
W-21B	1/14/2014	674.61	37.40	7.95	666.66
W-25A	4/28/2013	678.77	17.89	5.84	672.93
W-25A	7/11/2013	678.77	17.96	4.97	673.80
W-25A	10/7/2013	678.77	17.90	5.30	673.47
W-25A	1/14/2014	678.77	17.96	5.96	672.81
W-26A	4/28/2013	673.67	15.25	2.53	671.14
W-26A	7/11/2013	673.67	15.30	3.91	669.76
W-26A	10/7/2013	673.67	15.26	2.97	670.70
W-26A	1/13/2014	673.67	15.26	3.85	669.82
W-26B	4/28/2013	674.02	34.59	8.15	665.87
W-26B	7/11/2013	674.02	34.59	8.95	665.07
W-26B	10/7/2013	674.02	34.62	8.24	665.78
W-26B	1/14/2014	674.02	34.60	7.81	666.21
W-28C	4/28/2013	676.33	45.40	14.91	661.42
W-28C	7/11/2013	676.33	45.46	15.05	661.28
W-28C	10/7/2013	676.33	45.41	14.90	661.43
W-28C	1/14/2014	676.33	45.41	14.40	661.93
W-29A	4/28/2013	673.21	14.58	1.16	672.05
W-29A	7/11/2013	673.21	14.60	2.31	670.90
W-29A	10/7/2013	673.21	14.60	0.87	672.34
W-29A	1/14/2014	673.21	14.60	1.49	671.72
W-30A	4/28/2013	676.89	13.53	8.23	668.66
W-30A	7/11/2013	676.89	13.59	3.61	673.28
W-30A	10/7/2013	676.89	13.53	3.08	673.81
W-30A	1/14/2014	676.89	13.55	5.01	671.88

Table 1 - Water-Level Monitoring Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Well ID	Date	TOC Elevation (feet AMSL)	Depth to Bottom (feet bTOC)	Depth to Water (feet bTOC)	Groundwater Elevation (feet AMSL)
W-30C	4/28/2013	676.91	48.62	15.86	661.05
W-30C	7/11/2013	676.91	48.63	16.01	660.90
W-30C	10/7/2013	676.91	48.62	15.90	661.01
W-30C	1/14/2014	676.91	48.62	15.32	661.59
W-31C	4/28/2013	671.76	47.30	11.10	660.66
W-31C	7/11/2013	671.76	47.35	12.21	659.55
W-31C	10/7/2013	671.76	47.31	11.82	659.94
W-31C	1/14/2014	671.76	47.32	11.94	659.82
W-32C	4/28/2013	672.88	59.50	14.74	658.14
W-32C	7/11/2013	672.88	59.53	15.12	657.76
W-32C	10/7/2013	672.88	59.50	14.75	658.13
W-32C	1/14/2014	672.88	59.50	14.98	657.90
W-33D	4/28/2013	673.43	197.80	44.06	629.37
W-33D	7/11/2013	673.43	197.93	43.89	629.54
W-33D	10/7/2013	673.43	197.83	45.00	628.43
W-33D	1/14/2014	673.43	197.84	45.34	628.09
W-34D	4/28/2013	674.28	193.80	36.87	637.41
W-34D	7/11/2013	674.28	193.85	57.19	617.09
W-34D	10/7/2013	674.28	193.82	39.11	635.17
W-34D	1/14/2014	674.28	193.79	36.30	637.98
W-35A	4/28/2013	675.05	15.84	3.05	672.00
W-35A	7/11/2013	675.05	15.89	3.78	671.27
W-35A	10/7/2013	675.05	15.84	3.23	671.82
W-35A	1/13/2014	675.05	15.87	4.50	670.55
W-36A	4/28/2013	678.44	15.61	3.39	675.05
W-36A	7/11/2013	678.44	15.67	5.57	672.87
W-36A	10/7/2013	678.44	15.60	3.94	674.50
W-36A	1/16/2014	678.44	15.60	5.89	672.55
W-37A	4/28/2013	676.47	15.35	5.06	671.41
W-37A	7/11/2013	676.47	15.42	3.08	673.39
W-37A	10/7/2013	676.47	15.36	2.71	673.76
W-37A	1/13/2014	676.47	15.37	5.20	671.27
W-38A	4/28/2013	676.78	15.50	3.33	673.45
W-38A	7/11/2013	676.78	15.50	4.07	672.71
W-38A	10/7/2013	676.78	15.51	5.54	671.24
W-38A	1/14/2014	676.78	15.50	3.49	673.29
W-39A	4/28/2013	678.40	16.18	5.30	673.10
W-39A	7/11/2013	678.40	16.18	5.59	672.81
W-39A	10/7/2013	678.40	16.19	5.25	673.15
W-39A	1/14/2014	678.40	16.20	6.46	671.94
W-40A	4/28/2013	676.79	15.74	3.31	673.48
W-40A	7/11/2013	676.79	15.71	3.91	672.88
W-40A	10/7/2013	676.79	15.75	4.03	672.76
W-40A	1/13/2014	676.79	15.74	4.84	671.95

Notes:
bTOC - below top of casing
AMSL - above mean sea level

Table 2 - Groundwater Sampling and Laboratory Analysis Scope
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameter Group	Laboratory	Parameters	Method	Wells	Sampled
COPCs	TriMatrix Laboratories Grand Rapids, MI	Benzene	8021B	All wells [1]	All 4 events [2]
		PAHs/Phenolics	8270C	All wells [1]	All 4 events [2]
	TestAmerica West Sacramento, CA	PCDDs/PCDFs	8290	W-04AR W-10AR2 W-30A	April/May 2013
Geochemical Indicator Parameters	TriMatrix Laboratories Grand Rapids, MI	Dissolved Iron	6010B	All wells [1]	All 4 events [2]
		Dissolved Manganese	6010B	All wells [1]	All 4 events [2]
		Nitrate	4500 NO3-F	All wells [1]	All 4 events [2]
		Sulfate	9038	All wells [1]	All 4 events [2]
		Methane	RSK-175	All wells [1]	All 4 events [2]
		Alkalinity	2320B	All wells [1]	All 4 events [2]
		ORP, DO, Temperature, Conductivity, pH	Field Instrument/Test	All wells [1]	All 4 events [2]
Microbiological Indicator Parameters	Microbial Insights, Inc. Rockford, TN	CENSUS DNA Analysis – Naphthalene Dioxygenase	Microbial Insights Method	All wells [1]	July 2013
		Stable Isotope Probing (SIP)	Microbial Insights Method	W-30A only	July 2013 [3]

Notes:
1. All wells consists of: W-04AR, W-10AR2, W-16AR, W-25A, W-26A, W-30A, W-35A, W-36A, W-37A
2. Sampling events performed in April/May 2013, July 2013, October 2013 and January 2014.
3. Bio-Trap unit installed in April 2013 and retrieved in July 2013.
PAHs – polycyclic aromatic hydrocarbons
PCDD/PCDFs – polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans
ORP – oxidation/reduction potential
DO – dissolved oxygen

Table 3 - Groundwater Analytical Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameter	PAL (*italics*)	ES (bold)	UNITS	W-04AR 5/1/2013	W-04AR-DUP 5/1/2013	W-04AR 7/10/2013	W-04AR 10/9/2013	W-04AR 1/15/2014
				"Sentinel Well"				
8021B								
BENZENE	0.5	5	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.32 U
NAPHTHALENE	10	100	ug/L	0.44 U	0.44 U	0.44 U	0.44 U	0.56 U
8270C								
2,3,4,6-TETRACHLOROPHENOL			ug/L	0.37 U	0.37 U	0.37 U	0.8 U	0.37 U
2,3,5,6-TETRACHLOROPHENOL			ug/L	0.21 U	0.21 U	0.21 U	0.46 U	0.21 U
2,4,5-TRICHLOROPHENOL			ug/L	0.099 U	0.099 U	0.099 U	0.21 U	0.099 U
2,4,6-TRICHLOROPHENOL			ug/L	0.085 U	0.085 U	0.085 U	0.18 U	0.085 U
2,4-DICHLOROPHENOL			ug/L	0.092 U	0.092 U	0.092 U	0.2 U	0.092 U
2,4-DIMETHYLPHENOL			ug/L	0.17 U	0.17 U	0.17 U	0.36 U	0.17 U
2,4-DINITROPHENOL			ug/L	1.2 U	1.2 U	1.2 U	2.5 U	1.2 U
2-CHLOROPHENOL			ug/L	0.027 U	0.027 U	0.027 U	0.057 U	0.027 U
2-METHYLPHENOL			ug/L	0.048 U	0.048 U	0.048 U	0.1 U	0.048 U
2-NITROPHENOL			ug/L	0.048 U	0.048 U	0.048 U	0.1 U	0.048 U
4,6-DINITRO-2-METHYLPHENOL			ug/L	1 U	1 U	1 U	2.2 U	1 U
4-CHLORO-3-METHYLPHENOL			ug/L	0.12 U	0.12 U	0.12 U	0.25 U	0.12 U
4-METHYLPHENOL			ug/L	0.057 U	0.057 U	0.057 U	0.12 U	0.057 U
4-NITROPHENOL			ug/L	1.2 U	1.2 U	1.2 U	2.7 U	1.2 U
ACENAPHTHENE			ug/L	0.033 U	0.033 U	0.033 U	0.071 U	0.033 U
ACENAPHTHYLENE			ug/L	0.017 U	0.017 U	0.017 U	0.037 U	0.017 U
ANTHRACENE	600	3,000	ug/L	0.062 U	0.062 U	0.062 U	0.13 U	0.062 U
BENZO (A) ANTHRACENE			ug/L	0.045 U	0.045 U	0.045 U	0.098 U	0.045 U
BENZO (A) PYRENE	0.02	0.2	ug/L	0.04 U	0.04 U	0.04 U	0.087 U	0.04 U
BENZO (B) FLUORANTHENE	0.02	0.2	ug/L	0.058 U	0.058 U	0.058 U	0.12 U	0.058 U
BENZO (G,H,I) PERYLENE			ug/L	0.061 U	0.061 U	0.061 U	0.13 U	0.061 U
BENZO (K) FLUORANTHENE			ug/L	0.06 U	0.06 U	0.06 U	0.13 U	0.06 U
CHRYSENE	0.02	0.2	ug/L	0.045 U	0.045 U	0.045 U	0.097 U	0.045 U
DIBENZO (A,H) ANTHRACENE			ug/L	0.11 U	0.11 U	0.11 U	0.24 U	0.11 U
DIBENZOFURAN			ug/L	0.041 U	0.041 U	0.041 U	0.088 U	0.041 U
DIETHYLPHTHALATE			ug/L	NA	NA	0.2 U	0.24 U	0.2 U
FLUORANTHENE	80	400	ug/L	0.063 U	0.063 U	0.063 U	0.13 U	0.063 U
FLUORENE	80	400	ug/L	0.041 U	0.041 U	0.041 U	0.089 U	0.041 U
INDENO (1,2,3-CD) PYRENE			ug/L	0.08 U	0.08 U	0.08 U	0.17 U	0.08 U
PENTACHLOROPHENOL	0.1	1	ug/L	*0.62*	*0.65*	0.054 U	0.27 U	0.081 U
PHENANTHRENE			ug/L	0.043 U	0.043 U	0.043 U	0.092 U	0.043 U
PHENOL	400	2,000	ug/L	0.034 U	0.034 U	0.034 U	0.072 U	0.034 U
PYRENE	50	250	ug/L	0.066 U	0.066 U	0.066 U	0.14 U	0.066 U
6010C								
IRON, DISSOLVED			ug/L	6.5 U	6.5 U	6.5 U	7.9 J	6.5 U
MANGANESE, DISSOLVED			ug/L	2.8 U	2.9 J	8.2 J	15	58
RSK175								
METHANE			ug/L	0.14 U	0.14 U	0.16 JB	0.37 U	0.14 U
2320B								
ALKALINITY, TOTAL			mg/L	200	200	300	290	400
4500-NO3								
NITROGEN, NITRATE			mg/L	2.1	2.2	0.037	0.032	0.011 J
9038								
SULFATE			mg/L	120	120	75	82	80
FIELD								
OXIDATION REDUCTION POTENTIAL			mV	43.5	-	-54.1	-46.1	241.9
DISSOLVED OXYGEN			mg/L	2	-	0.89	0.95	0.95
TEMPERATURE			℃	3.21	-	16.63	15.55	5.45
SPECIFIC CONDUCTIVITY			mS/cm	0.497	-	0.969	1.208	0.965
pH			SU	7.35	-	6.99	7.36	7.16
MICROBIAL INSIGHTS CENSUS DNA								
NAPHTHALENE DIOXYGENASE			cells/mL	NA	NA	21.1	NA	NA

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameter	PAL (*italics*)	ES (bold)	UNITS	W-04AR 5/1/2013	W-04AR-DUP 5/1/2013	W-04AR 7/10/2013	W-04AR 10/9/2013	W-04AR 1/15/2014
				"Sentinel Well"				
8290								
1,2,3,4,6,7,8-HPCDD (TEF = 0.01)			ug/L	0.000021 J	0.000018 J	NA	NA	NA
1,2,3,4,6,7,8-HPCDF (TEF = 0.01)			ug/L	0.0000061 J	0.0000048 J	NA	NA	NA
1,2,3,4,7,8,9-HPCDF (TEF = 0.01)			ug/L	0.00000031 U	0.00000028 U	NA	NA	NA
1,2,3,4,7,8-HXCDD (TEF = 0.1)			ug/L	0.0000002 U	0.00000034 J	NA	NA	NA
1,2,3,4,7,8-HXCDF (TEF = 0.1)			ug/L	0.00000031 J	0.00000034 J	NA	NA	NA
1,2,3,6,7,8-HXCDD (TEF = 0.1)			ug/L	0.00000091 J	0.00000072 J	NA	NA	NA
1,2,3,6,7,8-HXCDF (TEF = 0.1)			ug/L	0.00000017 J	0.00000014 U	NA	NA	NA
1,2,3,7,8,9-HXCDD (TEF = 0.1)			ug/L	0.00000073 J	0.0000006 JQ	NA	NA	NA
1,2,3,7,8,9-HXCDF (TEF = 0.1)			ug/L	0.00000019 U	0.00000017 U	NA	NA	NA
1,2,3,7,8-PECDD (TEF = 1)			ug/L	0.00000033 U	0.0000003 U	NA	NA	NA
1,2,3,7,8-PECDF (TEF = 0.03)			ug/L	0.00000018 U	0.00000019 U	NA	NA	NA
2,3,4,6,7,8-HXCDF (TEF = 0.1)			ug/L	0.00000017 U	0.00000016 U	NA	NA	NA
2,3,4,7,8-PECDF (TEF = 0.3)			ug/L	0.00000019 U	0.0000002 U	NA	NA	NA
2,3,7,8-TCDD (TEF = 1)	3E-06	0.00003	ug/L	0.00000018 U	0.00000022 U	NA	NA	NA
2,3,7,8-TCDF (TEF = 0.1)			ug/L	0.00000015 U	0.00000015 U	NA	NA	NA
OCDD (TEF = 0.0003)			ug/L	0.00018	0.00016	NA	NA	NA
OCDF (TEF = 0.0003)			ug/L	0.000029 J	0.000022 J	NA	NA	NA
TOTAL HPCDD			ug/L	0.000041 J	0.000035 J	NA	NA	NA
TOTAL HPCDF			ug/L	0.000023 J	0.000019 J	NA	NA	NA
TOTAL HXCDD			ug/L	0.000004 J	0.0000036 JQ	NA	NA	NA
TOTAL HXCDF			ug/L	0.000004 JQ	0.0000034 J	NA	NA	NA
TOTAL PECDD			ug/L	0.00000033 U	0.0000003 U	NA	NA	NA
TOTAL PECDF			ug/L	0.00000019 U	0.0000002 U	NA	NA	NA
TOTAL TCDD			ug/L	0.00000018 U	0.00000022 U	NA	NA	NA
TOTAL TCDF			ug/L	0.00000015 U	0.00000015 U	NA	NA	NA
2,3,7,8-TCDD TEQ (ND = 0)			ug/L	5.46E-07	4.83E-07	NA	NA	NA

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameter	PAL (*italics*)	ES (bold)	UNITS	W-10AR2 5/1/2013	W-10AR2 7/10/2013	W-10AR2-DUP	W-10AR2 10/10/2013	W-10AR2 1/15/2014
				"Source Area Well"				
8021B								
BENZENE	0.5	5	ug/L	*2.4*	**16**	**17**	**17**	*1.2*
NAPHTHALENE	10	100	ug/L	*11*	*64*	*75*	*69*	9.5
8270C								
2,3,4,6-TETRACHLOROPHENOL			ug/L	0.37 U	0.4 UJ	0.41 U	0.74 U	0.37 U
2,3,5,6-TETRACHLOROPHENOL			ug/L	0.21 U	0.23 UJ	0.24 U	0.43 U	0.21 U
2,4,5-TRICHLOROPHENOL			ug/L	0.099 U	0.11 UJ	0.11 U	0.2 U	0.099 U
2,4,6-TRICHLOROPHENOL			ug/L	0.085 U	0.092 UJ	0.095 U	0.17 U	0.085 U
2,4-DICHLOROPHENOL			ug/L	0.092 U	0.099 UJ	0.1 U	0.18 U	0.092 U
2,4-DIMETHYLPHENOL			ug/L	0.17 U	0.18 UJ	0.19 U	0.34 U	0.17 U
2,4-DINITROPHENOL			ug/L	1.2 U	1.3 UJ	1.3 U	2.3 U	1.2 U
2-CHLOROPHENOL			ug/L	0.027 U	0.029 UJ	0.03 U	0.053 U	0.027 U
2-METHYLPHENOL			ug/L	0.048 U	0.065 J	0.053 U	0.095 U	0.048 U
2-NITROPHENOL			ug/L	0.048 U	0.052 UJ	0.053 U	0.095 U	0.048 U
4,6-DINITRO-2-METHYLPHENOL			ug/L	1 U	1.1 UJ	1.1 U	2 U	1 U
4-CHLORO-3-METHYLPHENOL			ug/L	0.12 U	0.12 UJ	0.13 U	0.23 U	0.12 U
4-METHYLPHENOL			ug/L	0.057 U	0.18 J	0.063 U	0.17 J	0.057 U
4-NITROPHENOL			ug/L	1.2 U	1.4 UJ	1.4 U	2.5 U	1.2 U
ACENAPHTHENE			ug/L	6.1	22 J	5.1 J	43	21
ACENAPHTHYLENE			ug/L	0.11	0.3 J	0.1 J	1	0.96
ANTHRACENE	600	3,000	ug/L	0.062 U	0.26 J	0.068 U	0.23 J	0.27
BENZO (A) ANTHRACENE			ug/L	0.045 U	0.22 J	0.056 J	0.091 U	0.12 J
BENZO (A) PYRENE	0.02	0.2	ug/L	0.04 U	*0.13 J*	*0.067 J*	0.081 U	0.04 U
BENZO (B) FLUORANTHENE	0.02	0.2	ug/L	0.058 U	*0.2 J*	*0.089 J*	0.12 U	*0.06 J*
BENZO (G,H,I) PERYLENE			ug/L	0.061 U	0.066 UJ	0.068 U	0.12 U	0.061 U
BENZO (K) FLUORANTHENE			ug/L	0.06 U	0.076 J	0.066 U	0.12 U	0.06 U
CHRYSENE	0.02	0.2	ug/L	0.045 U	*0.18 J*	*0.056 J*	0.091 U	*0.11 J*
DIBENZO (A,H) ANTHRACENE			ug/L	0.11 U	0.12 UJ	0.13 U	0.23 U	0.11 U
DIBENZOFURAN			ug/L	0.041 U	6.1 J	1.1 J	7.9	2.6
DIETHYLPHTHALATE			ug/L	NA	0.29 U	0.24 U	0.27 U	0.26 U
FLUORANTHENE	80	400	ug/L	0.2 J	6.1 J	1.8 J	0.62	0.7
FLUORENE	80	400	ug/L	1.1	7.5 J	1.8 J	11	3.1
INDENO (1,2,3-CD) PYRENE			ug/L	0.08 U	0.087 UJ	0.089 U	0.16 U	0.08 U
PENTACHLOROPHENOL	0.1	1	ug/L	*0.81*	*0.54 J*	*0.19 J*	0.25 U	*0.13 J*
PHENANTHRENE			ug/L	0.12 J	3.4 J	0.5 J	0.48	0.33
PHENOL	400	2,000	ug/L	0.034 U	0.28 J	0.14 J	0.067 U	0.034 U
PYRENE	50	250	ug/L	0.12 J	3.3 J	1.3 J	0.29 J	0.6
6010C								
IRON, DISSOLVED			ug/L	44	190	180	160	140
MANGANESE, DISSOLVED			ug/L	33	140	120	510	570
RSK175								
METHANE			ug/L	86	590	630	130	55
2320B								
ALKALINITY, TOTAL			mg/L	360	420	430	500	540
4500-NO3								
NITROGEN, NITRATE			mg/L	0.024 U	0.016 J	0.015 J	0.0089 U	0.01 J
9038								
SULFATE			mg/L	23	21	26	19	12
FIELD								
OXIDATION REDUCTION POTENTIAL			mV	-41.6	-73.6	-	-53.6	-58.9
DISSOLVED OXYGEN			mg/L	2.36	1.85	-	0.46	0.63
TEMPERATURE			℃	5.48	11.39	-	10.3	1.87
SPECIFIC CONDUCTIVITY			mS/cm	0.631	0.754	-	0.977	0.829
pH			SU	7.22	7.10	-	7.04	7.62
MICROBIAL INSIGHTS CENSUS DNA								
NAPHTHALENE DIOXYGENASE			cells/mL	NA	31.5	NA	NA	NA

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameter	PAL (*italics*)	ES (bold)	UNITS	W-10AR2 5/1/2013	W-10AR2 7/10/2013	W-10AR2-DUP	W-10AR2 10/10/2013	W-10AR2 1/15/2014
				"Source Area Well"				
8290								
1,2,3,4,6,7,8-HPCDD (TEF = 0.01)			ug/L	0.00023	NA	NA	NA	NA
1,2,3,4,6,7,8-HPCDF (TEF = 0.01)			ug/L	0.000065	NA	NA	NA	NA
1,2,3,4,7,8,9-HPCDF (TEF = 0.01)			ug/L	0.0000077 J	NA	NA	NA	NA
1,2,3,4,7,8-HXCDD (TEF = 0.1)			ug/L	0.0000016 J	NA	NA	NA	NA
1,2,3,4,7,8-HXCDF (TEF = 0.1)			ug/L	0.000011 J	NA	NA	NA	NA
1,2,3,6,7,8-HXCDD (TEF = 0.1)			ug/L	0.0000069 J	NA	NA	NA	NA
1,2,3,6,7,8-HXCDF (TEF = 0.1)			ug/L	0.0000027 J	NA	NA	NA	NA
1,2,3,7,8,9-HXCDD (TEF = 0.1)			ug/L	0.0000037 J	NA	NA	NA	NA
1,2,3,7,8,9-HXCDF (TEF = 0.1)			ug/L	0.0000011 U	NA	NA	NA	NA
1,2,3,7,8-PECDD (TEF = 1)			ug/L	0.00000035 U	NA	NA	NA	NA
1,2,3,7,8-PECDF (TEF = 0.03)			ug/L	0.000001 JQ	NA	NA	NA	NA
2,3,4,6,7,8-HXCDF (TEF = 0.1)			ug/L	0.0000015 JQ	NA	NA	NA	NA
2,3,4,7,8-PECDF (TEF = 0.3)			ug/L	0.0000012 JQ	NA	NA	NA	NA
2,3,7,8-TCDD (TEF = 1)	3E-06	0.00003	ug/L	0.00000021 U	NA	NA	NA	NA
2,3,7,8-TCDF (TEF = 0.1)			ug/L	0.00000037 J	NA	NA	NA	NA
OCDD (TEF = 0.0003)			ug/L	0.0013	NA	NA	NA	NA
OCDF (TEF = 0.0003)			ug/L	0.00015	NA	NA	NA	NA
TOTAL HPCDD			ug/L	0.00037	NA	NA	NA	NA
TOTAL HPCDF			ug/L	0.00041	NA	NA	NA	NA
TOTAL HXCDD			ug/L	0.000057	NA	NA	NA	NA
TOTAL HXCDF			ug/L	0.00021 Q	NA	NA	NA	NA
TOTAL PECDD			ug/L	0.000011 JQ	NA	NA	NA	NA
TOTAL PECDF			ug/L	0.000029 JQ	NA	NA	NA	NA
TOTAL TCDD			ug/L	0.0000018 J	NA	NA	NA	NA
TOTAL TCDF			ug/L	0.0000029 JQ	NA	NA	NA	NA
2,3,7,8-TCDD TEQ (ND = 0)			ug/L	6.63E-06	NA	NA	NA	NA

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameter	PAL (*italics*)	ES (bold)	UNITS	W-16AR 5/1/2013	W-16AR 7/10/2013	W-16AR 10/10/2013	W-16AR 1/16/2014
				"Source Area Well"			
8021B							
BENZENE	0.5	5	ug/L	0.2 U	**21 J**	**33**	**42**
NAPHTHALENE	10	100	ug/L	0.47 J	**3000**	**4000**	**2800**
8270C							
2,3,4,6-TETRACHLOROPHENOL			ug/L	0.37 U	1.5 U	1.5 U	1.5 U
2,3,5,6-TETRACHLOROPHENOL			ug/L	0.21 U	0.85 U	0.85 U	0.85 U
2,4,5-TRICHLOROPHENOL			ug/L	0.099 U	0.4 U	0.4 U	0.4 U
2,4,6-TRICHLOROPHENOL			ug/L	0.085 U	0.34 U	0.34 U	0.34 U
2,4-DICHLOROPHENOL			ug/L	0.092 U	0.37 U	0.37 U	0.37 U
2,4-DIMETHYLPHENOL			ug/L	1.4	0.67 U	0.67 U	0.67 U
2,4-DINITROPHENOL			ug/L	1.2 U	4.6 U	4.6 U	4.6 U
2-CHLOROPHENOL			ug/L	0.027 U	0.11 U	0.11 U	0.11 U
2-METHYLPHENOL			ug/L	0.12 J	0.37 J	0.28 J	0.19 U
2-NITROPHENOL			ug/L	0.048 U	0.19 U	0.19 U	0.19 U
4,6-DINITRO-2-METHYLPHENOL			ug/L	1 U	4.1 U	4.1 U	4.1 U
4-CHLORO-3-METHYLPHENOL			ug/L	0.12 U	0.46 U	0.46 U	0.46 U
4-METHYLPHENOL			ug/L	0.16 J	1.7	0.48 J	0.23 U
4-NITROPHENOL			ug/L	1.2 U	5 U	5 U	5 U
ACENAPHTHENE			ug/L	24	50	68	68
ACENAPHTHYLENE			ug/L	0.69	0.82	0.81	0.69
ANTHRACENE	600	3,000	ug/L	0.14 J	0.25 U	0.44 J	0.86
BENZO (A) ANTHRACENE			ug/L	0.1 J	0.18 U	0.18 U	0.18 U
BENZO (A) PYRENE	0.02	0.2	ug/L	*0.052 J*	0.16 U	0.16 U	0.16 U
BENZO (B) FLUORANTHENE	0.02	0.2	ug/L	*0.062 J*	0.23 U	0.23 U	0.23 U
BENZO (G,H,I) PERYLENE			ug/L	0.061 U	0.24 U	0.24 U	0.24 U
BENZO (K) FLUORANTHENE			ug/L	0.06 U	0.24 U	0.24 U	0.24 U
CHRYSENE	0.02	0.2	ug/L	*0.11 J*	0.18 U	0.18 U	0.18 U
DIBENZO (A,H) ANTHRACENE			ug/L	0.11 U	0.45 U	0.45 U	0.45 U
DIBENZOFURAN			ug/L	0.95	10	20	25
DIETHYLPHTHALATE			ug/L	NA	0.33 U	0.44 U	0.45 U
FLUORANTHENE	80	400	ug/L	0.79	0.33 J	0.57 J	0.65 J
FLUORENE	80	400	ug/L	1.2	12	19	4.6
INDENO (1,2,3-CD) PYRENE			ug/L	0.08 U	0.32 U	0.32 U	0.32 U
PENTACHLOROPHENOL	0.1	1	ug/L	0.08 U	0.22 U	0.5 U	0.32 U
PHENANTHRENE			ug/L	0.082 J	1.4	8.4	16
PHENOL	400	2,000	ug/L	0.034 U	0.13 U	0.28 J	0.13 U
PYRENE	50	250	ug/L	0.48	0.26 U	0.26 U	0.37 J
6010C							
IRON, DISSOLVED			ug/L	6.5 U	30	1300	240
MANGANESE, DISSOLVED			ug/L	70	160	150	240
RSK175							
METHANE			ug/L	4.8	50	63	130
2320B							
ALKALINITY, TOTAL			mg/L	340	450	460	500
4500-NO3							
NITROGEN, NITRATE			mg/L	0.1	0.0089 U	0.073	0.0089 U
9038							
SULFATE			mg/L	74	29	21	19
FIELD							
OXIDATION REDUCTION POTENTIAL			mV	58.9	16.7	0.1	-20.1
DISSOLVED OXYGEN			mg/L	4.4	0.32	0.87	0.48
TEMPERATURE			℃	6.92	26.74	9.91	5.16
SPECIFIC CONDUCTIVITY			mS/cm	0.615	1.061	1.027	0.978
pH			SU	7.24	6.96	7.24	7.82
MICROBIAL INSIGHTS CENSUS DNA							
NAPHTHALENE DIOXYGENASE			cells/mL	NA	318,000	NA	NA

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
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Parameter	PAL (*italics*)	ES (bold)	UNITS	W-16AR 5/1/2013	W-16AR 7/10/2013	W-16AR 10/10/2013	W-16AR 1/16/2014
				"Source Area Well"			
8290							
1,2,3,4,6,7,8-HPCDD (TEF = 0.01)			ug/L	NA	NA	NA	NA
1,2,3,4,6,7,8-HPCDF (TEF = 0.01)			ug/L	NA	NA	NA	NA
1,2,3,4,7,8,9-HPCDF (TEF = 0.01)			ug/L	NA	NA	NA	NA
1,2,3,4,7,8-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,4,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,6,7,8-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,6,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,7,8,9-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,7,8,9-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,7,8-PECDD (TEF = 1)			ug/L	NA	NA	NA	NA
1,2,3,7,8-PECDF (TEF = 0.03)			ug/L	NA	NA	NA	NA
2,3,4,6,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
2,3,4,7,8-PECDF (TEF = 0.3)			ug/L	NA	NA	NA	NA
2,3,7,8-TCDD (TEF = 1)	3E-06	0.00003	ug/L	NA	NA	NA	NA
2,3,7,8-TCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
OCDD (TEF = 0.0003)			ug/L	NA	NA	NA	NA
OCDF (TEF = 0.0003)			ug/L	NA	NA	NA	NA
TOTAL HPCDD			ug/L	NA	NA	NA	NA
TOTAL HPCDF			ug/L	NA	NA	NA	NA
TOTAL HXCDD			ug/L	NA	NA	NA	NA
TOTAL HXCDF			ug/L	NA	NA	NA	NA
TOTAL PECDD			ug/L	NA	NA	NA	NA
TOTAL PECDF			ug/L	NA	NA	NA	NA
TOTAL TCDD			ug/L	NA	NA	NA	NA
TOTAL TCDF			ug/L	NA	NA	NA	NA
2,3,7,8-TCDD TEQ (ND = 0)			ug/L	NA	NA	NA	NA

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameter	PAL (*italics*)	ES (bold)	UNITS	W-25A 4/29/2013	W-25A 7/9/2013	W-25A 10/9/2013	W-25A 1/15/2014
				"Source Area Well"			
8021B							
BENZENE	0.5	5	ug/L	0.2 U	0.2 U	0.2 U	0.32 U
NAPHTHALENE	10	100	ug/L	0.44 U	0.44 U	0.44 U	0.56 U
8270C							
2,3,4,6-TETRACHLOROPHENOL			ug/L	0.37 U	0.37 U	0.37 U	0.37 U
2,3,5,6-TETRACHLOROPHENOL			ug/L	0.21 U	0.21 U	0.21 U	0.21 U
2,4,5-TRICHLOROPHENOL			ug/L	0.099 U	0.099 U	0.099 U	0.099 U
2,4,6-TRICHLOROPHENOL			ug/L	0.085 U	0.085 U	0.085 U	0.085 U
2,4-DICHLOROPHENOL			ug/L	0.092 U	0.092 U	0.092 U	0.092 U
2,4-DIMETHYLPHENOL			ug/L	0.17 U	0.17 U	0.17 U	0.17 U
2,4-DINITROPHENOL			ug/L	1.2 U	1.2 U	1.2 U	1.2 U
2-CHLOROPHENOL			ug/L	0.027 U	0.027 U	0.027 U	0.027 U
2-METHYLPHENOL			ug/L	0.048 U	0.048 U	0.048 U	0.048 U
2-NITROPHENOL			ug/L	0.048 U	0.048 U	0.048 U	0.048 U
4,6-DINITRO-2-METHYLPHENOL			ug/L	1 U	1 U	1 U	1 U
4-CHLORO-3-METHYLPHENOL			ug/L	0.12 U	0.12 U	0.12 U	0.12 U
4-METHYLPHENOL			ug/L	0.057 U	0.057 U	0.057 U	0.057 U
4-NITROPHENOL			ug/L	1.2 U	1.2 U	1.2 U	1.2 U
ACENAPHTHENE			ug/L	0.41	0.033 U	0.033 U	0.033 U
ACENAPHTHYLENE			ug/L	0.017 U	0.017 U	0.017 U	0.017 U
ANTHRACENE	600	3,000	ug/L	0.062 U	0.062 U	0.062 U	0.062 U
BENZO (A) ANTHRACENE			ug/L	0.045 U	0.045 U	0.045 U	0.045 U
BENZO (A) PYRENE	0.02	0.2	ug/L	0.04 U	0.04 U	0.04 U	0.04 U
BENZO (B) FLUORANTHENE	0.02	0.2	ug/L	0.058 U	0.058 U	0.058 U	0.058 U
BENZO (G,H,I) PERYLENE			ug/L	0.061 U	0.061 U	0.061 U	0.061 U
BENZO (K) FLUORANTHENE			ug/L	0.06 U	0.06 U	0.06 U	0.06 U
CHRYSENE	0.02	0.2	ug/L	0.045 U	0.045 U	0.045 U	0.045 U
DIBENZO (A,H) ANTHRACENE			ug/L	0.11 U	0.11 U	0.11 U	0.11 U
DIBENZOFURAN			ug/L	0.12 J	0.041 U	0.041 U	0.041 U
DIETHYLPHTHALATE			ug/L	NA	0.36 U	0.2 U	0.19 U
FLUORANTHENE	80	400	ug/L	0.072 J	0.13 J	0.063 U	0.063 U
FLUORENE	80	400	ug/L	0.19	0.041 U	0.041 U	0.041 U
INDENO (1,2,3-CD) PYRENE			ug/L	0.08 U	0.08 U	0.08 U	0.08 U
PENTACHLOROPHENOL	0.1	1	ug/L	**1.2**	**2.9**	**2.3**	0.081 U
PHENANTHRENE			ug/L	0.24	0.043 U	0.043 U	0.043 U
PHENOL	400	2,000	ug/L	0.034 U	0.034 U	0.034 U	0.034 U
PYRENE	50	250	ug/L	0.066 U	0.066 U	0.066 U	0.066 U
6010C							
IRON, DISSOLVED			ug/L	6.5 U	6.5 U	6.5 U	6.5 U
MANGANESE, DISSOLVED			ug/L	7.5 J	15	23	3.8 U
RSK175							
METHANE			ug/L	0.46 J	28	34	0.14 U
2320B							
ALKALINITY, TOTAL			mg/L	570	580	580	590
4500-NO3							
NITROGEN, NITRATE			mg/L	0.015 U	0.0089 U	0.0089 U	0.035
9038							
SULFATE			mg/L	44	40	41	42
FIELD							
OXIDATION REDUCTION POTENTIAL			mV	49.8	94.7	-20.8	306.5
DISSOLVED OXYGEN			mg/L	0.91	0.56	1.05	0.95
TEMPERATURE			℃	14.41	15.62	12.13	3.96
SPECIFIC CONDUCTIVITY			mS/cm	1.256	1.269	1.495	1.149
pH			SU	7.17	7.23	7.12	7.17
MICROBIAL INSIGHTS CENSUS DNA							
NAPHTHALENE DIOXYGENASE			cells/mL	NA	878	NA	NA

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Table 3 - Groundwater Analytical Data
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Parameter	PAL (*italics*)	ES (bold)	UNITS	W-25A 4/29/2013	W-25A 7/9/2013	W-25A 10/9/2013	W-25A 1/15/2014
				"Source Area Well"			
8290							
1,2,3,4,6,7,8-HPCDD (TEF = 0.01)			ug/L	NA	NA	NA	NA
1,2,3,4,6,7,8-HPCDF (TEF = 0.01)			ug/L	NA	NA	NA	NA
1,2,3,4,7,8,9-HPCDF (TEF = 0.01)			ug/L	NA	NA	NA	NA
1,2,3,4,7,8-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,4,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,6,7,8-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,6,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,7,8,9-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,7,8,9-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,7,8-PECDD (TEF = 1)			ug/L	NA	NA	NA	NA
1,2,3,7,8-PECDF (TEF = 0.03)			ug/L	NA	NA	NA	NA
2,3,4,6,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
2,3,4,7,8-PECDF (TEF = 0.3)			ug/L	NA	NA	NA	NA
2,3,7,8-TCDD (TEF = 1)	3E-06	0.00003	ug/L	NA	NA	NA	NA
2,3,7,8-TCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
OCDD (TEF = 0.0003)			ug/L	NA	NA	NA	NA
OCDF (TEF = 0.0003)			ug/L	NA	NA	NA	NA
TOTAL HPCDD			ug/L	NA	NA	NA	NA
TOTAL HPCDF			ug/L	NA	NA	NA	NA
TOTAL HXCDD			ug/L	NA	NA	NA	NA
TOTAL HXCDF			ug/L	NA	NA	NA	NA
TOTAL PECDD			ug/L	NA	NA	NA	NA
TOTAL PECDF			ug/L	NA	NA	NA	NA
TOTAL TCDD			ug/L	NA	NA	NA	NA
TOTAL TCDF			ug/L	NA	NA	NA	NA
2,3,7,8-TCDD TEQ (ND = 0)			ug/L	NA	NA	NA	NA

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
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Former Koppers Inc. Facility - Superior, Wisconsin

Parameter	PAL (*italics*)	ES (bold)	UNITS	W-26A 4/29/2013	W-26A 7/9/2013	W-26A 10/8/2013	W-26A 1/15/2014
				"Sentinel Well"			
8021B							
BENZENE	0.5	5	ug/L	0.2 U	0.2 U	0.2 U	0.32 U
NAPHTHALENE	10	100	ug/L	0.44 U	0.44 U	0.44 U	0.56 U
8270C							
2,3,4,6-TETRACHLOROPHENOL			ug/L	0.37 U	0.37 U	0.37 U	0.37 U
2,3,5,6-TETRACHLOROPHENOL			ug/L	0.21 U	0.21 U	0.21 U	0.21 U
2,4,5-TRICHLOROPHENOL			ug/L	0.099 U	0.099 U	0.099 U	0.099 U
2,4,6-TRICHLOROPHENOL			ug/L	0.085 U	0.085 U	0.085 U	0.085 U
2,4-DICHLOROPHENOL			ug/L	0.092 U	0.092 U	0.092 U	0.092 U
2,4-DIMETHYLPHENOL			ug/L	0.17 U	0.17 U	0.17 U	0.17 U
2,4-DINITROPHENOL			ug/L	1.2 U	1.2 U	1.2 U	1.2 U
2-CHLOROPHENOL			ug/L	0.027 U	0.027 U	0.027 U	0.027 U
2-METHYLPHENOL			ug/L	0.048 U	0.048 U	0.048 U	0.048 U
2-NITROPHENOL			ug/L	0.048 U	0.048 U	0.048 U	0.048 U
4,6-DINITRO-2-METHYLPHENOL			ug/L	1 U	1 U	1 U	1 U
4-CHLORO-3-METHYLPHENOL			ug/L	0.12 U	0.12 U	0.12 U	0.12 U
4-METHYLPHENOL			ug/L	0.057 U	0.057 U	0.057 U	0.057 U
4-NITROPHENOL			ug/L	1.2 U	1.2 U	1.2 U	1.2 U
ACENAPHTHENE			ug/L	0.033 U	0.033 U	0.033 U	0.033 U
ACENAPHTHYLENE			ug/L	0.017 U	0.017 U	0.017 U	0.017 U
ANTHRACENE	600	3,000	ug/L	0.2 J	0.062 U	0.062 U	0.062 U
BENZO (A) ANTHRACENE			ug/L	0.045 U	0.045 U	0.045 U	0.045 U
BENZO (A) PYRENE	0.02	0.2	ug/L	0.04 U	0.04 U	0.04 U	0.04 U
BENZO (B) FLUORANTHENE	0.02	0.2	ug/L	0.058 U	0.058 U	0.058 U	0.058 U
BENZO (G,H,I) PERYLENE			ug/L	0.061 U	0.061 U	0.061 U	0.061 U
BENZO (K) FLUORANTHENE			ug/L	0.06 U	0.06 U	0.06 U	0.06 U
CHRYSENE	0.02	0.2	ug/L	0.045 U	0.045 U	0.045 U	0.045 U
DIBENZO (A,H) ANTHRACENE			ug/L	0.11 U	0.11 U	0.11 U	0.11 U
DIBENZOFURAN			ug/L	0.041 U	0.041 U	0.041 U	0.041 U
DIETHYLPHTHALATE			ug/L	NA	0.25 U	0.17 U	0.24 U
FLUORANTHENE	80	400	ug/L	0.063 U	0.063 U	0.063 U	0.09 J
FLUORENE	80	400	ug/L	0.041 U	0.041 U	0.041 U	0.041 U
INDENO (1,2,3-CD) PYRENE			ug/L	0.08 U	0.08 U	0.08 U	0.08 U
PENTACHLOROPHENOL	0.1	1	ug/L	0.08 U	0.09 J	0.081 U	0.081 U
PHENANTHRENE			ug/L	0.15	0.043 U	0.043 U	0.1 J
PHENOL	400	2,000	ug/L	0.034 U	0.034 U	0.034 U	0.034 U
PYRENE	50	250	ug/L	0.066 U	0.066 U	0.066 U	0.08 J
6010C							
IRON, DISSOLVED			ug/L	6.5 U	6.5 U	7 J	6.5 U
MANGANESE, DISSOLVED			ug/L	4.4 J	5.6 J	12	6.9 U
RSK175							
METHANE			ug/L	0.14 U	12	20	0.14 U
2320B							
ALKALINITY, TOTAL			mg/L	340	390	330	480
4500-NO3							
NITROGEN, NITRATE			mg/L	0.34	0.18	0.28	0.028 J
9038							
SULFATE			mg/L	57	46	39	41
FIELD							
OXIDATION REDUCTION POTENTIAL			mV	4.7	107.1	-109.3	18.5
DISSOLVED OXYGEN			mg/L	0.97	0.4	0.67	0.60
TEMPERATURE			℃	11.5	14.13	15.09	2.94
SPECIFIC CONDUCTIVITY			mS/cm	0.926	0.977	0.904	0.872
pH			SU	7.47	7.26	8.27	8.01
MICROBIAL INSIGHTS CENSUS DNA							
NAPHTHALENE DIOXYGENASE			cells/mL	NA	3.9	NA	NA

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameter	PAL (*italics*)	ES (bold)	UNITS	W-26A 4/29/2013	W-26A 7/9/2013	W-26A 10/8/2013	W-26A 1/15/2014
				"Sentinel Well"			
8290							
1,2,3,4,6,7,8-HPCDD (TEF = 0.01)			ug/L	NA	NA	NA	NA
1,2,3,4,6,7,8-HPCDF (TEF = 0.01)			ug/L	NA	NA	NA	NA
1,2,3,4,7,8,9-HPCDF (TEF = 0.01)			ug/L	NA	NA	NA	NA
1,2,3,4,7,8-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,4,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,6,7,8-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,6,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,7,8,9-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,7,8,9-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,7,8-PECDD (TEF = 1)			ug/L	NA	NA	NA	NA
1,2,3,7,8-PECDF (TEF = 0.03)			ug/L	NA	NA	NA	NA
2,3,4,6,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
2,3,4,7,8-PECDF (TEF = 0.3)			ug/L	NA	NA	NA	NA
2,3,7,8-TCDD (TEF = 1)	3E-06	0.00003	ug/L	NA	NA	NA	NA
2,3,7,8-TCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
OCDD (TEF = 0.0003)			ug/L	NA	NA	NA	NA
OCDF (TEF = 0.0003)			ug/L	NA	NA	NA	NA
TOTAL HPCDD			ug/L	NA	NA	NA	NA
TOTAL HPCDF			ug/L	NA	NA	NA	NA
TOTAL HXCDD			ug/L	NA	NA	NA	NA
TOTAL HXCDF			ug/L	NA	NA	NA	NA
TOTAL PECDD			ug/L	NA	NA	NA	NA
TOTAL PECDF			ug/L	NA	NA	NA	NA
TOTAL TCDD			ug/L	NA	NA	NA	NA
TOTAL TCDF			ug/L	NA	NA	NA	NA
2,3,7,8-TCDD TEQ (ND = 0)			ug/L	NA	NA	NA	NA

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameter	PAL (*italics*)	ES (bold)	UNITS	W-30A 5/1/2013	W-30A 7/10/2013	W-30A 10/9/2013	W-30A-DUP 10/9/2013	W-30A 1/15/2014
				"Source Area Well"				
8021B								
BENZENE	0.5	5	ug/L	0.2 U	**5.1 J**	*2.3*	*2.4*	*0.59 J*
NAPHTHALENE	10	100	ug/L	*15*	**680**	*96*	*99*	*24*
8270C								
2,3,4,6-TETRACHLOROPHENOL			ug/L	0.37 U	4.1 U	0.37 U	0.37 U	0.37 U
2,3,5,6-TETRACHLOROPHENOL			ug/L	0.21 U	2.4 U	0.21 U	0.21 U	0.21 U
2,4,5-TRICHLOROPHENOL			ug/L	0.099 U	1.1 U	0.099 U	0.099 U	0.099 U
2,4,6-TRICHLOROPHENOL			ug/L	0.085 U	0.95 U	0.085 U	0.085 U	0.085 U
2,4-DICHLOROPHENOL			ug/L	0.092 U	1 U	0.092 U	0.092 U	0.092 U
2,4-DIMETHYLPHENOL			ug/L	0.17 U	1.9 U	0.17 U	0.17 U	0.17 U
2,4-DINITROPHENOL			ug/L	1.2 U	13 U	1.2 U	1.2 U	1.2 U
2-CHLOROPHENOL			ug/L	0.027 U	0.3 U	0.027 U	0.027 U	0.027 U
2-METHYLPHENOL			ug/L	0.048 U	0.53 U	0.048 U	0.048 U	0.048 U
2-NITROPHENOL			ug/L	0.048 U	0.53 U	0.048 U	0.048 U	0.048 U
4,6-DINITRO-2-METHYLPHENOL			ug/L	1 U	11 U	1 U	1 U	1 U
4-CHLORO-3-METHYLPHENOL			ug/L	0.12 U	1.3 U	0.12 U	0.12 U	0.12 U
4-METHYLPHENOL			ug/L	0.057 U	0.63 U	0.057 U	0.057 U	0.057 U
4-NITROPHENOL			ug/L	1.2 U	14 U	1.2 U	1.2 U	1.2 U
ACENAPHTHENE			ug/L	2.6	89	9.2	8.8	4.7
ACENAPHTHYLENE			ug/L	0.041 J	0.89	0.16	0.16	0.082
ANTHRACENE	600	3,000	ug/L	0.062 J	1 J	0.12 J	0.11 J	0.082 J
BENZO (A) ANTHRACENE			ug/L	0.045 U	0.5 U	0.08 J	0.07 J	0.14 J
BENZO (A) PYRENE	0.02	0.2	ug/L	0.04 U	0.45 U	0.04 U	0.04 U	*0.082 J*
BENZO (B) FLUORANTHENE	0.02	0.2	ug/L	0.058 U	0.65 U	0.058 U	0.058 U	*0.11 J*
BENZO (G,H,I) PERYLENE			ug/L	0.061 U	0.68 U	0.061 U	0.061 U	0.061 U
BENZO (K) FLUORANTHENE			ug/L	0.06 U	0.66 U	0.06 U	0.06 U	0.062 J
CHRYSENE	0.02	0.2	ug/L	0.045 U	0.5 U	0.045 U	0.045 U	*0.1 J*
DIBENZO (A,H) ANTHRACENE			ug/L	0.11 U	1.3 U	0.11 U	0.11 U	0.11 U
DIBENZOFURAN			ug/L	0.99	41	2.9	2.8	1.8
DIETHYLPHTHALATE			ug/L	NA	0.72 U	0.33 U	0.26 U	0.28 U
FLUORANTHENE	80	400	ug/L	0.12 J	1.3 J	0.79	0.75	0.4
FLUORENE	80	400	ug/L	0.71	34	1.2	1.1	1.6
INDENO (1,2,3-CD) PYRENE			ug/L	0.08 U	0.89 U	0.08 U	0.08 U	0.08 U
PENTACHLOROPHENOL	0.1	1	ug/L	0.08 U	0.6 U	0.081 U	0.081 U	0.081 U
PHENANTHRENE			ug/L	0.26	17	0.05 J	0.05 J	0.15
PHENOL	400	2,000	ug/L	0.034 U	0.37 U	0.034 U	0.034 U	0.034 U
PYRENE	50	250	ug/L	0.072 J	0.73 U	0.43	0.4	0.39
6010C								
IRON, DISSOLVED			ug/L	32	270	260	260	1600
MANGANESE, DISSOLVED			ug/L	6.7 J	110	50	48	680
RSK175								
METHANE			ug/L	2.9	180	10	9.8	11
2320B								
ALKALINITY, TOTAL			mg/L	360	410	310	320	550
4500-NO3								
NITROGEN, NITRATE			mg/L	0.61	0.099	0.044	0.045	0.012 J
9038								
SULFATE			mg/L	22	37	30	32	62
FIELD								
OXIDATION REDUCTION POTENTIAL			mV	-66.8	-70.3	-5.1	-	-31.6
DISSOLVED OXYGEN			mg/L	1.43	1.58	2.01	-	0.81
TEMPERATURE			℃	4.92	10.55	14.97	-	2.91
SPECIFIC CONDUCTIVITY			mS/cm	0.511	0.617	0.827	-	0.679
pH			SU	7.07	6.89	7.25	-	6.85
MICROBIAL INSIGHTS CENSUS DNA								
NAPHTHALENE DIOXYGENASE			cells/mL	NA	1,730	NA	NA	NA

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameter	PAL (*italics*)	ES (bold)	UNITS	W-30A 5/1/2013	W-30A 7/10/2013	W-30A 10/9/2013	W-30A-DUP 10/9/2013	W-30A 1/15/2014
				"Source Area Well"				
8290								
1,2,3,4,6,7,8-HPCDD (TEF = 0.01)			ug/L	0.00015	NA	NA	NA	NA
1,2,3,4,6,7,8-HPCDF (TEF = 0.01)			ug/L	0.00004 J	NA	NA	NA	NA
1,2,3,4,7,8,9-HPCDF (TEF = 0.01)			ug/L	0.0000015 U	NA	NA	NA	NA
1,2,3,4,7,8-HXCDD (TEF = 0.1)			ug/L	0.00000071 J	NA	NA	NA	NA
1,2,3,4,7,8-HXCDF (TEF = 0.1)			ug/L	0.0000047 J	NA	NA	NA	NA
1,2,3,6,7,8-HXCDD (TEF = 0.1)			ug/L	0.0000048 J	NA	NA	NA	NA
1,2,3,6,7,8-HXCDF (TEF = 0.1)			ug/L	0.0000011 J	NA	NA	NA	NA
1,2,3,7,8,9-HXCDD (TEF = 0.1)			ug/L	0.0000015 JQ	NA	NA	NA	NA
1,2,3,7,8,9-HXCDF (TEF = 0.1)			ug/L	0.00000033 U	NA	NA	NA	NA
1,2,3,7,8-PECDD (TEF = 1)			ug/L	0.00000028 U	NA	NA	NA	NA
1,2,3,7,8-PECDF (TEF = 0.03)			ug/L	0.00000099 J	NA	NA	NA	NA
2,3,4,6,7,8-HXCDF (TEF = 0.1)			ug/L	0.00000063 JQ	NA	NA	NA	NA
2,3,4,7,8-PECDF (TEF = 0.3)			ug/L	0.0000011 J	NA	NA	NA	NA
2,3,7,8-TCDD (TEF = 1)	3E-06	0.00003	ug/L	0.00000017 U	NA	NA	NA	NA
2,3,7,8-TCDF (TEF = 0.1)			ug/L	0.00000055 J	NA	NA	NA	NA
OCDD (TEF = 0.0003)			ug/L	0.0016	NA	NA	NA	NA
OCDF (TEF = 0.0003)			ug/L	0.00013	NA	NA	NA	NA
TOTAL HPCDD			ug/L	0.00031	NA	NA	NA	NA
TOTAL HPCDF			ug/L	0.00016	NA	NA	NA	NA
TOTAL HXCDD			ug/L	0.00002 JQ	NA	NA	NA	NA
TOTAL HXCDF			ug/L	0.000051 Q	NA	NA	NA	NA
TOTAL PECDD			ug/L	0.00000028 U	NA	NA	NA	NA
TOTAL PECDF			ug/L	0.000007 JQ	NA	NA	NA	NA
TOTAL TCDD			ug/L	0.00000017 U	NA	NA	NA	NA
TOTAL TCDF			ug/L	0.00000093 U	NA	NA	NA	NA
2,3,7,8-TCDD TEQ (ND = 0)			ug/L	4.18E-06	NA	NA	NA	NA

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameter	PAL (*italics*)	ES (bold)	UNITS	W-35A 4/29/2013	W-35A 7/9/2013	W-35A 10/8/2013	W-35A 1/14/2014
				"Sentinel Well"			
8021B							
BENZENE	0.5	5	ug/L	0.2 U	0.2 U	0.2 U	0.32 U
NAPHTHALENE	10	100	ug/L	0.44 U	0.44 U	0.44 U	0.56 U
8270C							
2,3,4,6-TETRACHLOROPHENOL			ug/L	0.37 U	0.4 U	0.4 U	0.37 U
2,3,5,6-TETRACHLOROPHENOL			ug/L	0.21 U	0.23 U	0.23 U	0.21 U
2,4,5-TRICHLOROPHENOL			ug/L	0.099 U	0.11 U	0.11 U	0.099 U
2,4,6-TRICHLOROPHENOL			ug/L	0.085 U	0.092 U	0.092 U	0.085 U
2,4-DICHLOROPHENOL			ug/L	0.092 U	0.099 U	0.098 U	0.092 U
2,4-DIMETHYLPHENOL			ug/L	0.17 U	0.18 U	0.18 U	0.17 U
2,4-DINITROPHENOL			ug/L	1.2 U	1.3 U	1.2 U	1.2 U
2-CHLOROPHENOL			ug/L	0.027 U	0.029 U	0.029 U	0.027 U
2-METHYLPHENOL			ug/L	0.048 U	0.052 U	0.051 U	0.048 U
2-NITROPHENOL			ug/L	0.048 U	0.052 U	0.051 U	0.048 U
4,6-DINITRO-2-METHYLPHENOL			ug/L	1 U	1.1 U	1.1 U	1 U
4-CHLORO-3-METHYLPHENOL			ug/L	0.12 U	0.12 U	0.12 U	0.12 U
4-METHYLPHENOL			ug/L	0.057 U	0.062 U	0.061 U	0.057 U
4-NITROPHENOL			ug/L	1.2 U	1.4 U	1.3 U	1.2 U
ACENAPHTHENE			ug/L	0.033 U	0.036 U	0.035 U	0.033 U
ACENAPHTHYLENE			ug/L	0.017 U	0.019 U	0.018 U	0.017 U
ANTHRACENE	600	3,000	ug/L	0.062 U	0.067 U	0.066 U	0.062 U
BENZO (A) ANTHRACENE			ug/L	0.045 U	0.049 U	0.049 U	0.045 U
BENZO (A) PYRENE	0.02	0.2	ug/L	0.04 U	0.044 U	0.043 U	0.04 U
BENZO (B) FLUORANTHENE	0.02	0.2	ug/L	0.058 U	0.063 U	0.062 U	0.058 U
BENZO (G,H,I) PERYLENE			ug/L	0.061 U	0.066 U	0.065 U	0.061 U
BENZO (K) FLUORANTHENE			ug/L	0.06 U	0.065 U	0.064 U	0.06 U
CHRYSENE	0.02	0.2	ug/L	0.045 U	0.049 U	0.049 U	0.045 U
DIBENZO (A,H) ANTHRACENE			ug/L	0.11 U	0.12 U	0.12 U	0.11 U
DIBENZOFURAN			ug/L	0.041 U	0.044 U	0.044 U	0.041 U
DIETHYLPHTHALATE			ug/L	NA	0.23 U	0.2 U	0.33 U
FLUORANTHENE	80	400	ug/L	0.063 U	0.068 U	0.067 U	0.063 U
FLUORENE	80	400	ug/L	0.041 U	0.045 U	0.044 U	0.041 U
INDENO (1,2,3-CD) PYRENE			ug/L	0.08 U	0.087 U	0.086 U	0.08 U
PENTACHLOROPHENOL	0.1	1	ug/L	0.08 U	0.058 U	0.087 U	0.081 U
PHENANTHRENE			ug/L	0.043 U	0.046 U	0.046 U	0.043 U
PHENOL	400	2,000	ug/L	0.034 U	0.037 U	0.036 U	0.034 U
PYRENE	50	250	ug/L	0.066 U	0.071 U	0.071 U	0.066 U
6010C							
IRON, DISSOLVED			ug/L	6.5 U	6.5 U	7.6 J	6.5 U
MANGANESE, DISSOLVED			ug/L	3.7 J	130	140	3.7 U
RSK175							
METHANE			ug/L	0.22 J	14	17	0.14 U
2320B							
ALKALINITY, TOTAL			mg/L	410	480	490	470
4500-NO3							
NITROGEN, NITRATE			mg/L	0.076	0.063	0.0094 J	0.024 JB
9038							
SULFATE			mg/L	120	58	65	77
FIELD							
OXIDATION REDUCTION POTENTIAL			mV	27	31.3	-37.2	246.5
DISSOLVED OXYGEN			mg/L	0.62	0.52	1	0.98
TEMPERATURE			℃	9.68	10.41	11.15	1.69
SPECIFIC CONDUCTIVITY			mS/cm	0.947	0.958	0.906	0.562
pH			SU	7.47	7.36	7.2	7.65
MICROBIAL INSIGHTS CENSUS DNA							
NAPHTHALENE DIOXYGENASE			cells/mL	NA	6,670	NA	NA

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameter	PAL (*italics*)	ES (bold)	UNITS	W-35A 4/29/2013	W-35A 7/9/2013	W-35A 10/8/2013	W-35A 1/14/2014
				"Sentinel Well"			
8290							
1,2,3,4,6,7,8-HPCDD (TEF = 0.01)			ug/L	NA	NA	NA	NA
1,2,3,4,6,7,8-HPCDF (TEF = 0.01)			ug/L	NA	NA	NA	NA
1,2,3,4,7,8,9-HPCDF (TEF = 0.01)			ug/L	NA	NA	NA	NA
1,2,3,4,7,8-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,4,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,6,7,8-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,6,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,7,8,9-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,7,8,9-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,7,8-PECDD (TEF = 1)			ug/L	NA	NA	NA	NA
1,2,3,7,8-PECDF (TEF = 0.03)			ug/L	NA	NA	NA	NA
2,3,4,6,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
2,3,4,7,8-PECDF (TEF = 0.3)			ug/L	NA	NA	NA	NA
2,3,7,8-TCDD (TEF = 1)	3E-06	0.00003	ug/L	NA	NA	NA	NA
2,3,7,8-TCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
OCDD (TEF = 0.0003)			ug/L	NA	NA	NA	NA
OCDF (TEF = 0.0003)			ug/L	NA	NA	NA	NA
TOTAL HPCDD			ug/L	NA	NA	NA	NA
TOTAL HPCDF			ug/L	NA	NA	NA	NA
TOTAL HXCDD			ug/L	NA	NA	NA	NA
TOTAL HXCDF			ug/L	NA	NA	NA	NA
TOTAL PECDD			ug/L	NA	NA	NA	NA
TOTAL PECDF			ug/L	NA	NA	NA	NA
TOTAL TCDD			ug/L	NA	NA	NA	NA
TOTAL TCDF			ug/L	NA	NA	NA	NA
2,3,7,8-TCDD TEQ (ND = 0)			ug/L	NA	NA	NA	NA

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameter	PAL (*italics*)	ES (bold)	UNITS	W-36A 5/1/2013	W-36A 7/10/2013	W-36A 10/9/2013	W-36A 1/15/2014	W-36A DUP 1/15/2014
				"Source Area Well"				
8021B								
BENZENE	0.5	5	ug/L	0.2 U	0.2 U	0.2 U	0.32 U	0.32 U
NAPHTHALENE	10	100	ug/L	0.44 U	0.44 U	0.44 U	0.56 J	0.56 U
8270C								
2,3,4,6-TETRACHLOROPHENOL			ug/L	2.8	7.7	5.1	67	65
2,3,5,6-TETRACHLOROPHENOL			ug/L	1.7	35	24	6.9 J	6.9 J
2,4,5-TRICHLOROPHENOL			ug/L	0.33 J	9.3	30	3.8	4.2
2,4,6-TRICHLOROPHENOL			ug/L	0.44	0.74	2.5	9.2	9.3
2,4-DICHLOROPHENOL			ug/L	0.092 U	0.3 J	0.65	1.5 J	1.6 J
2,4-DIMETHYLPHENOL			ug/L	0.17 U	0.34 U	0.34 U	1.7 U	1.7 U
2,4-DINITROPHENOL			ug/L	1.2 U	2.3 U	2.3 U	12 U	12 U
2-CHLOROPHENOL			ug/L	0.027 U	0.053 U	0.053 U	0.27 U	0.27 U
2-METHYLPHENOL			ug/L	0.048 U	0.095 U	0.095 U	0.48 U	0.48 U
2-NITROPHENOL			ug/L	0.048 U	0.095 U	0.095 U	0.48 U	0.48 U
4,6-DINITRO-2-METHYLPHENOL			ug/L	1 U	2 U	2 U	10 U	10 U
4-CHLORO-3-METHYLPHENOL			ug/L	0.12 U	0.23 U	0.23 U	1.2 U	1.2 U
4-METHYLPHENOL			ug/L	0.057 U	0.11 U	0.14 J	0.57 U	0.57 U
4-NITROPHENOL			ug/L	1.2 U	2.5 U	2.5 U	12 U	12 U
ACENAPHTHENE			ug/L	0.05 J	0.08 J	0.066 U	0.33 U	0.33 U
ACENAPHTHYLENE			ug/L	0.03 J	0.034 U	0.04 J	0.17 U	0.17 U
ANTHRACENE	600	3,000	ug/L	0.21	0.22 J	0.18 J	0.62 U	0.71 J
BENZO (A) ANTHRACENE			ug/L	0.08 J	0.091 U	0.091 U	0.45 U	0.45 U
BENZO (A) PYRENE	0.02	0.2	ug/L	0.04 U	0.081 U	0.081 U	0.4 U	0.4 U
BENZO (B) FLUORANTHENE	0.02	0.2	ug/L	0.058 U	0.12 U	0.12 U	0.58 U	0.58 U
BENZO (G,H,I) PERYLENE			ug/L	0.061 U	0.12 U	0.12 U	0.61 U	0.61 U
BENZO (K) FLUORANTHENE			ug/L	0.06 U	0.12 U	0.12 U	0.6 U	0.6 U
CHRYSENE	0.02	0.2	ug/L	*0.13 J*	0.091 U	0.091 U	0.45 U	0.45 U
DIBENZO (A,H) ANTHRACENE			ug/L	0.11 U	0.23 U	0.23 U	1.1 U	1.1 U
DIBENZOFURAN			ug/L	0.11 J	0.68	0.53	0.61 J	0.61 J
DIETHYLPHTHALATE			ug/L	NA	0.36 U	0.32 U	1.3 U	4.1 J
FLUORANTHENE	80	400	ug/L	0.063 U	0.28 J	0.13 U	0.63 U	0.63 U
FLUORENE	80	400	ug/L	0.041 U	0.34	0.38	0.71 J	0.71 J
INDENO (1,2,3-CD) PYRENE			ug/L	0.08 U	0.16 U	0.16 U	0.8 U	0.8 U
PENTACHLOROPHENOL	0.1	1	ug/L	**19**	**29**	**8.5**	**170**	**170**
PHENANTHRENE			ug/L	0.09 J	0.24 J	0.12 J	0.43 U	0.43 U
PHENOL	400	2,000	ug/L	0.034 U	0.067 U	0.067 U	0.34 U	0.34 U
PYRENE	50	250	ug/L	0.07 J	0.18 J	0.14 J	0.66 U	0.66 U
6010C								
IRON, DISSOLVED			ug/L	19 J	310	110	120	130
MANGANESE, DISSOLVED			ug/L	280	730	650	810	930
RSK175								
METHANE			ug/L	80	430	510	280	320
2320B								
ALKALINITY, TOTAL			mg/L	340	390	430	480	470
4500-NO3								
NITROGEN, NITRATE			mg/L	0.098	0.018 J	0.052	0.027 J	0.03
9038								
SULFATE			mg/L	85	65	52	34	35
FIELD								
OXIDATION REDUCTION POTENTIAL			mV	160.5	-30.6	-75.9	79.2	-
DISSOLVED OXYGEN			mg/L	1.03	0.49	0.62	0.54	-
TEMPERATURE			℃	3.99	23.49	17.22	3.79	-
SPECIFIC CONDUCTIVITY			mS/cm	0.601	0.954	1.135	0.571	-
pH			SU	7.46	7.53	6.9	7.53	-
MICROBIAL INSIGHTS CENSUS DNA								
NAPHTHALENE DIOXYGENASE			cells/mL	NA	412	NA	NA	-

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameter	PAL (*italics*)	ES (bold)	UNITS	W-36A 5/1/2013	W-36A 7/10/2013	W-36A 10/9/2013	W-36A 1/15/2014	W-36A DUP 1/15/2014
				"Source Area Well"				
8290								
1,2,3,4,6,7,8-HPCDD (TEF = 0.01)			ug/L	NA	NA	NA	NA	NA
1,2,3,4,6,7,8-HPCDF (TEF = 0.01)			ug/L	NA	NA	NA	NA	NA
1,2,3,4,7,8,9-HPCDF (TEF = 0.01)			ug/L	NA	NA	NA	NA	NA
1,2,3,4,7,8-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA	NA
1,2,3,4,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA	NA
1,2,3,6,7,8-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA	NA
1,2,3,6,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA	NA
1,2,3,7,8,9-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA	NA
1,2,3,7,8,9-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA	NA
1,2,3,7,8-PECDD (TEF = 1)			ug/L	NA	NA	NA	NA	NA
1,2,3,7,8-PECDF (TEF = 0.03)			ug/L	NA	NA	NA	NA	NA
2,3,4,6,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA	NA
2,3,4,7,8-PECDF (TEF = 0.3)			ug/L	NA	NA	NA	NA	NA
2,3,7,8-TCDD (TEF = 1)	3E-06	0.00003	ug/L	NA	NA	NA	NA	NA
2,3,7,8-TCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA	NA
OCDD (TEF = 0.0003)			ug/L	NA	NA	NA	NA	NA
OCDF (TEF = 0.0003)			ug/L	NA	NA	NA	NA	NA
TOTAL HPCDD			ug/L	NA	NA	NA	NA	NA
TOTAL HPCDF			ug/L	NA	NA	NA	NA	NA
TOTAL HXCDD			ug/L	NA	NA	NA	NA	NA
TOTAL HXCDF			ug/L	NA	NA	NA	NA	NA
TOTAL PECDD			ug/L	NA	NA	NA	NA	NA
TOTAL PECDF			ug/L	NA	NA	NA	NA	NA
TOTAL TCDD			ug/L	NA	NA	NA	NA	NA
TOTAL TCDF			ug/L	NA	NA	NA	NA	NA
2,3,7,8-TCDD TEQ (ND = 0)			ug/L	NA	NA	NA	NA	NA

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameter	PAL (*italics*)	ES (bold)	UNITS	W-37A 4/30/2013	W-37A 7/9/2013	W-37A 10/8/2013	W-37A 1/14/2014
				"Sentinel Well"			
8021B							
BENZENE	0.5	5	ug/L	0.2 U	0.2 U	0.2 U	0.32 U
NAPHTHALENE	10	100	ug/L	0.44 U	0.44 U	0.44 U	0.56 U
8270C							
2,3,4,6-TETRACHLOROPHENOL			ug/L	0.37 U	0.4 U	0.4 U	0.37 U
2,3,5,6-TETRACHLOROPHENOL			ug/L	0.21 U	0.23 U	0.23 U	0.21 U
2,4,5-TRICHLOROPHENOL			ug/L	0.099 U	0.11 U	0.11 U	0.099 U
2,4,6-TRICHLOROPHENOL			ug/L	0.085 U	0.092 U	0.092 U	0.085 U
2,4-DICHLOROPHENOL			ug/L	0.092 U	0.099 U	0.099 U	0.092 U
2,4-DIMETHYLPHENOL			ug/L	0.17 U	0.18 U	0.18 U	0.17 U
2,4-DINITROPHENOL			ug/L	1.2 U	1.3 U	1.3 U	1.2 U
2-CHLOROPHENOL			ug/L	0.027 U	0.029 U	0.029 U	0.027 U
2-METHYLPHENOL			ug/L	0.048 U	0.052 U	0.052 U	0.048 U
2-NITROPHENOL			ug/L	0.048 U	0.052 U	0.052 U	0.048 U
4,6-DINITRO-2-METHYLPHENOL			ug/L	1 U	1.1 U	1.1 U	1 U
4-CHLORO-3-METHYLPHENOL			ug/L	0.12 U	0.12 U	0.12 U	0.12 U
4-METHYLPHENOL			ug/L	0.057 U	0.062 U	0.062 U	0.057 U
4-NITROPHENOL			ug/L	1.2 U	1.4 U	1.4 U	1.2 U
ACENAPHTHENE			ug/L	0.033 U	0.036 U	0.036 U	0.033 U
ACENAPHTHYLENE			ug/L	0.017 U	0.019 U	0.019 U	0.017 U
ANTHRACENE	600	3,000	ug/L	0.062 U	0.067 U	0.067 U	0.062 U
BENZO (A) ANTHRACENE			ug/L	0.045 U	0.049 U	0.049 U	0.045 U
BENZO (A) PYRENE	0.02	0.2	ug/L	0.04 U	0.044 U	0.044 U	0.04 U
BENZO (B) FLUORANTHENE	0.02	0.2	ug/L	0.058 U	0.063 U	0.063 U	0.058 U
BENZO (G,H,I) PERYLENE			ug/L	0.061 U	0.066 U	0.066 U	0.061 U
BENZO (K) FLUORANTHENE			ug/L	0.06 U	0.065 U	0.065 U	0.06 U
CHRYSENE	0.02	0.2	ug/L	0.045 U	0.049 U	0.049 U	0.045 U
DIBENZO (A,H) ANTHRACENE			ug/L	0.11 U	0.12 U	0.12 U	0.11 U
DIBENZOFURAN			ug/L	0.041 U	0.044 U	0.044 U	0.041 U
DIETHYLPHTHALATE			ug/L	NA	0.21 U	0.14 U	0.24 U
FLUORANTHENE	80	400	ug/L	0.063 U	0.13 J	0.068 U	0.07 J
FLUORENE	80	400	ug/L	0.041 U	0.045 U	0.045 U	0.041 U
INDENO (1,2,3-CD) PYRENE			ug/L	0.08 U	0.087 U	0.087 U	0.08 U
PENTACHLOROPHENOL	0.1	1	ug/L	0.08 U	0.058 U	0.088 U	0.081 U
PHENANTHRENE			ug/L	0.043 U	0.11 J	0.046 U	0.17
PHENOL	400	2,000	ug/L	0.034 U	0.037 U	0.037 U	0.034 U
PYRENE	50	250	ug/L	0.066 U	0.071 U	0.071 U	0.066 U
6010C							
IRON, DISSOLVED			ug/L	6.5 U	6.5 U	6.5 U	6.5 U
MANGANESE, DISSOLVED			ug/L	4 J	2.8 U	3.2 J	3.7 U
RSK175							
METHANE			ug/L	0.14 U	0.14 U	0.25 U	0.14 U
2320B							
ALKALINITY, TOTAL			mg/L	710	690	710	710
4500-NO3							
NITROGEN, NITRATE			mg/L	1.1	0.59	0.33	0.15
9038							
SULFATE			mg/L	43	40	37	38
FIELD							
OXIDATION REDUCTION POTENTIAL			mV	75.2	124.0	-61.3	311.8
DISSOLVED OXYGEN			mg/L	2.07	1.46	1.83	1.25
TEMPERATURE			℃	7.15	12.24	19.78	4.92
SPECIFIC CONDUCTIVITY			mS/cm	0.821	1.286	1.182	1.156
pH			SU	7.47	7.13	6.98	7.57
MICROBIAL INSIGHTS CENSUS DNA							
NAPHTHALENE DIOXYGENASE			cells/mL	NA	42.9	NA	NA

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Parameter	PAL (*italics*)	ES (bold)	UNITS	W-37A 4/30/2013	W-37A 7/9/2013	W-37A 10/8/2013	W-37A 1/14/2014
				"Sentinel Well"			
8290							
1,2,3,4,6,7,8-HPCDD (TEF = 0.01)			ug/L	NA	NA	NA	NA
1,2,3,4,6,7,8-HPCDF (TEF = 0.01)			ug/L	NA	NA	NA	NA
1,2,3,4,7,8,9-HPCDF (TEF = 0.01)			ug/L	NA	NA	NA	NA
1,2,3,4,7,8-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,4,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,6,7,8-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,6,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,7,8,9-HXCDD (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,7,8,9-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
1,2,3,7,8-PECDD (TEF = 1)			ug/L	NA	NA	NA	NA
1,2,3,7,8-PECDF (TEF = 0.03)			ug/L	NA	NA	NA	NA
2,3,4,6,7,8-HXCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
2,3,4,7,8-PECDF (TEF = 0.3)			ug/L	NA	NA	NA	NA
2,3,7,8-TCDD (TEF = 1)	3E-06	0.00003	ug/L	NA	NA	NA	NA
2,3,7,8-TCDF (TEF = 0.1)			ug/L	NA	NA	NA	NA
OCDD (TEF = 0.0003)			ug/L	NA	NA	NA	NA
OCDF (TEF = 0.0003)			ug/L	NA	NA	NA	NA
TOTAL HPCDD			ug/L	NA	NA	NA	NA
TOTAL HPCDF			ug/L	NA	NA	NA	NA
TOTAL HXCDD			ug/L	NA	NA	NA	NA
TOTAL HXCDF			ug/L	NA	NA	NA	NA
TOTAL PECDD			ug/L	NA	NA	NA	NA
TOTAL PECDF			ug/L	NA	NA	NA	NA
TOTAL TCDD			ug/L	NA	NA	NA	NA
TOTAL TCDF			ug/L	NA	NA	NA	NA
2,3,7,8-TCDD TEQ (ND = 0)			ug/L	NA	NA	NA	NA

See Page 19 for Notes.

Table 3 - Groundwater Analytical Data
Groundwater Natural Attenuation Demonstration Summary Report
Former Koppers Inc. Facility - Superior, Wisconsin

Notes:
ug/L - micrograms per liter
mg/L - milligrams per liter
mV - millivolts
°C - degrees Celcius
mS/cm - milliseimens per centimeter
SU - standard units
cells/mL - cells per milliliter
TEF - Toxicity Equivalent Factor (World Health Organization, 2005)
TEQ - Toxicity Equivalent Quotient (laboratory results that were U-qualified were assigned a value of 0 for 2,3,7,8-TCDD TEQ calculation)
DUP - duplicate sample
U - compound was analyzed for, but not detected; reported value is the laboratory detection limit
J - estimated value
Q - isomer is qualified as positively identified, but at an estimated quantity because quantitation is based on the theoretical ratio for these samples.
NA - not analyzed
Italics indicates exceedance of the Preventive Action Limit (PAL)
Bold indicates exceedance of the Enforcement Standard (ES)

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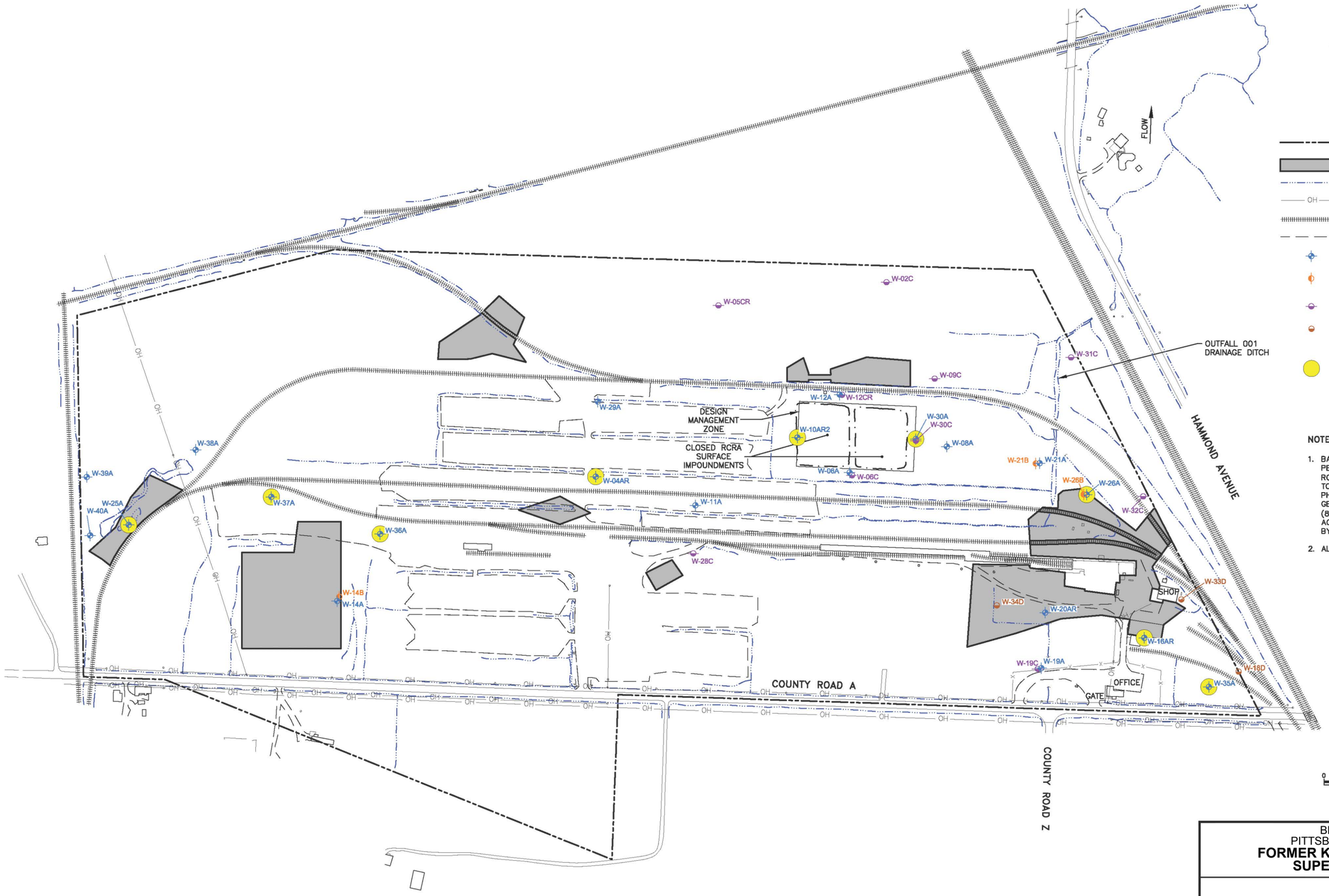
Figures



LEGEND:

- PROPERTY BOUNDARY (FORMER KOPPERS INC. FACILITY)
- LIMIT OF 1' SURFACE COVER
- WATER COURSE
- OH — OVERHEAD POWER LINE (APPROXIMATE)
- RAILROAD LINES
- GRAVEL ACCESS ROAD
- A ZONE (SHALLOW CLAY) MONITORING WELL
- B ZONE (INTERMEDIATE CLAY) MONITORING WELL
- C ZONE (DISCONTINUOUS SAND LENS) MONITORING WELL
- D ZONE (BEDROCK) MONITORING WELL
- WELL SAMPLED IN APRIL/MAY 2013, JULY 2013, OCTOBER 2013, AND JANUARY 2014 AS PART OF SUPPLEMENTAL NATURAL ATTENUATION DEMONSTRATION MONITORING PROGRAM

NOTES:

1. BASE MAP OBTAINED FROM PHOTOGRAMMETRY PERFORMED BY LOCKWOOD MAPPING COMPANY OF ROCHESTER, NY (12/28/01). GENERAL TOPOGRAPHY OBTAINED FROM AERIAL PHOTOGRAPHY BASED SURVEY BY AXIS GEOSPATIAL COMPANIES OF EASTON, MARYLAND (8/17/08). AS-BUILT TOPOGRAPHY OF CORRECTIVE ACTION AREAS OBTAINED FROM GROUND SURVEY BY LHB, INC. OF DULUTH, MINNESOTA.
2. ALL LOCATIONS ARE APPROXIMATE.

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA
FORMER KOPPERS INC. FACILITY
SUPERIOR, WISCONSIN

SITE PLAN

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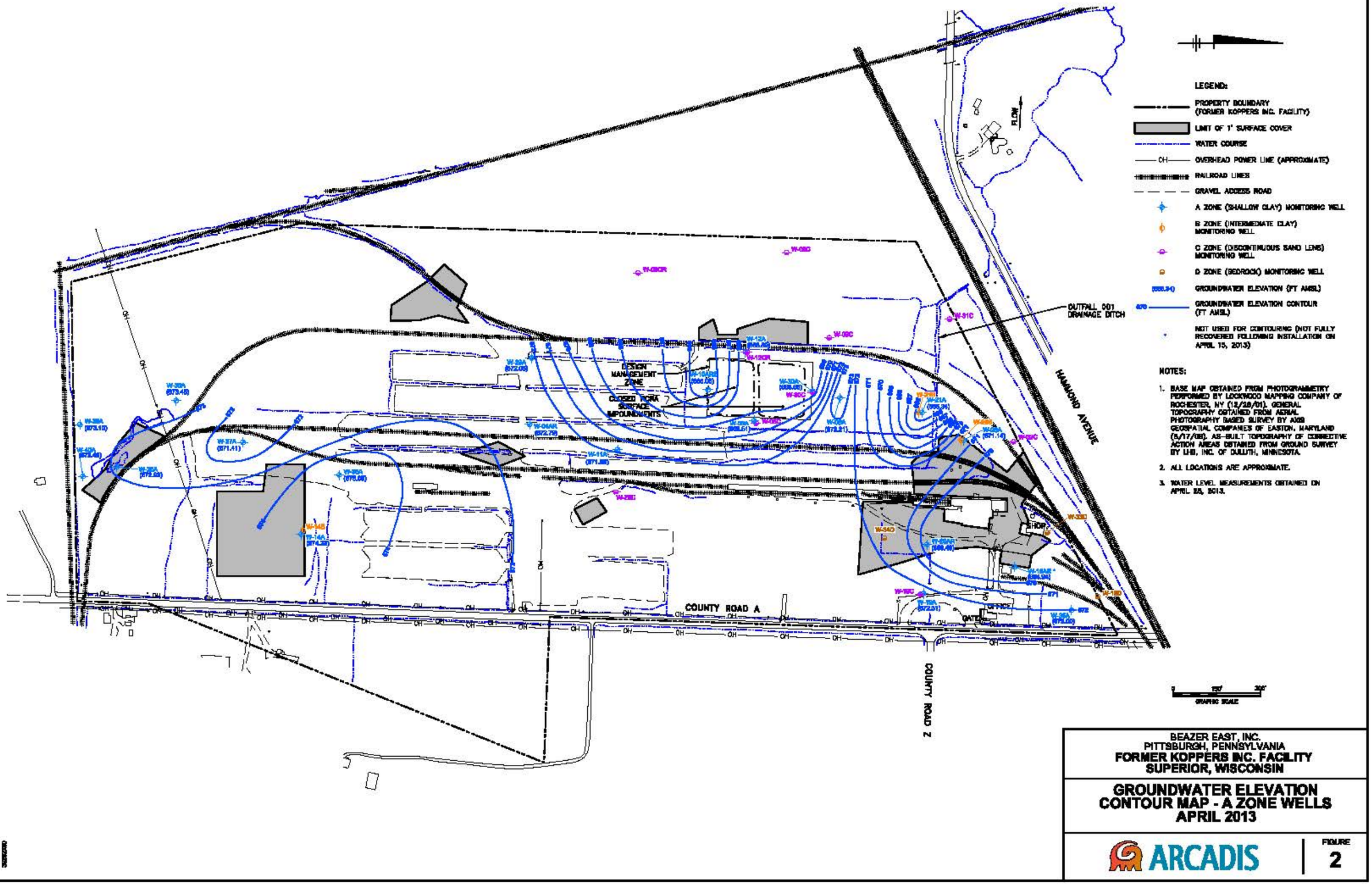
FIGURE
1

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: L.FORAKER R.PETRIE L.FORAKER LD: PIC: J. HOLDEN PM: D. BESSINGPAS TM: D. BESSINGPAS LYR: ON=*; OFF=*REF*
G:\ENVCAD\SYRACUSE\ACT\B003282\0000\000003\DWG\GW\39282G01.DWG LAYOUT: 1 SAVED: 6/4/2014 5:05 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 6/4/2014 5:12 PM BY: PETRIE, RICH
XREFS: IMAGES: PROJECTNAME: ---- PROJECTNAME: B0039200.0000.00000\XREF\SUPERIOR
39200X01
39282X00



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FORMER KOPPERS INC. FACILITY
SUPERIOR, WISCONSIN

GROUNDWATER ELEVATION CONTOUR MAP - A ZONE WELLS APRIL 2013

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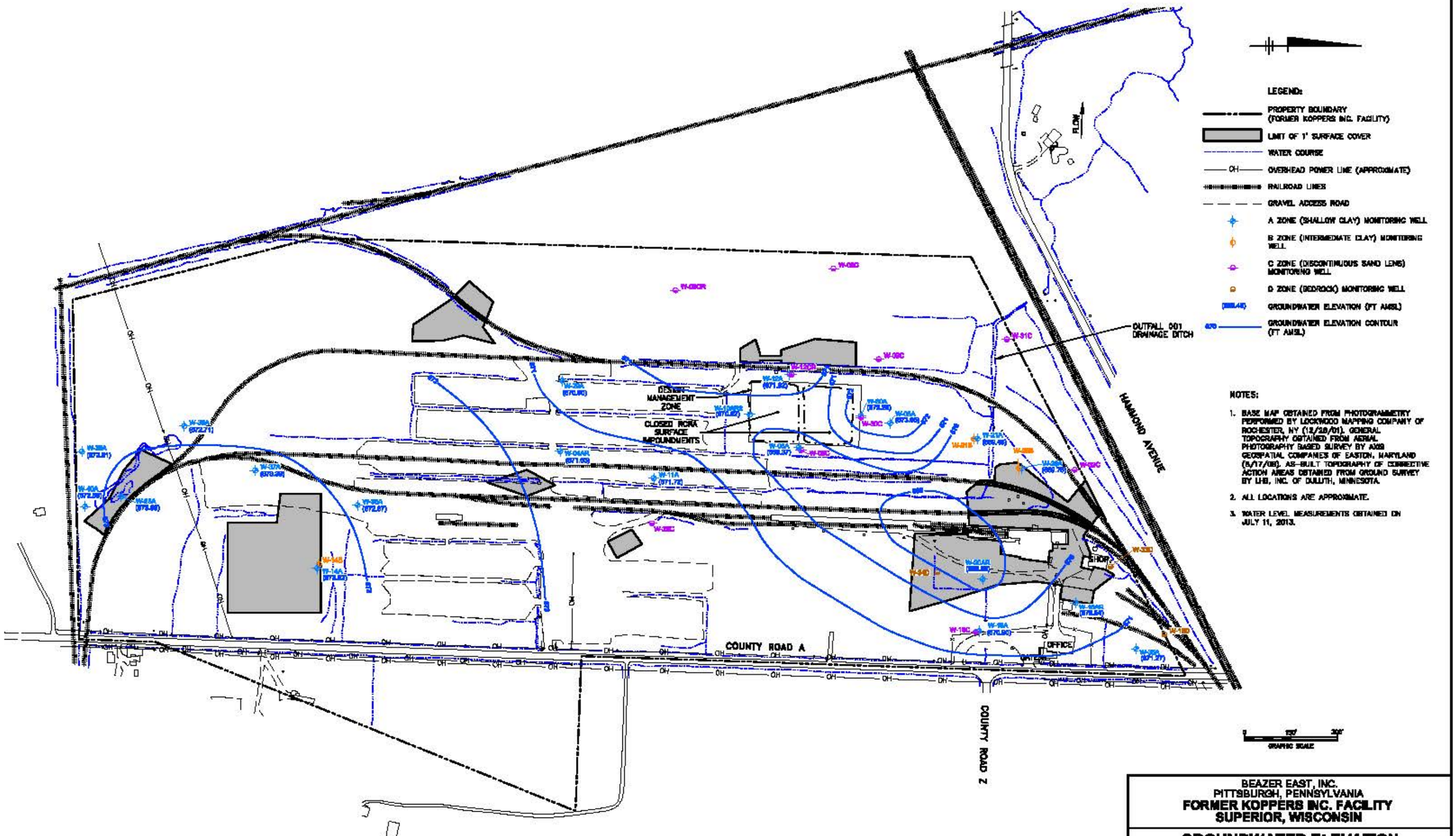
FIGURE 2



BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA
FORMER KOPPERS INC. FACILITY
SUPERIOR, WISCONSIN

GROUNDWATER ELEVATION CONTOUR MAP - A ZONE WELLS JULY 2013

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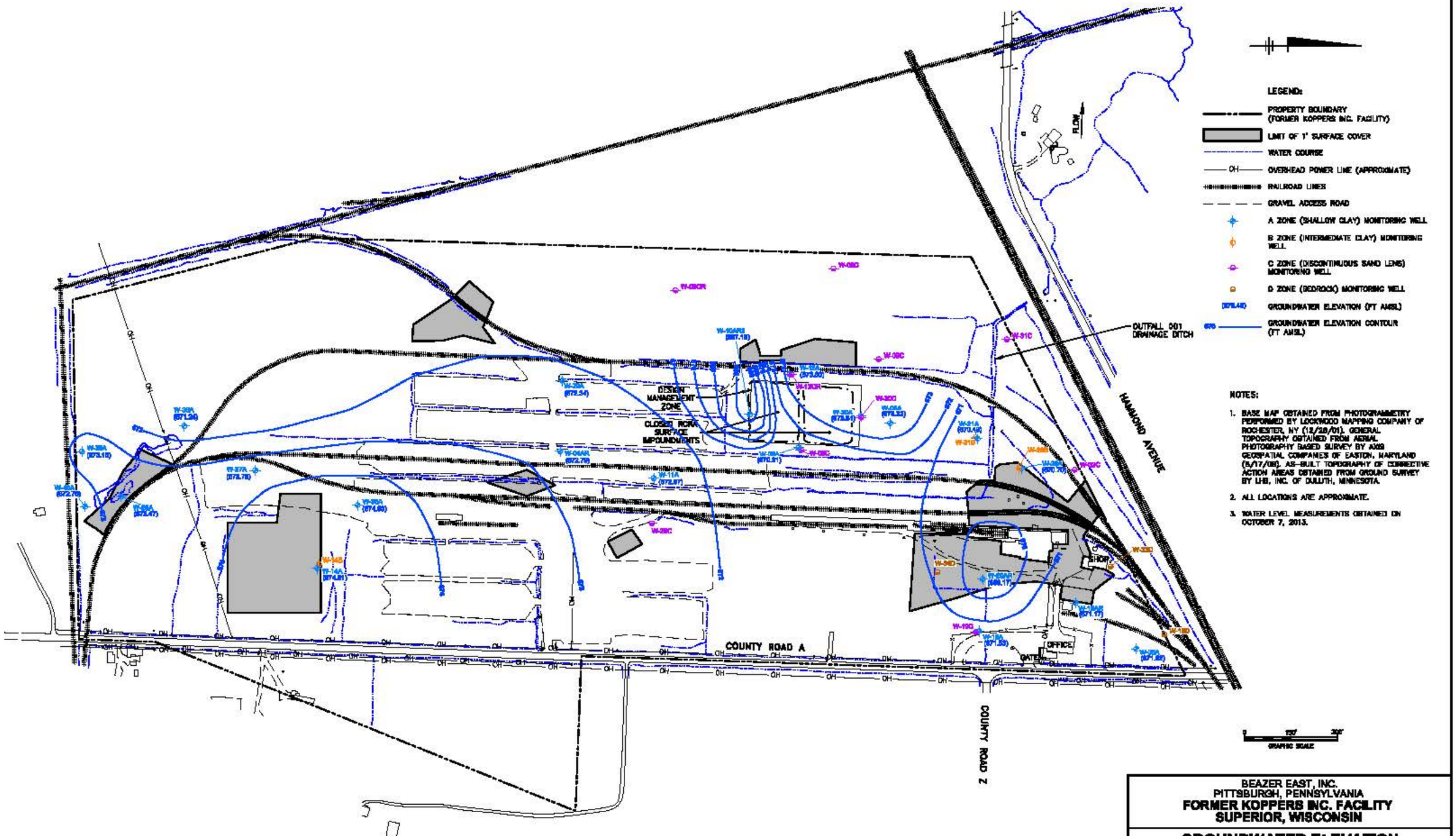
FIGURE 3



BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA
FORMER KOPPERS INC. FACILITY
SUPERIOR, WISCONSIN

GROUNDWATER ELEVATION CONTOUR MAP - A ZONE WELLS OCTOBER 2013

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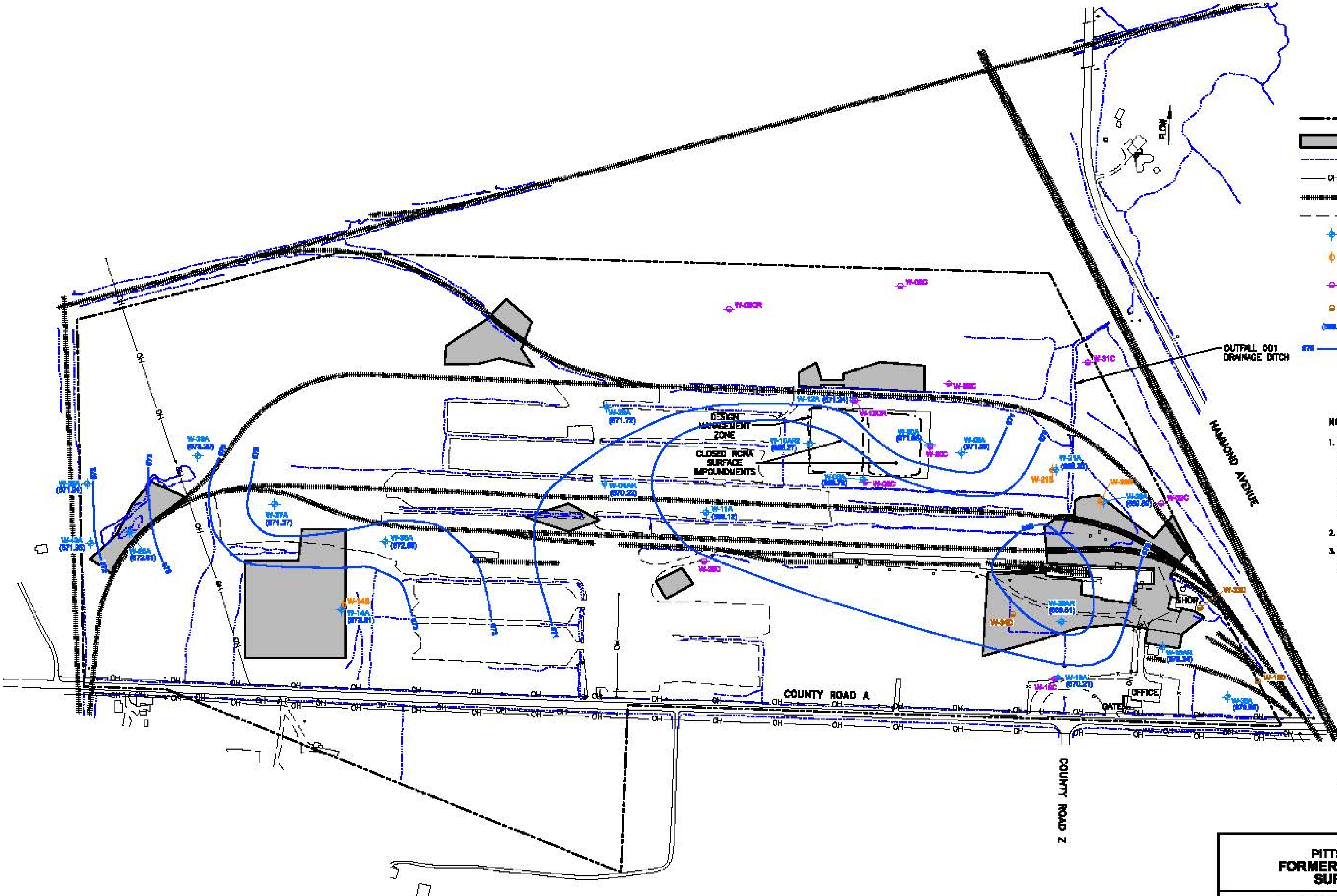
FIGURE 4



LEGEND:

- PROPERTY BOUNDARY (FORMER KOPPERS INC. FACILITY)
- LIMIT OF 1' SURFACE COVER
- WATER COURSE
- OVERHEAD POWER LINE (APPROXIMATE)
- RAILROAD LINES
- GRAVEL ACCESS ROAD
- A ZONE (SHALLOW CLAY) MONITORING WELL
- B ZONE (INTERMEDIATE CLAY) MONITORING WELL
- C ZONE (DISCONTINUOUS SAND LENS) MONITORING WELL
- D ZONE (BEDROCK) MONITORING WELL
- GROUNDWATER ELEVATION (FT AMSL)
- GROUNDWATER ELEVATION CONTOUR (FT AMSL)

NOTES:

1. BASE MAP OBTAINED FROM PHOTOGRAMMETRY PERFORMED BY LOCKWOOD MAPPING COMPANY OF ROCHESTER, NY (12/28/01). GENERAL TOPOGRAPHY OBTAINED FROM AERIAL PHOTOGRAPHY BASED SURVEY BY AXIS GEOSPATIAL COMPANIES OF EASTON, MARYLAND (5/17/08). AS-BUILT TOPOGRAPHY OF CORRECTIVE ACTION AREAS OBTAINED FROM GROUND SURVEY BY LHB, INC. OF DULUTH, MINNESOTA.
2. ALL LOCATIONS ARE APPROXIMATE.
3. WATER LEVEL MEASUREMENTS OBTAINED ON JANUARY 14, 2014, EXCEPT W-15AR (JAN. 15) AND W-36A (JAN. 16).

GRAPHIC SCALE

BEAZER EAST, INC.
PITTSBURGH, PENNSYLVANIA
FORMER KOPPERS INC. FACILITY
SUPERIOR, WISCONSIN

GROUNDWATER ELEVATION CONTOUR MAP - A ZONE WELLS
JANUARY 2014

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FIGURE
5

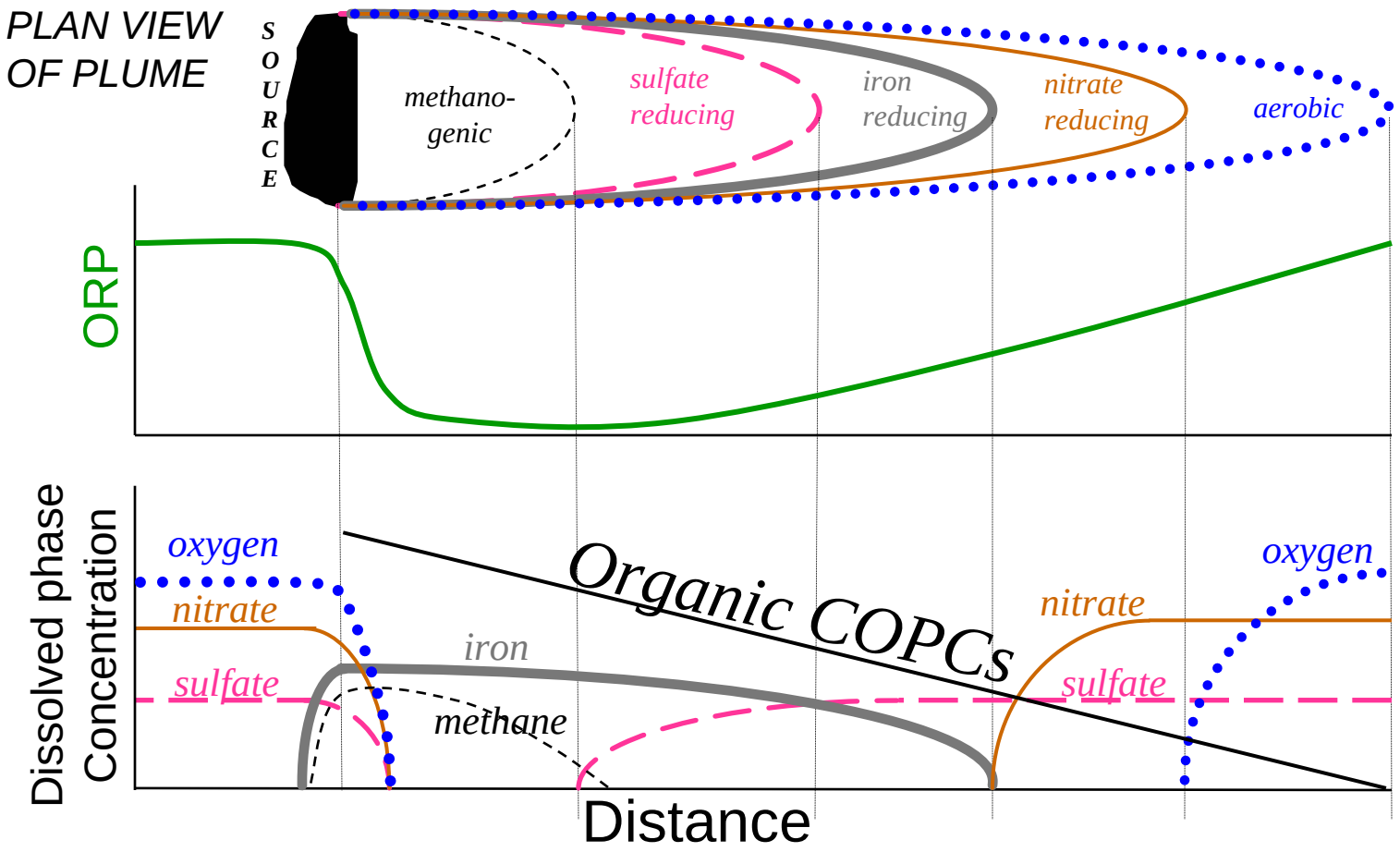

Figure 6. Conceptual model for trends in electron acceptors, metabolic by-products, and ORP during COPC biodegradation in groundwater downgradient of an organic source.

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Appendices

Appendix A

W-16AR Soil Boring/Well Construction Log

Date Start/Finish: 4/15/2013
Drilling Company: Boart Longyear
Driller's Name: Randy/Adam
Drilling Method: Hollow-Stem Auger
Auger Size: 8.25"
Rig Type: BK-81
Sampling Method: Split-Spoon

Northing: 5477113.78
Easting: 1449337.69
Casing Elevation: 675.37' AMSL

Borehole Depth: 14 ft bgs
Surface Elevation: 672.20' AMSL

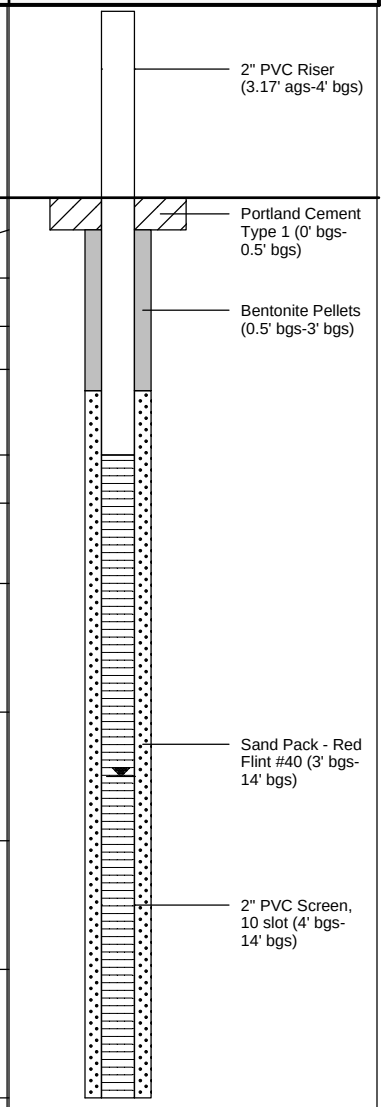
Descriptions By: Christopher Ryan

Well/Boring ID: **W-16AR**

Client: Beazer East, Inc.

Location: Superior, WI

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Blow Counts	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description
675							
0							
	SS-1	0-2	10-28 27-2	1.6	0.0 0.0		ORGANICS, Wood, no odor Light brown fine SAND, Organics, frozen, no odor Dark brown CLAY, Organics, no odor
670	SS-2	2-4	5-7 15-21	1.6	0.0 0.0		Dark brown CLAY, no odor Light brown CLAY, some coarse Sand, no odor
5	SS-3	4-6	10-11 17-16	2.0	0.0 0.1		Dark brown CLAY, no odor Red CLAY, slight creosote-like odor
665	SS-4	6-8	5-7 15-17	2.0	1.1		Red CLAY, gray fine Sand, oily spots, strong creosote-like odor
	SS-5	8-10	5-5 7-9	2.0	0.3		Red CLAY, oily spots, sheen, slight creosote-like odor
10	SS-6	10-12	5-5 6-7	1.8	0.2		Red CLAY, little gray Silt, creosote-like odor
660	SS-7	12-14	5-5 6-7	1.9	0.1		Red CLAY, no odor
15							End of Boring @ 14' bgs



Remarks: ft = feet; ags = above ground surface; bgs = below ground surface; NA = not available/not applicable; ppm = parts per million; PID = photoionization detector; AMSL = above mean sea level.

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Appendix B

Laboratory Analytical and
Data Validation Reports

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Laboratory Analytical and Data Validation Reports

April/May 2013

June 19, 2013

Beazer East, Inc.
Attn: Ms. Angie Gatchie c/o FTS
200 Third Avenue
Carnegie, PA 15106

Project: Superior GW - WI Cert. #999472650

Dear Ms. Angie Gatchie c/o FTS,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1305096	04/30/2013	Laboratory Services
1305097	05/01/2013	Laboratory Services
1305100	05/02/2013	Laboratory Services

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request. LOD and LOQ values associated with samples requiring a dilution have been adjusted based on the dilution factor.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Gary L. Wood
Project Chemist

5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305096**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-25-042913**	Sampled:	04/29/13 10:05
Lab Sample ID:	**1305096-01**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/09/13 By: LEW
Dilution Factor:	1	Analyzed:	05/09/13 By: LEW
QC Batch:	1304611	Analytical Batch:	3E14029

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*95*	*81-126*
aaa-Trifluorotoluene	*108*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305096**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-25-042913**	Sampled:	04/29/13 10:05
Lab Sample ID:	**1305096-01**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	04/30/13 08:20

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**0.46**	**J**	0.48	0.14	ug/L	1	RSK-175	05/09/13 13:24	BJH	1304377

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

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Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-25-042913**	Sampled:	04/29/13 10:05
Lab Sample ID:	**1305096-01**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/06/13 By: ALK
Dilution Factor:	1	Analyzed:	05/07/13 By: JLB
QC Batch:	1304209	Analytical Batch:	3E08013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**0.41**	0.11	0.033
*208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	**0.12J**	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	**0.072J**	0.21	0.063
86-73-7	Fluorene	**0.19**	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	**1.2**	0.27	0.080
85-01-8	Phenanthrene	**0.24**	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37

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*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

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Lab Sample ID:	**1305096-01**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/06/13 By: ALK
Dilution Factor:	1	Analyzed:	05/07/13 By: JLB
QC Batch:	1304209	Analytical Batch:	3E08013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*49*	*20-70*
Phenol-d6	*31*	*18-45*
Nitrobenzene-d5	*83*	*31-123*
2-Fluorobiphenyl	*78*	*25-113*
2,4,6-Tribromophenol	*91*	*30-121*
o-Terphenyl	*90*	*42-125*

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TRIMATRIX LABORATORIES

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Lab Sample ID:	**1305096-01**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	04/30/13 08:20

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	05/08/13 08:36	KLV	1304224
Manganese	**7.5**	**J**	9.3	2.8	ug/L	1	USEPA-6010C	05/08/13 08:36	KLV	1304224

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Lab Sample ID:	**1305096-01**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	04/30/13 08:20

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**570**		1.6	0.50	mg/L	1	SM 2320 B	05/10/13 15:50	SKA	1304528
Nitrogen, Nitrate	**0.015**	**J**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	04/30/13 13:00	CAC	1304067
Sulfate	**44**		2.6	0.77	mg/L	2	USEPA-9038	05/07/13 10:06	LMA	1304310

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305096**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-26A-042913**	Sampled:	04/29/13 13:05
Lab Sample ID:	**1305096-02**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/09/13 By: LEW
Dilution Factor:	1	Analyzed:	05/09/13 By: LEW
QC Batch:	1304611	Analytical Batch:	3E14029

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*96*	*81-126*
aaa-Trifluorotoluene	*107*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305096**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-26A-042913**	Sampled:	04/29/13 13:05
Lab Sample ID:	**1305096-02**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	04/30/13 08:20

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	ND	U	0.48	0.14	ug/L	1	RSK-175	05/09/13 13:27	BJH	1304377

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

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Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-26A-042913**	Sampled:	04/29/13 13:05
Lab Sample ID:	**1305096-02**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/06/13 By: ALK
Dilution Factor:	1	Analyzed:	05/07/13 By: JLB
QC Batch:	1304209	Analytical Batch:	3E08013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	**0.20J**	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.27	0.080
85-01-8	Phenanthrene	**0.15**	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305096**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-26A-042913**	Sampled:	04/29/13 13:05
Lab Sample ID:	**1305096-02**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/06/13 By: ALK
Dilution Factor:	1	Analyzed:	05/07/13 By: JLB
QC Batch:	1304209	Analytical Batch:	3E08013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*55*	*20-70*
Phenol-d6	*35*	*18-45*
Nitrobenzene-d5	*85*	*31-123*
2-Fluorobiphenyl	*77*	*25-113*
2,4,6-Tribromophenol	*96*	*30-121*
o-Terphenyl	*98*	*42-125*

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Lab Sample ID:	**1305096-02**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	04/30/13 08:20

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	05/08/13 08:52	KLV	1304224
Manganese	**4.4**	**J**	9.3	2.8	ug/L	1	USEPA-6010C	05/08/13 08:52	KLV	1304224

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Lab Sample ID:	**1305096-02**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	04/30/13 08:20

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**340**	1.6	0.50	mg/L	1	SM 2320 B	05/10/13 15:50	SKA	1304528
Nitrogen, Nitrate	**0.34**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	04/30/13 13:04	CAC	1304067
Sulfate	**57**	2.6	0.77	mg/L	2	USEPA-9038	05/07/13 10:09	LMA	1304310

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305096**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-35A-042913**	Sampled:	04/29/13 15:45
Lab Sample ID:	**1305096-03**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/09/13 By: LEW
Dilution Factor:	1	Analyzed:	05/09/13 By: LEW
QC Batch:	1304611	Analytical Batch:	3E14029

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*99*	*81-126*
aaa-Trifluorotoluene	*107*	*86-118*

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Matrix:	Water	Received:	04/30/13 08:20

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**0.22**	**J**	0.48	0.14	ug/L	1	RSK-175	05/09/13 13:30	BJH	1304377

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CAS Number	Analyte	Analytical Result	LOQ	LOD
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191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.27	0.080
85-01-8	Phenanthrene	NDU	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37

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Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/06/13 By: ALK
Dilution Factor:	1	Analyzed:	05/07/13 By: JLB
QC Batch:	1304209	Analytical Batch:	3E08013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*47*	*20-70*
Phenol-d6	*31*	*18-45*
Nitrobenzene-d5	*85*	*31-123*
2-Fluorobiphenyl	*78*	*25-113*
2,4,6-Tribromophenol	*91*	*30-121*
o-Terphenyl	*94*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305096**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-35A-042913**	Sampled:	04/29/13 15:45
Lab Sample ID:	**1305096-03**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	04/30/13 08:20

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	05/08/13 08:56	KLV	1304224
Manganese	**3.7**	**J**	9.3	2.8	ug/L	1	USEPA-6010C	05/08/13 08:56	KLV	1304224

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305096**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-35A-042913**	Sampled:	04/29/13 15:45
Lab Sample ID:	**1305096-03**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	04/30/13 08:20

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Nitrogen, Nitrate	**0.076**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	04/30/13 13:05	CAC	1304067
Alkalinity, Total	**410**	1.6	0.50	mg/L	1	SM 2320 B	05/10/13 15:50	SKA	1304528
Sulfate	**120**	6.4	1.9	mg/L	5	USEPA-9038	05/07/13 10:13	LMA	1304310

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305096**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**Trip Blank TM0212**	Sampled:	04/29/13 00:00
Lab Sample ID:	**1305096-04**	Sampled By:	TML
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/07/13 By: LEW
Dilution Factor:	1	Analyzed:	05/07/13 By: LEW
QC Batch:	1304432	Analytical Batch:	3E13041

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*109*	*81-126*
aaa-Trifluorotoluene	*107*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305097**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-37A-043013**	Sampled:	04/30/13 11:20
Lab Sample ID:	**1305097-01**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	05/01/13 10:15
Unit:	ug/L	Prepared:	05/09/13 By: LEW
Dilution Factor:	1	Analyzed:	05/09/13 By: LEW
QC Batch:	1304611	Analytical Batch:	3E14029

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*107*	*81-126*
aaa-Trifluorotoluene	*108*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305097**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-37A-043013**	Sampled:	04/30/13 11:20
Lab Sample ID:	**1305097-01**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	05/01/13 10:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	ND	U	0.48	0.14	ug/L	1	RSK-175	05/09/13 13:34	BJH	1304377

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305097**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-37A-043013**	Sampled:	04/30/13 11:20
Lab Sample ID:	**1305097-01**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	05/01/13 10:15
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.27	0.080
85-01-8	Phenanthrene	NDU	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305097**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-37A-043013**	Sampled:	04/30/13 11:20
Lab Sample ID:	**1305097-01**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	05/01/13 10:15
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*56*	*20-70*
Phenol-d6	*35*	*18-45*
Nitrobenzene-d5	*79*	*31-123*
2-Fluorobiphenyl	*88*	*25-113*
2,4,6-Tribromophenol	*86*	*30-121*
o-Terphenyl	*98*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305097**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-37A-043013**	Sampled:	04/30/13 11:20
Lab Sample ID:	**1305097-01**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	05/01/13 10:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	05/08/13 08:59	KLV	1304224
Manganese	**4.0**	**J**	9.3	2.8	ug/L	1	USEPA-6010C	05/08/13 08:59	KLV	1304224

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305097**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-37A-043013**	Sampled:	04/30/13 11:20
Lab Sample ID:	**1305097-01**	Sampled By:	Andrew Tomcik
Matrix:	Water	Received:	05/01/13 10:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Sulfate	**43**	2.6	0.77	mg/L	2	USEPA-9038	05/07/13 10:09	LMA	1304310
Alkalinity, Total	**710**	1.6	0.50	mg/L	1	SM 2320 B	05/10/13 15:50	SKA	1304528
Nitrogen, Nitrate	**1.1**	0.30	0.089	mg/L	10	SM 4500-NO3 F-2000	05/01/13 13:30	CAC	1304071

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305097**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**Trip Blank TM1254**	Sampled:	04/30/13 00:00
Lab Sample ID:	**1305097-02**	Sampled By:	TML
Matrix:	Water	Received:	05/01/13 10:15
Unit:	ug/L	Prepared:	05/07/13 By: LEW
Dilution Factor:	1	Analyzed:	05/07/13 By: LEW
QC Batch:	1304432	Analytical Batch:	3E13041

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*98*	*81-126*
aaa-Trifluorotoluene	*107*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-04AR-050113**	Sampled:	05/01/13 08:10
Lab Sample ID:	**1305100-01**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	ND	U	0.48	0.14	ug/L	1	RSK-175	05/09/13 13:38	BJH	1304377

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-04AR-050113**	Sampled:	05/01/13 08:10
Lab Sample ID:	**1305100-01**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	05/08/13 09:09	KLV	1304224
Manganese	**2.8**	**U**	9.3	2.8	ug/L	1	USEPA-6010C	05/08/13 09:09	KLV	1304224

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-04AR-050113**	Sampled:	05/01/13 08:10
Lab Sample ID:	**1305100-01**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Nitrogen, Nitrate	**2.1**	0.30	0.089	mg/L	10	SM 4500-NO3 F-2000	05/02/13 18:18	CAC	1304116
Alkalinity, Total	**200**	1.6	0.50	mg/L	1	SM 2320 B	05/13/13 11:55	SKA	1304583
Sulfate	**120**	6.4	1.9	mg/L	5	USEPA-9038	05/07/13 10:13	LMA	1304310

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-99A-050113**	Sampled:	05/01/13 18:00
Lab Sample ID:	**1305100-02**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	ND	U	0.48	0.14	ug/L	1	RSK-175	05/09/13 13:51	BJH	1304377

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-99A-050113**	Sampled:	05/01/13 18:00
Lab Sample ID:	**1305100-02**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	05/08/13 09:12	KLV	1304224
Manganese	**2.9**	**J**	9.3	2.8	ug/L	1	USEPA-6010C	05/08/13 09:12	KLV	1304224

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-99A-050113**	Sampled:	05/01/13 18:00
Lab Sample ID:	**1305100-02**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**200**	1.6	0.50	mg/L	1	SM 2320 B	05/13/13 11:55	SKA	1304583
Sulfate	**120**	6.4	1.9	mg/L	5	USEPA-9038	05/07/13 10:13	LMA	1304310
Nitrogen, Nitrate	**2.2**	0.15	0.044	mg/L	5	SM 4500-NO3 F-2000	05/02/13 18:22	CAC	1304116

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-36A-050113**	Sampled:	05/01/13 08:10
Lab Sample ID:	**1305100-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/09/13 By: LEW
Dilution Factor:	1	Analyzed:	05/09/13 By: LEW
QC Batch:	1304611	Analytical Batch:	3E14029

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*105*	*81-126*
aaa-Trifluorotoluene	*109*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-36A-050113**	Sampled:	05/01/13 08:10
Lab Sample ID:	**1305100-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**80**	0.97	0.29	ug/L	2	RSK-175	05/09/13 13:59	BJH	1304377

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-36A-050113**	Sampled:	05/01/13 08:10
Lab Sample ID:	**1305100-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**0.050J**	0.11	0.033
208-96-8	Acenaphthylene	**0.030J**	0.057	0.017
120-12-7	Anthracene	**0.21**	0.20	0.062
56-55-3	Benzo(a)anthracene	**0.080J**	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	**0.13J**	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	**0.11J**	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	**19**	0.27	0.080
85-01-8	Phenanthrene	**0.090J**	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	**0.070J**	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	**2.8**	1.2	0.37

Continued on next page

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-36A-050113**	Sampled:	05/01/13 08:10
Lab Sample ID:	**1305100-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
935-95-5	2,3,5,6-Tetrachlorophenol	**1.7**	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	**0.44**	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	**0.33J**	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*45*	*20-70*
Phenol-d6	*27*	*18-45*
Nitrobenzene-d5	*82*	*31-123*
2-Fluorobiphenyl	*65*	*25-113*
2,4,6-Tribromophenol	*99*	*30-121*
o-Terphenyl	*65*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-36A-050113**	Sampled:	05/01/13 08:10
Lab Sample ID:	**1305100-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**19**	**J**	22	6.5	ug/L	1	USEPA-6010C	05/08/13 09:16	KLV	1304224
Manganese	**280**		9.3	2.8	ug/L	1	USEPA-6010C	05/08/13 09:16	KLV	1304224

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-36A-050113**	Sampled:	05/01/13 08:10
Lab Sample ID:	**1305100-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**340**	1.6	0.50	mg/L	1	SM 2320 B	05/13/13 11:55	SKA	1304583
Sulfate	**85**	6.4	1.9	mg/L	5	USEPA-9038	05/07/13 10:13	LMA	1304310
Nitrogen, Nitrate	**0.098**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	05/02/13 13:39	CAC	1304116

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-36A-050113**	Sampled:	05/01/13 08:10
Lab Sample ID:	**1305100-03RE1**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/15/13 By: LEW
Dilution Factor:	50	Analyzed:	05/15/13 By: LEW
QC Batch:	1304752	Analytical Batch:	3E16003

Halogenated and Aromatic Volatiles by EPA Method 8021B

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*88*	*81-126*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30A-050113**	Sampled:	05/01/13 13:15
Lab Sample ID:	**1305100-04**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**2.9**	0.48	0.14	ug/L	1	RSK-175	05/09/13 14:05	BJH	1304377

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30A-050113**	Sampled:	05/01/13 13:15
Lab Sample ID:	**1305100-04**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**32**		22	6.5	ug/L	1	USEPA-6010C	05/08/13 09:19	KLV	1304224
Manganese	**6.7**	**J**	9.3	2.8	ug/L	1	USEPA-6010C	05/08/13 09:19	KLV	1304224

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30A-050113**	Sampled:	05/01/13 13:15
Lab Sample ID:	**1305100-04**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Sulfate	**22**	1.3	0.39	mg/L	1	USEPA-9038	05/07/13 09:44	LMA	1304310
Alkalinity, Total	**360**	1.6	0.50	mg/L	1	SM 2320 B	05/13/13 11:55	SKA	1304583
Nitrogen, Nitrate	**0.61**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	05/02/13 13:40	CAC	1304116

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-10AR2-050113**	Sampled:	05/01/13 10:55
Lab Sample ID:	**1305100-05**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**86**	0.97	0.29	ug/L	2	RSK-175	05/09/13 14:14	BJH	1304377

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-10AR2-050113**	Sampled:	05/01/13 10:55
Lab Sample ID:	**1305100-05**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**44**	22	6.5	ug/L	1	USEPA-6010C	05/08/13 09:23	KLV	1304224
Manganese	**33**	9.3	2.8	ug/L	1	USEPA-6010C	05/08/13 09:23	KLV	1304224

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-10AR2-050113**	Sampled:	05/01/13 10:55
Lab Sample ID:	**1305100-05**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**360**		1.6	0.50	mg/L	1	SM 2320 B	05/13/13 11:55	SKA	1304583
Nitrogen, Nitrate	**0.024**	**J**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	05/02/13 13:41	CAC	1304116
Sulfate	**23**		1.3	0.39	mg/L	1	USEPA-9038	05/07/13 09:44	LMA	1304310

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-16AR-050113**	Sampled:	05/01/13 14:55
Lab Sample ID:	**1305100-06**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/09/13 By: LEW
Dilution Factor:	1	Analyzed:	05/10/13 By: LEW
QC Batch:	1304611	Analytical Batch:	3E14029

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	**0.47J**	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*106*	*81-126*
aaa-Trifluorotoluene	*108*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-16AR-050113**	Sampled:	05/01/13 14:55
Lab Sample ID:	**1305100-06**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**4.8**	0.48	0.14	ug/L	1	RSK-175	05/09/13 14:26	BJH	1304377

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-16AR-050113**	Sampled:	05/01/13 14:55
Lab Sample ID:	**1305100-06**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**24**	0.11	0.033
208-96-8	Acenaphthylene	**0.69**	0.057	0.017
120-12-7	Anthracene	**0.14J**	0.20	0.062
56-55-3	Benzo(a)anthracene	**0.10J**	0.15	0.045
50-32-8	Benzo(a)pyrene	**0.052J**	0.13	0.040
*205-99-2	Benzo(b)fluoranthene	**0.062J**	0.19	0.058
*207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	**0.11J**	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	**0.95**	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
105-67-9	2,4-Dimethylphenol	**1.4**	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	**0.79**	0.21	0.063
86-73-7	Fluorene	**1.2**	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	**0.12J**	0.16	0.048
106-44-5	4-Methylphenol	**0.16J**	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.27	0.080
85-01-8	Phenanthrene	**0.082J**	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	**0.48**	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37

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*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-16AR-050113**	Sampled:	05/01/13 14:55
Lab Sample ID:	**1305100-06**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*44*	*20-70*
Phenol-d6	*27*	*18-45*
Nitrobenzene-d5	*81*	*31-123*
2-Fluorobiphenyl	*78*	*25-113*
2,4,6-Tribromophenol	*94*	*30-121*
o-Terphenyl	*78*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-16AR-050113**	Sampled:	05/01/13 14:55
Lab Sample ID:	**1305100-06**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	05/08/13 09:26	KLV	1304224
Manganese	**70**		9.3	2.8	ug/L	1	USEPA-6010C	05/08/13 09:26	KLV	1304224

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-16AR-050113**	Sampled:	05/01/13 14:55
Lab Sample ID:	**1305100-06**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**340**	1.6	0.50	mg/L	1	SM 2320 B	05/13/13 11:55	SKA	1304583
Nitrogen, Nitrate	**0.10**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	05/02/13 13:43	CAC	1304116
Sulfate	**74**	6.4	1.9	mg/L	5	USEPA-9038	05/07/13 11:38	LMA	1304310

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-050113**	Sampled:	05/01/13 15:50
Lab Sample ID:	**1305100-07**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**0.19**	**J**	0.48	0.14	ug/L	1	RSK-175	05/09/13 14:30	BJH	1304377

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-050113**	Sampled:	05/01/13 15:50
Lab Sample ID:	**1305100-07**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	05/08/13 09:29	KLV	1304224
Manganese	ND	U	9.3	2.8	ug/L	1	USEPA-6010C	05/08/13 09:29	KLV	1304224

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-050113**	Sampled:	05/01/13 15:50
Lab Sample ID:	**1305100-07**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**1.9**		1.6	0.50	mg/L	1	SM 2320 B	05/13/13 11:55	SKA	1304583
Nitrogen, Nitrate	ND	U	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	05/02/13 13:44	CAC	1304116
Sulfate	ND	U	1.3	0.39	mg/L	1	USEPA-9038	05/07/13 09:46	LMA	1304310

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305100**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**Trip Blank**	Sampled:	05/01/13 00:00
Lab Sample ID:	**1305100-08**	Sampled By:	TML
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/09/13 By: LEW
Dilution Factor:	1	Analyzed:	05/10/13 By: LEW
QC Batch:	1304611	Analytical Batch:	3E14029

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*107*	*81-126*
aaa-Trifluorotoluene	*106*	*86-118*

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QUALITY CONTROL REPORT

Halogenated and Aromatic Volatiles by EPA Method 8021B

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1304432 5030B Aqueous Purge & Trap/USEPA-8021B									
Method Blank					Analyzed:	05/07/2013	By: LEW		
Unit: ug/L					Analytical Batch:	3E13041			
Benzene			ND U					0.67	0.20
n-Butylbenzene			ND U			--		0.92	0.28
Chloromethane			ND U					1.2	0.37
Ethylbenzene			ND U					0.67	0.20
Methyl tert-Butyl Ether			ND U					1.6	0.48
Naphthalene			ND U			--		1.5	0.44
n-Propylbenzene			ND U					0.80	0.24
Styrene			ND U			--		0.67	0.20
Toluene			ND U					1.1	0.33
1,1,1-Trichloroethane			ND U					1.0	0.30
1,3,5-Trimethylbenzene			ND U					0.80	0.24
1,2,4-Trimethylbenzene			ND U					0.74	0.22
Xylene, Meta + Para			ND U			--		1.4	0.42
Xylene, Ortho			ND U					0.67	0.20
Surrogates:									
1,2-Dichloroethane-d4				*99*	*81-126*				
aaa-Trifluorotoluene				*103*	*86-118*				
Laboratory Control Sample					Analyzed:	05/07/2013	By: LEW		
Unit: ug/L					Analytical Batch:	3E13041			
Benzene	20.0		**20.6**	103	83-119	--		0.666	0.20
n-Butylbenzene	20.0		**19.0**	95	80-120	--		0.919	0.28
Chloromethane	20.0		**19.8**	99	65-138	--		1.24	0.37
Ethylbenzene	20.0		**20.1**	100	85-116	--		0.666	0.20
Methyl tert-Butyl Ether	20.0		**19.2**	96	77-116	--		1.59	0.48
Naphthalene	20.0		**19.3**	96	80-120	--		1.47	0.44
n-Propylbenzene	20.0		**19.4**	97	80-120	--		0.799	0.24
Styrene	20.0		**20.0**	100	80-120	--		0.666	0.20
Toluene	20.0		**19.9**	100	77-128	--		1.11	0.33
1,1,1-Trichloroethane	20.0		**20.1**	100	85-131	--		1.02	0.30
1,3,5-Trimethylbenzene	20.0		**19.3**	96	80-116	--		0.803	0.24
1,2,4-Trimethylbenzene	20.0		**19.3**	97	77-123	--		0.743	0.22
Xylene, Meta + Para	40.0		**39.9**	100	87-118	--		1.39	0.42
Xylene, Ortho	20.0		**19.8**	99	87-118	--		0.666	0.20

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Halogenated and Aromatic Volatiles by EPA Method 8021B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1304611 5030B Aqueous Purge & Trap/USEPA-8021B									
Method Blank					Analyzed:	05/09/2013	By: LEW		
Unit: ug/L					Analytical Batch:	3E14029			
Benzene			ND U					0.67	0.20
n-Butylbenzene			ND U					0.92	0.28
Chloromethane			ND U					1.2	0.37
Ethylbenzene			ND U					0.67	0.20
Methyl tert-Butyl Ether			ND U					1.6	0.48
Naphthalene			ND U			--		1.5	0.44
n-Propylbenzene			ND U					0.80	0.24
Styrene			ND U			--		0.67	0.20
Toluene			ND U					1.1	0.33
1,1,1-Trichloroethane			ND U					1.0	0.30
1,3,5-Trimethylbenzene			ND U					0.80	0.24
1,2,4-Trimethylbenzene			ND U					0.74	0.22
Xylene, Meta + Para			ND U			--		1.4	0.42
Xylene, Ortho			ND U					0.67	0.20
Surrogates:									
1,2-Dichloroethane-d4				*99*	*81-126*				
aaa-Trifluorotoluene				*103*	*86-118*				
Laboratory Control Sample					Analyzed:	05/09/2013	By: LEW		
Unit: ug/L					Analytical Batch:	3E14029			
Benzene	20.0		**20.7**	104	83-119	--		0.666	0.20
n-Butylbenzene	20.0		**18.3**	92	80-120	--		0.919	0.28
Chloromethane	20.0		**30.5**	**152**	65-138	--		1.24	0.37
Ethylbenzene	20.0		**19.6**	98	85-116	--		0.666	0.20
Methyl tert-Butyl Ether	20.0		**20.1**	101	77-116	--		1.59	0.48
Naphthalene	20.0		**17.3**	86	80-120	--		1.47	0.44
n-Propylbenzene	20.0		**18.7**	93	80-120	--		0.799	0.24
Styrene	20.0		**19.4**	97	80-120	--		0.666	0.20
Toluene	20.0		**19.7**	99	77-128	--		1.11	0.33
1,1,1-Trichloroethane	20.0		**19.8**	99	85-131	--		1.02	0.30
1,3,5-Trimethylbenzene	20.0		**18.6**	93	80-116	--		0.803	0.24
1,2,4-Trimethylbenzene	20.0		**18.5**	93	77-123	--		0.743	0.22
Xylene, Meta + Para	40.0		**38.9**	97	87-118	--		1.39	0.42
Xylene, Ortho	20.0		**19.4**	97	87-118	--		0.666	0.20

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QUALITY CONTROL REPORT

Halogenated and Aromatic Volatiles by EPA Method 8021B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1304752 5030B Aqueous Purge & Trap/USEPA-8021B									
Method Blank					Analyzed:	05/15/2013	By: LEW		
Unit: ug/L					Analytical Batch:	3E16003			
Chloromethane			ND U					1.2	0.37
Surrogates:									
1,2-Dichloroethane-d4				*96*	*81-126*				
Laboratory Control Sample					Analyzed:	05/15/2013	By: LEW		
Unit: ug/L					Analytical Batch:	3E16003			
Chloromethane		20.0	**21.3**	107	65-138	--		1.24	0.37

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QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1304377 Method-Specific Extraction/RSK-175									
Method Blank					Analyzed:		05/09/2013	By: BJH	
Unit: ug/L					Analytical Batch:		3E09050		
Methane			ND U			--		0.48	0.14
Laboratory Control Sample					Analyzed:		05/09/2013	By: BJH	
Unit: ug/L					Analytical Batch:		3E09050		
Methane		33.0	**31.6**	96	65-113	--		0.483	0.14

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QUALITY CONTROL REPORT

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1304209 3510C Liquid-Liquid Extraction/USEPA-8270C									
Method Blank						Analyzed:	05/07/2013	By: JLB	
Unit: ug/L						Analytical Batch:	3E08013		
Acenaphthene			ND U					0.11	0.033
Acenaphthylene			ND U					0.057	0.017
Anthracene			ND U			--		0.20	0.062
Benzo(a)anthracene			ND U			--		0.15	0.045
Benzo(a)pyrene			ND U					0.13	0.040
Benzo(b)fluoranthene			ND U					0.19	0.058
Benzo(k)fluoranthene			ND U					0.20	0.060
Benzo(g,h,i)perylene			ND U					0.20	0.061
Benzoic Acid			ND U					1.6	0.48
Benzyl Alcohol			ND U					0.16	0.049
4-Bromophenyl Phenyl Ether			ND U					0.14	0.043
Butyl Benzyl Phthalate			ND U					0.19	0.056
4-Chloro-3-methylphenol			ND U					0.38	0.12
4-Chloroaniline			ND U					0.34	0.10
Bis(2-chloroethoxy)methane			ND U					0.061	0.018
Bis(2-chloroethyl) Ether			ND U					0.079	0.024
Bis(2-chloroisopropyl) Ether			ND U					0.086	0.026
2-Chloronaphthalene			ND U					0.057	0.017
2-Chlorophenol			ND U					0.089	0.027
4-Chlorophenyl Phenyl Ether			ND U					0.16	0.048
Chrysene			ND U			--		0.15	0.045
Dibenz(a,h)anthracene			ND U					0.38	0.11
Dibenzofuran			ND U					0.14	0.041
Di-n-butyl Phthalate			ND U			--		0.45	0.14
1,2-Dichlorobenzene			ND U					0.13	0.040
1,3-Dichlorobenzene			ND U					0.14	0.041
1,4-Dichlorobenzene			ND U					0.066	0.020
3,3´-Dichlorobenzidine			ND U					0.41	0.12
2,4-Dichlorophenol			ND U					0.30	0.092
Diethyl Phthalate			ND U					0.22	0.065
2,4-Dimethylphenol			ND U					0.56	0.17
Dimethyl Phthalate			ND U					0.15	0.046
4,6-Dinitro-2-methylphenol			ND U					3.4	1.0
2,4-Dinitrophenol			ND U					3.9	1.2
2,4-Dinitrotoluene			ND U					0.16	0.048
2,6-Dinitrotoluene			ND U					0.27	0.080

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1304209 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 05/07/2013 By: JLB

Unit: ug/L Analytical Batch: 3E08013

Di-n-octyl Phthalate			ND U					0.26	0.077
Bis(2-ethylhexyl) Phthalate			**0.57**			--		0.38	0.11
Fluoranthene			ND U					0.21	0.063
Fluorene			ND U					0.14	0.041
Hexachlorobenzene			ND U					0.21	0.063
Hexachlorobutadiene			ND U					0.13	0.040
Hexachlorocyclopentadiene			ND U					0.15	0.044
Hexachloroethane			ND U					0.14	0.042
Indeno(1,2,3-cd)pyrene			ND U					0.27	0.080
Isophorone			ND U					0.15	0.045
2-Methylnaphthalene			ND U					0.050	0.015
1-Methylnaphthalene			ND U					0.065	0.020
2-Methylphenol			ND U					0.16	0.048
4-Methylphenol			ND U					0.19	0.057
2-Nitroaniline			ND U					0.39	0.12
3-Nitroaniline			ND U					0.81	0.24
4-Nitroaniline			ND U					1.1	0.33
Nitrobenzene			ND U					0.19	0.058
4-Nitrophenol			ND U					4.2	1.2
2-Nitrophenol			ND U					0.16	0.048
N-Nitroso-diphenylamine			ND U					0.23	0.068
N-Nitroso-di-n-propylamine			ND U					0.25	0.075
Pentachlorophenol			ND U					0.42	0.13
Phenanthrene			ND U			--		0.14	0.043
Phenol			ND U					0.11	0.034
Pyrene			ND U					0.22	0.066
2,3,4,6-Tetrachlorophenol			ND U					1.2	0.37
2,3,5,6-Tetrachlorophenol			ND U					0.71	0.21
1,2,4-Trichlorobenzene			ND U					0.089	0.027
2,4,6-Trichlorophenol			ND U					0.28	0.085
2,4,5-Trichlorophenol			ND U					0.33	0.099

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1304209 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C									
Method Blank (Continued)					Analyzed:	05/07/2013	By: JLB		
Unit: ug/L					Analytical Batch:	3E08013			
Surrogates:									
2-Fluorophenol				*53*	*20-70*				
Phenol-d6				*33*	*18-45*				
Nitrobenzene-d5				*85*	*31-123*				
2-Fluorobiphenyl				*102*	*25-113*				
2,4,6-Tribromophenol				*85*	*30-121*				
o-Terphenyl				*102*	*42-125*				
Laboratory Control Sample					Analyzed:	05/07/2013	By: JLB		
Unit: ug/L					Analytical Batch:	3E08013			
Acenaphthene		10.0	**9.79**	98	53-126	--		0.110	0.033
Acenaphthylene		10.0	**9.92**	99	62-133	--		0.0569	0.017
Anthracene		10.0	**9.62**	96	64-130	--		0.205	0.062
Benzo(a)anthracene		10.0	**9.82**	98	63-129	--		0.151	0.045
Benzo(a)pyrene		10.0	**9.83**	98	59-131	--		0.134	0.040
Benzo(b)fluoranthene		10.0	**10.7**	107	58-133	--		0.193	0.058
Benzo(k)fluoranthene		10.0	**8.85**	88	59-132	--		0.198	0.060
Benzo(g,h,i)perylene		10.0	**9.43**	94	52-129	--		0.203	0.061
Benzoic Acid		10.0	**2.18**	22	10-45	--		1.59	0.48
Benzyl Alcohol		10.0	**7.85**	78	24-116	--		0.162	0.049
4-Bromophenyl Phenyl Ether		10.0	**9.29**	93	57-124	--		0.143	0.043
Butyl Benzyl Phthalate		10.0	**11.1**	111	58-141	--		0.185	0.056
4-Chloro-3-methylphenol		10.0	**9.05**	90	53-120	--		0.383	0.12
4-Chloroaniline		10.0	**9.15**	92	44-138	--		0.340	0.10
Bis(2-chloroethoxy)methane		10.0	**9.00**	90	52-124	--		0.0613	0.018
Bis(2-chloroethyl) Ether		10.0	**8.50**	85	42-123	--		0.0789	0.024
Bis(2-chloroisopropyl) Ether		10.0	**8.19**	82	50-122	--		0.0859	0.026
2-Chloronaphthalene		10.0	**9.77**	98	58-126	--		0.0569	0.017
2-Chlorophenol		10.0	**7.93**	79	44-121	--		0.0889	0.027
4-Chlorophenyl Phenyl Ether		10.0	**8.84**	88	57-122	--		0.160	0.048
Chrysene		10.0	**9.41**	94	66-134	--		0.151	0.045
Dibenz(a,h)anthracene		10.0	**10.2**	102	57-130	--		0.376	0.11
Dibenzofuran		10.0	**9.47**	95	59-123	--		0.136	0.041
Di-n-butyl Phthalate		10.0	**10.1**	101	58-145	--		0.450	0.14
1,2-Dichlorobenzene		10.0	**8.73**	87	48-126	--		0.132	0.040

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

QC Batch: 1304209 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 05/07/2013 By: JLB

Unit: ug/L Analytical Batch: 3E08013

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
1,3-Dichlorobenzene		10.0	**8.64**	86	44-122	--		0.137	0.041
1,4-Dichlorobenzene		10.0	**8.55**	86	41-124	--		0.0656	0.020
3,3´-Dichlorobenzidine		20.0	**19.2**	96	55-135	--		0.413	0.12
2,4-Dichlorophenol		10.0	**8.61**	86	51-122	--		0.305	0.092
Diethyl Phthalate		10.0	**9.25**	92	55-129	--		0.217	0.065
2,4-Dimethylphenol		10.0	**8.14**	81	35-112	--		0.559	0.17
Dimethyl Phthalate		10.0	**8.84**	88	61-126	--		0.152	0.046
4,6-Dinitro-2-methylphenol		10.0	**8.18**	82	25-139	--		3.40	1.0
2,4-Dinitrophenol		10.0	**9.09**	91	10-147	--		3.86	1.2
2,4-Dinitrotoluene		10.0	**8.69**	87	55-131	--		0.158	0.048
2,6-Dinitrotoluene		10.0	**9.74**	97	59-120	--		0.267	0.080
Di-n-octyl Phthalate		10.0	**10.8**	108	55-136	--		0.255	0.077
*Bis(2-ethylhexyl) Phthalate		10.0	**9.86 B**	99	60-136	--		0.376	0.11
Fluoranthene		10.0	**9.06**	91	64-138	--		0.209	0.063
Fluorene		10.0	**9.00**	90	60-128	--		0.138	0.041
Hexachlorobenzene		10.0	**8.96**	90	49-130	--		0.209	0.063
Hexachlorobutadiene		10.0	**8.33**	83	50-128	--		0.132	0.040
Hexachlorocyclopentadiene		10.0	**8.86**	89	21-138	--		0.148	0.044
Hexachloroethane		10.0	**8.09**	81	41-123	--		0.139	0.042
Indeno(1,2,3-cd)pyrene		10.0	**10.0**	100	57-129	--		0.266	0.080
Isophorone		10.0	**7.64**	76	56-129	--		0.150	0.045
2-Methylnaphthalene		10.0	**8.84**	88	59-135	--		0.0496	0.015
1-Methylnaphthalene		10.0	**9.55**	96	50-150	--		0.0649	0.020
2-Methylphenol		10.0	**7.45**	74	39-107	--		0.158	0.048
4-Methylphenol		10.0	**7.31**	73	33-122	--		0.188	0.057
2-Nitroaniline		10.0	**10.2**	102	57-130	--		0.386	0.12
3-Nitroaniline		10.0	**8.73**	87	49-144	--		0.813	0.24
4-Nitroaniline		10.0	**8.04**	80	52-143	--		1.10	0.33
Nitrobenzene		10.0	**9.00**	90	53-121	--		0.195	0.058
4-Nitrophenol		10.0	**5.28**	53	17-70	--		4.16	1.2
2-Nitrophenol		10.0	**8.92**	89	44-128	--		0.158	0.048
N-Nitroso-diphenylamine		10.0	**9.52**	95	45-110	--		0.225	0.068
N-Nitroso-di-n-propylamine		10.0	**8.63**	86	49-125	--		0.251	0.075
Pentachlorophenol		10.0	**7.89**	79	21-124	--		0.420	0.13
Phenanthrene		10.0	**9.51**	95	63-126	--		0.142	0.043
Phenol		10.0	**4.34**	43	22-60	--		0.112	0.034

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*See Statement of Data Qualifications

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1304209 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C									
Laboratory Control Sample (Continued)					Analyzed:		05/07/2013	By: JLB	
Unit: ug/L					Analytical Batch:		3E08013		
Pyrene		10.0	**9.56**	96	60-134	--		0.218	0.066
2,3,4,6-Tetrachlorophenol		10.0	**9.35**	94	45-125	--		1.24	0.37
2,3,5,6-Tetrachlorophenol		10.0	**8.74**	87	50-150	--		0.709	0.21
1,2,4-Trichlorobenzene		10.0	**8.89**	89	47-123	--		0.0886	0.027
2,4,6-Trichlorophenol		10.0	**9.44**	94	47-128	--		0.283	0.085
2,4,5-Trichlorophenol		10.0	**10.3**	103	53-129	--		0.330	0.099
QC Batch: 1304256 3510C Liquid-Liquid Extraction/USEPA-8270C									
Method Blank					Analyzed:		05/08/2013	By: JLB	
Unit: ug/L					Analytical Batch:		3E09013		
Acenaphthene			ND U					0.11	0.033
Acenaphthylene			ND U					0.057	0.017
Anthracene			ND U					0.20	0.062
Benzo(a)anthracene			ND U					0.15	0.045
Benzo(a)pyrene			ND U					0.13	0.040
Benzo(b)fluoranthene			ND U					0.19	0.058
Benzo(k)fluoranthene			ND U					0.20	0.060
Benzo(g,h,i)perylene			ND U					0.20	0.061
Benzoic Acid			ND U					1.6	0.48
Benzyl Alcohol			ND U					0.16	0.049
4-Bromophenyl Phenyl Ether			ND U					0.14	0.043
Butyl Benzyl Phthalate			ND U			--		0.19	0.056
4-Chloro-3-methylphenol			ND U					0.38	0.12
4-Chloroaniline			ND U					0.34	0.10
Bis(2-chloroethoxy)methane			ND U					0.061	0.018
Bis(2-chloroethyl) Ether			ND U					0.079	0.024
Bis(2-chloroisopropyl) Ether			ND U					0.086	0.026
2-Chloronaphthalene			ND U					0.057	0.017
2-Chlorophenol			ND U					0.089	0.027
4-Chlorophenyl Phenyl Ether			ND U					0.16	0.048
Chrysene			ND U					0.15	0.045
Dibenz(a,h)anthracene			ND U					0.38	0.11
Dibenzofuran			ND U					0.14	0.041
Di-n-butyl Phthalate			ND U			--		0.45	0.14
1,2-Dichlorobenzene			ND U					0.13	0.040
1,3-Dichlorobenzene			ND U					0.14	0.041

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 05/08/2013 By: JLB

Unit: ug/L Analytical Batch: 3E09013

1,4-Dichlorobenzene			ND U			0.066	0.020
3,3´-Dichlorobenzidine			ND U			0.41	0.12
2,4-Dichlorophenol			ND U			0.30	0.092
Diethyl Phthalate			ND U			0.22	0.065
2,4-Dimethylphenol			ND U			0.56	0.17
Dimethyl Phthalate			ND U			0.15	0.046
4,6-Dinitro-2-methylphenol			ND U			3.4	1.0
2,4-Dinitrophenol			ND U			3.9	1.2
2,4-Dinitrotoluene			ND U			0.16	0.048
2,6-Dinitrotoluene			ND U			0.27	0.080
Di-n-octyl Phthalate			ND U			0.26	0.077
Bis(2-ethylhexyl) Phthalate			**0.58**		--	0.38	0.11
Fluoranthene			ND U			0.21	0.063
Fluorene			ND U			0.14	0.041
Hexachlorobenzene			ND U			0.21	0.063
Hexachlorobutadiene			ND U			0.13	0.040
Hexachlorocyclopentadiene			ND U			0.15	0.044
Hexachloroethane			ND U			0.14	0.042
Indeno(1,2,3-cd)pyrene			ND U			0.27	0.080
Isophorone			ND U			0.15	0.045
2-Methylnaphthalene			ND U			0.050	0.015
1-Methylnaphthalene			ND U			0.065	0.020
2-Methylphenol			ND U			0.16	0.048
4-Methylphenol			ND U			0.19	0.057
2-Nitroaniline			ND U			0.39	0.12
3-Nitroaniline			ND U			0.81	0.24
4-Nitroaniline			ND U			1.1	0.33
Nitrobenzene			ND U			0.19	0.058
4-Nitrophenol			ND U			4.2	1.2
2-Nitrophenol			ND U			0.16	0.048
N-Nitroso-diphenylamine			ND U			0.23	0.068
N-Nitroso-di-n-propylamine			ND U			0.25	0.075
Pentachlorophenol			ND U			0.42	0.13
Phenanthrene			ND U			0.14	0.043
Phenol			ND U			0.11	0.034
Pyrene			ND U			0.22	0.066

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 05/08/2013 By: JLB

Unit: ug/L Analytical Batch: 3E09013

2,3,4,6-Tetrachlorophenol			ND U			1.2	0.37
2,3,5,6-Tetrachlorophenol			ND U			0.71	0.21
1,2,4-Trichlorobenzene			ND U			0.089	0.027
2,4,6-Trichlorophenol			ND U			0.28	0.085
2,4,5-Trichlorophenol			ND U			0.33	0.099
Surrogates:							
2-Fluorophenol				*57*	*20-70*		
Phenol-d6				*37*	*18-45*		
Nitrobenzene-d5				*88*	*31-123*		
2-Fluorobiphenyl				*100*	*25-113*		
2,4,6-Tribromophenol				*86*	*30-121*		
o-Terphenyl				*108*	*42-125*		

Method Blank Analyzed: 05/08/2013 By: ASC

Unit: ug/L Analytical Batch: 3E09042

Acenaphthene			ND U			0.11	0.033
Acenaphthylene			ND U			0.057	0.017
Anthracene			ND U		--	0.20	0.062
Benzo(a)anthracene			ND U		--	0.15	0.045
Benzo(a)pyrene			ND U		--	0.13	0.040
Benzo(b)fluoranthene			ND U		--	0.19	0.058
Benzo(k)fluoranthene			ND U		--	0.20	0.060
Benzo(g,h,i)perylene			ND U			0.20	0.061
Benzoic Acid			**1.6 J**		--	1.6	0.48
Benzyl Alcohol			ND U			0.16	0.049
4-Bromophenyl Phenyl Ether			ND U			0.14	0.043
Butyl Benzyl Phthalate			**0.080 J**		--	0.19	0.056
4-Chloro-3-methylphenol			ND U			0.38	0.12
4-Chloroaniline			ND U			0.34	0.10
Bis(2-chloroethoxy)methane			ND U			0.061	0.018

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 05/08/2013 By: ASC

Unit: ug/L Analytical Batch: 3E09042

Bis(2-chloroethyl) Ether	ND U			0.079	0.024
Bis(2-chloroisopropyl) Ether	ND U			0.086	0.026
2-Chloronaphthalene	ND U			0.057	0.017
2-Chlorophenol	ND U			0.089	0.027
4-Chlorophenyl Phenyl Ether	ND U			0.16	0.048
Chrysene	ND U		--	0.15	0.045
Dibenz(a,h)anthracene	ND U			0.38	0.11
Dibenzofuran	ND U			0.14	0.041
Di-n-butyl Phthalate	ND U		--	0.45	0.14
1,2-Dichlorobenzene	ND U			0.13	0.040
1,3-Dichlorobenzene	ND U			0.14	0.041
1,4-Dichlorobenzene	ND U			0.066	0.020
3,3´-Dichlorobenzidine	ND U		--	0.41	0.12
2,4-Dichlorophenol	ND U			0.30	0.092
Diethyl Phthalate	**0.11 J**		--	0.22	0.065
2,4-Dimethylphenol	ND U			0.56	0.17
Dimethyl Phthalate	ND U		--	0.15	0.046
4,6-Dinitro-2-methylphenol	ND U			3.4	1.0
2,4-Dinitrophenol	ND U			3.9	1.2
2,4-Dinitrotoluene	ND U			0.16	0.048
2,6-Dinitrotoluene	**0.090 J**		--	0.27	0.080
Di-n-octyl Phthalate	**0.27**		--	0.26	0.077
Bis(2-ethylhexyl) Phthalate	**0.19 J**		--	0.38	0.11
Fluoranthene	ND U		--	0.21	0.063
Fluorene	ND U			0.14	0.041
Hexachlorobenzene	ND U			0.21	0.063
Hexachlorobutadiene	ND U			0.13	0.040
Hexachlorocyclopentadiene	ND U			0.15	0.044
Hexachloroethane	ND U			0.14	0.042
Indeno(1,2,3-cd)pyrene	ND U			0.27	0.080
Isophorone	ND U			0.15	0.045
2-Methylnaphthalene	ND U			0.050	0.015
1-Methylnaphthalene	ND U			0.065	0.020
2-Methylphenol	ND U			0.16	0.048
4-Methylphenol	ND U		--	0.19	0.057
2-Nitroaniline	ND U			0.39	0.12

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 05/08/2013 By: ASC

Unit: ug/L Analytical Batch: 3E09042

3-Nitroaniline			ND U			0.81	0.24
4-Nitroaniline			ND U			1.1	0.33
Nitrobenzene			ND U			0.19	0.058
4-Nitrophenol			ND U		--	4.2	1.2
2-Nitrophenol			ND U			0.16	0.048
N-Nitroso-diphenylamine			ND U			0.23	0.068
N-Nitroso-di-n-propylamine			ND U		--	0.25	0.075
Pentachlorophenol			ND U			0.42	0.13
Phenanthrene			ND U		--	0.14	0.043
Phenol			ND U			0.11	0.034
Pyrene			ND U		--	0.22	0.066
2,3,4,6-Tetrachlorophenol			ND U			1.2	0.37
2,3,5,6-Tetrachlorophenol			ND U			0.71	0.21
1,2,4-Trichlorobenzene			ND U			0.089	0.027
2,4,6-Trichlorophenol			ND U			0.28	0.085
2,4,5-Trichlorophenol			ND U			0.33	0.099
Surrogates:							
2-Fluorophenol				*59*	*20-70*		
Phenol-d6				*38*	*18-45*		
Nitrobenzene-d5				*88*	*31-123*		
2-Fluorobiphenyl				*99*	*25-113*		
2,4,6-Tribromophenol				*67*	*30-121*		
o-Terphenyl				*98*	*42-125*		

Laboratory Control Sample Analyzed: 05/08/2013 By: JLB

Unit: ug/L Analytical Batch: 3E09013

Acenaphthene	10.0	**10.0**	100	53-126	--	0.110	0.033
Acenaphthylene	10.0	**10.0**	100	62-133	--	0.0569	0.017
Anthracene	10.0	**9.67**	97	64-130	--	0.205	0.062
Benzo(a)anthracene	10.0	**9.60**	96	63-129	--	0.151	0.045

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 05/08/2013 By: JLB

Unit: ug/L Analytical Batch: 3E09013

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Benzo(a)pyrene		10.0	**9.68**	97	59-131	--		0.134	0.040
Benzo(b)fluoranthene		10.0	**9.97**	100	58-133	--		0.193	0.058
Benzo(k)fluoranthene		10.0	**9.19**	92	59-132	--		0.198	0.060
Benzo(g,h,i)perylene		10.0	**10.2**	102	52-129	--		0.203	0.061
Benzoic Acid		10.0	**2.23**	22	10-45	--		1.59	0.48
Benzyl Alcohol		10.0	**8.08**	81	24-116	--		0.162	0.049
4-Bromophenyl Phenyl Ether		10.0	**8.89**	89	57-124	--		0.143	0.043
Butyl Benzyl Phthalate		10.0	**11.1**	111	58-141	--		0.185	0.056
4-Chloro-3-methylphenol		10.0	**8.80**	88	53-120	--		0.383	0.12
4-Chloroaniline		10.0	**9.31**	93	44-138	--		0.340	0.10
Bis(2-chloroethoxy)methane		10.0	**8.92**	89	52-124	--		0.0613	0.018
Bis(2-chloroethyl) Ether		10.0	**8.47**	85	42-123	--		0.0789	0.024
Bis(2-chloroisopropyl) Ether		10.0	**8.26**	83	50-122	--		0.0859	0.026
2-Chloronaphthalene		10.0	**9.50**	95	58-126	--		0.0569	0.017
2-Chlorophenol		10.0	**8.02**	80	44-121	--		0.0889	0.027
4-Chlorophenyl Phenyl Ether		10.0	**8.89**	89	57-122	--		0.160	0.048
Chrysene		10.0	**9.40**	94	66-134	--		0.151	0.045
Dibenz(a,h)anthracene		10.0	**10.6**	106	57-130	--		0.376	0.11
Dibenzofuran		10.0	**9.39**	94	59-123	--		0.136	0.041
Di-n-butyl Phthalate		10.0	**10.2**	102	58-145	--		0.450	0.14
1,2-Dichlorobenzene		10.0	**8.83**	88	48-126	--		0.132	0.040
1,3-Dichlorobenzene		10.0	**8.66**	87	44-122	--		0.137	0.041
1,4-Dichlorobenzene		10.0	**8.45**	84	41-124	--		0.0656	0.020
3,3´-Dichlorobenzidine		20.0	**20.5**	102	55-135	--		0.413	0.12
2,4-Dichlorophenol		10.0	**8.45**	84	51-122	--		0.305	0.092
Diethyl Phthalate		10.0	**9.50**	95	55-129	--		0.217	0.065
2,4-Dimethylphenol		10.0	**8.33**	83	35-112	--		0.559	0.17
Dimethyl Phthalate		10.0	**9.10**	91	61-126	--		0.152	0.046
4,6-Dinitro-2-methylphenol		10.0	**8.16**	82	25-139	--		3.40	1.0
2,4-Dinitrophenol		10.0	**8.44**	84	10-147	--		3.86	1.2
2,4-Dinitrotoluene		10.0	**8.94**	89	55-131	--		0.158	0.048
2,6-Dinitrotoluene		10.0	**9.87**	99	59-120	--		0.267	0.080
Di-n-octyl Phthalate		10.0	**11.3**	113	55-136	--		0.255	0.077
*Bis(2-ethylhexyl) Phthalate		10.0	**9.87 B**	99	60-136	--		0.376	0.11
Fluoranthene		10.0	**9.05**	90	64-138	--		0.209	0.063
Fluorene		10.0	**9.13**	91	60-128	--		0.138	0.041

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*See Statement of Data Qualifications

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C									
Laboratory Control Sample (Continued)					Analyzed:	05/08/2013	By: JLB		
Unit: ug/L					Analytical Batch:	3E09013			
Hexachlorobenzene		10.0	**8.90**	89	49-130	--		0.209	0.063
Hexachlorobutadiene		10.0	**8.31**	83	50-128	--		0.132	0.040
Hexachlorocyclopentadiene		10.0	**9.77**	98	21-138	--		0.148	0.044
Hexachloroethane		10.0	**8.23**	82	41-123	--		0.139	0.042
Indeno(1,2,3-cd)pyrene		10.0	**10.4**	104	57-129	--		0.266	0.080
Isophorone		10.0	**7.77**	78	56-129	--		0.150	0.045
2-Methylnaphthalene		10.0	**8.77**	88	59-135	--		0.0496	0.015
1-Methylnaphthalene		10.0	**9.49**	95	50-150	--		0.0649	0.020
2-Methylphenol		10.0	**7.24**	72	39-107	--		0.158	0.048
4-Methylphenol		10.0	**6.94**	69	33-122	--		0.188	0.057
2-Nitroaniline		10.0	**10.0**	100	57-130	--		0.386	0.12
3-Nitroaniline		10.0	**8.27**	83	49-144	--		0.813	0.24
4-Nitroaniline		10.0	**8.41**	84	52-143	--		1.10	0.33
Nitrobenzene		10.0	**8.83**	88	53-121	--		0.195	0.058
4-Nitrophenol		10.0	**4.39**	44	17-70	--		4.16	1.2
2-Nitrophenol		10.0	**8.59**	86	44-128	--		0.158	0.048
N-Nitroso-diphenylamine		10.0	**9.55**	96	45-110	--		0.225	0.068
N-Nitroso-di-n-propylamine		10.0	**8.76**	88	49-125	--		0.251	0.075
Pentachlorophenol		10.0	**7.36**	74	21-124	--		0.420	0.13
Phenanthrene		10.0	**9.50**	95	63-126	--		0.142	0.043
Phenol		10.0	**4.25**	42	22-60	--		0.112	0.034
Pyrene		10.0	**9.34**	93	60-134	--		0.218	0.066
2,3,4,6-Tetrachlorophenol		10.0	**9.02**	90	45-125	--		1.24	0.37
2,3,5,6-Tetrachlorophenol		10.0	**7.42**	74	50-150	--		0.709	0.21
1,2,4-Trichlorobenzene		10.0	**8.81**	88	47-123	--		0.0886	0.027
2,4,6-Trichlorophenol		10.0	**9.12**	91	47-128	--		0.283	0.085
2,4,5-Trichlorophenol		10.0	**10.3**	103	53-129	--		0.330	0.099
Laboratory Control Sample					Analyzed:	05/08/2013	By: ASC		
Unit: ug/L					Analytical Batch:	3E09042			
Acenaphthene		10.0	**9.25**	92	53-126	--		0.110	0.033
Acenaphthylene		10.0	**9.50**	95	62-133	--		0.0569	0.017
Anthracene		10.0	**9.67**	97	64-130	--		0.205	0.062
Benzo(a)anthracene		10.0	**9.41**	94	63-129	--		0.151	0.045
Benzo(a)pyrene		10.0	**9.38**	94	59-131	--		0.134	0.040
Benzo(b)fluoranthene		10.0	**10.1**	101	58-133	--		0.193	0.058
Benzo(k)fluoranthene		10.0	**8.98**	90	59-132	--		0.198	0.060

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 05/08/2013 By: ASC

Unit: ug/L Analytical Batch: 3E09042

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Benzo(g,h,i)perylene		10.0	**9.03**	90	52-129	--		0.203	0.061
Benzoic Acid		10.0	**1.83**	18	10-45	--		1.59	0.48
Benzyl Alcohol		10.0	**7.42**	74	24-116	--		0.162	0.049
4-Bromophenyl Phenyl Ether		10.0	**9.89**	99	57-124	--		0.143	0.043
Butyl Benzyl Phthalate		10.0	**9.90**	99	58-141	--		0.185	0.056
4-Chloro-3-methylphenol		10.0	**8.96**	90	53-120	--		0.383	0.12
4-Chloroaniline		10.0	**10.8**	108	44-138	--		0.340	0.10
Bis(2-chloroethoxy)methane		10.0	**8.93**	89	52-124	--		0.0613	0.018
Bis(2-chloroethyl) Ether		10.0	**8.91**	89	42-123	--		0.0789	0.024
Bis(2-chloroisopropyl) Ether		10.0	**7.87**	79	50-122	--		0.0859	0.026
2-Chloronaphthalene		10.0	**9.52**	95	58-126	--		0.0569	0.017
2-Chlorophenol		10.0	**8.08**	81	44-121	--		0.0889	0.027
4-Chlorophenyl Phenyl Ether		10.0	**9.19**	92	57-122	--		0.160	0.048
Chrysene		10.0	**9.40**	94	66-134	--		0.151	0.045
Dibenz(a,h)anthracene		10.0	**9.66**	97	57-130	--		0.376	0.11
Dibenzofuran		10.0	**9.33**	93	59-123	--		0.136	0.041
Di-n-butyl Phthalate		10.0	**9.65**	96	58-145	--		0.450	0.14
1,2-Dichlorobenzene		10.0	**8.58**	86	48-126	--		0.132	0.040
1,3-Dichlorobenzene		10.0	**8.41**	84	44-122	--		0.137	0.041
1,4-Dichlorobenzene		10.0	**8.63**	86	41-124	--		0.0656	0.020
3,3´-Dichlorobenzidine		20.0	**24.8**	124	55-135	--		0.413	0.12
2,4-Dichlorophenol		10.0	**8.78**	88	51-122	--		0.305	0.092
Diethyl Phthalate		10.0	**9.54**	95	55-129	--		0.217	0.065
2,4-Dimethylphenol		10.0	**8.30**	83	35-112	--		0.559	0.17
Dimethyl Phthalate		10.0	**9.21**	92	61-126	--		0.152	0.046
4,6-Dinitro-2-methylphenol		10.0	**4.70**	47	25-139	--		3.40	1.0
2,4-Dinitrophenol		10.0	**2.49 J**	25	10-147	--		3.86	1.2
2,4-Dinitrotoluene		10.0	**9.38**	94	55-131	--		0.158	0.048
2,6-Dinitrotoluene		10.0	**9.75**	98	59-120	--		0.267	0.080
Di-n-octyl Phthalate		10.0	**9.96**	100	55-136	--		0.255	0.077
*Bis(2-ethylhexyl) Phthalate		10.0	**9.24 B**	92	60-136	--		0.376	0.11
Fluoranthene		10.0	**9.21**	92	64-138	--		0.209	0.063
Fluorene		10.0	**9.27**	93	60-128	--		0.138	0.041
Hexachlorobenzene		10.0	**9.32**	93	49-130	--		0.209	0.063
Hexachlorobutadiene		10.0	**9.19**	92	50-128	--		0.132	0.040
Hexachlorocyclopentadiene		10.0	**7.32**	73	21-138	--		0.148	0.044

Continued on next page

*See Statement of Data Qualifications

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 05/08/2013 By: ASC

Unit: ug/L Analytical Batch: 3E09042

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Hexachloroethane		10.0	**8.46**	85	41-123	--		0.139	0.042
Indeno(1,2,3-cd)pyrene		10.0	**9.61**	96	57-129	--		0.266	0.080
Isophorone		10.0	**7.47**	75	56-129	--		0.150	0.045
2-Methylnaphthalene		10.0	**8.82**	88	59-135	--		0.0496	0.015
1-Methylnaphthalene		10.0	**9.59**	96	50-150	--		0.0649	0.020
2-Methylphenol		10.0	**6.72**	67	39-107	--		0.158	0.048
4-Methylphenol		10.0	**17.0**	**170**	33-122	--		0.188	0.057
2-Nitroaniline		10.0	**10.3**	103	57-130	--		0.386	0.12
3-Nitroaniline		10.0	**9.71**	97	49-144	--		0.813	0.24
4-Nitroaniline		10.0	**10.5**	105	52-143	--		1.10	0.33
Nitrobenzene		10.0	**8.28**	83	53-121	--		0.195	0.058
4-Nitrophenol		10.0	ND U	**0**	17-70	--		4.16	1.2
2-Nitrophenol		10.0	**8.16**	82	44-128	--		0.158	0.048
N-Nitroso-diphenylamine		10.0	**9.66**	97	45-110	--		0.225	0.068
N-Nitroso-di-n-propylamine		10.0	**8.24**	82	49-125	--		0.251	0.075
Pentachlorophenol		10.0	**5.47**	55	21-124	--		0.420	0.13
Phenanthrene		10.0	**9.28**	93	63-126	--		0.142	0.043
Phenol		10.0	**4.41**	44	22-60	--		0.112	0.034
Pyrene		10.0	**9.67**	97	60-134	--		0.218	0.066
2,3,4,6-Tetrachlorophenol		10.0	**8.13**	81	45-125	--		1.24	0.37
2,3,5,6-Tetrachlorophenol		10.0	**6.60**	66	50-150	--		0.709	0.21
1,2,4-Trichlorobenzene		10.0	**8.82**	88	47-123	--		0.0886	0.027
2,4,6-Trichlorophenol		10.0	**8.15**	82	47-128	--		0.283	0.085
2,4,5-Trichlorophenol		10.0	**8.69**	87	53-129	--		0.330	0.099

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QUALITY CONTROL REPORT

Dissolved Metals by EPA 6000/7000 Series Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Analyte: **Iron**/USEPA-6010C										
QC Batch: 1304224 (3010A Digestion)							Analyzed:	05/08/2013	By: KLV	
Method Blank			ND U	ug/L					22	6.5
Laboratory Control Sample		400	**375**	ug/L	94	80-120			21.7	6.5
1305096-01 [W-25-042913]										
Matrix Spike	ND	400	**377**	ug/L	94	75-125			21.7	6.5
Matrix Spike Duplicate	ND	400	**371**	ug/L	93	75-125	2	20	21.7	6.5
Analyte: **Manganese**/USEPA-6010C										
QC Batch: 1304224 (3010A Digestion)							Analyzed:	05/08/2013	By: KLV	
Method Blank			ND U	ug/L					9.3	2.8
Laboratory Control Sample		400	**367**	ug/L	92	80-120			9.26	2.8
1305096-01 [W-25-042913]										
Matrix Spike	7.54	400	**363**	ug/L	89	75-125			9.26	2.8
Matrix Spike Duplicate	7.54	400	**364**	ug/L	89	75-125	0.2	20	9.26	2.8

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QUALITY CONTROL REPORT

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Analyte: **Alkalinity, Total**/SM 2320 B										
QC Batch: 1304528 (Method Specific Preparation)							Analyzed:	05/10/2013	By: SKA	
Method Blank			**1.2 J**	mg/L					1.6	0.50
Laboratory Control Sample		238	**240**	mg/L	101	91-110			1.65	0.50
1305096-01 [W-25-042913]										
Matrix Spike	570	238	**815**	mg/L	103	82-121			1.65	0.50
Duplicate	570		**572**	mg/L			0.3	20	1.65	0.50
QC Batch: 1304583 (Method Specific Preparation)							Analyzed:	05/13/2013	By: SKA	
Method Blank			**1.4 J**	mg/L					1.6	0.50
Laboratory Control Sample		238	**238**	mg/L	100	91-110			1.65	0.50
Analyte: **Nitrogen, Nitrate**/SM 4500-NO3 F-2000										
QC Batch: 1304071 (General Inorganic Prep)							Analyzed:	05/01/2013	By: CAC	
Method Blank			ND U	mg/L					0.030	0.0089
Laboratory Control Sample		0.500	**0.513**	mg/L	103	90-110			0.0296	0.0089
1305097-01 [W-37A-043013]										
Matrix Spike	1.09	5.00	**5.66**	mg/L	91	90-110			0.296	0.089
Matrix Spike Duplicate	1.09	5.00	**5.68**	mg/L	92	90-110	0.4	20	0.296	0.089
QC Batch: 1304116 (General Inorganic Prep)							Analyzed:	05/02/2013	By: CAC	
Method Blank			ND U	mg/L					0.030	0.0089
Laboratory Control Sample		0.500	**0.475**	mg/L	95	90-110			0.0296	0.0089
1305100-01 [W-04AR-050113]										
Matrix Spike	2.13	5.00	**7.53**	mg/L	108	90-110			0.296	0.089
Matrix Spike Duplicate	2.13	5.00	**7.51**	mg/L	108	90-110	0.2	20	0.296	0.089
QC Batch: 1304067 (General Inorganic Prep)							Analyzed:	04/30/2013	By: CAC	
Method Blank			**0.0095 J**	mg/L					0.030	0.0089
Laboratory Control Sample		0.500	**0.467**	mg/L	93	90-110			0.0296	0.0089
1305096-01 [W-25-042913]										
Matrix Spike	0.0153	0.500	**0.486**	mg/L	94	90-110			0.0296	0.0089
Matrix Spike Duplicate	0.0153	0.500	**0.488**	mg/L	94	90-110	0.3	20	0.0296	0.0089

Continued on next page

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QUALITY CONTROL REPORT

Physical/Chemical Parameters by EPA/APHA/ASTM Methods (Continued)

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Analyte: **Sulfate**/USEPA-9038										
QC Batch: 1304310 (General Inorganic Prep)							Analyzed:	05/07/2013	By: LMA	
Method Blank			ND U	mg/L					1.3	0.39
Laboratory Control Sample		20.0	**22.1**	mg/L	110	85-115			1.29	0.39
1305096-01 [W-25-042913]										
Matrix Spike	43.6	20.0	**62.2**	mg/L	93	76-126			2.57	0.77
Matrix Spike Duplicate	43.6	20.0	**62.2**	mg/L	93	76-126	0.02	20	2.57	0.77

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: Manual integration was required on the analytes listed below. All manual integrations were performed and reviewed in accordance with TriMatrix laboratory policy.

Analysis: USEPA-8270C

Sample/Analyte:		
1305096-01	W-25-042913	Acenaphthylene
1305100-06	W-16AR-050113	Benzo(b)fluoranthene
1305100-06	W-16AR-050113	Benzo(k)fluoranthene

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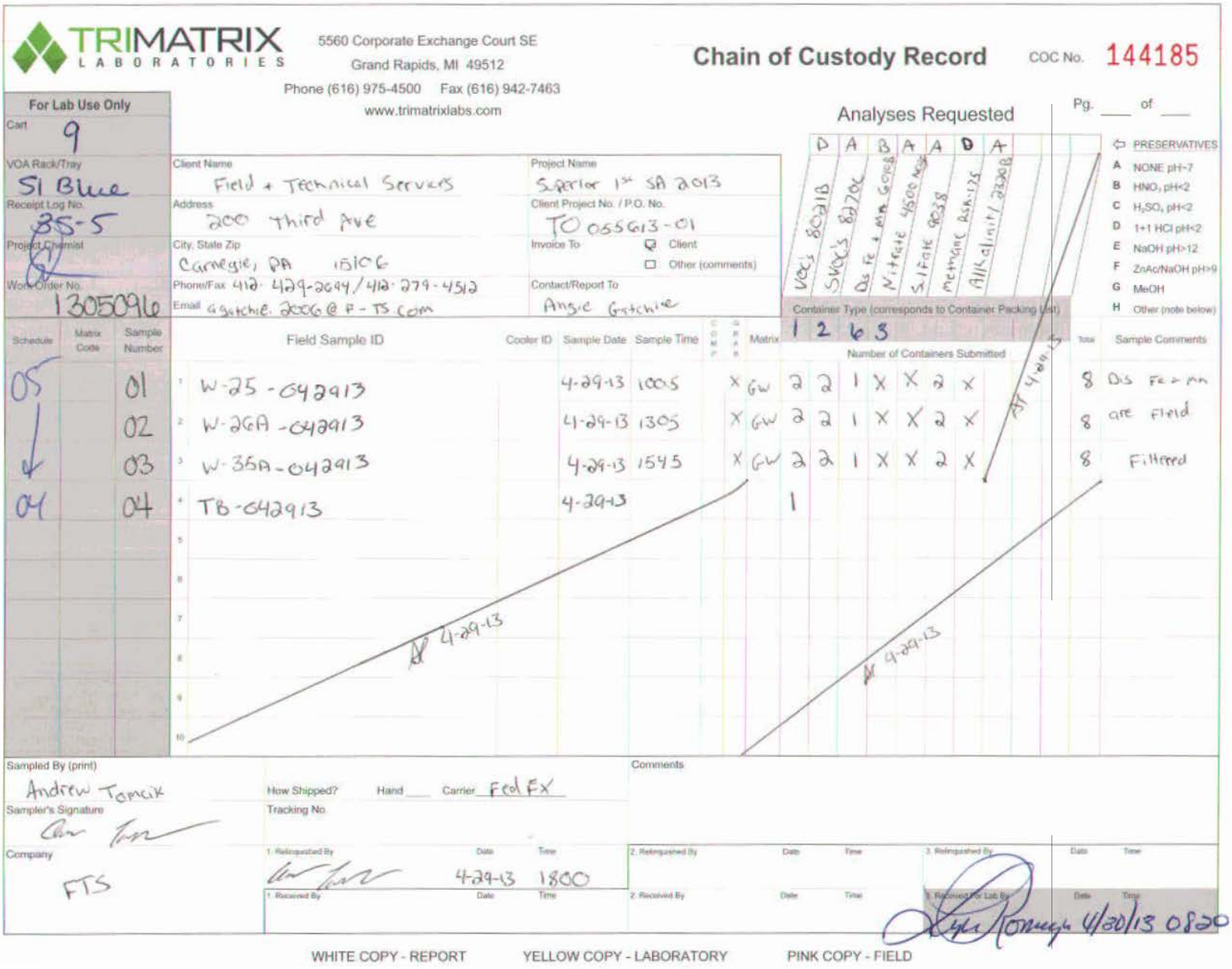

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Chain of Custody Record

COC No. 144185

Pg. ___ of ___

For Lab Use Only
Cart: 9
VOA Rack/Tray: S1 Blue
Receipt Log No.: 35-5
Project Chemist:
Work Order No.: 1305096

Client Name: Field + Technical Services
Address: 200 third Ave
City, State Zip: Carnegie, PA 15106
Phone/Fax: 412-429-2694 / 412-279-4512
Email: agatchie.2006@F-TS.com

Project Name: Superior 1st SA 2013
Client Project No. / P.O. No.: TO 055613-01
Invoice To: ☑ Client ☐ Other (comments)
Contact/Report To: Angie Gatchie

Analyses Requested

D	A	B	A	A	D	A
VOC's 8021B	SVOC's 8270C	Dis Fe + Mn 6010B	Nitrate 4500 NO3	Sulfate 9038	methane RSK-175	Alkalinity 2320B

PRESERVATIVES
A NONE pH>7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	Container Type (corresponds to Container Packing Unit)	Number of Containers Submitted							Total	Sample Comments
										1	2	6	3						
05		01	1 W-25-042913		4-29-13	1005		X	GW	2	2	1	X	X	2	X		8	Dis Fe + Mn
↓		02	2 W-26A-042913		4-29-13	1305		X	GW	2	2	1	X	X	2	X		8	GRE Field
↓		03	3 W-35A-042913		4-29-13	1545		X	GW	2	2	1	X	X	2	X		8	Filtered
04		04	4 TB-042913		4-29-13					1									
			5																
			6																
			7																
			8																
			9																
			10																

Sampled By (print): Andrew Tomcik
Sampler's Signature:
Company: FTS

How Shipped? Hand ___ Carrier FedEx
Tracking No.

Comments

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
	4-29-13	1800						
1. Received By	Date	Time	2. Received By	Date	Time	3. Received For Lab By	Date	Time
							4/30/13	0820

WHITE COPY - REPORT YELLOW COPY - LABORATORY PINK COPY - FIELD

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Field & Technical Srvs | Work Order #: 1305096
Receipt Record Page/Line #: 35-5 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): LR 4/30/13

Cooler ☑ | Box ☐ | Other ☐ | Qty Received: 1

Thermometer Used: IR Gun (#202) ☑ | Digital Thermometer (#54) ☐ | Other (#_____) ☐ | See Additional Cooler Information Form ☐

Cooler #	Time	Cooler #	Time	Cooler #	Time	Cooler #	Time
0212	1012						

Custody Seals:

☐ None		☐ None	☐ None	☐ None
☑ Present / Intact		☐ Present / Intact	☐ Present / Intact	☐ Present / Intact
☐ Present / Not Intact		☐ Present / Not Intact	☐ Present / Not Intact	☐ Present / Not Intact

Coolant Location:

Dispersed / (Top) / (Middle) / (Bottom)	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:

☐ Loose Ice / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers
☑ Bagged Ice / Avg 2-3 containers	☐ Bagged Ice / Avg 2-3 containers	☐ Bagged Ice / Avg 2-3 containers	☐ Bagged Ice / Avg 2-3 containers
☐ Blue Ice / Avg 2-3 containers	☐ Blue Ice / Avg 2-3 containers	☐ Blue Ice / Avg 2-3 containers	☐ Blue Ice / Avg 2-3 containers
☐ None / Avg 2-3 containers	☐ None / Avg 2-3 containers	☐ None / Avg 2-3 containers	☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:

☑ Temperature Blank (TB)	☐ Temperature Blank (TB)	☐ Temperature Blank (TB)	☐ Temperature Blank (TB)
☐ 1 Container	☐ 1 Container	☐ 1 Container	☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C	Recorded °C	Correction Factor °C	Actual °C	Recorded °C	Correction Factor °C	Actual °C	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:	-	3.1	Temp Blank:			Temp Blank:			Temp Blank:		
TB location: Representative / Not Representative			TB location: Representative / Not Representative			TB location: Representative / Not Representative			TB location: Representative / Not Representative		
1 4.5	-	4.5	1			1			1		
2 4.4	-	4.4	2			2			2		
3 4.4	-	4.4	3			3			3		
Average °C		4.4	Average °C			Average °C			Average °C		
☐ Cooler ID on COC?			☐ Cooler ID on COC?			☐ Cooler ID on COC?			☐ Cooler ID on COC?		
☐ VOC Trip Blank received?			☐ VOC Trip Blank received?			☐ VOC Trip Blank received?			☐ VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☑ TriMatrix COC ☐ Other 144185

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☑		Completed Sample Preservation Verification Form?
☐	☑		Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐		Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☑ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
4/20/13 0800	4/30/13 1024	Yes (No)

Log In Forms - Receiving.Log-In_Checklist revision: 3.4

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SAMPLE PRESERVATION VERIFICATION FORM

page ____ of ____

Client	Work Order #
Field & Technical Services	1305096
Receipt Log #	Completed By (initials/date)
35-5	LN 4/30/13

COC ID #	Adjusted by: / Date:	DO NOT ADJUST pH FOR THESE CONTAINER TYPES
144185		

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1					✓		✓	
COC Line #2					✓		✓	
COC Line #3					✓		✓	
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

COC ID #	Adjusted by: / Date:	DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Ph Strip Lot #

☑ HC256691

☐ _____

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms.xls -- Sample_Preserve_Verification

version: 3.0

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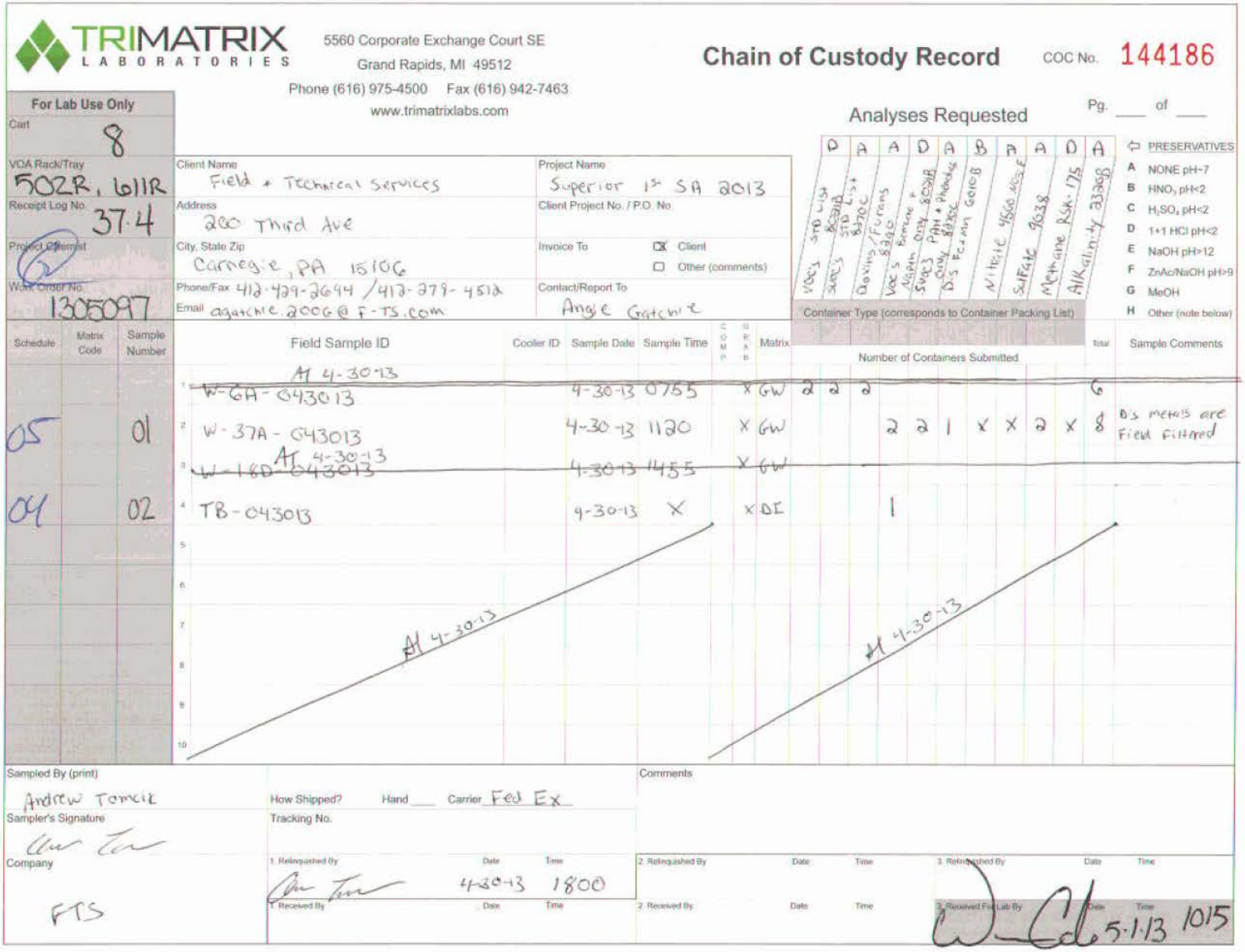

TRIMATRIX LABORATORIES

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Grand Rapids, MI 49512
Phone (616) 975-4500 Fax (616) 942-7463
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Chain of Custody Record

COC No. 144186

Pg. ___ of ___

For Lab Use Only

Cart: 8
VOA Rack/Tray: 502R, 611R
Receipt Log No.: 37.4
Project Chemist:
Work Order No.: 1305097

Client Name: Field + Technical Services
Address: 200 Third Ave
City, State Zip: Carnegie, PA 15106
Phone/Fax: 412-429-2644 / 412-279-4512
Email: agatchie.2006@f-ts.com

Project Name: Superior 1st SA 2013
Client Project No. / P.O. No.:
Invoice To: [X] Client [ ] Other (comments)
Contact/Report To: Angie Gatchie

Analyses Requested

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	Number of Containers Submitted	Total	Sample Comments
			W-6A-043013 At 4-30-13		4-30-13	0755		X	GW	2 2 2	6	
05		01	W-37A-043013		4-30-13	1120		X	GW	2 2 1 X X 2 X	8	Ds metals are Field Filtered
			W-18D-043013 At 4-30-13		4-30-13	1455		X	GW			
04		02	TB-043013		4-30-13	X		X	DI	1		

Container Type (corresponds to Container Packing List): D A A D A B A A D A

VOC's STD List 8260B; SVOC's STD List 8270C; Dioxins/Furans 8290; VOC's Marine Only 8260B; SVOC's PAH + Phenols Only 8270C; Ds Fe + Mn 6010B; Nitrate 4500 NO3-E; Sulfate 9038; Methane RSK-175; Alkalinity A3966

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Sampled By (print): Andrew Tomcik
Sampler's Signature:
Company: FTS

How Shipped? Hand ___ Carrier Fed Ex
Tracking No.:

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
	4-30-13	1800						
1. Received By	Date	Time	2. Received By	Date	Time	3. Received For Lab By	Date	Time
							5-1-13	1015

Comments:

WHITE COPY - REPORT YELLOW COPY - LABORATORY PINK COPY - FIELD

TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES	Client: Field & Tech	Work Order #: 1305097
	Receipt Record Page/Line #: 37.4	New / Add To; Project Chemist; Sample #s

Recorded by (initials/date): WC 5.1.13

☑ Cooler ☐ Box ☐ Other ____ — Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#) ☐ See Additional Cooler Information Form

	Cooler 1	Cooler 2	Cooler 3	Cooler 4
Cooler #	1254			
Time	1100			
Custody Seals	☐ None ☑ Present / Intact ☐ Present / Not Intact	☐ None ☐ Present / Intact ☐ Present / Not Intact	☐ None ☐ Present / Intact ☐ Present / Not Intact	☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location	(Dispersed) / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via	☐ Loose ice / Avg 2-3 containers ☑ Bagged ice / Avg 2-3 containers ☐ Blue ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Loose ice ☐ Bagged ice ☐ Blue ice ☐ None	☐ Loose ice ☐ Bagged ice ☐ Blue ice ☐ None	☐ Loose ice ☐ Bagged ice ☐ Blue ice ☐ None
Alternate Temperature Taken Via	☑ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C
Temp Blank:	-	3.7
TB location: (Representative) / Not Representative		
1 5.1	-	5.1
2 4.7	-	4.7
3 4.5	-	4.5
Average °C		

☐ Cooler ID on COC?
☑ VOC Trip Blank received?

(Coolers 2–4: Temp Blank, TB location: Representative / Not Representative, 1, 2, 3, Average °C — blank; ☐ Cooler ID on COC? ☐ VOC Trip Blank received?)

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes / No
- ☑ ☐ Chain of Custody record(s)? If No, Initiated By ____
- ☑ Received for Lab Signed/Date/Time?
- ☑ ☐ Shipping document?
- ☐ ☑ Other ____

COC Information

☑ TriMatrix COC ☐ Other ____

COC ID Numbers:

Check COC for Accuracy

Yes / No
- ☑ ☐ Analysis Requested?
- ☑ ☐ Sample ID matches COC?
- ☑ ☐ Sample Date and Time matches COC?
- ☑ Container type completed on COC?
- ☑ ☐ All container types indicated are received?

Sample Condition Summary

N/A / Yes / No
- ☐ ☑ Broken containers/lids?
- ☐ ☑ Missing or incomplete labels?
- ☐ ☑ Illegible information on labels?
- ☐ ☑ Low volume received?
- ☐ ☑ Inappropriate or non-TriMatrix containers received?
- ☐ ☐ ☑ VOC vials / TOX containers have headspace?
- ☐ ☐ ☑ Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A / Yes / No
- ☑ ☐ Average sample temperature ≤6° C?
- ☑ ☐ ☐ Was thermal preservation required?
- ☑ ☐ If "No", Project Chemist Approval Intials: ____
- ☑ ☐ If "Yes" Completed Non Con Cooler - Cont Inventory Form?
- ☐ ☑ Completed Sample Preservation Verification Form?
- ☐ ☑ ☐ Samples chemically preserved correctly?
- ☑ ☐ If "No", added orange tag?
- ☐ ☐ Received pre-preserved VOC soils?
  ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☑ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY: COPIES OF COC TO LAB AREA(S)
- ☐ NONE RECEIVED
- ☑ RECEIVED, COCs TO LAB(S)

Notes

☑ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
5.1.13 1015	5.1.13 1108	(Yes) / No

Log In Forms - Receiving Log-in_Checklist revision: 3.4

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SAMPLE PRESERVATION VERIFICATION FORM

page 1 of 1

Client	Work Order #
Field Tech	1305097
Receipt Log # 37.4	Completed By (initials/date) WC 5.1.13
	Project Chemist

COC ID # 144186

Adjusted by: _____ Date: _____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2					✓		✓	
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Ph Strip Lot # HC256691

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

COC ID # _____

Adjusted by: _____ Date: _____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms.xls – Sample_Preserve_Verification

version: 3.0

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2.

TRIMATRIX LABORATORIES

5560 Corporate Exchange Court SE
Grand Rapids, MI 49512
Phone (616) 975-4500 Fax (616) 942-7463
www.trimatrixlabs.com

Chain of Custody Record

COC No. 144198

Pg. 1 of 1

For Lab Use Only	
Cart	3
VOA Rack/Tray	364G
Receipt Log No.	39.9
Project Chemist	GW
Work Order No.	1305100

Client Name	Field & Technical Services
Address	200 3rd Ave
City, State Zip	Carnegie PA 15106
Phone/Fax	412-429-2644
Email	agatchie2006@ftsi.com
Project Name	Superior MNA Sampling
Client Project No. / P.O. No.	
Invoice To	☐ Client ☒ Other (comments)
Contact/Report To	Angie Gatchie

Analyses Requested

Schedule	Matrix Code	Sample Number		Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	VOCs - Benzene & Naphthalene only 8260B (D)	PAHs + Phenolics - 8270C (A)	Diss. Fe, Mn 6010B (D)	Nitrate (4500 NO3-F) (A)	Sulfate (9038) (A)	Alkalinity (2320B) (A)	Methane (RSK-175) (D)	Total	Sample Comments
07 ↓		01	1	W-04AR-050113		5/1/13	0810		X	GW			1	1	X	X	2		
		02	2	W-99A-050113		5/1/13	1800		X	GW			1	1	X	X	2		
05		03	3	W-36A-050113		5/1/13	0810		X	GW	2	2	1	1	X	X	2		
07 ↓		04	4	W-30A-050113		5/1/13	1315		X	GW			1	1	X	X	2		
		05	5	W-10AR2-050113		5/1/13	1055		X	GW			1	1	X	X	2		
05		06	6	W-16AR-050113		5/1/13	1455		X	GW	2	2	1	1	X	X	2		
EB 07	WR	07	7	EB-050113		5/1/13	1550		X	DI			1	1	X	X	2		
04		08	8	TB-050113		5/1/13	—		X	DI	1								
			9																
			10			AC 5/1/13													

Container Type (corresponds to Container Packing List)

Number of Containers Submitted

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Sampled By (print): Andrew Clark
Sampler's Signature: [signature]
Company: FTS

How Shipped? Hand ___ Carrier FedEx
Tracking No.

Comments

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
1. Received By	Date	Time	2. Received By	Date	Time	3. Received for Lab By [signature]	5.2.13	0830

WHITE COPY - REPORT YELLOW COPY - LABORATORY PINK COPY - FIELD

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TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Field & Tech | Work Order #: 1305100
Receipt Record Page/Line #: 39.9 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): WC 5.2.13
☑ Cooler ☐ Box ☐ Other ____ | Qty Received: 3
Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#____) ☐ See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via	Recorded °C	Correction Factor °C	Actual °C	TB location: Representative / Not Representative	Average °C	Cooler ID on COC?	VOC Trip Blank received?
—	1145	☐ None ☑ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☑ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container	Temp Blank:						
						1 3.1	–	3.1		2.9	☐	☑
						2 2.2	–	2.2				
						3 3.5	–	3.5				
m3061	1150	☐ None ☑ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☑ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container	Temp Blank:						
						1 4.0	–	4.0		3.4	☐	☑
						2 3.2	–	3.2				
						3 3.1	–	3.1				
—	1155	☐ None ☑ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☑ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container	Temp Blank:						
						1 5.4	–	5.4		4.4	☐	☐
						2 3.9	–	3.9				
						3 3.9	–	3.9				
		☐ None ☐ Present / Intact ☐ Present / Not Intact	Dispersed / Top / Middle / Bottom	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Temperature Blank (TB) ☐ 1 Container	Temp Blank:						
						1					☐	☐
						2						
						3						

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes / No
- ☐ ☑ Chain of Custody record(s)? If No, Initiated By ____
- ☐ ☐ Received for Lab Signed/Date/Time?
- ☐ ☐ Shipping document?
- ☐ ☐ Other ____

COC Information

☑ TriMatrix COC ☐ Other ____

COC ID Numbers:

Check COC for Accuracy

Yes / No
- ☐ ☐ Analysis Requested?
- ☐ ☑ Sample ID matches COC?
- ☐ ☐ Sample Date and Time matches COC?
- ☐ ☐ Container type completed on COC?
- ☐ ☑ All container types indicated are received?

Sample Condition Summary

N/A / Yes / No
- ☐ ☐ Broken containers/lids?
- ☐ ☐ Missing or incomplete labels?
- ☐ ☐ Illegible information on labels?
- ☐ ☐ Low volume received?
- ☐ ☐ Inappropriate or non-TriMatrix containers received?
- ☐ ☐ VOC vials / TOX containers have headspace?
- ☐ ☐ Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A / Yes / No
- ☐ ☐ Average sample temperature ≤6° C?
- ☐ ☐ Was thermal preservation required?
- ☐ ☐ If "No", Project Chemist Approval Intials: ____
- ☐ ☐ If "Yes" Completed Non Con Cooler - Cont Inventory Form?
- ☐ ☐ Completed Sample Preservation Verification Form?
- ☐ ☐ Samples chemically preserved correctly?
- ☐ ☐ If "No", added orange tag?
- ☐ ☐ Received pre-preserved VOC soils?
  - ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☑ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
- ☐ NONE RECEIVED
- ☑ RECEIVED, COCs TO LAB(S)

Notes

☑ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
5.2.13 0830	5.2.13 1200	Yes / (No)

Log In Forms - Receiving Log-In_Checklist revision: 3.4

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TRIMATRIX LABORATORIES — SAMPLE PRESERVATION VERIFICATION FORM

page 1 of 1

Client	Field Tech	Work Order #	1305100
Receipt Log #	39.9	Completed By (initials/date)	WS 5.2.13
		Project Chemist	

COC ID # 144198 — Adjusted by: ____ Date: ____ — DO NOT ADJUST pH FOR THESE CONTAINER TYPES

pH Strip Lot # HC256691

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1					✓		✓	
COC Line #2					✓		✓	
COC Line #3					✓		✓	
COC Line #4					✓		✓	
COC Line #5					✓		✓	
COC Line #6					✓		✓	
COC Line #7					✓		✓	
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

COC ID # — Adjusted by: ____ Date: ____ — DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms -- Sample_Preserve_Verification

version: 3.0

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May 29, 2013

Beazer East, Inc.
Attn: Ms. Angie Gatchie c/o FTS
200 Third Avenue
Carnegie, PA 15106

Project: Superior GW - WI Cert. #999472650

Dear Ms. Angie Gatchie c/o FTS,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1305020	04/30/2013	Laboratory Services
1305060	05/02/2013	Laboratory Services
1305098	05/02/2013	Laboratory Services

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request. LOD and LOQ values associated with samples requiring a dilution have been adjusted based on the dilution factor.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Gary L. Wood
Project Chemist

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305020**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30C-042913**	Sampled:	04/29/13 10:10
Lab Sample ID:	**1305020-01**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/07/13 By: LEW
Dilution Factor:	1	Analyzed:	05/07/13 By: LEW
QC Batch:	1304432	Analytical Batch:	3E13041

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDU	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
*1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*103*	*81-126*
aaa-Trifluorotoluene	*105*	*86-118*

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305020**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30C-042913**	Sampled:	04/29/13 10:10
Lab Sample ID:	**1305020-01**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/06/13 By: ALK
Dilution Factor:	1	Analyzed:	05/07/13 By: JLB
QC Batch:	1304209	Analytical Batch:	3E08013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	**0.15J**	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	**0.12J**	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
84-74-2	Di-n-butyl Phthalate	**0.36J**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305020**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30C-042913**	Sampled:	04/29/13 10:10
Lab Sample ID:	**1305020-01**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/06/13 By: ALK
Dilution Factor:	1	Analyzed:	05/07/13 By: JLB
QC Batch:	1304209	Analytical Batch:	3E08013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
84-66-2	Diethyl Phthalate	NDU	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	**0.25J**	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**1.0B**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.080
85-01-8	Phenanthrene	**0.081J**	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305020**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30C-042913**	Sampled:	04/29/13 10:10
Lab Sample ID:	**1305020-01**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/06/13 By: ALK
Dilution Factor:	1	Analyzed:	05/07/13 By: JLB
QC Batch:	1304209	Analytical Batch:	3E08013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*49*	*20-70*
Phenol-d6	*30*	*18-45*
Nitrobenzene-d5	*81*	*31-123*
2-Fluorobiphenyl	*81*	*25-113*
2,4,6-Tribromophenol	*93*	*30-121*
o-Terphenyl	*94*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305020**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-28C-042913**	Sampled:	04/29/13 13:40
Lab Sample ID:	**1305020-02**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/07/13 By: LEW
Dilution Factor:	1	Analyzed:	05/07/13 By: LEW
QC Batch:	1304432	Analytical Batch:	3E13041

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDU	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
*1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*100*	*81-126*
aaa-Trifluorotoluene	*106*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305020**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-28C-042913**	Sampled:	04/29/13 13:40
Lab Sample ID:	**1305020-02**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/06/13 By: ALK
Dilution Factor:	1	Analyzed:	05/07/13 By: JLB
QC Batch:	1304209	Analytical Batch:	3E08013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	NDU	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	NDU	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
84-74-2	Di-n-butyl Phthalate	NDU	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305020**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-28C-042913**	Sampled:	04/29/13 13:40
Lab Sample ID:	**1305020-02**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/06/13 By: ALK
Dilution Factor:	1	Analyzed:	05/07/13 By: JLB
QC Batch:	1304209	Analytical Batch:	3E08013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
84-66-2	Diethyl Phthalate	NDU	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**0.80B**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.080
85-01-8	Phenanthrene	NDU	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305020**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-28C-042913**	Sampled:	04/29/13 13:40
Lab Sample ID:	**1305020-02**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/06/13 By: ALK
Dilution Factor:	1	Analyzed:	05/07/13 By: JLB
QC Batch:	1304209	Analytical Batch:	3E08013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*41*	*20-70*
Phenol-d6	*27*	*18-45*
Nitrobenzene-d5	*78*	*31-123*
2-Fluorobiphenyl	*73*	*25-113*
2,4,6-Tribromophenol	*76*	*30-121*
o-Terphenyl	*85*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305020**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-042913**	Sampled:	04/29/13 16:10
Lab Sample ID:	**1305020-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/07/13 By: LEW
Dilution Factor:	1	Analyzed:	05/07/13 By: LEW
QC Batch:	1304432	Analytical Batch:	3E13041

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDU	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
*1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*102*	*81-126*
aaa-Trifluorotoluene	*106*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305020**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-042913**	Sampled:	04/29/13 16:10
Lab Sample ID:	**1305020-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/06/13 By: ALK
Dilution Factor:	1	Analyzed:	05/07/13 By: JLB
QC Batch:	1304209	Analytical Batch:	3E08013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	**0.11J**	0.20	0.062
56-55-3	Benzo(a)anthracene	**1.1**	0.15	0.045
50-32-8	Benzo(a)pyrene	**0.49**	0.13	0.040
205-99-2	Benzo(b)fluoranthene	**3.1**	0.19	0.058
207-08-9	Benzo(k)fluoranthene	**2.3**	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	**2.1**	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	NDU	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	**2.7**	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	**1.9**	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	**1.9**	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
84-74-2	Di-n-butyl Phthalate	**1.6**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305020**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-042913**	Sampled:	04/29/13 16:10
Lab Sample ID:	**1305020-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/06/13 By: ALK
Dilution Factor:	1	Analyzed:	05/07/13 By: JLB
QC Batch:	1304209	Analytical Batch:	3E08013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
84-66-2	Diethyl Phthalate	NDU	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	**2.6**	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**3.2B**	0.38	0.11
206-44-0	Fluoranthene	**0.93**	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	**2.2**	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	**1.3**	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	**0.092J**	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	**1.5**	0.27	0.080
85-01-8	Phenanthrene	**0.15**	0.14	0.043

Continued on next page

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305020**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-042913**	Sampled:	04/29/13 16:10
Lab Sample ID:	**1305020-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/06/13 By: ALK
Dilution Factor:	1	Analyzed:	05/07/13 By: JLB
QC Batch:	1304209	Analytical Batch:	3E08013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	**0.86**	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	**0.36J**	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*34*	*20-70*
Phenol-d6	*29*	*18-45*
Nitrobenzene-d5	*85*	*31-123*
2-Fluorobiphenyl	*79*	*25-113*
2,4,6-Tribromophenol	*91*	*30-121*
o-Terphenyl	*93*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305020**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**Trip Blank**	Sampled:	04/29/13 00:00
Lab Sample ID:	**1305020-04**	Sampled By:	TML
Matrix:	Water	Received:	04/30/13 08:20
Unit:	ug/L	Prepared:	05/07/13 By: LEW
Dilution Factor:	1	Analyzed:	05/07/13 By: LEW
QC Batch:	1304432	Analytical Batch:	3E13041

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDU	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
*1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*100*	*81-126*
aaa-Trifluorotoluene	*107*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-04AR-050113**	Sampled:	05/01/13 08:10
Lab Sample ID:	**1305060-01**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: LEW
Dilution Factor:	1	Analyzed:	05/07/13 By: LEW
QC Batch:	1304432	Analytical Batch:	3E13041

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDU	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
*1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*102*	*81-126*
aaa-Trifluorotoluene	*107*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-04AR-050113**	Sampled:	05/01/13 08:10
Lab Sample ID:	**1305060-01**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	NDU	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	NDU	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
84-74-2	Di-n-butyl Phthalate	NDU	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-04AR-050113**	Sampled:	05/01/13 08:10
Lab Sample ID:	**1305060-01**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
84-66-2	Diethyl Phthalate	NDU	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	**0.27**	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**3.3B**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	**0.62**	0.27	0.080
85-01-8	Phenanthrene	NDU	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-04AR-050113**	Sampled:	05/01/13 08:10
Lab Sample ID:	**1305060-01**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*48*	*20-70*
Phenol-d6	*29*	*18-45*
Nitrobenzene-d5	*79*	*31-123*
2-Fluorobiphenyl	*84*	*25-113*
2,4,6-Tribromophenol	*86*	*30-121*
o-Terphenyl	*93*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-99A-050113**	Sampled:	05/01/13 18:00
Lab Sample ID:	**1305060-02**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: LEW
Dilution Factor:	1	Analyzed:	05/07/13 By: LEW
QC Batch:	1304432	Analytical Batch:	3E13041

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDU	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
*1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*102*	*81-126*
aaa-Trifluorotoluene	*107*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-99A-050113**	Sampled:	05/01/13 18:00
Lab Sample ID:	**1305060-02**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	NDU	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	NDU	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
84-74-2	Di-n-butyl Phthalate	NDU	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-99A-050113**	Sampled:	05/01/13 18:00
Lab Sample ID:	**1305060-02**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
84-66-2	Diethyl Phthalate	NDU	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**1.3B**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	**0.65**	0.27	0.080
85-01-8	Phenanthrene	NDU	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-99A-050113**	Sampled:	05/01/13 18:00
Lab Sample ID:	**1305060-02**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*54*	*20-70*
Phenol-d6	*33*	*18-45*
Nitrobenzene-d5	*84*	*31-123*
2-Fluorobiphenyl	*94*	*25-113*
2,4,6-Tribromophenol	*94*	*30-121*
o-Terphenyl	*102*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30A-050113**	Sampled:	05/01/13 13:15
Lab Sample ID:	**1305060-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/09/13 By: LEW
Dilution Factor:	1	Analyzed:	05/09/13 By: LEW
QC Batch:	1304611	Analytical Batch:	3E14029

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	**0.68**	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	**15**	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	**0.47J**	0.74	0.22
179601-23-1	Xylene, Meta + Para	**0.45J**	1.4	0.42
95-47-6	Xylene, Ortho	**0.28J**	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*121*	*81-126*
aaa-Trifluorotoluene	*101*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30A-050113**	Sampled:	05/01/13 13:15
Lab Sample ID:	**1305060-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**2.6**	0.11	0.033
208-96-8	Acenaphthylene	**0.041J**	0.057	0.017
120-12-7	Anthracene	**0.062J**	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	**0.46**	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	**0.25**	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	**0.99**	0.14	0.041
84-74-2	Di-n-butyl Phthalate	**0.23J**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30A-050113**	Sampled:	05/01/13 13:15
Lab Sample ID:	**1305060-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
84-66-2	Diethyl Phthalate	NDU	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**0.72B**	0.38	0.11
206-44-0	Fluoranthene	**0.12J**	0.21	0.063
86-73-7	Fluorene	**0.71**	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	**0.021J**	0.050	0.015
90-12-0	1-Methylnaphthalene	**0.92**	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.080
85-01-8	Phenanthrene	**0.26**	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30A-050113**	Sampled:	05/01/13 13:15
Lab Sample ID:	**1305060-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	**0.072J**	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*40*	*20-70*
Phenol-d6	*27*	*18-45*
Nitrobenzene-d5	*66*	*31-123*
2-Fluorobiphenyl	*73*	*25-113*
2,4,6-Tribromophenol	*70*	*30-121*
o-Terphenyl	*77*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-10AR2-050113**	Sampled:	05/01/13 10:55
Lab Sample ID:	**1305060-04**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/09/13 By: LEW
Dilution Factor:	1	Analyzed:	05/09/13 By: LEW
QC Batch:	1304611	Analytical Batch:	3E14029

*Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	**2.4**	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	**5.1**	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	**11**	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	**0.62J**	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	**1.9**	0.74	0.22
179601-23-1	Xylene, Meta + Para	**1.2J**	1.4	0.42
95-47-6	Xylene, Ortho	**3.9**	0.67	0.20

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	***135***	*81-126*
aaa-Trifluorotoluene	*102*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-10AR2-050113**	Sampled:	05/01/13 10:55
Lab Sample ID:	**1305060-04**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**6.1**	0.11	0.033
208-96-8	Acenaphthylene	**0.11**	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	**0.35**	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	**0.11J**	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
84-74-2	Di-n-butyl Phthalate	**0.43J**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-10AR2-050113**	Sampled:	05/01/13 10:55
Lab Sample ID:	**1305060-04**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
84-66-2	Diethyl Phthalate	NDU	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	**0.28**	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**0.92B**	0.38	0.11
206-44-0	Fluoranthene	**0.20J**	0.21	0.063
86-73-7	Fluorene	**1.1**	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	**0.12**	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	**0.81**	0.27	0.080
85-01-8	Phenanthrene	**0.12J**	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-10AR2-050113**	Sampled:	05/01/13 10:55
Lab Sample ID:	**1305060-04**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	**0.12J**	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*47*	*20-70*
Phenol-d6	*30*	*18-45*
Nitrobenzene-d5	*82*	*31-123*
2-Fluorobiphenyl	*91*	*25-113*
2,4,6-Tribromophenol	*85*	*30-121*
o-Terphenyl	*91*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-050113**	Sampled:	05/01/13 15:50
Lab Sample ID:	**1305060-05**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: LEW
Dilution Factor:	1	Analyzed:	05/07/13 By: LEW
QC Batch:	1304432	Analytical Batch:	3E13041

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDU	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
*1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*101*	*81-126*
aaa-Trifluorotoluene	*107*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-050113**	Sampled:	05/01/13 15:50
Lab Sample ID:	**1305060-05**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	NDU	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	NDU	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
84-74-2	Di-n-butyl Phthalate	**0.36J**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-050113**	Sampled:	05/01/13 15:50
Lab Sample ID:	**1305060-05**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
84-66-2	Diethyl Phthalate	NDU	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**0.78B**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.080
85-01-8	Phenanthrene	NDU	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-050113**	Sampled:	05/01/13 15:50
Lab Sample ID:	**1305060-05**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*50*	*20-70*
Phenol-d6	*32*	*18-45*
Nitrobenzene-d5	*84*	*31-123*
2-Fluorobiphenyl	*97*	*25-113*
2,4,6-Tribromophenol	*86*	*30-121*
o-Terphenyl	*104*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305060**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**TB-050113**	Sampled:	05/01/13 00:00
Lab Sample ID:	**1305060-06**	Sampled By:	TML
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: LEW
Dilution Factor:	1	Analyzed:	05/07/13 By: LEW
QC Batch:	1304432	Analytical Batch:	3E13041

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDU	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
*1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*100*	*81-126*
aaa-Trifluorotoluene	*107*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-12A-043013**	Sampled:	04/30/13 07:45
Lab Sample ID:	**1305098-01**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/09/13 By: LEW
Dilution Factor:	1	Analyzed:	05/09/13 By: LEW
QC Batch:	1304611	Analytical Batch:	3E14029

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*106*	*81-126*
aaa-Trifluorotoluene	*106*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-12A-043013**	Sampled:	04/30/13 07:45
Lab Sample ID:	**1305098-01**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	NDU	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	**0.061J**	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
84-74-2	Di-n-butyl Phthalate	NDU	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-12A-043013**	Sampled:	04/30/13 07:45
Lab Sample ID:	**1305098-01**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
84-66-2	Diethyl Phthalate	NDU	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**0.72B**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.080
85-01-8	Phenanthrene	NDU	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-12A-043013**	Sampled:	04/30/13 07:45
Lab Sample ID:	**1305098-01**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*47*	*20-70*
Phenol-d6	*31*	*18-45*
Nitrobenzene-d5	*76*	*31-123*
2-Fluorobiphenyl	*79*	*25-113*
2,4,6-Tribromophenol	*82*	*30-121*
o-Terphenyl	*92*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-12CR-043013**	Sampled:	04/30/13 11:10
Lab Sample ID:	**1305098-02**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/09/13 By: LEW
Dilution Factor:	1	Analyzed:	05/09/13 By: LEW
QC Batch:	1304611	Analytical Batch:	3E14029

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	**0.49J**	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	**0.42PB**	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*104*	*81-126*
aaa-Trifluorotoluene	*106*	*86-118*

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-12CR-043013**	Sampled:	04/30/13 11:10
Lab Sample ID:	**1305098-02**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	NDU	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	**0.092J**	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
84-74-2	Di-n-butyl Phthalate	**0.14J**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	**0.092**	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	**0.21J**	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-12CR-043013**	Sampled:	04/30/13 11:10
Lab Sample ID:	**1305098-02**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
84-66-2	Diethyl Phthalate	NDU	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**0.80B**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.080
85-01-8	Phenanthrene	NDU	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-12CR-043013**	Sampled:	04/30/13 11:10
Lab Sample ID:	**1305098-02**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*50*	*20-70*
Phenol-d6	*32*	*18-45*
Nitrobenzene-d5	*79*	*31-123*
2-Fluorobiphenyl	*76*	*25-113*
2,4,6-Tribromophenol	*91*	*30-121*
o-Terphenyl	*94*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-06C-043013**	Sampled:	04/30/13 14:15
Lab Sample ID:	**1305098-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/09/13 By: LEW
Dilution Factor:	1	Analyzed:	05/09/13 By: LEW
QC Batch:	1304611	Analytical Batch:	3E14029

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*104*	*81-126*
aaa-Trifluorotoluene	*104*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-06C-043013**	Sampled:	04/30/13 14:15
Lab Sample ID:	**1305098-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	NDU	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	NDU	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
84-74-2	Di-n-butyl Phthalate	**0.15J**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-06C-043013**	Sampled:	04/30/13 14:15
Lab Sample ID:	**1305098-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
84-66-2	Diethyl Phthalate	NDU	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**0.75B**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.080
85-01-8	Phenanthrene	**0.060J**	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-06C-043013**	Sampled:	04/30/13 14:15
Lab Sample ID:	**1305098-03**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	**0.050J**	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*49*	*20-70*
Phenol-d6	*32*	*18-45*
Nitrobenzene-d5	*78*	*31-123*
2-Fluorobiphenyl	*79*	*25-113*
2,4,6-Tribromophenol	*88*	*30-121*
o-Terphenyl	*92*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-06A-043013**	Sampled:	04/30/13 07:55
Lab Sample ID:	**1305098-04**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/09/13 By: LEW
Dilution Factor:	1	Analyzed:	05/09/13 By: LEW
QC Batch:	1304611	Analytical Batch:	3E14029

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*109*	*81-126*
aaa-Trifluorotoluene	*104*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-06A-043013**	Sampled:	04/30/13 07:55
Lab Sample ID:	**1305098-04**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	**0.42**	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	**0.16J**	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
84-74-2	Di-n-butyl Phthalate	**0.48**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-06A-043013**	Sampled:	04/30/13 07:55
Lab Sample ID:	**1305098-04**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
84-66-2	Diethyl Phthalate	NDU	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**0.82B**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.080
85-01-8	Phenanthrene	**0.13J**	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-06A-043013**	Sampled:	04/30/13 07:55
Lab Sample ID:	**1305098-04**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*43*	*20-70*
Phenol-d6	*26*	*18-45*
Nitrobenzene-d5	*71*	*31-123*
2-Fluorobiphenyl	*70*	*25-113*
2,4,6-Tribromophenol	*79*	*30-121*
o-Terphenyl	*87*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-18D-043013**	Sampled:	04/30/13 14:55
Lab Sample ID:	**1305098-05**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	NDU	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	NDU	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
84-74-2	Di-n-butyl Phthalate	NDU	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
84-66-2	Diethyl Phthalate	NDU	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-18D-043013**	Sampled:	04/30/13 14:55
Lab Sample ID:	**1305098-05**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**0.71B**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
*56-49-5	3-Methylcholanthrene	NDUB	0.40	0.12
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
91-20-3	Naphthalene	NDU	0.10	0.031
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.080
85-01-8	Phenanthrene	NDU	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-18D-043013**	Sampled:	04/30/13 14:55
Lab Sample ID:	**1305098-05**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*44*	*20-70*
Phenol-d6	*26*	*18-45*
Nitrobenzene-d5	*78*	*31-123*
2-Fluorobiphenyl	*74*	*25-113*
2,4,6-Tribromophenol	*88*	*30-121*
o-Terphenyl	*90*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-043013**	Sampled:	04/30/13 16:40
Lab Sample ID:	**1305098-06**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/09/13 By: LEW
Dilution Factor:	1	Analyzed:	05/09/13 By: LEW
QC Batch:	1304611	Analytical Batch:	3E14029

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	**0.53J**	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*96*	*81-126*
aaa-Trifluorotoluene	*108*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-043013**	Sampled:	04/30/13 16:40
Lab Sample ID:	**1305098-06**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	NDU	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	**0.061J**	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
84-74-2	Di-n-butyl Phthalate	**0.20J**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-043013**	Sampled:	04/30/13 16:40
Lab Sample ID:	**1305098-06**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
84-66-2	Diethyl Phthalate	NDU	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**0.68B**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.080
85-01-8	Phenanthrene	NDU	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-043013**	Sampled:	04/30/13 16:40
Lab Sample ID:	**1305098-06**	Sampled By:	Andrew Clark
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/07/13 By: SMS9
Dilution Factor:	1	Analyzed:	05/08/13 By: JLB
QC Batch:	1304256	Analytical Batch:	3E09013

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*47*	*20-70*
Phenol-d6	*28*	*18-45*
Nitrobenzene-d5	*81*	*31-123*
2-Fluorobiphenyl	*76*	*25-113*
2,4,6-Tribromophenol	*86*	*30-121*
o-Terphenyl	*87*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1305098**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**TB-043013**	Sampled:	04/30/13 00:00
Lab Sample ID:	**1305098-07**	Sampled By:	TML
Matrix:	Water	Received:	05/02/13 08:30
Unit:	ug/L	Prepared:	05/09/13 By: LEW
Dilution Factor:	1	Analyzed:	05/09/13 By: LEW
QC Batch:	1304611	Analytical Batch:	3E14029

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*103*	*81-126*
aaa-Trifluorotoluene	*107*	*86-118*

*See Statement of Data Qualifications

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QUALITY CONTROL REPORT

Halogenated and Aromatic Volatiles by EPA Method 8021B

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1304432 5030B Aqueous Purge & Trap/USEPA-8021B									
Method Blank					Analyzed:	05/07/2013	By: LEW		
Unit: ug/L					Analytical Batch:	3E13041			
Benzene			ND U					0.67	0.20
n-Butylbenzene			ND U			--		0.92	0.28
Chloromethane			ND U					1.2	0.37
Ethylbenzene			ND U					0.67	0.20
Methyl tert-Butyl Ether			ND U					1.6	0.48
Naphthalene			ND U			--		1.5	0.44
n-Propylbenzene			ND U					0.80	0.24
Styrene			ND U			--		0.67	0.20
Toluene			ND U					1.1	0.33
1,1,1-Trichloroethane			ND U					1.0	0.30
1,3,5-Trimethylbenzene			ND U					0.80	0.24
1,2,4-Trimethylbenzene			ND U					0.74	0.22
Xylene, Meta + Para			ND U			--		1.4	0.42
Xylene, Ortho			ND U					0.67	0.20
Surrogates:									
1,2-Dichloroethane-d4				*99*	*81-126*				
aaa-Trifluorotoluene				*103*	*86-118*				
Laboratory Control Sample					Analyzed:	05/07/2013	By: LEW		
Unit: ug/L					Analytical Batch:	3E13041			
Benzene	20.0		**20.6**	103	83-119	--		0.666	0.20
n-Butylbenzene	20.0		**19.0**	95	80-120	--		0.919	0.28
Chloromethane	20.0		**19.8**	99	65-138	--		1.24	0.37
Ethylbenzene	20.0		**20.1**	100	85-116	--		0.666	0.20
Methyl tert-Butyl Ether	20.0		**19.2**	96	77-116	--		1.59	0.48
Naphthalene	20.0		**19.3**	96	80-120	--		1.47	0.44
n-Propylbenzene	20.0		**19.4**	97	80-120	--		0.799	0.24
Styrene	20.0		**20.0**	100	80-120	--		0.666	0.20
Toluene	20.0		**19.9**	100	77-128	--		1.11	0.33
1,1,1-Trichloroethane	20.0		**20.1**	100	85-131	--		1.02	0.30
1,3,5-Trimethylbenzene	20.0		**19.3**	96	80-116	--		0.803	0.24
1,2,4-Trimethylbenzene	20.0		**19.3**	97	77-123	--		0.743	0.22
Xylene, Meta + Para	40.0		**39.9**	100	87-118	--		1.39	0.42
Xylene, Ortho	20.0		**19.8**	99	87-118	--		0.666	0.20

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QUALITY CONTROL REPORT

Halogenated and Aromatic Volatiles by EPA Method 8021B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1304611 5030B Aqueous Purge & Trap/USEPA-8021B									
Method Blank					Analyzed:	05/09/2013	By: LEW		
Unit: ug/L					Analytical Batch:	3E14029			
Benzene			ND U					0.67	0.20
n-Butylbenzene			ND U					0.92	0.28
Chloromethane			ND U					1.2	0.37
Ethylbenzene			ND U					0.67	0.20
Methyl tert-Butyl Ether			ND U					1.6	0.48
Naphthalene			ND U			--		1.5	0.44
n-Propylbenzene			ND U					0.80	0.24
Styrene			ND U			--		0.67	0.20
Toluene			ND U					1.1	0.33
1,1,1-Trichloroethane			ND U					1.0	0.30
1,3,5-Trimethylbenzene			ND U					0.80	0.24
1,2,4-Trimethylbenzene			ND U					0.74	0.22
Xylene, Meta + Para			ND U			--		1.4	0.42
Xylene, Ortho			ND U					0.67	0.20
Surrogates:									
1,2-Dichloroethane-d4				*99*	*81-126*				
aaa-Trifluorotoluene				*103*	*86-118*				
Laboratory Control Sample					Analyzed:	05/09/2013	By: LEW		
Unit: ug/L					Analytical Batch:	3E14029			
Benzene	20.0		**20.7**	104	83-119	--		0.666	0.20
n-Butylbenzene	20.0		**18.3**	92	80-120	--		0.919	0.28
Chloromethane	20.0		**30.5**	**152**	65-138	--		1.24	0.37
Ethylbenzene	20.0		**19.6**	98	85-116	--		0.666	0.20
Methyl tert-Butyl Ether	20.0		**20.1**	101	77-116	--		1.59	0.48
Naphthalene	20.0		**17.3**	86	80-120	--		1.47	0.44
n-Propylbenzene	20.0		**18.7**	93	80-120	--		0.799	0.24
Styrene	20.0		**19.4**	97	80-120	--		0.666	0.20
Toluene	20.0		**19.7**	99	77-128	--		1.11	0.33
1,1,1-Trichloroethane	20.0		**19.8**	99	85-131	--		1.02	0.30
1,3,5-Trimethylbenzene	20.0		**18.6**	93	80-116	--		0.803	0.24
1,2,4-Trimethylbenzene	20.0		**18.5**	93	77-123	--		0.743	0.22
Xylene, Meta + Para	40.0		**38.9**	97	87-118	--		1.39	0.42
Xylene, Ortho	20.0		**19.4**	97	87-118	--		0.666	0.20

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Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1304209 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank Analyzed: 05/07/2013 By: JLB

Unit: ug/L Analytical Batch: 3E08013

Acenaphthene	ND U			0.11	0.033
Acenaphthylene	ND U			0.057	0.017
Anthracene	ND U		--	0.20	0.062
Benzo(a)anthracene	ND U		--	0.15	0.045
Benzo(a)pyrene	ND U			0.13	0.040
Benzo(b)fluoranthene	ND U			0.19	0.058
Benzo(k)fluoranthene	ND U			0.20	0.060
Benzo(g,h,i)perylene	ND U			0.20	0.061
Benzoic Acid	ND U			1.6	0.48
Benzyl Alcohol	ND U			0.16	0.049
4-Bromophenyl Phenyl Ether	ND U			0.14	0.043
Butyl Benzyl Phthalate	ND U			0.19	0.056
4-Chloro-3-methylphenol	ND U			0.38	0.12
4-Chloroaniline	ND U			0.34	0.10
Bis(2-chloroethoxy)methane	ND U			0.061	0.018
Bis(2-chloroethyl) Ether	ND U			0.079	0.024
Bis(2-chloroisopropyl) Ether	ND U			0.086	0.026
2-Chloronaphthalene	ND U			0.057	0.017
2-Chlorophenol	ND U			0.089	0.027
4-Chlorophenyl Phenyl Ether	ND U			0.16	0.048
Chrysene	ND U		--	0.15	0.045
Dibenz(a,h)anthracene	ND U			0.38	0.11
Dibenzofuran	ND U			0.14	0.041
Di-n-butyl Phthalate	ND U		--	0.45	0.14
1,2-Dichlorobenzene	ND U			0.13	0.040
1,3-Dichlorobenzene	ND U			0.14	0.041
1,4-Dichlorobenzene	ND U			0.066	0.020
3,3´-Dichlorobenzidine	ND U			0.41	0.12
2,4-Dichlorophenol	ND U			0.30	0.092
Diethyl Phthalate	ND U			0.22	0.065
2,4-Dimethylphenol	ND U			0.56	0.17
Dimethyl Phthalate	ND U			0.15	0.046
4,6-Dinitro-2-methylphenol	ND U			3.4	1.0
2,4-Dinitrophenol	ND U			3.9	1.2
2,4-Dinitrotoluene	ND U			0.16	0.048
2,6-Dinitrotoluene	ND U			0.27	0.080

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1304209 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 05/07/2013 By: JLB

Unit: ug/L Analytical Batch: 3E08013

Di-n-octyl Phthalate			ND U					0.26	0.077
Bis(2-ethylhexyl) Phthalate			**0.57**			--		0.38	0.11
Fluoranthene			ND U					0.21	0.063
Fluorene			ND U					0.14	0.041
Hexachlorobenzene			ND U					0.21	0.063
Hexachlorobutadiene			ND U					0.13	0.040
Hexachlorocyclopentadiene			ND U					0.15	0.044
Hexachloroethane			ND U					0.14	0.042
Indeno(1,2,3-cd)pyrene			ND U					0.27	0.080
Isophorone			ND U					0.15	0.045
2-Methylnaphthalene			ND U					0.050	0.015
1-Methylnaphthalene			ND U					0.065	0.020
2-Methylphenol			ND U					0.16	0.048
4-Methylphenol			ND U					0.19	0.057
2-Nitroaniline			ND U					0.39	0.12
3-Nitroaniline			ND U					0.81	0.24
4-Nitroaniline			ND U					1.1	0.33
Nitrobenzene			ND U					0.19	0.058
4-Nitrophenol			ND U					4.2	1.2
2-Nitrophenol			ND U					0.16	0.048
N-Nitroso-diphenylamine			ND U					0.23	0.068
N-Nitroso-di-n-propylamine			ND U					0.25	0.075
Pentachlorophenol			ND U					0.42	0.13
Phenanthrene			ND U			--		0.14	0.043
Phenol			ND U					0.11	0.034
Pyrene			ND U					0.22	0.066
2,3,4,6-Tetrachlorophenol			ND U					1.2	0.37
2,3,5,6-Tetrachlorophenol			ND U					0.71	0.21
1,2,4-Trichlorobenzene			ND U					0.089	0.027
2,4,6-Trichlorophenol			ND U					0.28	0.085
2,4,5-Trichlorophenol			ND U					0.33	0.099

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1304209 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C									
Method Blank (Continued)					Analyzed:	05/07/2013	By: JLB		
Unit: ug/L					Analytical Batch:	3E08013			
Surrogates:									
2-Fluorophenol				*53*	*20-70*				
Phenol-d6				*33*	*18-45*				
Nitrobenzene-d5				*85*	*31-123*				
2-Fluorobiphenyl				*102*	*25-113*				
2,4,6-Tribromophenol				*85*	*30-121*				
o-Terphenyl				*102*	*42-125*				
Laboratory Control Sample					Analyzed:	05/07/2013	By: JLB		
Unit: ug/L					Analytical Batch:	3E08013			
Acenaphthene		10.0	**9.79**	98	53-126	--		0.110	0.033
Acenaphthylene		10.0	**9.92**	99	62-133	--		0.0569	0.017
Anthracene		10.0	**9.62**	96	64-130	--		0.205	0.062
Benzo(a)anthracene		10.0	**9.82**	98	63-129	--		0.151	0.045
Benzo(a)pyrene		10.0	**9.83**	98	59-131	--		0.134	0.040
Benzo(b)fluoranthene		10.0	**10.7**	107	58-133	--		0.193	0.058
Benzo(k)fluoranthene		10.0	**8.85**	88	59-132	--		0.198	0.060
Benzo(g,h,i)perylene		10.0	**9.43**	94	52-129	--		0.203	0.061
Benzoic Acid		10.0	**2.18**	22	10-45	--		1.59	0.48
Benzyl Alcohol		10.0	**7.85**	78	24-116	--		0.162	0.049
4-Bromophenyl Phenyl Ether		10.0	**9.29**	93	57-124	--		0.143	0.043
Butyl Benzyl Phthalate		10.0	**11.1**	111	58-141	--		0.185	0.056
4-Chloro-3-methylphenol		10.0	**9.05**	90	53-120	--		0.383	0.12
4-Chloroaniline		10.0	**9.15**	92	44-138	--		0.340	0.10
Bis(2-chloroethoxy)methane		10.0	**9.00**	90	52-124	--		0.0613	0.018
Bis(2-chloroethyl) Ether		10.0	**8.50**	85	42-123	--		0.0789	0.024
Bis(2-chloroisopropyl) Ether		10.0	**8.19**	82	50-122	--		0.0859	0.026
2-Chloronaphthalene		10.0	**9.77**	98	58-126	--		0.0569	0.017
2-Chlorophenol		10.0	**7.93**	79	44-121	--		0.0889	0.027
4-Chlorophenyl Phenyl Ether		10.0	**8.84**	88	57-122	--		0.160	0.048
Chrysene		10.0	**9.41**	94	66-134	--		0.151	0.045
Dibenz(a,h)anthracene		10.0	**10.2**	102	57-130	--		0.376	0.11
Dibenzofuran		10.0	**9.47**	95	59-123	--		0.136	0.041
Di-n-butyl Phthalate		10.0	**10.1**	101	58-145	--		0.450	0.14
1,2-Dichlorobenzene		10.0	**8.73**	87	48-126	--		0.132	0.040

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QUALITY CONTROL REPORT

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

QC Batch: 1304209 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 05/07/2013 By: JLB

Unit: ug/L Analytical Batch: 3E08013

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
1,3-Dichlorobenzene		10.0	**8.64**	86	44-122	--		0.137	0.041
1,4-Dichlorobenzene		10.0	**8.55**	86	41-124	--		0.0656	0.020
3,3´-Dichlorobenzidine		20.0	**19.2**	96	55-135	--		0.413	0.12
2,4-Dichlorophenol		10.0	**8.61**	86	51-122	--		0.305	0.092
Diethyl Phthalate		10.0	**9.25**	92	55-129	--		0.217	0.065
2,4-Dimethylphenol		10.0	**8.14**	81	35-112	--		0.559	0.17
Dimethyl Phthalate		10.0	**8.84**	88	61-126	--		0.152	0.046
4,6-Dinitro-2-methylphenol		10.0	**8.18**	82	25-139	--		3.40	1.0
2,4-Dinitrophenol		10.0	**9.09**	91	10-147	--		3.86	1.2
2,4-Dinitrotoluene		10.0	**8.69**	87	55-131	--		0.158	0.048
2,6-Dinitrotoluene		10.0	**9.74**	97	59-120	--		0.267	0.080
Di-n-octyl Phthalate		10.0	**10.8**	108	55-136	--		0.255	0.077
*Bis(2-ethylhexyl) Phthalate		10.0	**9.86 B**	99	60-136	--		0.376	0.11
Fluoranthene		10.0	**9.06**	91	64-138	--		0.209	0.063
Fluorene		10.0	**9.00**	90	60-128	--		0.138	0.041
Hexachlorobenzene		10.0	**8.96**	90	49-130	--		0.209	0.063
Hexachlorobutadiene		10.0	**8.33**	83	50-128	--		0.132	0.040
Hexachlorocyclopentadiene		10.0	**8.86**	89	21-138	--		0.148	0.044
Hexachloroethane		10.0	**8.09**	81	41-123	--		0.139	0.042
Indeno(1,2,3-cd)pyrene		10.0	**10.0**	100	57-129	--		0.266	0.080
Isophorone		10.0	**7.64**	76	56-129	--		0.150	0.045
2-Methylnaphthalene		10.0	**8.84**	88	59-135	--		0.0496	0.015
1-Methylnaphthalene		10.0	**9.55**	96	50-150	--		0.0649	0.020
2-Methylphenol		10.0	**7.45**	74	39-107	--		0.158	0.048
4-Methylphenol		10.0	**7.31**	73	33-122	--		0.188	0.057
2-Nitroaniline		10.0	**10.2**	102	57-130	--		0.386	0.12
3-Nitroaniline		10.0	**8.73**	87	49-144	--		0.813	0.24
4-Nitroaniline		10.0	**8.04**	80	52-143	--		1.10	0.33
Nitrobenzene		10.0	**9.00**	90	53-121	--		0.195	0.058
4-Nitrophenol		10.0	**5.28**	53	17-70	--		4.16	1.2
2-Nitrophenol		10.0	**8.92**	89	44-128	--		0.158	0.048
N-Nitroso-diphenylamine		10.0	**9.52**	95	45-110	--		0.225	0.068
N-Nitroso-di-n-propylamine		10.0	**8.63**	86	49-125	--		0.251	0.075
Pentachlorophenol		10.0	**7.89**	79	21-124	--		0.420	0.13
Phenanthrene		10.0	**9.51**	95	63-126	--		0.142	0.043
Phenol		10.0	**4.34**	43	22-60	--		0.112	0.034

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1304209 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C									
Laboratory Control Sample (Continued)					Analyzed:		05/07/2013	By: JLB	
Unit: ug/L					Analytical Batch:		3E08013		
Pyrene		10.0	**9.56**	96	60-134	--		0.218	0.066
2,3,4,6-Tetrachlorophenol		10.0	**9.35**	94	45-125	--		1.24	0.37
2,3,5,6-Tetrachlorophenol		10.0	**8.74**	87	50-150	--		0.709	0.21
1,2,4-Trichlorobenzene		10.0	**8.89**	89	47-123	--		0.0886	0.027
2,4,6-Trichlorophenol		10.0	**9.44**	94	47-128	--		0.283	0.085
2,4,5-Trichlorophenol		10.0	**10.3**	103	53-129	--		0.330	0.099
QC Batch: 1304256 3510C Liquid-Liquid Extraction/USEPA-8270C									
Method Blank					Analyzed:		05/08/2013	By: JLB	
Unit: ug/L					Analytical Batch:		3E09013		
Acenaphthene			ND U					0.11	0.033
Acenaphthene			ND U					0.11	0.033
Acenaphthylene			ND U					0.057	0.017
Acenaphthylene			ND U					0.057	0.017
Anthracene			ND U					0.20	0.062
Anthracene			ND U					0.20	0.062
Benzo(a)anthracene			ND U					0.15	0.045
Benzo(a)anthracene			ND U					0.15	0.045
Benzo(a)pyrene			ND U					0.13	0.040
Benzo(a)pyrene			ND U					0.13	0.040
Benzo(b)fluoranthene			ND U					0.19	0.058
Benzo(b)fluoranthene			ND U					0.19	0.058
Benzo(k)fluoranthene			ND U					0.20	0.060
Benzo(k)fluoranthene			ND U					0.20	0.060
Benzo(g,h,i)perylene			ND U					0.20	0.061
Benzo(g,h,i)perylene			ND U					0.20	0.061
Benzoic Acid			ND U					1.6	0.48
Benzoic Acid			ND U					1.6	0.48
Benzyl Alcohol			ND U					0.16	0.049
Benzyl Alcohol			ND U					0.16	0.049
4-Bromophenyl Phenyl Ether			ND U					0.14	0.043
4-Bromophenyl Phenyl Ether			ND U					0.14	0.043
Butyl Benzyl Phthalate			ND U			--		0.19	0.056
Butyl Benzyl Phthalate			ND U			--		0.19	0.056
4-Chloro-3-methylphenol			ND U					0.38	0.12
4-Chloro-3-methylphenol			ND U					0.38	0.12

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 05/08/2013 By: JLB

Unit: ug/L Analytical Batch: 3E09013

4-Chloroaniline	ND U			0.34	0.10
4-Chloroaniline	ND U			0.34	0.10
Bis(2-chloroethoxy)methane	ND U			0.061	0.018
Bis(2-chloroethoxy)methane	ND U			0.061	0.018
Bis(2-chloroethyl) Ether	ND U			0.079	0.024
Bis(2-chloroethyl) Ether	ND U			0.079	0.024
Bis(2-chloroisopropyl) Ether	ND U			0.086	0.026
Bis(2-chloroisopropyl) Ether	ND U			0.086	0.026
2-Chloronaphthalene	ND U			0.057	0.017
2-Chloronaphthalene	ND U			0.057	0.017
2-Chlorophenol	ND U			0.089	0.027
2-Chlorophenol	ND U			0.089	0.027
4-Chlorophenyl Phenyl Ether	ND U			0.16	0.048
4-Chlorophenyl Phenyl Ether	ND U			0.16	0.048
Chrysene	ND U			0.15	0.045
Chrysene	ND U			0.15	0.045
Dibenz(a,h)anthracene	ND U			0.38	0.11
Dibenz(a,h)anthracene	ND U			0.38	0.11
Dibenzofuran	ND U			0.14	0.041
Dibenzofuran	ND U			0.14	0.041
Di-n-butyl Phthalate	ND U		--	0.45	0.14
Di-n-butyl Phthalate	ND U		--	0.45	0.14
1,2-Dichlorobenzene	ND U			0.13	0.040
1,2-Dichlorobenzene	ND U			0.13	0.040
1,3-Dichlorobenzene	ND U			0.14	0.041
1,3-Dichlorobenzene	ND U			0.14	0.041
1,4-Dichlorobenzene	ND U			0.066	0.020
1,4-Dichlorobenzene	ND U			0.066	0.020
3,3´-Dichlorobenzidine	ND U			0.41	0.12
3,3´-Dichlorobenzidine	ND U			0.41	0.12
2,4-Dichlorophenol	ND U			0.30	0.092
2,4-Dichlorophenol	ND U			0.30	0.092
Diethyl Phthalate	ND U			0.22	0.065
Diethyl Phthalate	ND U			0.22	0.065
2,4-Dimethylphenol	ND U			0.56	0.17
2,4-Dimethylphenol	ND U			0.56	0.17

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 05/08/2013 By: JLB

Unit: ug/L Analytical Batch: 3E09013

Dimethyl Phthalate	ND U			0.15	0.046
Dimethyl Phthalate	ND U			0.15	0.046
4,6-Dinitro-2-methylphenol	ND U			3.4	1.0
4,6-Dinitro-2-methylphenol	ND U			3.4	1.0
2,4-Dinitrophenol	ND U			3.9	1.2
2,4-Dinitrophenol	ND U			3.9	1.2
2,4-Dinitrotoluene	ND U			0.16	0.048
2,4-Dinitrotoluene	ND U			0.16	0.048
2,6-Dinitrotoluene	ND U			0.27	0.080
2,6-Dinitrotoluene	ND U			0.27	0.080
Di-n-octyl Phthalate	ND U			0.26	0.077
Di-n-octyl Phthalate	ND U			0.26	0.077
Bis(2-ethylhexyl) Phthalate	**0.58**		--	0.38	0.11
Bis(2-ethylhexyl) Phthalate	**0.58**		--	0.38	0.11
Fluoranthene	ND U			0.21	0.063
Fluoranthene	ND U			0.21	0.063
Fluorene	ND U			0.14	0.041
Fluorene	ND U			0.14	0.041
Hexachlorobenzene	ND U			0.21	0.063
Hexachlorobenzene	ND U			0.21	0.063
Hexachlorobutadiene	ND U			0.13	0.040
Hexachlorobutadiene	ND U			0.13	0.040
Hexachlorocyclopentadiene	ND U			0.15	0.044
Hexachlorocyclopentadiene	ND U			0.15	0.044
Hexachloroethane	ND U			0.14	0.042
Hexachloroethane	ND U			0.14	0.042
Indeno(1,2,3-cd)pyrene	ND U			0.27	0.080
Indeno(1,2,3-cd)pyrene	ND U			0.27	0.080
Isophorone	ND U			0.15	0.045
Isophorone	ND U			0.15	0.045
3-Methylcholanthrene	ND U			0.40	0.12
2-Methylnaphthalene	ND U			0.050	0.015
2-Methylnaphthalene	ND U			0.050	0.015
1-Methylnaphthalene	ND U			0.065	0.020
1-Methylnaphthalene	ND U			0.065	0.020
2-Methylphenol	ND U			0.16	0.048

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 05/08/2013 By: JLB

Unit: ug/L Analytical Batch: 3E09013

2-Methylphenol	ND U	0.16	0.048
4-Methylphenol	ND U	0.19	0.057
4-Methylphenol	ND U	0.19	0.057
Naphthalene	ND U	0.10	0.031
2-Nitroaniline	ND U	0.39	0.12
2-Nitroaniline	ND U	0.39	0.12
3-Nitroaniline	ND U	0.81	0.24
3-Nitroaniline	ND U	0.81	0.24
4-Nitroaniline	ND U	1.1	0.33
4-Nitroaniline	ND U	1.1	0.33
Nitrobenzene	ND U	0.19	0.058
Nitrobenzene	ND U	0.19	0.058
4-Nitrophenol	ND U	4.2	1.2
4-Nitrophenol	ND U	4.2	1.2
2-Nitrophenol	ND U	0.16	0.048
2-Nitrophenol	ND U	0.16	0.048
N-Nitroso-diphenylamine	ND U	0.23	0.068
N-Nitroso-diphenylamine	ND U	0.23	0.068
N-Nitroso-di-n-propylamine	ND U	0.25	0.075
N-Nitroso-di-n-propylamine	ND U	0.25	0.075
Pentachlorophenol	ND U	0.42	0.13
Pentachlorophenol	ND U	0.42	0.13
Phenanthrene	ND U	0.14	0.043
Phenanthrene	ND U	0.14	0.043
Phenol	ND U	0.11	0.034
Phenol	ND U	0.11	0.034
Pyrene	ND U	0.22	0.066
Pyrene	ND U	0.22	0.066
2,3,4,6-Tetrachlorophenol	ND U	1.2	0.37
2,3,4,6-Tetrachlorophenol	ND U	1.2	0.37
2,3,5,6-Tetrachlorophenol	ND U	0.71	0.21
2,3,5,6-Tetrachlorophenol	ND U	0.71	0.21
1,2,4-Trichlorobenzene	ND U	0.089	0.027
1,2,4-Trichlorobenzene	ND U	0.089	0.027
2,4,6-Trichlorophenol	ND U	0.28	0.085
2,4,6-Trichlorophenol	ND U	0.28	0.085

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 05/08/2013 By: JLB

Unit: ug/L Analytical Batch: 3E09013

2,4,5-Trichlorophenol			ND U			0.33	0.099
2,4,5-Trichlorophenol			ND U			0.33	0.099
Surrogates:							
2-Fluorophenol				*57*	*20-70*		
2-Fluorophenol				*57*	*20-70*		
Phenol-d6				*37*	*18-45*		
Phenol-d6				*37*	*18-45*		
Nitrobenzene-d5				*88*	*31-123*		
Nitrobenzene-d5				*88*	*31-123*		
2-Fluorobiphenyl				*100*	*25-113*		
2-Fluorobiphenyl				*100*	*25-113*		
2,4,6-Tribromophenol				*86*	*30-121*		
2,4,6-Tribromophenol				*86*	*30-121*		
o-Terphenyl				*108*	*42-125*		
o-Terphenyl				*108*	*42-125*		

Method Blank Analyzed: 05/08/2013 By: ASC

Unit: ug/L Analytical Batch: 3E09042

Acenaphthene			ND U			0.11	0.033
Acenaphthylene			ND U			0.057	0.017
Anthracene			ND U		--	0.20	0.062
Benzo(a)anthracene			ND U		--	0.15	0.045
Benzo(a)pyrene			ND U		--	0.13	0.040
Benzo(b)fluoranthene			ND U		--	0.19	0.058

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 05/08/2013 By: ASC

Unit: ug/L Analytical Batch: 3E09042

Benzo(k)fluoranthene	ND U	--		0.20	0.060
Benzo(g,h,i)perylene	ND U			0.20	0.061
Benzoic Acid	**1.6 J**	--		1.6	0.48
Benzyl Alcohol	ND U			0.16	0.049
4-Bromophenyl Phenyl Ether	ND U			0.14	0.043
Butyl Benzyl Phthalate	**0.080 J**	--		0.19	0.056
4-Chloro-3-methylphenol	ND U			0.38	0.12
4-Chloroaniline	ND U			0.34	0.10
Bis(2-chloroethoxy)methane	ND U			0.061	0.018
Bis(2-chloroethyl) Ether	ND U			0.079	0.024
Bis(2-chloroisopropyl) Ether	ND U			0.086	0.026
2-Chloronaphthalene	ND U			0.057	0.017
2-Chlorophenol	ND U			0.089	0.027
4-Chlorophenyl Phenyl Ether	ND U			0.16	0.048
Chrysene	ND U	--		0.15	0.045
Dibenz(a,h)anthracene	ND U			0.38	0.11
Dibenzofuran	ND U			0.14	0.041
Di-n-butyl Phthalate	ND U	--		0.45	0.14
1,2-Dichlorobenzene	ND U			0.13	0.040
1,3-Dichlorobenzene	ND U			0.14	0.041
1,4-Dichlorobenzene	ND U			0.066	0.020
3,3´-Dichlorobenzidine	ND U	--		0.41	0.12
2,4-Dichlorophenol	ND U			0.30	0.092
Diethyl Phthalate	**0.11 J**	--		0.22	0.065
2,4-Dimethylphenol	ND U			0.56	0.17
Dimethyl Phthalate	ND U	--		0.15	0.046
4,6-Dinitro-2-methylphenol	ND U			3.4	1.0
2,4-Dinitrophenol	ND U			3.9	1.2
2,4-Dinitrotoluene	ND U			0.16	0.048
2,6-Dinitrotoluene	**0.090 J**	--		0.27	0.080
Di-n-octyl Phthalate	**0.27**	--		0.26	0.077
Bis(2-ethylhexyl) Phthalate	**0.19 J**	--		0.38	0.11
Fluoranthene	ND U	--		0.21	0.063
Fluorene	ND U			0.14	0.041
Hexachlorobenzene	ND U			0.21	0.063
Hexachlorobutadiene	ND U			0.13	0.040

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 05/08/2013 By: ASC

Unit: ug/L Analytical Batch: 3E09042

Hexachlorocyclopentadiene			ND U				0.15	0.044
Hexachloroethane			ND U				0.14	0.042
Indeno(1,2,3-cd)pyrene			ND U				0.27	0.080
Isophorone			ND U				0.15	0.045
2-Methylnaphthalene			ND U				0.050	0.015
1-Methylnaphthalene			ND U				0.065	0.020
2-Methylphenol			ND U				0.16	0.048
4-Methylphenol			ND U			--	0.19	0.057
2-Nitroaniline			ND U				0.39	0.12
3-Nitroaniline			ND U				0.81	0.24
4-Nitroaniline			ND U				1.1	0.33
Nitrobenzene			ND U				0.19	0.058
4-Nitrophenol			ND U			--	4.2	1.2
2-Nitrophenol			ND U				0.16	0.048
N-Nitroso-diphenylamine			ND U				0.23	0.068
N-Nitroso-di-n-propylamine			ND U			--	0.25	0.075
Pentachlorophenol			ND U				0.42	0.13
Phenanthrene			ND U			--	0.14	0.043
Phenol			ND U				0.11	0.034
Pyrene			ND U			--	0.22	0.066
2,3,4,6-Tetrachlorophenol			ND U				1.2	0.37
2,3,5,6-Tetrachlorophenol			ND U				0.71	0.21
1,2,4-Trichlorobenzene			ND U				0.089	0.027
2,4,6-Trichlorophenol			ND U				0.28	0.085
2,4,5-Trichlorophenol			ND U				0.33	0.099
Surrogates:								
2-Fluorophenol				*59*	*20-70*			
Phenol-d6				*38*	*18-45*			
Nitrobenzene-d5				*88*	*31-123*			
2-Fluorobiphenyl				*99*	*25-113*			

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C									
Method Blank (Continued)					Analyzed:	05/08/2013	By: ASC		
Unit: ug/L					Analytical Batch:	3E09042			
Surrogates (Continued):									
2,4,6-Tribromophenol				*67*	*30-121*				
o-Terphenyl				*98*	*42-125*				
Laboratory Control Sample					Analyzed:	05/08/2013	By: JLB		
Unit: ug/L					Analytical Batch:	3E09013			
Acenaphthene		10.0	**10.0**	100	53-126	--		0.110	0.033
Acenaphthene		10.0	**10.0**	100	53-126	--		0.110	0.033
Acenaphthylene		10.0	**10.0**	100	62-133	--		0.0569	0.017
Acenaphthylene		10.0	**10.0**	100	62-133	--		0.0569	0.017
Anthracene		10.0	**9.67**	97	64-130	--		0.205	0.062
Anthracene		10.0	**9.67**	97	64-130	--		0.205	0.062
Benzo(a)anthracene		10.0	**9.60**	96	63-129	--		0.151	0.045
Benzo(a)anthracene		10.0	**9.60**	96	63-129	--		0.151	0.045
Benzo(a)pyrene		10.0	**9.68**	97	59-131	--		0.134	0.040
Benzo(a)pyrene		10.0	**9.68**	97	59-131	--		0.134	0.040
Benzo(b)fluoranthene		10.0	**9.97**	100	58-133	--		0.193	0.058
Benzo(b)fluoranthene		10.0	**9.97**	100	58-133	--		0.193	0.058
Benzo(k)fluoranthene		10.0	**9.19**	92	59-132	--		0.198	0.060
Benzo(k)fluoranthene		10.0	**9.19**	92	59-132	--		0.198	0.060
Benzo(g,h,i)perylene		10.0	**10.2**	102	52-129	--		0.203	0.061
Benzo(g,h,i)perylene		10.0	**10.2**	102	52-129	--		0.203	0.061
Benzoic Acid		10.0	**2.23**	22	10-45	--		1.59	0.48
Benzoic Acid		10.0	**2.23**	22	10-45	--		1.59	0.48
Benzyl Alcohol		10.0	**8.08**	81	24-116	--		0.162	0.049
Benzyl Alcohol		10.0	**8.08**	81	24-116	--		0.162	0.049
4-Bromophenyl Phenyl Ether		10.0	**8.89**	89	57-124	--		0.143	0.043
4-Bromophenyl Phenyl Ether		10.0	**8.89**	89	57-124	--		0.143	0.043
Butyl Benzyl Phthalate		10.0	**11.1**	111	58-141	--		0.185	0.056
Butyl Benzyl Phthalate		10.0	**11.1**	111	58-141	--		0.185	0.056
4-Chloro-3-methylphenol		10.0	**8.80**	88	53-120	--		0.383	0.12
4-Chloro-3-methylphenol		10.0	**8.80**	88	53-120	--		0.383	0.12
4-Chloroaniline		10.0	**9.31**	93	44-138	--		0.340	0.10
4-Chloroaniline		10.0	**9.31**	93	44-138	--		0.340	0.10
Bis(2-chloroethoxy)methane		10.0	**8.92**	89	52-124	--		0.0613	0.018
Bis(2-chloroethoxy)methane		10.0	**8.92**	89	52-124	--		0.0613	0.018

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 05/08/2013 By: JLB

Unit: ug/L Analytical Batch: 3E09013

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Bis(2-chloroethyl) Ether		10.0	**8.47**	85	42-123	--		0.0789	0.024
Bis(2-chloroethyl) Ether		10.0	**8.47**	85	42-123	--		0.0789	0.024
Bis(2-chloroisopropyl) Ether		10.0	**8.26**	83	50-122	--		0.0859	0.026
Bis(2-chloroisopropyl) Ether		10.0	**8.26**	83	50-122	--		0.0859	0.026
2-Chloronaphthalene		10.0	**9.50**	95	58-126	--		0.0569	0.017
2-Chloronaphthalene		10.0	**9.50**	95	58-126	--		0.0569	0.017
2-Chlorophenol		10.0	**8.02**	80	44-121	--		0.0889	0.027
2-Chlorophenol		10.0	**8.02**	80	44-121	--		0.0889	0.027
4-Chlorophenyl Phenyl Ether		10.0	**8.89**	89	57-122	--		0.160	0.048
4-Chlorophenyl Phenyl Ether		10.0	**8.89**	89	57-122	--		0.160	0.048
Chrysene		10.0	**9.40**	94	66-134	--		0.151	0.045
Chrysene		10.0	**9.40**	94	66-134	--		0.151	0.045
Dibenz(a,h)anthracene		10.0	**10.6**	106	57-130	--		0.376	0.11
Dibenz(a,h)anthracene		10.0	**10.6**	106	57-130	--		0.376	0.11
Dibenzofuran		10.0	**9.39**	94	59-123	--		0.136	0.041
Dibenzofuran		10.0	**9.39**	94	59-123	--		0.136	0.041
Di-n-butyl Phthalate		10.0	**10.2**	102	58-145	--		0.450	0.14
Di-n-butyl Phthalate		10.0	**10.2**	102	58-145	--		0.450	0.14
1,2-Dichlorobenzene		10.0	**8.83**	88	48-126	--		0.132	0.040
1,2-Dichlorobenzene		10.0	**8.83**	88	48-126	--		0.132	0.040
1,3-Dichlorobenzene		10.0	**8.66**	87	44-122	--		0.137	0.041
1,3-Dichlorobenzene		10.0	**8.66**	87	44-122	--		0.137	0.041
1,4-Dichlorobenzene		10.0	**8.45**	84	41-124	--		0.0656	0.020
1,4-Dichlorobenzene		10.0	**8.45**	84	41-124	--		0.0656	0.020
3,3´-Dichlorobenzidine		20.0	**20.5**	102	55-135	--		0.413	0.12
3,3´-Dichlorobenzidine		20.0	**20.5**	102	55-135	--		0.413	0.12
2,4-Dichlorophenol		10.0	**8.45**	84	51-122	--		0.305	0.092
2,4-Dichlorophenol		10.0	**8.45**	84	51-122	--		0.305	0.092
Diethyl Phthalate		10.0	**9.50**	95	55-129	--		0.217	0.065
Diethyl Phthalate		10.0	**9.50**	95	55-129	--		0.217	0.065
2,4-Dimethylphenol		10.0	**8.33**	83	35-112	--		0.559	0.17
2,4-Dimethylphenol		10.0	**8.33**	83	35-112	--		0.559	0.17
Dimethyl Phthalate		10.0	**9.10**	91	61-126	--		0.152	0.046
Dimethyl Phthalate		10.0	**9.10**	91	61-126	--		0.152	0.046
4,6-Dinitro-2-methylphenol		10.0	**8.16**	82	25-139	--		3.40	1.0
4,6-Dinitro-2-methylphenol		10.0	**8.16**	82	25-139	--		3.40	1.0

Continued on next page

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 05/08/2013 By: JLB

Unit: ug/L Analytical Batch: 3E09013

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
2,4-Dinitrophenol		10.0	**8.44**	84	10-147	--		3.86	1.2
2,4-Dinitrophenol		10.0	**8.44**	84	10-147	--		3.86	1.2
2,4-Dinitrotoluene		10.0	**8.94**	89	55-131	--		0.158	0.048
2,4-Dinitrotoluene		10.0	**8.94**	89	55-131	--		0.158	0.048
2,6-Dinitrotoluene		10.0	**9.87**	99	59-120	--		0.267	0.080
2,6-Dinitrotoluene		10.0	**9.87**	99	59-120	--		0.267	0.080
Di-n-octyl Phthalate		10.0	**11.3**	113	55-136	--		0.255	0.077
Di-n-octyl Phthalate		10.0	**11.3**	113	55-136	--		0.255	0.077
*Bis(2-ethylhexyl) Phthalate		10.0	**9.87 B**	99	60-136	--		0.376	0.11
*Bis(2-ethylhexyl) Phthalate		10.0	**9.87 B**	99	60-136	--		0.376	0.11
Fluoranthene		10.0	**9.05**	90	64-138	--		0.209	0.063
Fluoranthene		10.0	**9.05**	90	64-138	--		0.209	0.063
Fluorene		10.0	**9.13**	91	60-128	--		0.138	0.041
Fluorene		10.0	**9.13**	91	60-128	--		0.138	0.041
Hexachlorobenzene		10.0	**8.90**	89	49-130	--		0.209	0.063
Hexachlorobenzene		10.0	**8.90**	89	49-130	--		0.209	0.063
Hexachlorobutadiene		10.0	**8.31**	83	50-128	--		0.132	0.040
Hexachlorobutadiene		10.0	**8.31**	83	50-128	--		0.132	0.040
Hexachlorocyclopentadiene		10.0	**9.77**	98	21-138	--		0.148	0.044
Hexachlorocyclopentadiene		10.0	**9.77**	98	21-138	--		0.148	0.044
Hexachloroethane		10.0	**8.23**	82	41-123	--		0.139	0.042
Hexachloroethane		10.0	**8.23**	82	41-123	--		0.139	0.042
Indeno(1,2,3-cd)pyrene		10.0	**10.4**	104	57-129	--		0.266	0.080
Indeno(1,2,3-cd)pyrene		10.0	**10.4**	104	57-129	--		0.266	0.080
Isophorone		10.0	**7.77**	78	56-129	--		0.150	0.045
Isophorone		10.0	**7.77**	78	56-129	--		0.150	0.045
2-Methylnaphthalene		10.0	**8.77**	88	59-135	--		0.0496	0.015
2-Methylnaphthalene		10.0	**8.77**	88	59-135	--		0.0496	0.015
1-Methylnaphthalene		10.0	**9.49**	95	50-150	--		0.0649	0.020
1-Methylnaphthalene		10.0	**9.49**	95	50-150	--		0.0649	0.020
2-Methylphenol		10.0	**7.24**	72	39-107	--		0.158	0.048
2-Methylphenol		10.0	**7.24**	72	39-107	--		0.158	0.048
4-Methylphenol		10.0	**6.94**	69	33-122	--		0.188	0.057
4-Methylphenol		10.0	**6.94**	69	33-122	--		0.188	0.057
Naphthalene		10.0	**8.93**	89	50-127	--		0.102	0.031
2-Nitroaniline		10.0	**10.0**	100	57-130	--		0.386	0.12

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 05/08/2013 By: JLB

Unit: ug/L Analytical Batch: 3E09013

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
2-Nitroaniline		10.0	**10.0**	100	57-130	--		0.386	0.12
3-Nitroaniline		10.0	**8.27**	83	49-144	--		0.813	0.24
3-Nitroaniline		10.0	**8.27**	83	49-144	--		0.813	0.24
4-Nitroaniline		10.0	**8.41**	84	52-143	--		1.10	0.33
4-Nitroaniline		10.0	**8.41**	84	52-143	--		1.10	0.33
Nitrobenzene		10.0	**8.83**	88	53-121	--		0.195	0.058
Nitrobenzene		10.0	**8.83**	88	53-121	--		0.195	0.058
4-Nitrophenol		10.0	**4.39**	44	17-70	--		4.16	1.2
4-Nitrophenol		10.0	**4.39**	44	17-70	--		4.16	1.2
2-Nitrophenol		10.0	**8.59**	86	44-128	--		0.158	0.048
2-Nitrophenol		10.0	**8.59**	86	44-128	--		0.158	0.048
N-Nitroso-diphenylamine		10.0	**9.55**	96	45-110	--		0.225	0.068
N-Nitroso-diphenylamine		10.0	**9.55**	96	45-110	--		0.225	0.068
N-Nitroso-di-n-propylamine		10.0	**8.76**	88	49-125	--		0.251	0.075
N-Nitroso-di-n-propylamine		10.0	**8.76**	88	49-125	--		0.251	0.075
Pentachlorophenol		10.0	**7.36**	74	21-124	--		0.420	0.13
Pentachlorophenol		10.0	**7.36**	74	21-124	--		0.420	0.13
Phenanthrene		10.0	**9.50**	95	63-126	--		0.142	0.043
Phenanthrene		10.0	**9.50**	95	63-126	--		0.142	0.043
Phenol		10.0	**4.25**	42	22-60	--		0.112	0.034
Phenol		10.0	**4.25**	42	22-60	--		0.112	0.034
Pyrene		10.0	**9.34**	93	60-134	--		0.218	0.066
Pyrene		10.0	**9.34**	93	60-134	--		0.218	0.066
2,3,4,6-Tetrachlorophenol		10.0	**9.02**	90	45-125	--		1.24	0.37
2,3,4,6-Tetrachlorophenol		10.0	**9.02**	90	45-125	--		1.24	0.37
2,3,5,6-Tetrachlorophenol		10.0	**7.42**	74	50-150	--		0.709	0.21
2,3,5,6-Tetrachlorophenol		10.0	**7.42**	74	50-150	--		0.709	0.21
1,2,4-Trichlorobenzene		10.0	**8.81**	88	47-123	--		0.0886	0.027
1,2,4-Trichlorobenzene		10.0	**8.81**	88	47-123	--		0.0886	0.027
2,4,6-Trichlorophenol		10.0	**9.12**	91	47-128	--		0.283	0.085
2,4,6-Trichlorophenol		10.0	**9.12**	91	47-128	--		0.283	0.085
2,4,5-Trichlorophenol		10.0	**10.3**	103	53-129	--		0.330	0.099
2,4,5-Trichlorophenol		10.0	**10.3**	103	53-129	--		0.330	0.099

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 05/08/2013 By: JLB

Unit: ug/L Analytical Batch: 3E09013

Surrogates:								
2-Fluorophenol				*53*	*20-70*			
Phenol-d6				*35*	*18-45*			
Nitrobenzene-d5				*91*	*31-123*			
2-Fluorobiphenyl				*104*	*25-113*			
2,4,6-Tribromophenol				*97*	*30-121*			
o-Terphenyl				*99*	*42-125*			

Laboratory Control Sample Analyzed: 05/08/2013 By: ASC

Unit: ug/L Analytical Batch: 3E09042

Acenaphthene	10.0	**9.25**	92	53-126	--	0.110	0.033
Acenaphthylene	10.0	**9.50**	95	62-133	--	0.0569	0.017
Anthracene	10.0	**9.67**	97	64-130	--	0.205	0.062
Benzo(a)anthracene	10.0	**9.41**	94	63-129	--	0.151	0.045
Benzo(a)pyrene	10.0	**9.38**	94	59-131	--	0.134	0.040
Benzo(b)fluoranthene	10.0	**10.1**	101	58-133	--	0.193	0.058
Benzo(k)fluoranthene	10.0	**8.98**	90	59-132	--	0.198	0.060
Benzo(g,h,i)perylene	10.0	**9.03**	90	52-129	--	0.203	0.061
Benzoic Acid	10.0	**1.83**	18	10-45	--	1.59	0.48
Benzyl Alcohol	10.0	**7.42**	74	24-116	--	0.162	0.049
4-Bromophenyl Phenyl Ether	10.0	**9.89**	99	57-124	--	0.143	0.043
Butyl Benzyl Phthalate	10.0	**9.90**	99	58-141	--	0.185	0.056
4-Chloro-3-methylphenol	10.0	**8.96**	90	53-120	--	0.383	0.12
4-Chloroaniline	10.0	**10.8**	108	44-138	--	0.340	0.10
Bis(2-chloroethoxy)methane	10.0	**8.93**	89	52-124	--	0.0613	0.018
Bis(2-chloroethyl) Ether	10.0	**8.91**	89	42-123	--	0.0789	0.024
Bis(2-chloroisopropyl) Ether	10.0	**7.87**	79	50-122	--	0.0859	0.026
2-Chloronaphthalene	10.0	**9.52**	95	58-126	--	0.0569	0.017
2-Chlorophenol	10.0	**8.08**	81	44-121	--	0.0889	0.027
4-Chlorophenyl Phenyl Ether	10.0	**9.19**	92	57-122	--	0.160	0.048
Chrysene	10.0	**9.40**	94	66-134	--	0.151	0.045
Dibenz(a,h)anthracene	10.0	**9.66**	97	57-130	--	0.376	0.11
Dibenzofuran	10.0	**9.33**	93	59-123	--	0.136	0.041

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 05/08/2013 By: ASC

Unit: ug/L Analytical Batch: 3E09042

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Di-n-butyl Phthalate		10.0	**9.65**	96	58-145	--		0.450	0.14
1,2-Dichlorobenzene		10.0	**8.58**	86	48-126	--		0.132	0.040
1,3-Dichlorobenzene		10.0	**8.41**	84	44-122	--		0.137	0.041
1,4-Dichlorobenzene		10.0	**8.63**	86	41-124	--		0.0656	0.020
3,3´-Dichlorobenzidine		20.0	**24.8**	124	55-135	--		0.413	0.12
2,4-Dichlorophenol		10.0	**8.78**	88	51-122	--		0.305	0.092
Diethyl Phthalate		10.0	**9.54**	95	55-129	--		0.217	0.065
2,4-Dimethylphenol		10.0	**8.30**	83	35-112	--		0.559	0.17
Dimethyl Phthalate		10.0	**9.21**	92	61-126	--		0.152	0.046
4,6-Dinitro-2-methylphenol		10.0	**4.70**	47	25-139	--		3.40	1.0
2,4-Dinitrophenol		10.0	**2.49 J**	25	10-147	--		3.86	1.2
2,4-Dinitrotoluene		10.0	**9.38**	94	55-131	--		0.158	0.048
2,6-Dinitrotoluene		10.0	**9.75**	98	59-120	--		0.267	0.080
Di-n-octyl Phthalate		10.0	**9.96**	100	55-136	--		0.255	0.077
*Bis(2-ethylhexyl) Phthalate		10.0	**9.24 B**	92	60-136	--		0.376	0.11
Fluoranthene		10.0	**9.21**	92	64-138	--		0.209	0.063
Fluorene		10.0	**9.27**	93	60-128	--		0.138	0.041
Hexachlorobenzene		10.0	**9.32**	93	49-130	--		0.209	0.063
Hexachlorobutadiene		10.0	**9.19**	92	50-128	--		0.132	0.040
Hexachlorocyclopentadiene		10.0	**7.32**	73	21-138	--		0.148	0.044
Hexachloroethane		10.0	**8.46**	85	41-123	--		0.139	0.042
Indeno(1,2,3-cd)pyrene		10.0	**9.61**	96	57-129	--		0.266	0.080
Isophorone		10.0	**7.47**	75	56-129	--		0.150	0.045
2-Methylnaphthalene		10.0	**8.82**	88	59-135	--		0.0496	0.015
1-Methylnaphthalene		10.0	**9.59**	96	50-150	--		0.0649	0.020
2-Methylphenol		10.0	**6.72**	67	39-107	--		0.158	0.048
4-Methylphenol		10.0	**17.0**	**170**	33-122	--		0.188	0.057
2-Nitroaniline		10.0	**10.3**	103	57-130	--		0.386	0.12
3-Nitroaniline		10.0	**9.71**	97	49-144	--		0.813	0.24
4-Nitroaniline		10.0	**10.5**	105	52-143	--		1.10	0.33
Nitrobenzene		10.0	**8.28**	83	53-121	--		0.195	0.058
4-Nitrophenol		10.0	ND U	**0**	17-70	--		4.16	1.2
2-Nitrophenol		10.0	**8.16**	82	44-128	--		0.158	0.048
N-Nitroso-diphenylamine		10.0	**9.66**	97	45-110	--		0.225	0.068
N-Nitroso-di-n-propylamine		10.0	**8.24**	82	49-125	--		0.251	0.075
Pentachlorophenol		10.0	**5.47**	55	21-124	--		0.420	0.13

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*See Statement of Data Qualifications

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1304256 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C									
Laboratory Control Sample (Continued)					Analyzed:	05/08/2013	By: ASC		
Unit: ug/L					Analytical Batch:	3E09042			
Phenanthrene		10.0	**9.28**	93	63-126	--		0.142	0.043
Phenol		10.0	**4.41**	44	22-60	--		0.112	0.034
Pyrene		10.0	**9.67**	97	60-134	--		0.218	0.066
2,3,4,6-Tetrachlorophenol		10.0	**8.13**	81	45-125	--		1.24	0.37
2,3,5,6-Tetrachlorophenol		10.0	**6.60**	66	50-150	--		0.709	0.21
1,2,4-Trichlorobenzene		10.0	**8.82**	88	47-123	--		0.0886	0.027
2,4,6-Trichlorophenol		10.0	**8.15**	82	47-128	--		0.283	0.085
2,4,5-Trichlorophenol		10.0	**8.69**	87	53-129	--		0.330	0.099

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TRIMATRIX LABORATORIES

STATEMENT OF DATA QUALIFICATIONS

Halogenated and Aromatic Volatiles by EPA Method 8021B

Qualification: The LCS recovery exceeded the upper control limit. A positive result for this analyte in any sample from the associated QC batch is considered estimated. Non-detectable results are not qualified.

Analysis: USEPA-8021B

Sample/Analyte:		
1305060-03	W-30A-050113	Chloromethane
1305060-04	W-10AR2-050113	Chloromethane
1305098-01	W-12A-043013	Chloromethane
1305098-02	W-12CR-043013	Chloromethane
1305098-03	W-06C-043013	Chloromethane
1305098-04	W-06A-043013	Chloromethane
1305098-06	EB-043013	Chloromethane
1305098-07	TB-043013	Chloromethane

Qualification: The corresponding CCV for this analytical batch had a recovery exceeding the upper control limit of the method. A positive result for this analyte in any associated samples are considered estimated. Non-detectable results are not qualified.

Analysis: USEPA-8021B

Sample/Analyte:		
1305020-01	W-30C-042913	Methyl tert-Butyl Ether
1305020-02	W-28C-042913	Methyl tert-Butyl Ether
1305020-03	EB-042913	Methyl tert-Butyl Ether
1305020-04	Trip Blank	Methyl tert-Butyl Ether
1305060-01	W-04AR-050113	Methyl tert-Butyl Ether
1305060-02	W-99A-050113	Methyl tert-Butyl Ether
1305060-03	W-30A-050113	Chloromethane
1305060-04	W-10AR2-050113	Chloromethane
1305060-05	EB-050113	Methyl tert-Butyl Ether
1305060-06	TB-050113	Methyl tert-Butyl Ether
1305098-01	W-12A-043013	Chloromethane
1305098-02	W-12CR-043013	Chloromethane
1305098-03	W-06C-043013	Chloromethane
1305098-04	W-06A-043013	Chloromethane
1305098-06	EB-043013	Chloromethane
1305098-07	TB-043013	Chloromethane

Qualification: The corresponding CCV for this analytical batch had a recovery below the lower control limit of the method. Positive results for this analyte in any associated samples are considered estimated; non-detectable results are considered approximate.

Analysis: USEPA-8021B

Sample/Analyte:		
1305020-01	W-30C-042913	Chloromethane
1305020-02	W-28C-042913	Chloromethane
1305020-03	EB-042913	Chloromethane
1305020-04	Trip Blank	Chloromethane
1305060-01	W-04AR-050113	Chloromethane
1305060-02	W-99A-050113	Chloromethane
1305060-05	EB-050113	Chloromethane

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STATEMENT OF DATA QUALIFICATIONS

Halogenated and Aromatic Volatiles by EPA Method 8021B (Continued)

Qualification: The corresponding CCV for this analytical batch had a recovery below the lower control limit of the method. Positive results for this analyte in any associated samples are considered estimated; non-detectable results are considered approximate.

Analysis: USEPA-8021B

Sample/Analyte: 1305060-06 TB-050113 Chloromethane

Qualification: One or more surrogate recoveries for the sample exceeded the upper control limit. Positive results are considered estimated, non-detect results are not qualified.

Analysis: USEPA-8021B

Sample: 1305060-04 W-10AR2-050113

Qualification: The following reported test methods and analyte(s) are exceptions to our NELAP Fields of Accreditation, or for which accreditation is not required, applicable, or available.

Analysis: USEPA-8021B

Analyte(s): n-Propylbenzene

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: The LCS recovery exceeded the upper control limit. A positive result for this analyte in any sample from the associated QC batch is considered estimated. Non-detectable results are not qualified.

Analysis: USEPA-8270C

Sample/Analyte:		
1305098-05	W-18D-043013	3-Methylcholanthrene

Qualification: The analyte concentration in the associated MB was greater than or equal to the RL. The positive sample result, which was less than 5 times the MB value, is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:		
1305020-01	W-30C-042913	Bis(2-ethylhexyl) Phthalate
1305020-02	W-28C-042913	Bis(2-ethylhexyl) Phthalate
1305020-03	EB-042913	Bis(2-ethylhexyl) Phthalate
1305060-01	W-04AR-050113	Bis(2-ethylhexyl) Phthalate
1305060-02	W-99A-050113	Bis(2-ethylhexyl) Phthalate
1305060-03	W-30A-050113	Bis(2-ethylhexyl) Phthalate
1305060-04	W-10AR2-050113	Bis(2-ethylhexyl) Phthalate
1305060-05	EB-050113	Bis(2-ethylhexyl) Phthalate
1305098-01	W-12A-043013	Bis(2-ethylhexyl) Phthalate
1305098-02	W-12CR-043013	Bis(2-ethylhexyl) Phthalate
1305098-03	W-06C-043013	Bis(2-ethylhexyl) Phthalate
1305098-04	W-06A-043013	Bis(2-ethylhexyl) Phthalate
1305098-05	W-18D-043013	Bis(2-ethylhexyl) Phthalate
1305098-06	EB-043013	Bis(2-ethylhexyl) Phthalate

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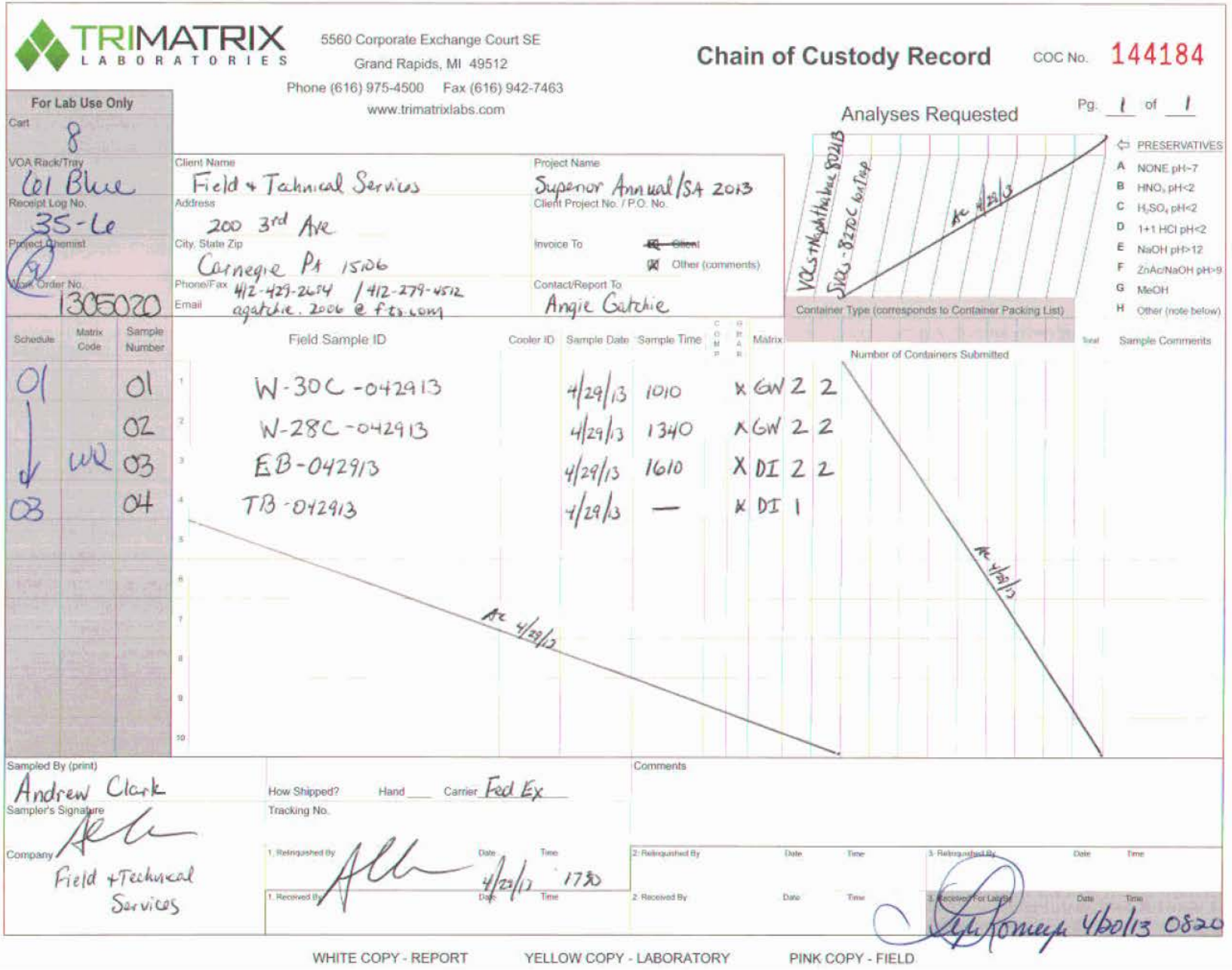

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Chain of Custody Record

COC No. 144184

Pg. 1 of 1

For Lab Use Only
Cart: 8
VOA Rack/Tray: 61 Blue
Receipt Log No.: 35-Le
Project Chemist:
Work Order No.: 1305020

Client Name: Field + Technical Services
Address: 200 3rd Ave
City, State Zip: Carnegie PA 15106
Phone/Fax: 412-429-2694 / 412-279-4512
Email: agatchie.2006@fts.com

Project Name: Superior Annual SA 2013
Client Project No. / P.O. No.:
Invoice To: ~~Client~~ Other (comments)
Contact/Report To: Angie Gatchie

Analyses Requested

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

VOCs + Naphthalene 8021B
SVOCs - 8270C w/ TCLP
AE 4/29/13

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	Comp	Grab	Matrix	Container Type (corresponds to Container Packing List)	Total	Sample Comments
01		01	W-30C-042913		4/29/13	1010		X	GW	2	2	
		02	W-28C-042913		4/29/13	1340		X	GW	2	2	
↓	WP	03	EB-042913		4/29/13	1610		X	DI	2	2	
08		04	TB-042913		4/29/13	—		X	DI	1		

Number of Containers Submitted

AE 4/29/13

AE 4/29/13

Sampled By (print): Andrew Clark
Sampler's Signature:
Company: Field + Technical Services

How Shipped? Hand ___ Carrier Fed Ex
Tracking No.:

1. Relinquished By: Date 4/29/13 Time 1730
1. Received By: Date Time

2. Relinquished By: Date Time
2. Received By: Date Time

3. Relinquished By: Date Time
3. Received For Laboratory: Date 4/30/13 Time 0820

Comments

WHITE COPY - REPORT YELLOW COPY - LABORATORY PINK COPY - FIELD

TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Field & Technical Services	New / Add To	Work Order #: 1305020	
Receipt Record Page/Line #: 35-6	Project Chemist	Sample #s	

Recorded by (initials/date): [initials] 4/30/13

☒ Cooler ☐ Box ☐ Other___ — Qty Received: 1

Thermometer Used: ☒ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#___) ☐ See Additional Cooler Information Form

	Cooler 1	Cooler 2	Cooler 3	Cooler 4
Cooler # / Time	— / 1034			
Custody Seals	☒ Present / Intact			
Coolant Location	Dispersed / (Top) / (Middle) / (Bottom)	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via	☒ Bagged Ice / Avg 2-3 containers			
Alternate Temperature Taken Via	☐ Temperature Blank (TB) ☐ 1 Container			

Custody Seals options: None / Present / Intact / Present / Not Intact. Coolant/Temperature Taken Via options: Loose Ice / Avg 2-3 containers; Bagged Ice / Avg 2-3 containers; Blue Ice / Avg 2-3 containers; None / Avg 2-3 containers.

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank			
TB location: Representative / Not Representative			
1	4.3	—	4.3
2	3.7	—	3.7
3	3.3	—	3.3
Average °C			3.8

☐ Cooler ID on COC?
☒ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☒	☐	Chain of Custody record(s)? If No, Initiated By ___
☒		Received for Lab Signed/Date/Time?
☒	☐	Shipping document?
☐	☒	Other ___

COC Information

☒ TriMatrix COC ☐ Other 144184

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☒	☐	Average sample temperature ≤6° C?
☒	☐	☐	Was thermal preservation required?
☒	☐		If "No", Project Chemist Approval Initials: ___
☒	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☒	☐		Completed Sample Preservation Verification Form?
☒	☐	☐	Samples chemically preserved correctly?
☒	☐		If "No", added orange tag?
	☐	☐	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☒	☐	Analysis Requested?
☒	☐	Sample ID matches COC?
☒	☐	Sample Date and Time matches COC?
☒		Container type completed on COC?
☒	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY: COPIES OF COC TO LAB AREA(S)
☒ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☒	Broken containers/lids?
	☐	☒	Missing or incomplete labels?
	☐	☒	Illegible information on labels?
	☐	☒	Low volume received?
	☐	☒	Inappropriate or non-TriMatrix containers received?
☐	☐	☒	VOC vials / TOX containers have headspace?
☒	☐	☐	Extra sample locations / containers not listed on COC?

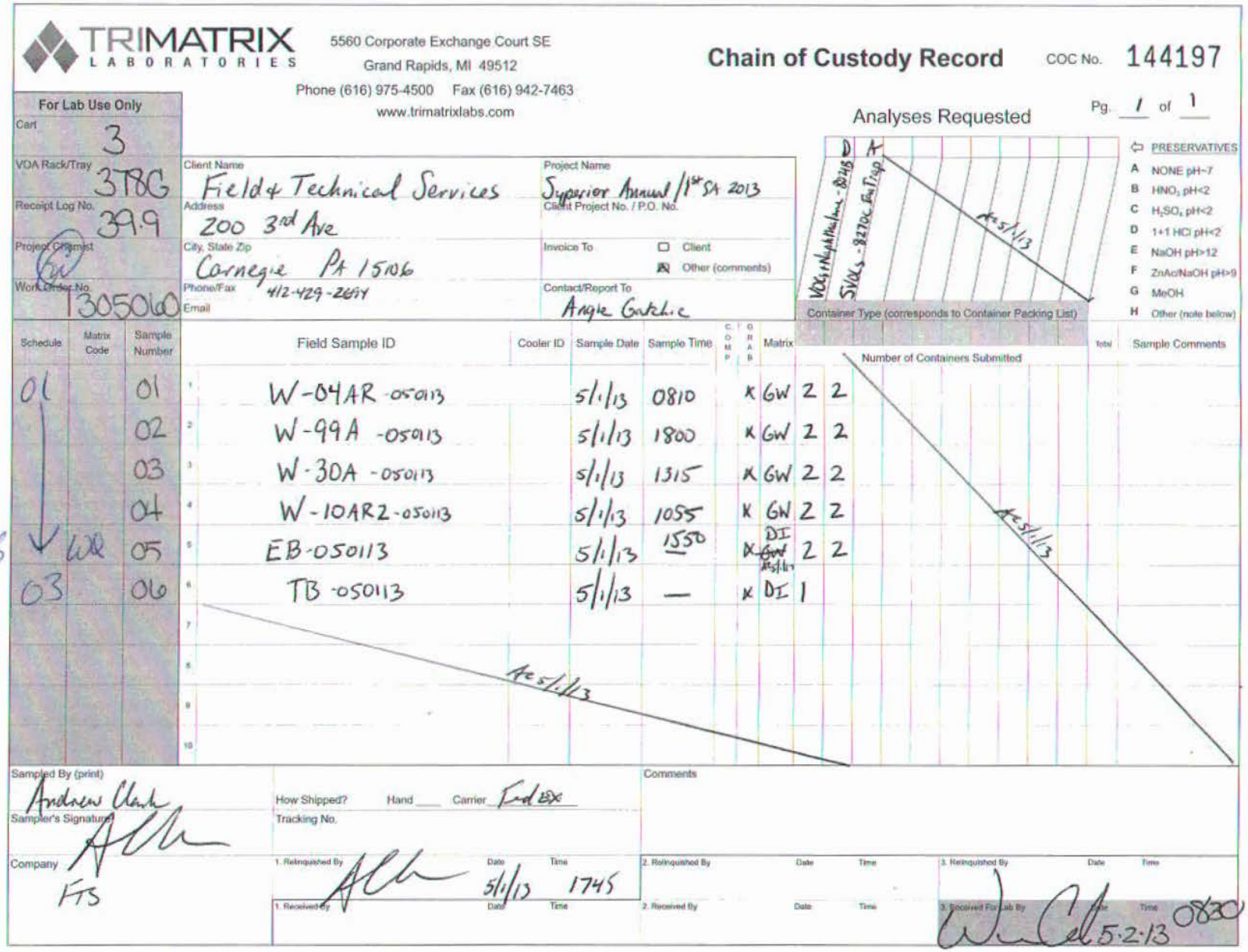
Notes

☒ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
4/30/13 0820	4/30/13 1042	Yes / (No)

Log In Forms - Receiving Log-In_Checklist revision: 3.4

1.



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Chain of Custody Record

COC No. 144197

Pg. 1 of 1

For Lab Use Only
Cart: 3
VOA Rack/Tray: 3T8G
Receipt Log No.: 399
Project Chemist: GW
Work Order No.: 305060

Client Name: Field & Technical Services
Address: 200 3rd Ave
City, State Zip: Carnegie PA 15106
Phone/Fax: 412-429-2694
Email:

Project Name: Superior Annual 1st SA 2013
Client Project No. / P.O. No.:
Invoice To: ☐ Client ☒ Other (comments)
Contact/Report To: Angie Gatchie

Analyses Requested

D A
VOCs + Naphthalene - 8260
SVOCs - 8270C Fe, Ti, Sn
As 5/1/13

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	Container Type (corresponds to Container Packing List)	Number of Containers Submitted	Total	Sample Comments
01		01	W-04AR-050113		5/1/13	0810		X	GW	2	2		
		02	W-99A-050113		5/1/13	1800		X	GW	2	2		
		03	W-30A-050113		5/1/13	1315		X	GW	2	2		
		04	W-10AR2-050113		5/1/13	1055		X	GW	2	2		
↓	WQ	05	EB-050113		5/1/13	1550		X	~~GW~~ DI	2	2		
03		06	TB-050113		5/1/13	—		X	DI	1			

As 5/1/13

Sampled By (print): Andrew Clark
Sampler's Signature:
Company: FTS

How Shipped? Hand ___ Carrier FedEx
Tracking No.:

Comments:

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
	5/1/13	1745						
1. Received By	Date	Time	2. Received By	Date	Time	3. Received For Lab By	Date	Time
							5-2-13	0830

WHITE COPY - REPORT YELLOW COPY - LABORATORY PINK COPY - FIELD

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Field Tech | Work Order #: 1305060
Receipt Record Page/Line #: 39.9 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): WC 5.2.13

☑ Cooler ☐ Box ☐ Other | Qty Received: 3

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#____) ☐ See Additional Cooler Information Form

Cooler #	—	Tm 3061	—
Time	1145	1150	1155
Custody Seals	☐ None ☑ Present / Intact ☐ Present / Not Intact	☐ None ☑ Present / Intact ☐ Present / Not Intact	☐ None ☑ Present / Intact ☐ Present / Not Intact
Coolant Location	(Dispersed) / Top / Middle / Bottom	(Dispersed) / Top / Middle / Bottom	(Dispersed) / Top / Middle / Bottom
Coolant/Temperature Taken Via	☐ Loose Ice / Avg 2-3 containers ☑ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers ☑ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers ☑ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via	☐ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C			
Temp Blank:			
TB location: Representative / Not Representative			
1	3.1 –	3.1	4.0 – 4.0	5.4 – 5.4
2	2.2 –	2.2	3.2 – 3.2	3.9 – 3.9
3	3.5 –	3.5	3.1 – 3.1	3.9 – 3.9
Average °C		2.9		3.4		4.4
☐ Cooler ID on COC?				
☑ VOC Trip Blank received?				

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes / No
- ☐ ☐ Chain of Custody record(s)? If No, Initiated By _____
- ☐ ☐ Received for Lab Signed/Date/Time?
- ☐ ☐ Shipping document?
- ☐ ☐ Other _____

COC Information

☑ TriMatrix COC ☐ Other _____

COC ID Numbers:

Check COC for Accuracy

Yes / No
- ☐ ☐ Analysis Requested?
- ☐ ☐ Sample ID matches COC?
- ☐ ☐ Sample Date and Time matches COC?
- ☐ ☐ Container type completed on COC?
- ☐ ☐ All container types indicated are received?

Sample Condition Summary

N/A / Yes / No
- ☐ ☐ ☐ Broken containers/lids?
- ☐ ☐ ☐ Missing or incomplete labels?
- ☐ ☐ ☐ Illegible information on labels?
- ☐ ☐ ☐ Low volume received?
- ☐ ☐ ☐ Inappropriate or non-TriMatrix containers received?
- ☐ ☐ ☐ VOC vials / TOX containers have headspace?
- ☐ ☐ ☐ Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A / Yes / No
- ☐ ☐ ☐ Average sample temperature ≤6° C?
- ☐ ☐ ☐ Was thermal preservation required?
- ☐ ☐ ☐ If "No", Project Chemist Approval Intials: _____
- ☐ ☐ ☐ If "Yes" Completed Non Con Cooler - Cont Inventory Form?
- ☐ ☐ ☐ Completed Sample Preservation Verification Form?
- ☐ ☐ ☐ Samples chemically preserved correctly?
- ☐ ☐ ☐ If "No", added orange tag?
- ☐ ☐ ☐ Received pre-preserved VOC soils?
  - ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☑ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
- ☐ NONE RECEIVED
- ☑ RECEIVED, COCs TO LAB(S)

Notes

☑ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
5.2.13 0830	5.2.13 1200	Yes / (No)

Log In Forms - Receiving Log-In_Checklist revision: 3.4

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Chain of Custody Record

COC No. 144187

Pg. ___ of ___

For Lab Use Only

Cart: 3
VOA Rack/Tray: 384G
Receipt Log No.: 39.10
Project Chemist: (initials)
Work Order No.: 1305098

Client Name: Field + Technical Services
Address: 200 3rd Ave.
City, State Zip: Carnegie PA 15106
Phone/Fax: 412-429-2694 / 412-279-4512
Email: agatchie 2006 @ f-ts.com

Project Name: Superior Annual / 1st S+ 2013
Client Project No. / P.O. No.:
Invoice To: ☐ Client ☒ Other (comments)
Contact/Report To: Angie Gatchie

Analyses Requested: D – VOCs + Naphthalene - 8260B; A – SVOCs - 8270C Low Level

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Container Type (corresponds to Container Packing List)
Number of Containers Submitted

Schedule	Matrix Code	Sample Number		Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	D	A	Total	Sample Comments
01		01	1	W-12A-043013		4/30/13	0745		X	GW	2	2		
		02	2	W-12CR-043013		4/30/13	1110		X	GW	2	2		
		03	3	W-06C-043013		4/30/13	1415		X	GW	2	2		
		04	4	W-06A-043013		4/30/13	0755		X	GW	2	2		
03		05	5	W-18D-043013		4/30/13	1455		X	GW		2		
01	cd	06	6	EB-043013		4/30/13	1640		X	~~GW~~ DI	2	2		
04		07	7	TB-043013		4/30/13	—		X	DI	2			
			8											
			9											
			10											

AG 4/30/13

Sampled By (print): Andrew Clark
Sampler's Signature: (signature)
Company: Field + Technical Services

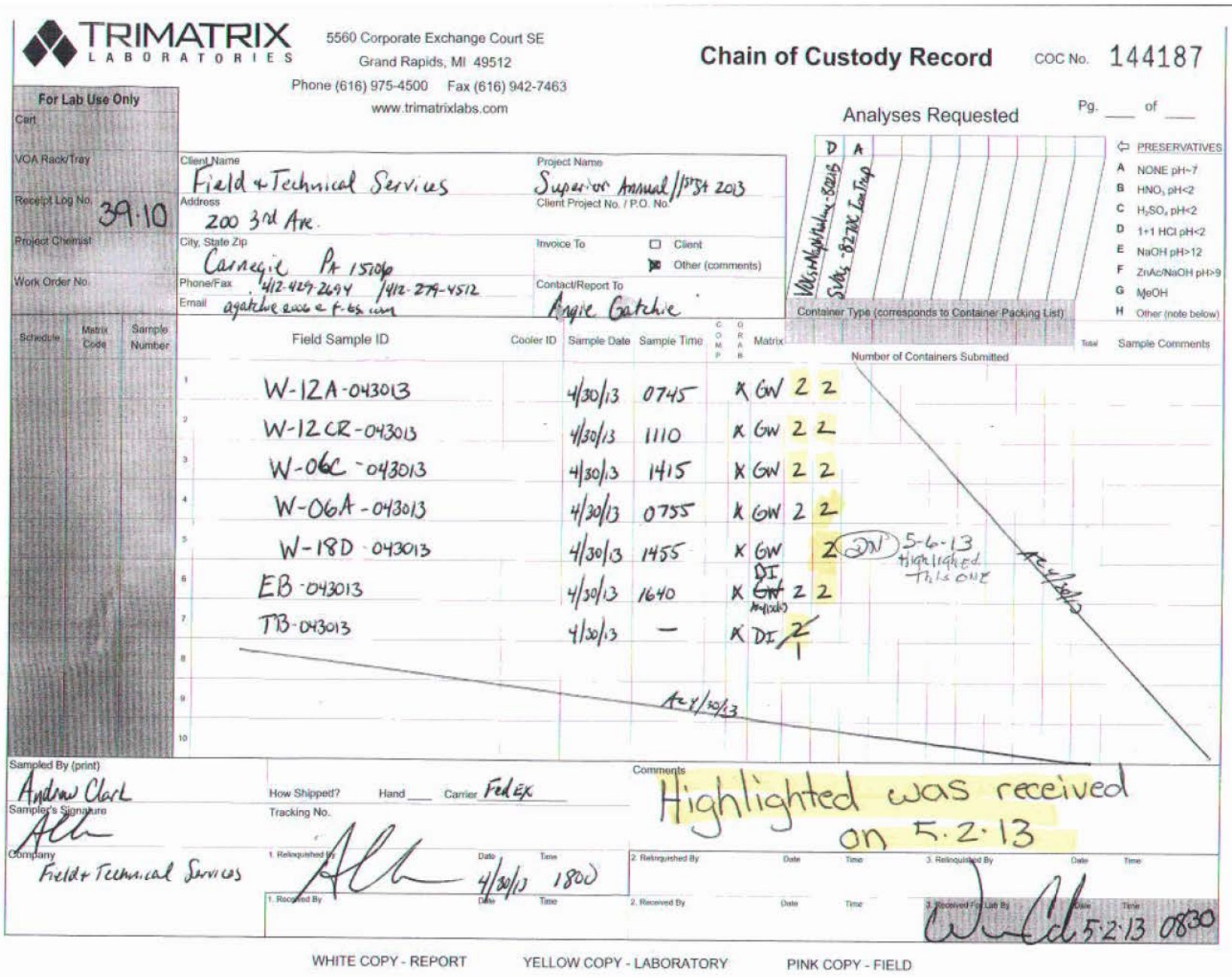
How Shipped? Hand ___ Carrier FedEx
Tracking No.

Comments

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
(signature)	4/30/13	1800						
1. Received By	**Date**	**Time**	**2. Received By**	**Date**	**Time**	**3. Received For Lab By**	**Date**	**Time**
						(signature)	5-2-13	0830

WHITE COPY - REPORT YELLOW COPY - LABORATORY PINK COPY - FIELD

TRIMATRIX LABORATORIES



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Chain of Custody Record

COC No. 144187

Pg. ___ of ___

For Lab Use Only
Cart
VOA Rack/Tray
Receipt Log No. 39.10
Project Chemist
Work Order No.

Client Name: Field + Technical Services
Address: 200 3rd Ave.
City, State Zip: Carnegie PA 15106
Phone/Fax: 412-429-2694 / 412-279-4512
Email: agatchie2006@f-ts.com

Project Name: Superfund Annual 15th 2013
Client Project No. / P.O. No.
Invoice To: ☐ Client ☒ Other (comments)
Contact/Report To: Angie Gatchie

Analyses Requested

D A
VOCs-MeOH Preserved-8260B
SVOCs-8270C Low Trip

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Container Type (corresponds to Container Packing List)

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	Number of Containers Submitted	Total	Sample Comments
1			W-12A-043013		4/30/13	0745		X	GW	2 2		
2			W-12CR-043013		4/30/13	1110		X	GW	2 2		
3			W-06C-043013		4/30/13	1415		X	GW	2 2		
4			W-06A-043013		4/30/13	0755		X	GW	2 2		
5			W-18D-043013		4/30/13	1455		X	GW	2 (2)		5-6-13 Highlighted This ONE
6			EB-043013		4/30/13	1640		X	~~GW~~ DI (MeOH)	2 2		
7			TB-043013		4/30/13	—		X	DI	2/1		
8												
9												
10												

Acy 4/30/13

Acy 4/30/13

Sampled By (print): Andrew Clark
Sampler's Signature:
Company: Field + Technical Services

How Shipped? Hand ___ Carrier FedEx
Tracking No.

Comments: Highlighted was received on 5.2.13

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
	4/30/13	1800						
1. Received By	Date	Time	2. Received By	Date	Time	3. Received For Lab By	Date	Time
							5.2.13	0830

WHITE COPY - REPORT YELLOW COPY - LABORATORY PINK COPY - FIELD

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Field & Tech. | Work Order #: 1305098
Receipt Record Page/Line #: 39.10 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): WC 5.2.13

Cooler ☑ | Box ☐ | Other ☐ | Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler 1	Cooler 2	Cooler 3	Cooler 4
Cooler #: Tm 1349	Cooler #:	Cooler #:	Cooler #:
Time: 1205	Time:	Time:	Time:
Custody Seals: ☐ None ☑ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☑ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C
Temp Blank:	Temp Blank:	Temp Blank:	Temp Blank:
TB location: Representative / Not Representative	TB location: Representative / Not Representative	TB location: Representative / Not Representative	TB location: Representative / Not Representative
1 4.5 - 4.5	1	1	1
2 3.3 - 3.3	2	2	2
3 4.2 - 4.2	3	3	3
Average °C: 4.0	Average °C	Average °C	Average °C
☐ Cooler ID on COC?	☐ Cooler ID on COC?	☐ Cooler ID on COC?	☐ Cooler ID on COC?
☑ VOC Trip Blank received?	☐ VOC Trip Blank received?	☐ VOC Trip Blank received?	☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes / No

- ☑ ☐ Chain of Custody record(s)? If No, Initiated By _____
- ☑ ☐ Received for Lab Signed/Date/Time?
- ☐ ☐ Shipping document?
- ☐ ☑ Other _____

COC Information

☑ TriMatrix COC ☐ Other _____

COC ID Numbers:

Check Sample Preservation

N/A / Yes / No

- ☐ ☑ ☐ Average sample temperature ≤6° C?
- ☐ ☐ ☐ Was thermal preservation required?
- ☐ ☐ ☐ If "No", Project Chemist Approval Intials: _____
- ☐ ☐ ☐ If "Yes" Completed Non Con Cooler - Cont Inventory Form?
- ☐ ☐ ☐ Completed Sample Preservation Verification Form?
- ☐ ☐ ☐ Samples chemically preserved correctly?
- ☐ ☑ ☐ If "No", added orange tag?
- ☐ ☐ ☐ Received pre-preserved VOC soils?
  - ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes / No

- ☑ ☐ Analysis Requested?
- ☐ ☐ Sample ID matches COC?
- ☐ ☐ Sample Date and Time matches COC?
- ☐ ☐ Container type completed on COC?
- ☐ ☐ All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☐ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☑ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A / Yes / No

- ☐ ☐ ☐ Broken containers/lids?
- ☐ ☐ ☐ Missing or incomplete labels?
- ☐ ☐ ☐ Illegible information on labels?
- ☐ ☐ ☐ Low volume received?
- ☐ ☐ ☐ Inappropriate or non-TriMatrix containers received?
- ☐ ☐ ☐ VOC vials / TOX containers have headspace?
- ☐ ☐ ☑ Extra sample locations / containers not listed on COC?

Notes

☑ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
5.2.13 0830	5.2.13 1215	Yes (No)

Log In Forms - Receiving Log-In_Checklist revision: 3.4

5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: 320-2441-1
Client Project/Site: Superior GW

For:
Field & Technical Services LLC
200 Third Avenue
Carnegie, Pennsylvania 15106

Attn: Ms. Angie Gatchie

Karen Dahl

Authorized for release by:
5/23/2013 2:51:11 PM

Karen Dahl, Project Manager II
karen.dahl@testamericainc.com

Table of Contents

Qualifiers

Dioxin

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
q	The isomer is qualified as positively identified, but at an estimated quantity because the quantitation is based on the theoretical ratio for these samples.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
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)
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: 320-2441-1

Laboratory: TestAmerica Sacramento

Narrative

Comments
No additional comments.

Receipt
The samples were received on 4/30/2013 8:45 AM, 5/1/2013 10:05 AM and 5/2/2013 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.1° C, 2.1° C and 2.5° C.

Dioxin
Method(s) 8290: The bracketing continuing calibration verification (CCV) associated with batch 15659 had the 13C-OCDD isotope dilution analyte with a percent difference value that was outside acceptance criteria. Per method guidelines, an average relative response factor (RRF) was calculated from the bracketing CCV and was used to quantitate this internal standard and its associated target analytes in the CCV.

Method(s) 8290: Some of the Ion abundance ratios are outside criteria for the following samples: (MB 320-15535/1-A), EB-0429123 (320-2441-3), W-28C-042913 (320-2441-2), W-30C-042913 (320-2441-1), (MB 320-15622/1-A), EB-043013 (320-2454-5), W-012A-043013 (320-2454-2), W-06A-043013 (320-2454-1), W-12CR-043013 (320-2454-3), (MB 320-16061/1-A), EB-050113 (320-2475-5), W-04AR-050113 (320-2475-1), W-10AR2-050113 (320-2475-4), W-30A-050113 (320-2475-3), & W-99A-050113 (320-2475-2). Quantitation is based on theoretical ion abundance ratios so the affected analytes have been reported as estimated maximum possible concentrations (EMPCs). The affected analytes have been flagged with a 'q' flag.

No other analytical or quality issues were noted.

Dioxin Prep
No analytical or quality issues were noted.

Detection Summary

Client: Field & Technical Services LLC
Project/Site: Superior GW

TestAmerica Job ID: 320-2441-1

Client Sample ID: W-30C-042913 — Lab Sample ID: 320-2441-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,6,7,8-HxCDD	0.33	J q	54	0.16	pg/L	1		8290	Total/NA
1,2,3,4,7,8-HxCDF	0.28	J q	54	0.18	pg/L	1		8290	Total/NA
1,2,3,6,7,8-HxCDF	0.24	J	54	0.14	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDD	2.7	J	54	0.27	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDF	0.98	J q B	54	0.12	pg/L	1		8290	Total/NA
1,2,3,4,7,8,9-HpCDF	0.22	J q	54	0.14	pg/L	1		8290	Total/NA
OCDD	39	J B	110	0.74	pg/L	1		8290	Total/NA
OCDF	3.3	J	110	0.25	pg/L	1		8290	Total/NA
Total TCDF	0.34	J B	11	0.12	pg/L	1		8290	Total/NA
Total HxCDD	0.48	J q	54	0.21	pg/L	1		8290	Total/NA
Total HxCDF	0.52	J q	54	0.16	pg/L	1		8290	Total/NA
Total HpCDD	7.2	J B	54	0.27	pg/L	1		8290	Total/NA
Total HpCDF	2.5	J q B	54	0.13	pg/L	1		8290	Total/NA

Client Sample ID: W-28C-042913 — Lab Sample ID: 320-2441-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8-HxCDF	1.3	J	50	0.14	pg/L	1		8290	Total/NA
1,2,3,6,7,8-HxCDF	0.32	J	50	0.11	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDD	2.1	J	50	0.21	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDF	6.1	J B	50	0.16	pg/L	1		8290	Total/NA
OCDD	28	J B	100	0.50	pg/L	1		8290	Total/NA
OCDF	15	J	100	0.35	pg/L	1		8290	Total/NA
Total TCDF	0.19	J q B	10	0.076	pg/L	1		8290	Total/NA
Total HxCDD	0.21	J q	50	0.15	pg/L	1		8290	Total/NA
Total HxCDF	2.2	J	50	0.12	pg/L	1		8290	Total/NA
Total HpCDD	6.0	J B	50	0.21	pg/L	1		8290	Total/NA
Total HpCDF	7.4	J q B	50	0.17	pg/L	1		8290	Total/NA

Client Sample ID: EB-0429123 — Lab Sample ID: 320-2441-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	0.51	J	54	0.14	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDF	0.25	J B	54	0.097	pg/L	1		8290	Total/NA
OCDD	1.4	J B	110	0.26	pg/L	1		8290	Total/NA
Total TCDF	0.27	J q B	11	0.081	pg/L	1		8290	Total/NA
Total HpCDD	1.3	J q B	54	0.14	pg/L	1		8290	Total/NA
Total HpCDF	0.25	J B	54	0.10	pg/L	1		8290	Total/NA

Client Sample ID: W-06A-043013 — Lab Sample ID: 320-2454-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8-HxCDF	0.21	J q	49	0.15	pg/L	1		8290	Total/NA
1,2,3,6,7,8-HxCDF	0.27	J q	49	0.12	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDD	2.0	J B	49	0.22	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDF	0.48	J q B	49	0.12	pg/L	1		8290	Total/NA
OCDD	17	J B	99	0.35	pg/L	1		8290	Total/NA
OCDF	1.5	J	99	0.20	pg/L	1		8290	Total/NA
Total HxCDF	0.47	J q	49	0.14	pg/L	1		8290	Total/NA
Total HpCDD	4.7	J q B	49	0.22	pg/L	1		8290	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-06A-043013 (Continued) — Lab Sample ID: 320-2454-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HpCDF	1.0	J q B	49	0.13	pg/L	1		8290	Total/NA

Client Sample ID: W-012A-043013 — Lab Sample ID: 320-2454-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,6,7,8-HxCDD	0.68	J	52	0.19	pg/L	1		8290	Total/NA
1,2,3,7,8,9-HxCDD	0.42	J	52	0.17	pg/L	1		8290	Total/NA
1,2,3,4,7,8-HxCDF	0.65	J	52	0.18	pg/L	1		8290	Total/NA
1,2,3,6,7,8-HxCDF	0.49	J	52	0.14	pg/L	1		8290	Total/NA
2,3,4,6,7,8-HxCDF	0.38	J	52	0.16	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDD	8.8	J B	52	0.52	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDF	2.9	J B	52	0.25	pg/L	1		8290	Total/NA
1,2,3,4,7,8,9-HpCDF	0.64	J q B	52	0.30	pg/L	1		8290	Total/NA
OCDD	70	J B	100	1.2	pg/L	1		8290	Total/NA
OCDF	6.0	J B	100	0.26	pg/L	1		8290	Total/NA
Total HxCDD	2.1	J q	52	0.27	pg/L	1		8290	Total/NA
Total HxCDF	3.8	J q	52	0.16	pg/L	1		8290	Total/NA
Total HpCDD	16	J B	52	0.52	pg/L	1		8290	Total/NA
Total HpCDF	9.1	J q B	52	0.27	pg/L	1		8290	Total/NA

Client Sample ID: W-12CR-043013 — Lab Sample ID: 320-2454-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8-HxCDF	0.32	J q	52	0.19	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDD	3.8	J B	52	0.44	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDF	1.1	J q B	52	0.16	pg/L	1		8290	Total/NA
OCDD	56	J B	100	0.92	pg/L	1		8290	Total/NA
OCDF	3.5	J B	100	0.25	pg/L	1		8290	Total/NA
Total HxCDF	0.63	J q	52	0.17	pg/L	1		8290	Total/NA
Total HpCDD	9.9	J q B	52	0.44	pg/L	1		8290	Total/NA
Total HpCDF	2.7	J q B	52	0.18	pg/L	1		8290	Total/NA

Client Sample ID: W-06C-043013 — Lab Sample ID: 320-2454-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	1.9	J B	50	0.26	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDF	0.72	J B	50	0.13	pg/L	1		8290	Total/NA
OCDD	20	J B	100	0.63	pg/L	1		8290	Total/NA
OCDF	1.5	J B	100	0.24	pg/L	1		8290	Total/NA
Total HpCDD	4.5	J B	50	0.26	pg/L	1		8290	Total/NA
Total HpCDF	1.4	J B	50	0.14	pg/L	1		8290	Total/NA

Client Sample ID: EB-043013 — Lab Sample ID: 320-2454-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	0.50	J q B	50	0.17	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDF	0.36	J q B	50	0.12	pg/L	1		8290	Total/NA
OCDD	1.8	J B	99	0.27	pg/L	1		8290	Total/NA
OCDF	1.0	J B	99	0.21	pg/L	1		8290	Total/NA
Total HpCDD	1.5	J q B	50	0.17	pg/L	1		8290	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: EB-043013 (Continued) — Lab Sample ID: 320-2454-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total HpCDF	0.36	J q B	50	0.13	pg/L	1		8290	Total/NA

Client Sample ID: W-04AR-050113 — Lab Sample ID: 320-2475-1

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,6,7,8-HxCDD	0.91	J	55	0.16	pg/L	1		8290	Total/NA
1,2,3,7,8,9-HxCDD	0.73	J	55	0.15	pg/L	1		8290	Total/NA
1,2,3,4,7,8-HxCDF	0.31	J	55	0.20	pg/L	1		8290	Total/NA
1,2,3,6,7,8-HxCDF	0.17	J	55	0.15	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDD	21	J B	55	0.65	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDF	6.1	J B	55	0.27	pg/L	1		8290	Total/NA
OCDD	180	B	110	1.8	pg/L	1		8290	Total/NA
OCDF	29	J	110	0.39	pg/L	1		8290	Total/NA
Total HxCDD	4.0	J	55	0.17	pg/L	1		8290	Total/NA
Total HxCDF	4.0	J q	55	0.18	pg/L	1		8290	Total/NA
Total HpCDD	41	J B	55	0.65	pg/L	1		8290	Total/NA
Total HpCDF	23	J B	55	0.29	pg/L	1		8290	Total/NA

Client Sample ID: W-99A-050113 — Lab Sample ID: 320-2475-2

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,7,8-HxCDD	0.34	J	59	0.21	pg/L	1		8290	Total/NA
1,2,3,6,7,8-HxCDD	0.72	J	59	0.17	pg/L	1		8290	Total/NA
1,2,3,7,8,9-HxCDD	0.60	J q	59	0.15	pg/L	1		8290	Total/NA
1,2,3,4,7,8-HxCDF	0.34	J	59	0.18	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDD	18	J B	59	0.56	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDF	4.8	J B	59	0.24	pg/L	1		8290	Total/NA
OCDD	160	B	120	1.6	pg/L	1		8290	Total/NA
OCDF	22	J	120	0.29	pg/L	1		8290	Total/NA
Total HxCDD	3.6	J q	59	0.18	pg/L	1		8290	Total/NA
Total HxCDF	3.4	J	59	0.16	pg/L	1		8290	Total/NA
Total HpCDD	35	J B	59	0.56	pg/L	1		8290	Total/NA
Total HpCDF	19	J B	59	0.26	pg/L	1		8290	Total/NA

Client Sample ID: W-30A-050113 — Lab Sample ID: 320-2475-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDF	0.55	J	9.9	0.13	pg/L	1		8290	Total/NA
1,2,3,7,8-PeCDF	0.99	J	50	0.25	pg/L	1		8290	Total/NA
2,3,4,7,8-PeCDF	1.1	J	50	0.27	pg/L	1		8290	Total/NA
1,2,3,4,7,8-HxCDD	0.71	J	50	0.25	pg/L	1		8290	Total/NA
1,2,3,6,7,8-HxCDD	4.8	J	50	0.19	pg/L	1		8290	Total/NA
1,2,3,7,8,9-HxCDD	1.5	J q	50	0.18	pg/L	1		8290	Total/NA
1,2,3,4,7,8-HxCDF	4.7	J	50	0.34	pg/L	1		8290	Total/NA
1,2,3,6,7,8-HxCDF	1.1	J	50	0.27	pg/L	1		8290	Total/NA
2,3,4,6,7,8-HxCDF	0.63	J q	50	0.30	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDD	150	B	50	3.5	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDF	40	J B	50	1.3	pg/L	1		8290	Total/NA
OCDD	1600	B	99	14	pg/L	1		8290	Total/NA
OCDF	130		99	0.83	pg/L	1		8290	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-30A-050113 (Continued) — Lab Sample ID: 320-2475-3

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
Total TCDF	0.93	J q	9.9	0.13	pg/L	1		8290	Total/NA
Total PeCDF	7.0	J q	50	0.26	pg/L	1		8290	Total/NA
Total HxCDD	20	J q	50	0.21	pg/L	1		8290	Total/NA
Total HxCDF	51	q	50	0.31	pg/L	1		8290	Total/NA
Total HpCDD	310	B	50	3.5	pg/L	1		8290	Total/NA
Total HpCDF	160	B	50	1.4	pg/L	1		8290	Total/NA

Client Sample ID: W-10AR2-050113 — Lab Sample ID: 320-2475-4

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
2,3,7,8-TCDF	0.37	J	10	0.16	pg/L	1		8290	Total/NA
1,2,3,7,8-PeCDF	1.0	J q	50	0.31	pg/L	1		8290	Total/NA
2,3,4,7,8-PeCDF	1.2	J q	50	0.33	pg/L	1		8290	Total/NA
1,2,3,4,7,8-HxCDD	1.6	J	50	0.39	pg/L	1		8290	Total/NA
1,2,3,6,7,8-HxCDD	6.9	J	50	0.30	pg/L	1		8290	Total/NA
1,2,3,7,8,9-HxCDD	3.7	J	50	0.28	pg/L	1		8290	Total/NA
1,2,3,4,7,8-HxCDF	11	J	50	1.2	pg/L	1		8290	Total/NA
1,2,3,6,7,8-HxCDF	2.7	J	50	0.90	pg/L	1		8290	Total/NA
2,3,4,6,7,8-HxCDF	1.5	J q	50	1.0	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDD	230	B	50	4.2	pg/L	1		8290	Total/NA
1,2,3,4,6,7,8-HpCDF	65	B	50	3.3	pg/L	1		8290	Total/NA
1,2,3,4,7,8,9-HpCDF	7.7	J B	50	3.8	pg/L	1		8290	Total/NA
OCDD	1300	B	100	9.1	pg/L	1		8290	Total/NA
OCDF	150		100	1.2	pg/L	1		8290	Total/NA
Total TCDD	1.8	J	10	0.21	pg/L	1		8290	Total/NA
Total TCDF	2.9	J q	10	0.16	pg/L	1		8290	Total/NA
Total PeCDD	11	J q	50	0.35	pg/L	1		8290	Total/NA
Total PeCDF	29	J q	50	0.32	pg/L	1		8290	Total/NA
Total HxCDD	57		50	0.33	pg/L	1		8290	Total/NA
Total HxCDF	210	q	50	1.0	pg/L	1		8290	Total/NA
Total HpCDD	370	B	50	4.2	pg/L	1		8290	Total/NA
Total HpCDF	410	B	50	3.6	pg/L	1		8290	Total/NA

Client Sample ID: EB-050113 — Lab Sample ID: 320-2475-5

Analyte	Result	Qualifier	RL	EDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3,4,6,7,8-HpCDD	0.49	J B q	50	0.17	pg/L	1		8290	Total/NA
OCDD	2.1	J B	99	0.23	pg/L	1		8290	Total/NA
Total HpCDD	1.5	J B q	50	0.17	pg/L	1		8290	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: W-30C-042913

Lab Sample ID: 320-2441-1

Date Collected: 04/29/13 10:10

Matrix: Water

Date Received: 04/30/13 08:45

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		11	0.19	pg/L		05/02/13 13:19	05/04/13 00:10	1
2,3,7,8-TCDF	ND		11	0.12	pg/L		05/02/13 13:19	05/04/13 00:10	1
1,2,3,7,8-PeCDD	ND		54	0.29	pg/L		05/02/13 13:19	05/04/13 00:10	1
1,2,3,7,8-PeCDF	ND		54	0.20	pg/L		05/02/13 13:19	05/04/13 00:10	1
2,3,4,7,8-PeCDF	ND		54	0.22	pg/L		05/02/13 13:19	05/04/13 00:10	1
1,2,3,4,7,8-HxCDD	ND		54	0.20	pg/L		05/02/13 13:19	05/04/13 00:10	1
1,2,3,6,7,8-HxCDD	**0.33**	**J q**	54	0.16	pg/L		05/02/13 13:19	05/04/13 00:10	1
1,2,3,7,8,9-HxCDD	ND		54	0.26	pg/L		05/02/13 13:19	05/04/13 00:10	1
1,2,3,4,7,8-HxCDF	**0.28**	**J q**	54	0.18	pg/L		05/02/13 13:19	05/04/13 00:10	1
1,2,3,6,7,8-HxCDF	**0.24**	**J**	54	0.14	pg/L		05/02/13 13:19	05/04/13 00:10	1
2,3,4,6,7,8-HxCDF	ND		54	0.16	pg/L		05/02/13 13:19	05/04/13 00:10	1
1,2,3,7,8,9-HxCDF	ND		54	0.17	pg/L		05/02/13 13:19	05/04/13 00:10	1
1,2,3,4,6,7,8-HpCDD	**2.7**	**J**	54	0.27	pg/L		05/02/13 13:19	05/04/13 00:10	1
1,2,3,4,6,7,8-HpCDF	**0.98**	**J q B**	54	0.12	pg/L		05/02/13 13:19	05/04/13 00:10	1
1,2,3,4,7,8,9-HpCDF	**0.22**	**J q**	54	0.14	pg/L		05/02/13 13:19	05/04/13 00:10	1
OCDD	**39**	**J B**	110	0.74	pg/L		05/02/13 13:19	05/04/13 00:10	1
OCDF	**3.3**	**J**	110	0.25	pg/L		05/02/13 13:19	05/04/13 00:10	1
Total TCDD	ND		11	0.19	pg/L		05/02/13 13:19	05/04/13 00:10	1
Total TCDF	**0.34**	**J B**	11	0.12	pg/L		05/02/13 13:19	05/04/13 00:10	1
Total PeCDD	ND		54	0.29	pg/L		05/02/13 13:19	05/04/13 00:10	1
Total PeCDF	ND		54	0.22	pg/L		05/02/13 13:19	05/04/13 00:10	1
Total HxCDD	**0.48**	**J q**	54	0.21	pg/L		05/02/13 13:19	05/04/13 00:10	1
Total HxCDF	**0.52**	**J q**	54	0.16	pg/L		05/02/13 13:19	05/04/13 00:10	1
Total HpCDD	**7.2**	**J B**	54	0.27	pg/L		05/02/13 13:19	05/04/13 00:10	1
Total HpCDF	**2.5**	**J q B**	54	0.13	pg/L		05/02/13 13:19	05/04/13 00:10	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*89*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:10*	*1*
13C-2,3,7,8-TCDF	*81*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:10*	*1*
13C-1,2,3,7,8-PeCDD	*97*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:10*	*1*
13C-1,2,3,7,8-PeCDF	*91*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:10*	*1*
13C-1,2,3,6,7,8-HxCDD	*99*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:10*	*1*
13C-1,2,3,4,7,8-HxCDF	*83*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:10*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*103*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:10*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*98*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:10*	*1*
13C-OCDD	*86*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:10*	*1*

Client Sample ID: W-28C-042913

Lab Sample ID: 320-2441-2

Date Collected: 04/29/13 13:40

Matrix: Water

Date Received: 04/30/13 08:45

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.17	pg/L		05/02/13 13:19	05/04/13 00:52	1
2,3,7,8-TCDF	ND		10	0.076	pg/L		05/02/13 13:19	05/04/13 00:52	1
1,2,3,7,8-PeCDD	ND		50	0.25	pg/L		05/02/13 13:19	05/04/13 00:52	1
1,2,3,7,8-PeCDF	ND		50	0.14	pg/L		05/02/13 13:19	05/04/13 00:52	1
2,3,4,7,8-PeCDF	ND		50	0.15	pg/L		05/02/13 13:19	05/04/13 00:52	1
1,2,3,4,7,8-HxCDD	ND		50	0.18	pg/L		05/02/13 13:19	05/04/13 00:52	1
1,2,3,6,7,8-HxCDD	ND		50	0.14	pg/L		05/02/13 13:19	05/04/13 00:52	1

Client Sample ID: W-28C-042913 — **Lab Sample ID: 320-2441-2**
Date Collected: 04/29/13 13:40 — **Matrix: Water**
Date Received: 04/30/13 08:45

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		50	0.13	pg/L		05/02/13 13:19	05/04/13 00:52	1
1,2,3,4,7,8-HxCDF	**1.3**	**J**	50	0.14	pg/L		05/02/13 13:19	05/04/13 00:52	1
1,2,3,6,7,8-HxCDF	**0.32**	**J**	50	0.11	pg/L		05/02/13 13:19	05/04/13 00:52	1
2,3,4,6,7,8-HxCDF	ND		50	0.12	pg/L		05/02/13 13:19	05/04/13 00:52	1
1,2,3,7,8,9-HxCDF	ND		50	0.13	pg/L		05/02/13 13:19	05/04/13 00:52	1
1,2,3,4,6,7,8-HpCDD	**2.1**	**J**	50	0.21	pg/L		05/02/13 13:19	05/04/13 00:52	1
1,2,3,4,6,7,8-HpCDF	**6.1**	**J B**	50	0.16	pg/L		05/02/13 13:19	05/04/13 00:52	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.18	pg/L		05/02/13 13:19	05/04/13 00:52	1
OCDD	**28**	**J B**	100	0.50	pg/L		05/02/13 13:19	05/04/13 00:52	1
OCDF	**15**	**J**	100	0.35	pg/L		05/02/13 13:19	05/04/13 00:52	1
Total TCDD	ND		10	0.17	pg/L		05/02/13 13:19	05/04/13 00:52	1
Total TCDF	**0.19**	**J q B**	10	0.076	pg/L		05/02/13 13:19	05/04/13 00:52	1
Total PeCDD	ND		50	0.25	pg/L		05/02/13 13:19	05/04/13 00:52	1
Total PeCDF	ND		50	0.15	pg/L		05/02/13 13:19	05/04/13 00:52	1
Total HxCDD	**0.21**	**J q**	50	0.15	pg/L		05/02/13 13:19	05/04/13 00:52	1
Total HxCDF	**2.2**	**J**	50	0.12	pg/L		05/02/13 13:19	05/04/13 00:52	1
Total HpCDD	**6.0**	**J B**	50	0.21	pg/L		05/02/13 13:19	05/04/13 00:52	1
Total HpCDF	**7.4**	**J q B**	50	0.17	pg/L		05/02/13 13:19	05/04/13 00:52	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*89*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:52*	*1*
13C-2,3,7,8-TCDF	*80*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:52*	*1*
13C-1,2,3,7,8-PeCDD	*96*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:52*	*1*
13C-1,2,3,7,8-PeCDF	*91*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:52*	*1*
13C-1,2,3,6,7,8-HxCDD	*104*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:52*	*1*
13C-1,2,3,4,7,8-HxCDF	*91*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:52*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*117*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:52*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*108*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:52*	*1*
13C-OCDD	*92*		*40 - 135*	*05/02/13 13:19*	*05/04/13 00:52*	*1*

Client Sample ID: EB-0429123 — **Lab Sample ID: 320-2441-3**
Date Collected: 04/29/13 16:10 — **Matrix: Water**
Date Received: 04/30/13 08:45

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		11	0.19	pg/L		05/02/13 13:19	05/04/13 01:34	1
2,3,7,8-TCDF	ND		11	0.081	pg/L		05/02/13 13:19	05/04/13 01:34	1
1,2,3,7,8-PeCDD	ND		54	0.25	pg/L		05/02/13 13:19	05/04/13 01:34	1
1,2,3,7,8-PeCDF	ND		54	0.13	pg/L		05/02/13 13:19	05/04/13 01:34	1
2,3,4,7,8-PeCDF	ND		54	0.14	pg/L		05/02/13 13:19	05/04/13 01:34	1
1,2,3,4,7,8-HxCDD	ND		54	0.17	pg/L		05/02/13 13:19	05/04/13 01:34	1
1,2,3,6,7,8-HxCDD	ND		54	0.13	pg/L		05/02/13 13:19	05/04/13 01:34	1
1,2,3,7,8,9-HxCDD	ND		54	0.12	pg/L		05/02/13 13:19	05/04/13 01:34	1
1,2,3,4,7,8-HxCDF	ND		54	0.11	pg/L		05/02/13 13:19	05/04/13 01:34	1
1,2,3,6,7,8-HxCDF	ND		54	0.083	pg/L		05/02/13 13:19	05/04/13 01:34	1
2,3,4,6,7,8-HxCDF	ND		54	0.092	pg/L		05/02/13 13:19	05/04/13 01:34	1
1,2,3,7,8,9-HxCDF	ND		54	0.10	pg/L		05/02/13 13:19	05/04/13 01:34	1
1,2,3,4,6,7,8-HpCDD	**0.51**	**J**	54	0.14	pg/L		05/02/13 13:19	05/04/13 01:34	1
1,2,3,4,6,7,8-HpCDF	**0.25**	**J B**	54	0.097	pg/L		05/02/13 13:19	05/04/13 01:34	1

Client Sample ID: EB-0429123 — **Lab Sample ID: 320-2441-3**
Date Collected: 04/29/13 16:10 — **Matrix: Water**
Date Received: 04/30/13 08:45

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		54	0.11	pg/L		05/02/13 13:19	05/04/13 01:34	1
OCDD	**1.4**	**J B**	110	0.26	pg/L		05/02/13 13:19	05/04/13 01:34	1
OCDF	ND		110	0.18	pg/L		05/02/13 13:19	05/04/13 01:34	1
Total TCDD	ND		11	0.19	pg/L		05/02/13 13:19	05/04/13 01:34	1
Total TCDF	**0.27**	**J q B**	11	0.081	pg/L		05/02/13 13:19	05/04/13 01:34	1
Total PeCDD	ND		54	0.25	pg/L		05/02/13 13:19	05/04/13 01:34	1
Total PeCDF	ND		54	0.14	pg/L		05/02/13 13:19	05/04/13 01:34	1
Total HxCDD	ND		54	0.17	pg/L		05/02/13 13:19	05/04/13 01:34	1
Total HxCDF	ND		54	0.11	pg/L		05/02/13 13:19	05/04/13 01:34	1
Total HpCDD	**1.3**	**J q B**	54	0.14	pg/L		05/02/13 13:19	05/04/13 01:34	1
Total HpCDF	**0.25**	**J B**	54	0.10	pg/L		05/02/13 13:19	05/04/13 01:34	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*90*		*40 - 135*	*05/02/13 13:19*	*05/04/13 01:34*	*1*
13C-2,3,7,8-TCDF	*76*		*40 - 135*	*05/02/13 13:19*	*05/04/13 01:34*	*1*
13C-1,2,3,7,8-PeCDD	*102*		*40 - 135*	*05/02/13 13:19*	*05/04/13 01:34*	*1*
13C-1,2,3,7,8-PeCDF	*87*		*40 - 135*	*05/02/13 13:19*	*05/04/13 01:34*	*1*
13C-1,2,3,6,7,8-HxCDD	*102*		*40 - 135*	*05/02/13 13:19*	*05/04/13 01:34*	*1*
13C-1,2,3,4,7,8-HxCDF	*95*		*40 - 135*	*05/02/13 13:19*	*05/04/13 01:34*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*118*		*40 - 135*	*05/02/13 13:19*	*05/04/13 01:34*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*103*		*40 - 135*	*05/02/13 13:19*	*05/04/13 01:34*	*1*
13C-OCDD	*91*		*40 - 135*	*05/02/13 13:19*	*05/04/13 01:34*	*1*

Client Sample ID: W-06A-043013 — **Lab Sample ID: 320-2454-1**
Date Collected: 04/30/13 07:55 — **Matrix: Water**
Date Received: 05/01/13 10:05

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.9	0.21	pg/L		05/09/13 10:29	05/11/13 04:24	1
2,3,7,8-TCDF	ND		9.9	0.15	pg/L		05/09/13 10:29	05/11/13 04:24	1
1,2,3,7,8-PeCDD	ND		49	0.29	pg/L		05/09/13 10:29	05/11/13 04:24	1
1,2,3,7,8-PeCDF	ND		49	0.19	pg/L		05/09/13 10:29	05/11/13 04:24	1
2,3,4,7,8-PeCDF	ND		49	0.20	pg/L		05/09/13 10:29	05/11/13 04:24	1
1,2,3,4,7,8-HxCDD	ND		49	0.22	pg/L		05/09/13 10:29	05/11/13 04:24	1
1,2,3,6,7,8-HxCDD	ND		49	0.46	pg/L		05/09/13 10:29	05/11/13 04:24	1
1,2,3,7,8,9-HxCDD	ND		49	0.16	pg/L		05/09/13 10:29	05/11/13 04:24	1
1,2,3,4,7,8-HxCDF	**0.21**	**J q**	49	0.15	pg/L		05/09/13 10:29	05/11/13 04:24	1
1,2,3,6,7,8-HxCDF	**0.27**	**J q**	49	0.12	pg/L		05/09/13 10:29	05/11/13 04:24	1
2,3,4,6,7,8-HxCDF	ND		49	0.13	pg/L		05/09/13 10:29	05/11/13 04:24	1
1,2,3,7,8,9-HxCDF	ND		49	0.15	pg/L		05/09/13 10:29	05/11/13 04:24	1
1,2,3,4,6,7,8-HpCDD	**2.0**	**J B**	49	0.22	pg/L		05/09/13 10:29	05/11/13 04:24	1
1,2,3,4,6,7,8-HpCDF	**0.48**	**J q B**	49	0.12	pg/L		05/09/13 10:29	05/11/13 04:24	1
1,2,3,4,7,8,9-HpCDF	ND		49	0.14	pg/L		05/09/13 10:29	05/11/13 04:24	1
OCDD	**17**	**J B**	99	0.35	pg/L		05/09/13 10:29	05/11/13 04:24	1
OCDF	**1.5**	**J**	99	0.20	pg/L		05/09/13 10:29	05/11/13 04:24	1
Total TCDD	ND		9.9	0.21	pg/L		05/09/13 10:29	05/11/13 04:24	1
Total TCDF	ND		9.9	0.15	pg/L		05/09/13 10:29	05/11/13 04:24	1
Total PeCDD	ND		49	0.29	pg/L		05/09/13 10:29	05/11/13 04:24	1
Total PeCDF	ND		49	0.20	pg/L		05/09/13 10:29	05/11/13 04:24	1

Client Sample ID: W-06A-043013 — **Lab Sample ID: 320-2454-1**
Date Collected: 04/30/13 07:55 — **Matrix: Water**
Date Received: 05/01/13 10:05

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	ND		49	0.46	pg/L		05/09/13 10:29	05/11/13 04:24	1
Total HxCDF	**0.47**	**J q**	49	0.14	pg/L		05/09/13 10:29	05/11/13 04:24	1
Total HpCDD	**4.7**	**J q B**	49	0.22	pg/L		05/09/13 10:29	05/11/13 04:24	1
Total HpCDF	**1.0**	**J q B**	49	0.13	pg/L		05/09/13 10:29	05/11/13 04:24	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*83*		*40 - 135*	*05/09/13 10:29*	*05/11/13 04:24*	*1*
13C-2,3,7,8-TCDF	*77*		*40 - 135*	*05/09/13 10:29*	*05/11/13 04:24*	*1*
13C-1,2,3,7,8-PeCDD	*98*		*40 - 135*	*05/09/13 10:29*	*05/11/13 04:24*	*1*
13C-1,2,3,7,8-PeCDF	*85*		*40 - 135*	*05/09/13 10:29*	*05/11/13 04:24*	*1*
13C-1,2,3,6,7,8-HxCDD	*94*		*40 - 135*	*05/09/13 10:29*	*05/11/13 04:24*	*1*
13C-1,2,3,4,7,8-HxCDF	*87*		*40 - 135*	*05/09/13 10:29*	*05/11/13 04:24*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*99*		*40 - 135*	*05/09/13 10:29*	*05/11/13 04:24*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*90*		*40 - 135*	*05/09/13 10:29*	*05/11/13 04:24*	*1*
13C-OCDD	*105*		*40 - 135*	*05/09/13 10:29*	*05/11/13 04:24*	*1*

Client Sample ID: W-012A-043013 — **Lab Sample ID: 320-2454-2**
Date Collected: 04/30/13 07:45 — **Matrix: Water**
Date Received: 05/01/13 10:05

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.23	pg/L		05/03/13 14:02	05/06/13 19:56	1
2,3,7,8-TCDF	ND		10	0.13	pg/L		05/03/13 14:02	05/06/13 19:56	1
1,2,3,7,8-PeCDD	ND		52	0.32	pg/L		05/03/13 14:02	05/06/13 19:56	1
1,2,3,7,8-PeCDF	ND		52	0.21	pg/L		05/03/13 14:02	05/06/13 19:56	1
2,3,4,7,8-PeCDF	ND		52	0.23	pg/L		05/03/13 14:02	05/06/13 19:56	1
1,2,3,4,7,8-HxCDD	ND		52	0.44	pg/L		05/03/13 14:02	05/06/13 19:56	1
1,2,3,6,7,8-HxCDD	**0.68**	**J**	52	0.19	pg/L		05/03/13 14:02	05/06/13 19:56	1
1,2,3,7,8,9-HxCDD	**0.42**	**J**	52	0.17	pg/L		05/03/13 14:02	05/06/13 19:56	1
1,2,3,4,7,8-HxCDF	**0.65**	**J**	52	0.18	pg/L		05/03/13 14:02	05/06/13 19:56	1
1,2,3,6,7,8-HxCDF	**0.49**	**J**	52	0.14	pg/L		05/03/13 14:02	05/06/13 19:56	1
2,3,4,6,7,8-HxCDF	**0.38**	**J**	52	0.16	pg/L		05/03/13 14:02	05/06/13 19:56	1
1,2,3,7,8,9-HxCDF	ND		52	0.18	pg/L		05/03/13 14:02	05/06/13 19:56	1
1,2,3,4,6,7,8-HpCDD	**8.8**	**J B**	52	0.52	pg/L		05/03/13 14:02	05/06/13 19:56	1
1,2,3,4,6,7,8-HpCDF	**2.9**	**J B**	52	0.25	pg/L		05/03/13 14:02	05/06/13 19:56	1
1,2,3,4,7,8,9-HpCDF	**0.64**	**J q B**	52	0.30	pg/L		05/03/13 14:02	05/06/13 19:56	1
OCDD	**70**	**J B**	100	1.2	pg/L		05/03/13 14:02	05/06/13 19:56	1
OCDF	**6.0**	**J B**	100	0.26	pg/L		05/03/13 14:02	05/06/13 19:56	1
Total TCDD	ND		10	0.23	pg/L		05/03/13 14:02	05/06/13 19:56	1
Total TCDF	ND		10	0.13	pg/L		05/03/13 14:02	05/06/13 19:56	1
Total PeCDD	ND		52	0.32	pg/L		05/03/13 14:02	05/06/13 19:56	1
Total PeCDF	ND		52	0.23	pg/L		05/03/13 14:02	05/06/13 19:56	1
Total HxCDD	**2.1**	**J q**	52	0.27	pg/L		05/03/13 14:02	05/06/13 19:56	1
Total HxCDF	**3.8**	**J q**	52	0.16	pg/L		05/03/13 14:02	05/06/13 19:56	1
Total HpCDD	**16**	**J B**	52	0.52	pg/L		05/03/13 14:02	05/06/13 19:56	1
Total HpCDF	**9.1**	**J q B**	52	0.27	pg/L		05/03/13 14:02	05/06/13 19:56	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*88*		*40 - 135*	*05/03/13 14:02*	*05/06/13 19:56*	*1*
13C-2,3,7,8-TCDF	*74*		*40 - 135*	*05/03/13 14:02*	*05/06/13 19:56*	*1*

Client: Field & Technical Services LLC
Project/Site: Superior GW

TestAmerica Job ID: 320-2441-1

Client Sample ID: W-012A-043013

Lab Sample ID: 320-2454-2

Date Collected: 04/30/13 07:45

Matrix: Water

Date Received: 05/01/13 10:05

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDD	106		40 - 135	05/03/13 14:02	05/06/13 19:56	1
13C-1,2,3,7,8-PeCDF	82		40 - 135	05/03/13 14:02	05/06/13 19:56	1
13C-1,2,3,6,7,8-HxCDD	104		40 - 135	05/03/13 14:02	05/06/13 19:56	1
13C-1,2,3,4,7,8-HxCDF	89		40 - 135	05/03/13 14:02	05/06/13 19:56	1
13C-1,2,3,4,6,7,8-HpCDD	96		40 - 135	05/03/13 14:02	05/06/13 19:56	1
13C-1,2,3,4,6,7,8-HpCDF	88		40 - 135	05/03/13 14:02	05/06/13 19:56	1
13C-OCDD	105		40 - 135	05/03/13 14:02	05/06/13 19:56	1

Client Sample ID: W-12CR-043013

Lab Sample ID: 320-2454-3

Date Collected: 04/30/13 11:10

Matrix: Water

Date Received: 05/01/13 10:05

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.27	pg/L		05/03/13 14:02	05/06/13 20:37	1
2,3,7,8-TCDF	ND		10	0.13	pg/L		05/03/13 14:02	05/06/13 20:37	1
1,2,3,7,8-PeCDD	ND		52	0.38	pg/L		05/03/13 14:02	05/06/13 20:37	1
1,2,3,7,8-PeCDF	ND		52	0.22	pg/L		05/03/13 14:02	05/06/13 20:37	1
2,3,4,7,8-PeCDF	ND		52	0.23	pg/L		05/03/13 14:02	05/06/13 20:37	1
1,2,3,4,7,8-HxCDD	ND		52	0.23	pg/L		05/03/13 14:02	05/06/13 20:37	1
1,2,3,6,7,8-HxCDD	ND		52	0.18	pg/L		05/03/13 14:02	05/06/13 20:37	1
1,2,3,7,8,9-HxCDD	ND		52	0.16	pg/L		05/03/13 14:02	05/06/13 20:37	1
1,2,3,4,7,8-HxCDF	**0.32**	**J q**	52	0.19	pg/L		05/03/13 14:02	05/06/13 20:37	1
1,2,3,6,7,8-HxCDF	ND		52	0.14	pg/L		05/03/13 14:02	05/06/13 20:37	1
2,3,4,6,7,8-HxCDF	ND		52	0.16	pg/L		05/03/13 14:02	05/06/13 20:37	1
1,2,3,7,8,9-HxCDF	ND		52	0.18	pg/L		05/03/13 14:02	05/06/13 20:37	1
1,2,3,4,6,7,8-HpCDD	**3.8**	**J B**	52	0.44	pg/L		05/03/13 14:02	05/06/13 20:37	1
1,2,3,4,6,7,8-HpCDF	**1.1**	**J q B**	52	0.16	pg/L		05/03/13 14:02	05/06/13 20:37	1
1,2,3,4,7,8,9-HpCDF	ND		52	0.19	pg/L		05/03/13 14:02	05/06/13 20:37	1
OCDD	**56**	**J B**	100	0.92	pg/L		05/03/13 14:02	05/06/13 20:37	1
OCDF	**3.5**	**J B**	100	0.25	pg/L		05/03/13 14:02	05/06/13 20:37	1
Total TCDD	ND		10	0.27	pg/L		05/03/13 14:02	05/06/13 20:37	1
Total TCDF	ND		10	0.13	pg/L		05/03/13 14:02	05/06/13 20:37	1
Total PeCDD	ND		52	0.38	pg/L		05/03/13 14:02	05/06/13 20:37	1
Total PeCDF	ND		52	0.23	pg/L		05/03/13 14:02	05/06/13 20:37	1
Total HxCDD	ND		52	0.23	pg/L		05/03/13 14:02	05/06/13 20:37	1
Total HxCDF	**0.63**	**J q**	52	0.17	pg/L		05/03/13 14:02	05/06/13 20:37	1
Total HpCDD	**9.9**	**J q B**	52	0.44	pg/L		05/03/13 14:02	05/06/13 20:37	1
Total HpCDF	**2.7**	**J q B**	52	0.18	pg/L		05/03/13 14:02	05/06/13 20:37	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	86		40 - 135	05/03/13 14:02	05/06/13 20:37	1
13C-2,3,7,8-TCDF	77		40 - 135	05/03/13 14:02	05/06/13 20:37	1
13C-1,2,3,7,8-PeCDD	91		40 - 135	05/03/13 14:02	05/06/13 20:37	1
13C-1,2,3,7,8-PeCDF	85		40 - 135	05/03/13 14:02	05/06/13 20:37	1
13C-1,2,3,6,7,8-HxCDD	95		40 - 135	05/03/13 14:02	05/06/13 20:37	1
13C-1,2,3,4,7,8-HxCDF	78		40 - 135	05/03/13 14:02	05/06/13 20:37	1
13C-1,2,3,4,6,7,8-HpCDD	97		40 - 135	05/03/13 14:02	05/06/13 20:37	1
13C-1,2,3,4,6,7,8-HpCDF	94		40 - 135	05/03/13 14:02	05/06/13 20:37	1
13C-OCDD	106		40 - 135	05/03/13 14:02	05/06/13 20:37	1

Client: Field & Technical Services LLC
Project/Site: Superior GW

TestAmerica Job ID: 320-2441-1

Client Sample ID: W-06C-043013

Lab Sample ID: 320-2454-4

Date Collected: 04/30/13 14:15

Matrix: Water

Date Received: 05/01/13 10:05

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.26	pg/L		05/03/13 14:02	05/06/13 21:19	1
2,3,7,8-TCDF	ND		10	0.12	pg/L		05/03/13 14:02	05/06/13 21:19	1
1,2,3,7,8-PeCDD	ND		50	0.32	pg/L		05/03/13 14:02	05/06/13 21:19	1
1,2,3,7,8-PeCDF	ND		50	0.18	pg/L		05/03/13 14:02	05/06/13 21:19	1
2,3,4,7,8-PeCDF	ND		50	0.19	pg/L		05/03/13 14:02	05/06/13 21:19	1
1,2,3,4,7,8-HxCDD	ND		50	0.19	pg/L		05/03/13 14:02	05/06/13 21:19	1
1,2,3,6,7,8-HxCDD	ND		50	0.15	pg/L		05/03/13 14:02	05/06/13 21:19	1
1,2,3,7,8,9-HxCDD	ND		50	0.14	pg/L		05/03/13 14:02	05/06/13 21:19	1
1,2,3,4,7,8-HxCDF	ND		50	0.14	pg/L		05/03/13 14:02	05/06/13 21:19	1
1,2,3,6,7,8-HxCDF	ND		50	0.11	pg/L		05/03/13 14:02	05/06/13 21:19	1
2,3,4,6,7,8-HxCDF	ND		50	0.12	pg/L		05/03/13 14:02	05/06/13 21:19	1
1,2,3,7,8,9-HxCDF	ND		50	0.14	pg/L		05/03/13 14:02	05/06/13 21:19	1
1,2,3,4,6,7,8-HpCDD	**1.9**	**J B**	50	0.26	pg/L		05/03/13 14:02	05/06/13 21:19	1
1,2,3,4,6,7,8-HpCDF	**0.72**	**J B**	50	0.13	pg/L		05/03/13 14:02	05/06/13 21:19	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.15	pg/L		05/03/13 14:02	05/06/13 21:19	1
OCDD	**20**	**J B**	100	0.63	pg/L		05/03/13 14:02	05/06/13 21:19	1
OCDF	**1.5**	**J B**	100	0.24	pg/L		05/03/13 14:02	05/06/13 21:19	1
Total TCDD	ND		10	0.26	pg/L		05/03/13 14:02	05/06/13 21:19	1
Total TCDF	ND		10	0.12	pg/L		05/03/13 14:02	05/06/13 21:19	1
Total PeCDD	ND		50	0.32	pg/L		05/03/13 14:02	05/06/13 21:19	1
Total PeCDF	ND		50	0.19	pg/L		05/03/13 14:02	05/06/13 21:19	1
Total HxCDD	ND		50	0.19	pg/L		05/03/13 14:02	05/06/13 21:19	1
Total HxCDF	ND		50	0.14	pg/L		05/03/13 14:02	05/06/13 21:19	1
Total HpCDD	**4.5**	**J B**	50	0.26	pg/L		05/03/13 14:02	05/06/13 21:19	1
Total HpCDF	**1.4**	**J B**	50	0.14	pg/L		05/03/13 14:02	05/06/13 21:19	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*86*		*40 - 135*	*05/03/13 14:02*	*05/06/13 21:19*	*1*
13C-2,3,7,8-TCDF	*74*		*40 - 135*	*05/03/13 14:02*	*05/06/13 21:19*	*1*
13C-1,2,3,7,8-PeCDD	*103*		*40 - 135*	*05/03/13 14:02*	*05/06/13 21:19*	*1*
13C-1,2,3,7,8-PeCDF	*82*		*40 - 135*	*05/03/13 14:02*	*05/06/13 21:19*	*1*
13C-1,2,3,6,7,8-HxCDD	*99*		*40 - 135*	*05/03/13 14:02*	*05/06/13 21:19*	*1*
13C-1,2,3,4,7,8-HxCDF	*87*		*40 - 135*	*05/03/13 14:02*	*05/06/13 21:19*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*95*		*40 - 135*	*05/03/13 14:02*	*05/06/13 21:19*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*86*		*40 - 135*	*05/03/13 14:02*	*05/06/13 21:19*	*1*
13C-OCDD	*109*		*40 - 135*	*05/03/13 14:02*	*05/06/13 21:19*	*1*

Client Sample ID: EB-043013

Lab Sample ID: 320-2454-5

Date Collected: 04/30/13 16:40

Matrix: Water

Date Received: 05/01/13 10:05

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.9	0.22	pg/L		05/03/13 14:02	05/06/13 22:01	1
2,3,7,8-TCDF	ND		9.9	0.11	pg/L		05/03/13 14:02	05/06/13 22:01	1
1,2,3,7,8-PeCDD	ND		50	0.34	pg/L		05/03/13 14:02	05/06/13 22:01	1
1,2,3,7,8-PeCDF	ND		50	0.17	pg/L		05/03/13 14:02	05/06/13 22:01	1
2,3,4,7,8-PeCDF	ND		50	0.18	pg/L		05/03/13 14:02	05/06/13 22:01	1
1,2,3,4,7,8-HxCDD	ND		50	0.19	pg/L		05/03/13 14:02	05/06/13 22:01	1
1,2,3,6,7,8-HxCDD	ND		50	0.15	pg/L		05/03/13 14:02	05/06/13 22:01	1

Client Sample ID: EB-043013 — **Lab Sample ID: 320-2454-5**
Date Collected: 04/30/13 16:40 — **Matrix: Water**
Date Received: 05/01/13 10:05

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		50	0.14	pg/L		05/03/13 14:02	05/06/13 22:01	1
1,2,3,4,7,8-HxCDF	ND		50	0.12	pg/L		05/03/13 14:02	05/06/13 22:01	1
1,2,3,6,7,8-HxCDF	ND		50	0.095	pg/L		05/03/13 14:02	05/06/13 22:01	1
2,3,4,6,7,8-HxCDF	ND		50	0.11	pg/L		05/03/13 14:02	05/06/13 22:01	1
1,2,3,7,8,9-HxCDF	ND		50	0.12	pg/L		05/03/13 14:02	05/06/13 22:01	1
1,2,3,4,6,7,8-HpCDD	**0.50**	**J q B**	50	0.17	pg/L		05/03/13 14:02	05/06/13 22:01	1
1,2,3,4,6,7,8-HpCDF	**0.36**	**J q B**	50	0.12	pg/L		05/03/13 14:02	05/06/13 22:01	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.14	pg/L		05/03/13 14:02	05/06/13 22:01	1
OCDD	**1.8**	**J B**	99	0.27	pg/L		05/03/13 14:02	05/06/13 22:01	1
OCDF	**1.0**	**J B**	99	0.21	pg/L		05/03/13 14:02	05/06/13 22:01	1
Total TCDD	ND		9.9	0.22	pg/L		05/03/13 14:02	05/06/13 22:01	1
Total TCDF	ND		9.9	0.11	pg/L		05/03/13 14:02	05/06/13 22:01	1
Total PeCDD	ND		50	0.34	pg/L		05/03/13 14:02	05/06/13 22:01	1
Total PeCDF	ND		50	0.18	pg/L		05/03/13 14:02	05/06/13 22:01	1
Total HxCDD	ND		50	0.19	pg/L		05/03/13 14:02	05/06/13 22:01	1
Total HxCDF	ND		50	0.12	pg/L		05/03/13 14:02	05/06/13 22:01	1
Total HpCDD	**1.5**	**J q B**	50	0.17	pg/L		05/03/13 14:02	05/06/13 22:01	1
Total HpCDF	**0.36**	**J q B**	50	0.13	pg/L		05/03/13 14:02	05/06/13 22:01	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*84*		*40 - 135*	*05/03/13 14:02*	*05/06/13 22:01*	*1*
13C-2,3,7,8-TCDF	*78*		*40 - 135*	*05/03/13 14:02*	*05/06/13 22:01*	*1*
13C-1,2,3,7,8-PeCDD	*100*		*40 - 135*	*05/03/13 14:02*	*05/06/13 22:01*	*1*
13C-1,2,3,7,8-PeCDF	*91*		*40 - 135*	*05/03/13 14:02*	*05/06/13 22:01*	*1*
13C-1,2,3,6,7,8-HxCDD	*97*		*40 - 135*	*05/03/13 14:02*	*05/06/13 22:01*	*1*
13C-1,2,3,4,7,8-HxCDF	*78*		*40 - 135*	*05/03/13 14:02*	*05/06/13 22:01*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*103*		*40 - 135*	*05/03/13 14:02*	*05/06/13 22:01*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*96*		*40 - 135*	*05/03/13 14:02*	*05/06/13 22:01*	*1*
13C-OCDD	*103*		*40 - 135*	*05/03/13 14:02*	*05/06/13 22:01*	*1*

Client Sample ID: W-04AR-050113 — **Lab Sample ID: 320-2475-1**
Date Collected: 05/01/13 08:10 — **Matrix: Water**
Date Received: 05/02/13 09:00

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		11	0.18	pg/L		05/09/13 10:29	05/11/13 05:06	1
2,3,7,8-TCDF	ND		11	0.15	pg/L		05/09/13 10:29	05/11/13 05:06	1
1,2,3,7,8-PeCDD	ND		55	0.33	pg/L		05/09/13 10:29	05/11/13 05:06	1
1,2,3,7,8-PeCDF	ND		55	0.18	pg/L		05/09/13 10:29	05/11/13 05:06	1
2,3,4,7,8-PeCDF	ND		55	0.19	pg/L		05/09/13 10:29	05/11/13 05:06	1
1,2,3,4,7,8-HxCDD	ND		55	0.20	pg/L		05/09/13 10:29	05/11/13 05:06	1
1,2,3,6,7,8-HxCDD	**0.91**	**J**	55	0.16	pg/L		05/09/13 10:29	05/11/13 05:06	1
1,2,3,7,8,9-HxCDD	**0.73**	**J**	55	0.15	pg/L		05/09/13 10:29	05/11/13 05:06	1
1,2,3,4,7,8-HxCDF	**0.31**	**J**	55	0.20	pg/L		05/09/13 10:29	05/11/13 05:06	1
1,2,3,6,7,8-HxCDF	**0.17**	**J**	55	0.15	pg/L		05/09/13 10:29	05/11/13 05:06	1
2,3,4,6,7,8-HxCDF	ND		55	0.17	pg/L		05/09/13 10:29	05/11/13 05:06	1
1,2,3,7,8,9-HxCDF	ND		55	0.19	pg/L		05/09/13 10:29	05/11/13 05:06	1
1,2,3,4,6,7,8-HpCDD	**21**	**J B**	55	0.65	pg/L		05/09/13 10:29	05/11/13 05:06	1
1,2,3,4,6,7,8-HpCDF	**6.1**	**J B**	55	0.27	pg/L		05/09/13 10:29	05/11/13 05:06	1

Client Sample ID: W-04AR-050113
Date Collected: 05/01/13 08:10
Date Received: 05/02/13 09:00

Lab Sample ID: 320-2475-1
Matrix: Water

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8,9-HpCDF	ND		55	0.31	pg/L		05/09/13 10:29	05/11/13 05:06	1
OCDD	**180**	**B**	110	1.8	pg/L		05/09/13 10:29	05/11/13 05:06	1
OCDF	**29**	**J**	110	0.39	pg/L		05/09/13 10:29	05/11/13 05:06	1
Total TCDD	ND		11	0.18	pg/L		05/09/13 10:29	05/11/13 05:06	1
Total TCDF	ND		11	0.15	pg/L		05/09/13 10:29	05/11/13 05:06	1
Total PeCDD	ND		55	0.33	pg/L		05/09/13 10:29	05/11/13 05:06	1
Total PeCDF	ND		55	0.19	pg/L		05/09/13 10:29	05/11/13 05:06	1
Total HxCDD	**4.0**	**J**	55	0.17	pg/L		05/09/13 10:29	05/11/13 05:06	1
Total HxCDF	**4.0**	**J q**	55	0.18	pg/L		05/09/13 10:29	05/11/13 05:06	1
Total HpCDD	**41**	**J B**	55	0.65	pg/L		05/09/13 10:29	05/11/13 05:06	1
Total HpCDF	**23**	**J B**	55	0.29	pg/L		05/09/13 10:29	05/11/13 05:06	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*84*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:06*	*1*
13C-2,3,7,8-TCDF	*76*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:06*	*1*
13C-1,2,3,7,8-PeCDD	*97*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:06*	*1*
13C-1,2,3,7,8-PeCDF	*83*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:06*	*1*
13C-1,2,3,6,7,8-HxCDD	*95*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:06*	*1*
13C-1,2,3,4,7,8-HxCDF	*89*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:06*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*98*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:06*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*89*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:06*	*1*
13C-OCDD	*106*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:06*	*1*

Client Sample ID: W-99A-050113
Date Collected: 05/01/13 18:00
Date Received: 05/02/13 09:00

Lab Sample ID: 320-2475-2
Matrix: Water

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		12	0.22	pg/L		05/09/13 10:29	05/11/13 05:48	1
2,3,7,8-TCDF	ND		12	0.15	pg/L		05/09/13 10:29	05/11/13 05:48	1
1,2,3,7,8-PeCDD	ND		59	0.30	pg/L		05/09/13 10:29	05/11/13 05:48	1
1,2,3,7,8-PeCDF	ND		59	0.19	pg/L		05/09/13 10:29	05/11/13 05:48	1
2,3,4,7,8-PeCDF	ND		59	0.20	pg/L		05/09/13 10:29	05/11/13 05:48	1
1,2,3,4,7,8-HxCDD	**0.34**	**J**	59	0.21	pg/L		05/09/13 10:29	05/11/13 05:48	1
1,2,3,6,7,8-HxCDD	**0.72**	**J**	59	0.17	pg/L		05/09/13 10:29	05/11/13 05:48	1
1,2,3,7,8,9-HxCDD	**0.60**	**J q**	59	0.15	pg/L		05/09/13 10:29	05/11/13 05:48	1
1,2,3,4,7,8-HxCDF	**0.34**	**J**	59	0.18	pg/L		05/09/13 10:29	05/11/13 05:48	1
1,2,3,6,7,8-HxCDF	ND		59	0.14	pg/L		05/09/13 10:29	05/11/13 05:48	1
2,3,4,6,7,8-HxCDF	ND		59	0.16	pg/L		05/09/13 10:29	05/11/13 05:48	1
1,2,3,7,8,9-HxCDF	ND		59	0.17	pg/L		05/09/13 10:29	05/11/13 05:48	1
1,2,3,4,6,7,8-HpCDD	**18**	**J B**	59	0.56	pg/L		05/09/13 10:29	05/11/13 05:48	1
1,2,3,4,6,7,8-HpCDF	**4.8**	**J B**	59	0.24	pg/L		05/09/13 10:29	05/11/13 05:48	1
1,2,3,4,7,8,9-HpCDF	ND		59	0.28	pg/L		05/09/13 10:29	05/11/13 05:48	1
OCDD	**160**	**B**	120	1.6	pg/L		05/09/13 10:29	05/11/13 05:48	1
OCDF	**22**	**J**	120	0.29	pg/L		05/09/13 10:29	05/11/13 05:48	1
Total TCDD	ND		12	0.22	pg/L		05/09/13 10:29	05/11/13 05:48	1
Total TCDF	ND		12	0.15	pg/L		05/09/13 10:29	05/11/13 05:48	1
Total PeCDD	ND		59	0.30	pg/L		05/09/13 10:29	05/11/13 05:48	1
Total PeCDF	ND		59	0.20	pg/L		05/09/13 10:29	05/11/13 05:48	1

Client Sample ID: W-99A-050113
Date Collected: 05/01/13 18:00
Date Received: 05/02/13 09:00

Lab Sample ID: 320-2475-2
Matrix: Water

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total HxCDD	3.6	J q	59	0.18	pg/L		05/09/13 10:29	05/11/13 05:48	1
Total HxCDF	3.4	J	59	0.16	pg/L		05/09/13 10:29	05/11/13 05:48	1
Total HpCDD	35	J B	59	0.56	pg/L		05/09/13 10:29	05/11/13 05:48	1
Total HpCDF	19	J B	59	0.26	pg/L		05/09/13 10:29	05/11/13 05:48	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*86*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:48*	*1*
13C-2,3,7,8-TCDF	*80*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:48*	*1*
13C-1,2,3,7,8-PeCDD	*102*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:48*	*1*
13C-1,2,3,7,8-PeCDF	*89*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:48*	*1*
13C-1,2,3,6,7,8-HxCDD	*102*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:48*	*1*
13C-1,2,3,4,7,8-HxCDF	*94*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:48*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*104*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:48*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*94*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:48*	*1*
13C-OCDD	*109*		*40 - 135*	*05/09/13 10:29*	*05/11/13 05:48*	*1*

Client Sample ID: W-30A-050113
Date Collected: 05/01/13 13:15
Date Received: 05/02/13 09:00

Lab Sample ID: 320-2475-3
Matrix: Water

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.9	0.17	pg/L		05/09/13 10:29	05/11/13 06:30	1
2,3,7,8-TCDF	0.55	J	9.9	0.13	pg/L		05/09/13 10:29	05/11/13 06:30	1
1,2,3,7,8-PeCDD	ND		50	0.28	pg/L		05/09/13 10:29	05/11/13 06:30	1
1,2,3,7,8-PeCDF	0.99	J	50	0.25	pg/L		05/09/13 10:29	05/11/13 06:30	1
2,3,4,7,8-PeCDF	1.1	J	50	0.27	pg/L		05/09/13 10:29	05/11/13 06:30	1
1,2,3,4,7,8-HxCDD	0.71	J	50	0.25	pg/L		05/09/13 10:29	05/11/13 06:30	1
1,2,3,6,7,8-HxCDD	4.8	J	50	0.19	pg/L		05/09/13 10:29	05/11/13 06:30	1
1,2,3,7,8,9-HxCDD	1.5	J q	50	0.18	pg/L		05/09/13 10:29	05/11/13 06:30	1
1,2,3,4,7,8-HxCDF	4.7	J	50	0.34	pg/L		05/09/13 10:29	05/11/13 06:30	1
1,2,3,6,7,8-HxCDF	1.1	J	50	0.27	pg/L		05/09/13 10:29	05/11/13 06:30	1
2,3,4,6,7,8-HxCDF	0.63	J q	50	0.30	pg/L		05/09/13 10:29	05/11/13 06:30	1
1,2,3,7,8,9-HxCDF	ND		50	0.33	pg/L		05/09/13 10:29	05/11/13 06:30	1
1,2,3,4,6,7,8-HpCDD	150	B	50	3.5	pg/L		05/09/13 10:29	05/11/13 06:30	1
1,2,3,4,6,7,8-HpCDF	40	J B	50	1.3	pg/L		05/09/13 10:29	05/11/13 06:30	1
1,2,3,4,7,8,9-HpCDF	ND		50	1.5	pg/L		05/09/13 10:29	05/11/13 06:30	1
OCDD	1600	B	99	14	pg/L		05/09/13 10:29	05/11/13 06:30	1
OCDF	130		99	0.83	pg/L		05/09/13 10:29	05/11/13 06:30	1
Total TCDD	ND		9.9	0.17	pg/L		05/09/13 10:29	05/11/13 06:30	1
Total TCDF	0.93	J q	9.9	0.13	pg/L		05/09/13 10:29	05/11/13 06:30	1
Total PeCDD	ND		50	0.28	pg/L		05/09/13 10:29	05/11/13 06:30	1
Total PeCDF	7.0	J q	50	0.26	pg/L		05/09/13 10:29	05/11/13 06:30	1
Total HxCDD	20	J q	50	0.21	pg/L		05/09/13 10:29	05/11/13 06:30	1
Total HxCDF	51	q	50	0.31	pg/L		05/09/13 10:29	05/11/13 06:30	1
Total HpCDD	310	B	50	3.5	pg/L		05/09/13 10:29	05/11/13 06:30	1
Total HpCDF	160	B	50	1.4	pg/L		05/09/13 10:29	05/11/13 06:30	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*83*		*40 - 135*	*05/09/13 10:29*	*05/11/13 06:30*	*1*
13C-2,3,7,8-TCDF	*77*		*40 - 135*	*05/09/13 10:29*	*05/11/13 06:30*	*1*

Client Sample ID: W-30A-050113 — **Lab Sample ID: 320-2475-3**
Date Collected: 05/01/13 13:15 — **Matrix: Water**
Date Received: 05/02/13 09:00

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,7,8-PeCDD	97		40 - 135	05/09/13 10:29	05/11/13 06:30	1
13C-1,2,3,7,8-PeCDF	85		40 - 135	05/09/13 10:29	05/11/13 06:30	1
13C-1,2,3,6,7,8-HxCDD	97		40 - 135	05/09/13 10:29	05/11/13 06:30	1
13C-1,2,3,4,7,8-HxCDF	89		40 - 135	05/09/13 10:29	05/11/13 06:30	1
13C-1,2,3,4,6,7,8-HpCDD	99		40 - 135	05/09/13 10:29	05/11/13 06:30	1
13C-1,2,3,4,6,7,8-HpCDF	92		40 - 135	05/09/13 10:29	05/11/13 06:30	1
13C-OCDD	110		40 - 135	05/09/13 10:29	05/11/13 06:30	1

Client Sample ID: W-10AR2-050113 — **Lab Sample ID: 320-2475-4**
Date Collected: 05/01/13 00:00 — **Matrix: Water**
Date Received: 05/02/13 09:00

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.21	pg/L		05/09/13 10:29	05/11/13 07:11	1
2,3,7,8-TCDF	**0.37**	**J**	10	0.16	pg/L		05/09/13 10:29	05/11/13 07:11	1
1,2,3,7,8-PeCDD	ND		50	0.35	pg/L		05/09/13 10:29	05/11/13 07:11	1
1,2,3,7,8-PeCDF	**1.0**	**J q**	50	0.31	pg/L		05/09/13 10:29	05/11/13 07:11	1
2,3,4,7,8-PeCDF	**1.2**	**J q**	50	0.33	pg/L		05/09/13 10:29	05/11/13 07:11	1
1,2,3,4,7,8-HxCDD	**1.6**	**J**	50	0.39	pg/L		05/09/13 10:29	05/11/13 07:11	1
1,2,3,6,7,8-HxCDD	**6.9**	**J**	50	0.30	pg/L		05/09/13 10:29	05/11/13 07:11	1
1,2,3,7,8,9-HxCDD	**3.7**	**J**	50	0.28	pg/L		05/09/13 10:29	05/11/13 07:11	1
1,2,3,4,7,8-HxCDF	**11**	**J**	50	1.2	pg/L		05/09/13 10:29	05/11/13 07:11	1
1,2,3,6,7,8-HxCDF	**2.7**	**J**	50	0.90	pg/L		05/09/13 10:29	05/11/13 07:11	1
2,3,4,6,7,8-HxCDF	**1.5**	**J q**	50	1.0	pg/L		05/09/13 10:29	05/11/13 07:11	1
1,2,3,7,8,9-HxCDF	ND		50	1.1	pg/L		05/09/13 10:29	05/11/13 07:11	1
1,2,3,4,6,7,8-HpCDD	**230**	**B**	50	4.2	pg/L		05/09/13 10:29	05/11/13 07:11	1
1,2,3,4,6,7,8-HpCDF	**65**	**B**	50	3.3	pg/L		05/09/13 10:29	05/11/13 07:11	1
1,2,3,4,7,8,9-HpCDF	**7.7**	**J B**	50	3.8	pg/L		05/09/13 10:29	05/11/13 07:11	1
OCDD	**1300**	**B**	100	9.1	pg/L		05/09/13 10:29	05/11/13 07:11	1
OCDF	**150**		100	1.2	pg/L		05/09/13 10:29	05/11/13 07:11	1
Total TCDD	**1.8**	**J**	10	0.21	pg/L		05/09/13 10:29	05/11/13 07:11	1
Total TCDF	**2.9**	**J q**	10	0.16	pg/L		05/09/13 10:29	05/11/13 07:11	1
Total PeCDD	**11**	**J q**	50	0.35	pg/L		05/09/13 10:29	05/11/13 07:11	1
Total PeCDF	**29**	**J q**	50	0.32	pg/L		05/09/13 10:29	05/11/13 07:11	1
Total HxCDD	**57**		50	0.33	pg/L		05/09/13 10:29	05/11/13 07:11	1
Total HxCDF	**210**	**q**	50	1.0	pg/L		05/09/13 10:29	05/11/13 07:11	1
Total HpCDD	**370**	**B**	50	4.2	pg/L		05/09/13 10:29	05/11/13 07:11	1
Total HpCDF	**410**	**B**	50	3.6	pg/L		05/09/13 10:29	05/11/13 07:11	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	83		40 - 135	05/09/13 10:29	05/11/13 07:11	1
13C-2,3,7,8-TCDF	76		40 - 135	05/09/13 10:29	05/11/13 07:11	1
13C-1,2,3,7,8-PeCDD	95		40 - 135	05/09/13 10:29	05/11/13 07:11	1
13C-1,2,3,7,8-PeCDF	84		40 - 135	05/09/13 10:29	05/11/13 07:11	1
13C-1,2,3,6,7,8-HxCDD	94		40 - 135	05/09/13 10:29	05/11/13 07:11	1
13C-1,2,3,4,7,8-HxCDF	89		40 - 135	05/09/13 10:29	05/11/13 07:11	1
13C-1,2,3,4,6,7,8-HpCDD	102		40 - 135	05/09/13 10:29	05/11/13 07:11	1
13C-1,2,3,4,6,7,8-HpCDF	93		40 - 135	05/09/13 10:29	05/11/13 07:11	1
13C-OCDD	110		40 - 135	05/09/13 10:29	05/11/13 07:11	1

Client: Field & Technical Services LLC
Project/Site: Superior GW

TestAmerica Job ID: 320-2441-1

Client Sample ID: EB-050113
Date Collected: 05/01/13 15:50
Date Received: 05/02/13 09:00

Lab Sample ID: 320-2475-5
Matrix: Water

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		9.9	0.17	pg/L		05/09/13 10:29	05/11/13 07:53	1
2,3,7,8-TCDF	ND		9.9	0.11	pg/L		05/09/13 10:29	05/11/13 07:53	1
1,2,3,7,8-PeCDD	ND		50	0.26	pg/L		05/09/13 10:29	05/11/13 07:53	1
1,2,3,7,8-PeCDF	ND		50	0.15	pg/L		05/09/13 10:29	05/11/13 07:53	1
2,3,4,7,8-PeCDF	ND		50	0.16	pg/L		05/09/13 10:29	05/11/13 07:53	1
1,2,3,4,7,8-HxCDD	ND		50	0.15	pg/L		05/09/13 10:29	05/11/13 07:53	1
1,2,3,6,7,8-HxCDD	ND		50	0.11	pg/L		05/09/13 10:29	05/11/13 07:53	1
1,2,3,7,8,9-HxCDD	ND		50	0.11	pg/L		05/09/13 10:29	05/11/13 07:53	1
1,2,3,4,7,8-HxCDF	ND		50	0.11	pg/L		05/09/13 10:29	05/11/13 07:53	1
1,2,3,6,7,8-HxCDF	ND		50	0.085	pg/L		05/09/13 10:29	05/11/13 07:53	1
2,3,4,6,7,8-HxCDF	ND		50	0.094	pg/L		05/09/13 10:29	05/11/13 07:53	1
1,2,3,7,8,9-HxCDF	ND		50	0.10	pg/L		05/09/13 10:29	05/11/13 07:53	1
1,2,3,4,6,7,8-HpCDD	**0.49**	**J B q**	50	0.17	pg/L		05/09/13 10:29	05/11/13 07:53	1
1,2,3,4,6,7,8-HpCDF	ND		50	0.10	pg/L		05/09/13 10:29	05/11/13 07:53	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.12	pg/L		05/09/13 10:29	05/11/13 07:53	1
OCDD	**2.1**	**J B**	99	0.23	pg/L		05/09/13 10:29	05/11/13 07:53	1
OCDF	ND		99	0.18	pg/L		05/09/13 10:29	05/11/13 07:53	1
Total TCDD	ND		9.9	0.17	pg/L		05/09/13 10:29	05/11/13 07:53	1
Total TCDF	ND		9.9	0.11	pg/L		05/09/13 10:29	05/11/13 07:53	1
Total PeCDD	ND		50	0.26	pg/L		05/09/13 10:29	05/11/13 07:53	1
Total PeCDF	ND		50	0.16	pg/L		05/09/13 10:29	05/11/13 07:53	1
Total HxCDD	ND		50	0.15	pg/L		05/09/13 10:29	05/11/13 07:53	1
Total HxCDF	ND		50	0.11	pg/L		05/09/13 10:29	05/11/13 07:53	1
Total HpCDD	**1.5**	**J B q**	50	0.17	pg/L		05/09/13 10:29	05/11/13 07:53	1
Total HpCDF	ND		50	0.12	pg/L		05/09/13 10:29	05/11/13 07:53	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*78*		*40 - 135*	*05/09/13 10:29*	*05/11/13 07:53*	*1*
13C-2,3,7,8-TCDF	*72*		*40 - 135*	*05/09/13 10:29*	*05/11/13 07:53*	*1*
13C-1,2,3,7,8-PeCDD	*90*		*40 - 135*	*05/09/13 10:29*	*05/11/13 07:53*	*1*
13C-1,2,3,7,8-PeCDF	*79*		*40 - 135*	*05/09/13 10:29*	*05/11/13 07:53*	*1*
13C-1,2,3,6,7,8-HxCDD	*89*		*40 - 135*	*05/09/13 10:29*	*05/11/13 07:53*	*1*
13C-1,2,3,4,7,8-HxCDF	*85*		*40 - 135*	*05/09/13 10:29*	*05/11/13 07:53*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*93*		*40 - 135*	*05/09/13 10:29*	*05/11/13 07:53*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*85*		*40 - 135*	*05/09/13 10:29*	*05/11/13 07:53*	*1*
13C-OCDD	*102*		*40 - 135*	*05/09/13 10:29*	*05/11/13 07:53*	*1*

Isotope Dilution Summary

Client: Field & Technical Services LLC
Project/Site: Superior GW

TestAmerica Job ID: 320-2441-1

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	TCDD (40-135)	TCDF (40-135)	PeCDD (40-135)	PeCDF1 (40-135)	HxCDD2 (40-135)	HxCDF1 (40-135)	HpCDD (40-135)	HpCDF1 (40-135)
320-2441-1	W-30C-042913	89	81	97	91	99	83	103	98
320-2441-2	W-28C-042913	89	80	96	91	104	91	117	108
320-2441-3	EB-0429123	90	76	102	87	102	95	118	103
320-2454-1	W-06A-043013	83	77	98	85	94	87	99	90
320-2454-2	W-012A-043013	88	74	106	82	104	89	96	88
320-2454-3	W-12CR-043013	86	77	91	85	95	78	97	94
320-2454-4	W-06C-043013	86	74	103	82	99	87	95	86
320-2454-5	EB-043013	84	78	100	91	97	78	103	96
320-2475-1	W-04AR-050113	84	76	97	83	95	89	98	89
320-2475-2	W-99A-050113	86	80	102	89	102	94	104	94
320-2475-3	W-30A-050113	83	77	97	85	97	89	99	92
320-2475-4	W-10AR2-050113	83	76	95	84	94	89	102	93
320-2475-5	EB-050113	78	72	90	79	89	85	93	85
LCS 320-15535/2-A	Lab Control Sample	82	76	102	86	102	87	94	85
LCS 320-15622/2-A	Lab Control Sample	87	82	102	94	103	78	94	91
LCS 320-16061/2-A	Lab Control Sample	73	66	86	73	85	78	86	79
LCSD 320-15622/3-A	Lab Control Sample Dup	86	72	104	81	105	89	100	89
LCSD 320-16061/3-A	Lab Control Sample Dup	85	78	101	86	98	88	99	90
MB 320-15535/1-A	Method Blank	87	79	113	88	104	90	94	87
MB 320-15622/1-A	Method Blank	91	80	98	91	108	93	112	104
MB 320-16061/1-A	Method Blank	85	77	100	86	100	91	99	92

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	OCDD (40-135)							
320-2441-1	W-30C-042913	86							
320-2441-2	W-28C-042913	92							
320-2441-3	EB-0429123	91							
320-2454-1	W-06A-043013	105							
320-2454-2	W-012A-043013	105							
320-2454-3	W-12CR-043013	106							
320-2454-4	W-06C-043013	109							
320-2454-5	EB-043013	103							
320-2475-1	W-04AR-050113	106							
320-2475-2	W-99A-050113	109							
320-2475-3	W-30A-050113	110							
320-2475-4	W-10AR2-050113	110							
320-2475-5	EB-050113	102							
LCS 320-15535/2-A	Lab Control Sample	90							
LCS 320-15622/2-A	Lab Control Sample	104							
LCS 320-16061/2-A	Lab Control Sample	95							
LCSD 320-15622/3-A	Lab Control Sample Dup	112							
LCSD 320-16061/3-A	Lab Control Sample Dup	109							
MB 320-15535/1-A	Method Blank	89							
MB 320-15622/1-A	Method Blank	112							
MB 320-16061/1-A	Method Blank	109							

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD

TCDF = 13C-2,3,7,8-TCDF

Isotope Dilution Summary

Client: Field & Technical Services LLC
Project/Site: Superior GW

TestAmerica Job ID: 320-2441-1

PeCDD = 13C-1,2,3,7,8-PeCDD
PeCDF1 = 13C-1,2,3,7,8-PeCDF
HxCDD2 = 13C-1,2,3,6,7,8-HxCDD
HxCDF1 = 13C-1,2,3,4,7,8-HxCDF
HpCDD = 13C-1,2,3,4,6,7,8-HpCDD
HpCDF1 = 13C-1,2,3,4,6,7,8-HpCDF
OCDD = 13C-OCDD

Method: 8290 - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-15535/1-A
Matrix: Water
Analysis Batch: 15659

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 15535

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.16	pg/L		05/02/13 13:19	05/03/13 22:47	1
2,3,7,8-TCDF	ND		10	0.11	pg/L		05/02/13 13:19	05/03/13 22:47	1
1,2,3,7,8-PeCDD	ND		50	0.23	pg/L		05/02/13 13:19	05/03/13 22:47	1
1,2,3,7,8-PeCDF	ND		50	0.15	pg/L		05/02/13 13:19	05/03/13 22:47	1
2,3,4,7,8-PeCDF	ND		50	0.16	pg/L		05/02/13 13:19	05/03/13 22:47	1
1,2,3,4,7,8-HxCDD	ND		50	0.15	pg/L		05/02/13 13:19	05/03/13 22:47	1
1,2,3,6,7,8-HxCDD	ND		50	0.12	pg/L		05/02/13 13:19	05/03/13 22:47	1
1,2,3,7,8,9-HxCDD	ND		50	0.11	pg/L		05/02/13 13:19	05/03/13 22:47	1
1,2,3,4,7,8-HxCDF	ND		50	0.10	pg/L		05/02/13 13:19	05/03/13 22:47	1
1,2,3,6,7,8-HxCDF	ND		50	0.081	pg/L		05/02/13 13:19	05/03/13 22:47	1
2,3,4,6,7,8-HxCDF	ND		50	0.090	pg/L		05/02/13 13:19	05/03/13 22:47	1
1,2,3,7,8,9-HxCDF	ND		50	0.10	pg/L		05/02/13 13:19	05/03/13 22:47	1
1,2,3,4,6,7,8-HpCDD	ND		50	0.14	pg/L		05/02/13 13:19	05/03/13 22:47	1
1,2,3,4,6,7,8-HpCDF	0.297	J	50	0.099	pg/L		05/02/13 13:19	05/03/13 22:47	1
1,2,3,4,7,8,9-HpCDF	ND		50	0.11	pg/L		05/02/13 13:19	05/03/13 22:47	1
OCDD	1.13	J	100	0.22	pg/L		05/02/13 13:19	05/03/13 22:47	1
OCDF	ND		100	0.14	pg/L		05/02/13 13:19	05/03/13 22:47	1
Total TCDD	ND		10	0.16	pg/L		05/02/13 13:19	05/03/13 22:47	1
Total TCDF	0.215	J	10	0.11	pg/L		05/02/13 13:19	05/03/13 22:47	1
Total PeCDD	ND		50	0.23	pg/L		05/02/13 13:19	05/03/13 22:47	1
Total PeCDF	ND		50	0.16	pg/L		05/02/13 13:19	05/03/13 22:47	1
Total HxCDD	ND		50	0.15	pg/L		05/02/13 13:19	05/03/13 22:47	1
Total HxCDF	ND		50	0.10	pg/L		05/02/13 13:19	05/03/13 22:47	1
Total HpCDD	0.884	J q	50	0.14	pg/L		05/02/13 13:19	05/03/13 22:47	1
Total HpCDF	0.297	J	50	0.11	pg/L		05/02/13 13:19	05/03/13 22:47	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*87*		*40 - 135*	*05/02/13 13:19*	*05/03/13 22:47*	*1*
13C-2,3,7,8-TCDF	*79*		*40 - 135*	*05/02/13 13:19*	*05/03/13 22:47*	*1*
13C-1,2,3,7,8-PeCDD	*113*		*40 - 135*	*05/02/13 13:19*	*05/03/13 22:47*	*1*
13C-1,2,3,7,8-PeCDF	*88*		*40 - 135*	*05/02/13 13:19*	*05/03/13 22:47*	*1*
13C-1,2,3,6,7,8-HxCDD	*104*		*40 - 135*	*05/02/13 13:19*	*05/03/13 22:47*	*1*
13C-1,2,3,4,7,8-HxCDF	*90*		*40 - 135*	*05/02/13 13:19*	*05/03/13 22:47*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*94*		*40 - 135*	*05/02/13 13:19*	*05/03/13 22:47*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*87*		*40 - 135*	*05/02/13 13:19*	*05/03/13 22:47*	*1*
13C-OCDD	*89*		*40 - 135*	*05/02/13 13:19*	*05/03/13 22:47*	*1*

Lab Sample ID: LCS 320-15535/2-A
Matrix: Water
Analysis Batch: 15659

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 15535

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	183		pg/L		92	72 - 144
2,3,7,8-TCDF	200	188		pg/L		94	73 - 150
1,2,3,7,8-PeCDD	1000	951		pg/L		95	79 - 125
1,2,3,7,8-PeCDF	1000	952		pg/L		95	79 - 137
2,3,4,7,8-PeCDF	1000	977		pg/L		98	76 - 137
1,2,3,4,7,8-HxCDD	1000	852		pg/L		85	65 - 144

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-15535/2-A
Matrix: Water
Analysis Batch: 15659

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 15535

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3,6,7,8-HxCDD	1000	925		pg/L		93	78 - 137
1,2,3,7,8,9-HxCDD	1000	825		pg/L		83	74 - 142
1,2,3,4,7,8-HxCDF	1000	941		pg/L		94	86 - 126
1,2,3,6,7,8-HxCDF	1000	946		pg/L		95	79 - 137
2,3,4,6,7,8-HxCDF	1000	941		pg/L		94	80 - 138
1,2,3,7,8,9-HxCDF	1000	916		pg/L		92	72 - 145
1,2,3,4,6,7,8-HpCDD	1000	967		pg/L		97	81 - 132
1,2,3,4,6,7,8-HpCDF	1000	950		pg/L		95	81 - 135
1,2,3,4,7,8,9-HpCDF	1000	939		pg/L		94	72 - 140
OCDD	2000	1980		pg/L		99	80 - 129
OCDF	2000	1870		pg/L		94	65 - 145

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*82*		*40 - 135*
13C-2,3,7,8-TCDF	*76*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*102*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*86*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*102*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*87*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*94*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*85*		*40 - 135*
13C-OCDD	*90*		*40 - 135*

Lab Sample ID: MB 320-15622/1-A
Matrix: Water
Analysis Batch: 15785

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 15622

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.17	pg/L		05/03/13 14:02	05/06/13 17:09	1
2,3,7,8-TCDF	ND		10	0.098	pg/L		05/03/13 14:02	05/06/13 17:09	1
1,2,3,7,8-PeCDD	ND		50	0.28	pg/L		05/03/13 14:02	05/06/13 17:09	1
1,2,3,7,8-PeCDF	ND		50	0.17	pg/L		05/03/13 14:02	05/06/13 17:09	1
2,3,4,7,8-PeCDF	ND		50	0.18	pg/L		05/03/13 14:02	05/06/13 17:09	1
1,2,3,4,7,8-HxCDD	ND		50	0.17	pg/L		05/03/13 14:02	05/06/13 17:09	1
1,2,3,6,7,8-HxCDD	ND		50	0.13	pg/L		05/03/13 14:02	05/06/13 17:09	1
1,2,3,7,8,9-HxCDD	ND		50	0.12	pg/L		05/03/13 14:02	05/06/13 17:09	1
1,2,3,4,7,8-HxCDF	ND		50	0.16	pg/L		05/03/13 14:02	05/06/13 17:09	1
1,2,3,6,7,8-HxCDF	ND		50	0.13	pg/L		05/03/13 14:02	05/06/13 17:09	1
2,3,4,6,7,8-HxCDF	ND		50	0.14	pg/L		05/03/13 14:02	05/06/13 17:09	1
1,2,3,7,8,9-HxCDF	ND		50	0.16	pg/L		05/03/13 14:02	05/06/13 17:09	1
1,2,3,4,6,7,8-HpCDD	0.473	J	50	0.19	pg/L		05/03/13 14:02	05/06/13 17:09	1
1,2,3,4,6,7,8-HpCDF	0.229	J q	50	0.11	pg/L		05/03/13 14:02	05/06/13 17:09	1
1,2,3,4,7,8,9-HpCDF	0.240	J q	50	0.13	pg/L		05/03/13 14:02	05/06/13 17:09	1
OCDD	2.09	J q	100	0.25	pg/L		05/03/13 14:02	05/06/13 17:09	1
OCDF	0.503	J q	100	0.19	pg/L		05/03/13 14:02	05/06/13 17:09	1
Total TCDD	ND		10	0.17	pg/L		05/03/13 14:02	05/06/13 17:09	1
Total TCDF	ND		10	0.098	pg/L		05/03/13 14:02	05/06/13 17:09	1
Total PeCDD	ND		50	0.28	pg/L		05/03/13 14:02	05/06/13 17:09	1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-15622/1-A
Matrix: Water
Analysis Batch: 15785

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 15622

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
Total PeCDF	ND		50	0.18	pg/L		05/03/13 14:02	05/06/13 17:09	1
Total HxCDD	ND		50	0.17	pg/L		05/03/13 14:02	05/06/13 17:09	1
Total HxCDF	ND		50	0.16	pg/L		05/03/13 14:02	05/06/13 17:09	1
Total HpCDD	1.49	J	50	0.19	pg/L		05/03/13 14:02	05/06/13 17:09	1
Total HpCDF	0.469	J q	50	0.12	pg/L		05/03/13 14:02	05/06/13 17:09	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*91*		*40 - 135*	*05/03/13 14:02*	*05/06/13 17:09*	*1*
13C-2,3,7,8-TCDF	*80*		*40 - 135*	*05/03/13 14:02*	*05/06/13 17:09*	*1*
13C-1,2,3,7,8-PeCDD	*98*		*40 - 135*	*05/03/13 14:02*	*05/06/13 17:09*	*1*
13C-1,2,3,7,8-PeCDF	*91*		*40 - 135*	*05/03/13 14:02*	*05/06/13 17:09*	*1*
13C-1,2,3,6,7,8-HxCDD	*108*		*40 - 135*	*05/03/13 14:02*	*05/06/13 17:09*	*1*
13C-1,2,3,4,7,8-HxCDF	*93*		*40 - 135*	*05/03/13 14:02*	*05/06/13 17:09*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*112*		*40 - 135*	*05/03/13 14:02*	*05/06/13 17:09*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*104*		*40 - 135*	*05/03/13 14:02*	*05/06/13 17:09*	*1*
13C-OCDD	*112*		*40 - 135*	*05/03/13 14:02*	*05/06/13 17:09*	*1*

Lab Sample ID: LCS 320-15622/2-A
Matrix: Water
Analysis Batch: 15785

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 15622

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	188		pg/L		94	72 - 144
2,3,7,8-TCDF	200	192		pg/L		96	73 - 150
1,2,3,7,8-PeCDD	1000	962		pg/L		96	79 - 125
1,2,3,7,8-PeCDF	1000	964		pg/L		96	79 - 137
2,3,4,7,8-PeCDF	1000	943		pg/L		94	76 - 137
1,2,3,4,7,8-HxCDD	1000	808		pg/L		81	65 - 144
1,2,3,6,7,8-HxCDD	1000	932		pg/L		93	78 - 137
1,2,3,7,8,9-HxCDD	1000	856		pg/L		86	74 - 142
1,2,3,4,7,8-HxCDF	1000	949		pg/L		95	86 - 126
1,2,3,6,7,8-HxCDF	1000	996		pg/L		100	79 - 137
2,3,4,6,7,8-HxCDF	1000	1000		pg/L		100	80 - 138
1,2,3,7,8,9-HxCDF	1000	1030		pg/L		103	72 - 145
1,2,3,4,6,7,8-HpCDD	1000	971		pg/L		97	81 - 132
1,2,3,4,6,7,8-HpCDF	1000	960		pg/L		96	81 - 135
1,2,3,4,7,8,9-HpCDF	1000	858		pg/L		86	72 - 140
OCDD	2000	2010		pg/L		101	80 - 129
OCDF	2000	1960		pg/L		98	65 - 145

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*87*		*40 - 135*
13C-2,3,7,8-TCDF	*82*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*102*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*94*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*103*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*78*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*94*		*40 - 135*

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-15622/2-A
Matrix: Water
Analysis Batch: 15785

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 15622

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C-1,2,3,4,6,7,8-HpCDF	*91*		*40 - 135*
13C-OCDD	*104*		*40 - 135*

Lab Sample ID: LCSD 320-15622/3-A
Matrix: Water
Analysis Batch: 15785

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 15622

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD			200	188		pg/L		94	72 - 144	0	20
2,3,7,8-TCDF			200	193		pg/L		97	73 - 150	1	20
1,2,3,7,8-PeCDD			1000	973		pg/L		97	79 - 125	1	20
1,2,3,7,8-PeCDF			1000	976		pg/L		98	79 - 137	1	20
2,3,4,7,8-PeCDF			1000	1130		pg/L		113	76 - 137	18	20
1,2,3,4,7,8-HxCDD			1000	828		pg/L		83	65 - 144	2	20
1,2,3,6,7,8-HxCDD			1000	944		pg/L		94	78 - 137	1	20
1,2,3,7,8,9-HxCDD			1000	825		pg/L		82	74 - 142	4	20
1,2,3,4,7,8-HxCDF			1000	967		pg/L		97	86 - 126	2	20
1,2,3,6,7,8-HxCDF			1000	1010		pg/L		101	79 - 137	1	20
2,3,4,6,7,8-HxCDF			1000	945		pg/L		95	80 - 138	6	20
1,2,3,7,8,9-HxCDF			1000	886		pg/L		89	72 - 145	15	20
1,2,3,4,6,7,8-HpCDD			1000	996		pg/L		100	81 - 132	3	20
1,2,3,4,6,7,8-HpCDF			1000	974		pg/L		97	81 - 135	1	20
1,2,3,4,7,8,9-HpCDF			1000	1010		pg/L		101	72 - 140	17	20
OCDD			2000	2060		pg/L		103	80 - 129	2	20
OCDF			2000	1970		pg/L		99	65 - 145	1	20

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C-2,3,7,8-TCDD	*86*		*40 - 135*
13C-2,3,7,8-TCDF	*72*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*104*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*81*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*105*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*89*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*100*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*89*		*40 - 135*
13C-OCDD	*112*		*40 - 135*

Lab Sample ID: MB 320-16061/1-A
Matrix: Water
Analysis Batch: 16235

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16061

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		10	0.15	pg/L		05/09/13 10:29	05/11/13 02:19	1
2,3,7,8-TCDF	ND		10	0.13	pg/L		05/09/13 10:29	05/11/13 02:19	1
1,2,3,7,8-PeCDD	ND		50	0.28	pg/L		05/09/13 10:29	05/11/13 02:19	1
1,2,3,7,8-PeCDF	ND		50	0.14	pg/L		05/09/13 10:29	05/11/13 02:19	1
2,3,4,7,8-PeCDF	ND		50	0.15	pg/L		05/09/13 10:29	05/11/13 02:19	1
1,2,3,4,7,8-HxCDD	ND		50	0.21	pg/L		05/09/13 10:29	05/11/13 02:19	1
1,2,3,6,7,8-HxCDD	ND		50	0.16	pg/L		05/09/13 10:29	05/11/13 02:19	1

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-16061/1-A
Matrix: Water
Analysis Batch: 16235

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 16061

Analyte	MB Result	MB Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,7,8,9-HxCDD	ND		50	0.15	pg/L		05/09/13 10:29	05/11/13 02:19	1
1,2,3,4,7,8-HxCDF	ND		50	0.12	pg/L		05/09/13 10:29	05/11/13 02:19	1
1,2,3,6,7,8-HxCDF	ND		50	0.095	pg/L		05/09/13 10:29	05/11/13 02:19	1
2,3,4,6,7,8-HxCDF	ND		50	0.11	pg/L		05/09/13 10:29	05/11/13 02:19	1
1,2,3,7,8,9-HxCDF	ND		50	0.12	pg/L		05/09/13 10:29	05/11/13 02:19	1
1,2,3,4,6,7,8-HpCDD	0.503	J	50	0.16	pg/L		05/09/13 10:29	05/11/13 02:19	1
1,2,3,4,6,7,8-HpCDF	0.281	J	50	0.073	pg/L		05/09/13 10:29	05/11/13 02:19	1
1,2,3,4,7,8,9-HpCDF	0.126	J q	50	0.085	pg/L		05/09/13 10:29	05/11/13 02:19	1
OCDD	1.37	J q	100	0.20	pg/L		05/09/13 10:29	05/11/13 02:19	1
OCDF	ND		100	0.18	pg/L		05/09/13 10:29	05/11/13 02:19	1
Total TCDD	ND		10	0.15	pg/L		05/09/13 10:29	05/11/13 02:19	1
Total TCDF	ND		10	0.13	pg/L		05/09/13 10:29	05/11/13 02:19	1
Total PeCDD	ND		50	0.28	pg/L		05/09/13 10:29	05/11/13 02:19	1
Total PeCDF	ND		50	0.15	pg/L		05/09/13 10:29	05/11/13 02:19	1
Total HxCDD	ND		50	0.21	pg/L		05/09/13 10:29	05/11/13 02:19	1
Total HxCDF	ND		50	0.12	pg/L		05/09/13 10:29	05/11/13 02:19	1
Total HpCDD	1.71	J	50	0.16	pg/L		05/09/13 10:29	05/11/13 02:19	1
Total HpCDF	0.407	J q	50	0.079	pg/L		05/09/13 10:29	05/11/13 02:19	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C-2,3,7,8-TCDD	*85*		*40 - 135*	*05/09/13 10:29*	*05/11/13 02:19*	*1*
13C-2,3,7,8-TCDF	*77*		*40 - 135*	*05/09/13 10:29*	*05/11/13 02:19*	*1*
13C-1,2,3,7,8-PeCDD	*100*		*40 - 135*	*05/09/13 10:29*	*05/11/13 02:19*	*1*
13C-1,2,3,7,8-PeCDF	*86*		*40 - 135*	*05/09/13 10:29*	*05/11/13 02:19*	*1*
13C-1,2,3,6,7,8-HxCDD	*100*		*40 - 135*	*05/09/13 10:29*	*05/11/13 02:19*	*1*
13C-1,2,3,4,7,8-HxCDF	*91*		*40 - 135*	*05/09/13 10:29*	*05/11/13 02:19*	*1*
13C-1,2,3,4,6,7,8-HpCDD	*99*		*40 - 135*	*05/09/13 10:29*	*05/11/13 02:19*	*1*
13C-1,2,3,4,6,7,8-HpCDF	*92*		*40 - 135*	*05/09/13 10:29*	*05/11/13 02:19*	*1*
13C-OCDD	*109*		*40 - 135*	*05/09/13 10:29*	*05/11/13 02:19*	*1*

Lab Sample ID: LCS 320-16061/2-A
Matrix: Water
Analysis Batch: 16235

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 16061

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,3,7,8-TCDD	200	188		pg/L		94	72 - 144
2,3,7,8-TCDF	200	188		pg/L		94	73 - 150
1,2,3,7,8-PeCDD	1000	954		pg/L		95	79 - 125
1,2,3,7,8-PeCDF	1000	954		pg/L		95	79 - 137
2,3,4,7,8-PeCDF	1000	1020		pg/L		102	76 - 137
1,2,3,4,7,8-HxCDD	1000	913		pg/L		91	65 - 144
1,2,3,6,7,8-HxCDD	1000	933		pg/L		93	78 - 137
1,2,3,7,8,9-HxCDD	1000	872		pg/L		87	74 - 142
1,2,3,4,7,8-HxCDF	1000	945		pg/L		95	86 - 126
1,2,3,6,7,8-HxCDF	1000	921		pg/L		92	79 - 137
2,3,4,6,7,8-HxCDF	1000	900		pg/L		90	80 - 138
1,2,3,7,8,9-HxCDF	1000	923		pg/L		92	72 - 145
1,2,3,4,6,7,8-HpCDD	1000	977		pg/L		98	81 - 132

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-16061/2-A
Matrix: Water
Analysis Batch: 16235

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 16061

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2,3,4,6,7,8-HpCDF			1000	948		pg/L		95	81 - 135		
1,2,3,4,7,8,9-HpCDF			1000	946		pg/L		95	72 - 140		
OCDD			2000	2030		pg/L		102	80 - 129		
OCDF			2000	1950		pg/L		97	65 - 145		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*73*		*40 - 135*
13C-2,3,7,8-TCDF	*66*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*86*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*73*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*85*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*78*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*86*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*79*		*40 - 135*
13C-OCDD	*95*		*40 - 135*

Lab Sample ID: LCSD 320-16061/3-A
Matrix: Water
Analysis Batch: 16235

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 16061

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,3,7,8-TCDD			200	194		pg/L		97	72 - 144	3	20
2,3,7,8-TCDF			200	192		pg/L		96	73 - 150	2	20
1,2,3,7,8-PeCDD			1000	957		pg/L		96	79 - 125	0	20
1,2,3,7,8-PeCDF			1000	967		pg/L		97	79 - 137	1	20
2,3,4,7,8-PeCDF			1000	1030		pg/L		103	76 - 137	0	20
1,2,3,4,7,8-HxCDD			1000	896		pg/L		90	65 - 144	2	20
1,2,3,6,7,8-HxCDD			1000	949		pg/L		95	78 - 137	2	20
1,2,3,7,8,9-HxCDD			1000	866		pg/L		87	74 - 142	1	20
1,2,3,4,7,8-HxCDF			1000	958		pg/L		96	86 - 126	1	20
1,2,3,6,7,8-HxCDF			1000	930		pg/L		93	79 - 137	1	20
2,3,4,6,7,8-HxCDF			1000	914		pg/L		91	80 - 138	2	20
1,2,3,7,8,9-HxCDF			1000	946		pg/L		95	72 - 145	2	20
1,2,3,4,6,7,8-HpCDD			1000	980		pg/L		98	81 - 132	0	20
1,2,3,4,6,7,8-HpCDF			1000	963		pg/L		96	81 - 135	2	20
1,2,3,4,7,8,9-HpCDF			1000	955		pg/L		95	72 - 140	1	20
OCDD			2000	2060		pg/L		103	80 - 129	1	20
OCDF			2000	1970		pg/L		99	65 - 145	1	20

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
13C-2,3,7,8-TCDD	*85*		*40 - 135*
13C-2,3,7,8-TCDF	*78*		*40 - 135*
13C-1,2,3,7,8-PeCDD	*101*		*40 - 135*
13C-1,2,3,7,8-PeCDF	*86*		*40 - 135*
13C-1,2,3,6,7,8-HxCDD	*98*		*40 - 135*
13C-1,2,3,4,7,8-HxCDF	*88*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDD	*99*		*40 - 135*
13C-1,2,3,4,6,7,8-HpCDF	*90*		*40 - 135*

Method: 8290 - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-16061/3-A
Matrix: Water
Analysis Batch: 16235

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 16061

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C-OCDD	109		40 - 135

Specialty Organics

Prep Batch: 15535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-2441-1	W-30C-042913	Total/NA	Water	8290	
320-2441-2	W-28C-042913	Total/NA	Water	8290	
320-2441-3	EB-0429123	Total/NA	Water	8290	
LCS 320-15535/2-A	Lab Control Sample	Total/NA	Water	8290	
MB 320-15535/1-A	Method Blank	Total/NA	Water	8290	

Prep Batch: 15622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-2454-2	W-012A-043013	Total/NA	Water	8290	
320-2454-3	W-12CR-043013	Total/NA	Water	8290	
320-2454-4	W-06C-043013	Total/NA	Water	8290	
320-2454-5	EB-043013	Total/NA	Water	8290	
LCS 320-15622/2-A	Lab Control Sample	Total/NA	Water	8290	
LCSD 320-15622/3-A	Lab Control Sample Dup	Total/NA	Water	8290	
MB 320-15622/1-A	Method Blank	Total/NA	Water	8290	

Analysis Batch: 15659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-2441-1	W-30C-042913	Total/NA	Water	8290	15535
320-2441-2	W-28C-042913	Total/NA	Water	8290	15535
320-2441-3	EB-0429123	Total/NA	Water	8290	15535
LCS 320-15535/2-A	Lab Control Sample	Total/NA	Water	8290	15535
MB 320-15535/1-A	Method Blank	Total/NA	Water	8290	15535

Analysis Batch: 15785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-2454-2	W-012A-043013	Total/NA	Water	8290	15622
320-2454-3	W-12CR-043013	Total/NA	Water	8290	15622
320-2454-4	W-06C-043013	Total/NA	Water	8290	15622
320-2454-5	EB-043013	Total/NA	Water	8290	15622
LCS 320-15622/2-A	Lab Control Sample	Total/NA	Water	8290	15622
LCSD 320-15622/3-A	Lab Control Sample Dup	Total/NA	Water	8290	15622
MB 320-15622/1-A	Method Blank	Total/NA	Water	8290	15622

Prep Batch: 16061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-2454-1	W-06A-043013	Total/NA	Water	8290	
320-2475-1	W-04AR-050113	Total/NA	Water	8290	
320-2475-2	W-99A-050113	Total/NA	Water	8290	
320-2475-3	W-30A-050113	Total/NA	Water	8290	
320-2475-4	W-10AR2-050113	Total/NA	Water	8290	
320-2475-5	EB-050113	Total/NA	Water	8290	
LCS 320-16061/2-A	Lab Control Sample	Total/NA	Water	8290	
LCSD 320-16061/3-A	Lab Control Sample Dup	Total/NA	Water	8290	
MB 320-16061/1-A	Method Blank	Total/NA	Water	8290	

Analysis Batch: 16235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-2454-1	W-06A-043013	Total/NA	Water	8290	16061
320-2475-1	W-04AR-050113	Total/NA	Water	8290	16061
320-2475-2	W-99A-050113	Total/NA	Water	8290	16061

Specialty Organics (Continued)

Analysis Batch: 16235 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-2475-3	W-30A-050113	Total/NA	Water	8290	16061
320-2475-4	W-10AR2-050113	Total/NA	Water	8290	16061
320-2475-5	EB-050113	Total/NA	Water	8290	16061
LCS 320-16061/2-A	Lab Control Sample	Total/NA	Water	8290	16061
LCSD 320-16061/3-A	Lab Control Sample Dup	Total/NA	Water	8290	16061
MB 320-16061/1-A	Method Blank	Total/NA	Water	8290	16061

Lab Chronicle

Client: Field & Technical Services LLC
Project/Site: Superior GW

TestAmerica Job ID: 320-2441-1

Client Sample ID: W-30C-042913
Lab Sample ID: 320-2441-1
Date Collected: 04/29/13 10:10
Matrix: Water
Date Received: 04/30/13 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			931.2 mL	20 uL	15535	05/02/13 13:19	NM	TAL SAC
Total/NA	Analysis	8290		1			15659	05/04/13 00:10	NK	TAL SAC

Client Sample ID: W-28C-042913
Lab Sample ID: 320-2441-2
Date Collected: 04/29/13 13:40
Matrix: Water
Date Received: 04/30/13 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			991.8 mL	20 uL	15535	05/02/13 13:19	NM	TAL SAC
Total/NA	Analysis	8290		1			15659	05/04/13 00:52	NK	TAL SAC

Client Sample ID: EB-0429123
Lab Sample ID: 320-2441-3
Date Collected: 04/29/13 16:10
Matrix: Water
Date Received: 04/30/13 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			929.2 mL	20 uL	15535	05/02/13 13:19	NM	TAL SAC
Total/NA	Analysis	8290		1			15659	05/04/13 01:34	NK	TAL SAC

Client Sample ID: W-06A-043013
Lab Sample ID: 320-2454-1
Date Collected: 04/30/13 07:55
Matrix: Water
Date Received: 05/01/13 10:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1013.9 mL	20 uL	16061	05/09/13 10:29	NM	TAL SAC
Total/NA	Analysis	8290		1			16235	05/11/13 04:24	SA	TAL SAC

Client Sample ID: W-012A-043013
Lab Sample ID: 320-2454-2
Date Collected: 04/30/13 07:45
Matrix: Water
Date Received: 05/01/13 10:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			955.7 mL	20.00 uL	15622	05/03/13 14:02	CR	TAL SAC
Total/NA	Analysis	8290		1			15785	05/06/13 19:56	NK	TAL SAC

Client Sample ID: W-12CR-043013
Lab Sample ID: 320-2454-3
Date Collected: 04/30/13 11:10
Matrix: Water
Date Received: 05/01/13 10:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			957.8 mL	20.00 uL	15622	05/03/13 14:02	CR	TAL SAC
Total/NA	Analysis	8290		1			15785	05/06/13 20:37	NK	TAL SAC

Client Sample ID: W-06C-043013

Lab Sample ID: 320-2454-4

Date Collected: 04/30/13 14:15

Matrix: Water

Date Received: 05/01/13 10:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1002.8 mL	20.00 uL	15622	05/03/13 14:02	CR	TAL SAC
Total/NA	Analysis	8290		1			15785	05/06/13 21:19	NK	TAL SAC

Client Sample ID: EB-043013

Lab Sample ID: 320-2454-5

Date Collected: 04/30/13 16:40

Matrix: Water

Date Received: 05/01/13 10:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1006.1 mL	20.00 uL	15622	05/03/13 14:02	CR	TAL SAC
Total/NA	Analysis	8290		1			15785	05/06/13 22:01	NK	TAL SAC

Client Sample ID: W-04AR-050113

Lab Sample ID: 320-2475-1

Date Collected: 05/01/13 08:10

Matrix: Water

Date Received: 05/02/13 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			912.3 mL	20 uL	16061	05/09/13 10:29	NM	TAL SAC
Total/NA	Analysis	8290		1			16235	05/11/13 05:06	SA	TAL SAC

Client Sample ID: W-99A-050113

Lab Sample ID: 320-2475-2

Date Collected: 05/01/13 18:00

Matrix: Water

Date Received: 05/02/13 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			853 mL	20 uL	16061	05/09/13 10:29	NM	TAL SAC
Total/NA	Analysis	8290		1			16235	05/11/13 05:48	SA	TAL SAC

Client Sample ID: W-30A-050113

Lab Sample ID: 320-2475-3

Date Collected: 05/01/13 13:15

Matrix: Water

Date Received: 05/02/13 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1009.9 mL	20 uL	16061	05/09/13 10:29	NM	TAL SAC
Total/NA	Analysis	8290		1			16235	05/11/13 06:30	SA	TAL SAC

Client Sample ID: W-10AR2-050113

Lab Sample ID: 320-2475-4

Date Collected: 05/01/13 00:00

Matrix: Water

Date Received: 05/02/13 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			998.1 mL	20 uL	16061	05/09/13 10:29	NM	TAL SAC
Total/NA	Analysis	8290		1			16235	05/11/13 07:11	SA	TAL SAC

Client Sample ID: EB-050113
Date Collected: 05/01/13 15:50
Date Received: 05/02/13 09:00

Lab Sample ID: 320-2475-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8290			1009.1 mL	20 uL	16061	05/09/13 10:29	NM	TAL SAC
Total/NA	Analysis	8290		1			16235	05/11/13 07:53	SA	TAL SAC

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Certification Summary

Client: Field & Technical Services LLC
Project/Site: Superior GW

TestAmerica Job ID: 320-2441-1

Laboratory: TestAmerica Sacramento

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

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2928-01	01-31-14
Alaska (UST)	State Program	10	UST-055	12-18-13
Arizona	State Program	9	AZ0708	08-11-13
Arkansas DEQ	State Program	6	88-0691	06-17-13
California	NELAP	9	1119CA	01-31-14
Colorado	State Program	8	N/A	08-31-13
Connecticut	State Program	1	PH-0691	06-30-13
Florida	NELAP	4	E87570	06-30-13
Guam	State Program	9	N/A	08-31-13
Hawaii	State Program	9	N/A	01-31-14
Illinois	NELAP	5	200060	03-17-14
Kansas	NELAP	7	E-10375	10-31-13
Louisiana	NELAP	6	30612	06-30-13
Michigan	State Program	5	9947	01-31-14
Nevada	State Program	9	CA44	07-31-13
New Jersey	NELAP	2	CA005	06-30-13
New York	NELAP	2	11666	04-01-14
Northern Mariana Islands	State Program	9	MP0007	02-01-14
Oregon	NELAP	10	CA200005	03-28-14
Pennsylvania	NELAP	3	68-01272	03-31-14
South Carolina	State Program	4	87014	06-30-13
Texas	NELAP	6	T104704399-08-TX	05-31-13
US Fish & Wildlife	Federal		LE148388-0	12-31-13
USDA	Federal		P330-11-00436	12-30-14
USEPA UCMR	Federal	1	CA00044	11-06-14
Utah	NELAP	8	QUAN1	01-31-14
Washington	State Program	10	C581	05-05-14
West Virginia	State Program	3	9930C	12-31-13
West Virginia DEP	State Program	3	334	07-31-13
Wyoming	State Program	8	8TMS-Q	01-31-14

Method Summary

Client: Field & Technical Services LLC
Project/Site: Superior GW

TestAmerica Job ID: 320-2441-1

Method	Method Description	Protocol	Laboratory
8290	Dioxins and Furans (HRGC/HRMS)	SW846	TAL SAC

Protocol References:

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

Laboratory References:

TAL SAC = TestAmerica Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: Field & Technical Services LLC
Project/Site: Superior GW

TestAmerica Job ID: 320-2441-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-2441-1	W-30C-042913	Water	04/29/13 10:10	04/30/13 08:45
320-2441-2	W-28C-042913	Water	04/29/13 13:40	04/30/13 08:45
320-2441-3	EB-0429123	Water	04/29/13 16:10	04/30/13 08:45
320-2454-1	W-06A-043013	Water	04/30/13 07:55	05/01/13 10:05
320-2454-2	W-012A-043013	Water	04/30/13 07:45	05/01/13 10:05
320-2454-3	W-12CR-043013	Water	04/30/13 11:10	05/01/13 10:05
320-2454-4	W-06C-043013	Water	04/30/13 14:15	05/01/13 10:05
320-2454-5	EB-043013	Water	04/30/13 16:40	05/01/13 10:05
320-2475-1	W-04AR-050113	Water	05/01/13 08:10	05/02/13 09:00
320-2475-2	W-99A-050113	Water	05/01/13 18:00	05/02/13 09:00
320-2475-3	W-30A-050113	Water	05/01/13 13:15	05/02/13 09:00
320-2475-4	W-10AR2-050113	Water	05/01/13 00:00	05/02/13 09:00
320-2475-5	EB-050113	Water	05/01/13 15:50	05/02/13 09:00

Chain of Custody Record

Temperature on Receipt 0.1

Drinking Water? Yes ☐ No ☒

TestAmeric

THE LEADER IN ENVIRONMENTAL TES

320-2441 Chain of

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Field & Technical Services	Angie Gatchie	4/29/13	148582
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
200 3rd Ave.	412-429-2694	412-963-7058	
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Carnegie / PA / 15106	A. Clark	V. Bortot	
Project Name and Location (State)	**Carrier/Waybill Number**		
Superior Annual GW Sampling 2013			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: Dioxin Furans 8290
W-30C-042913	4/29/13	1010		X			2						2
W-28C-042913	4/29/13	1340		X			2						2
EB-042913	4/29/13	1610		X			2						2

AC 4/29/13

AC 4/29/13

AC 4/29/13

Special Instructions/ Conditions of Receipt

Possible Hazard Identification

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

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

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

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other 5D

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	4/29/13	1730	1. Received By	4/30/13	845
2. Relinquished By			2. Received By		
3 Relinquished By			3. Received By		

Comments

0.1

DISTRIBUTION: *WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy*

Chain of Custody Record

Temperature on Receipt 2.1

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

320-2454 Chain of Custody

TAL-4124 (1007)

Client: Field & Technical Services	Project Manager: Angie Gatchie	Date: 4/30/13	148583
Address: 200 3rd Ave.	Telephone Number (Area Code)/Fax Number: 412-429-2614 / 412-279-4512	Lab Number: 412963-7058	Page 1 of 1
City: Carnegie / State: PA / Zip Code: 15106	Site Contact: A. Clark	Lab Contact: K. Bortot	
Project Name and Location (State): Superior Annual GW 2013	Carrier/Waybill Number: Fed Ex		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): Dissolved Fluoride SW6	Special Instructions/ Conditions of Receipt
W-06A-043013	4/30/13	0755		X			2						2	
W-012A-043013	4/30/13	0745		X			2						2	
W-12CR-043013	4/30/13	1110		X			2						2	
W-06C-043013	4/30/13	1415		X			2						2	
EB-043013	4/30/13	1640		X			2						2	

Rec 4/30/13

Rec 4/30/13

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☒ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other STD.

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	4/30/13	1800	1. Received By	5/1/13	10:05
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Recor

TestAmerica Laboratory location: West Sac
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA

320-2475 Chain of

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Field & Technical Services	Client Project Manager: Angie Gatchie	Site Contact: Andrew Clark	Lab Contact: V. Bartot	COC No: 008844
Address: 200 3rd Ave	Telephone: 412-429-2694	Telephone: 412-335-8096	Telephone: 412-963-7058	1 of 1 COCs
City/State/Zip: Carnegie PA 15106	Email: agatchie.2006@f-ts.com	Analysis Turnaround Time (in BUS days)	Analyses	
Phone: 412-429-2694		TAT if different from below SD		
Project Name: Superior Annual 2013	Method of Shipment/Carrier: Fed Ex	☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Number: 0M055613-091	Shipping/Tracking No:			
PO #				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other	Filtered Sample (Y/N)	Composite=C / Grab=G	Dissolved Fluoride - 8290 A (MS) 5/1/13	Sample Specific Notes / Special Instructions:
W-04AR-050113	5/1/13	0810		X									2			G	2	
W-99A-050113	5/1/13	1800		X									2			G	2	
W-30A-050113	5/1/13	1315		X									2			G	2	
W-10AR2-050113	5/1/13			X									2			G	2	
EB-050113	5/1/13	1550		X									2			G	2	

Possible Hazard Identification: ☒ 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:

2.5

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
	FTS	1745		TA WS	5/2/13 9:00
Relinquished by:	Company	Date/Time	Received by	Company	Date/Time
Relinquished by.	Company	Date/Time	Received in Laboratory by:	Company	Date/Time.

TAL 0018- 1 (04/10)

5/23/2013

Login Sample Receipt Checklist

Client: Field & Technical Services LLC

Job Number: 320-2441-1

Login Number: 2441

List Source: TestAmerica Sacramento

List Number: 1

Creator: Hytrek, Cheryl

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?	N/A	
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: Field & Technical Services LLC

Job Number: 320-2441-1

Login Number: 2454

List Source: TestAmerica Sacramento

List Number: 1

Creator: Tecson, Jeffrey

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?	N/A	
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: Field & Technical Services LLC

Job Number: 320-2441-1

Login Number: 2475

List Source: TestAmerica Sacramento

List Number: 1

Creator: Cortes, Cesar C

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?	N/A	
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	

FTS, LLC

DATE: June 10, 2013

FROM: Kendra Chintella

SUBJECT: Superior Natural Attenuation GW

SAMPLE DELIVERY GROUP (SDG): 1305096/1305097/1305100

SAMPLES: W-25-042913, W-26A-042913, W-35A-042913, Trip Blank TM0212, W-37A-043013, Trip Blank TM1254, W-04AR-050113, W-99A-050113(W-04AR), W-36A-050113, W-30A-050113, W-10AR2-050113, W-16AR-050113, EB-050113, Trip Blank

ANALYSES: Method 8021B (VOCs), 8270C (SVOCs), RSK-175 (Methane), 6010C (Dissolved Metals), 2320B (Total Alkalinity), 4500-NO3 (Nitrate Nitrogen), 9038 (Sulfate)

LABORATORY: Tri-Matrix Laboratories, Inc.

The data contained in this SDG were evaluated with regard to the following parameters:

□ Data Completeness
Noncompliance: None

□ Holding Times
Noncompliance: None

□ Laboratory Blank Contamination
Noncompliance: Alkalinity and nitrate were detected in the method blank. See attached page for details.

□ Field Blank Contamination
Noncompliance: Alkalinity and methane were detected in the equipment blank. See attached page for details.

□ Field Duplicate Precision
Noncompliance: See attached page for details.

□ Surrogate Recoveries
Noncompliance: None

□ Laboratory Control Sample
Noncompliance: The LCS recoveries of 4-methylphenol and chloromethane were above the control limits. The LCS recovery of 4-nitrophenol fell below the control limits. No action was taken on this basis.

Laboratory Blank Contamination:

The following analytes were detected in the aqueous method blank at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
Alkalinity	1.4 J mg/l	7 mg/l
Nitrate	0.0095 J mg/l	0.0475 mg/l

An action level of 5X the maximum concentration was used to evaluate the sample data for laboratory blank contamination. Associated samples with concentrations below the blank action level were qualified "U" for laboratory blank contamination.

Field Blank Contamination:

The following analytes were detected in the aqueous equipment blank, EB-050113, at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
Alkalinity	1.9 mg/l	9.5 mg/l
Methane	0.19 J mg/l	0.95 ug/l

An action level of 5X the maximum concentration was used to evaluate the sample data for field blank contamination. Associated samples with concentrations below the blank action level were qualified "B" for field blank contamination.

Field Duplicate Precision:

FIELD DUPLICATE PRECISION					
ANALYTE	W-04AR	QUAL	W-99A	QUAL	RPD
Alkalinity	200		200		0.00
Manganese	2.8	U	2.9	J	NC
Nitrate	2.1		2.2		4.65
Pentachlorophenol	0.62		0.65		4.72
Sulfate	120		120		0.00

ND – not calculated due to non-detect result

FTS, LLC

DATE: June 7, 2013

FROM: Kendra Chintella

SUBJECT: Superior GW

SAMPLE DELIVERY GROUP (SDG): 320-2441-1

SAMPLES: W-30C-042913, W-28C-042913, EB-042913, W-06A-043013, W-012A-043013, W-12CR-043013, W-06C-043013, EB-043013, W-04AR-050113, W-99A-050113(W-04AR), W-30A-050113, W-10AR2-050113, EB-050113

ANALYSES: Method 8290 (Dioxins/Furans)

LABORATORY: TestAmerica, Inc. Sacramento

The data contained in this SDG were evaluated with regard to the following parameters:

□ Data Completeness
Noncompliance: None

□ Holding Times
Noncompliance: None

□ Laboratory Blank Contamination
Noncompliance: 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF, OCDD, OCDF, total HpCDD, total HpCDF, and total TCDF were detected in the method blank. See attached page for details.

□ Field Blank Contamination
Noncompliance: 1,2,3,4,6,7,8-HpCDD, 1,2,3,4,6,7,8-HpCDF, OCDD, OCDF, total HpCDD, total HpCDF, and total TCDF were detected in the equipment blanks. See attached page for details.

□ Field Duplicate Precision
Noncompliance: See attached page for details.

□ Surrogate Recoveries
Noncompliance: None

□ Laboratory Control Sample
Noncompliance: None

□ Dioxin Internal Standards
Noncompliance: None

Laboratory Blank Contamination:

The following analytes were detected in the aqueous method blank at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
1,2,3,4,6,7,8-HpCDD	0.503 J pg/l	2.515 pg/l
1,2,3,4,6,7,8-HpCDF	0.297 J pg/l	1.485 pg/l
1,2,3,4,7,8,9-HpCDF	0.24 JQ pg/l	1.2 pg/l
OCDD	2.09 JQ pg/l	10.45 pg/l
OCDF	0.503 JQ pg/l	2.515 pg/l
Total HpCDD	1.71 J pg/l	8.55 pg/l
Total HpCDF	0.469 JQ pg/l	2.345 pg/l
Total TCDF	0.215 J pg/l	1.075 pg/l

An action level of 5X the maximum concentration was used to evaluate the sample data for laboratory blank contamination. Associated samples with concentrations below the blank action level were qualified as “U”, nondetect.

Field Blank Contamination:

The following analytes were detected in the aqueous equipment blank, EB-0429123, at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
1,2,3,4,6,7,8-HpCDD	0.51 J pg/l	2.55 pg/l
1,2,3,4,6,7,8-HpCDF	0.25 J pg/l	1.25 pg/l
OCDD	1.4 J pg/l	7 pg/l
Total HpCDD	1.3 J pg/l	6.5 pg/l
Total HpCDF	0.25 J pg/l	1.25 pg/l
Total TCDF	0.27 JQ pg/l	1.35 pg/l

The following analytes were detected in the aqueous equipment blank, EB-043013, at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
1,2,3,4,6,7,8-HpCDD	0.5 JQ pg/l	2.5 pg/l
1,2,3,4,6,7,8-HpCDF	0.36 JQ pg/l	1.65 pg/l
OCDD	1.8 J pg/l	9 pg/l
OCDF	1 J pg/l	5 pg/l
Total HpCDD	1.5 JQ pg/l	7.5 pg/l
Total HpCDF	0.36 JQ pg/l	1.65 pg/l

The following analytes were detected in the aqueous equipment blank, EB-050113, at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
1,2,3,4,6,7,8-HpCDD	0.49 JQ pg/l	2.45 pg/l
OCDD	2.1 J pg/l	10.5 pg/l
Total HpCDD	1.5 JQ pg/l	7.5 pg/l

An action level of 5X the maximum concentration was used to evaluate the sample data for field blank contamination. Associated samples with concentrations below the blank action level were qualified with a “B” for field blank contamination.

Field Duplicate Precision:

FIELD DUPLICATE PRECISION					
ANALYTE	W-04AR	QUAL	W-99A	QUAL	RPD
1,2,3,4,6,7,8-HpCDD	21	J	18	J	15.38
1,2,3,4,6,7,8-HpCDF	6.1	J	4.8	J	23.85
1,2,3,4,7,8-HxCDD	0.2	U	0.34	J	NC
1,2,3,4,7,8-HxCDF	0.31	J	0.34	J	9.23
1,2,3,6,7,8-HxCDD	0.91	J	0.72	J	23.31
1,2,3,6,7,8-HxCDF	0.17	J	0.14	U	NC
1,2,3,7,8,9-HxCDD	0.73	J	0.6	JQ	19.55
OCDD	180		160		11.76
OCDF	29	J	22	J	27.45
Total HpCDD	41	J	35	J	15.79
Total HpCDF	23	J	19	J	19.05
Total HxCDD	4	J	3.6	JQ	10.53
Total HxCDF	4	JQ	3.4	J	16.22

NC – not calculated due to nondetect result.

ARCADIS

Laboratory Analytical and Data Validation Reports

July 2013

July 31, 2013

Beazer East, Inc.
Attn: Ms. Angie Gatchie c/o FTS
200 Third Avenue
Carnegie, PA 15106

Project: Superior Quarterly MNA GW - WI Cert. #999472650

Dear Ms. Angie Gatchie c/o FTS,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1307137	07/10/2013	Laboratory Services
1307138	07/11/2013	Laboratory Services

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request. LOD and LOQ values associated with samples requiring a dilution have been adjusted based on the dilution factor.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Gary L. Wood
Project Chemist

5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-35A-070913**	Sampled:	07/09/13 08:25
Lab Sample ID:	**1307137-01**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30
Unit:	ug/L	Prepared:	07/12/13 By: LEW
Dilution Factor:	1	Analyzed:	07/12/13 By: LEW
QC Batch:	1307211	Analytical Batch:	3G19023

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*102*	*81-126*
aaa-Trifluorotoluene	*97*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-35A-070913**	Sampled:	07/09/13 08:25
Lab Sample ID:	**1307137-01**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**14**	0.48	0.14	ug/L	1	RSK-175	07/19/13 10:54	BJH	1307323

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-35A-070913**	Sampled:	07/09/13 08:25
Lab Sample ID:	**1307137-01**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.12	0.036
208-96-8	Acenaphthylene	NDU	0.062	0.019
120-12-7	Anthracene	NDU	0.22	0.067
56-55-3	Benzo(a)anthracene	NDU	0.16	0.049
50-32-8	Benzo(a)pyrene	NDU	0.15	0.044
205-99-2	Benzo(b)fluoranthene	NDU	0.21	0.063
207-08-9	Benzo(k)fluoranthene	NDU	0.22	0.065
191-24-2	Benzo(g,h,i)perylene	NDU	0.22	0.066
59-50-7	4-Chloro-3-methylphenol	NDU	0.42	0.12
95-57-8	2-Chlorophenol	NDU	0.097	0.029
218-01-9	Chrysene	NDU	0.16	0.049
53-70-3	Dibenz(a,h)anthracene	NDU	0.41	0.12
132-64-9	Dibenzofuran	NDU	0.15	0.044
120-83-2	2,4-Dichlorophenol	NDU	0.33	0.099
*84-66-2	Diethyl Phthalate	**0.23PB**	0.24	0.071
105-67-9	2,4-Dimethylphenol	NDU	0.61	0.18
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.7	1.1
51-28-5	2,4-Dinitrophenol	NDU	4.2	1.3
206-44-0	Fluoranthene	NDU	0.23	0.068
86-73-7	Fluorene	NDU	0.15	0.045
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.29	0.087
95-48-7	2-Methylphenol	NDU	0.17	0.052
106-44-5	4-Methylphenol	NDU	0.20	0.062
100-02-7	4-Nitrophenol	NDU	4.5	1.4
88-75-5	2-Nitrophenol	NDU	0.17	0.052
87-86-5	Pentachlorophenol	NDU	0.19	0.058
85-01-8	Phenanthrene	NDU	0.15	0.046
108-95-2	Phenol	NDU	0.12	0.037
129-00-0	Pyrene	NDU	0.24	0.071

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-35A-070913**	Sampled:	07/09/13 08:25
Lab Sample ID:	**1307137-01**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

*Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.3	0.40
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.77	0.23
88-06-2	2,4,6-Trichlorophenol	NDU	0.31	0.092
95-95-4	2,4,5-Trichlorophenol	NDU	0.36	0.11

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*37*	*20-70*
Phenol-d6	*24*	*18-45*
Nitrobenzene-d5	*70*	*31-123*
2-Fluorobiphenyl	*60*	*25-113*
2,4,6-Tribromophenol	*59*	*30-121*
o-Terphenyl	*74*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-35A-070913**	Sampled:	07/09/13 08:25
Lab Sample ID:	**1307137-01**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	07/18/13 08:34	KLV	1307218
Manganese	**130**		9.3	2.8	ug/L	1	USEPA-6010C	07/18/13 08:34	KLV	1307218

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-35A-070913**	Sampled:	07/09/13 08:25
Lab Sample ID:	**1307137-01**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**480**	1.6	0.50	mg/L	1	SM 2320 B	07/22/13 08:30	SKA	1307429
Nitrogen, Nitrate	**0.063**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	07/10/13 13:26	CAC	1307072
***Sulfate**	**58**	2.6	0.77	mg/L	2	USEPA-9038	07/22/13 10:03	LMA	1307477

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-37A-070913**	Sampled:	07/09/13 08:50
Lab Sample ID:	**1307137-02**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30
Unit:	ug/L	Prepared:	07/12/13 By: LEW
Dilution Factor:	1	Analyzed:	07/12/13 By: LEW
QC Batch:	1307211	Analytical Batch:	3G19023

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*101*	*81-126*
aaa-Trifluorotoluene	*98*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-37A-070913**	Sampled:	07/09/13 08:50
Lab Sample ID:	**1307137-02**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	ND	U	0.48	0.14	ug/L	1	RSK-175	07/19/13 10:58	BJH	1307323

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-37A-070913**	Sampled:	07/09/13 08:50
Lab Sample ID:	**1307137-02**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.12	0.036
208-96-8	Acenaphthylene	NDU	0.062	0.019
120-12-7	Anthracene	NDU	0.22	0.067
56-55-3	Benzo(a)anthracene	NDU	0.16	0.049
50-32-8	Benzo(a)pyrene	NDU	0.15	0.044
205-99-2	Benzo(b)fluoranthene	NDU	0.21	0.063
207-08-9	Benzo(k)fluoranthene	NDU	0.22	0.065
191-24-2	Benzo(g,h,i)perylene	NDU	0.22	0.066
59-50-7	4-Chloro-3-methylphenol	NDU	0.42	0.12
95-57-8	2-Chlorophenol	NDU	0.097	0.029
218-01-9	Chrysene	NDU	0.16	0.049
53-70-3	Dibenz(a,h)anthracene	NDU	0.41	0.12
132-64-9	Dibenzofuran	NDU	0.15	0.044
120-83-2	2,4-Dichlorophenol	NDU	0.33	0.099
*84-66-2	Diethyl Phthalate	**0.21PB**	0.24	0.071
105-67-9	2,4-Dimethylphenol	NDU	0.61	0.18
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.7	1.1
51-28-5	2,4-Dinitrophenol	NDU	4.2	1.3
206-44-0	Fluoranthene	**0.13J**	0.23	0.068
86-73-7	Fluorene	NDU	0.15	0.045
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.29	0.087
95-48-7	2-Methylphenol	NDU	0.17	0.052
106-44-5	4-Methylphenol	NDU	0.20	0.062
100-02-7	4-Nitrophenol	NDU	4.5	1.4
88-75-5	2-Nitrophenol	NDU	0.17	0.052
87-86-5	Pentachlorophenol	NDU	0.19	0.058
85-01-8	Phenanthrene	**0.11J**	0.15	0.046
108-95-2	Phenol	NDU	0.12	0.037
129-00-0	Pyrene	NDU	0.24	0.071

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-37A-070913**	Sampled:	07/09/13 08:50
Lab Sample ID:	**1307137-02**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

*Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.3	0.40
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.77	0.23
88-06-2	2,4,6-Trichlorophenol	NDU	0.31	0.092
95-95-4	2,4,5-Trichlorophenol	NDU	0.36	0.11

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*41*	*20-70*
Phenol-d6	*27*	*18-45*
Nitrobenzene-d5	*68*	*31-123*
2-Fluorobiphenyl	*59*	*25-113*
2,4,6-Tribromophenol	*67*	*30-121*
o-Terphenyl	*67*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-37A-070913**	Sampled:	07/09/13 08:50
Lab Sample ID:	**1307137-02**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	07/18/13 08:51	KLV	1307218
Manganese	ND	U	9.3	2.8	ug/L	1	USEPA-6010C	07/18/13 08:51	KLV	1307218

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-37A-070913**	Sampled:	07/09/13 08:50
Lab Sample ID:	**1307137-02**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**690**	1.6	0.50	mg/L	1	SM 2320 B	07/22/13 08:30	SKA	1307429
Nitrogen, Nitrate	**0.59**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	07/10/13 13:36	CAC	1307072
Sulfate	**40**	2.6	0.77	mg/L	2	USEPA-9038	07/22/13 10:03	LMA	1307477

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-26A-070913**	Sampled:	07/09/13 14:30
Lab Sample ID:	**1307137-03**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30
Unit:	ug/L	Prepared:	07/12/13 By: LEW
Dilution Factor:	1	Analyzed:	07/12/13 By: LEW
QC Batch:	1307211	Analytical Batch:	3G19023

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*117*	*81-126*
aaa-Trifluorotoluene	*96*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-26A-070913**	Sampled:	07/09/13 14:30
Lab Sample ID:	**1307137-03**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**12**	0.48	0.14	ug/L	1	RSK-175	07/19/13 11:02	BJH	1307323

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-26A-070913**	Sampled:	07/09/13 14:30
Lab Sample ID:	**1307137-03**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.25B**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	**0.090J**	0.18	0.054
85-01-8	Phenanthrene	NDU	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-26A-070913**	Sampled:	07/09/13 14:30
Lab Sample ID:	**1307137-03**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*38*	*20-70*
Phenol-d6	*23*	*18-45*
Nitrobenzene-d5	*76*	*31-123*
2-Fluorobiphenyl	*62*	*25-113*
2,4,6-Tribromophenol	*75*	*30-121*
o-Terphenyl	*77*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-26A-070913**	Sampled:	07/09/13 14:30
Lab Sample ID:	**1307137-03**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	07/18/13 08:55	KLV	1307218
Manganese	**5.6**	**J**	9.3	2.8	ug/L	1	USEPA-6010C	07/18/13 08:55	KLV	1307218

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-26A-070913**	Sampled:	07/09/13 14:30
Lab Sample ID:	**1307137-03**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Nitrogen, Nitrate	**0.18**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	07/10/13 13:36	CAC	1307072
Alkalinity, Total	**390**	1.6	0.50	mg/L	1	SM 2320 B	07/22/13 08:30	SKA	1307429
Sulfate	**46**	2.6	0.77	mg/L	2	USEPA-9038	07/22/13 10:07	LMA	1307477

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-25A-070913**	Sampled:	07/09/13 13:50
Lab Sample ID:	**1307137-04**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30
Unit:	ug/L	Prepared:	07/12/13 By: LEW
Dilution Factor:	1	Analyzed:	07/12/13 By: LEW
QC Batch:	1307211	Analytical Batch:	3G19023

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*101*	*81-126*
aaa-Trifluorotoluene	*102*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-25A-070913**	Sampled:	07/09/13 13:50
Lab Sample ID:	**1307137-04**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**28**	0.48	0.14	ug/L	1	RSK-175	07/19/13 11:05	BJH	1307323

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-25A-070913**	Sampled:	07/09/13 13:50
Lab Sample ID:	**1307137-04**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.36B**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	**0.13J**	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	**2.9**	0.18	0.054
85-01-8	Phenanthrene	NDU	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066

Continued on next page

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-25A-070913**	Sampled:	07/09/13 13:50
Lab Sample ID:	**1307137-04**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

*Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*27*	*20-70*
Phenol-d6	***15***	*18-45*
Nitrobenzene-d5	*76*	*31-123*
2-Fluorobiphenyl	*66*	*25-113*
2,4,6-Tribromophenol	*77*	*30-121*
o-Terphenyl	*77*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-25A-070913**	Sampled:	07/09/13 13:50
Lab Sample ID:	**1307137-04**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	07/18/13 08:58	KLV	1307218
Manganese	**15**		9.3	2.8	ug/L	1	USEPA-6010C	07/18/13 08:58	KLV	1307218

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-25A-070913**	Sampled:	07/09/13 13:50
Lab Sample ID:	**1307137-04**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Nitrogen, Nitrate	ND	U	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	07/10/13 13:37	CAC	1307072
Alkalinity, Total	**580**		1.6	0.50	mg/L	1	SM 2320 B	07/22/13 08:30	SKA	1307429
Sulfate	**40**		2.6	0.77	mg/L	2	USEPA-9038	07/22/13 10:07	LMA	1307477

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**TB-070913 TM3080**	Sampled:	07/09/13 00:00
Lab Sample ID:	**1307137-05**	Sampled By:	TML
Matrix:	Water	Received:	07/10/13 08:30
Unit:	ug/L	Prepared:	07/12/13 By: LEW
Dilution Factor:	1	Analyzed:	07/12/13 By: LEW
QC Batch:	1307211	Analytical Batch:	3G19023

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*99*	*81-126*
aaa-Trifluorotoluene	*100*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-070913**	Sampled:	07/09/13 17:20
Lab Sample ID:	**1307137-06**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30
Unit:	ug/L	Prepared:	07/12/13 By: LEW
Dilution Factor:	1	Analyzed:	07/12/13 By: LEW
QC Batch:	1307211	Analytical Batch:	3G19023

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*119*	*81-126*
aaa-Trifluorotoluene	*98*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-070913**	Sampled:	07/09/13 17:20
Lab Sample ID:	**1307137-06**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	ND	U	0.48	0.14	ug/L	1	RSK-175	07/19/13 11:09	BJH	1307323

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-070913**	Sampled:	07/09/13 17:20
Lab Sample ID:	**1307137-06**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.19PB**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.18	0.054
85-01-8	Phenanthrene	NDU	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066

Continued on next page

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-070913**	Sampled:	07/09/13 17:20
Lab Sample ID:	**1307137-06**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*44*	*20-70*
Phenol-d6	*28*	*18-45*
Nitrobenzene-d5	*78*	*31-123*
2-Fluorobiphenyl	*66*	*25-113*
2,4,6-Tribromophenol	*78*	*30-121*
o-Terphenyl	*78*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-070913**	Sampled:	07/09/13 17:20
Lab Sample ID:	**1307137-06**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	07/18/13 09:08	KLV	1307218
Manganese	ND	U	9.3	2.8	ug/L	1	USEPA-6010C	07/18/13 09:08	KLV	1307218

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307137**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-070913**	Sampled:	07/09/13 17:20
Lab Sample ID:	**1307137-06**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/10/13 08:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Sulfate	ND	U	1.3	0.39	mg/L	1	USEPA-9038	07/22/13 09:27	LMA	1307477
Alkalinity, Total	**1.9**		1.6	0.50	mg/L	1	SM 2320 B	07/22/13 08:30	SKA	1307429
Nitrogen, Nitrate	ND	U	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	07/10/13 13:38	CAC	1307072

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-04AR**	Sampled:	07/10/13 08:56
Lab Sample ID:	**1307138-01**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/17/13 By: LEW
Dilution Factor:	1	Analyzed:	07/18/13 By: LEW
QC Batch:	1307454	Analytical Batch:	3G22028

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*119*	*81-126*
aaa-Trifluorotoluene	*104*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-04AR**	Sampled:	07/10/13 08:56
Lab Sample ID:	**1307138-01**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**0.16**	**J**	0.48	0.14	ug/L	1	RSK-175	07/19/13 11:13	BJH	1307323

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-04AR**	Sampled:	07/10/13 08:56
Lab Sample ID:	**1307138-01**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.20PB**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.18	0.054
85-01-8	Phenanthrene	NDU	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066

Continued on next page

*See Statement of Data Qualifications

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ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-04AR**	Sampled:	07/10/13 08:56
Lab Sample ID:	**1307138-01**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*43*	*20-70*
Phenol-d6	*29*	*18-45*
Nitrobenzene-d5	*75*	*31-123*
2-Fluorobiphenyl	*68*	*25-113*
2,4,6-Tribromophenol	*82*	*30-121*
o-Terphenyl	*82*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-04AR**	Sampled:	07/10/13 08:56
Lab Sample ID:	**1307138-01**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	07/18/13 09:11	KLV	1307218
Manganese	**8.2**	**J**	9.3	2.8	ug/L	1	USEPA-6010C	07/18/13 09:11	KLV	1307218

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-04AR**	Sampled:	07/10/13 08:56
Lab Sample ID:	**1307138-01**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Nitrogen, Nitrate	**0.037**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	07/11/13 15:28	CAC	1307117
Alkalinity, Total	**300**	1.6	0.50	mg/L	1	SM 2320 B	07/22/13 08:30	SKA	1307429
Sulfate	**75**	6.4	1.9	mg/L	5	USEPA-9038	07/22/13 11:02	LMA	1307477

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30A**	Sampled:	07/10/13 08:05
Lab Sample ID:	**1307138-02**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/24/13 By: LEW
Dilution Factor:	10	Analyzed:	07/24/13 By: LEW
QC Batch:	1307626	Analytical Batch:	3G25020

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	**5.1J**	6.7	2.0
*91-20-3	Naphthalene	**680**	15	4.4

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*87*	*81-126*
aaa-Trifluorotoluene	*98*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30A**	Sampled:	07/10/13 08:05
Lab Sample ID:	**1307138-02**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**180**	2.4	0.72	ug/L	5	RSK-175	07/19/13 11:36	BJH	1307323

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30A**	Sampled:	07/10/13 08:05
Lab Sample ID:	**1307138-02**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	10	Analyzed:	07/26/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26025

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**89**	1.2	0.37
208-96-8	Acenaphthylene	**0.89**	0.63	0.19
120-12-7	Anthracene	**1.0J**	2.3	0.68
56-55-3	Benzo(a)anthracene	NDU	1.7	0.50
50-32-8	Benzo(a)pyrene	NDU	1.5	0.45
205-99-2	Benzo(b)fluoranthene	NDU	2.1	0.65
207-08-9	Benzo(k)fluoranthene	NDU	2.2	0.66
191-24-2	Benzo(g,h,i)perylene	NDU	2.3	0.68
59-50-7	4-Chloro-3-methylphenol	NDU	4.3	1.3
95-57-8	2-Chlorophenol	NDU	0.99	0.30
218-01-9	Chrysene	NDU	1.7	0.50
53-70-3	Dibenz(a,h)anthracene	NDU	4.2	1.3
132-64-9	Dibenzofuran	**41**	1.5	0.45
120-83-2	2,4-Dichlorophenol	NDU	3.4	1.0
84-66-2	Diethyl Phthalate	NDU	2.4	0.72
105-67-9	2,4-Dimethylphenol	NDU	6.2	1.9
534-52-1	4,6-Dinitro-2-methylphenol	NDU	38	11
51-28-5	2,4-Dinitrophenol	NDU	43	13
206-44-0	Fluoranthene	**1.3J**	2.3	0.70
86-73-7	Fluorene	**34**	1.5	0.46
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	3.0	0.89
95-48-7	2-Methylphenol	NDU	1.8	0.53
106-44-5	4-Methylphenol	NDU	2.1	0.63
100-02-7	4-Nitrophenol	NDU	46	14
88-75-5	2-Nitrophenol	NDU	1.8	0.53
87-86-5	Pentachlorophenol	NDU	2.0	0.60
85-01-8	Phenanthrene	**17**	1.6	0.47
108-95-2	Phenol	NDU	1.2	0.37
129-00-0	Pyrene	NDU	2.4	0.73

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ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30A**	Sampled:	07/10/13 08:05
Lab Sample ID:	**1307138-02**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	10	Analyzed:	07/26/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26025

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	14	4.1
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	7.9	2.4
88-06-2	2,4,6-Trichlorophenol	NDU	3.1	0.95
95-95-4	2,4,5-Trichlorophenol	NDU	3.7	1.1

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*41*	*20-70*
Phenol-d6	*26*	*18-45*
Nitrobenzene-d5	*68*	*31-123*
2-Fluorobiphenyl	*62*	*25-113*
2,4,6-Tribromophenol	*66*	*30-121*
o-Terphenyl	*73*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30A**	Sampled:	07/10/13 08:05
Lab Sample ID:	**1307138-02**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**270**	22	6.5	ug/L	1	USEPA-6010C	07/18/13 09:15	KLV	1307218
Manganese	**110**	9.3	2.8	ug/L	1	USEPA-6010C	07/18/13 09:15	KLV	1307218

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-30A**	Sampled:	07/10/13 08:05
Lab Sample ID:	**1307138-02**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Nitrogen, Nitrate	**0.099**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	07/11/13 15:30	CAC	1307117
Alkalinity, Total	**410**	1.6	0.50	mg/L	1	SM 2320 B	07/22/13 08:30	SKA	1307429
Sulfate	**37**	2.6	0.77	mg/L	2	USEPA-9038	07/22/13 10:13	LMA	1307477

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-36A**	Sampled:	07/10/13 14:05
Lab Sample ID:	**1307138-03**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/17/13 By: LEW
Dilution Factor:	1	Analyzed:	07/18/13 By: LEW
QC Batch:	1307454	Analytical Batch:	3G22028

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*108*	*81-126*
aaa-Trifluorotoluene	*106*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-36A**	Sampled:	07/10/13 14:05
Lab Sample ID:	**1307138-03**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**430**	4.8	1.4	ug/L	10	RSK-175	07/19/13 11:44	BJH	1307323

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-36A**	Sampled:	07/10/13 14:05
Lab Sample ID:	**1307138-03**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	2	Analyzed:	07/26/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26025

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**0.080J**	0.22	0.066
208-96-8	Acenaphthylene	NDU	0.11	0.034
120-12-7	Anthracene	**0.22J**	0.41	0.12
56-55-3	Benzo(a)anthracene	NDU	0.30	0.091
50-32-8	Benzo(a)pyrene	NDU	0.27	0.081
205-99-2	Benzo(b)fluoranthene	NDU	0.39	0.12
207-08-9	Benzo(k)fluoranthene	NDU	0.40	0.12
191-24-2	Benzo(g,h,i)perylene	NDU	0.41	0.12
59-50-7	4-Chloro-3-methylphenol	NDU	0.77	0.23
95-57-8	2-Chlorophenol	NDU	0.18	0.053
218-01-9	Chrysene	NDU	0.30	0.091
53-70-3	Dibenz(a,h)anthracene	NDU	0.75	0.23
132-64-9	Dibenzofuran	**0.68**	0.27	0.082
120-83-2	2,4-Dichlorophenol	**0.30J**	0.61	0.18
*84-66-2	Diethyl Phthalate	**0.36PB**	0.43	0.13
105-67-9	2,4-Dimethylphenol	NDU	1.1	0.34
534-52-1	4,6-Dinitro-2-methylphenol	NDU	6.8	2.0
51-28-5	2,4-Dinitrophenol	NDU	7.7	2.3
206-44-0	Fluoranthene	**0.28J**	0.42	0.13
86-73-7	Fluorene	**0.34**	0.28	0.083
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.53	0.16
95-48-7	2-Methylphenol	NDU	0.32	0.095
106-44-5	4-Methylphenol	NDU	0.38	0.11
100-02-7	4-Nitrophenol	NDU	8.3	2.5
88-75-5	2-Nitrophenol	NDU	0.32	0.095
87-86-5	Pentachlorophenol	**29**	0.36	0.11
85-01-8	Phenanthrene	**0.24J**	0.28	0.085
108-95-2	Phenol	NDU	0.22	0.067
129-00-0	Pyrene	**0.18J**	0.44	0.13

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-36A**	Sampled:	07/10/13 14:05
Lab Sample ID:	**1307138-03**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	2	Analyzed:	07/26/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26025

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	**7.7**	2.5	0.74
935-95-5	2,3,5,6-Tetrachlorophenol	**35**	1.4	0.43
88-06-2	2,4,6-Trichlorophenol	**0.74**	0.57	0.17
95-95-4	2,4,5-Trichlorophenol	**9.3**	0.66	0.20

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*43*	*20-70*
Phenol-d6	*32*	*18-45*
Nitrobenzene-d5	*70*	*31-123*
2-Fluorobiphenyl	*60*	*25-113*
2,4,6-Tribromophenol	*79*	*30-121*
o-Terphenyl	*69*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-36A**	Sampled:	07/10/13 14:05
Lab Sample ID:	**1307138-03**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**310**	22	6.5	ug/L	1	USEPA-6010C	07/18/13 09:18	KLV	1307218
Manganese	**730**	9.3	2.8	ug/L	1	USEPA-6010C	07/18/13 09:18	KLV	1307218

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-36A**	Sampled:	07/10/13 14:05
Lab Sample ID:	**1307138-03**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**390**		1.6	0.50	mg/L	1	SM 2320 B	07/22/13 08:30	SKA	1307429
Sulfate	**65**		2.6	0.77	mg/L	2	USEPA-9038	07/22/13 10:13	LMA	1307477
Nitrogen, Nitrate	**0.018**	**J**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	07/11/13 15:31	CAC	1307117

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-16AR**	Sampled:	07/10/13 16:10
Lab Sample ID:	**1307138-04**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/24/13 By: LEW
Dilution Factor:	50	Analyzed:	07/24/13 By: LEW
QC Batch:	1307626	Analytical Batch:	3G25020

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	**21J**	33	10
*91-20-3	Naphthalene	**3000**	74	22

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*88*	*81-126*
aaa-Trifluorotoluene	*98*	*86-118*

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-16AR**	Sampled:	07/10/13 16:10
Lab Sample ID:	**1307138-04**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**50**	0.48	0.14	ug/L	1	RSK-175	07/19/13 12:13	BJH	1307323

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-16AR**	Sampled:	07/10/13 16:10
Lab Sample ID:	**1307138-04**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	4	Analyzed:	07/30/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G30046

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**50**	0.44	0.13
*208-96-8	Acenaphthylene	**0.82**	0.23	0.068
120-12-7	Anthracene	NDU	0.82	0.25
56-55-3	Benzo(a)anthracene	NDU	0.60	0.18
50-32-8	Benzo(a)pyrene	NDU	0.54	0.16
205-99-2	Benzo(b)fluoranthene	NDU	0.77	0.23
207-08-9	Benzo(k)fluoranthene	NDU	0.79	0.24
191-24-2	Benzo(g,h,i)perylene	NDU	0.81	0.24
59-50-7	4-Chloro-3-methylphenol	NDU	1.5	0.46
95-57-8	2-Chlorophenol	NDU	0.36	0.11
218-01-9	Chrysene	NDU	0.60	0.18
53-70-3	Dibenz(a,h)anthracene	NDU	1.5	0.45
132-64-9	Dibenzofuran	**10**	0.54	0.16
120-83-2	2,4-Dichlorophenol	NDU	1.2	0.37
*84-66-2	Diethyl Phthalate	**0.33PB**	0.87	0.26
105-67-9	2,4-Dimethylphenol	NDU	2.2	0.67
534-52-1	4,6-Dinitro-2-methylphenol	NDU	14	4.1
51-28-5	2,4-Dinitrophenol	NDU	15	4.6
206-44-0	Fluoranthene	**0.33J**	0.84	0.25
86-73-7	Fluorene	**12**	0.55	0.17
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	1.1	0.32
95-48-7	2-Methylphenol	**0.37J**	0.63	0.19
106-44-5	4-Methylphenol	**1.7**	0.75	0.23
100-02-7	4-Nitrophenol	NDU	17	5.0
88-75-5	2-Nitrophenol	NDU	0.63	0.19
87-86-5	Pentachlorophenol	NDU	0.72	0.22
85-01-8	Phenanthrene	**1.4**	0.57	0.17
108-95-2	Phenol	NDU	0.45	0.13
129-00-0	Pyrene	NDU	0.87	0.26

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ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-16AR**	Sampled:	07/10/13 16:10
Lab Sample ID:	**1307138-04**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	4	Analyzed:	07/30/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G30046

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	4.9	1.5
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	2.8	0.85
88-06-2	2,4,6-Trichlorophenol	NDU	1.1	0.34
95-95-4	2,4,5-Trichlorophenol	NDU	1.3	0.40

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*25*	*20-70*
Phenol-d6	*19*	*18-45*
Nitrobenzene-d5	*60*	*31-123*
2-Fluorobiphenyl	*48*	*25-113*
2,4,6-Tribromophenol	*45*	*30-121*
o-Terphenyl	*60*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-16AR**	Sampled:	07/10/13 16:10
Lab Sample ID:	**1307138-04**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**30**	22	6.5	ug/L	1	USEPA-6010C	07/18/13 09:21	KLV	1307218
Manganese	**160**	9.3	2.8	ug/L	1	USEPA-6010C	07/18/13 09:21	KLV	1307218

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-16AR**	Sampled:	07/10/13 16:10
Lab Sample ID:	**1307138-04**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**450**		1.6	0.50	mg/L	1	SM 2320 B	07/22/13 08:30	SKA	1307429
Sulfate	**29**		1.3	0.39	mg/L	1	USEPA-9038	07/22/13 09:33	LMA	1307477
Nitrogen, Nitrate	ND	U	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	07/11/13 15:35	CAC	1307117

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-10AR2**	Sampled:	07/10/13 10:45
Lab Sample ID:	**1307138-05**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/23/13 By: LEW
Dilution Factor:	1	Analyzed:	07/23/13 By: LEW
QC Batch:	1307624	Analytical Batch:	3G25018

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	**16**	0.67	0.20
*91-20-3	Naphthalene	**64B**	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*92*	*81-126*
aaa-Trifluorotoluene	*96*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-10AR2**	Sampled:	07/10/13 10:45
Lab Sample ID:	**1307138-05**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**590**	9.7	2.9	ug/L	20	RSK-175	07/19/13 12:26	BJH	1307323

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-10AR2**	Sampled:	07/10/13 10:45
Lab Sample ID:	**1307138-05**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**22**	0.12	0.036
208-96-8	Acenaphthylene	**0.30**	0.062	0.019
120-12-7	Anthracene	**0.26**	0.22	0.067
56-55-3	Benzo(a)anthracene	**0.22**	0.16	0.049
50-32-8	Benzo(a)pyrene	**0.13J**	0.15	0.044
*205-99-2	Benzo(b)fluoranthene	**0.20J**	0.21	0.063
*207-08-9	Benzo(k)fluoranthene	**0.076J**	0.22	0.065
191-24-2	Benzo(g,h,i)perylene	NDU	0.22	0.066
59-50-7	4-Chloro-3-methylphenol	NDU	0.42	0.12
95-57-8	2-Chlorophenol	NDU	0.097	0.029
218-01-9	Chrysene	**0.18**	0.16	0.049
53-70-3	Dibenz(a,h)anthracene	NDU	0.41	0.12
132-64-9	Dibenzofuran	**6.1**	0.15	0.044
120-83-2	2,4-Dichlorophenol	NDU	0.33	0.099
*84-66-2	Diethyl Phthalate	**0.29B**	0.24	0.071
105-67-9	2,4-Dimethylphenol	NDU	0.61	0.18
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.7	1.1
51-28-5	2,4-Dinitrophenol	NDU	4.2	1.3
206-44-0	Fluoranthene	**6.1**	0.23	0.068
86-73-7	Fluorene	**7.5**	0.15	0.045
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.29	0.087
95-48-7	2-Methylphenol	**0.065J**	0.17	0.052
106-44-5	4-Methylphenol	**0.18J**	0.20	0.062
100-02-7	4-Nitrophenol	NDU	4.5	1.4
88-75-5	2-Nitrophenol	NDU	0.17	0.052
87-86-5	Pentachlorophenol	**0.54**	0.20	0.059
85-01-8	Phenanthrene	**3.4**	0.15	0.046
108-95-2	Phenol	**0.28**	0.12	0.037
129-00-0	Pyrene	**3.3**	0.24	0.071

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-10AR2**	Sampled:	07/10/13 10:45
Lab Sample ID:	**1307138-05**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

*Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.3	0.40
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.77	0.23
88-06-2	2,4,6-Trichlorophenol	NDU	0.31	0.092
95-95-4	2,4,5-Trichlorophenol	NDU	0.36	0.11

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	***15***	*20-70*
Phenol-d6	***12***	*18-45*
Nitrobenzene-d5	***19***	*31-123*
2-Fluorobiphenyl	***14***	*25-113*
2,4,6-Tribromophenol	***18***	*30-121*
o-Terphenyl	***16***	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-10AR2**	Sampled:	07/10/13 10:45
Lab Sample ID:	**1307138-05**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**190**	22	6.5	ug/L	1	USEPA-6010C	07/18/13 09:25	KLV	1307218
Manganese	**140**	9.3	2.8	ug/L	1	USEPA-6010C	07/18/13 09:25	KLV	1307218

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-10AR2**	Sampled:	07/10/13 10:45
Lab Sample ID:	**1307138-05**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Nitrogen, Nitrate	**0.016**	**J**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	07/11/13 15:36	CAC	1307117
Alkalinity, Total	**420**		1.6	0.50	mg/L	1	SM 2320 B	07/22/13 08:30	SKA	1307429
Sulfate	**21**		1.3	0.39	mg/L	1	USEPA-9038	07/22/13 09:33	LMA	1307477

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-10AR2**	Sampled:	07/10/13 10:45
Lab Sample ID:	**1307138-05RE1**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/26/13 By: ALK
Dilution Factor:	1	Analyzed:	07/30/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G30046

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**0.93**	0.12	0.037
*208-96-8	Acenaphthylene	**0.033J**	0.063	0.019
120-12-7	Anthracene	NDU	0.23	0.068
*56-55-3	Benzo(a)anthracene	NDU	0.17	0.050
50-32-8	Benzo(a)pyrene	**0.067J**	0.15	0.045
*205-99-2	Benzo(b)fluoranthene	**0.089J**	0.21	0.065
*207-08-9	Benzo(k)fluoranthene	NDU	0.22	0.066
191-24-2	Benzo(g,h,i)perylene	NDU	0.23	0.068
59-50-7	4-Chloro-3-methylphenol	NDU	0.43	0.13
95-57-8	2-Chlorophenol	NDU	0.099	0.030
*218-01-9	Chrysene	**0.056J**	0.17	0.050
53-70-3	Dibenz(a,h)anthracene	NDU	0.42	0.13
132-64-9	Dibenzofuran	**0.19**	0.15	0.045
120-83-2	2,4-Dichlorophenol	NDU	0.34	0.10
*84-66-2	Diethyl Phthalate	**0.44B**	0.24	0.072
105-67-9	2,4-Dimethylphenol	NDU	0.62	0.19
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.8	1.1
51-28-5	2,4-Dinitrophenol	NDU	4.3	1.3
206-44-0	Fluoranthene	**0.49**	0.23	0.070
86-73-7	Fluorene	**0.22**	0.15	0.046
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.30	0.089
95-48-7	2-Methylphenol	NDU	0.18	0.053
106-44-5	4-Methylphenol	NDU	0.21	0.063
100-02-7	4-Nitrophenol	NDU	4.6	1.4
88-75-5	2-Nitrophenol	NDU	0.18	0.053
87-86-5	Pentachlorophenol	**0.27**	0.20	0.060
85-01-8	Phenanthrene	**0.24**	0.16	0.047
108-95-2	Phenol	NDU	0.12	0.037
129-00-0	Pyrene	**1.0**	0.24	0.073
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.4	0.41
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.79	0.24

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-10AR2**	Sampled:	07/10/13 10:45
Lab Sample ID:	**1307138-05RE1**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/26/13 By: ALK
Dilution Factor:	1	Analyzed:	07/30/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G30046

*Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
88-06-2	2,4,6-Trichlorophenol	NDU	0.31	0.095
95-95-4	2,4,5-Trichlorophenol	NDU	0.37	0.11

Surrogates:	*% Recovery*	*Control Limits*
2-Fluorophenol	*36*	*20-70*
Phenol-d6	*26*	*18-45*
Nitrobenzene-d5	*55*	*31-123*
2-Fluorobiphenyl	*56*	*25-113*
2,4,6-Tribromophenol	*57*	*30-121*
o-Terphenyl	*59*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-99A**	Sampled:	07/10/13 20:00
Lab Sample ID:	**1307138-06**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/23/13 By: LEW
Dilution Factor:	1	Analyzed:	07/23/13 By: LEW
QC Batch:	1307624	Analytical Batch:	3G25018

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	**17**	0.67	0.20
*91-20-3	Naphthalene	**75B**	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*95*	*81-126*
aaa-Trifluorotoluene	*96*	*86-118*

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-99A**	Sampled:	07/10/13 20:00
Lab Sample ID:	**1307138-06**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**630**	9.7	2.9	ug/L	20	RSK-175	07/19/13 12:34	BJH	1307323

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-99A**	Sampled:	07/10/13 20:00
Lab Sample ID:	**1307138-06**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**5.1**	0.12	0.037
*208-96-8	Acenaphthylene	**0.10**	0.063	0.019
120-12-7	Anthracene	NDU	0.23	0.068
*56-55-3	Benzo(a)anthracene	**0.056J**	0.17	0.050
50-32-8	Benzo(a)pyrene	**0.067J**	0.15	0.045
*205-99-2	Benzo(b)fluoranthene	**0.089J**	0.21	0.065
*207-08-9	Benzo(k)fluoranthene	NDU	0.22	0.066
191-24-2	Benzo(g,h,i)perylene	NDU	0.23	0.068
59-50-7	4-Chloro-3-methylphenol	NDU	0.43	0.13
95-57-8	2-Chlorophenol	NDU	0.099	0.030
*218-01-9	Chrysene	**0.056J**	0.17	0.050
53-70-3	Dibenz(a,h)anthracene	NDU	0.42	0.13
132-64-9	Dibenzofuran	**1.1**	0.15	0.045
120-83-2	2,4-Dichlorophenol	NDU	0.34	0.10
*84-66-2	Diethyl Phthalate	**0.24B**	0.24	0.072
105-67-9	2,4-Dimethylphenol	NDU	0.62	0.19
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.8	1.1
51-28-5	2,4-Dinitrophenol	NDU	4.3	1.3
206-44-0	Fluoranthene	**1.8**	0.23	0.070
86-73-7	Fluorene	**1.8**	0.15	0.046
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.30	0.089
95-48-7	2-Methylphenol	NDU	0.18	0.053
106-44-5	4-Methylphenol	NDU	0.21	0.063
100-02-7	4-Nitrophenol	NDU	4.6	1.4
88-75-5	2-Nitrophenol	NDU	0.18	0.053
87-86-5	Pentachlorophenol	**0.19J**	0.20	0.060
85-01-8	Phenanthrene	**0.50**	0.16	0.047
108-95-2	Phenol	**0.14**	0.12	0.037
129-00-0	Pyrene	**1.3**	0.24	0.073

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-99A**	Sampled:	07/10/13 20:00
Lab Sample ID:	**1307138-06**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

*Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.4	0.41
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.79	0.24
88-06-2	2,4,6-Trichlorophenol	NDU	0.31	0.095
95-95-4	2,4,5-Trichlorophenol	NDU	0.37	0.11

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*23*	*20-70*
Phenol-d6	***17***	*18-45*
Nitrobenzene-d5	*31*	*31-123*
2-Fluorobiphenyl	*25*	*25-113*
2,4,6-Tribromophenol	*30*	*30-121*
o-Terphenyl	***30***	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-99A**	Sampled:	07/10/13 20:00
Lab Sample ID:	**1307138-06**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**180**	22	6.5	ug/L	1	USEPA-6010C	07/18/13 09:28	KLV	1307218
Manganese	**120**	9.3	2.8	ug/L	1	USEPA-6010C	07/18/13 09:28	KLV	1307218

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**W-99A**	Sampled:	07/10/13 20:00
Lab Sample ID:	**1307138-06**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**430**		1.6	0.50	mg/L	1	SM 2320 B	07/22/13 08:30	SKA	1307429
Nitrogen, Nitrate	**0.015**	**J**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	07/11/13 15:37	CAC	1307117
Sulfate	**26**		1.3	0.39	mg/L	1	USEPA-9038	07/22/13 09:33	LMA	1307477

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-071013**	Sampled:	07/10/13 17:15
Lab Sample ID:	**1307138-07**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/17/13 By: LEW
Dilution Factor:	1	Analyzed:	07/18/13 By: LEW
QC Batch:	1307454	Analytical Batch:	3G22028

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*118*	*81-126*
aaa-Trifluorotoluene	*103*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-071013**	Sampled:	07/10/13 17:15
Lab Sample ID:	**1307138-07**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**0.24**	**J**	0.48	0.14	ug/L	1	RSK-175	07/19/13 12:37	BJH	1307323

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-071013**	Sampled:	07/10/13 17:15
Lab Sample ID:	**1307138-07**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.20PB**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.18	0.054
85-01-8	Phenanthrene	NDU	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-071013**	Sampled:	07/10/13 17:15
Lab Sample ID:	**1307138-07**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/12/13 By: JTS
Dilution Factor:	1	Analyzed:	07/25/13 By: JLB
QC Batch:	1307110	Analytical Batch:	3G26022

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*46*	*20-70*
Phenol-d6	*30*	*18-45*
Nitrobenzene-d5	*81*	*31-123*
2-Fluorobiphenyl	*66*	*25-113*
2,4,6-Tribromophenol	*76*	*30-121*
o-Terphenyl	*74*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-071013**	Sampled:	07/10/13 17:15
Lab Sample ID:	**1307138-07**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	07/18/13 09:31	KLV	1307218
Manganese	ND	U	9.3	2.8	ug/L	1	USEPA-6010C	07/18/13 09:31	KLV	1307218

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**EB-071013**	Sampled:	07/10/13 17:15
Lab Sample ID:	**1307138-07**	Sampled By:	R. Stahl
Matrix:	Water	Received:	07/11/13 08:10

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Nitrogen, Nitrate	ND	U	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	07/11/13 15:37	CAC	1307117
Alkalinity, Total	**1.9**		1.6	0.50	mg/L	1	SM 2320 B	07/22/13 08:30	SKA	1307429
Sulfate	ND	U	1.3	0.39	mg/L	1	USEPA-9038	07/22/13 09:36	LMA	1307477

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1307138**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**TB-071013 TM3031**	Sampled:	07/10/13 00:00
Lab Sample ID:	**1307138-08**	Sampled By:	TML
Matrix:	Water	Received:	07/11/13 08:10
Unit:	ug/L	Prepared:	07/17/13 By: LEW
Dilution Factor:	1	Analyzed:	07/18/13 By: LEW
QC Batch:	1307454	Analytical Batch:	3G22028

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*121*	*81-126*
aaa-Trifluorotoluene	*103*	*86-118*

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QUALITY CONTROL REPORT

Halogenated and Aromatic Volatiles by EPA Method 8021B

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1307211 5030B Aqueous Purge & Trap/USEPA-8021B									
Method Blank					Analyzed:		07/12/2013	By: LEW	
Unit: ug/L					Analytical Batch:		3G19023		
Benzene			ND U					0.67	0.20
Naphthalene			ND U					1.5	0.44
Surrogates:									
1,2-Dichloroethane-d4				*102*	*81-126*				
aaa-Trifluorotoluene				*98*	*86-118*				
Laboratory Control Sample					Analyzed:		07/12/2013	By: LEW	
Unit: ug/L					Analytical Batch:		3G19023		
Benzene		20.0	**20.0**	100	83-119	--		0.666	0.20
Naphthalene		20.0	**18.3**	91	80-120	--		1.47	0.44
QC Batch: 1307454 5030B Aqueous Purge & Trap/USEPA-8021B									
Method Blank					Analyzed:		07/17/2013	By: LEW	
Unit: ug/L					Analytical Batch:		3G22028		
Benzene			ND U					0.67	0.20
Naphthalene			ND U					1.5	0.44
Surrogates:									
1,2-Dichloroethane-d4				*102*	*81-126*				
aaa-Trifluorotoluene				*99*	*86-118*				
Laboratory Control Sample					Analyzed:		07/17/2013	By: LEW	
Unit: ug/L					Analytical Batch:		3G22028		
Benzene		20.0	**19.8**	99	83-119	--		0.666	0.20
Naphthalene		20.0	**17.5**	88	80-120	--		1.47	0.44
QC Batch: 1307624 5030B Aqueous Purge & Trap/USEPA-8021B									
Method Blank					Analyzed:		07/23/2013	By: LEW	
Unit: ug/L					Analytical Batch:		3G25018		
Benzene			ND U			--		0.67	0.20
Naphthalene			**0.75 J**			--		1.5	0.44

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Halogenated and Aromatic Volatiles by EPA Method 8021B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1307624 (Continued) 5030B Aqueous Purge & Trap/USEPA-8021B									
Method Blank (Continued)					Analyzed:		07/23/2013	By: LEW	
Unit: ug/L					Analytical Batch:		3G25018		
Surrogates:									
1,2-Dichloroethane-d4				*97*	*81-126*				
aaa-Trifluorotoluene				*92*	*86-118*				
Laboratory Control Sample					Analyzed:		07/23/2013	By: LEW	
Unit: ug/L					Analytical Batch:		3G25018		
Benzene		20.0	**17.2**	86	83-119	--		0.666	0.20
Naphthalene		20.0	**18.4**	92	80-120	--		1.47	0.44
QC Batch: 1307626 5030B Aqueous Purge & Trap/USEPA-8021B									
Method Blank					Analyzed:		07/24/2013	By: LEW	
Unit: ug/L					Analytical Batch:		3G25020		
Benzene			ND U					0.67	0.20
Naphthalene			ND U			--		1.5	0.44
Surrogates:									
1,2-Dichloroethane-d4				*94*	*81-126*				
aaa-Trifluorotoluene				*100*	*86-118*				
Laboratory Control Sample					Analyzed:		07/24/2013	By: LEW	
Unit: ug/L					Analytical Batch:		3G25020		
Benzene		20.0	**18.7**	94	83-119	--		0.666	0.20
Naphthalene		20.0	**19.8**	99	80-120	--		1.47	0.44

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QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1307323 Method-Specific Extraction/RSK-175									
Method Blank					Analyzed:		07/19/2013	By: BJH	
Unit: ug/L					Analytical Batch:		3G19043		
Methane			ND U			--		0.48	0.14
Laboratory Control Sample					Analyzed:		07/19/2013	By: BJH	
Unit: ug/L					Analytical Batch:		3G19043		
Methane		35.4	**28.2**	80	70-116	--		0.483	0.14

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QUALITY CONTROL REPORT

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1307110 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank Analyzed: 07/25/2013 By: JLB

Unit: ug/L Analytical Batch: 3G26022

Acenaphthene			ND U					0.11	0.033
Acenaphthylene			ND U					0.057	0.017
Anthracene			ND U					0.20	0.062
Benzo(a)anthracene			ND U			--		0.15	0.045
Benzo(a)pyrene			ND U					0.13	0.040
Benzo(b)fluoranthene			ND U					0.19	0.058
Benzo(k)fluoranthene			ND U					0.20	0.060
Benzo(g,h,i)perylene			ND U					0.20	0.061
4-Chloro-3-methylphenol			ND U					0.38	0.12
2-Chlorophenol			ND U			--		0.089	0.027
Chrysene			ND U			--		0.15	0.045
Dibenz(a,h)anthracene			ND U					0.38	0.11
Dibenzofuran			ND U					0.14	0.041
2,4-Dichlorophenol			ND U					0.30	0.092
Diethyl Phthalate			**0.18 J**			--		0.22	0.065
2,4-Dimethylphenol			ND U					0.56	0.17
4,6-Dinitro-2-methylphenol			ND U			--		3.4	1.0
2,4-Dinitrophenol			ND U					3.9	1.2
Fluoranthene			ND U			--		0.21	0.063
Fluorene			ND U					0.14	0.041
Indeno(1,2,3-cd)pyrene			ND U					0.27	0.080
2-Methylphenol			ND U					0.16	0.048
4-Methylphenol			ND U					0.19	0.057
4-Nitrophenol			ND U			--		4.2	1.2
2-Nitrophenol			ND U			--		0.16	0.048
Pentachlorophenol			ND U			--		0.42	0.13
Phenanthrene			ND U			--		0.14	0.043
Phenol			ND U					0.11	0.034
Pyrene			ND U					0.22	0.066
2,3,4,6-Tetrachlorophenol			ND U					1.2	0.37
2,3,5,6-Tetrachlorophenol			ND U					0.71	0.21
2,4,6-Trichlorophenol			ND U					0.28	0.085
2,4,5-Trichlorophenol			ND U					0.33	0.099

Continued on next page

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1307110 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 07/25/2013 By: JLB

Unit: ug/L Analytical Batch: 3G26022

Surrogates:							
2-Fluorophenol			*47*	*20-70*			
Phenol-d6			*32*	*18-45*			
Nitrobenzene-d5			*82*	*31-123*			
2-Fluorobiphenyl			*79*	*25-113*			
2,4,6-Tribromophenol			*76*	*30-121*			
o-Terphenyl			*80*	*42-125*			

Method Blank Analyzed: 07/30/2013 By: JLB

Unit: ug/L Analytical Batch: 3G30046

Acenaphthene			ND U			0.11	0.033
Acenaphthylene			ND U			0.057	0.017
Anthracene			ND U			0.20	0.062
Benzo(a)anthracene			ND U		--	0.15	0.045
Benzo(a)pyrene			ND U			0.13	0.040
Benzo(b)fluoranthene			ND U			0.19	0.058
Benzo(k)fluoranthene			ND U		--	0.20	0.060
Benzo(g,h,i)perylene			ND U			0.20	0.061
4-Chloro-3-methylphenol			ND U			0.38	0.12
2-Chlorophenol			ND U			0.089	0.027
Chrysene			ND U			0.15	0.045
Dibenz(a,h)anthracene			ND U		--	0.38	0.11
Dibenzofuran			ND U			0.14	0.041
2,4-Dichlorophenol			ND U			0.30	0.092
Diethyl Phthalate			**0.48**		--	0.22	0.065
2,4-Dimethylphenol			ND U			0.56	0.17
4,6-Dinitro-2-methylphenol			ND U		--	3.4	1.0
2,4-Dinitrophenol			ND U			3.9	1.2
Fluoranthene			ND U		--	0.21	0.063
Fluorene			ND U			0.14	0.041
Indeno(1,2,3-cd)pyrene			ND U			0.27	0.080
2-Methylphenol			ND U		--	0.16	0.048
4-Methylphenol			ND U			0.19	0.057

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1307110 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 07/30/2013 By: JLB

Unit: ug/L Analytical Batch: 3G30046

4-Nitrophenol		ND U				4.2	1.2
2-Nitrophenol		ND U				0.16	0.048
Pentachlorophenol		ND U				0.42	0.13
Phenanthrene		ND U			--	0.14	0.043
Phenol		ND U			--	0.11	0.034
Pyrene		ND U				0.22	0.066
2,3,4,6-Tetrachlorophenol		ND U				1.2	0.37
2,3,5,6-Tetrachlorophenol		ND U				0.71	0.21
2,4,6-Trichlorophenol		ND U				0.28	0.085
2,4,5-Trichlorophenol		ND U				0.33	0.099
Surrogates:							
2-Fluorophenol			*36*	*20-70*			
Phenol-d6			*23*	*18-45*			
Nitrobenzene-d5			*63*	*31-123*			
2-Fluorobiphenyl			*64*	*25-113*			
2,4,6-Tribromophenol			*54*	*30-121*			
o-Terphenyl			*70*	*42-125*			

Laboratory Control Sample Analyzed: 07/26/2013 By: JLB

Unit: ug/L Analytical Batch: 3G26025

Acenaphthene	10.0	**8.04**	80	53-126	--	0.110	0.033
Acenaphthylene	10.0	**8.14**	81	62-133	--	0.0569	0.017
Anthracene	10.0	**8.31**	83	64-130	--	0.205	0.062
Benzo(a)anthracene	10.0	**8.42**	84	63-129	--	0.151	0.045
Benzo(a)pyrene	10.0	**8.48**	85	59-131	--	0.134	0.040
Benzo(b)fluoranthene	10.0	**8.18**	82	58-133	--	0.193	0.058
Benzo(k)fluoranthene	10.0	**8.21**	82	59-132	--	0.198	0.060
Benzo(g,h,i)perylene	10.0	**8.97**	90	52-129	--	0.203	0.061
4-Chloro-3-methylphenol	10.0	**8.78**	88	53-120	--	0.383	0.12
2-Chlorophenol	10.0	**7.04**	70	44-121	--	0.0889	0.027

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1307110 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C									
Laboratory Control Sample (Continued)					Analyzed:	07/26/2013	By: JLB		
Unit: ug/L					Analytical Batch:	3G26025			
Chrysene		10.0	**8.69**	87	66-134	--		0.151	0.045
Dibenz(a,h)anthracene		10.0	**8.80**	88	57-130	--		0.376	0.11
Dibenzofuran		10.0	**8.72**	87	59-123	--		0.136	0.041
2,4-Dichlorophenol		10.0	**8.20**	82	51-122	--		0.305	0.092
Diethyl Phthalate		10.0	**9.55**	96	55-129	--		0.217	0.065
2,4-Dimethylphenol		10.0	**7.25**	72	35-112	--		0.559	0.17
4,6-Dinitro-2-methylphenol		10.0	**6.91**	69	25-139	--		3.40	1.0
2,4-Dinitrophenol		10.0	**7.08**	71	10-147	--		3.86	1.2
Fluoranthene		10.0	**8.43**	84	64-138	--		0.209	0.063
Fluorene		10.0	**9.05**	90	60-128	--		0.138	0.041
Indeno(1,2,3-cd)pyrene		10.0	**9.00**	90	57-129	--		0.266	0.080
2-Methylphenol		10.0	**6.45**	64	39-107	--		0.158	0.048
4-Methylphenol		10.0	**6.15**	62	33-122	--		0.188	0.057
4-Nitrophenol		10.0	**3.40 J**	34	17-70	--		4.16	1.2
2-Nitrophenol		10.0	**8.32**	83	44-128	--		0.158	0.048
Pentachlorophenol		10.0	**5.85**	58	21-124	--		0.420	0.13
Phenanthrene		10.0	**8.25**	82	63-126	--		0.142	0.043
Phenol		10.0	**3.90**	39	22-60	--		0.112	0.034
Pyrene		10.0	**8.87**	89	60-134	--		0.218	0.066
2,3,4,6-Tetrachlorophenol		10.0	**9.34**	93	45-125	--		1.24	0.37
2,3,5,6-Tetrachlorophenol		10.0	**9.29**	93	50-150	--		0.709	0.21
2,4,6-Trichlorophenol		10.0	**7.91**	79	47-128	--		0.283	0.085
2,4,5-Trichlorophenol		10.0	**8.82**	88	53-129	--		0.330	0.099
Laboratory Control Sample					Analyzed:	07/30/2013	By: JLB		
Unit: ug/L					Analytical Batch:	3G30046			
Acenaphthene		10.0	**7.48**	75	53-126	--		0.110	0.033
Acenaphthylene		10.0	**7.56**	76	62-133	--		0.0569	0.017
Anthracene		10.0	**7.60**	76	64-130	--		0.205	0.062
Benzo(a)anthracene		10.0	**7.47**	75	63-129	--		0.151	0.045
Benzo(a)pyrene		10.0	**7.79**	78	59-131	--		0.134	0.040
Benzo(b)fluoranthene		10.0	**7.29**	73	58-133	--		0.193	0.058
Benzo(k)fluoranthene		10.0	**7.40**	74	59-132	--		0.198	0.060
Benzo(g,h,i)perylene		10.0	**8.26**	83	52-129	--		0.203	0.061
4-Chloro-3-methylphenol		10.0	**7.35**	74	53-120	--		0.383	0.12
2-Chlorophenol		10.0	**6.61**	66	44-121	--		0.0889	0.027
Chrysene		10.0	**7.77**	78	66-134	--		0.151	0.045

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1307110 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C									
Laboratory Control Sample (Continued)					Analyzed:	07/30/2013	By: JLB		
Unit: ug/L					Analytical Batch:	3G30046			
Dibenz(a,h)anthracene		10.0	**8.41**	84	57-130	--		0.376	0.11
Dibenzofuran		10.0	**8.10**	81	59-123	--		0.136	0.041
2,4-Dichlorophenol		10.0	**7.23**	72	51-122	--		0.305	0.092
Diethyl Phthalate		10.0	**8.86**	89	55-129	--		0.217	0.065
2,4-Dimethylphenol		10.0	**6.44**	64	35-112	--		0.559	0.17
4,6-Dinitro-2-methylphenol		10.0	**7.20**	72	25-139	--		3.40	1.0
2,4-Dinitrophenol		10.0	**6.09**	61	10-147	--		3.86	1.2
Fluoranthene		10.0	**7.64**	76	64-138	--		0.209	0.063
Fluorene		10.0	**8.52**	85	60-128	--		0.138	0.041
Indeno(1,2,3-cd)pyrene		10.0	**8.57**	86	57-129	--		0.266	0.080
2-Methylphenol		10.0	**5.85**	58	39-107	--		0.158	0.048
4-Methylphenol		10.0	**5.57**	56	33-122	--		0.188	0.057
4-Nitrophenol		10.0	**3.17 J**	32	17-70	--		4.16	1.2
2-Nitrophenol		10.0	**7.66**	77	44-128	--		0.158	0.048
Pentachlorophenol		10.0	**5.61**	56	21-124	--		0.420	0.13
Phenanthrene		10.0	**7.50**	75	63-126	--		0.142	0.043
Phenol		10.0	**3.41**	34	22-60	--		0.112	0.034
Pyrene		10.0	**8.35**	84	60-134	--		0.218	0.066
2,3,4,6-Tetrachlorophenol		10.0	**8.31**	83	45-125	--		1.24	0.37
2,3,5,6-Tetrachlorophenol		10.0	**8.03**	80	50-150	--		0.709	0.21
2,4,6-Trichlorophenol		10.0	**7.25**	72	47-128	--		0.283	0.085
2,4,5-Trichlorophenol		10.0	**7.62**	76	53-129	--		0.330	0.099

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Metals by EPA 6000/7000 Series Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Analyte: **Iron**/USEPA-6010C										
QC Batch: 1307218 (3020A Digestion)							Analyzed:	07/18/2013	By: KLV	
Method Blank			ND U	ug/L					22	6.5
Laboratory Control Sample		400	**398**	ug/L	100	80-120			21.7	6.5
1307137-01 [W-35A-070913]										
Matrix Spike	ND	400	**400**	ug/L	100	75-125			21.7	6.5
Matrix Spike Duplicate	ND	400	**393**	ug/L	98	75-125	2	20	21.7	6.5
Analyte: **Manganese**/USEPA-6010C										
QC Batch: 1307218 (3020A Digestion)							Analyzed:	07/18/2013	By: KLV	
Method Blank			ND U	ug/L					9.3	2.8
Laboratory Control Sample		400	**405**	ug/L	101	80-120			9.26	2.8
1307137-01 [W-35A-070913]										
Matrix Spike	129	400	**535**	ug/L	101	75-125			9.26	2.8
Matrix Spike Duplicate	129	400	**512**	ug/L	96	75-125	5	20	9.26	2.8

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QUALITY CONTROL REPORT

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Analyte: **Alkalinity, Total**/SM 2320 B										
QC Batch: 1307429 (Method Specific Preparation)							Analyzed:	07/22/2013	By: SKA	
Method Blank			**1.2 J**	mg/L					1.6	0.50
Laboratory Control Sample		238	**236**	mg/L	99	91-110			1.65	0.50
1307137-01 [W-35A-070913]										
Matrix Spike	480	238	**715**	mg/L	99	82-121			1.65	0.50
Duplicate	480		**483**	mg/L			0.6	20	1.65	0.50
Analyte: **Nitrogen, Nitrate**/SM 4500-NO3 F-2000										
QC Batch: 1307072 (General Inorganic Prep)							Analyzed:	07/10/2013	By: CAC	
Method Blank			ND U	mg/L					0.030	0.0089
Laboratory Control Sample		0.500	**0.486**	mg/L	97	90-110			0.0296	0.0089
1307137-01 [W-35A-070913]										
Matrix Spike	0.0630	0.500	**0.573**	mg/L	102	90-110			0.0296	0.0089
Matrix Spike Duplicate	0.0630	0.500	**0.571**	mg/L	102	90-110	0.3	20	0.0296	0.0089
QC Batch: 1307117 (General Inorganic Prep)							Analyzed:	07/11/2013	By: CAC	
Method Blank			ND U	mg/L					0.030	0.0089
Laboratory Control Sample		0.500	**0.487**	mg/L	97	90-110			0.0296	0.0089
1307138-01 [W-04AR]										
Matrix Spike	0.0368	0.500	**0.547**	mg/L	102	90-110			0.0296	0.0089
Matrix Spike Duplicate	0.0368	0.500	**0.559**	mg/L	104	90-110	2	20	0.0296	0.0089
Analyte: **Sulfate**/USEPA-9038										
QC Batch: 1307477 (General Inorganic Prep)							Analyzed:	07/22/2013	By: LMA	
Method Blank			ND U	mg/L					1.3	0.39
Laboratory Control Sample		20.0	**20.0**	mg/L	100	85-115			1.29	0.39

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STATEMENT OF DATA QUALIFICATIONS

Halogenated and Aromatic Volatiles by EPA Method 8021B

Qualification: The corresponding CCV for this analytical batch had a recovery exceeding the upper control limit of the method. A positive result for this analyte in any associated samples are considered estimated. Non-detectable results are not qualified.

Analysis: USEPA-8021B

Sample/Analyte:	1307138-02	W-30A	Naphthalene
	1307138-04	W-16AR	Naphthalene

Qualification: The analyte concentration in the associated MB was greater than the MDL but less than the RL. The positive sample result, which was greater than 5 times the MB value, is not considered estimated.

Analysis: USEPA-8021B

Sample/Analyte:	1307138-05	W-10AR2	Naphthalene
	1307138-06	W-99A	Naphthalene

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: The EPA hold time for sample pretreatment was exceeded.

Analysis: USEPA-8270C

Sample: 1307138-05RE1 W-10AR2

Qualification: Manual integration was required on the analytes listed below. All manual integrations were performed and reviewed in accordance with TriMatrix laboratory policy.

Analysis: USEPA-8270C

Sample/Analyte:	1307138-04	W-16AR	Acenaphthylene
	1307138-04	W-16AR	Diethyl Phthalate
	1307138-05	W-10AR2	Benzo(b)fluoranthene
	1307138-05	W-10AR2	Benzo(k)fluoranthene
	1307138-05RE1	W-10AR2	Acenaphthylene
	1307138-05RE1	W-10AR2	Benzo(a)anthracene
	1307138-05RE1	W-10AR2	Benzo(b)fluoranthene
	1307138-05RE1	W-10AR2	Benzo(k)fluoranthene
	1307138-05RE1	W-10AR2	Chrysene
	1307138-06	W-99A	Acenaphthylene
	1307138-06	W-99A	Benzo(a)anthracene
	1307138-06	W-99A	Benzo(b)fluoranthene
	1307138-06	W-99A	Benzo(k)fluoranthene
	1307138-06	W-99A	Chrysene

Qualification: The analyte concentration in the associated MB was greater than the MDL but less than the RL. The positive sample result, which was less than 5 times the MB value, is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:	1307137-01	W-35A-070913	Diethyl Phthalate
	1307137-02	W-37A-070913	Diethyl Phthalate
	1307137-03	W-26A-070913	Diethyl Phthalate
	1307137-04	W-25A-070913	Diethyl Phthalate
	1307137-06	EB-070913	Diethyl Phthalate
	1307138-01	W-04AR	Diethyl Phthalate
	1307138-03	W-36A	Diethyl Phthalate
	1307138-04	W-16AR	Diethyl Phthalate
	1307138-05	W-10AR2	Diethyl Phthalate
	1307138-05RE1	W-10AR2	Diethyl Phthalate
	1307138-06	W-99A	Diethyl Phthalate
	1307138-07	EB-071013	Diethyl Phthalate

Qualification: The RL for this analysis was elevated due to insufficient sample volume or weight received.

Analysis: USEPA-8270C

Sample: 1307137-01 W-35A-070913
1307137-02 W-37A-070913

Qualification: One or more surrogate recoveries for the sample were less than the lower control limit but greater than or equal to 10%. All results and reporting limits are considered estimated.

Analysis: USEPA-8270C

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Qualification: One or more surrogate recoveries for the sample were less than the lower control limit but greater than or equal to 10%. All results and reporting limits are considered estimated.

Analysis: USEPA-8270C

Sample: 1307138-05 W-10AR2

Qualification: One or more surrogate recoveries in the acid and/or base-neutral fraction(s) for the sample were less than the lower control limit but greater than or equal to 10%. All results and reporting limits from the same fraction are considered estimated.

Analysis: USEPA-8270C

Sample: 1307137-04 W-25A-070913
1307138-06 W-99A

Qualification: This sample was re-extracted due to low surrogate recovery in the initial extract. The re-extracted sample had acceptable surrogate recovery, but was extracted outside of the EPA holding time. Both sample extract results were reported.

Analysis: USEPA-8270C

Sample: 1307138-05 W-10AR2

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STATEMENT OF DATA QUALIFICATIONS

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Qualification: The concentration of analyte found in the matrix spike(s) exceeded the upper end of the calibration curve due to native analyte concentration found in the sample. Consequently matrix spike results are not available.

Analysis: USEPA-9038

Sample/Analyte:	1307137-01	W-35A-070913	Sulfate

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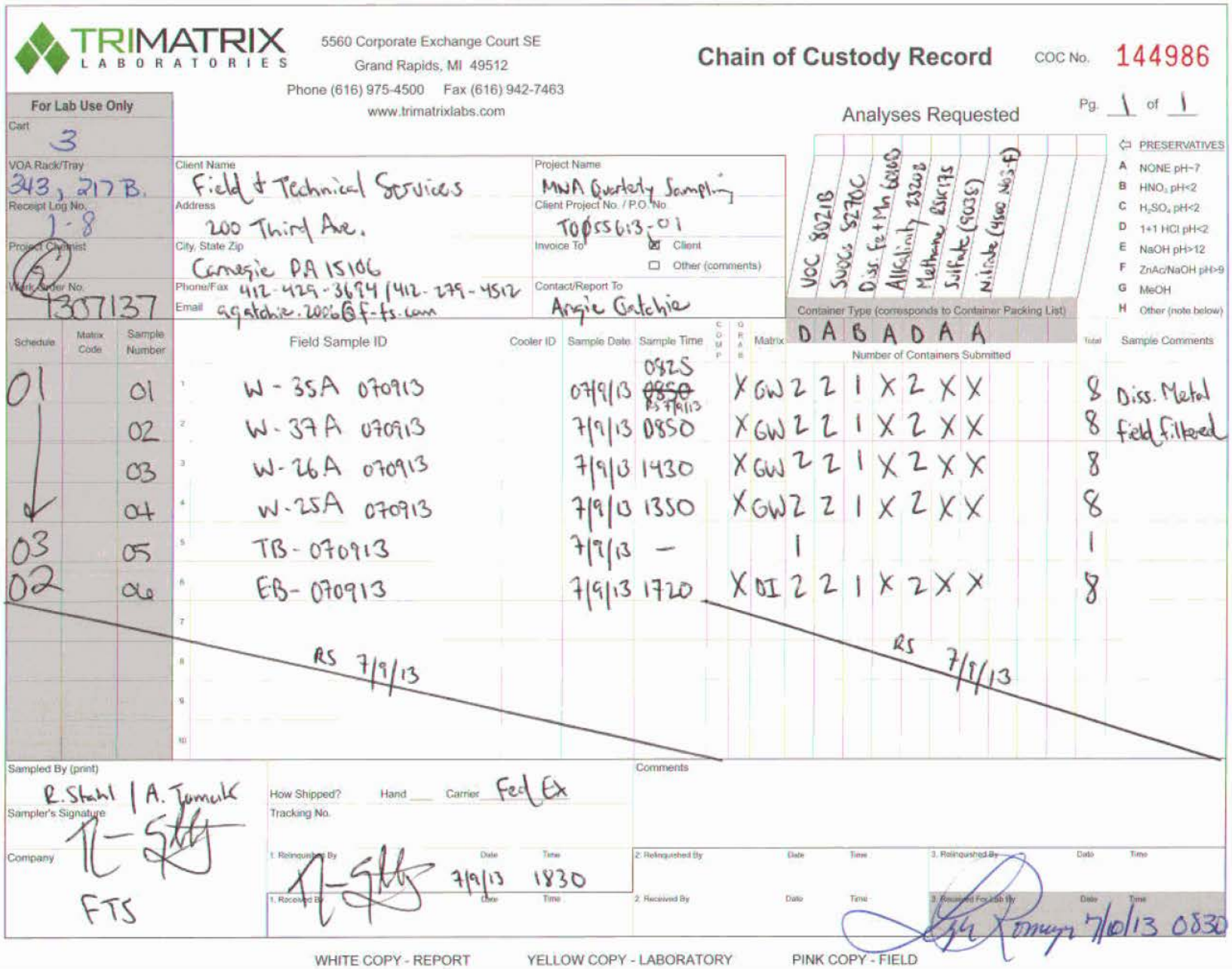

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Chain of Custody Record

COC No. 144986

Pg. 1 of 1

For Lab Use Only
Cart: 3
VOA Rack/Tray: 343, 217 B.
Receipt Log No.: 1-8
Project Chemist:
Work Order No.: 1307137

Client Name: Field & Technical Services
Address: 200 Third Ave.
City, State Zip: Carnegie PA 15106
Phone/Fax: 412-429-3694 / 412-279-4512
Email: agatchie.2006@f-ts.com

Project Name: MWA Quarterly Sampling
Client Project No. / P.O. No.: TOP55613-01
Invoice To: [x] Client [ ] Other (comments)
Contact/Report To: Angie Gatchie

Analyses Requested

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	VOC 80218	Sucos 52700	Diss. Fe+Mn 6020B	Alkalinity 2320B	Methane RSK175	Sulfate (9035)	Nitrate (4500 NO3-F)	Total	Sample Comments
01		01	W-35A 070913		07/9/13	~~0850~~ 0825 RS 7/9/13		X	GW	2	2	1	X	2	X	X	8	Diss. Metal
		02	W-37A 070913		7/9/13	0850		X	GW	2	2	1	X	2	X	X	8	field filtered
		03	W-26A 070913		7/9/13	1430		X	GW	2	2	1	X	2	X	X	8	
		04	W-25A 070913		7/9/13	1350		X	GW	2	2	1	X	2	X	X	8	
03		05	TB-070913		7/9/13	—						1					1	
02		06	EB-070913		7/9/13	1720		X	DI	2	2	1	X	2	X	X	8	

Container Type (corresponds to Container Packing List): D A B A D A A
Number of Containers Submitted

RS 7/9/13 RS 7/9/13

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Sampled By (print): R. Stahl / A. Jamulk
Sampler's Signature:
Company: FTS

How Shipped? Hand ___ Carrier Fed Ex
Tracking No.

1. Relinquished By: Date 7/9/13 Time 1830
1. Received By: Date Time
2. Relinquished By: Date Time
2. Received By: Date Time
3. Relinquished By: Date Time
3. Received For Lab By: Date 7/10/13 Time 0830

Comments

WHITE COPY - REPORT YELLOW COPY - LABORATORY PINK COPY - FIELD

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Field & Tech Srvs | Work Order #: 1307137
Receipt Record Page/Line #: 1-8 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): LR 7/10/13

Cooler ☑ | Box ☐ | Other ☐ | Qty Received: 2

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler #	–	3080	
Time	1152	1154	
Custody Seals	☐ None ☑ Present / Intact ☐ Present / Not Intact	☐ None ☑ Present / Intact ☐ Present / Not Intact	☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location:	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via:	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via:	☑ Temperature Blank (TB) ☐ 1 Container	☑ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C			
Temp Blank:	– / 5.5	– / 4.2	
TB location: Representative / Not Representative			
1	4.4 / – / 4.4	3.9 / – / 3.9	
2	4.6 / – / 4.6	3.3 / – / 3.3	
3	4.3 / – / 4.3	3.5 / – / 3.5	
Average °C	4.4	3.6	
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?		☑	

Cooler #			
Time			
Custody Seals	☐ None ☐ Present / Intact ☐ Present / Not Intact	☐ None ☐ Present / Intact ☐ Present / Not Intact	☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location:	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via:	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via:	☐ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C			
Temp Blank:			
TB location: Representative / Not Representative			
1			
2			
3			
Average °C			
☐ Cooler ID on COC?			
☐ VOC Trip Blank received?			

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☑ TriMatrix COC ☐ Other 144986

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☑		Completed Sample Preservation Verification Form?
☐	☑	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☑ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☑ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
7/10/13 0830	7/10/13 1209	Yes / (No)

Log In Forms - Receiving Log-In_Checklist revision: 3.4

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TRIMATRIX LABORATORIES SAMPLE PRESERVATION VERIFICATION FORM

page ____ of ____

Client	Field & Tech Services	Work Order #	1307137
Receipt Log #	1-8	Completed By (initials/date)	7/10/13
		Project Chemist	

COC ID # 144986

Adjusted by: _____ Date: _____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1					✓		✓	
COC Line #2					✓		✓	
COC Line #3					✓		✓	
COC Line #4					✓		✓	
COC Line #5								
COC Line #6					✓		✓	
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Ph Strip Lot #

☑ HC270245

☐ _____

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

COC ID # _____

Adjusted by: _____ Date: _____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms -- Sample_Preserve_Verification

version: 3.0

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TRIMATRIX LABORATORIES

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Grand Rapids, MI 49512
Phone (616) 975-4500 Fax (616) 942-7463
www.trimatrixlabs.com

Chain of Custody Record

COC No. 144985

Pg. 1 of 1

For Lab Use Only

Cart: Le
VOA Rack/Tray: 117, 27 Blue
Receipt Log No.: 3-12
Project Chemist: [illegible]
Work Order No.: 1307138

Client Name: Field & Technical Services
Address: 200 3rd Ave
City, State Zip: Carnegie PA 15106
Phone/Fax: 412-429-2694
Email: agatchie.2006@f-ts.com

Project Name: T0855613-01
Client Project No. / P.O. No.:
Invoice To: ☐ Client ☒ Other (comments)
Contact/Report To: Angie Gatchie

Analyses Requested: 8021B (VOCs) Benz+Napht; RSK 175 (Methane); 6010B diss metals Fe+Mn; SUCCs 8270C phenols PAH's; Nitrate 4500 NO3-F; Alkalinity (2320B); Sulfate 9038

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Container Type (corresponds to Container Packing List)

Schedule	Matrix Code	Sample Number	Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	Number of Containers Submitted							Sample Comments
01		01	W-04AR		7/10/13	0856		X	GW	2	2	1	2	X	X	X	Diss. Metals are field filtered
		02	W-30A		7/10/13	0805		X	GW	2	2	1	2	X	X	X	
		03	W-36A		7/10/13	1405		X	GW	2	2	1	2	X	X	X	
		04	W-16AR		7/10/13	1610		X	GW	2	2	1	2	X	X	X	
		05	W-10AR2		7/10/13	1045		X	GW	2	2	1	2	X	X	X	
		06	W-99A		7/10/13	2000		X	GW	2	2	1	2	X	X	X	
02		07	EB-071013		7/10/13	1715		X	DI	2	2	1	2	X	X	X	
03		08	TB-071013		—	—			—	1							

RS 7/10/13   RS 7/10/13

Sampled By (print): R. Stahl / A. Tomcik
Sampler's Signature: [signature]
Company: FTS

How Shipped? Hand ___ Carrier Fed Ex
Tracking No.

Comments

1. Relinquished By: [signature] Date: 7/10/13 Time: 1800
1. Received By:
2. Relinquished By: Date: Time:
2. Received By: Date: Time:
3. Relinquished By: Date: Time:
3. Received For Lab By: [signature] Date: 7/11/13 Time: 0810

WHITE COPY - REPORT   YELLOW COPY - LABORATORY   PINK COPY - FIELD

TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Field & Tech Services | Work Order #: 1307138
Receipt Record Page/Line #: 3-12 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): 7/11/13

☑ Cooler ☐ Box ☐ Other _____ | Qty Received: 3

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) | ☐ See Additional Cooler Information Form

Cooler #	3031	2630	MB709	
Time	1233	1238	1240	
Custody Seals:	☐ None ☑ Present / Intact ☐ Present / Not Intact	☐ None ☑ Present / Intact ☐ Present / Not Intact	☐ None ☑ Present / Intact ☐ Present / Not Intact	☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location:	(Dispersed) / Top / Middle / Bottom	(Dispersed) / Top / Middle / Bottom	(Dispersed) / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via:	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via:	☑ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container	☑ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C	Temp Blank: — / 3.7	Temp Blank:	Temp Blank: — / 2.8	Temp Blank:
TB location: (Representative) / Not Representative			(Representative) / Not Representative	Representative / Not Representative
1	2.5 — 2.5	2.5 — 2.5	2.3 — 2.3	
2	1.1 — 1.1	3.1 — 3.1	2.2 — 2.2	
3	2.2 — 2.2	2.8 — 2.8	2.9 — 2.9	
Average °C	1.9	2.8	2.5	
☐ Cooler ID on COC?				
☑ VOC Trip Blank received?			☐ VOC Trip Blank received?	☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☑ TriMatrix COC ☐ Other 144985

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☑		Completed Sample Preservation Verification Form?
☐	☑	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
☐	☐	☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☑ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED. COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☑ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
7/11/13 0810	7/11/13 1301	Yes / No

Log In Forms - Receiving Log-in_Checklist revision: 3.4

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SAMPLE PRESERVATION VERIFICATION FORM

page ____ of ____

Client: Fluid & Tech Services	Work Order #: 1307138
Receipt Log #: 3-12	Completed By (initials/date): JL 7/11/13
	Project Chemist:

COC ID #: 144985 | Adjusted by: ____ Date: ____ | DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1					✓		✓	
COC Line #2					✓		✓	
COC Line #3					✓		✓	
COC Line #4					✓		✓	
COC Line #5					✓		✓	
COC Line #6					✓		✓	
COC Line #7					✓		✓	
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Ph Strip Lot #

☑ HC270245

☐ ____

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

COC ID #: | Adjusted by: ____ Date: ____ | DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms -- Sample_Preserve_Verification

version: 3.0

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FTS, LLC

DATE: September 13, 2013

FROM: Kendra Chintella

SUBJECT: Superior Natural Attenuation GW

SAMPLE DELIVERY GROUP (SDG): 1307137/1307138

SAMPLES: W-35A-070913, W-37A-070913, W-26A-070913, W-25A-070913, TB-070913 TM3080, EB-070913, W-04AR, W-30A, W-36A, W-16AR, W-10AR2, W-99A(W-10AR2), EB-071013, TB-071013 TM3031

ANALYSES: Method 8021B (VOCs), 8270C (SVOCs), RSK-175 (Methane), 6010C (Dissolved Metals), 2320B (Total Alkalinity), 4500-NO3 (Nitrate Nitrogen), 9038 (Sulfate)

LABORATORY: Tri-Matrix Laboratories, Inc.

The data contained in this SDG were evaluated with regard to the following parameters:

□ Data Completeness
Noncompliance: None

□ Holding Times
Noncompliance: None

□ Laboratory Blank Contamination
Noncompliance: Alkalinity, diethyl phthalate, and naphthalene were detected in the method blank. See attached page for details.

□ Field Blank Contamination
Noncompliance: Alkalinity, diethyl phthalate, and methane were detected in the equipment blanks. See attached page for details.

□ Field Duplicate Precision
Noncompliance: See attached page for details.

□ Surrogate Recoveries
Noncompliance: The surrogate recovery of phenol-d6 fell below the control limits in sample W-25A. The surrogate recoveries of phenol-d6 and o-terphenyl fell below the control limits in sample W-99A. No action was taken on this basis. The surrogate recoveries of all of the surrogates fell below the control limits in sample W-10AR2. The sample was reextracted 2X outside of the hold time. The initial set of results will be presented and qualified as estimated, "J."

□ Laboratory Control Sample
Noncompliance: None

□ Matrix Spike/Matrix Spike Duplicate
Noncompliance: None

Laboratory Blank Contamination:

The following analytes were detected in the aqueous method blank at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
Alkalinity	1.2 J mg/l	6 mg/l
Diethyl phthalate	0.48 ug/l	2.4 ug/l
Naphthalene	0.75 J ug/l	3.75 ug/l

An action level of 5X the maximum concentration was used to evaluate the sample data for laboratory blank contamination. Associated samples with concentrations below the blank action level were qualified "U" for laboratory blank contamination.

Field Blank Contamination:

The following analytes were detected in the aqueous equipment blank, EB-070913, at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
Alkalinity	1.9 mg/l	9.5 mg/l
Diethyl phthalate	0.19 ug/l	0.95 ug/l

The following analytes were detected in the aqueous equipment blank, EB-071013, at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
Alkalinity	1.9 mg/l	9.5 mg/l
Diethyl phthalate	0.2 ug/l	1 ug/l
Methane	0.24 J ug/l	1.2 ug/l

An action level of 5X the maximum concentration was used to evaluate the sample data for field blank contamination. Associated samples with concentrations below the blank action level were qualified "B" for field blank contamination.

Field Duplicate Precision:

FIELD DUPLICATE PRECISION					
ANALYTE	W-10AR2	QUAL	W-99A	QUAL	RPD
2-Methylphenol	0.065	J	0.053	U	NC
4-Methylphenol	0.18	J	0.063	U	NC
Acenaphthene	22		5.1		124.72*
Acenaphthylene	0.3		0.1		100*
Alkalinity	420		430		2.35
Anthracene	0.26		0.068	U	NC
Benzene	16		17		6.06
Benzo(a)anthracene	0.22		0.056	J	118.84*
Benzo(a)pyrene	0.13	J	0.067	J	63.96*
Benzo(b)fluoranthene	0.2	J	0.089	J	76.82*
Benzo(k)fluoranthene	0.076	J	0.066	U	NC
Chrysene	0.18		0.056	J	105.08*
Dibenzofuran	6.1		1.1		138.89*

Diethyl phthalate	0.29		0.24		18.87
Fluoranthene	6.1		1.8		108.86*
Fluorene	7.5		1.8		122.58*
Iron	190		180		5.41
Manganese	140		120		15.38
Methane	590		630		6.56
Naphthalene	64		75		15.83
Nitrate	0.016	J	0.015	J	6.45
Pentachlorophenol	0.54		0.19	J	95.89*
Phenanthrene	3.4		0.5		148.72*
Phenol	0.28		0.14		66.67*
Pyrene	3.3		1.3		86.96*
Sulfate	21		26		21.28

ND – not calculated due to non-detect result

* - RPD is greater than 30%, associated samples are qualified as estimated, “J,” due to laboratory or field sampling imprecision

ARCADIS

CENSUS DNA Data

2340 Stock Creek Blvd.
Rockford TN 37853-3044
Phone: (865) 573-8188
Fax: (865) 573-8133
Email: info@microbe.com

Client: Angie Gatchie
Field & Technical Services
200 3rd Ave
Pittsburg, PA 15106

Phone: 412.279.3363

Fax: 412-279-4512

Identifier: 010KG **Date Rec:** 07/10/2013 **Report Date:** 07/17/2013

Client Project #: T0055613-01 **Client Project Name:** MNA Quaterly Sampling

Purchase Order #:

Analysis Requested: CENSUS, PLFA, Stable Isotope Probing

Reviewed By:

MICROBIAL INSIGHTS, INC.

2340 Stock Creek Blvd. Rockford, TN 37853-3044
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **Field & Technical Services**
Project: MNA Quaterly Sampling

MI Project Number: **010KG**
Date Received: 07/10/2013

Sample Information

Client Sample ID:		**W-35A**	**W-37A**	**W-26A**	**W-25A**	**W-04AR**
Sample Date:		07/09/2013	07/09/2013	07/09/2013	07/09/2013	07/10/2013
Units:		cells/mL	cells/mL	cells/mL	cells/mL	cells/mL
Analyst:		RW	RW	RW	RW	RW
Functional Genes						
Naphthalene Dioxygenase	NAH	**6.67E+03**	**4.29E+01**	**3.90E+00**	**8.78E+02**	**2.11E+01**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

MICROBIAL INSIGHTS, INC.

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CENSUS

Client: **Field & Technical Services**
Project: MNA Quaterly Sampling

MI Project Number: **010KG**
Date Received: 07/10/2013

Sample Information

Client Sample ID:		**W-30A**	**W-36A**	**W-16A**	**W-10AR2**
Sample Date:		07/10/2013	07/10/2013	07/10/2013	07/10/2013
Units:		cells/mL	cells/mL	cells/mL	cells/mL
Analyst:		RW	RW	RW	RW
Functional Genes					
Naphthalene Dioxygenase	NAH	**1.73E+03**	**4.12E+02**	**3.18E+05**	**3.15E+01**

Legend:
NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

ARCADIS

Stable Isotope Probing Data

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SITE LOGIC Report

Stable Isotope Probing (SIP) Study

Contact: Angie Gatchie
Address: Field and Technical Services
200 3rd Ave
Pittsburg, PA 15106

Phone: (412) 279-4512

Email: agatchie.2006@f-ts.com

MI Identifier: 010KG

Report Date: 09/19/2013

Project: MNA Quarterly Sampling; #T0055613-01

Comments:

Executive Summary

A Stable Isotope Probing (SIP) study was performed to determine whether biodegradation of naphthalene is occurring under existing site conditions. A Bio-Trap® sampler was baited with ^{13}C labeled naphthalene and was deployed in monitoring well W-30A. Following a 70-day deployment period, the Bio-Trap was recovered to quantify ^{13}C incorporation into biomass, dissolved inorganic carbon (DIC) and to quantify concentration of naphthalene dioxygenase (NAH). A complete summary of the SIP and PLFA results are provided in Table 1 and Figures 1 through 5.

Overall Observations

- Incorporation of ^{13}C into the microbial biomass and DIC conclusively demonstrated that naphthalene biodegradation occurred under existing site conditions in monitoring well W-30A.
    - Total PLFA biomass (10^5 cells/bead) fell within the moderate range. Additionally, CENSUS® results showed the concentration of the functional gene naphthalene dioxygenase was 1.73E+03 cells/bead.
    - The average PLFA $\delta^{13}C$ value (9,322‰) demonstrates a high level of ^{13}C labeled naphthalene incorporation into the biomass.
    - Furthermore, quantification of ^{13}C enriched DIC (8,271‰) confirms substantial ^{13}C naphthalene mineralization.
    - The PLFA community structure was dominated by monounsaturates, indicators of the diverse bacterial group *Proteobacteria,* which consists of both aerobic and anaerobic bacteria. Normal saturates and indicators for eukaryotes (polyenoics) were also detected.

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Overview of Approach

Stable Isotope Probing (SIP)

Stable isotope probing (SIP) is an innovative method to track the environmental fate of a "labeled" contaminant of concern to unambiguously demonstrate biodegradation. Two stable carbon isotopes exist in nature – carbon 12 (^{12}C), which accounts for 99% of carbon and carbon 13 (^{13}C), which is considerably less, abundant (~1%). With the SIP method, the Bio-Trap® sampler is baited with a specially synthesized form of the contaminant containing ^{13}C labeled carbon. Since ^{13}C is rare, the labeled compound can be readily differentiated from the contaminants present at the site. Following deployment, the Bio-Trap® is recovered and three approaches are used to conclusively demonstrate biodegradation of the contaminant of concern.

- The loss of the labeled compound provides an estimate of the degradation rate (% loss of ^{13}C).
- Quantification of ^{13}C enriched phospholipid fatty acids (PLFA) indicates incorporation into microbial biomass.
- Quantification of ^{13}C enriched dissolved inorganic carbon (DIC) indicates contaminant mineralization.

Phospholipid Fatty Acids (PLFA)

PLFA are a primary component of the membrane of all living cells including bacteria. PLFA decomposes rapidly upon cell death (1, 2), so the total amount of PLFA present in a sample is indicative of the viable biomass. When combined with stable isotope probing (SIP), incorporation of ^{13}C into PLFA is a conclusive indicator of biodegradation.

Some organisms produce "signature" types of PLFA allowing quantification of important microbial functional groups (e.g. iron reducers, sulfate reducers, or fermenters). The relative proportions of the groups of PLFA provide a "fingerprint" of the microbial community. In addition, *Proteobacteria* modify specific PLFA during periods of slow growth or in response to environmental stress providing an index of their health and metabolic activity.

CENSUS®

Based on quantitative polymerase chain reaction (qPCR), CENSUS® is a nucleic acid-based approach to quantify specific microorganisms, groups of microorganisms, or functional genes involved in bioremediation or other biological processes. CENSUS targets include bacteria and functional genes responsible for biodegradation of chlorinated solvents and petroleum products among others.

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Results

Table 1. Summary of the stable isotope probing results obtained from the Bio-Trap® Units.

Sample Information	W-30A
Microbial Populations (cells/bead)	
Naphthalene Dioxygenase (NAH)	1.73E+03
^{13}C Contaminant Loss	
^{13}C Naphthalene Pre-deployment (µg/bead)	97 ± 17
^{13}C Naphthalene Post-deployment (µg/bead)	31 ± 5
Biomass & ^{13}C Incorporation	
Total Biomass (Cells/bead)	1.92E+05
^{13}C Enriched Biomass (Cells/bead)	1.95E+04
Average PLFA δ^{13}C (‰)	9,322
Maximum PLFA δ^{13}C (‰)	14,381
^{13}C Mineralization	
DIC δ^{13}C (‰)	8,271
% 13C	9.37
Community Structure (% total PLFA)	
Firmicutes (TerBrSats)	0.2
Proteobacteria (Monos)	74.5
Anaerobic metal reducers (BrMonos)	0.0
Actinomycetes (MidBrSats)	1.1
General (Nsats)	22.1
Eukaryotes (Polyenoics)	2.2
Physiological Status (Proteobacteria only)	
Slowed Growth	0.26
Decreased Permeability	0.0

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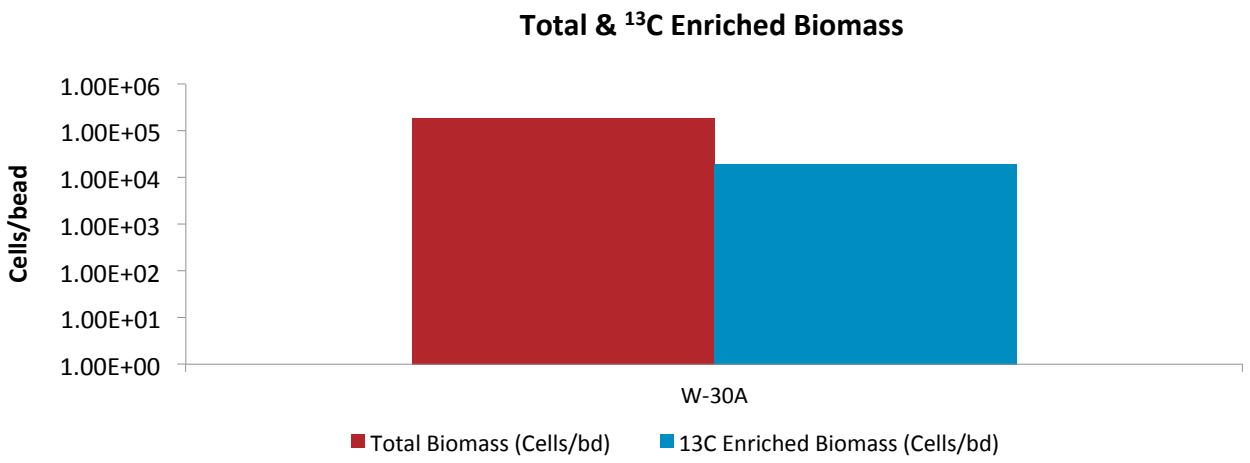

Figure 1. Biomass content is presented as a cell equivalent based on the total amount of phospholipid fatty acids (PLFA) extracted from a given sample. Total biomass is calculated based upon PLFA attributed to bacterial and eukaryotic biomass (associated with higher organisms).

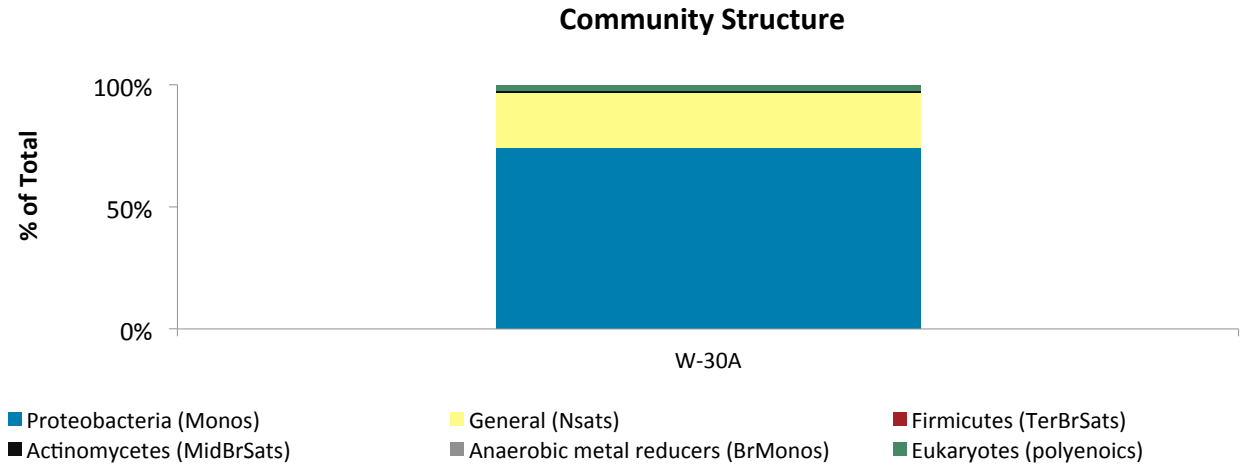

Figure 2. Relative percentages of total PLFA structural groups in the samples analyzed. Structural groups are assigned according to PLFA chemical structure, which is related to fatty acid biosynthesis. See the table in the interpretation section for detailed descriptions of the structural groups.

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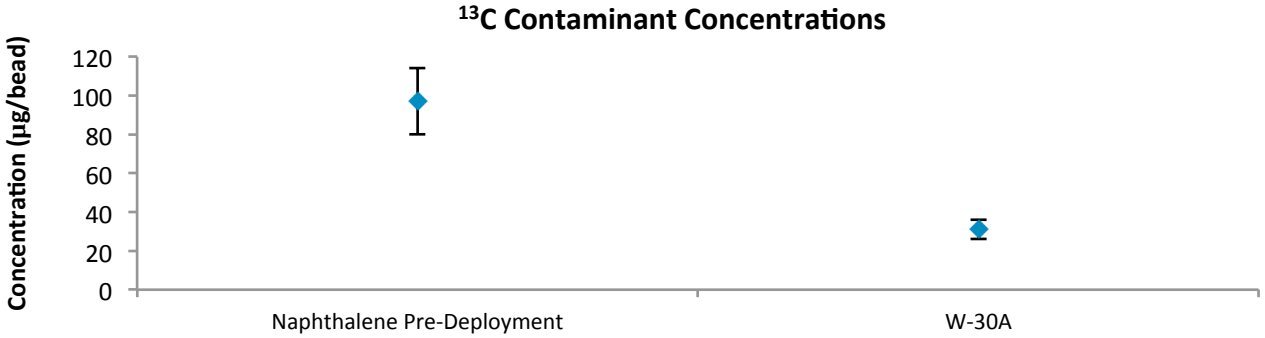

Figure 3. Comparison of Pre-deployment concentrations loaded on Bio-Sep beads to the concentrations detected after incubation.

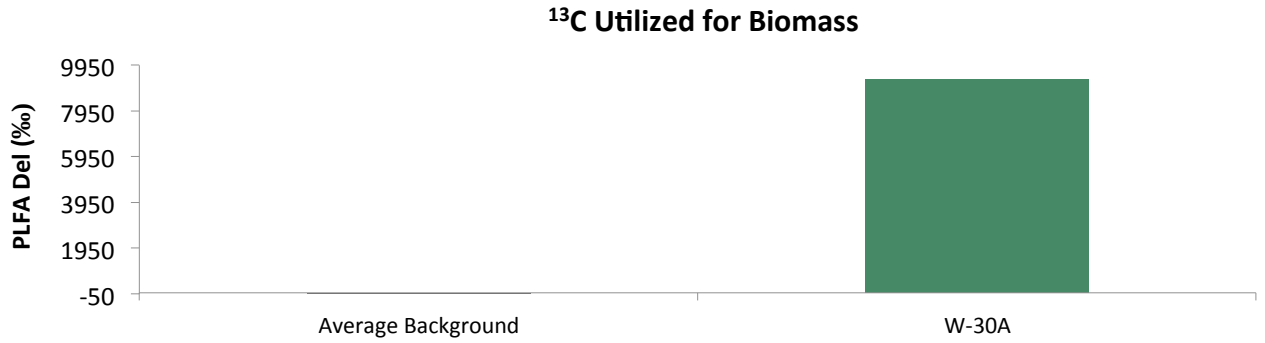

Figure 4. Comparison of the average Del value obtained from PLFA biomarkers from each Bio-Trap® unit to the average background Del observed in samples not exposed to ^{13}C enriched compounds.

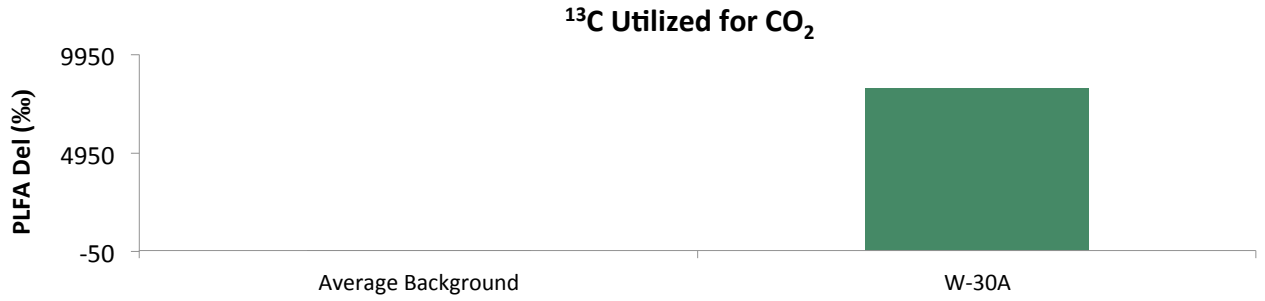

Figure 5. Comparison of the Del value obtained from DIC from each Bio-Trap® unit to the average background Del observed in samples not exposed to ^{13}C enriched compounds.

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Interpretation

Interpretation of the results of the SIP Bio-Trap® study must be performed with due consideration of site conditions, site activities, and the desired treatment mechanism. The following discussion describes interpretation of results in general terms and is meant to serve as a guide.

Contaminant Concentration: Bio-Traps® are baited with a ^{13}C labeled contaminant of concern and a pre-deployment concentration is determined prior to shipping. Following deployment, Bio-Traps® are recovered for analysis including measurement of the concentration of the ^{13}C labeled contaminant remaining. Pre- and post-deployment concentrations are used to calculate percent loss.

Biomass Concentrations: PLFA analysis is one of the most reliable and accurate methods available for the determination of viable (live) biomass. Phospholipids break down rapidly upon cell death, so biomass calculations based on PLFA content do not include "fossil" lipids from dead cells. Total biomass (cells/bead) is calculated from total PLFA using a conversion factor of 20,000 cells/pmole of PLFA. When making comparisons between wells, treatments, or over time, differences of one order of magnitude or more are considered significant.

Total Biomass		
Low	**Moderate**	**High**
10^3 to 10^4 cells	10^5 to 10^6 cells	10^7 to 10^8 cells

For SIP studies, the ^{13}C-enriched PLFA is also determined to conclusively demonstrate contaminant biodegradation and quantify incorporation into biomass as a result of the ^{13}C being used for cellular growth. The % ^{13}C incorporation (^{13}C enriched biomass/total biomass) is also provided in the data summary table, but the value must be interpreted carefully especially when comparing wells or treatments. Typically, biodegradation of a contaminant of concern is performed by a small subset of the total microbial community. For Bio-Traps® with large total biomass, the % ^{13}C incorporation value could be low despite significant ^{13}C labeled biomass and loss of the compound. The % ^{13}C incorporation should be viewed in light of total biomass, percent loss, and dissolved inorganic carbon (DIC) results.

^{13}C enrichment data is often reported as a del value. The del value is the difference between the isotopic ratio ($^{13}C/^{12}C$) of the sample (R_x) and a standard (R_{std}) normalized to the isotopic ratio of the standard (R_{std}) and multiplied by 1,000 (units are parts per thousand, denoted ‰).

R_{std} is the naturally occurring isotopic ratio and is approximately 0.011180 (roughly 1% of naturally occurring carbon is ^{13}C). The isotopic ratio, R_x, of PLFA is typically less than the R_{std} under natural conditions, resulting in a del value between -20 and -30‰. For a SIP Bio-Trap® study, biodegradation and incorporation of the ^{13}C labeled compound into PLFA results in a larger $^{13}C/^{12}C$ ratio (R_x) and thus del values greater than under natural conditions. Typical PLFA del values are provided below.

PLFA Del (‰)		
Low	**Moderate**	**High**
0 to 100	100 to 1,000	>1,000

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Dissolved Inorganic Carbon (DIC): Often, bacteria can utilize the ^{13}C labeled compound as both a carbon and energy source. The ^{13}C portion used as a carbon source for growth can be incorporated into PLFA as discussed above, while the ^{13}C used for energy is oxidized to $^{13}CO_2$ (mineralized).

^{13}C enriched CO_2 data is often reported as a del value as described above for PLFA. Under natural conditions, the R_x of CO_2 is approximately the same as R_{std} (0.01118 or about 1.1% ^{13}C). For an SIP Bio-Trap® study, mineralization of the ^{13}C labeled contaminant of concern would lead to a greater value of R_x (increased $^{13}CO_2$ production) and thus a positive del value. As with PLFA, del values between 0 and 100‰ are considered low, values between 100 and 1,000‰ are considered moderate, and values greater than 1,000‰ are considered high. Thus DIC $\%^{13}C$ are considered low if the value is less than 1.23%, moderate if between 1.23 and 2.24%, and high if greater than 2.24%.

Dissolved Inorganic Carbon (DIC) Del and $\%^{13}C$		
Low	**Moderate**	**High**
0 to 100	100 to 1,000	>1,000
1.11 to 1.23%	1.23 to 2.24%	>2.24%

Community Structure (% total PLFA): Community structure data is presented as a percentage of PLFA structural groups normalized to the total PLFA biomass. The relative proportions of the PLFA structural groups provide a "fingerprint" of the types of microbial groups (e.g. anaerobes, sulfate reducers, etc.) present and therefore offer insight into the dominant metabolic processes occurring at the sample location. Thorough interpretation of the PLFA structural groups depends in part on an understanding of site conditions and the desired microbial biodegradation pathways. For example, an increase in mid chain branched saturated PLFA (MidBrSats), indicative of sulfate reducing bacteria (SRB) and *Actinomycetes*, may be desirable at a site where anaerobic BTEX biodegradation is the treatment mechanism, but would not be desirable for a corrective action promoting aerobic BTEX or MTBE biodegradation. The following table provides a brief summary of each PLFA structural group and its potential relevance to bioremediation.

Description of PLFA structural groups:

PLFA Structural Group	General classification	Potential Relevance to Bioremediation Studies
Monoenoic (Monos)	Abundant in Proteobacteria (Gram negative bacteria), typically fast growing, utilize many carbon sources, and adapt quickly to a variety of environments.	Proteobacteria is one of the largest groups of bacteria and represents a wide variety of both aerobes and anaerobes. The majority of Hydrocarbon utilizing bacteria fall within the Proteobacteria
Terminally Branched Saturated (TerBrSats)	Characteristic of Firmicutes (Low G+C Gram-positive bacteria), and also found in Bacteriodes, and some Gram-negative bacteria (especially anaerobes).	Firmicutes are indicative of presence of anaerobic fermenting bacteria (mainly *Clostridia/Bacteriodes*-like), which produce the H_2 necessary for reductive dechlorination
Branched Monoenoic (BrMonos)	Found in the cell membranes of micro-aerophiles and anaerobes, such as sulfate- or iron-reducing bacteria	In contaminated environments high proportions are often associated with anaerobic sulfate and iron reducing bacteria
Mid-Chain Branched Saturated (MidBrSats)	Common in sulfate reducing bacteria and also Actinobacteria (High G+C Gram-positive bacteria).	In contaminated environments high proportions are often associated with anaerobic sulfate and iron reducing bacteria
Normal Saturated (Nsats)	Found in all organisms.	High proportions often indicate less diverse populations.
Polyenoic	Found in higher plants, and animals.	Eukaryotic scavengers will often prey on contaminant utilizing bacteria.

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Physiological Status (*Proteobacteria*): Some *Proteobacteria* modify specific PLFA as a strategy to adapt to stressful environmental conditions (3, 4). For example, *cis* monounsaturated fatty acids may be modified to cyclopropyl fatty acids during periods of slowed growth or modified to *trans* monounsaturated fatty acids to decrease membrane permeability in response to environmental stress. The ratio of product to substrate fatty acid thus provides an index of their health and metabolic activity. In general, status ratios greater than 0.25 indicate a response to unfavorable environmental conditions.

Glossary

Del: A Del value is the difference between the isotopic ratio ($^{13}C/^{12}C$) of the sample (R_x) and a standard (R_{std}) normalized to the isotopic ratio of the standard (R_{std}) and multiplied by 1,000 (units are parts per thousand denoted ‰).

$$Del = (R_x - R_{std})/R_{std} \times 1000$$

References

1. White, D.C., W.M. Davis, J.S. Nickels, J.D. King, and R.J. Bobbie. 1979. Determination of the sedimentary microbial biomass by extractable lipid phosphate. Oecologia 40:51-62.
2. White, D.C. and D.B. Ringelberg. 1995. Utility of signature lipid biomarker analysis in determining in situ viable biomass. In P.S. Amy and D.L. Halderman (eds.) The microbiology of the terrestrial surface. CRC Press, Boca Raton.
3. Guckert, J.B., M.A. Hood, and D.C. White. 1986. Phospholipid ester-linked fatty acid profile changes during nutrient deprivation of *Vibrio chloerae*: increases in the trans/cis ratio and proportions of cyclopropyl fatty acids. Applied and Environmental Microbiology. 52:794-801.
4. Tsitko, I.V., G. M. Zaitsev, A. G. Lobanok, and M.S. Salkinoja-Salonen. 1999. Effect of aromatic compounds on cellular fatty acid composition of *Rhodococcus opacus*. Applied and Environmental Microbiology. 65:853-855.

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ARCADIS

Laboratory Analytical and Data Validation Reports

October 2013

October 28, 2013

Beazer East, Inc.
Attn: Ms. Angie Gatchie c/o FTS
200 Third Avenue
Carnegie, PA 15106

Project: Superior Quarterly MNA GW - WI Cert. #999472650

Dear Ms. Angie Gatchie c/o FTS,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1310189	10/09/2013	Laboratory Services
1310231	10/10/2013	Laboratory Services
1310252	10/11/2013	Laboratory Services

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request. LOD and LOQ values associated with samples requiring a dilution have been adjusted based on the dilution factor.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Gary L. Wood
Project Chemist

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PROJECT TECHNICAL NARRATIVE(s)

Halogenated and Aromatic Volatiles by EPA Method 8021B

Narrative: Due to insufficient sample volume, matrix QC was not performed on this batch. A blank and a Laboratory Control Sample make up the batch QC.

Analysis: USEPA-8021B

Sample/Analyte:

1310189-01	SUPE-W-35A-100813
1310189-02	SUPE-W-37A-100813
1310189-03	SUPE-EB-01-100813
1310189-04	SUPE-W-26A-100813
1310189-05	SUPE-TB-01-100813
1310231-01	SUPE-W-25A-100913
1310231-02	SUPE-EB-02-100913
1310231-03	SUPE-W-36A-100913
1310252-01	SUPE-W-16AR-101013

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PROJECT TECHNICAL NARRATIVE(s)

Dissolved Gases in Water by RSK-175 Headspace Analysis

Narrative: Due to insufficient sample volume, matrix QC was not performed on this batch. A blank and a Laboratory Control Sample make up the batch QC.

Analysis: RSK-175

Sample/Analyte:
1310189-01 SUPE-W-35A-100813
1310189-02 SUPE-W-37A-100813
1310189-03 SUPE-EB-01-100813
1310189-04 SUPE-W-26A-100813
1310231-01 SUPE-W-25A-100913
1310231-02 SUPE-EB-02-100913
1310231-03 SUPE-W-36A-100913
1310252-01 SUPE-W-16AR-101013

Narrative: The analyte concentration in the associated MB was greater than the MDL but less than the RL. The positive sample result, which was greater than 5 times the MB value, is not qualified.

Analysis: RSK-175

Sample/Analyte:		
1310189-01	SUPE-W-35A-100813	Methane
1310189-04	SUPE-W-26A-100813	Methane
1310231-01	SUPE-W-25A-100913	Methane
1310231-03	SUPE-W-36A-100913	Methane
1310252-01	SUPE-W-16AR-101013	Methane

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PROJECT TECHNICAL NARRATIVE(s)

Semivolatile Organic Compounds by EPA Method 8270C

Narrative: Due to insufficient sample volume, matrix QC was not performed on this batch. A blank and a Laboratory Control Sample make up the batch QC.

Analysis: USEPA-8270C

Sample/Analyte:
1310189-01 SUPE-W-35A-100813
1310189-02 SUPE-W-37A-100813
1310189-03 SUPE-EB-01-100813
1310189-04 SUPE-W-26A-100813
1310231-01 SUPE-W-25A-100913
1310231-02 SUPE-EB-02-100913
1310231-03 SUPE-W-36A-100913
1310252-01 SUPE-W-16AR-101013

Narrative: Manual integration was required on the analytes listed below. All manual integrations were performed and reviewed in accordance with TriMatrix laboratory policy.

Analysis: USEPA-8270C

Sample/Analyte:		
1310231-03	SUPE-W-36A-100913	Benzo(a)anthracene
1310231-03	SUPE-W-36A-100913	Chrysene
1310988-BS2		Indeno(1,2,3-cd)pyrene

Narrative: The RL for this analysis was elevated due to insufficient sample volume or weight received.

Analysis: USEPA-8270C

Sample/Analyte:
1310189-01 SUPE-W-35A-100813
1310189-02 SUPE-W-37A-100813
1310189-03 SUPE-EB-01-100813

Narrative: 3-Methylphenol cannot be resolved from 4-Methylphenol due to chromatographic limitations. The reported result could be 3-Methylphenol, 4-Methylphenol, or a combination of both isomers.

Analysis: USEPA-8270C

Sample/Analyte:		
1310231-03	SUPE-W-36A-100913	4-Methylphenol
1310252-01	SUPE-W-16AR-101013	4-Methylphenol

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PROJECT TECHNICAL NARRATIVE(s)

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Narrative: The CRL recovery for this analyte was outside of the laboratory control limits.

Analysis: SM 4500-NO3 F-2000

3J24038-CRL1 Nitrogen, Nitrate

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STATEMENT OF DATA QUALIFICATIONS

Dissolved Gases in Water by RSK-175 Headspace Analysis

Qualification: The analyte concentration in the associated MB was greater than the MDL but less than the RL. The positive sample result, which was less than 5 times the MB value, is considered estimated.

Analysis: RSK-175

Sample/Analyte:		
1310189-02	SUPE-W-37A-100813	Methane
1310189-03	SUPE-EB-01-100813	Methane
1310231-02	SUPE-EB-02-100913	Methane

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: The analyte concentration in the associated MB was greater than the MDL but less than the RL. The positive sample result, which was less than 5 times the MB value, is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:		
1310189-01	SUPE-W-35A-100813	Diethyl Phthalate
1310189-02	SUPE-W-37A-100813	Diethyl Phthalate
1310189-03	SUPE-EB-01-100813	Diethyl Phthalate
1310189-04	SUPE-W-26A-100813	Diethyl Phthalate
1310231-01	SUPE-W-25A-100913	Diethyl Phthalate
1310231-02	SUPE-EB-02-100913	Diethyl Phthalate
1310231-03	SUPE-W-36A-100913	Diethyl Phthalate
1310252-01	SUPE-W-16AR-101013	Diethyl Phthalate

Qualification: One or more surrogate recoveries in the acid and/or base-neutral fraction(s) for the sample were less than the lower control limit but greater than or equal to 10%. All results and reporting limits from the same fraction are considered estimated.

Analysis: USEPA-8270C

Sample: 1310189-04 SUPE-W-26A-100813

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-35A-100813**	Sampled:	10/8/13 9:27		
Lab Sample ID:	**1310189-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/14/13 8:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/14/13 15:30	By:	LEW
QC Batch:	1310945	Analytical Batch:	3J15002		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*97*	*81-126*
aaa-Trifluorotoluene	*102*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-35A-100813**	Sampled:	10/8/13 9:27
Lab Sample ID:	**1310189-01**	Sampled By:	Client
Matrix:	Water	Received:	10/9/13 8:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**17**	0.48	0.14	ug/L	1	RSK-175	10/17/13 09:40	JMF	1310984

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-35A-100813**	Sampled:	10/8/13 9:27		
Lab Sample ID:	**1310189-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/18/13 21:52	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.12	0.035
208-96-8	Acenaphthylene	NDU	0.061	0.018
120-12-7	Anthracene	NDU	0.22	0.066
56-55-3	Benzo(a)anthracene	NDU	0.16	0.049
50-32-8	Benzo(a)pyrene	NDU	0.14	0.043
205-99-2	Benzo(b)fluoranthene	NDU	0.21	0.062
207-08-9	Benzo(k)fluoranthene	NDU	0.21	0.064
191-24-2	Benzo(g,h,i)perylene	NDU	0.22	0.065
59-50-7	4-Chloro-3-methylphenol	NDU	0.41	0.12
95-57-8	2-Chlorophenol	NDU	0.096	0.029
218-01-9	Chrysene	NDU	0.16	0.049
53-70-3	Dibenz(a,h)anthracene	NDU	0.40	0.12
132-64-9	Dibenzofuran	NDU	0.15	0.044
120-83-2	2,4-Dichlorophenol	NDU	0.33	0.098
*84-66-2	Diethyl Phthalate	**0.20PB**	0.23	0.070
105-67-9	2,4-Dimethylphenol	NDU	0.60	0.18
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.7	1.1
51-28-5	2,4-Dinitrophenol	NDU	4.2	1.2
206-44-0	Fluoranthene	NDU	0.22	0.067
86-73-7	Fluorene	NDU	0.15	0.044
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.29	0.086
95-48-7	2-Methylphenol	NDU	0.17	0.051
106-44-5	4-Methylphenol	NDU	0.20	0.061
100-02-7	4-Nitrophenol	NDU	4.5	1.3
88-75-5	2-Nitrophenol	NDU	0.17	0.051
87-86-5	Pentachlorophenol	NDU	0.29	0.087
85-01-8	Phenanthrene	NDU	0.15	0.046
108-95-2	Phenol	NDU	0.12	0.036
129-00-0	Pyrene	NDU	0.23	0.071

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-35A-100813**	Sampled:	10/8/13 9:27		
Lab Sample ID:	**1310189-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/18/13 21:52	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.3	0.40
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.76	0.23
88-06-2	2,4,6-Trichlorophenol	NDU	0.30	0.092
95-95-4	2,4,5-Trichlorophenol	NDU	0.36	0.11

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*29*	*20-70*
Phenol-d6	*19*	*18-45*
Nitrobenzene-d5	*57*	*31-123*
2-Fluorobiphenyl	*57*	*25-113*
2,4,6-Tribromophenol	*51*	*30-121*
o-Terphenyl	*63*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-35A-100813**	Sampled:	10/8/13 9:27
Lab Sample ID:	**1310189-01**	Sampled By:	Client
Matrix:	Water	Received:	10/9/13 8:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**7.6**	**J**	22	6.5	ug/L	1	USEPA-6010C	10/17/13 11:12	CKD	1310906
Manganese	**140**		9.3	2.8	ug/L	1	USEPA-6010C	10/17/13 11:12	CKD	1310906

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-35A-100813**	Sampled:	10/8/13 9:27
Lab Sample ID:	**1310189-01**	Sampled By:	Client
Matrix:	Water	Received:	10/9/13 8:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**490**		1.6	0.50	mg/L	1	SM 2320 B	10/18/13 10:16	SKA	1311109
Nitrogen, Nitrate	**0.0094**	**J**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	10/09/13 13:45	CAC	1310732
Sulfate	**65**		2.6	0.77	mg/L	2	USEPA-9038	10/14/13 14:11	LMA	1310923

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-37A-100813**	Sampled:	10/8/13 12:24		
Lab Sample ID:	**1310189-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/14/13 8:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/14/13 16:19	By:	LEW
QC Batch:	1310945	Analytical Batch:	3J15002		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*94*	*81-126*
aaa-Trifluorotoluene	*103*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-37A-100813**	Sampled:	10/8/13 12:24
Lab Sample ID:	**1310189-02**	Sampled By:	Client
Matrix:	Water	Received:	10/9/13 8:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
*Methane	**0.25 PB**	0.48	0.14	ug/L	1	RSK-175	10/17/13 09:43	JMF	1310984

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-37A-100813**	Sampled:	10/8/13 12:24		
Lab Sample ID:	**1310189-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/18/13 22:26	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.12	0.036
208-96-8	Acenaphthylene	NDU	0.062	0.019
120-12-7	Anthracene	NDU	0.22	0.067
56-55-3	Benzo(a)anthracene	NDU	0.16	0.049
50-32-8	Benzo(a)pyrene	NDU	0.15	0.044
205-99-2	Benzo(b)fluoranthene	NDU	0.21	0.063
207-08-9	Benzo(k)fluoranthene	NDU	0.22	0.065
191-24-2	Benzo(g,h,i)perylene	NDU	0.22	0.066
59-50-7	4-Chloro-3-methylphenol	NDU	0.42	0.12
95-57-8	2-Chlorophenol	NDU	0.097	0.029
218-01-9	Chrysene	NDU	0.16	0.049
53-70-3	Dibenz(a,h)anthracene	NDU	0.41	0.12
132-64-9	Dibenzofuran	NDU	0.15	0.044
120-83-2	2,4-Dichlorophenol	NDU	0.33	0.099
*84-66-2	Diethyl Phthalate	**0.14PB**	0.24	0.071
105-67-9	2,4-Dimethylphenol	NDU	0.61	0.18
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.7	1.1
51-28-5	2,4-Dinitrophenol	NDU	4.2	1.3
206-44-0	Fluoranthene	NDU	0.23	0.068
86-73-7	Fluorene	NDU	0.15	0.045
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.29	0.087
95-48-7	2-Methylphenol	NDU	0.17	0.052
106-44-5	4-Methylphenol	NDU	0.20	0.062
100-02-7	4-Nitrophenol	NDU	4.5	1.4
88-75-5	2-Nitrophenol	NDU	0.17	0.052
87-86-5	Pentachlorophenol	NDU	0.29	0.088
85-01-8	Phenanthrene	NDU	0.15	0.046
108-95-2	Phenol	NDU	0.12	0.037
129-00-0	Pyrene	NDU	0.24	0.071

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ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-37A-100813**	Sampled:	10/8/13 12:24		
Lab Sample ID:	**1310189-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/18/13 22:26	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.3	0.40
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.77	0.23
88-06-2	2,4,6-Trichlorophenol	NDU	0.31	0.092
95-95-4	2,4,5-Trichlorophenol	NDU	0.36	0.11

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*30*	*20-70*
Phenol-d6	*20*	*18-45*
Nitrobenzene-d5	*57*	*31-123*
2-Fluorobiphenyl	*55*	*25-113*
2,4,6-Tribromophenol	*52*	*30-121*
o-Terphenyl	*60*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-37A-100813**	Sampled:	10/8/13 12:24
Lab Sample ID:	**1310189-02**	Sampled By:	Client
Matrix:	Water	Received:	10/9/13 8:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	10/17/13 11:37	CKD	1310906
Manganese	**3.2**	**J**	9.3	2.8	ug/L	1	USEPA-6010C	10/17/13 11:37	CKD	1310906

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TRIMATRIX LABORATORIES

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Client:	**Beazer East, Inc.**	Work Order:	**1310189**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-37A-100813**	Sampled:	10/8/13 12:24
Lab Sample ID:	**1310189-02**	Sampled By:	Client
Matrix:	Water	Received:	10/9/13 8:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**710**	1.6	0.50	mg/L	1	SM 2320 B	10/18/13 10:16	SKA	1311109
Nitrogen, Nitrate	**0.33**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	10/09/13 13:51	CAC	1310732
Sulfate	**37**	2.6	0.77	mg/L	2	USEPA-9038	10/14/13 14:11	LMA	1310923

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-01-100813**	Sampled:	10/8/13 14:00		
Lab Sample ID:	**1310189-03**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/14/13 8:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/14/13 13:03	By:	LEW
QC Batch:	1310945	Analytical Batch:	3J15002		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*93*	*81-126*
aaa-Trifluorotoluene	*101*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-01-100813**	Sampled:	10/8/13 14:00
Lab Sample ID:	**1310189-03**	Sampled By:	Client
Matrix:	Water	Received:	10/9/13 8:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
*Methane	**0.21 PB**	0.48	0.14	ug/L	1	RSK-175	10/17/13 09:47	JMF	1310984

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-01-100813**	Sampled:	10/8/13 14:00		
Lab Sample ID:	**1310189-03**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/18/13 23:01	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.12	0.035
208-96-8	Acenaphthylene	NDU	0.061	0.018
120-12-7	Anthracene	NDU	0.22	0.065
56-55-3	Benzo(a)anthracene	NDU	0.16	0.048
50-32-8	Benzo(a)pyrene	NDU	0.14	0.043
205-99-2	Benzo(b)fluoranthene	NDU	0.21	0.062
207-08-9	Benzo(k)fluoranthene	NDU	0.21	0.063
191-24-2	Benzo(g,h,i)perylene	NDU	0.22	0.065
59-50-7	4-Chloro-3-methylphenol	NDU	0.41	0.12
95-57-8	2-Chlorophenol	NDU	0.095	0.028
218-01-9	Chrysene	NDU	0.16	0.048
53-70-3	Dibenz(a,h)anthracene	NDU	0.40	0.12
132-64-9	Dibenzofuran	NDU	0.14	0.043
120-83-2	2,4-Dichlorophenol	NDU	0.32	0.097
*84-66-2	Diethyl Phthalate	**0.11PB**	0.23	0.069
105-67-9	2,4-Dimethylphenol	NDU	0.60	0.18
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.6	1.1
51-28-5	2,4-Dinitrophenol	NDU	4.1	1.2
206-44-0	Fluoranthene	NDU	0.22	0.067
86-73-7	Fluorene	NDU	0.15	0.044
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.28	0.085
95-48-7	2-Methylphenol	NDU	0.17	0.051
106-44-5	4-Methylphenol	NDU	0.20	0.060
100-02-7	4-Nitrophenol	NDU	4.4	1.3
88-75-5	2-Nitrophenol	NDU	0.17	0.051
87-86-5	Pentachlorophenol	NDU	0.29	0.086
85-01-8	Phenanthrene	NDU	0.15	0.045
108-95-2	Phenol	NDU	0.12	0.036
129-00-0	Pyrene	NDU	0.23	0.070

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-01-100813**	Sampled:	10/8/13 14:00		
Lab Sample ID:	**1310189-03**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/18/13 23:01	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.3	0.39
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.75	0.23
88-06-2	2,4,6-Trichlorophenol	NDU	0.30	0.091
95-95-4	2,4,5-Trichlorophenol	NDU	0.35	0.11

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*33*	*20-70*
Phenol-d6	*22*	*18-45*
Nitrobenzene-d5	*59*	*31-123*
2-Fluorobiphenyl	*53*	*25-113*
2,4,6-Tribromophenol	*56*	*30-121*
o-Terphenyl	*60*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-01-100813**	Sampled:	10/8/13 14:00
Lab Sample ID:	**1310189-03**	Sampled By:	Client
Matrix:	Water	Received:	10/9/13 8:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	10/17/13 11:40	CKD	1310906
Manganese	ND	U	9.3	2.8	ug/L	1	USEPA-6010C	10/17/13 11:40	CKD	1310906

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-01-100813**	Sampled:	10/8/13 14:00
Lab Sample ID:	**1310189-03**	Sampled By:	Client
Matrix:	Water	Received:	10/9/13 8:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Nitrogen, Nitrate	ND	U	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	10/09/13 13:52	CAC	1310732
Alkalinity, Total	**0.98**	**J**	1.6	0.50	mg/L	1	SM 2320 B	10/18/13 10:16	SKA	1311109
Sulfate	ND	U	1.3	0.39	mg/L	1	USEPA-9038	10/14/13 13:41	LMA	1310923

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-26A-100813**	Sampled:	10/8/13 14:50		
Lab Sample ID:	**1310189-04**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/14/13 8:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/14/13 17:09	By:	LEW
QC Batch:	1310945	Analytical Batch:	3J15002		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*92*	*81-126*
aaa-Trifluorotoluene	*102*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-26A-100813**	Sampled:	10/8/13 14:50
Lab Sample ID:	**1310189-04**	Sampled By:	Client
Matrix:	Water	Received:	10/9/13 8:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**20**	0.48	0.14	ug/L	1	RSK-175	10/17/13 09:52	JMF	1310984

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-26A-100813**	Sampled:	10/8/13 14:50		
Lab Sample ID:	**1310189-04**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/18/13 23:37	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

*Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.17PB**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	NDU	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-26A-100813**	Sampled:	10/8/13 14:50		
Lab Sample ID:	**1310189-04**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/18/13 23:37	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

*Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*22*	*20-70*
Phenol-d6	***16***	*18-45*
Nitrobenzene-d5	*58*	*31-123*
2-Fluorobiphenyl	*53*	*25-113*
2,4,6-Tribromophenol	*43*	*30-121*
o-Terphenyl	*62*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-26A-100813**	Sampled:	10/8/13 14:50
Lab Sample ID:	**1310189-04**	Sampled By:	Client
Matrix:	Water	Received:	10/9/13 8:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**7.0**	**J**	22	6.5	ug/L	1	USEPA-6010C	10/17/13 11:43	CKD	1310906
Manganese	**12**		9.3	2.8	ug/L	1	USEPA-6010C	10/17/13 11:43	CKD	1310906

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-26A-100813**	Sampled:	10/8/13 14:50
Lab Sample ID:	**1310189-04**	Sampled By:	Client
Matrix:	Water	Received:	10/9/13 8:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Nitrogen, Nitrate	**0.28**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	10/09/13 13:52	CAC	1310732
Alkalinity, Total	**330**	1.6	0.50	mg/L	1	SM 2320 B	10/18/13 10:16	SKA	1311109
Sulfate	**39**	2.6	0.77	mg/L	2	USEPA-9038	10/14/13 14:11	LMA	1310923

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310189**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-TB-01-100813**	Sampled:	10/8/13 20:00		
Lab Sample ID:	**1310189-05**	Sampled By:	TML		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/14/13 8:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/14/13 13:52	By:	LEW
QC Batch:	1310945	Analytical Batch:	3J15002		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*92*	*81-126*
aaa-Trifluorotoluene	*102*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-25A-100913**	Sampled:	10/9/13 8:42		
Lab Sample ID:	**1310231-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/14/13 8:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/14/13 17:58	By:	LEW
QC Batch:	1310945	Analytical Batch:	3J15002		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*92*	*81-126*
aaa-Trifluorotoluene	*103*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-25A-100913**	Sampled:	10/9/13 8:42
Lab Sample ID:	**1310231-01**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**34**	0.48	0.14	ug/L	1	RSK-175	10/17/13 10:06	JMF	1310984

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-25A-100913**	Sampled:	10/9/13 8:42		
Lab Sample ID:	**1310231-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/19/13 0:11	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.20PB**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	**2.3**	0.27	0.081
85-01-8	Phenanthrene	NDU	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066

Continued on next page

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ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-25A-100913**	Sampled:	10/9/13 8:42		
Lab Sample ID:	**1310231-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/19/13 0:11	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*30*	*20-70*
Phenol-d6	*18*	*18-45*
Nitrobenzene-d5	*60*	*31-123*
2-Fluorobiphenyl	*57*	*25-113*
2,4,6-Tribromophenol	*58*	*30-121*
o-Terphenyl	*62*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-25A-100913**	Sampled:	10/9/13 8:42
Lab Sample ID:	**1310231-01**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	10/17/13 11:53	CKD	1310906
Manganese	**23**		9.3	2.8	ug/L	1	USEPA-6010C	10/17/13 11:53	CKD	1310906

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-25A-100913**	Sampled:	10/9/13 8:42
Lab Sample ID:	**1310231-01**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Sulfate	**41**		2.6	0.77	mg/L	2	USEPA-9038	10/14/13 14:13	LMA	1310923
Alkalinity, Total	**580**		1.6	0.50	mg/L	1	SM 2320 B	10/18/13 10:16	SKA	1311109
Nitrogen, Nitrate	ND	U	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	10/10/13 16:38	CAC	1310879

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-02-100913**	Sampled:	10/9/13 10:40		
Lab Sample ID:	**1310231-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/14/13 8:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/14/13 14:41	By:	LEW
QC Batch:	1310945	Analytical Batch:	3J15002		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*92*	*81-126*
aaa-Trifluorotoluene	*102*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-02-100913**	Sampled:	10/9/13 10:40
Lab Sample ID:	**1310231-02**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
*Methane	**0.20 PB**	0.48	0.14	ug/L	1	RSK-175	10/17/13 10:53	JMF	1310984

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-02-100913**	Sampled:	10/9/13 10:40		
Lab Sample ID:	**1310231-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/16/13 1:10	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J24002		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.17PB**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.42	0.13
85-01-8	Phenanthrene	NDU	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-02-100913**	Sampled:	10/9/13 10:40		
Lab Sample ID:	**1310231-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/16/13 1:10	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J24002		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*34*	*20-70*
Phenol-d6	*22*	*18-45*
Nitrobenzene-d5	*60*	*31-123*
2-Fluorobiphenyl	*56*	*25-113*
2,4,6-Tribromophenol	*42*	*30-121*
o-Terphenyl	*65*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-02-100913**	Sampled:	10/9/13 10:40
Lab Sample ID:	**1310231-02**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	10/17/13 11:57	CKD	1310906
Manganese	ND	U	9.3	2.8	ug/L	1	USEPA-6010C	10/17/13 11:57	CKD	1310906

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-02-100913**	Sampled:	10/9/13 10:40
Lab Sample ID:	**1310231-02**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**1.5**	**J**	1.6	0.50	mg/L	1	SM 2320 B	10/18/13 10:16	SKA	1311109
Nitrogen, Nitrate	ND	U	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	10/10/13 16:40	CAC	1310879
Sulfate	ND	U	1.3	0.39	mg/L	1	USEPA-9038	10/14/13 13:45	LMA	1310923

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-36A-100913**	Sampled:	10/9/13 15:06		
Lab Sample ID:	**1310231-03**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/14/13 8:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/14/13 18:47	By:	LEW
QC Batch:	1310945	Analytical Batch:	3J15002		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
91-20-3	Naphthalene	NDU	1.5	0.44

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*100*	*81-126*
aaa-Trifluorotoluene	*105*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-36A-100913**	Sampled:	10/9/13 15:06
Lab Sample ID:	**1310231-03**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**510**	9.7	2.9	ug/L	20	RSK-175	10/17/13 11:02	JMF	1310984

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-36A-100913**	Sampled:	10/9/13 15:06		
Lab Sample ID:	**1310231-03**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	2	Analyzed:	10/22/13 0:46	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.22	0.066
208-96-8	Acenaphthylene	**0.040J**	0.11	0.034
120-12-7	Anthracene	**0.18J**	0.41	0.12
56-55-3	Benzo(a)anthracene	NDU	0.30	0.091
50-32-8	Benzo(a)pyrene	NDU	0.27	0.081
205-99-2	Benzo(b)fluoranthene	NDU	0.39	0.12
207-08-9	Benzo(k)fluoranthene	NDU	0.40	0.12
191-24-2	Benzo(g,h,i)perylene	NDU	0.41	0.12
59-50-7	4-Chloro-3-methylphenol	NDU	0.77	0.23
95-57-8	2-Chlorophenol	NDU	0.18	0.053
218-01-9	Chrysene	NDU	0.30	0.091
53-70-3	Dibenz(a,h)anthracene	NDU	0.75	0.23
132-64-9	Dibenzofuran	**0.53**	0.27	0.082
120-83-2	2,4-Dichlorophenol	**0.65**	0.61	0.18
*84-66-2	Diethyl Phthalate	**0.32PB**	0.43	0.13
105-67-9	2,4-Dimethylphenol	NDU	1.1	0.34
534-52-1	4,6-Dinitro-2-methylphenol	NDU	6.8	2.0
51-28-5	2,4-Dinitrophenol	NDU	7.7	2.3
206-44-0	Fluoranthene	NDU	0.42	0.13
86-73-7	Fluorene	**0.38**	0.28	0.083
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.53	0.16
95-48-7	2-Methylphenol	NDU	0.32	0.095
106-44-5	4-Methylphenol	**0.14J**	0.38	0.11
100-02-7	4-Nitrophenol	NDU	8.3	2.5
88-75-5	2-Nitrophenol	NDU	0.32	0.095
87-86-5	Pentachlorophenol	**8.5**	0.54	0.16
85-01-8	Phenanthrene	**0.12J**	0.28	0.085
108-95-2	Phenol	NDU	0.22	0.067
129-00-0	Pyrene	**0.14J**	0.44	0.13

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-36A-100913**	Sampled:	10/9/13 15:06		
Lab Sample ID:	**1310231-03**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	2	Analyzed:	10/22/13 0:46	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	**5.1**	2.5	0.74
935-95-5	2,3,5,6-Tetrachlorophenol	**24**	1.4	0.43
88-06-2	2,4,6-Trichlorophenol	**2.5**	0.57	0.17
95-95-4	2,4,5-Trichlorophenol	**30**	0.66	0.20

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*35*	*20-70*
Phenol-d6	*21*	*18-45*
Nitrobenzene-d5	*60*	*31-123*
2-Fluorobiphenyl	*61*	*25-113*
2,4,6-Tribromophenol	*64*	*30-121*
o-Terphenyl	*62*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-36A-100913**	Sampled:	10/9/13 15:06
Lab Sample ID:	**1310231-03**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**110**	22	6.5	ug/L	1	USEPA-6010C	10/17/13 12:00	CKD	1310906
Manganese	**650**	9.3	2.8	ug/L	1	USEPA-6010C	10/17/13 12:00	CKD	1310906

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310231**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-36A-100913**	Sampled:	10/9/13 15:06
Lab Sample ID:	**1310231-03**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Sulfate	**52**	2.6	0.77	mg/L	2	USEPA-9038	10/14/13 14:11	LMA	1310923
Alkalinity, Total	**430**	1.6	0.50	mg/L	1	SM 2320 B	10/18/13 10:16	SKA	1311109
Nitrogen, Nitrate	**0.052**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	10/10/13 17:42	CAC	1310879

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310252**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-16AR-101013**	Sampled:	10/10/13 9:52		
Lab Sample ID:	**1310252-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/11/13 8:30		
Unit:	ug/L	Prepared:	10/21/13 9:00	By:	LEW
Dilution Factor:	50	Analyzed:	10/22/13 2:54	By:	LEW
QC Batch:	1311234	Analytical Batch:	3J22036		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	**33**	33	10
91-20-3	Naphthalene	**4000**	74	22

Surrogates:	*% Recovery*	*Control Limits*
1,2-Dichloroethane-d4	*120*	*81-126*
aaa-Trifluorotoluene	*98*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310252**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-16AR-101013**	Sampled:	10/10/13 9:52
Lab Sample ID:	**1310252-01**	Sampled By:	Client
Matrix:	Water	Received:	10/11/13 8:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**63**	0.97	0.29	ug/L	2	RSK-175	10/17/13 11:31	JMF	1310984

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310252**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-16AR-101013**	Sampled:	10/10/13 9:52		
Lab Sample ID:	**1310252-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/11/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	4	Analyzed:	10/22/13 23:44	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J23046		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**68**	0.44	0.13
208-96-8	Acenaphthylene	**0.81**	0.23	0.068
120-12-7	Anthracene	**0.44J**	0.82	0.25
56-55-3	Benzo(a)anthracene	NDU	0.60	0.18
50-32-8	Benzo(a)pyrene	NDU	0.54	0.16
205-99-2	Benzo(b)fluoranthene	NDU	0.77	0.23
207-08-9	Benzo(k)fluoranthene	NDU	0.79	0.24
191-24-2	Benzo(g,h,i)perylene	NDU	0.81	0.24
59-50-7	4-Chloro-3-methylphenol	NDU	1.5	0.46
95-57-8	2-Chlorophenol	NDU	0.36	0.11
218-01-9	Chrysene	NDU	0.60	0.18
53-70-3	Dibenz(a,h)anthracene	NDU	1.5	0.45
132-64-9	Dibenzofuran	**20**	0.54	0.16
120-83-2	2,4-Dichlorophenol	NDU	1.2	0.37
*84-66-2	Diethyl Phthalate	**0.44PB**	0.87	0.26
105-67-9	2,4-Dimethylphenol	NDU	2.2	0.67
534-52-1	4,6-Dinitro-2-methylphenol	NDU	14	4.1
51-28-5	2,4-Dinitrophenol	NDU	15	4.6
206-44-0	Fluoranthene	**0.57J**	0.84	0.25
86-73-7	Fluorene	**19**	0.55	0.17
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	1.1	0.32
95-48-7	2-Methylphenol	**0.28J**	0.63	0.19
106-44-5	4-Methylphenol	**0.48J**	0.75	0.23
100-02-7	4-Nitrophenol	NDU	17	5.0
88-75-5	2-Nitrophenol	NDU	0.63	0.19
87-86-5	Pentachlorophenol	NDU	1.7	0.50
85-01-8	Phenanthrene	**8.4**	0.57	0.17
108-95-2	Phenol	**0.28J**	0.45	0.13
129-00-0	Pyrene	NDU	0.87	0.26

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ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310252**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-16AR-101013**	Sampled:	10/10/13 9:52		
Lab Sample ID:	**1310252-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/11/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	4	Analyzed:	10/22/13 23:44	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J23046		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	4.9	1.5
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	2.8	0.85
88-06-2	2,4,6-Trichlorophenol	NDU	1.1	0.34
95-95-4	2,4,5-Trichlorophenol	NDU	1.3	0.40

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*39*	*20-70*
Phenol-d6	*24*	*18-45*
Nitrobenzene-d5	*71*	*31-123*
2-Fluorobiphenyl	*65*	*25-113*
2,4,6-Tribromophenol	*72*	*30-121*
o-Terphenyl	*73*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310252**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-16AR-101013**	Sampled:	10/10/13 9:52
Lab Sample ID:	**1310252-01**	Sampled By:	Client
Matrix:	Water	Received:	10/11/13 8:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**1300**	22	6.5	ug/L	1	USEPA-6010C	10/17/13 12:51	CKD	1310906
Manganese	**150**	9.3	2.8	ug/L	1	USEPA-6010C	10/17/13 12:51	CKD	1310906

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310252**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-16AR-101013**	Sampled:	10/10/13 9:52
Lab Sample ID:	**1310252-01**	Sampled By:	Client
Matrix:	Water	Received:	10/11/13 8:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Sulfate	**21**	1.3	0.39	mg/L	1	USEPA-9038	10/14/13 13:50	LMA	1310923
Alkalinity, Total	**460**	1.6	0.50	mg/L	1	SM 2320 B	10/18/13 10:16	SKA	1311109
Nitrogen, Nitrate	**0.073**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	10/11/13 12:54	CAC	1310895

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QUALITY CONTROL REPORT

Halogenated and Aromatic Volatiles by EPA Method 8021B

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1310945 5030B Aqueous Purge & Trap/USEPA-8021B									
Method Blank					Analyzed:		10/14/2013	By: LEW	
Unit: ug/L					Analytical Batch:		3J15002		
Benzene			ND U					0.67	0.20
Naphthalene			ND U			--		1.5	0.44
Surrogates:									
1,2-Dichloroethane-d4				*99*	*81-126*				
aaa-Trifluorotoluene				*100*	*86-118*				
Laboratory Control Sample					Analyzed:		10/14/2013	By: LEW	
Unit: ug/L					Analytical Batch:		3J15002		
Benzene		20.0	**20.9**	104	83-119	--		0.666	0.20
Naphthalene		20.0	**20.2**	101	80-120	--		1.47	0.44
QC Batch: 1311234 5030B Aqueous Purge & Trap/USEPA-8021B									
Method Blank					Analyzed:		10/21/2013	By: LEW	
Unit: ug/L					Analytical Batch:		3J22036		
Benzene			ND U			--		0.67	0.20
Naphthalene			ND U			--		1.5	0.44
Surrogates:									
1,2-Dichloroethane-d4				*123*	*81-126*				
aaa-Trifluorotoluene				*99*	*86-118*				
Laboratory Control Sample					Analyzed:		10/21/2013	By: LEW	
Unit: ug/L					Analytical Batch:		3J22036		
Benzene		20.0	**21.6**	108	83-119	--		0.666	0.20
Naphthalene		20.0	**20.9**	105	80-120	--		1.47	0.44

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QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1310984 Method-Specific Extraction/RSK-175									
Method Blank					Analyzed:		10/17/2013	By: JMF	
Unit: ug/L					Analytical Batch:		3J17042		
Methane			**0.21 J**			--		0.48	0.14
Laboratory Control Sample					Analyzed:		10/17/2013	By: JMF	
Unit: ug/L					Analytical Batch:		3J17042		
Methane		35.8	**26.8**	75	70-116	--		0.483	0.14

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QUALITY CONTROL REPORT

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1310817 3510C Liquid-Liquid Extraction/USEPA-8270C									
Method Blank					Analyzed:	10/14/2013	By: DWJ		
Unit: ug/L					Analytical Batch:	3J15045			
Pentachlorophenol			ND U					0.42	0.13
Surrogates:									
2-Fluorophenol				*43*	*20-70*				
Phenol-d6				*30*	*18-45*				
Nitrobenzene-d5				*66*	*31-123*				
2-Fluorobiphenyl				*68*	*25-113*				
2,4,6-Tribromophenol				*53*	*30-121*				
o-Terphenyl				*82*	*42-125*				
Method Blank					Analyzed:	10/18/2013	By: DWJ		
Unit: ug/L					Analytical Batch:	3J21076			
Acenaphthene			ND U			--		0.11	0.033
Acenaphthylene			ND U					0.057	0.017
Anthracene			ND U					0.20	0.062
Benzo(a)anthracene			ND U			--		0.15	0.045
Benzo(a)pyrene			ND U			--		0.13	0.040
Benzo(b)fluoranthene			ND U					0.19	0.058
Benzo(k)fluoranthene			ND U					0.20	0.060
Benzo(g,h,i)perylene			ND U					0.20	0.061
4-Chloro-3-methylphenol			ND U					0.38	0.12
2-Chlorophenol			ND U					0.089	0.027
Chrysene			ND U			--		0.15	0.045
Dibenz(a,h)anthracene			ND U					0.38	0.11
Dibenzofuran			ND U					0.14	0.041
2,4-Dichlorophenol			ND U					0.30	0.092
Diethyl Phthalate			**0.090 J**			--		0.22	0.065
2,4-Dimethylphenol			ND U					0.56	0.17
4,6-Dinitro-2-methylphenol			ND U					3.4	1.0
2,4-Dinitrophenol			ND U					3.9	1.2
Fluoranthene			ND U					0.21	0.063

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1310817 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C									
Method Blank (Continued)					Analyzed:		10/18/2013	By: DWJ	
Unit: ug/L					Analytical Batch:		3J21076		
Fluorene			ND U					0.14	0.041
Indeno(1,2,3-cd)pyrene			ND U					0.27	0.080
2-Methylphenol			ND U					0.16	0.048
4-Methylphenol			ND U					0.19	0.057
4-Nitrophenol			ND U			--		4.2	1.2
2-Nitrophenol			ND U					0.16	0.048
Pentachlorophenol			ND U					0.42	0.13
Phenanthrene			ND U					0.14	0.043
Phenol			ND U					0.11	0.034
Pyrene			ND U					0.22	0.066
2,3,4,6-Tetrachlorophenol			ND U					1.2	0.37
2,3,5,6-Tetrachlorophenol			ND U					0.71	0.21
2,4,6-Trichlorophenol			ND U					0.28	0.085
2,4,5-Trichlorophenol			ND U					0.33	0.099
Surrogates:									
2-Fluorophenol				*40*	*20-70*				
Phenol-d6				*27*	*18-45*				
Nitrobenzene-d5				*65*	*31-123*				
2-Fluorobiphenyl				*68*	*25-113*				
2,4,6-Tribromophenol				*65*	*30-121*				
o-Terphenyl				*69*	*42-125*				
Laboratory Control Sample					Analyzed:		10/14/2013	By: DWJ	
Unit: ug/L					Analytical Batch:		3J15045		
Pentachlorophenol	10.0		**4.68**	47	21-124	--		0.420	0.13
Laboratory Control Sample					Analyzed:		10/18/2013	By: DWJ	
Unit: ug/L					Analytical Batch:		3J21076		
Acenaphthene	10.0		**6.36**	64	53-126	--		0.110	0.033
Acenaphthylene	10.0		**6.21**	62	62-133	--		0.0569	0.017
Anthracene	10.0		**6.39**	64	64-130	--		0.205	0.062

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1310817 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 10/18/2013 By: DWJ

Unit: ug/L Analytical Batch: 3J21076

Benzo(a)anthracene	10.0	**6.54**	65	63-129	--		0.151	0.045
Benzo(a)pyrene	10.0	**6.58**	66	59-131	--		0.134	0.040
Benzo(b)fluoranthene	10.0	**6.34**	63	58-133	--		0.193	0.058
Benzo(k)fluoranthene	10.0	**6.46**	65	59-132	--		0.198	0.060
Benzo(g,h,i)perylene	10.0	**6.50**	65	52-129	--		0.203	0.061
4-Chloro-3-methylphenol	10.0	**6.13**	61	53-120	--		0.383	0.12
2-Chlorophenol	10.0	**5.43**	54	44-121	--		0.0889	0.027
Chrysene	10.0	**6.28**	63	56-134	--		0.151	0.045
Dibenz(a,h)anthracene	10.0	**6.61**	66	57-130	--		0.376	0.11
Dibenzofuran	10.0	**6.26**	63	59-123	--		0.136	0.041
2,4-Dichlorophenol	10.0	**6.10**	61	51-122	--		0.305	0.092
Diethyl Phthalate	10.0	**6.26**	63	55-129	--		0.217	0.065
2,4-Dimethylphenol	10.0	**4.82**	48	35-112	--		0.559	0.17
4,6-Dinitro-2-methylphenol	10.0	**6.39**	64	25-139	--		3.40	1.0
2,4-Dinitrophenol	10.0	**6.66**	67	10-147	--		3.86	1.2
Fluoranthene	10.0	**6.24**	62	57-123	--		0.209	0.063
Fluorene	10.0	**6.22**	62	60-128	--		0.138	0.041
Indeno(1,2,3-cd)pyrene	10.0	**6.56**	66	57-129	--		0.266	0.080
2-Methylphenol	10.0	**4.89**	49	39-107	--		0.158	0.048
4-Methylphenol	10.0	**4.63**	46	33-122	--		0.188	0.057
4-Nitrophenol	10.0	**2.43 J**	24	17-70	--		4.16	1.2
2-Nitrophenol	10.0	**6.24**	62	44-128	--		0.158	0.048
Pentachlorophenol	10.0	**5.99**	60	21-124	--		0.420	0.13
Phenanthrene	10.0	**6.43**	64	63-126	--		0.142	0.043
Phenol	10.0	**2.18**	22	22-60	--		0.112	0.034
Pyrene	10.0	**6.70**	67	60-134	--		0.218	0.066
2,3,4,6-Tetrachlorophenol	10.0	**6.35**	64	45-125	--		1.24	0.37
2,3,5,6-Tetrachlorophenol	10.0	**6.33**	63	50-150	--		0.709	0.21
2,4,6-Trichlorophenol	10.0	**6.15**	62	47-128	--		0.283	0.085
2,4,5-Trichlorophenol	10.0	**6.46**	65	53-129	--		0.330	0.099

QC Batch: 1310988 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank Analyzed: 10/17/2013 By: JLB

Unit: ug/L Analytical Batch: 3J18005

Acenaphthene		ND U			--		0.11	0.033
Dibenzofuran		ND U					0.14	0.041

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1310988 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 10/17/2013 By: JLB

Unit: ug/L Analytical Batch: 3J18005

Fluorene			ND U			0.14	0.041
Phenanthrene			ND U			0.14	0.043
Surrogates:							
2-Fluorophenol				*55*	*20-70*		
Phenol-d6				*34*	*18-45*		
Nitrobenzene-d5				*88*	*31-123*		
2-Fluorobiphenyl				*100*	*25-113*		
2,4,6-Tribromophenol				*62*	*30-121*		
o-Terphenyl				*109*	*42-125*		

Method Blank Analyzed: 10/21/2013 By: DWJ

Unit: ug/L Analytical Batch: 3J22055

Acenaphthene			ND U		--	0.11	0.033
Acenaphthylene			ND U			0.057	0.017
Anthracene			ND U			0.20	0.062
Benzo(a)anthracene			ND U		--	0.15	0.045
Benzo(a)pyrene			ND U		--	0.13	0.040
Benzo(b)fluoranthene			ND U			0.19	0.058
Benzo(k)fluoranthene			ND U			0.20	0.060
Benzo(g,h,i)perylene			ND U			0.20	0.061
4-Chloro-3-methylphenol			ND U			0.38	0.12
2-Chlorophenol			ND U			0.089	0.027
Chrysene			ND U		--	0.15	0.045
Dibenz(a,h)anthracene			ND U			0.38	0.11
Dibenzofuran			ND U			0.14	0.041
2,4-Dichlorophenol			ND U			0.30	0.092
Diethyl Phthalate			**0.13 J**		--	0.22	0.065
2,4-Dimethylphenol			ND U			0.56	0.17
4,6-Dinitro-2-methylphenol			ND U			3.4	1.0
2,4-Dinitrophenol			ND U			3.9	1.2

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1310988 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C									
Method Blank (Continued)					Analyzed:		10/21/2013	By: DWJ	
Unit: ug/L					Analytical Batch:		3J22055		
Fluoranthene			ND U					0.21	0.063
Fluorene			ND U					0.14	0.041
Indeno(1,2,3-cd)pyrene			ND U					0.27	0.080
2-Methylphenol			ND U			--		0.16	0.048
4-Methylphenol			ND U					0.19	0.057
4-Nitrophenol			ND U			--		4.2	1.2
2-Nitrophenol			ND U					0.16	0.048
Pentachlorophenol			ND U					0.42	0.13
Phenanthrene			ND U					0.14	0.043
Phenol			ND U			--		0.11	0.034
Pyrene			ND U					0.22	0.066
2,3,4,6-Tetrachlorophenol			ND U					1.2	0.37
2,3,5,6-Tetrachlorophenol			ND U					0.71	0.21
2,4,6-Trichlorophenol			ND U					0.28	0.085
2,4,5-Trichlorophenol			ND U					0.33	0.099
Surrogates:									
2-Fluorophenol				*52*	*20-70*				
Phenol-d6				*34*	*18-45*				
Nitrobenzene-d5				*86*	*31-123*				
2-Fluorobiphenyl				*91*	*25-113*				
2,4,6-Tribromophenol				*84*	*30-121*				
o-Terphenyl				*93*	*42-125*				
Laboratory Control Sample					Analyzed:		10/17/2013	By: JLB	
Unit: ug/L					Analytical Batch:		3J18005		
Acenaphthene	10.0		**9.52**	95	53-126	--		0.110	0.033
Dibenzofuran	10.0		**9.15**	92	59-123	--		0.136	0.041
Fluorene	10.0		**9.51**	95	60-128	--		0.138	0.041
Phenanthrene	10.0		**9.78**	98	63-126	--		0.142	0.043
Laboratory Control Sample					Analyzed:		10/21/2013	By: DWJ	
Unit: ug/L					Analytical Batch:		3J22055		
Acenaphthene	10.0		**8.73**	87	53-126	--		0.110	0.033

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

QC Batch: 1310988 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 10/21/2013 By: DWJ

Unit: ug/L Analytical Batch: 3J22055

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Acenaphthylene		10.0	**8.68**	87	62-133	--		0.0569	0.017
Anthracene		10.0	**8.98**	90	64-130	--		0.205	0.062
Benzo(a)anthracene		10.0	**8.99**	90	63-129	--		0.151	0.045
Benzo(a)pyrene		10.0	**9.28**	93	59-131	--		0.134	0.040
Benzo(b)fluoranthene		10.0	**8.88**	89	58-133	--		0.193	0.058
Benzo(k)fluoranthene		10.0	**8.95**	90	59-132	--		0.198	0.060
Benzo(g,h,i)perylene		10.0	**9.62**	96	52-129	--		0.203	0.061
4-Chloro-3-methylphenol		10.0	**8.67**	87	53-120	--		0.383	0.12
2-Chlorophenol		10.0	**7.97**	80	44-121	--		0.0889	0.027
Chrysene		10.0	**8.86**	89	56-134	--		0.151	0.045
Dibenz(a,h)anthracene		10.0	**9.70**	97	57-130	--		0.376	0.11
Dibenzofuran		10.0	**8.67**	87	59-123	--		0.136	0.041
2,4-Dichlorophenol		10.0	**8.83**	88	51-122	--		0.305	0.092
Diethyl Phthalate		10.0	**8.81**	88	55-129	--		0.217	0.065
2,4-Dimethylphenol		10.0	**7.03**	70	35-112	--		0.559	0.17
4,6-Dinitro-2-methylphenol		10.0	**9.19**	92	25-139	--		3.40	1.0
2,4-Dinitrophenol		10.0	**8.31**	83	10-147	--		3.86	1.2
Fluoranthene		10.0	**9.42**	94	57-123	--		0.209	0.063
Fluorene		10.0	**8.82**	88	60-128	--		0.138	0.041
Indeno(1,2,3-cd)pyrene		10.0	**9.46**	95	57-129	--		0.266	0.080
2-Methylphenol		10.0	**7.00**	70	39-107	--		0.158	0.048
4-Methylphenol		10.0	**6.60**	66	33-122	--		0.188	0.057
4-Nitrophenol		10.0	**4.05 J**	40	17-70	--		4.16	1.2
2-Nitrophenol		10.0	**9.03**	90	44-128	--		0.158	0.048
Pentachlorophenol		10.0	**7.88**	79	21-124	--		0.420	0.13
Phenanthrene		10.0	**9.03**	90	63-126	--		0.142	0.043
Phenol		10.0	**3.92**	39	22-60	--		0.112	0.034
Pyrene		10.0	**8.77**	88	60-134	--		0.218	0.066
2,3,4,6-Tetrachlorophenol		10.0	**9.65**	96	45-125	--		1.24	0.37
2,3,5,6-Tetrachlorophenol		10.0	**9.10**	91	50-150	--		0.709	0.21
2,4,6-Trichlorophenol		10.0	**9.03**	90	47-128	--		0.283	0.085
2,4,5-Trichlorophenol		10.0	**9.77**	98	53-129	--		0.330	0.099

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Metals by EPA 6000/7000 Series Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Analyte: **Iron**/USEPA-6010C										
QC Batch: 1310906 (3010A Digestion)							Analyzed:	10/17/2013	By: CKD	
Method Blank			ND U	ug/L					22	6.5
Laboratory Control Sample		400	**399**	ug/L	100	80-120			21.7	6.5
1310189-01 [SUPE-W-35A-100813]										
Matrix Spike	7.61	400	**397**	ug/L	97	75-125			21.7	6.5
Matrix Spike Duplicate	7.61	400	**404**	ug/L	99	75-125	2	20	21.7	6.5
Analyte: **Manganese**/USEPA-6010C										
QC Batch: 1310906 (3010A Digestion)							Analyzed:	10/17/2013	By: CKD	
Method Blank			ND U	ug/L					9.3	2.8
Laboratory Control Sample		400	**394**	ug/L	99	80-120			9.26	2.8
1310189-01 [SUPE-W-35A-100813]										
Matrix Spike	140	400	**533**	ug/L	98	75-125			9.26	2.8
Matrix Spike Duplicate	140	400	**536**	ug/L	99	75-125	0.6	20	9.26	2.8

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QUALITY CONTROL REPORT

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Analyte: **Alkalinity, Total**/SM 2320 B										
QC Batch: 1311109 (General Inorganic Prep)							Analyzed:	10/18/2013	By: SKA	
Method Blank			**0.98 J**	mg/L					1.6	0.50
Laboratory Control Sample		238	**240**	mg/L	101	91-110			1.65	0.50
1310189-01 [SUPE-W-35A-100813]										
Matrix Spike	492	238	**730**	mg/L	100	82-121			1.65	0.50
Duplicate	492		**493**	mg/L			0.2	20	1.65	0.50
Analyte: **Nitrogen, Nitrate**/SM 4500-NO3 F-2000										
QC Batch: 1310732 (General Inorganic Prep)							Analyzed:	10/09/2013	By: CAC	
Method Blank			ND U	mg/L					0.030	0.0089
Laboratory Control Sample		0.500	**0.493**	mg/L	99	90-110			0.0296	0.0089
1310189-01 [SUPE-W-35A-100813]										
Matrix Spike	0.00939	0.500	**0.549**	mg/L	108	90-110			0.0296	0.0089
Matrix Spike Duplicate	0.00939	0.500	**0.499**	mg/L	98	90-110	10	20	0.0296	0.0089
QC Batch: 1310879 (General Inorganic Prep)							Analyzed:	10/10/2013	By: CAC	
Method Blank			ND U	mg/L					0.030	0.0089
Laboratory Control Sample		0.500	**0.520**	mg/L	104	90-110			0.0296	0.0089
1310231-01 [SUPE-W-25A-100913]										
Matrix Spike	ND	0.500	**0.550**	mg/L	110	90-110			0.0296	0.0089
Matrix Spike Duplicate	ND	0.500	**0.544**	mg/L	109	90-110	1	20	0.0296	0.0089
QC Batch: 1310895 (General Inorganic Prep)							Analyzed:	10/11/2013	By: CAC	
Method Blank			ND U	mg/L					0.030	0.0089
Laboratory Control Sample		0.500	**0.490**	mg/L	98	90-110			0.0296	0.0089
1310252-01 [SUPE-W-16AR-101013]										
Matrix Spike	0.0729	0.500	**0.604**	mg/L	106	90-110			0.0296	0.0089
Matrix Spike Duplicate	0.0729	0.500	**0.612**	mg/L	108	90-110	1	20	0.0296	0.0089
Analyte: **Sulfate**/USEPA-9038										
QC Batch: 1310923 (General Inorganic Prep)							Analyzed:	10/14/2013	By: LMA	
Method Blank			ND U	mg/L					1.3	0.39

Continued on next page

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QUALITY CONTROL REPORT

Physical/Chemical Parameters by EPA/APHA/ASTM Methods (Continued)

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Analyte: **Sulfate**/USEPA-9038 (Continued)										
QC Batch: 1310923 (Continued) (General Inorganic Prep)							Analyzed:	10/14/2013	By: LMA	
Laboratory Control Sample		20.0	**19.1**	mg/L	96	85-115			1.29	0.39

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CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 100224

3-9

Project Name:	Superior 2013 2nd SA GW/MNA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0556-13	Address:	200 Third Avenue	Contact:	(412) 480-1162
Laboratory:			Carnegie, PA 15106		Atomcik.2006@f-ts.com
Shipment Method	FEDEX 1310189		(412) 279-3363		
Program:	2013 Superior 2nd SA GW Sampling_001		Cart Le. 116 + 214 White		

	Sample Date	Sample Time	Matrix	Sample Identification	Analysis	RSK175-Methane	Alk_Nitrate_Sulfate	8021B_Benzene_naphtha	8270C_PAH_Phenolics	Diss_Fe_Mn											Notes:
					Preservative	HCL	None	HCL	None	HNO3											
					Total Bottle Count																
01	10/08/2013	0927	AQ	SUPE-W-35A-100813	8	2	1	2	2	1											01
02	10/08/2013	1224	AQ	SUPE-W-37A-100813	8	2	1	2	2	1											01
03	10/08/2013	1400	AQ	SUPE-EB-01-100813	8	2	1	2	2	1											02
04	10/08/2013	1450	AQ	SUPE-W-26A-100813	8	2	1	2	2	1											01
05	10/08/2013	2000	AQ	SUPE-TB-01-100813	1	0	0	1	0	0											03

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature:	Signature:	Signature:	☐ Rush
Printed Name: Andrew Tomcik	Printed Name:	Printed Name: Lyn Komuga	
Firm FTS	Firm	Firm Trimatrix	☒ Standard
Date/Time: 10/08/2013 1621	Date/Time:	Date/Time: 10/9/13 0815	

Page 1 of 1 LAB COPY

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: FTS-Beazer | Work Order #: 1310189
Receipt Record Page/Line #: 3-7 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): JR 10/9/13

Cooler ☑ | Box ☐ | Other ☐ | Qty Received

Thermometer Used: ☐ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#____) | ☐ See Additional Cooler Information Form

Cooler #	2867	2061	3085	
Time	1010	1015	1026	
Custody Seals: None	☐	☐	☐	☐
Custody Seals: Present / Intact	☑	☑	☑	☐
Custody Seals: Present / Not Intact	☐	☐	☐	☐
Coolant Location: Dispersed / Top / Middle / Bottom	Dispersed	Dispersed	Dispersed	Dispersed
Coolant/Temperature Taken Via: Loose Ice / Avg 2-3 containers	☑	☑	☑	☐
Coolant/Temperature Taken Via: Bagged Ice / Avg 2-3 containers	☐	☐	☐	☐
Coolant/Temperature Taken Via: Blue Ice / Avg 2-3 containers	☐	☐	☐	☐
Coolant/Temperature Taken Via: None / Avg 2-3 containers	☐	☐	☐	☐
Alternate Temperature Taken Via: Temperature Blank (TB)	☑	☑	☑	☐
Alternate Temperature Taken Via: 1 Container	☐	☐	☐	☐
Recorded °C (Temp Blank)	—	—	—	
Correction Factor °C (Temp Blank)				
Actual °C (Temp Blank)	3.1	2.7	2.2	
TB location: Representative / Not Representative	Representative	Representative	Representative	Representative
1	2.7	1.2	2.3	
2	3.2	1.5	1.9	
3	3.2	3.1	1.3	
Average °C	3.0	1.9	1.8	
Cooler ID on COC?	☐	☐	☐	☐
VOC Trip Blank received?	☐	☑	☐	☐

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By ____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other ____

COC Information

☐ TriMatrix COC ☑ Other ____

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑		☐	If "No", Project Chemist Approval Initials: ____
☑		☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐		☑	Completed Sample Preservation Verification Form?
☐		☑	☐ Samples chemically preserved correctly?
☑		☐	If "No", added orange tag?
		☐	☑ Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☑ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
10/9/13 0815	10/9/13 1047	Yes (No)

Log In Forms - Receiving\Log-In_Checklist revision: 3.4

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2 5-7

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

#12145

REF.# 100226

Project Name:	Superior 2013 2nd SA GW/MNA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0556-13	Address:	200 Third Avenue	Contact:	(412) 480-1162
Laboratory:			Carnegie, PA 15106		Atomcik.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	2013 Superior 2nd SA GW Sampling_001				

WO# 1310231

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	RSK175-Methane	Alk_Nitrate_Sulfate	8270C_PAH_Phenolics	8021B_Benzene_naphtha	Diss_Fe_Mn	8021B_VOA+naphtha	8270C_SVOC (less naphtha)									Bottle Order	Notes:
				Preservative	HCL	None	None	HCL	HNO3	HCL	None										
				Total Bottle Count																	
10/09/2013	0842	AQ	SUPE-W-25A-100913	8	2	1	2	2	1	0	0									01	-01
10/09/2013	1040	AQ	SUPE-EB-02-100913	8	2	1	2	2	1	0	0									02	-02
10/09/2013	1131	AQ	SUPE-W-04AR-100913	8	2	1	0	0	1	2	2										
10/09/2013	1506	AQ	SUPE-W-36A-100913	8	2	1	2	2	1	0	0									01	-03
10/09/2013	2000	AQ	SUPE-TB-02-100913	1	0	0	0	0	0	1	0										

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature:	Signature:	Signature:	☐ Rush
Printed Name: Andrew Tomcik	Printed Name:	Printed Name: Lyn Romeyn	☒ Standard
Firm: FTS	Firm	Firm: Trimatrix	
Date/Time: 10/09/2013 1718	Date/Time:	Date/Time: 10/10/13 0830	

Page 1 of 1 LAB COPY

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: FTS Beazer | Work Order #: 1310231
Receipt Record Page/Line #: 5-7 | New / Add To | Project Chemist: JW | Sample #s

Recorded by (initials/date): LL 10/10/13

Cooler / Box / Other | Qty Received: 3

IR Gun (#202) | Thermometer Used: Digital Thermometer (#54) / Other (#_____) | See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via	Recorded °C	Correction Factor °C	Actual °C
2228	1002	Present / Intact	Dispersed	Loose Ice / Avg 2-3 containers	Temperature Blank (TB)	Temp Blank: —		2.0
						TB location: Representative / Not Representative		
						1: 1.6	—	1.6
						2: 2.6	—	2.6
						3: 1.7	—	1.7
							Average °C	2.0
						Cooler ID on COC? ☐		
						VOC Trip Blank received? ☐		
3100	1018	Present / Intact	Dispersed	Loose Ice / Avg 2-3 containers	Temperature Blank (TB)	Temp Blank: —		3.9
						TB location: Representative / Not Representative		
						1: 3.2	—	3.2
						2: 2.6	—	2.6
						3: 2.6	—	2.6
							Average °C	2.8
						Cooler ID on COC? ☐		
						VOC Trip Blank received? ☑		
3133	1026	Present / Intact	Dispersed	Loose Ice / Avg 2-3 containers	Temperature Blank (TB)	Temp Blank: —		1.9
						TB location: Representative / Not Representative		
						1: 2.4	—	2.4
						2: 2.4	—	2.4
						3: 1.4	—	1.4
							Average °C	2.2
						Cooler ID on COC? ☐		
						VOC Trip Blank received? ☐		
		None / Present / Intact / Present / Not Intact	Dispersed / Top / Middle / Bottom	Loose Ice / Bagged Ice / Blue Ice / None / Avg 2-3 containers	Temperature Blank (TB) / 1 Container	Recorded °C	Correction Factor °C	Actual °C
						Temp Blank:		
						TB location: Representative / Not Representative		
						1		
						2		
						3		
							Average °C	
						Cooler ID on COC? ☐		
						VOC Trip Blank received? ☐		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other _____

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☑		Completed Sample Preservation Verification Form?
☐	☑	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
☐	☐	☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☑ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Notes

☑ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
10/10/13 0830	10/10/13 1041	Yes / (No)

Log In Forms - Receiving.Log-In_Checklist revision: 3.4

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SAMPLE PRESERVATION VERIFICATION FORM

page ____ of ____

Client: FTS Beazer		Work Order #: 1310231	
Receipt Log #: 5-7	Completed By (initials/date): LR 10/10/13	Project Chemist: [illegible]	

COC ID # 410125	Adjusted by: / Date:	DO NOT ADJUST pH FOR THESE CONTAINER TYPES		
Container Type	5 / 23	4	13	3	6	15
Tag Color	Lt. Blue	Blue	Brown	Green	Red	Red Stripe
Preservative	NaOH	H_2SO_4	H_2SO_4	None	HNO_3	HNO_3
Expected pH	>12	<2	<2	6-8	<2	<2
COC Line #1						
COC Line #2						
COC Line #3						
COC Line #4				✓		✓
COC Line #5				✓		✓
COC Line #6						
COC Line #7						
COC Line #8						
COC Line #9						
COC Line #10						

Comments

COC ID # 100226	Adjusted by: / Date:	DO NOT ADJUST pH FOR THESE CONTAINER TYPES		
Container Type	5 / 23	4	13	3	6	15
Tag Color	Lt. Blue	Blue	Brown	Green	Red	Red Stripe
Preservative	NaOH	H_2SO_4	H_2SO_4	None	HNO_3	HNO_3
Expected pH	>12	<2	<2	6-8	<2	<2
COC Line #1				✓		✓
COC Line #2				✓		✓
COC Line #3				✓		✓
COC Line #4				✓		✓
COC Line #5						
COC Line #6						
COC Line #7						
COC Line #8						
COC Line #9						
COC Line #10						

Comments

Ph Strip Lot #

☐ HC270245

☑ HC378115

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms -- Sample_Preserve_Verification

version: 3.0

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#12148

75

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 410127

Project Name:	Superior 2013 2nd SA GW/MNA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0556-13	Address:	200 Third Avenue	Contact:	(412) 735-0793
Laboratory:			Carnegie, PA 15106		RStahl.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	2013 Superior 2nd SA GW Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8270C_PAH_Phenolics	8021B_Benzene_naphtha	Alk_Nitrate_Sulfate	Diss_Fe_Mn	RSK175-Methane										Schedule	Notes:
				Preservative	None	HCL	None	HNO3	HCL											
				Total Bottle Count																
01 10/10/2013	0952	AQ	SUPE-W-16AR-101013	8	2	2	1	1	2										01	

Cart 2
RSK Rock #495W
VOC Rock #718W

WO# 1310252

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature:	Signature:	Signature:	☐ Rush
Printed Name: Ryan Stahl	Printed Name:	Printed Name:	
Firm: FTS	Firm:	Firm:	☒ Standard
Date/Time: 10/10/2013 1042	Date/Time:	Date/Time: 10-11-13 0830	

Page 1 of 1 LAB COPY

TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: FTS	Work Order #: 1310252
Receipt Record Page/Line #	New / Add To; Project Chemist; Sample #s

Recorded by (initials/date): WC 10.11.13

Cooler / Box / Other ___ — Qty Received: 1

Thermometer Used: IR Gun (#202) / Digital Thermometer (#54) / Other (#___) — See Additional Cooler Information Form

Cooler #	Time	Cooler #	Time	Cooler #	Time	Cooler #	Time
Tm 0929	0905						

Custody Seals: None / Present / Intact / Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via: Loose Ice / Avg 2-3 containers; Bagged Ice / Avg 2-3 containers; Blue Ice / Avg 2-3 containers; None / Avg 2-3 containers

Alternate Temperature Taken Via: Temperature Blank (TB); 1 Container

	Recorded °C	Correction Factor °C	Actual °C	Recorded °C	Correction Factor °C	Actual °C	Recorded °C	Correction Factor °C	Actual °C	Recorded °C	Correction Factor °C	Actual °C
Temp Blank		—	1.9									
TB location	Representative / Not Representative			Representative / Not Representative			Representative / Not Representative			Representative / Not Representative		
1	2.5	—	2.5									
2	3.0	—	3.0									
3	2.2	—	2.2									
Average °C			2.6									

Cooler ID on COC? / VOC Trip Blank received? (each cooler)

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received
Yes / No
- Chain of Custody record(s)? If No, Initiated By ________
- Received for Lab Signed/Date/Time?
- Shipping document?
- Other ________

COC Information
- TriMatrix COC / Other ________
- COC ID Numbers:

Check COC for Accuracy
Yes / No
- Analysis Requested?
- Sample ID matches COC?
- Sample Date and Time matches COC?
- Container type completed on COC?
- All container types indicated are received?

Sample Condition Summary
N/A / Yes / No
- Broken containers/lids?
- Missing or incomplete labels?
- Illegible information on labels?
- Low volume received?
- Inappropriate or non-TriMatrix containers received?
- VOC vials / TOX containers have headspace?
- Extra sample locations / containers not listed on COC?

Check Sample Preservation
N/A / Yes / No
- Average sample temperature ≤6° C?
- Was thermal preservation required?
- If "No", Project Chemist Approval Intials: ________
- If "Yes" Completed Non Con Cooler - Cont Inventory Form?
- Completed Sample Preservation Verification Form?
- Samples chemically preserved correctly?
- If "No", added orange tag?
- Received pre-preserved VOC soils?
- MeOH / Na_2SO_4

Check for Short Hold-Time Prep/Analyses
- Bacteriological
- Air Bags
- EnCores / Methanol Pre-Preserved
- Formaldehyde/Aldehyde
- Green-tagged containers
- Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY: COPIES OF COC TO LAB AREA(S)
- NONE RECEIVED
- RECEIVED, COCs TO LAB(S)

Notes

Trip Blank received / Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
10.11.13 0830	10.11.13 0920	Yes (circled) / No

Log In Forms - Receiving.Log-In_Checklist — revision: 3.4

SAMPLE PRESERVATION VERIFICATION FORM

page 1 of 1

Client	Work Order #
FTS	1310252
Receipt Log # 75	Completed By (initials/date) WC 10.11.13
	Project Chemist

COC ID # 12148	Adjusted by: / Date:				DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1					✓		✓	
COC Line #2								
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

COC ID #	Adjusted by: / Date:				DO NOT ADJUST pH FOR THESE CONTAINER TYPES			
Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Ph Strip Lot #

☐ HC270245

☑ HC378115

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms -- Sample_Preserve_Verification

version: 3.0

5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

October 28, 2013

Beazer East, Inc.
Attn: Ms. Angie Gatchie c/o FTS
200 Third Avenue
Carnegie, PA 15106

Project: Superior GW - WI Cert. #999472650

Dear Ms. Angie Gatchie c/o FTS,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1310191	10/09/2013	Laboratory Services
1310230	10/10/2013	Laboratory Services
1310232	10/10/2013	Laboratory Services
1310243	10/11/2013	Laboratory Services

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request. LOD and LOQ values associated with samples requiring a dilution have been adjusted based on the dilution factor.

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If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Gary L. Wood
Project Chemist

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PROJECT TECHNICAL NARRATIVE(s)

Halogenated and Aromatic Volatiles by EPA Method 8021B

Narrative: Due to insufficient sample volume, matrix QC was not performed on this batch. A blank and a Laboratory Control Sample make up the batch QC.

Analysis: USEPA-8021B

Sample/Analyte:

1310191-01	SUPE-W-28C-100813
1310191-02	SUPE-W-12A-100813
1310191-04	SUPE-W-06C-100813
1310230-01	SUPE-W-30C-100913
1310230-02	SUPE-W-06A-100913
1310230-03	SUPE-W-12CR-100913
1310230-04	SUPE-W-30A-100913
1310230-05	SUPE-W-99-100913
1310232-01	SUPE-W-04AR-100913
1310232-02	SUPE-TB-02-100913
1310243-01	SUPE-W-10AR2-101013
1310243-02	SUPE-EB-03-101013
1310243-03	SUPE-TB-03-101013

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PROJECT TECHNICAL NARRATIVE(s)

Dissolved Gases in Water by RSK-175 Headspace Analysis

Narrative: Due to insufficient sample volume, matrix QC was not performed on this batch. A blank and a Laboratory Control Sample make up the batch QC.

Analysis: RSK-175

Sample/Analyte:		
	1310230-04	SUPE-W-30A-100913
	1310230-05	SUPE-W-99-100913
	1310232-01	SUPE-W-04AR-100913
	1310243-01	SUPE-W-10AR2-101013
	1310243-02	SUPE-EB-03-101013

Narrative: The analyte concentration in the associated MB was greater than the MDL but less than the RL. The positive sample result, which was greater than 5 times the MB value, is not qualified.

Analysis: RSK-175

Sample/Analyte:			
	1310230-04	SUPE-W-30A-100913	Methane
	1310230-05	SUPE-W-99-100913	Methane
	1310243-01	SUPE-W-10AR2-101013	Methane

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PROJECT TECHNICAL NARRATIVE(s)

Semivolatile Organic Compounds by EPA Method 8270C

Narrative: Due to insufficient sample volume, matrix QC was not performed on this batch. A blank and a Laboratory Control Sample make up the batch QC.

Analysis: USEPA-8270C

Sample/Analyte:
1310191-01 SUPE-W-28C-100813
1310191-02 SUPE-W-12A-100813
1310191-03 SUPE-W-18D-100813
1310191-04 SUPE-W-06C-100813
1310230-01 SUPE-W-30C-100913
1310230-02 SUPE-W-06A-100913
1310230-03 SUPE-W-12CR-100913
1310230-04 SUPE-W-30A-100913
1310230-05 SUPE-W-99-100913
1310232-01 SUPE-W-04AR-100913
1310243-01 SUPE-W-10AR2-101013
1310243-02 SUPE-EB-03-101013

Narrative: Manual integration was required on the analytes listed below. All manual integrations were performed and reviewed in accordance with TriMatrix laboratory policy.

Analysis: USEPA-8270C

Sample/Analyte:

1310191-01	SUPE-W-28C-100813	Nitrobenzene-d5
1310191-02	SUPE-W-12A-100813	Benzo(b)fluoranthene
1310191-02	SUPE-W-12A-100813	Benzo(k)fluoranthene
1310230-04	SUPE-W-30A-100913	Benzo(a)anthracene
1310230-04	SUPE-W-30A-100913	Benzo(b)fluoranthene
1310230-04	SUPE-W-30A-100913	Benzo(k)fluoranthene
1310230-04	SUPE-W-30A-100913	Chrysene
1310230-04	SUPE-W-30A-100913	Nitrobenzene-d5
1310230-05	SUPE-W-99-100913	Benzo(a)anthracene
1310230-05	SUPE-W-99-100913	Benzo(b)fluoranthene
1310230-05	SUPE-W-99-100913	Benzo(k)fluoranthene
1310230-05	SUPE-W-99-100913	Chrysene
1310817-BS2		Naphthalene
1310988-BS2		Indeno(1,2,3-cd)pyrene

Narrative: The RL for this analysis was elevated due to insufficient sample volume or weight received.

Analysis: USEPA-8270C

Sample/Analyte: 1310232-01 SUPE-W-04AR-100913

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PROJECT TECHNICAL NARRATIVE(s)

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Narrative: The RL for this analysis has been elevated due to sample matrix interference.

Analysis: USEPA-8270C

Sample/Analyte: 1310232-01 SUPE-W-04AR-100913

Narrative: 3-Methylphenol cannot be resolved from 4-Methylphenol due to chromatographic limitations. The reported result could be 3-Methylphenol, 4-Methylphenol, or a combination of both isomers.

Analysis: USEPA-8270C

Sample/Analyte: 1310243-01 SUPE-W-10AR2-101013 4-Methylphenol

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PROJECT TECHNICAL NARRATIVE(s)

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Narrative: The CRL recovery for this analyte was outside of the laboratory control limits.

Analysis: SM 4500-NO3 F-2000

3J24038-CRL1 Nitrogen, Nitrate

Narrative: The concentration of analyte found in the MS and/or MSD exceeded the upper end of the calibration curve due to native analyte concentration found in the sample. Matrix quality control results are not available.

Analysis: USEPA-9038

Sample/Analyte: 1310230-04 SUPE-W-30A-100913 Sulfate

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STATEMENT OF DATA QUALIFICATIONS

Halogenated and Aromatic Volatiles by EPA Method 8021B

Qualification: The LCS recovery exceeded the upper control limit. Positive results for this analyte in all samples in the associated QC batch are considered estimated. Non-detectable results are not qualified.

Analysis: USEPA-8021B

Sample/Analyte:		
1310191-01	SUPE-W-28C-100813	Chloromethane
1310191-02	SUPE-W-12A-100813	Chloromethane
1310191-04	SUPE-W-06C-100813	Chloromethane
1310230-01	SUPE-W-30C-100913	Chloromethane
1310230-02	SUPE-W-06A-100913	Chloromethane
1310230-03	SUPE-W-12CR-100913	Chloromethane
1310230-04	SUPE-W-30A-100913	Chloromethane
1310230-05	SUPE-W-99-100913	Chloromethane
1310232-01	SUPE-W-04AR-100913	Chloromethane
1310232-02	SUPE-TB-02-100913	Chloromethane
1310243-01	SUPE-W-10AR2-101013	Chloromethane
1310243-02	SUPE-EB-03-101013	Chloromethane
1310243-03	SUPE-TB-03-101013	Chloromethane

Qualification: The corresponding CCV for this analytical batch had a recovery exceeding the upper control limit of the method. A positive result for this analyte in any associated samples are considered estimated. Non-detectable results are not qualified.

Analysis: USEPA-8021B

Sample/Analyte:		
1310191-01	SUPE-W-28C-100813	Chloromethane
1310191-02	SUPE-W-12A-100813	Chloromethane
1310191-04	SUPE-W-06C-100813	Chloromethane
1310230-01	SUPE-W-30C-100913	Chloromethane
1310230-02	SUPE-W-06A-100913	Chloromethane
1310230-03	SUPE-W-12CR-100913	Chloromethane
1310230-04	SUPE-W-30A-100913	Chloromethane
1310230-05	SUPE-W-99-100913	Chloromethane
1310232-01	SUPE-W-04AR-100913	Chloromethane
1310232-02	SUPE-TB-02-100913	Chloromethane
1310243-01	SUPE-W-10AR2-101013	Chloromethane
1310243-02	SUPE-EB-03-101013	Chloromethane
1310243-03	SUPE-TB-03-101013	Chloromethane

Qualification: One or more surrogate recoveries for the sample exceeded the upper control limit. Positive results are considered estimated, non-detect results are not qualified.

Analysis: USEPA-8021B

Sample:	
1310191-04	SUPE-W-06C-100813
1310230-03	SUPE-W-12CR-100913

Qualification: The following reported test methods and analyte(s) are exceptions to our NELAP Fields of Accreditation, or for which accreditation is not required, applicable, or available.

Analysis: USEPA-8021B

Analyte(s): n-Propylbenzene

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STATEMENT OF DATA QUALIFICATIONS

Dissolved Gases in Water by RSK-175 Headspace Analysis

Qualification: The analyte concentration in the associated MB was greater than the MDL but less than the RL. The positive sample result, which was less than 5 times the MB value, is considered estimated.

Analysis: RSK-175

Sample/Analyte:		
1310232-01	SUPE-W-04AR-100913	Methane
1310243-02	SUPE-EB-03-101013	Methane

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: The analyte concentration in the associated MB was greater than or equal to the RL. The positive sample result, which was less than 5 times the MB value, is qualified "B".

Analysis: USEPA-8270C

Sample/Analyte:		
1310191-01	SUPE-W-28C-100813	Bis(2-ethylhexyl) Phthalate
1310191-01	SUPE-W-28C-100813	Di-n-butyl Phthalate
1310191-02	SUPE-W-12A-100813	Bis(2-ethylhexyl) Phthalate
1310191-02	SUPE-W-12A-100813	Di-n-butyl Phthalate
1310191-03	SUPE-W-18D-100813	Bis(2-ethylhexyl) Phthalate
1310191-03	SUPE-W-18D-100813	Di-n-butyl Phthalate
1310191-04	SUPE-W-06C-100813	Bis(2-ethylhexyl) Phthalate
1310191-04	SUPE-W-06C-100813	Di-n-butyl Phthalate
1310232-01	SUPE-W-04AR-100913	Di-n-butyl Phthalate

Qualification: The analyte concentration in the associated MB was greater than the MDL but less than the RL. The positive sample result, which was less than 5 times the MB value, is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:		
1310191-01	SUPE-W-28C-100813	Benzoic Acid
1310191-01	SUPE-W-28C-100813	Diethyl Phthalate
1310191-02	SUPE-W-12A-100813	Benzoic Acid
1310191-02	SUPE-W-12A-100813	Diethyl Phthalate
1310191-03	SUPE-W-18D-100813	Benzoic Acid
1310191-03	SUPE-W-18D-100813	Benzyl Alcohol
1310191-03	SUPE-W-18D-100813	Diethyl Phthalate
1310191-04	SUPE-W-06C-100813	Benzoic Acid
1310191-04	SUPE-W-06C-100813	Diethyl Phthalate
1310230-01	SUPE-W-30C-100913	Diethyl Phthalate
1310230-01	SUPE-W-30C-100913	Di-n-butyl Phthalate
1310230-02	SUPE-W-06A-100913	Diethyl Phthalate
1310230-02	SUPE-W-06A-100913	Di-n-butyl Phthalate
1310230-03	SUPE-W-12CR-100913	Diethyl Phthalate
1310230-03	SUPE-W-12CR-100913	Di-n-butyl Phthalate
1310230-04	SUPE-W-30A-100913	Diethyl Phthalate
1310230-05	SUPE-W-99-100913	Diethyl Phthalate
1310232-01	SUPE-W-04AR-100913	Diethyl Phthalate
1310243-01	SUPE-W-10AR2-101013	Diethyl Phthalate
1310243-02	SUPE-EB-03-101013	Diethyl Phthalate
1310243-02	SUPE-EB-03-101013	Di-n-butyl Phthalate

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310191**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-28C-100813**	Sampled:	10/8/13 9:55		
Lab Sample ID:	**1310191-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/21/13 9:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/21/13 13:07	By:	LEW
QC Batch:	1311234	Analytical Batch:	3J22036		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*120*	*81-126*
aaa-Trifluorotoluene	*96*	*86-118*

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310191**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-28C-100813**	Sampled:	10/8/13 9:55		
Lab Sample ID:	**1310191-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/19/13 2:31	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
*65-85-0	Benzoic Acid	**1.1PB**	1.6	0.48
100-51-6	Benzyl Alcohol	NDU	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	**0.081J**	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
*84-74-2	Di-n-butyl Phthalate	**1.9B**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

Continued on next page

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310191**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-28C-100813**	Sampled:	10/8/13 9:55		
Lab Sample ID:	**1310191-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/19/13 2:31	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
*84-66-2	Diethyl Phthalate	**0.18PB**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**0.16PB**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	NDU	0.14	0.043

Continued on next page

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310191**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-28C-100813**	Sampled:	10/8/13 9:55		
Lab Sample ID:	**1310191-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/19/13 2:31	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*32*	*20-70*
Phenol-d6	*20*	*18-45*
Nitrobenzene-d5	*58*	*31-123*
2-Fluorobiphenyl	*57*	*25-113*
2,4,6-Tribromophenol	*57*	*30-121*
o-Terphenyl	*62*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310191**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-12A-100813**	Sampled:	10/8/13 11:44		
Lab Sample ID:	**1310191-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/21/13 9:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/21/13 13:56	By:	LEW
QC Batch:	1311234	Analytical Batch:	3J22036		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*125*	*81-126*
aaa-Trifluorotoluene	*95*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310191**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-12A-100813**	Sampled:	10/8/13 11:44		
Lab Sample ID:	**1310191-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/19/13 3:06	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	**0.071J**	0.15	0.045
50-32-8	Benzo(a)pyrene	**0.061J**	0.13	0.040
205-99-2	Benzo(b)fluoranthene	**0.081J**	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
*65-85-0	Benzoic Acid	**1.2PB**	1.6	0.48
100-51-6	Benzyl Alcohol	NDU	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	**0.061J**	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	**0.061J**	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
*84-74-2	Di-n-butyl Phthalate	**1.1B**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310191**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-12A-100813**	Sampled:	10/8/13 11:44		
Lab Sample ID:	**1310191-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/19/13 3:06	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
*84-66-2	Diethyl Phthalate	**0.16PB**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**0.23PB**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	**0.051J**	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310191**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-12A-100813**	Sampled:	10/8/13 11:44		
Lab Sample ID:	**1310191-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/19/13 3:06	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	**0.081J**	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*27*	*20-70*
Phenol-d6	*18*	*18-45*
Nitrobenzene-d5	*54*	*31-123*
2-Fluorobiphenyl	*54*	*25-113*
2,4,6-Tribromophenol	*48*	*30-121*
o-Terphenyl	*50*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310191**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-18D-100813**	Sampled:	10/8/13 14:38		
Lab Sample ID:	**1310191-03**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/21/13 23:36	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
*65-85-0	Benzoic Acid	**1.3PB**	1.6	0.48
*100-51-6	Benzyl Alcohol	NDUB	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	NDU	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
*84-74-2	Di-n-butyl Phthalate	**1.1B**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.18PB**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310191**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-18D-100813**	Sampled:	10/8/13 14:38		
Lab Sample ID:	**1310191-03**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/21/13 23:36	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**0.15PB**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
56-49-5	3-Methylcholanthrene	NDU	0.40	0.12
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
91-20-3	Naphthalene	**0.041J**	0.10	0.031
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	NDU	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310191**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-18D-100813**	Sampled:	10/8/13 14:38		
Lab Sample ID:	**1310191-03**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/21/13 23:36	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*31*	*20-70*
Phenol-d6	*20*	*18-45*
Nitrobenzene-d5	*56*	*31-123*
2-Fluorobiphenyl	*54*	*25-113*
2,4,6-Tribromophenol	*54*	*30-121*
o-Terphenyl	*57*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310191**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-06C-100813**	Sampled:	10/8/13 16:53		
Lab Sample ID:	**1310191-04**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/21/13 9:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/21/13 14:45	By:	LEW
QC Batch:	1311234	Analytical Batch:	3J22036		

*Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	***129***	*81-126*
aaa-Trifluorotoluene	*95*	*86-118*

*See Statement of Data Qualifications

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310191**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-06C-100813**	Sampled:	10/8/13 16:53		
Lab Sample ID:	**1310191-04**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/19/13 4:16	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
*65-85-0	Benzoic Acid	**1.1PB**	1.6	0.48
100-51-6	Benzyl Alcohol	NDU	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	NDU	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
*84-74-2	Di-n-butyl Phthalate	**0.99B**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	**0.040J**	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310191**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-06C-100813**	Sampled:	10/8/13 16:53		
Lab Sample ID:	**1310191-04**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/19/13 4:16	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
*84-66-2	Diethyl Phthalate	**0.19PB**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
*117-81-7	Bis(2-ethylhexyl) Phthalate	**0.11UB**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	NDU	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310191**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-06C-100813**	Sampled:	10/8/13 16:53		
Lab Sample ID:	**1310191-04**	Sampled By:	Client		
Matrix:	Water	Received:	10/9/13 8:15		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	1	Analyzed:	10/19/13 4:16	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J21076		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*26*	*20-70*
Phenol-d6	*18*	*18-45*
Nitrobenzene-d5	*58*	*31-123*
2-Fluorobiphenyl	*49*	*25-113*
2,4,6-Tribromophenol	*50*	*30-121*
o-Terphenyl	*60*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-30C-100913**	Sampled:	10/9/13 9:30		
Lab Sample ID:	**1310230-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/21/13 9:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/21/13 15:34	By:	LEW
QC Batch:	1311234	Analytical Batch:	3J22036		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*120*	*81-126*
aaa-Trifluorotoluene	*96*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-30C-100913**	Sampled:	10/9/13 9:30		
Lab Sample ID:	**1310230-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 1:55	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	NDU	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	NDU	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
*84-74-2	Di-n-butyl Phthalate	**0.19PB**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-30C-100913**	Sampled:	10/9/13 9:30		
Lab Sample ID:	**1310230-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 1:55	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
*84-66-2	Diethyl Phthalate	**0.24B**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
117-81-7	Bis(2-ethylhexyl) Phthalate	**0.19J**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	NDU	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-30C-100913**	Sampled:	10/9/13 9:30		
Lab Sample ID:	**1310230-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 1:55	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*47*	*20-70*
Phenol-d6	*32*	*18-45*
Nitrobenzene-d5	*86*	*31-123*
2-Fluorobiphenyl	*84*	*25-113*
2,4,6-Tribromophenol	*82*	*30-121*
o-Terphenyl	*92*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-06A-100913**	Sampled:	10/9/13 10:44		
Lab Sample ID:	**1310230-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/21/13 9:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/21/13 16:23	By:	LEW
QC Batch:	1311234	Analytical Batch:	3J22036		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*120*	*81-126*
aaa-Trifluorotoluene	*94*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-06A-100913**	Sampled:	10/9/13 10:44		
Lab Sample ID:	**1310230-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 2:30	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	**0.27**	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	**0.061J**	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
*84-74-2	Di-n-butyl Phthalate	**0.30PB**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-06A-100913**	Sampled:	10/9/13 10:44		
Lab Sample ID:	**1310230-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 2:30	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
*84-66-2	Diethyl Phthalate	**0.25B**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
117-81-7	Bis(2-ethylhexyl) Phthalate	**0.20J**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	NDU	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-06A-100913**	Sampled:	10/9/13 10:44		
Lab Sample ID:	**1310230-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 2:30	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*42*	*20-70*
Phenol-d6	*28*	*18-45*
Nitrobenzene-d5	*74*	*31-123*
2-Fluorobiphenyl	*72*	*25-113*
2,4,6-Tribromophenol	*71*	*30-121*
o-Terphenyl	*80*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-12CR-100913**	Sampled:	10/9/13 12:17		
Lab Sample ID:	**1310230-03**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/21/13 9:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/21/13 17:12	By:	LEW
QC Batch:	1311234	Analytical Batch:	3J22036		

*Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	***129***	*81-126*
aaa-Trifluorotoluene	*94*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-12CR-100913**	Sampled:	10/9/13 12:17		
Lab Sample ID:	**1310230-03**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 3:05	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	**0.12J**	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	**0.061J**	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	**8.7**	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
*84-74-2	Di-n-butyl Phthalate	**0.20PB**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	**0.15J**	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-12CR-100913**	Sampled:	10/9/13 12:17		
Lab Sample ID:	**1310230-03**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 3:05	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
*84-66-2	Diethyl Phthalate	**0.30B**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
117-81-7	Bis(2-ethylhexyl) Phthalate	**0.78**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	NDU	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-12CR-100913**	Sampled:	10/9/13 12:17		
Lab Sample ID:	**1310230-03**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 3:05	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*45*	*20-70*
Phenol-d6	*29*	*18-45*
Nitrobenzene-d5	*85*	*31-123*
2-Fluorobiphenyl	*82*	*25-113*
2,4,6-Tribromophenol	*85*	*30-121*
o-Terphenyl	*92*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-30A-100913**	Sampled:	10/9/13 15:25		
Lab Sample ID:	**1310230-04**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/21/13 9:00	By:	LEW
Dilution Factor:	2	Analyzed:	10/22/13 1:17	By:	LEW
QC Batch:	1311234	Analytical Batch:	3J22036		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	**2.3**	1.3	0.40
104-51-8	n-Butylbenzene	NDU	1.8	0.55
*74-87-3	Chloromethane	NDUB	2.5	0.74
100-41-4	Ethylbenzene	**6.8**	1.3	0.40
1634-04-4	Methyl tert-Butyl Ether	NDU	3.2	0.95
91-20-3	Naphthalene	**96**	2.9	0.88
103-65-1	n-Propylbenzene	NDU	1.6	0.48
100-42-5	Styrene	NDU	1.3	0.40
108-88-3	Toluene	NDU	2.2	0.67
71-55-6	1,1,1-Trichloroethane	NDU	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	NDU	1.6	0.48
95-63-6	1,2,4-Trimethylbenzene	**2.1**	1.5	0.45
179601-23-1	Xylene, Meta + Para	**3.3**	2.8	0.83
95-47-6	Xylene, Ortho	**2.3**	1.3	0.40

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*121*	*81-126*
aaa-Trifluorotoluene	*97*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-30A-100913**	Sampled:	10/9/13 15:25
Lab Sample ID:	**1310230-04**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**10**	0.48	0.14	ug/L	1	RSK-175	10/17/13 09:59	JMF	1310984

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-30A-100913**	Sampled:	10/9/13 15:25		
Lab Sample ID:	**1310230-04**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 3:40	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**9.2**	0.11	0.033
208-96-8	Acenaphthylene	**0.16**	0.057	0.017
120-12-7	Anthracene	**0.12J**	0.20	0.062
56-55-3	Benzo(a)anthracene	**0.080J**	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	**0.16J**	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	NDU	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	**0.020J**	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	**0.28**	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	**2.9**	0.14	0.041
84-74-2	Di-n-butyl Phthalate	NDU	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-30A-100913**	Sampled:	10/9/13 15:25		
Lab Sample ID:	**1310230-04**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 3:40	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
*84-66-2	Diethyl Phthalate	**0.33B**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
117-81-7	Bis(2-ethylhexyl) Phthalate	**0.15J**	0.38	0.11
206-44-0	Fluoranthene	**0.79**	0.21	0.063
86-73-7	Fluorene	**1.2**	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	**1.5**	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	**0.050J**	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-30A-100913**	Sampled:	10/9/13 15:25		
Lab Sample ID:	**1310230-04**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 3:40	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	**0.43**	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*46*	*20-70*
Phenol-d6	*30*	*18-45*
Nitrobenzene-d5	*83*	*31-123*
2-Fluorobiphenyl	*78*	*25-113*
2,4,6-Tribromophenol	*84*	*30-121*
o-Terphenyl	*88*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-30A-100913**	Sampled:	10/9/13 15:25
Lab Sample ID:	**1310230-04**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**260**	22	6.5	ug/L	1	USEPA-6010C	10/17/13 11:47	CKD	1310906
Manganese	**50**	9.3	2.8	ug/L	1	USEPA-6010C	10/17/13 11:47	CKD	1310906

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-30A-100913**	Sampled:	10/9/13 15:25
Lab Sample ID:	**1310230-04**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**310**	1.6	0.50	mg/L	1	SM 2320 B	10/18/13 10:16	SKA	1311109
Sulfate	**30**	1.3	0.39	mg/L	1	USEPA-9038	10/14/13 13:41	LMA	1310923
Nitrogen, Nitrate	**0.044**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	10/10/13 17:42	CAC	1310879

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-99-100913**	Sampled:	10/9/13 20:00		
Lab Sample ID:	**1310230-05**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/21/13 9:00	By:	LEW
Dilution Factor:	2	Analyzed:	10/22/13 2:06	By:	LEW
QC Batch:	1311234	Analytical Batch:	3J22036		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	**2.4**	1.3	0.40
104-51-8	n-Butylbenzene	NDU	1.8	0.55
*74-87-3	Chloromethane	NDUB	2.5	0.74
100-41-4	Ethylbenzene	**7.1**	1.3	0.40
1634-04-4	Methyl tert-Butyl Ether	NDU	3.2	0.95
91-20-3	Naphthalene	**99**	2.9	0.88
103-65-1	n-Propylbenzene	NDU	1.6	0.48
100-42-5	Styrene	NDU	1.3	0.40
108-88-3	Toluene	NDU	2.2	0.67
71-55-6	1,1,1-Trichloroethane	NDU	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	NDU	1.6	0.48
95-63-6	1,2,4-Trimethylbenzene	**2.1**	1.5	0.45
179601-23-1	Xylene, Meta + Para	**3.4**	2.8	0.83
95-47-6	Xylene, Ortho	**2.4**	1.3	0.40

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*114*	*81-126*
aaa-Trifluorotoluene	*98*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-99-100913**	Sampled:	10/9/13 20:00
Lab Sample ID:	**1310230-05**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**9.8**	0.48	0.14	ug/L	1	RSK-175	10/17/13 10:02	JMF	1310984

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-99-100913**	Sampled:	10/9/13 20:00		
Lab Sample ID:	**1310230-05**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 4:15	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**8.8**	0.11	0.033
208-96-8	Acenaphthylene	**0.16**	0.057	0.017
120-12-7	Anthracene	**0.11J**	0.20	0.062
56-55-3	Benzo(a)anthracene	**0.070J**	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	**0.15J**	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	NDU	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	**0.21**	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	**2.8**	0.14	0.041
84-74-2	Di-n-butyl Phthalate	NDU	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-99-100913**	Sampled:	10/9/13 20:00		
Lab Sample ID:	**1310230-05**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 4:15	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
*84-66-2	Diethyl Phthalate	**0.26B**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
117-81-7	Bis(2-ethylhexyl) Phthalate	**0.16J**	0.38	0.11
206-44-0	Fluoranthene	**0.75**	0.21	0.063
86-73-7	Fluorene	**1.1**	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	**1.4**	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	**0.050J**	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-99-100913**	Sampled:	10/9/13 20:00		
Lab Sample ID:	**1310230-05**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 4:15	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	**0.40**	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*40*	*20-70*
Phenol-d6	*28*	*18-45*
Nitrobenzene-d5	*83*	*31-123*
2-Fluorobiphenyl	*75*	*25-113*
2,4,6-Tribromophenol	*73*	*30-121*
o-Terphenyl	*88*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-99-100913**	Sampled:	10/9/13 20:00
Lab Sample ID:	**1310230-05**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**260**	22	6.5	ug/L	1	USEPA-6010C	10/17/13 11:50	CKD	1310906
Manganese	**48**	9.3	2.8	ug/L	1	USEPA-6010C	10/17/13 11:50	CKD	1310906

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310230**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-99-100913**	Sampled:	10/9/13 20:00
Lab Sample ID:	**1310230-05**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Sulfate	**32**	1.3	0.39	mg/L	1	USEPA-9038	10/14/13 13:44	LMA	1310923
Alkalinity, Total	**320**	1.6	0.50	mg/L	1	SM 2320 B	10/18/13 10:16	SKA	1311109
Nitrogen, Nitrate	**0.045**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	10/10/13 16:54	CAC	1310879

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310232**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-04AR-100913**	Sampled:	10/9/13 11:31		
Lab Sample ID:	**1310232-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/21/13 9:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/21/13 18:49	By:	LEW
QC Batch:	1311234	Analytical Batch:	3J22036		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*119*	*81-126*
aaa-Trifluorotoluene	*95*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310232**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-04AR-100913**	Sampled:	10/9/13 11:31
Lab Sample ID:	**1310232-01**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
*Methane	**0.37 PB**	0.48	0.14	ug/L	1	RSK-175	10/17/13 11:06	JMF	1310984

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310232**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-04AR-100913**	Sampled:	10/9/13 11:31		
Lab Sample ID:	**1310232-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	2	Analyzed:	10/22/13 1:21	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.24	0.071
208-96-8	Acenaphthylene	NDU	0.12	0.037
120-12-7	Anthracene	NDU	0.44	0.13
56-55-3	Benzo(a)anthracene	NDU	0.33	0.098
50-32-8	Benzo(a)pyrene	NDU	0.29	0.087
205-99-2	Benzo(b)fluoranthene	NDU	0.42	0.12
207-08-9	Benzo(k)fluoranthene	NDU	0.43	0.13
191-24-2	Benzo(g,h,i)perylene	NDU	0.44	0.13
65-85-0	Benzoic Acid	NDU	3.4	1.0
100-51-6	Benzyl Alcohol	NDU	0.35	0.10
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.31	0.092
85-68-7	Butyl Benzyl Phthalate	NDU	0.40	0.12
59-50-7	4-Chloro-3-methylphenol	NDU	0.82	0.25
106-47-8	4-Chloroaniline	NDU	0.73	0.22
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.13	0.040
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.17	0.051
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.18	0.055
91-58-7	2-Chloronaphthalene	NDU	0.12	0.037
95-57-8	2-Chlorophenol	NDU	0.19	0.057
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.34	0.10
218-01-9	Chrysene	NDU	0.32	0.097
53-70-3	Dibenz(a,h)anthracene	NDU	0.81	0.24
132-64-9	Dibenzofuran	NDU	0.29	0.088
*84-74-2	Di-n-butyl Phthalate	**0.30PB**	0.97	0.29
95-50-1	1,2-Dichlorobenzene	NDU	0.28	0.085
541-73-1	1,3-Dichlorobenzene	NDU	0.29	0.088
106-46-7	1,4-Dichlorobenzene	NDU	0.14	0.042
91-94-1	3,3´-Dichlorobenzidine	NDU	0.89	0.27
120-83-2	2,4-Dichlorophenol	NDU	0.66	0.20

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310232**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-04AR-100913**	Sampled:	10/9/13 11:31		
Lab Sample ID:	**1310232-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	2	Analyzed:	10/22/13 1:21	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
*84-66-2	Diethyl Phthalate	**0.24PB**	0.47	0.14
105-67-9	2,4-Dimethylphenol	NDU	1.2	0.36
131-11-3	Dimethyl Phthalate	NDU	0.33	0.098
534-52-1	4,6-Dinitro-2-methylphenol	NDU	7.3	2.2
51-28-5	2,4-Dinitrophenol	NDU	8.3	2.5
121-14-2	2,4-Dinitrotoluene	NDU	0.34	0.10
606-20-2	2,6-Dinitrotoluene	NDU	0.57	0.17
117-84-0	Di-n-octyl Phthalate	NDU	0.55	0.16
117-81-7	Bis(2-ethylhexyl) Phthalate	NDU	0.81	0.24
206-44-0	Fluoranthene	NDU	0.45	0.13
86-73-7	Fluorene	NDU	0.30	0.089
118-74-1	Hexachlorobenzene	NDU	0.45	0.13
87-68-3	Hexachlorobutadiene	NDU	0.28	0.085
77-47-4	Hexachlorocyclopentadiene	NDU	0.32	0.095
67-72-1	Hexachloroethane	NDU	0.30	0.090
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.57	0.17
78-59-1	Isophorone	NDU	0.32	0.097
91-57-6	2-Methylnaphthalene	NDU	0.11	0.032
90-12-0	1-Methylnaphthalene	NDU	0.14	0.042
95-48-7	2-Methylphenol	NDU	0.34	0.10
106-44-5	4-Methylphenol	NDU	0.41	0.12
88-74-4	2-Nitroaniline	NDU	0.83	0.25
99-09-2	3-Nitroaniline	NDU	1.7	0.52
100-01-6	4-Nitroaniline	NDU	2.4	0.71
98-95-3	Nitrobenzene	NDU	0.42	0.13
100-02-7	4-Nitrophenol	NDU	9.0	2.7
88-75-5	2-Nitrophenol	NDU	0.34	0.10
86-30-6	N-Nitroso-diphenylamine	NDU	0.48	0.15
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.54	0.16
87-86-5	Pentachlorophenol	NDU	0.90	0.27
85-01-8	Phenanthrene	NDU	0.31	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310232**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-04AR-100913**	Sampled:	10/9/13 11:31		
Lab Sample ID:	**1310232-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/11/13 11:16	By:	ALK
Dilution Factor:	2	Analyzed:	10/22/13 1:21	By:	DWJ
QC Batch:	1310817	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.24	0.072
129-00-0	Pyrene	NDU	0.47	0.14
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	2.7	0.80
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	1.5	0.46
120-82-1	1,2,4-Trichlorobenzene	NDU	0.19	0.057
88-06-2	2,4,6-Trichlorophenol	NDU	0.61	0.18
95-95-4	2,4,5-Trichlorophenol	NDU	0.71	0.21

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*42*	*20-70*
Phenol-d6	*26*	*18-45*
Nitrobenzene-d5	*76*	*31-123*
2-Fluorobiphenyl	*75*	*25-113*
2,4,6-Tribromophenol	*75*	*30-121*
o-Terphenyl	*80*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310232**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-04AR-100913**	Sampled:	10/9/13 11:31
Lab Sample ID:	**1310232-01**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**7.9**	**J**	22	6.5	ug/L	1	USEPA-6010C	10/17/13 12:10	CKD	1310906
Manganese	**15**		9.3	2.8	ug/L	1	USEPA-6010C	10/17/13 12:10	CKD	1310906

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310232**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-04AR-100913**	Sampled:	10/9/13 11:31
Lab Sample ID:	**1310232-01**	Sampled By:	Client
Matrix:	Water	Received:	10/10/13 8:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Sulfate	**82**	6.4	1.9	mg/L	5	USEPA-9038	10/14/13 14:13	LMA	1310923
Alkalinity, Total	**290**	1.6	0.50	mg/L	1	SM 2320 B	10/18/13 10:16	SKA	1311109
Nitrogen, Nitrate	**0.032**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	10/10/13 16:41	CAC	1310879

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310232**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-TB-02-100913**	Sampled:	10/9/13 20:00		
Lab Sample ID:	**1310232-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/10/13 8:30		
Unit:	ug/L	Prepared:	10/21/13 9:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/21/13 18:00	By:	LEW
QC Batch:	1311234	Analytical Batch:	3J22036		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*119*	*81-126*
aaa-Trifluorotoluene	*96*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310243**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-10AR2-101013**	Sampled:	10/10/13 9:37		
Lab Sample ID:	**1310243-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/11/13 8:30		
Unit:	ug/L	Prepared:	10/21/13 9:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/22/13 0:29	By:	LEW
QC Batch:	1311234	Analytical Batch:	3J22036		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	**17**	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	**20**	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	**69**	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	**2.1**	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	**0.25J**	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	**6.8**	0.74	0.22
179601-23-1	Xylene, Meta + Para	**3.7**	1.4	0.42
95-47-6	Xylene, Ortho	**11**	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*126*	*81-126*
aaa-Trifluorotoluene	*100*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310243**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-10AR2-101013**	Sampled:	10/10/13 9:37
Lab Sample ID:	**1310243-01**	Sampled By:	Client
Matrix:	Water	Received:	10/11/13 8:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**130**	1.9	0.58	ug/L	4	RSK-175	10/17/13 11:19	JMF	1310984

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310243**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-10AR2-101013**	Sampled:	10/10/13 9:37		
Lab Sample ID:	**1310243-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/11/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	2	Analyzed:	10/22/13 22:34	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J23046		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**43**	0.22	0.066
208-96-8	Acenaphthylene	**1.0**	0.11	0.034
120-12-7	Anthracene	**0.23J**	0.41	0.12
56-55-3	Benzo(a)anthracene	NDU	0.30	0.091
50-32-8	Benzo(a)pyrene	NDU	0.27	0.081
205-99-2	Benzo(b)fluoranthene	NDU	0.39	0.12
207-08-9	Benzo(k)fluoranthene	NDU	0.40	0.12
191-24-2	Benzo(g,h,i)perylene	NDU	0.41	0.12
65-85-0	Benzoic Acid	NDU	3.2	0.96
100-51-6	Benzyl Alcohol	NDU	0.32	0.097
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.29	0.086
85-68-7	Butyl Benzyl Phthalate	NDU	0.37	0.11
59-50-7	4-Chloro-3-methylphenol	NDU	0.77	0.23
106-47-8	4-Chloroaniline	NDU	0.68	0.20
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.12	0.037
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.16	0.047
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.17	0.052
91-58-7	2-Chloronaphthalene	**0.56**	0.11	0.034
95-57-8	2-Chlorophenol	NDU	0.18	0.053
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.32	0.096
218-01-9	Chrysene	NDU	0.30	0.091
53-70-3	Dibenz(a,h)anthracene	NDU	0.75	0.23
132-64-9	Dibenzofuran	**7.9**	0.27	0.082
84-74-2	Di-n-butyl Phthalate	NDU	0.90	0.27
95-50-1	1,2-Dichlorobenzene	NDU	0.26	0.079
541-73-1	1,3-Dichlorobenzene	NDU	0.27	0.082
106-46-7	1,4-Dichlorobenzene	NDU	0.13	0.039
91-94-1	3,3´-Dichlorobenzidine	NDU	0.83	0.25
120-83-2	2,4-Dichlorophenol	NDU	0.61	0.18

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310243**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-10AR2-101013**	Sampled:	10/10/13 9:37		
Lab Sample ID:	**1310243-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/11/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	2	Analyzed:	10/22/13 22:34	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J23046		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
*84-66-2	Diethyl Phthalate	**0.27PB**	0.43	0.13
105-67-9	2,4-Dimethylphenol	NDU	1.1	0.34
131-11-3	Dimethyl Phthalate	NDU	0.30	0.091
534-52-1	4,6-Dinitro-2-methylphenol	NDU	6.8	2.0
51-28-5	2,4-Dinitrophenol	NDU	7.7	2.3
121-14-2	2,4-Dinitrotoluene	NDU	0.32	0.095
606-20-2	2,6-Dinitrotoluene	NDU	0.53	0.16
117-84-0	Di-n-octyl Phthalate	NDU	0.51	0.15
117-81-7	Bis(2-ethylhexyl) Phthalate	**0.27J**	0.75	0.23
206-44-0	Fluoranthene	**0.62**	0.42	0.13
86-73-7	Fluorene	**11**	0.28	0.083
118-74-1	Hexachlorobenzene	NDU	0.42	0.13
87-68-3	Hexachlorobutadiene	NDU	0.26	0.079
77-47-4	Hexachlorocyclopentadiene	NDU	0.30	0.089
67-72-1	Hexachloroethane	NDU	0.28	0.084
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.53	0.16
78-59-1	Isophorone	NDU	0.30	0.090
91-57-6	2-Methylnaphthalene	NDU	0.099	0.030
90-12-0	1-Methylnaphthalene	**3.7**	0.13	0.039
95-48-7	2-Methylphenol	NDU	0.32	0.095
106-44-5	4-Methylphenol	**0.17J**	0.38	0.11
88-74-4	2-Nitroaniline	NDU	0.77	0.23
99-09-2	3-Nitroaniline	NDU	1.6	0.49
100-01-6	4-Nitroaniline	NDU	2.2	0.66
98-95-3	Nitrobenzene	NDU	0.39	0.12
100-02-7	4-Nitrophenol	NDU	8.3	2.5
88-75-5	2-Nitrophenol	NDU	0.32	0.095
86-30-6	N-Nitroso-diphenylamine	NDU	0.45	0.14
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.50	0.15
87-86-5	Pentachlorophenol	NDU	0.84	0.25
85-01-8	Phenanthrene	**0.48**	0.28	0.085

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310243**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-10AR2-101013**	Sampled:	10/10/13 9:37		
Lab Sample ID:	**1310243-01**	Sampled By:	Client		
Matrix:	Water	Received:	10/11/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	2	Analyzed:	10/22/13 22:34	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J23046		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.22	0.067
129-00-0	Pyrene	**0.29J**	0.44	0.13
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	2.5	0.74
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	1.4	0.43
120-82-1	1,2,4-Trichlorobenzene	NDU	0.18	0.053
88-06-2	2,4,6-Trichlorophenol	NDU	0.57	0.17
95-95-4	2,4,5-Trichlorophenol	NDU	0.66	0.20

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*42*	*20-70*
Phenol-d6	*30*	*18-45*
Nitrobenzene-d5	*89*	*31-123*
2-Fluorobiphenyl	*82*	*25-113*
2,4,6-Tribromophenol	*70*	*30-121*
o-Terphenyl	*90*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310243**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-10AR2-101013**	Sampled:	10/10/13 9:37
Lab Sample ID:	**1310243-01**	Sampled By:	Client
Matrix:	Water	Received:	10/11/13 8:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**160**	22	6.5	ug/L	1	USEPA-6010C	10/17/13 12:37	CKD	1310906
Manganese	**510**	9.3	2.8	ug/L	1	USEPA-6010C	10/17/13 12:37	CKD	1310906

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310243**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-10AR2-101013**	Sampled:	10/10/13 9:37
Lab Sample ID:	**1310243-01**	Sampled By:	Client
Matrix:	Water	Received:	10/11/13 8:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**500**		1.6	0.50	mg/L	1	SM 2320 B	10/18/13 10:16	SKA	1311109
Sulfate	**19**		1.3	0.39	mg/L	1	USEPA-9038	10/14/13 13:47	LMA	1310923
Nitrogen, Nitrate	ND	U	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	10/11/13 12:56	CAC	1310895

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310243**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-03-101013**	Sampled:	10/10/13 11:15		
Lab Sample ID:	**1310243-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/11/13 8:30		
Unit:	ug/L	Prepared:	10/21/13 9:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/21/13 23:40	By:	LEW
QC Batch:	1311234	Analytical Batch:	3J22036		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*118*	*81-126*
aaa-Trifluorotoluene	*99*	*86-118*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310243**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-03-101013**	Sampled:	10/10/13 11:15
Lab Sample ID:	**1310243-02**	Sampled By:	Client
Matrix:	Water	Received:	10/11/13 8:30

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
*Methane	**0.20 PB**	0.48	0.14	ug/L	1	RSK-175	10/17/13 11:24	JMF	1310984

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310243**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-03-101013**	Sampled:	10/10/13 11:15		
Lab Sample ID:	**1310243-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/11/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 5:25	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
65-85-0	Benzoic Acid	NDU	1.6	0.48
100-51-6	Benzyl Alcohol	NDU	0.16	0.049
101-55-3	4-Bromophenyl Phenyl Ether	NDU	0.14	0.043
85-68-7	Butyl Benzyl Phthalate	NDU	0.19	0.056
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
106-47-8	4-Chloroaniline	NDU	0.34	0.10
111-91-1	Bis(2-chloroethoxy)methane	NDU	0.061	0.018
111-44-4	Bis(2-chloroethyl) Ether	NDU	0.079	0.024
108-60-1	Bis(2-chloroisopropyl) Ether	NDU	0.086	0.026
91-58-7	2-Chloronaphthalene	NDU	0.057	0.017
95-57-8	2-Chlorophenol	NDU	0.089	0.027
7005-72-3	4-Chlorophenyl Phenyl Ether	NDU	0.16	0.048
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
*84-74-2	Di-n-butyl Phthalate	**0.42PB**	0.45	0.14
95-50-1	1,2-Dichlorobenzene	NDU	0.13	0.040
541-73-1	1,3-Dichlorobenzene	NDU	0.14	0.041
106-46-7	1,4-Dichlorobenzene	NDU	0.066	0.020
91-94-1	3,3´-Dichlorobenzidine	NDU	0.41	0.12
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310243**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-03-101013**	Sampled:	10/10/13 11:15		
Lab Sample ID:	**1310243-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/11/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 5:25	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
*84-66-2	Diethyl Phthalate	**0.21PB**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
131-11-3	Dimethyl Phthalate	NDU	0.15	0.046
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
121-14-2	2,4-Dinitrotoluene	NDU	0.16	0.048
606-20-2	2,6-Dinitrotoluene	NDU	0.27	0.080
117-84-0	Di-n-octyl Phthalate	NDU	0.26	0.077
117-81-7	Bis(2-ethylhexyl) Phthalate	**0.12J**	0.38	0.11
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
118-74-1	Hexachlorobenzene	NDU	0.21	0.063
87-68-3	Hexachlorobutadiene	NDU	0.13	0.040
77-47-4	Hexachlorocyclopentadiene	NDU	0.15	0.044
67-72-1	Hexachloroethane	NDU	0.14	0.042
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
78-59-1	Isophorone	NDU	0.15	0.045
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
90-12-0	1-Methylnaphthalene	NDU	0.065	0.020
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
88-74-4	2-Nitroaniline	NDU	0.39	0.12
99-09-2	3-Nitroaniline	NDU	0.81	0.24
100-01-6	4-Nitroaniline	NDU	1.1	0.33
98-95-3	Nitrobenzene	NDU	0.19	0.058
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
86-30-6	N-Nitroso-diphenylamine	NDU	0.23	0.068
621-64-7	N-Nitroso-di-n-propylamine	NDU	0.25	0.075
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	NDU	0.14	0.043

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310243**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-03-101013**	Sampled:	10/10/13 11:15		
Lab Sample ID:	**1310243-02**	Sampled By:	Client		
Matrix:	Water	Received:	10/11/13 8:30		
Unit:	ug/L	Prepared:	10/16/13 8:06	By:	ALK
Dilution Factor:	1	Analyzed:	10/22/13 5:25	By:	DWJ
QC Batch:	1310988	Analytical Batch:	3J22055		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
120-82-1	1,2,4-Trichlorobenzene	NDU	0.089	0.027
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*48*	*20-70*
Phenol-d6	*30*	*18-45*
Nitrobenzene-d5	*83*	*31-123*
2-Fluorobiphenyl	*79*	*25-113*
2,4,6-Tribromophenol	*85*	*30-121*
o-Terphenyl	*89*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310243**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-03-101013**	Sampled:	10/10/13 11:15
Lab Sample ID:	**1310243-02**	Sampled By:	Client
Matrix:	Water	Received:	10/11/13 8:30

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	10/17/13 12:41	CKD	1310906
Manganese	ND	U	9.3	2.8	ug/L	1	USEPA-6010C	10/17/13 12:41	CKD	1310906

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310243**
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-03-101013**	Sampled:	10/10/13 11:15
Lab Sample ID:	**1310243-02**	Sampled By:	Client
Matrix:	Water	Received:	10/11/13 8:30

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**1.5**	**J**	1.6	0.50	mg/L	1	SM 2320 B	10/18/13 10:16	SKA	1311109
Sulfate	ND	U	1.3	0.39	mg/L	1	USEPA-9038	10/14/13 13:47	LMA	1310923
Nitrogen, Nitrate	ND	U	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2000	10/11/13 12:56	CAC	1310895

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1310243**		
Project:	Superior GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-TB-03-101013**	Sampled:	10/10/13 20:00		
Lab Sample ID:	**1310243-03**	Sampled By:	Client		
Matrix:	Water	Received:	10/11/13 8:30		
Unit:	ug/L	Prepared:	10/21/13 9:00	By:	LEW
Dilution Factor:	1	Analyzed:	10/21/13 22:52	By:	LEW
QC Batch:	1311234	Analytical Batch:	3J22036		

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	0.67	0.20
104-51-8	n-Butylbenzene	NDU	0.92	0.28
*74-87-3	Chloromethane	NDUB	1.2	0.37
100-41-4	Ethylbenzene	NDU	0.67	0.20
1634-04-4	Methyl tert-Butyl Ether	NDU	1.6	0.48
91-20-3	Naphthalene	NDU	1.5	0.44
103-65-1	n-Propylbenzene	NDU	0.80	0.24
100-42-5	Styrene	NDU	0.67	0.20
108-88-3	Toluene	NDU	1.1	0.33
71-55-6	1,1,1-Trichloroethane	NDU	1.0	0.30
108-67-8	1,3,5-Trimethylbenzene	NDU	0.80	0.24
95-63-6	1,2,4-Trimethylbenzene	NDU	0.74	0.22
179601-23-1	Xylene, Meta + Para	NDU	1.4	0.42
95-47-6	Xylene, Ortho	NDU	0.67	0.20

Surrogates:	***% Recovery***	***Control Limits***
1,2-Dichloroethane-d4	*114*	*81-126*
aaa-Trifluorotoluene	*100*	*86-118*

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QUALITY CONTROL REPORT

Halogenated and Aromatic Volatiles by EPA Method 8021B

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1311234 5030B Aqueous Purge & Trap/USEPA-8021B									
Method Blank					Analyzed:	10/21/2013	By: LEW		
Unit: ug/L					Analytical Batch:	3J22036			
Benzene			ND U			--		0.67	0.20
n-Butylbenzene			ND U			--		0.92	0.28
Chloromethane			ND U					1.2	0.37
Ethylbenzene			ND U					0.67	0.20
Methyl tert-Butyl Ether			ND U					1.6	0.48
Naphthalene			ND U			--		1.5	0.44
n-Propylbenzene			ND U					0.80	0.24
Styrene			ND U			--		0.67	0.20
Toluene			ND U					1.1	0.33
1,1,1-Trichloroethane			ND U					1.0	0.30
1,3,5-Trimethylbenzene			ND U					0.80	0.24
1,2,4-Trimethylbenzene			ND U					0.74	0.22
Xylene, Meta + Para			ND U			--		1.4	0.42
Xylene, Ortho			ND U					0.67	0.20
Surrogates:									
1,2-Dichloroethane-d4				*123*	*81-126*				
aaa-Trifluorotoluene				*99*	*86-118*				
Laboratory Control Sample					Analyzed:	10/21/2013	By: LEW		
Unit: ug/L					Analytical Batch:	3J22036			
Benzene		20.0	**21.6**	108	83-119	--		0.666	0.20
n-Butylbenzene		20.0	**22.3**	111	80-120	--		0.919	0.28
Chloromethane		20.0	**49.0**	**245**	65-138	--		1.24	0.37
Ethylbenzene		20.0	**21.7**	108	85-116	--		0.666	0.20
Methyl tert-Butyl Ether		20.0	**21.1**	106	77-116	--		1.59	0.48
Naphthalene		20.0	**20.9**	105	80-120	--		1.47	0.44
n-Propylbenzene		20.0	**21.9**	109	80-120	--		0.799	0.24
Styrene		20.0	**21.3**	106	80-120	--		0.666	0.20
Toluene		20.0	**21.5**	107	77-128	--		1.11	0.33
1,1,1-Trichloroethane		20.0	**23.1**	115	85-131	--		1.02	0.30
1,3,5-Trimethylbenzene		20.0	**21.5**	108	80-116	--		0.803	0.24
1,2,4-Trimethylbenzene		20.0	**21.3**	106	77-123	--		0.743	0.22
Xylene, Meta + Para		40.0	**43.1**	108	87-118	--		1.39	0.42
Xylene, Ortho		20.0	**21.4**	107	87-118	--		0.666	0.20

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QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1310984 Method-Specific Extraction/RSK-175									
Method Blank					Analyzed:		10/17/2013	By: JMF	
Unit: ug/L					Analytical Batch:		3J17042		
Methane			**0.21 J**			--		0.48	0.14
Laboratory Control Sample					Analyzed:		10/17/2013	By: JMF	
Unit: ug/L					Analytical Batch:		3J17042		
Methane		35.8	**26.8**	75	70-116	--		0.483	0.14

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QUALITY CONTROL REPORT

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1310817 3510C Liquid-Liquid Extraction/USEPA-8270C									
Method Blank					Analyzed:	10/14/2013	By: DWJ		
Unit: ug/L					Analytical Batch:	3J15045			
Bis(2-ethylhexyl) Phthalate			**30**			--		0.38	0.11
Isophorone			ND U					0.15	0.045
Pentachlorophenol			ND U					0.42	0.13
Surrogates:									
2-Fluorophenol				*43*	*20-70*				
Phenol-d6				*30*	*18-45*				
Nitrobenzene-d5				*66*	*31-123*				
2-Fluorobiphenyl				*68*	*25-113*				
2,4,6-Tribromophenol				*53*	*30-121*				
o-Terphenyl				*82*	*42-125*				
Method Blank					Analyzed:	10/18/2013	By: DWJ		
Unit: ug/L					Analytical Batch:	3J21076			
Acenaphthene			ND U			--		0.11	0.033
Acenaphthene			ND U			--		0.11	0.033
Acenaphthylene			ND U					0.057	0.017
Acenaphthylene			ND U					0.057	0.017
Anthracene			ND U					0.20	0.062
Anthracene			ND U					0.20	0.062
Benzo(a)anthracene			ND U			--		0.15	0.045
Benzo(a)anthracene			ND U			--		0.15	0.045
Benzo(a)pyrene			ND U			--		0.13	0.040
Benzo(a)pyrene			ND U			--		0.13	0.040
Benzo(b)fluoranthene			ND U					0.19	0.058
Benzo(b)fluoranthene			ND U					0.19	0.058
Benzo(k)fluoranthene			ND U					0.20	0.060
Benzo(k)fluoranthene			ND U					0.20	0.060
Benzo(g,h,i)perylene			ND U					0.20	0.061
Benzo(g,h,i)perylene			ND U					0.20	0.061
Benzoic Acid			**1.2 J**			--		1.6	0.48

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1310817 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 10/18/2013 By: DWJ

Unit: ug/L Analytical Batch: 3J21076

Benzoic Acid	**1.2 J**		--	1.6	0.48
Benzyl Alcohol	**0.17**		--	0.16	0.049
Benzyl Alcohol	**0.17**		--	0.16	0.049
4-Bromophenyl Phenyl Ether	ND U			0.14	0.043
4-Bromophenyl Phenyl Ether	ND U			0.14	0.043
Butyl Benzyl Phthalate	ND U		--	0.19	0.056
Butyl Benzyl Phthalate	ND U		--	0.19	0.056
4-Chloro-3-methylphenol	ND U			0.38	0.12
4-Chloro-3-methylphenol	ND U			0.38	0.12
4-Chloroaniline	ND U		--	0.34	0.10
4-Chloroaniline	ND U		--	0.34	0.10
Bis(2-chloroethoxy)methane	ND U			0.061	0.018
Bis(2-chloroethoxy)methane	ND U			0.061	0.018
Bis(2-chloroethyl) Ether	ND U			0.079	0.024
Bis(2-chloroethyl) Ether	ND U			0.079	0.024
Bis(2-chloroisopropyl) Ether	ND U			0.086	0.026
Bis(2-chloroisopropyl) Ether	ND U			0.086	0.026
2-Chloronaphthalene	ND U			0.057	0.017
2-Chloronaphthalene	ND U			0.057	0.017
2-Chlorophenol	ND U			0.089	0.027
2-Chlorophenol	ND U			0.089	0.027
4-Chlorophenyl Phenyl Ether	ND U			0.16	0.048
4-Chlorophenyl Phenyl Ether	ND U			0.16	0.048
Chrysene	ND U		--	0.15	0.045
Chrysene	ND U		--	0.15	0.045
Dibenz(a,h)anthracene	ND U			0.38	0.11
Dibenz(a,h)anthracene	ND U			0.38	0.11
Dibenzofuran	ND U			0.14	0.041
Dibenzofuran	ND U			0.14	0.041
Di-n-butyl Phthalate	**1.4**		--	0.45	0.14
Di-n-butyl Phthalate	**1.4**		--	0.45	0.14
1,2-Dichlorobenzene	ND U			0.13	0.040
1,2-Dichlorobenzene	ND U			0.13	0.040
1,3-Dichlorobenzene	ND U			0.14	0.041
1,3-Dichlorobenzene	ND U			0.14	0.041
1,4-Dichlorobenzene	ND U			0.066	0.020

Continued on next page

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1310817 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 10/18/2013 By: DWJ

Unit: ug/L Analytical Batch: 3J21076

1,4-Dichlorobenzene	ND U			0.066	0.020
3,3´-Dichlorobenzidine	ND U			0.41	0.12
3,3´-Dichlorobenzidine	ND U			0.41	0.12
2,4-Dichlorophenol	ND U			0.30	0.092
2,4-Dichlorophenol	ND U			0.30	0.092
Diethyl Phthalate	**0.090 J**	--		0.22	0.065
Diethyl Phthalate	**0.090 J**	--		0.22	0.065
2,4-Dimethylphenol	ND U			0.56	0.17
2,4-Dimethylphenol	ND U			0.56	0.17
Dimethyl Phthalate	ND U			0.15	0.046
Dimethyl Phthalate	ND U			0.15	0.046
4,6-Dinitro-2-methylphenol	ND U			3.4	1.0
4,6-Dinitro-2-methylphenol	ND U			3.4	1.0
2,4-Dinitrophenol	ND U			3.9	1.2
2,4-Dinitrophenol	ND U			3.9	1.2
2,4-Dinitrotoluene	ND U			0.16	0.048
2,4-Dinitrotoluene	ND U			0.16	0.048
2,6-Dinitrotoluene	ND U			0.27	0.080
2,6-Dinitrotoluene	ND U			0.27	0.080
Di-n-octyl Phthalate	**0.090 J**	--		0.26	0.077
Di-n-octyl Phthalate	**0.090 J**	--		0.26	0.077
Bis(2-ethylhexyl) Phthalate	**22**	--		0.38	0.11
Bis(2-ethylhexyl) Phthalate	**22**	--		0.38	0.11
Fluoranthene	ND U			0.21	0.063
Fluoranthene	ND U			0.21	0.063
Fluorene	ND U			0.14	0.041
Fluorene	ND U			0.14	0.041
Hexachlorobenzene	ND U			0.21	0.063
Hexachlorobenzene	ND U			0.21	0.063
Hexachlorobutadiene	ND U			0.13	0.040
Hexachlorobutadiene	ND U			0.13	0.040
Hexachlorocyclopentadiene	ND U			0.15	0.044
Hexachlorocyclopentadiene	ND U			0.15	0.044
Hexachloroethane	ND U			0.14	0.042
Hexachloroethane	ND U			0.14	0.042
Indeno(1,2,3-cd)pyrene	ND U			0.27	0.080

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1310817 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 10/18/2013 By: DWJ

Unit: ug/L Analytical Batch: 3J21076

Indeno(1,2,3-cd)pyrene	ND U			0.27	0.080
Isophorone	ND U		--	0.15	0.045
Isophorone	ND U		--	0.15	0.045
3-Methylcholanthrene	ND U			0.40	0.12
2-Methylnaphthalene	ND U			0.050	0.015
2-Methylnaphthalene	ND U			0.050	0.015
1-Methylnaphthalene	ND U			0.065	0.020
1-Methylnaphthalene	ND U			0.065	0.020
2-Methylphenol	ND U			0.16	0.048
2-Methylphenol	ND U			0.16	0.048
4-Methylphenol	ND U			0.19	0.057
4-Methylphenol	ND U			0.19	0.057
Naphthalene	ND U			0.10	0.031
2-Nitroaniline	ND U			0.39	0.12
2-Nitroaniline	ND U			0.39	0.12
3-Nitroaniline	ND U			0.81	0.24
3-Nitroaniline	ND U			0.81	0.24
4-Nitroaniline	ND U			1.1	0.33
4-Nitroaniline	ND U			1.1	0.33
Nitrobenzene	ND U		--	0.19	0.058
Nitrobenzene	ND U		--	0.19	0.058
4-Nitrophenol	ND U		--	4.2	1.2
4-Nitrophenol	ND U		--	4.2	1.2
2-Nitrophenol	ND U			0.16	0.048
2-Nitrophenol	ND U			0.16	0.048
N-Nitroso-diphenylamine	ND U			0.23	0.068
N-Nitroso-diphenylamine	ND U			0.23	0.068
N-Nitroso-di-n-propylamine	ND U		--	0.25	0.075
N-Nitroso-di-n-propylamine	ND U		--	0.25	0.075
Pentachlorophenol	ND U			0.42	0.13
Pentachlorophenol	ND U			0.42	0.13
Phenanthrene	ND U			0.14	0.043
Phenanthrene	ND U			0.14	0.043
Phenol	ND U			0.11	0.034
Phenol	ND U			0.11	0.034
Pyrene	ND U			0.22	0.066

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1310817 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 10/18/2013 By: DWJ

Unit: ug/L Analytical Batch: 3J21076

Pyrene			ND U					0.22	0.066
2,3,4,6-Tetrachlorophenol			ND U					1.2	0.37
2,3,4,6-Tetrachlorophenol			ND U					1.2	0.37
2,3,5,6-Tetrachlorophenol			ND U					0.71	0.21
2,3,5,6-Tetrachlorophenol			ND U					0.71	0.21
1,2,4-Trichlorobenzene			ND U					0.089	0.027
1,2,4-Trichlorobenzene			ND U					0.089	0.027
2,4,6-Trichlorophenol			ND U					0.28	0.085
2,4,6-Trichlorophenol			ND U					0.28	0.085
2,4,5-Trichlorophenol			ND U					0.33	0.099
2,4,5-Trichlorophenol			ND U					0.33	0.099
Surrogates:									
2-Fluorophenol				*40*	*20-70*				
2-Fluorophenol				*40*	*20-70*				
Phenol-d6				*27*	*18-45*				
Phenol-d6				*27*	*18-45*				
Nitrobenzene-d5				*65*	*31-123*				
Nitrobenzene-d5				*65*	*31-123*				
2-Fluorobiphenyl				*68*	*25-113*				
2-Fluorobiphenyl				*68*	*25-113*				
2,4,6-Tribromophenol				*65*	*30-121*				
2,4,6-Tribromophenol				*65*	*30-121*				
o-Terphenyl				*69*	*42-125*				
o-Terphenyl				*69*	*42-125*				

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1310817 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C									
Laboratory Control Sample					Analyzed:		10/14/2013	By: DWJ	
Unit: ug/L					Analytical Batch:		3J15045		
*Bis(2-ethylhexyl) Phthalate		10.0	**11.5 B**	115	60-136	--		0.376	0.11
Isophorone		10.0	**5.64**	56	56-129	--		0.150	0.045
Pentachlorophenol		10.0	**4.68**	47	21-124	--		0.420	0.13
Laboratory Control Sample					Analyzed:		10/18/2013	By: DWJ	
Unit: ug/L					Analytical Batch:		3J21076		
Acenaphthene		10.0	**6.36**	64	53-126	--		0.110	0.033
Acenaphthene		10.0	**6.36**	64	53-126	--		0.110	0.033
Acenaphthylene		10.0	**6.21**	62	62-133	--		0.0569	0.017
Acenaphthylene		10.0	**6.21**	62	62-133	--		0.0569	0.017
Anthracene		10.0	**6.39**	64	64-130	--		0.205	0.062
Anthracene		10.0	**6.39**	64	64-130	--		0.205	0.062
Benzo(a)anthracene		10.0	**6.54**	65	63-129	--		0.151	0.045
Benzo(a)anthracene		10.0	**6.54**	65	63-129	--		0.151	0.045
Benzo(a)pyrene		10.0	**6.58**	66	59-131	--		0.134	0.040
Benzo(a)pyrene		10.0	**6.58**	66	59-131	--		0.134	0.040
Benzo(b)fluoranthene		10.0	**6.34**	63	58-133	--		0.193	0.058
Benzo(b)fluoranthene		10.0	**6.34**	63	58-133	--		0.193	0.058
Benzo(k)fluoranthene		10.0	**6.46**	65	59-132	--		0.198	0.060
Benzo(k)fluoranthene		10.0	**6.46**	65	59-132	--		0.198	0.060
Benzo(g,h,i)perylene		10.0	**6.50**	65	52-129	--		0.203	0.061
Benzo(g,h,i)perylene		10.0	**6.50**	65	52-129	--		0.203	0.061
Benzoic Acid		50.0	**8.21**	16	10-45	--		1.59	0.48
Benzoic Acid		50.0	**8.21**	16	10-45	--		1.59	0.48
Benzyl Alcohol		10.0	**5.53**	55	24-116	--		0.162	0.049
Benzyl Alcohol		10.0	**5.53**	55	24-116	--		0.162	0.049
4-Bromophenyl Phenyl Ether		10.0	**6.66**	67	57-124	--		0.143	0.043
4-Bromophenyl Phenyl Ether		10.0	**6.66**	67	57-124	--		0.143	0.043
Butyl Benzyl Phthalate		10.0	**6.88**	69	58-141	--		0.185	0.056
Butyl Benzyl Phthalate		10.0	**6.88**	69	58-141	--		0.185	0.056
4-Chloro-3-methylphenol		10.0	**6.13**	61	53-120	--		0.383	0.12
4-Chloro-3-methylphenol		10.0	**6.13**	61	53-120	--		0.383	0.12
4-Chloroaniline		10.0	**6.73**	67	44-138	--		0.340	0.10
4-Chloroaniline		10.0	**7.73**	77	44-138	--		0.340	0.10
Bis(2-chloroethoxy)methane		10.0	**6.50**	65	52-124	--		0.0613	0.018
Bis(2-chloroethoxy)methane		10.0	**6.50**	65	52-124	--		0.0613	0.018
Bis(2-chloroethyl) Ether		10.0	**6.07**	61	42-123	--		0.0789	0.024

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

QC Batch: 1310817 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 10/18/2013 By: DWJ

Unit: ug/L Analytical Batch: 3J21076

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Bis(2-chloroethyl) Ether		10.0	**6.07**	61	42-123	--		0.0789	0.024
Bis(2-chloroisopropyl) Ether		10.0	**6.22**	62	50-122	--		0.0859	0.026
Bis(2-chloroisopropyl) Ether		10.0	**6.22**	62	50-122	--		0.0859	0.026
2-Chloronaphthalene		10.0	**6.36**	64	58-126	--		0.0569	0.017
2-Chloronaphthalene		10.0	**6.36**	64	58-126	--		0.0569	0.017
2-Chlorophenol		10.0	**5.43**	54	44-121	--		0.0889	0.027
2-Chlorophenol		10.0	**5.43**	54	44-121	--		0.0889	0.027
4-Chlorophenyl Phenyl Ether		10.0	**6.09**	61	57-122	--		0.160	0.048
4-Chlorophenyl Phenyl Ether		10.0	**6.09**	61	57-122	--		0.160	0.048
Chrysene		10.0	**6.28**	63	56-134	--		0.151	0.045
Chrysene		10.0	**6.28**	63	56-134	--		0.151	0.045
Dibenz(a,h)anthracene		10.0	**6.61**	66	57-130	--		0.376	0.11
Dibenz(a,h)anthracene		10.0	**6.61**	66	57-130	--		0.376	0.11
Dibenzofuran		10.0	**6.26**	63	59-123	--		0.136	0.041
Dibenzofuran		10.0	**6.26**	63	59-123	--		0.136	0.041
*Di-n-butyl Phthalate		10.0	**8.32 B**	83	58-145	--		0.450	0.14
*Di-n-butyl Phthalate		10.0	**8.32 B**	83	58-145	--		0.450	0.14
1,2-Dichlorobenzene		10.0	**6.04**	60	48-126	--		0.132	0.040
1,2-Dichlorobenzene		10.0	**6.04**	60	48-126	--		0.132	0.040
1,3-Dichlorobenzene		10.0	**6.05**	60	44-122	--		0.137	0.041
1,3-Dichlorobenzene		10.0	**6.05**	60	44-122	--		0.137	0.041
1,4-Dichlorobenzene		10.0	**5.88**	59	41-124	--		0.0656	0.020
1,4-Dichlorobenzene		10.0	**5.88**	59	41-124	--		0.0656	0.020
3,3´-Dichlorobenzidine		20.0	**14.2**	71	55-135	--		0.413	0.12
3,3´-Dichlorobenzidine		20.0	**14.2**	71	55-135	--		0.413	0.12
2,4-Dichlorophenol		10.0	**6.10**	61	51-122	--		0.305	0.092
2,4-Dichlorophenol		10.0	**6.10**	61	51-122	--		0.305	0.092
Diethyl Phthalate		10.0	**6.26**	63	55-129	--		0.217	0.065
Diethyl Phthalate		10.0	**6.26**	63	55-129	--		0.217	0.065
2,4-Dimethylphenol		10.0	**4.82**	48	35-112	--		0.559	0.17
2,4-Dimethylphenol		10.0	**4.82**	48	35-112	--		0.559	0.17
Dimethyl Phthalate		10.0	**6.06**	61	61-126	--		0.152	0.046
Dimethyl Phthalate		10.0	**6.06**	61	61-126	--		0.152	0.046
4,6-Dinitro-2-methylphenol		10.0	**6.39**	64	25-139	--		3.40	1.0
4,6-Dinitro-2-methylphenol		10.0	**6.39**	64	25-139	--		3.40	1.0
2,4-Dinitrophenol		10.0	**6.66**	67	10-147	--		3.86	1.2

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QUALITY CONTROL REPORT

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

QC Batch: 1310817 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 10/18/2013 By: DWJ

Unit: ug/L Analytical Batch: 3J21076

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
2,4-Dinitrophenol		10.0	**6.66**	67	10-147	--		3.86	1.2
2,4-Dinitrotoluene		10.0	**6.47**	65	55-131	--		0.158	0.048
2,4-Dinitrotoluene		10.0	**6.47**	65	55-131	--		0.158	0.048
2,6-Dinitrotoluene		10.0	**6.47**	65	59-120	--		0.267	0.080
2,6-Dinitrotoluene		10.0	**6.47**	65	59-120	--		0.267	0.080
Di-n-octyl Phthalate		10.0	**6.80**	68	55-136	--		0.255	0.077
Di-n-octyl Phthalate		10.0	**6.80**	68	55-136	--		0.255	0.077
*Bis(2-ethylhexyl) Phthalate		10.0	**9.54 B**	95	60-136	--		0.376	0.11
*Bis(2-ethylhexyl) Phthalate		10.0	**9.54 B**	95	60-136	--		0.376	0.11
Fluoranthene		10.0	**6.24**	62	57-123	--		0.209	0.063
Fluoranthene		10.0	**6.24**	62	57-123	--		0.209	0.063
Fluorene		10.0	**6.22**	62	60-128	--		0.138	0.041
Fluorene		10.0	**6.22**	62	60-128	--		0.138	0.041
Hexachlorobenzene		10.0	**6.51**	65	49-130	--		0.209	0.063
Hexachlorobenzene		10.0	**6.51**	65	49-130	--		0.209	0.063
Hexachlorobutadiene		10.0	**6.35**	64	50-128	--		0.132	0.040
Hexachlorobutadiene		10.0	**6.35**	64	50-128	--		0.132	0.040
Hexachlorocyclopentadiene		10.0	**5.06**	51	21-138	--		0.148	0.044
Hexachlorocyclopentadiene		10.0	**5.06**	51	21-138	--		0.148	0.044
Hexachloroethane		10.0	**5.76**	58	41-123	--		0.139	0.042
Hexachloroethane		10.0	**5.76**	58	41-123	--		0.139	0.042
Indeno(1,2,3-cd)pyrene		10.0	**6.56**	66	57-129	--		0.266	0.080
Indeno(1,2,3-cd)pyrene		10.0	**6.56**	66	57-129	--		0.266	0.080
Isophorone		10.0	**5.60**	56	56-129	--		0.150	0.045
Isophorone		10.0	**5.60**	56	56-129	--		0.150	0.045
2-Methylnaphthalene		10.0	**6.40**	64	59-135	--		0.0496	0.015
2-Methylnaphthalene		10.0	**6.40**	64	59-135	--		0.0496	0.015
1-Methylnaphthalene		10.0	**6.68**	67	50-150	--		0.0649	0.020
1-Methylnaphthalene		10.0	**6.68**	67	50-150	--		0.0649	0.020
2-Methylphenol		10.0	**4.89**	49	39-107	--		0.158	0.048
2-Methylphenol		10.0	**4.89**	49	39-107	--		0.158	0.048
4-Methylphenol		10.0	**4.63**	46	33-122	--		0.188	0.057
4-Methylphenol		10.0	**4.63**	46	33-122	--		0.188	0.057
Naphthalene		10.0	**6.32**	63	50-127	--		0.102	0.031
2-Nitroaniline		10.0	**7.20**	72	57-130	--		0.386	0.12
2-Nitroaniline		10.0	**7.20**	72	57-130	--		0.386	0.12

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

QC Batch: 1310817 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 10/18/2013 By: DWJ

Unit: ug/L Analytical Batch: 3J21076

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
3-Nitroaniline		10.0	**6.51**	65	49-144	--		0.813	0.24
3-Nitroaniline		10.0	**6.51**	65	49-144	--		0.813	0.24
4-Nitroaniline		10.0	**6.66**	67	52-143	--		1.10	0.33
4-Nitroaniline		10.0	**6.66**	67	52-143	--		1.10	0.33
Nitrobenzene		10.0	**6.30**	63	53-121	--		0.195	0.058
Nitrobenzene		10.0	**6.30**	63	53-121	--		0.195	0.058
4-Nitrophenol		10.0	**2.43 J**	24	17-70	--		4.16	1.2
4-Nitrophenol		10.0	**2.43 J**	24	17-70	--		4.16	1.2
2-Nitrophenol		10.0	**6.24**	62	44-128	--		0.158	0.048
2-Nitrophenol		10.0	**6.24**	62	44-128	--		0.158	0.048
N-Nitroso-diphenylamine		10.0	**6.53**	65	45-110	--		0.225	0.068
N-Nitroso-diphenylamine		10.0	**6.53**	65	45-110	--		0.225	0.068
N-Nitroso-di-n-propylamine		10.0	**5.91**	59	49-125	--		0.251	0.075
N-Nitroso-di-n-propylamine		10.0	**5.91**	59	49-125	--		0.251	0.075
Pentachlorophenol		10.0	**5.99**	60	21-124	--		0.420	0.13
Pentachlorophenol		10.0	**5.99**	60	21-124	--		0.420	0.13
Phenanthrene		10.0	**6.43**	64	63-126	--		0.142	0.043
Phenanthrene		10.0	**6.43**	64	63-126	--		0.142	0.043
Phenol		10.0	**2.18**	22	22-60	--		0.112	0.034
Phenol		10.0	**2.18**	22	22-60	--		0.112	0.034
Pyrene		10.0	**6.70**	67	60-134	--		0.218	0.066
Pyrene		10.0	**6.70**	67	60-134	--		0.218	0.066
2,3,4,6-Tetrachlorophenol		10.0	**6.35**	64	45-125	--		1.24	0.37
2,3,4,6-Tetrachlorophenol		10.0	**6.35**	64	45-125	--		1.24	0.37
2,3,5,6-Tetrachlorophenol		10.0	**6.33**	63	50-150	--		0.709	0.21
2,3,5,6-Tetrachlorophenol		10.0	**6.33**	63	50-150	--		0.709	0.21
1,2,4-Trichlorobenzene		10.0	**6.25**	62	47-123	--		0.0886	0.027
1,2,4-Trichlorobenzene		10.0	**6.25**	62	47-123	--		0.0886	0.027
2,4,6-Trichlorophenol		10.0	**6.15**	62	47-128	--		0.283	0.085
2,4,6-Trichlorophenol		10.0	**6.15**	62	47-128	--		0.283	0.085
2,4,5-Trichlorophenol		10.0	**6.46**	65	53-129	--		0.330	0.099
2,4,5-Trichlorophenol		10.0	**6.46**	65	53-129	--		0.330	0.099

Continued on next page

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1310817 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 10/18/2013 By: DWJ

Unit: ug/L Analytical Batch: 3J21076

Surrogates:									
2-Fluorophenol				*36*	*20-70*				
Phenol-d6				*25*	*18-45*				
Nitrobenzene-d5				*64*	*31-123*				
2-Fluorobiphenyl				*65*	*25-113*				
2,4,6-Tribromophenol				*64*	*30-121*				
o-Terphenyl				*66*	*42-125*				

QC Batch: 1310988 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank Analyzed: 10/17/2013 By: JLB

Unit: ug/L Analytical Batch: 3J18005

Acenaphthene			ND U			--		0.11	0.033
Dibenzofuran			ND U					0.14	0.041
Di-n-butyl Phthalate			**0.25 J**			--		0.45	0.14
Bis(2-ethylhexyl) Phthalate			ND U			--		0.38	0.11
Fluorene			ND U					0.14	0.041
Phenanthrene			ND U					0.14	0.043
Surrogates:									
2-Fluorophenol				*55*	*20-70*				
Phenol-d6				*34*	*18-45*				
Nitrobenzene-d5				*88*	*31-123*				
2-Fluorobiphenyl				*100*	*25-113*				
2,4,6-Tribromophenol				*62*	*30-121*				
o-Terphenyl				*109*	*42-125*				

Method Blank Analyzed: 10/21/2013 By: DWJ

Unit: ug/L Analytical Batch: 3J22055

Acenaphthene			ND U			--		0.11	0.033

Continued on next page

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1310988 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 10/21/2013 By: DWJ

Unit: ug/L Analytical Batch: 3J22055

Analyte	Result	RPD	LOQ	LOD
Acenaphthylene	ND U		0.057	0.017
Anthracene	ND U		0.20	0.062
Benzo(a)anthracene	ND U	--	0.15	0.045
Benzo(a)pyrene	ND U	--	0.13	0.040
Benzo(b)fluoranthene	ND U		0.19	0.058
Benzo(k)fluoranthene	ND U		0.20	0.060
Benzo(g,h,i)perylene	ND U		0.20	0.061
Benzoic Acid	ND U		1.6	0.48
Benzyl Alcohol	ND U	--	0.16	0.049
4-Bromophenyl Phenyl Ether	ND U		0.14	0.043
Butyl Benzyl Phthalate	ND U	--	0.19	0.056
4-Chloro-3-methylphenol	ND U		0.38	0.12
4-Chloroaniline	ND U		0.34	0.10
Bis(2-chloroethoxy)methane	ND U		0.061	0.018
Bis(2-chloroethyl) Ether	ND U		0.079	0.024
Bis(2-chloroisopropyl) Ether	ND U		0.086	0.026
2-Chloronaphthalene	ND U		0.057	0.017
2-Chlorophenol	ND U		0.089	0.027
4-Chlorophenyl Phenyl Ether	ND U		0.16	0.048
Chrysene	ND U	--	0.15	0.045
Dibenz(a,h)anthracene	ND U		0.38	0.11
Dibenzofuran	ND U		0.14	0.041
Di-n-butyl Phthalate	**0.23 J**	--	0.45	0.14
1,2-Dichlorobenzene	ND U		0.13	0.040
1,3-Dichlorobenzene	ND U		0.14	0.041
1,4-Dichlorobenzene	ND U		0.066	0.020
3,3´-Dichlorobenzidine	ND U		0.41	0.12
2,4-Dichlorophenol	ND U		0.30	0.092
Diethyl Phthalate	**0.13 J**	--	0.22	0.065
2,4-Dimethylphenol	ND U		0.56	0.17
Dimethyl Phthalate	ND U		0.15	0.046
4,6-Dinitro-2-methylphenol	ND U		3.4	1.0
2,4-Dinitrophenol	ND U		3.9	1.2
2,4-Dinitrotoluene	ND U		0.16	0.048
2,6-Dinitrotoluene	ND U		0.27	0.080
Di-n-octyl Phthalate	ND U		0.26	0.077

Continued on next page

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1310988 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 10/21/2013 By: DWJ

Unit: ug/L Analytical Batch: 3J22055

Bis(2-ethylhexyl) Phthalate	ND U		--	0.38	0.11
Fluoranthene	ND U			0.21	0.063
Fluorene	ND U			0.14	0.041
Hexachlorobenzene	ND U			0.21	0.063
Hexachlorobutadiene	ND U			0.13	0.040
Hexachlorocyclopentadiene	ND U			0.15	0.044
Hexachloroethane	ND U			0.14	0.042
Indeno(1,2,3-cd)pyrene	ND U			0.27	0.080
Isophorone	ND U		--	0.15	0.045
2-Methylnaphthalene	ND U			0.050	0.015
1-Methylnaphthalene	ND U			0.065	0.020
2-Methylphenol	ND U		--	0.16	0.048
4-Methylphenol	ND U			0.19	0.057
2-Nitroaniline	ND U			0.39	0.12
3-Nitroaniline	ND U			0.81	0.24
4-Nitroaniline	ND U			1.1	0.33
Nitrobenzene	ND U		--	0.19	0.058
4-Nitrophenol	ND U		--	4.2	1.2
2-Nitrophenol	ND U			0.16	0.048
N-Nitroso-diphenylamine	ND U			0.23	0.068
N-Nitroso-di-n-propylamine	ND U			0.25	0.075
Pentachlorophenol	ND U			0.42	0.13
Phenanthrene	ND U			0.14	0.043
Phenol	ND U		--	0.11	0.034
Pyrene	ND U			0.22	0.066
2,3,4,6-Tetrachlorophenol	ND U			1.2	0.37
2,3,5,6-Tetrachlorophenol	ND U			0.71	0.21
1,2,4-Trichlorobenzene	ND U			0.089	0.027
2,4,6-Trichlorophenol	ND U			0.28	0.085
2,4,5-Trichlorophenol	ND U			0.33	0.099

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1310988 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C									
Method Blank (Continued)					Analyzed:	10/21/2013	By: DWJ		
Unit: ug/L					Analytical Batch:	3J22055			
Surrogates:									
2-Fluorophenol				*52*	*20-70*				
Phenol-d6				*34*	*18-45*				
Nitrobenzene-d5				*86*	*31-123*				
2-Fluorobiphenyl				*91*	*25-113*				
2,4,6-Tribromophenol				*84*	*30-121*				
o-Terphenyl				*93*	*42-125*				
Laboratory Control Sample					Analyzed:	10/17/2013	By: JLB		
Unit: ug/L					Analytical Batch:	3J18005			
Acenaphthene		10.0	**9.52**	95	53-126	--		0.110	0.033
Dibenzofuran		10.0	**9.15**	92	59-123	--		0.136	0.041
Di-n-butyl Phthalate		10.0	**10.6**	106	58-145	--		0.450	0.14
Bis(2-ethylhexyl) Phthalate		10.0	**11.9**	119	60-136	--		0.376	0.11
Fluorene		10.0	**9.51**	95	60-128	--		0.138	0.041
Phenanthrene		10.0	**9.78**	98	63-126	--		0.142	0.043
Laboratory Control Sample					Analyzed:	10/21/2013	By: DWJ		
Unit: ug/L					Analytical Batch:	3J22055			
Acenaphthene		10.0	**8.73**	87	53-126	--		0.110	0.033
Acenaphthylene		10.0	**8.68**	87	62-133	--		0.0569	0.017
Anthracene		10.0	**8.98**	90	64-130	--		0.205	0.062
Benzo(a)anthracene		10.0	**8.99**	90	63-129	--		0.151	0.045
Benzo(a)pyrene		10.0	**9.28**	93	59-131	--		0.134	0.040
Benzo(b)fluoranthene		10.0	**8.88**	89	58-133	--		0.193	0.058
Benzo(k)fluoranthene		10.0	**8.95**	90	59-132	--		0.198	0.060
Benzo(g,h,i)perylene		10.0	**9.62**	96	52-129	--		0.203	0.061
Benzoic Acid		50.0	**5.14**	10	10-45	--		1.59	0.48
Benzyl Alcohol		10.0	**7.29**	73	24-116	--		0.162	0.049
4-Bromophenyl Phenyl Ether		10.0	**9.18**	92	57-124	--		0.143	0.043
Butyl Benzyl Phthalate		10.0	**8.95**	90	58-141	--		0.185	0.056
4-Chloro-3-methylphenol		10.0	**8.67**	87	53-120	--		0.383	0.12
4-Chloroaniline		10.0	**9.68**	97	44-138	--		0.340	0.10
Bis(2-chloroethoxy)methane		10.0	**8.84**	88	52-124	--		0.0613	0.018
Bis(2-chloroethyl) Ether		10.0	**8.55**	86	42-123	--		0.0789	0.024
Bis(2-chloroisopropyl) Ether		10.0	**8.57**	86	50-122	--		0.0859	0.026
2-Chloronaphthalene		10.0	**8.72**	87	58-126	--		0.0569	0.017

Continued on next page

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

QC Batch: 1310988 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Laboratory Control Sample (Continued) Analyzed: 10/21/2013 By: DWJ

Unit: ug/L Analytical Batch: 3J22055

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
2-Chlorophenol		10.0	**7.97**	80	44-121	--		0.0889	0.027
4-Chlorophenyl Phenyl Ether		10.0	**8.55**	86	57-122	--		0.160	0.048
Chrysene		10.0	**8.86**	89	56-134	--		0.151	0.045
Dibenz(a,h)anthracene		10.0	**9.70**	97	57-130	--		0.376	0.11
Dibenzofuran		10.0	**8.67**	87	59-123	--		0.136	0.041
Di-n-butyl Phthalate		10.0	**9.28**	93	58-145	--		0.450	0.14
1,2-Dichlorobenzene		10.0	**8.54**	85	48-126	--		0.132	0.040
1,3-Dichlorobenzene		10.0	**8.53**	85	44-122	--		0.137	0.041
1,4-Dichlorobenzene		10.0	**8.33**	83	41-124	--		0.0656	0.020
3,3´-Dichlorobenzidine		20.0	**20.7**	103	55-135	--		0.413	0.12
2,4-Dichlorophenol		10.0	**8.83**	88	51-122	--		0.305	0.092
Diethyl Phthalate		10.0	**8.81**	88	55-129	--		0.217	0.065
2,4-Dimethylphenol		10.0	**7.03**	70	35-112	--		0.559	0.17
Dimethyl Phthalate		10.0	**8.39**	84	61-126	--		0.152	0.046
4,6-Dinitro-2-methylphenol		10.0	**9.19**	92	25-139	--		3.40	1.0
2,4-Dinitrophenol		10.0	**8.31**	83	10-147	--		3.86	1.2
2,4-Dinitrotoluene		10.0	**9.36**	94	55-131	--		0.158	0.048
2,6-Dinitrotoluene		10.0	**9.13**	91	59-120	--		0.267	0.080
Di-n-octyl Phthalate		10.0	**9.09**	91	55-136	--		0.255	0.077
Bis(2-ethylhexyl) Phthalate		10.0	**9.00**	90	60-136	--		0.376	0.11
Fluoranthene		10.0	**9.42**	94	57-123	--		0.209	0.063
Fluorene		10.0	**8.82**	88	60-128	--		0.138	0.041
Hexachlorobenzene		10.0	**9.15**	92	49-130	--		0.209	0.063
Hexachlorobutadiene		10.0	**8.98**	90	50-128	--		0.132	0.040
Hexachlorocyclopentadiene		10.0	**7.17**	72	21-138	--		0.148	0.044
Hexachloroethane		10.0	**8.14**	81	41-123	--		0.139	0.042
Indeno(1,2,3-cd)pyrene		10.0	**9.46**	95	57-129	--		0.266	0.080
Isophorone		10.0	**7.49**	75	56-129	--		0.150	0.045
2-Methylnaphthalene		10.0	**9.02**	90	59-135	--		0.0496	0.015
1-Methylnaphthalene		10.0	**9.27**	93	50-150	--		0.0649	0.020
2-Methylphenol		10.0	**7.00**	70	39-107	--		0.158	0.048
4-Methylphenol		10.0	**6.60**	66	33-122	--		0.188	0.057
2-Nitroaniline		10.0	**10.0**	100	57-130	--		0.386	0.12
3-Nitroaniline		10.0	**9.30**	93	49-144	--		0.813	0.24
4-Nitroaniline		10.0	**9.76**	98	52-143	--		1.10	0.33
Nitrobenzene		10.0	**8.55**	86	53-121	--		0.195	0.058

Continued on next page

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1310988 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C									
Laboratory Control Sample (Continued)					Analyzed:		10/21/2013	By: DWJ	
Unit: ug/L					Analytical Batch:		3J22055		
4-Nitrophenol		10.0	**4.05 J**	40	17-70	--		4.16	1.2
2-Nitrophenol		10.0	**9.03**	90	44-128	--		0.158	0.048
N-Nitroso-diphenylamine		10.0	**8.96**	90	45-110	--		0.225	0.068
N-Nitroso-di-n-propylamine		10.0	**8.06**	81	49-125	--		0.251	0.075
Pentachlorophenol		10.0	**7.88**	79	21-124	--		0.420	0.13
Phenanthrene		10.0	**9.03**	90	63-126	--		0.142	0.043
Phenol		10.0	**3.92**	39	22-60	--		0.112	0.034
Pyrene		10.0	**8.77**	88	60-134	--		0.218	0.066
2,3,4,6-Tetrachlorophenol		10.0	**9.65**	96	45-125	--		1.24	0.37
2,3,5,6-Tetrachlorophenol		10.0	**9.10**	91	50-150	--		0.709	0.21
1,2,4-Trichlorobenzene		10.0	**8.72**	87	47-123	--		0.0886	0.027
2,4,6-Trichlorophenol		10.0	**9.03**	90	47-128	--		0.283	0.085
2,4,5-Trichlorophenol		10.0	**9.77**	98	53-129	--		0.330	0.099

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Metals by EPA 6000/7000 Series Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Analyte: **Iron**/USEPA-6010C										
QC Batch: 1310906 (3010A Digestion)							Analyzed:	10/17/2013	By: CKD	
Method Blank			ND U	ug/L					22	6.5
Laboratory Control Sample		400	**399**	ug/L	100	80-120			21.7	6.5
Analyte: **Manganese**/USEPA-6010C										
QC Batch: 1310906 (3010A Digestion)							Analyzed:	10/17/2013	By: CKD	
Method Blank			ND U	ug/L					9.3	2.8
Laboratory Control Sample		400	**394**	ug/L	99	80-120			9.26	2.8

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QUALITY CONTROL REPORT

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Analyte: **Alkalinity, Total**/SM 2320 B										
QC Batch: 1311109 (General Inorganic Prep)							Analyzed:	10/18/2013	By: SKA	
Method Blank			**0.98 J**	mg/L					1.6	0.50
Laboratory Control Sample		238	**240**	mg/L	101	91-110			1.65	0.50
Analyte: **Nitrogen, Nitrate**/SM 4500-NO3 F-2000										
QC Batch: 1310879 (General Inorganic Prep)							Analyzed:	10/10/2013	By: CAC	
Method Blank			ND U	mg/L					0.030	0.0089
Laboratory Control Sample		0.500	**0.520**	mg/L	104	90-110			0.0296	0.0089
QC Batch: 1310895 (General Inorganic Prep)							Analyzed:	10/11/2013	By: CAC	
Method Blank			ND U	mg/L					0.030	0.0089
Laboratory Control Sample		0.500	**0.490**	mg/L	98	90-110			0.0296	0.0089
Analyte: **Sulfate**/USEPA-9038										
QC Batch: 1310923 (General Inorganic Prep)							Analyzed:	10/14/2013	By: LMA	
Method Blank			ND U	mg/L					1.3	0.39
Laboratory Control Sample		20.0	**19.1**	mg/L	96	85-115			1.29	0.39

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CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 410123

1310191

3-9

Project Name:	Superior 2013 2nd SA GW/MNA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0556-13	Address:	200 Third Avenue	Contact:	(412) 735-0793
Laboratory:			Carnegie, PA 15106		RStahl.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	2013 Superior 2nd SA GW Sampling_001				

Cartle 1163 214 White

	Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8021B_VOA+naphtha	8270C_SVOC (less naphtha)	8270C_SVOC+naphtha													Notes:
					Preservative	HCL	None	None													
					Total Bottle Count																
01	10/08/2013	0955	AQ	SUPE-W-28C-100813	4	2	2	0													01
02	10/08/2013	1144	AQ	SUPE-W-12A-100813	4	2	2	0													↓
03	10/08/2013	1438	AQ	SUPE-W-18D-100813	2	0	0	2													03
04	10/08/2013	1653	AQ	SUPE-W-06C-100813	4	2	2	0													01

Received by.

Relinquished by:	Relinquished by:	~~Relinquished by:~~	Turnaround Requirements
Signature:	Signature:	Signature:	☐ Rush
Printed Name: Ryan Stahl	Printed Name:	Printed Name: Lyn Romeyn	
Firm FTS	Firm	Firm Trimatrix	☒ Standard
Date/Time: 10/08/2013 1726	Date/Time:	Date/Time: 10/9/13 0815	

Page 1 of 1 LAB COPY

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: FTS-Beazer | Work Order #: 1310191
Receipt Record Page/Line #: 3-9 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): JR 10/9/13

Cooler / Box / Other | Qty Received | Thermometer Used: IR Gun (#202) / Digital Thermometer (#54) / Other (#) | See Additional Cooler Information Form

Cooler #	2867	2061	3085	
Time	1010	1015	1026	
Custody Seals	None / Present / Intact / Present / Not Intact			
Coolant Location	Dispersed / Top / Middle / Bottom			
Coolant/Temperature Taken Via	Loose Ice / Bagged Ice / Blue Ice / None — Avg 2-3 containers			
Alternate Temperature Taken Via	Temperature Blank (TB) / 1 Container			
Recorded °C	Temp Blank: —	Temp Blank: —	Temp Blank: —	Temp Blank:
Correction Factor °C				
Actual °C	Temp Blank: 3.1	Temp Blank: 2.7	Temp Blank: 2.2	Temp Blank:
TB location: Representative / Not Representative	Representative	Representative	Representative	Representative / Not Representative
1	2.7 — 2.7	1.2 — 1.2	2.3 — 2.3	
2	3.2 — 3.2	1.5 — 1.5	1.9 — 1.9	
3	3.2 — 3.2	3.1 — 3.1	1.3 — 1.3	
Average °C	3.0	1.9	1.8	
Cooler ID on COC?	☐	☐	☐	☐
VOC Trip Blank received?	☐	☑	☐	☐

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other _____

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☐	☐	☐	Was thermal preservation required?
☑	☐	☐	If "No", Project Chemist Approval Initials: _____
☑	☐	☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☐	☑	Completed Sample Preservation Verification Form?
☐	☐	☑	Samples chemically preserved correctly?
☑	☐	☐	If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☑ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
10/9/13 0815	10/9/13 1047	Yes / (No)

Log In Forms - Receiving Log-In_Checklist revision: 3.4

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SAMPLE PRESERVATION VERIFICATION FORM

page ___ of ___

Client	Work Order #
FTS-Beazer	1310191
Receipt Log #	**Completed By (initials/date)** / **Project Chemist**
3-9	TR 10/9/13

COC ID # 100224 — Adjusted by: _____ Date: _____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1					✓		✓	
COC Line #2					✓		✓	
COC Line #3					✓		✓	
COC Line #4					✓		✓	
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

COC ID # 410123 — Adjusted by: _____ Date: _____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Ph Strip Lot #

☐ HC270245

☑ HC378115

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms -- Sample_Preserve_Verification

version: 3.0

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CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

1 5-7

REF.# 410125

#12144 Cart 13

Rack # 389-373 Green

Project Name:	Superior 2013 2nd SA GW/MNA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0556-13	Address:	200 Third Avenue	Contact:	(412) 735-0793
Laboratory:			Carnegie, PA 15106		RStahl.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	2013 Superior 2nd SA GW Sampling_001				

WO# 1310230

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8270C_SVOC (less naphtha)	8021B_VOA+naphtha	RSK175-Methane	Diss_Fe_Mn	Alk_Nitrate_Sulfate											Notes:
				Preservative	None	HCL	HCL	HNO3	None											
				Total Bottle Count																
10/09/2013	0930	AQ	SUPE-W-30C-100913	4	2	2	0	0	0										01	-01
10/09/2013	1044	AQ	SUPE-W-06A-100913	4	2	2	0	0	0										↓	-02
10/09/2013	1217	AQ	SUPE-W-12CR-100913	4	2	2	0	0	0										↓	-03
10/09/2013	1525	AQ	SUPE-W-30A-100913	8	2	2	2	1	1										05	-04
10/09/2013	2000	AQ	SUPE-W-99-100913	8	2	2	2	1	1										↓	-05

Received

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature:	Signature:	Signature:	☐ Rush
Printed Name: Ryan Stahl	Printed Name:	Printed Name: Lyn Romeyn	☒ Standard
Firm: FTS	Firm:	Firm: Trimatrix	
Date/Time: 10/09/2013 1727	Date/Time:	Date/Time: 10/10/13 0830	

Page 1 of 1 LAB COPY

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: FTS Beazer | Work Order #: L310230
Receipt Record Page/Line #: 5-7 | Project Chemist: BA | Sample #s

Recorded by (initials/date): LR 10/10/13

Cooler ☑ | Box ☐ | Other ☐ | Qty Received: 3

Thermometer Used: IR Gun (#202) ☑ | Digital Thermometer (#54) ☐ | Other (#) ☐ | See Additional Cooler Information Form ☐

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via
2228	1002	None ☐ / Present / Intact ☑ / Present / Not Intact ☐	Dispersed / Top / Middle / Bottom	Loose Ice / Avg 2-3 containers ☑ / Bagged Ice / Avg 2-3 containers ☐ / Blue Ice / Avg 2-3 containers ☐ / None / Avg 2-3 containers ☐	Temperature Blank (TB) ☑ / 1 Container ☐
3100	1018	None ☐ / Present / Intact ☑ / Present / Not Intact ☐	Dispersed / Top / Middle / Bottom	Loose Ice / Avg 2-3 containers ☑ / Bagged Ice / Avg 2-3 containers ☐ / Blue Ice / Avg 2-3 containers ☐ / None / Avg 2-3 containers ☐	Temperature Blank (TB) ☑ / 1 Container ☐
3133	1026	None ☐ / Present / Intact ☑ / Present / Not Intact ☐	Dispersed / Top / Middle / Bottom	Loose Ice / Avg 2-3 containers ☑ / Bagged Ice / Avg 2-3 containers ☐ / Blue Ice / Avg 2-3 containers ☐ / None / Avg 2-3 containers ☐	Temperature Blank (TB) ☑ / 1 Container ☐
		None ☐ / Present / Intact ☐ / Present / Not Intact ☐	Dispersed / Top / Middle / Bottom	Loose Ice / Avg 2-3 containers ☐ / Bagged Ice / Avg 2-3 containers ☐ / Blue Ice / Avg 2-3 containers ☐ / None / Avg 2-3 containers ☐	Temperature Blank (TB) ☐ / 1 Container ☐

Cooler #	Recorded °C	Correction Factor °C	Actual °C
2228	Temp Blank: —		2.0
	TB location: Representative / Not Representative		
	1 1.6	—	1.6
	2 2.6	—	2.6
	3 1.7	—	1.7
		Average °C	2.0
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		
3100	Temp Blank: —		3.9
	TB location: Representative / Not Representative		
	1 3.2	—	3.2
	2 2.6	—	2.6
	3 2.6	—	2.6
		Average °C	2.8
	☐ Cooler ID on COC?		
	☑ VOC Trip Blank received?		
3133	Temp Blank: —		1.9
	TB location: Representative / Not Representative		
	1 2.4	—	2.4
	2 2.4	—	2.4
	3 1.4	—	1.4
		Average °C	2.2
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		
	Temp Blank:		
	TB location: Representative / Not Representative		
	1		
	2		
	3		
		Average °C	
	☐ Cooler ID on COC?		
	☐ VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, initiated By _____
☑	☐	Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other _____

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑	☐	Container type completed on COC?
☑	☐	All container types indicated are received?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐	☐	If "No", Project Chemist Approval Initials: _____
☑	☐	☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☐	☑	Completed Sample Preservation Verification Form?
☐	☐	☑	Samples chemically preserved correctly?
☑	☐	☐	If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☑ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☑ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
10/10/13 0830	10/10/13 1041	Yes (No)

Log In Forms - Receiving Log-In_Checklist revision: 3.4

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SAMPLE PRESERVATION VERIFICATION FORM

page ____ of ____

Client	FTS Beazer	Work Order #	1310230
Receipt Log #	5-7	Completed By (initials/date)	LC 10/10/13
		Project Chemist	GT

COC ID # 410125 — Adjusted by: _____ Date: _____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4					✓		✓	
COC Line #5					✓		✓	
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

COC ID # 100226 — Adjusted by: _____ Date: _____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1					✓		✓	
COC Line #2					✓		✓	
COC Line #3					✓		✓	
COC Line #4					✓		✓	
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Ph Strip Lot #

☐ HC270245

☑ HC378115

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms -- Sample_Preserve_Verification

version: 3.0

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FTS
Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

#12145

L 5-7

REF.# 100226

Project Name:	Superior 2013 2nd SA GW/MNA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0556-13	Address:	200 Third Avenue	Contact:	(412) 480-1162
Laboratory:			Carnegie, PA 15106		Atomcik.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	2013 Superior 2nd SA GW Sampling_001				

WO# 1310232

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	RSK175-Methane	Alk_Nitrate_Sulfate	8270C_PAH_Phenolics	8021B_Benzene_naphtha	Diss_Fe_Mn	8021B_VOA+naphtha	8270C_SVOC (less naphtha)									Schedule	Notes:
				Preservative	HCL	None	None	HCL	HNO3	HCL	None										
				Total Bottle Count																	
10/09/2013	0842	AQ	SUPE-W-25A-100913	8	2	1	2	2	1	0	0									11	
10/09/2013	1040	AQ	SUPE-EB-02-100913	8	2	1	2	2	1	0	0									11	
10/09/2013	1131	AQ	SUPE-W-04AR-100913	8	2	1	0	0	1	2	2									05	-01
10/09/2013	1506	AQ	SUPE-W-36A-100913	8	2	1	2	2	1	0	0									11	
10/09/2013	2000	AQ	SUPE-TB-02-100913	1	0	0	0	0	0	1	0									04	-02

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature:	Signature:	Signature:	☐ Rush
Printed Name: Andrew Tomcik	Printed Name:	Printed Name: Lyn Romeyn	☒ Standard
Firm: FTS	Firm	Firm: Trimatrix	
Date/Time: 10/09/2013 1718	Date/Time:	Date/Time: 10/10/13 0830	

Page 1 of 1 LAB COPY

TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: FTS Beazer | Work Order #: 1310232

Receipt Record Page/Line #: 5-7 | New / Add To | Project Chemist: GW | Sample #s

Recorded by (initials/date): LL 10/10/13

Cooler / Box / Other ____ | Qty Received: 3

Thermometer Used: IR Gun (#202) / Digital Thermometer (#54) / Other (#____) | See Additional Cooler Information Form

Cooler #	Time	Custody Seals	Coolant Location	Coolant/Temperature Taken Via	Alternate Temperature Taken Via	Recorded °C	Correction Factor °C	Actual °C
2228	1002	Present / Intact	Dispersed / Top / Middle / Bottom	Loose Ice / Avg 2-3 containers	Temperature Blank (TB)	Temp Blank: —		2.0
						TB location: Representative / Not Representative		
						1: 1.6	—	1.6
						2: 2.6	—	2.6
						3: 1.7	—	1.7
							Average °C	2.0
						Cooler ID on COC?		
						VOC Trip Blank received?		
3100	1018	Present / Intact	Dispersed / Top / Middle / Bottom	Loose Ice / Avg 2-3 containers	Temperature Blank (TB)	Temp Blank: —		3.9
						TB location: Representative / Not Representative		
						1: 3.2	—	3.2
						2: 2.6	—	2.6
						3: 2.6	—	2.6
							Average °C	2.8
						Cooler ID on COC?		
						VOC Trip Blank received?		
3133	1026	Present / Intact	Dispersed / Top / Middle / Bottom	Loose Ice / Avg 2-3 containers	Temperature Blank (TB)	Temp Blank: —		1.9
						TB location: Representative / Not Representative		
						1: 2.6	—	2.6
						2: 2.6	—	2.6
						3: 1.4	—	1.4
							Average °C	2.2
						Cooler ID on COC?		
						VOC Trip Blank received?		
		None / Present / Intact / Present / Not Intact	Dispersed / Top / Middle / Bottom	Loose Ice / Bagged Ice / Blue Ice / None / Avg 2-3 containers	Temperature Blank (TB) / 1 Container	Recorded °C	Correction Factor °C	Actual °C
						Temp Blank:		
						TB location: Representative / Not Representative		
						1		
						2		
						3		
							Average °C	
						Cooler ID on COC?		
						VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By ____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other ____

COC Information

☐ TriMatrix COC ☑ Other ____

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Initials ____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☑		Completed Sample Preservation Verification Form?
☐	☑		Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
☐	☑		Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☑ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☑	☐	☐	Extra sample locations / containers not listed on COC?

Notes

☑ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
10/10/13 0830	10/10/13 1041	Yes (No)

Log In Forms - Receiving Log-In_Checklist

revision: 3.4

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SAMPLE PRESERVATION VERIFICATION FORM

page ____ of ____

Client	Work Order #
FTS Beazer	1310232
Receipt Log #	**Completed By (initials/date)** / **Project Chemist**
5-7	CR 10/10/13

COC ID # 410125 — Adjusted by: ____ Date: ____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES: 3, 6, 15

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4					✓		✓	
COC Line #5					✓		✓	
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments:

COC ID # 100226 — Adjusted by: ____ Date: ____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES: 3, 6, 15

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1					✓		✓	
COC Line #2					✓		✓	
COC Line #3					✓		✓	
COC Line #4					✓		✓	
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments:

Ph Strip Lot #

☐ HC270245

☑ HC378115

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms -- Sample_Preserve_Verification

version: 3.0

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#12147

7-4

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 100228

Project Name:	Superior 2013 2nd SA GW/MNA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0556-13	Address:	200 Third Avenue	Contact:	(412) 480-1162
Laboratory:			Carnegie, PA 15106		Atomcik.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	2013 Superior 2nd SA GW Sampling_001				

Sample Date	Sample Time	Matrix	Sample Identification	Analysis	Diss_Fe_Mn	RSK175-Methane	8021B_VOA+naphtha	Alk_Nitrate_Sulfate	8270C_SVOC (less naphtha)											Schedule	Notes:
				Preservative	HNO3	HCL	HCL	None	None												
				Total Bottle Count																	
10/10/2013	0937	AQ	SUPE-W-10AR2-101013	8	1	2	2	1	2											05	
10/10/2013	1115	AQ	SUPE-EB-03-101013	8	1	2	2	1	2											↓	
10/10/2013	2000	AQ	SUPE-TB-03-101013	1	0	0	1	0	0											04	

0201
03

Cart 2
RSK Rack #488W
VOC Rack #734W

WO# 1310243

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature:	Signature:	Signature:	☐ Rush
Printed Name: Andrew Tomcik	Printed Name:	Printed Name:	
Firm: FTS	Firm:	Firm:	☒ Standard
Date/Time: 10/10/2013 1104	Date/Time:	Date/Time: 10.11.13 0830	

Page 1 of 1 LAB COPY

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: FTS | Work Order #: 1310243

Receipt Record Page/Line # | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): WC 10.11.13

☑ Cooler ☐ Box ☐ Other | Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler #	Time	Cooler #	Time	Cooler #	Time	Cooler #	Time
Tm 0929	0905						

Custody Seals:
- Cooler: ☑ None ☐ Present / Intact ☐ Present / Not Intact
- Box: ☑ None ☐ Present / Intact ☐ Present / Not Intact
- Other: ☑ None ☐ Present / Intact ☐ Present / Not Intact
- Other: ☑ None ☐ Present / Intact ☐ Present / Not Intact

Coolant Location: Dispersed / Top / Middle / Bottom

Coolant/Temperature Taken Via:
- ☑ Loose Ice / Avg 2-3 containers
- ☐ Bagged Ice / Avg 2-3 containers
- ☐ Blue Ice / Avg 2-3 containers
- ☐ None / Avg 2-3 containers

Alternate Temperature Taken Via:
- ☑ Temperature Blank (TB)
- ☑ 1 Container

	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:	—		1.9
TB location: Representative / Not Representative			
1	2.5	–	2.5
2	3.0	–	3.0
3	2.2	–	2.2
Average °C			2.6

☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☐	Other _____

COC Information

☐ TriMatrix COC ☐ Other _____

COC ID Numbers

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☐	☐	☑	Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐	☐	If "No", Project Chemist Approval Intials: _____
☑	☐	☐	If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☑	☐	☑	Completed Sample Preservation Verification Form?
☑	☐	☐	Samples chemically preserved correctly?
☑	☐	☐	If "No", added orange tag?
☑	☐	☐	Received pre-preserved VOC soils?

☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

- ☐ Bacteriological
- ☐ Air Bags
- ☐ EnCores / Methanol Pre-Preserved
- ☐ Formaldehyde/Aldehyde
- ☑ Green-tagged containers
- ☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
- ☐ NONE RECEIVED
- ☑ RECEIVED, COCs TO LAB(S)

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
10.11.13 0830	10.11.13 0920	(Yes) / No

Log In Forms - Receiving Log-In_Checklist revision: 3.4

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SAMPLE PRESERVATION VERIFICATION FORM

page 1 of 1

Client	FTS	Work Order #	1310243
Receipt Log #	7.4	Completed By (initials/date)	WC 10.11.13
		Project Chemist	

COC ID # 12147 — Adjusted by: _____ Date: _____ — DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1					✓		✓	
COC Line #2					✓		✓	
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Ph Strip Lot #
☐ HC270245
☑ HC378115

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

COC ID # — Adjusted by: _____ Date: _____ — DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms -- Sample_Preserve_Verification

version: 3.0

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FTS, LLC

DATE: November 14, 2013

FROM: Jane Kilzer

SUBJECT: Superior Natural Attenuation GW

SAMPLE DELIVERY GROUP (SDG): 1310189/1310231/1310252

SAMPLES: SUPE-W-35A-100813, SUPE-W-37A-100813, SUPE-EB-01-100813, SUPE-W-26A-100813, SUPE-TB-01-100813, SUPE-W-25A-100913, SUPE-EB-02-100913, SUPE-W-36A-100913, SUPE-W-16AR-101013

ANALYSES: Method 8021B (VOCs), 8270C (SVOCs), RSK-175 (Methane), 6010C (Dissolved Metals), 2320B (Total Alkalinity), 4500-NO3 (Nitrate Nitrogen), 9038 (Sulfate)

LABORATORY: Tri-Matrix Laboratories, Inc.

The data contained in this SDG were evaluated with regard to the following parameters:

□ Data Completeness
Noncompliance: None

□ Holding Times
Noncompliance: None

□ Laboratory Blank Contamination
Noncompliance: Methane, diethyl phthalate, and alkalinity were detected in the method blank. See attached page for details.

□ Field Blank Contamination
Noncompliance: Methane, diethyl phthalate, and alkalinity were detected in the equipment blanks. See attached page for details.

□ Surrogate Recoveries
Noncompliance: The surrogate recovery of phenol-d6 in monitoring well W-26A was below the control limits. No action was taken on this basis.

□ Laboratory Control Sample
Noncompliance: None

□ Matrix Spike/Matrix Spike Duplicate
Noncompliances: None

Laboratory Blank Contamination:

The following analytes were detected in the aqueous method blank at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
Methane	0.21 J ug/l	1.05 ug/l
Diethyl Phthalate	0.13 J ug/l	0.65 ug/l
Alkalinity	0.98 J mg/l	4.9 mg/l

An action level of 5X the maximum concentration was used to evaluate the sample data for laboratory blank contamination. Associated samples with concentrations below the blank action level were qualified “U” for laboratory blank contamination.

Field Blank Contamination:

The following analytes were detected in the aqueous equipment blank, SUPE-EB-01-100813, at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
Methane	0.21 ug/l	1.05 ug/l
Diethyl Phthalate	0.11 ug/l	0.55 ug/l
Alkalinity	0.98 J mg/l	4.9 mg/l

The following analytes were detected in the aqueous equipment blank, SUPE-EB-02-100913, at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
Methane	0.20 ug/l	1 ug/l
Diethyl Phthalate	0.17 ug/l	0.85 ug/l
Alkalinity	1.5 J mg/l	7.5 mg/l

An action level of 5X the maximum concentration was used to evaluate the sample data for field blank contamination. Associated samples with concentrations below the blank action level were qualified “B” for field blank contamination.

FTS, LLC

DATE: November 14, 2013

FROM: Jane Kilzer

SUBJECT: Superior GW/Natural Attenuation GW

SAMPLE DELIVERY GROUP (SDG): 1310191/1310230/1310232/1310243

SAMPLES: SUPE-W-28C-100813, SUPE-W-12A-100813, SUPE-W-18D-100813, SUPE-W-06C-100813, SUPE-W-30C-100913, SUPE-W-06A-100913, SUPE-W-12CR-100913, SUPE-W-30A-100913, SUPE-W-99-100913 (W-30A), SUPE-W-04AR-100913, SUPE-TB-02-100913, SUPE-W-10AR2-101013, SUPE-EB-03-101013, SUPE-TB-03-101013

ANALYSES: Method 8021B (VOCs), 8270C (SVOCs), RSK-175 (Methane), 6010C (Dissolved Metals), 2320B (Total Alkalinity), 4500-NO3 (Nitrate Nitrogen), 9038 (Sulfate)

LABORATORY: Tri-Matrix Laboratories, Inc.

The data contained in this SDG were evaluated with regard to the following parameters:

□ Data Completeness
Noncompliance: None

□ Holding Times
Noncompliance: None

□ Laboratory Blank Contamination
Noncompliance: Methane, several SVOCs, and alkalinity were detected in the method blank. See attached page for details.

□ Field Blank Contamination
Noncompliance: Methane, di-n-butyl phthalate, diethyl phthalate, bis(2-ethylhexyl)phthalate, and alkalinity were detected in the equipment blank. See attached page for details.

□ Field Duplicate Precision
Noncompliance: See attached page for details.

□ Surrogate Recoveries
Noncompliance: The surrogate recovery of 1,2-dichloroethane-d4 in monitoring wells W-06C and W-12CR were above the control limits. No action was taken on this basis.

□ Laboratory Control Sample
Noncompliance: The LCS recovery of chloromethane was above the control limits. No action was taken on this basis.

Laboratory Blank Contamination:

The following analytes were detected in the aqueous method blank at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
Methane	0.21 J ug/l	1.05 ug/l
Bis(2-ethylhexyl)phthalate	30 ug/l	150 ug/l
Benzoic Acid	1.2 J ug/l	6 ug/l
Benzyl Alcohol	0.17 ug/l	0.85 ug/l
Di-n-butyl phthalate	1.4 ug/l	7 ug/l
Di-n-octyl phthalate	0.090 J ug/l	0.45 ug/l
Diethyl Phthalate	0.13 J ug/l	0.65 ug/l
Alkalinity	0.98 J mg/l	4.9 mg/l

An action level of 5X the maximum concentration was used to evaluate the sample data for laboratory blank contamination. Associated samples with concentrations below the blank action level were qualified “U” for laboratory blank contamination.

Field Blank Contamination:

The following analytes were detected in the aqueous equipment blank, SUPE-EB-03-101013, at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
Methane	0.2 ug/l	1 ug/l
Di-n-butyl phthalate	0.42 ug/l	2.1 ug/l
Diethyl Phthalate	0.21 ug/l	1.05 ug/l
Bis(2-ethylhexyl)phthalate	0.12 J ug/l	0.6 ug/l
Alkalinity	1.5 J mg/l	7.5 mg/l

An action level of 5X the maximum concentration was used to evaluate the sample data for field blank contamination. Associated samples with concentrations below the blank action level were qualified “B” for field blank contamination.

Field Duplicate Precision:

FIELD DUPLICATE PRECISION					
ANALYTE	W-30A	QUAL	W-99	QUAL	RPD
1,2,4-Trimethylbenzene	2.1		2.1		0.00
2-Chloronaphthalene	0.28		0.21		28.57
1-Methylnaphthalene	1.5		1.4		6.90
Acenaphthene	9.2		8.8		4.44
Acenaphthylene	0.16		0.16		0
Alkalinity	310		320		3.17
Anthracene	0.12	J	0.11	J	8.70
Benzene	2.3		2.4		4.26
Benzo(a)anthracene	0.08	J	0.07	J	13.33
Benzyl Alcohol	0.16	J	0.15	J	6.45
bis(2-chloroethoxy)methane	0.02	J	0.061	U	NC
bis(2-ethylhexyl)phthalate	0.15	J	0.16	J	6.45
Dibenzofuran	2.9		2.8		3.51
Diethyl phthalate	0.33		0.26		23.73
Ethlybenzene	6.8		7.1		4.32
Fluoranthene	0.79		0.75		5.19
Fluorene	1.2		1.1		8.70
Iron	260		260		0.00
Manganese	50		48		4.08
Methane	10		9.8		2.02
Naphthalene	96		99		3.08
Nitrate	0.044		0.045		2.25
Phenanthrene	0.05	J	0.05	J	0.00
Pyrene	0.43		0.4		7.23
Sulfate	30		32		6.45
Meta Para Xylene	3.3		3.4		2.99
Ortho Xylene	2.3		2.4		4.26

NC – not calculated due to non-detect result

ARCADIS

Laboratory Analytical and Data Validation Reports

January 2014

February 04, 2014

Beazer East, Inc.
Attn: Ms. Angie Gatchie c/o FTS
200 Third Avenue
Carnegie, PA 15106

Project: Superior Quarterly MNA GW - WI Cert. #999472650

Dear Ms. Angie Gatchie c/o FTS,

Enclosed is a copy of the laboratory report for the following work order(s) received by TriMatrix Laboratories:

Work Order	Received	Description
1401174	01/15/2014	Laboratory Services
1401177	01/16/2014	Laboratory Services
1401188	01/16/2014	Laboratory Services
1401205	01/17/2014	Laboratory Services

This report relates only to the sample(s) as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Program (NELAP) and/or one of the following certification programs:

ACLASS DoD-ELAP/ISO17025 (#ADE-1542); Arkansas DEP (#88-0730/12-056-0); Florida DEP (#E87622-24); Georgia EPD (#E87622-24); Illinois DEP (#200026/003059); Kansas DPH (#E-10302); Kentucky DEP (#0021); Louisiana DEP (#83658); Michigan DPH (#0034); Minnesota DPH (#491715); New York ELAP (#11776/48855); North Carolina DNRE (#659); Texas CEQ (#T104704495-13-3); Virginia DCLS (#460153/1622); Wisconsin DNR (#999472650); USDA Soil Import Permit (#P330-12-00236).

Any qualification or narration of results, including sample acceptance requirements and test exceptions to the above referenced programs, is presented in the Statement of Data Qualifications section of this report. Estimates of analytical uncertainties and certification documents for the test results contained within this report are available upon request. LOD and LOQ values associated with samples requiring a dilution have been adjusted based on the dilution factor.

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If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

Gary L. Wood
Project Chemist

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PROJECT TECHNICAL NARRATIVE(s)

Dissolved Gases in Water by RSK-175 Headspace Analysis

Narrative: Due to sample volumes, matrix specific quality control (QC) was not performed on this batch. A blank and a Laboratory Control Sample make up the batch QC.

Analysis: RSK-175

Sample/Analyte:

1401174-01	SUPE-W-35A-011414
1401174-02	SUPE-W-37A-011414
1401174-03	SUPE-EB-01-011414
1401188-01	SUPE-W-26A-011514
1401188-02	SUPE-W-30A-011514
1401188-03	SUPE-EB-02-011514
1401188-05	SUPE-W-10AR2-011514
1401188-06	SUPE-W-04AR2-011514
1401188-07	SUPE-W-25A-011514
1401188-08	SUPE-W-36A-011514
1401188-09	SUPE-M-99A-011514
1401205-02	SUPE-W-16AR-011614
1401205-03	SUPE-EB-03-011614

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PROJECT TECHNICAL NARRATIVE(s)

Semivolatile Organic Compounds by EPA Method 8270C

Narrative: Due to sample volumes, matrix specific quality control (QC) was not performed on this batch. A blank and a Laboratory Control Sample make up the batch QC.

Analysis: USEPA-8270C

Sample/Analyte:

1401174-03	SUPE-EB-01-011414
1401177-01	SUPE-W-35A-011414
1401177-02	SUPE-W-37A-011414
1401188-01	SUPE-W-26A-011514
1401188-02	SUPE-W-30A-011514
1401188-03	SUPE-EB-02-011514
1401188-05	SUPE-W-10AR2-011514
1401188-06	SUPE-W-04AR2-011514
1401188-07	SUPE-W-25A-011514
1401188-08	SUPE-W-36A-011514
1401188-09	SUPE-M-99A-011514
1401205-02	SUPE-W-16AR-011614
1401205-03	SUPE-EB-03-011614

Narrative: Manual integration was required on the analytes listed below. All manual integrations were performed and reviewed in accordance with TriMatrix laboratory policy.

Analysis: USEPA-8270C

Sample/Analyte:

1401188-02	SUPE-W-30A-011514	Benzo(a)anthracene
1401188-05	SUPE-W-10AR2-011514	2,4-Dimethylphenol
1401188-05	SUPE-W-10AR2-011514	Benzo(b)fluoranthene
1401188-05	SUPE-W-10AR2-011514	Benzo(k)fluoranthene
1401188-09	SUPE-M-99A-011514	Phenol-d6
1401205-02	SUPE-W-16AR-011614	2,4-Dimethylphenol

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PROJECT TECHNICAL NARRATIVE(s)

Dissolved Metals by EPA 6000/7000 Series Methods

Narrative: This analyte was not present in this sample at a concentration greater than 50 times the MDL, therefore serial dilution is not required.

Analysis: USEPA-6010C

Sample/Analyte: 1401174-02 SUPE-W-37A-011414 Manganese

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PROJECT TECHNICAL NARRATIVE(s)

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Narrative: The CRL recovery for this analyte was outside of the laboratory control limits.

Analysis: SM 4500-NO3 F-2011

4A23005-CRL1	Nitrogen, Nitrate
4A23024-CRL1	Nitrogen, Nitrate

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STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: The analyte concentration in the associated MB was greater than the MDL but less than the RL. The positive sample result, which was less than 5 times the MB value, is considered estimated.

Analysis: USEPA-8270C

Sample/Analyte:		
1401174-03	SUPE-EB-01-011414	Diethyl Phthalate
1401177-01	SUPE-W-35A-011414	Diethyl Phthalate
1401177-02	SUPE-W-37A-011414	Diethyl Phthalate
1401188-01	SUPE-W-26A-011514	Diethyl Phthalate
1401188-02	SUPE-W-30A-011514	Diethyl Phthalate
1401188-03	SUPE-EB-02-011514	Diethyl Phthalate
1401188-05	SUPE-W-10AR2-011514	Diethyl Phthalate
1401188-06	SUPE-W-04AR2-011514	Diethyl Phthalate
1401188-07	SUPE-W-25A-011514	Diethyl Phthalate
1401188-08	SUPE-W-36A-011514	Diethyl Phthalate
1401188-09	SUPE-M-99A-011514	Diethyl Phthalate
1401205-02	SUPE-W-16AR-011614	Diethyl Phthalate
1401205-03	SUPE-EB-03-011614	Diethyl Phthalate

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401174**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-35A-011414**	Sampled:	1/14/14 13:15
Lab Sample ID:	**1401174-01**	Sampled By:	Client
Matrix:	Water	Received:	1/15/14 9:00

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	ND	U	0.48	0.14	ug/L	1	RSK-175	01/22/14 12:50	JMF	1400491

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401174**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-35A-011414**	Sampled:	1/14/14 13:15		
Lab Sample ID:	**1401174-01**	Sampled By:	Client		
Matrix:	Water	Received:	1/15/14 9:00		
Unit:	ug/L	Prepared:	1/24/14 15:00	By:	LEW
Dilution Factor:	1	Analyzed:	1/24/14 22:09	By:	LEW
QC Batch:	1400737	Analytical Batch:	4A31014		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	1.1	0.32
91-20-3	Naphthalene	NDU	1.9	0.56

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*97*	*85-118*
1,2-Dichloroethane-d4	*94*	*87-122*
Toluene-d8	*97*	*85-113*
4-Bromofluorobenzene	*99*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401174**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-37A-011414**	Sampled:	1/14/14 16:10
Lab Sample ID:	**1401174-02**	Sampled By:	Client
Matrix:	Water	Received:	1/15/14 9:00

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	ND U	0.48	0.14	ug/L	1	RSK-175	01/22/14 12:54	JMF	1400491

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401174**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-37A-011414**	Sampled:	1/14/14 16:10		
Lab Sample ID:	**1401174-02**	Sampled By:	Client		
Matrix:	Water	Received:	1/15/14 9:00		
Unit:	ug/L	Prepared:	1/24/14 15:00	By:	LEW
Dilution Factor:	1	Analyzed:	1/24/14 22:36	By:	LEW
QC Batch:	1400737	Analytical Batch:	4A31014		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	1.1	0.32
91-20-3	Naphthalene	NDU	1.9	0.56

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*97*	*85-118*
1,2-Dichloroethane-d4	*97*	*87-122*
Toluene-d8	*98*	*85-113*
4-Bromofluorobenzene	*97*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401174**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-37A-011414**	Sampled:	1/14/14 16:10
Lab Sample ID:	**1401174-02**	Sampled By:	Client
Matrix:	Water	Received:	1/15/14 9:00

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	01/21/14 12:36	CKD	1400386
Manganese	**3.7**	**J**	9.3	2.8	ug/L	1	USEPA-6010C	01/21/14 12:36	CKD	1400386

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401174**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-37A-011414**	Sampled:	1/14/14 16:10
Lab Sample ID:	**1401174-02**	Sampled By:	Client
Matrix:	Water	Received:	1/15/14 9:00

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**710**	1.6	0.50	mg/L	1	SM 2320 B-2011	01/20/14 12:20	SKA	1400367
Nitrogen, Nitrate	**0.15**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2011	01/15/14 14:08	CAC	1400306
Sulfate	**38**	2.6	0.77	mg/L	2	USEPA-9038	01/16/14 11:17	LMA	1400342

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401174**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-01-011414**	Sampled:	1/14/14 18:00
Lab Sample ID:	**1401174-03**	Sampled By:	Client
Matrix:	Water	Received:	1/15/14 9:00

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	ND	U	0.48	0.14	ug/L	1	RSK-175	01/22/14 13:02	JMF	1400491

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401174**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-01-011414**	Sampled:	1/14/14 18:00		
Lab Sample ID:	**1401174-03**	Sampled By:	Client		
Matrix:	Water	Received:	1/15/14 9:00		
Unit:	ug/L	Prepared:	1/24/14 15:00	By:	LEW
Dilution Factor:	1	Analyzed:	1/24/14 23:03	By:	LEW
QC Batch:	1400737	Analytical Batch:	4A31014		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	1.1	0.32
91-20-3	Naphthalene	NDU	1.9	0.56

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*98*	*85-118*
1,2-Dichloroethane-d4	*95*	*87-122*
Toluene-d8	*98*	*85-113*
4-Bromofluorobenzene	*98*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401174**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-01-011414**	Sampled:	1/14/14 18:00		
Lab Sample ID:	**1401174-03**	Sampled By:	Client		
Matrix:	Water	Received:	1/15/14 9:00		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/20/14 15:57	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A21024		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.23B**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	NDU	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401174**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-01-011414**	Sampled:	1/14/14 18:00		
Lab Sample ID:	**1401174-03**	Sampled By:	Client		
Matrix:	Water	Received:	1/15/14 9:00		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/20/14 15:57	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A21024		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*56*	*20-70*
Phenol-d6	*35*	*18-45*
Nitrobenzene-d5	*89*	*31-123*
2-Fluorobiphenyl	*66*	*25-113*
2,4,6-Tribromophenol	*58*	*30-121*
o-Terphenyl	*84*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401177**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-35A-011414**	Sampled:	1/14/14 13:15		
Lab Sample ID:	**1401177-01**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/20/14 16:32	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A21024		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.33B**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	NDU	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401177**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-35A-011414**	Sampled:	1/14/14 13:15		
Lab Sample ID:	**1401177-01**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/20/14 16:32	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A21024		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	*% Recovery*	*Control Limits*
2-Fluorophenol	*41*	*20-70*
Phenol-d6	*28*	*18-45*
Nitrobenzene-d5	*86*	*31-123*
2-Fluorobiphenyl	*66*	*25-113*
2,4,6-Tribromophenol	*46*	*30-121*
o-Terphenyl	*85*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401177**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-35A-011414**	Sampled:	1/14/14 13:15
Lab Sample ID:	**1401177-01**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	01/21/14 12:53	CKD	1400386
Manganese	**3.7**	**J**	9.3	2.8	ug/L	1	USEPA-6010C	01/21/14 12:53	CKD	1400386

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401177**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-35A-011414**	Sampled:	1/14/14 13:15
Lab Sample ID:	**1401177-01**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**470**		1.6	0.50	mg/L	1	SM 2320 B-2011	01/20/14 12:20	SKA	1400367
Nitrogen, Nitrate	**0.024**	**J**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2011	01/16/14 12:55	CAC	1400377
Sulfate	**77**		6.4	1.9	mg/L	5	USEPA-9038	01/16/14 11:20	LMA	1400342

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401177**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-37A-011414**	Sampled:	1/14/14 16:10		
Lab Sample ID:	**1401177-02**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/20/14 17:06	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A21024		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.24B**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	**0.070J**	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	**0.17**	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401177**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-37A-011414**	Sampled:	1/14/14 16:10		
Lab Sample ID:	**1401177-02**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/20/14 17:06	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A21024		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	*% Recovery*	*Control Limits*
2-Fluorophenol	*51*	*20-70*
Phenol-d6	*32*	*18-45*
Nitrobenzene-d5	*85*	*31-123*
2-Fluorobiphenyl	*68*	*25-113*
2,4,6-Tribromophenol	*59*	*30-121*
o-Terphenyl	*84*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401177**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-01-011414**	Sampled:	1/14/14 18:00
Lab Sample ID:	**1401177-03**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	01/21/14 12:56	CKD	1400386
Manganese	**2.9**	**J**	9.3	2.8	ug/L	1	USEPA-6010C	01/21/14 12:56	CKD	1400386

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401177**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-01-011414**	Sampled:	1/14/14 18:00
Lab Sample ID:	**1401177-03**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**0.99**	**J**	1.6	0.50	mg/L	1	SM 2320 B-2011	01/20/14 12:20	SKA	1400367
Nitrogen, Nitrate	**0.014**	**J**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2011	01/16/14 12:57	CAC	1400377
Sulfate	ND	U	1.3	0.39	mg/L	1	USEPA-9038	01/16/14 10:50	LMA	1400342

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-26A-011514**	Sampled:	1/15/14 11:31
Lab Sample ID:	**1401188-01**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	ND	U	0.48	0.14	ug/L	1	RSK-175	01/22/14 13:07	JMF	1400491

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-26A-011514**	Sampled:	1/15/14 11:31		
Lab Sample ID:	**1401188-01**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/27/14 9:00	By:	LEW
Dilution Factor:	1	Analyzed:	1/27/14 18:29	By:	LEW
QC Batch:	1400738	Analytical Batch:	4A31015		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	1.1	0.32
91-20-3	Naphthalene	NDU	1.9	0.56

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*101*	*85-118*
1,2-Dichloroethane-d4	*98*	*87-122*
Toluene-d8	*97*	*85-113*
4-Bromofluorobenzene	*97*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-26A-011514**	Sampled:	1/15/14 11:31		
Lab Sample ID:	**1401188-01**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/20/14 17:41	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A21024		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.24B**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	**0.090J**	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	**0.10J**	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	**0.080J**	0.22	0.066

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ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-26A-011514**	Sampled:	1/15/14 11:31		
Lab Sample ID:	**1401188-01**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/20/14 17:41	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A21024		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*40*	*20-70*
Phenol-d6	*27*	*18-45*
Nitrobenzene-d5	*82*	*31-123*
2-Fluorobiphenyl	*61*	*25-113*
2,4,6-Tribromophenol	*50*	*30-121*
o-Terphenyl	*79*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-26A-011514**	Sampled:	1/15/14 11:31
Lab Sample ID:	**1401188-01**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	01/21/14 13:06	CKD	1400386
Manganese	**6.9**	**J**	9.3	2.8	ug/L	1	USEPA-6010C	01/21/14 13:06	CKD	1400386

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-26A-011514**	Sampled:	1/15/14 11:31
Lab Sample ID:	**1401188-01**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Nitrogen, Nitrate	**0.028**	**J**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2011	01/16/14 12:58	CAC	1400377
Alkalinity, Total	**480**		1.6	0.50	mg/L	1	SM 2320 B-2011	01/20/14 12:20	SKA	1400367
Sulfate	**41**		2.6	0.77	mg/L	2	USEPA-9038	01/22/14 12:45	LMA	1400504

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-30A-011514**	Sampled:	1/15/14 14:09
Lab Sample ID:	**1401188-02**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**11**	0.48	0.14	ug/L	1	RSK-175	01/22/14 13:12	JMF	1400491

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-30A-011514**	Sampled:	1/15/14 14:09		
Lab Sample ID:	**1401188-02**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/24/14 15:00	By:	LEW
Dilution Factor:	1	Analyzed:	1/25/14 3:36	By:	LEW
QC Batch:	1400737	Analytical Batch:	4A31014		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	**0.59J**	1.1	0.32
91-20-3	Naphthalene	**24**	1.9	0.56

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*98*	*85-118*
1,2-Dichloroethane-d4	*96*	*87-122*
Toluene-d8	*96*	*85-113*
4-Bromofluorobenzene	*101*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-30A-011514**	Sampled:	1/15/14 14:09		
Lab Sample ID:	**1401188-02**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/20/14 18:17	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A21024		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**4.7**	0.11	0.033
208-96-8	Acenaphthylene	**0.082**	0.057	0.017
120-12-7	Anthracene	**0.082J**	0.20	0.062
56-55-3	Benzo(a)anthracene	**0.14J**	0.15	0.045
50-32-8	Benzo(a)pyrene	**0.082J**	0.13	0.040
205-99-2	Benzo(b)fluoranthene	**0.11J**	0.19	0.058
207-08-9	Benzo(k)fluoranthene	**0.062J**	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	**0.10J**	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	**1.8**	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.28B**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	**0.40**	0.21	0.063
86-73-7	Fluorene	**1.6**	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	**0.15**	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	**0.39**	0.22	0.066

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-30A-011514**	Sampled:	1/15/14 14:09		
Lab Sample ID:	**1401188-02**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/20/14 18:17	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A21024		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*40*	*20-70*
Phenol-d6	*28*	*18-45*
Nitrobenzene-d5	*79*	*31-123*
2-Fluorobiphenyl	*61*	*25-113*
2,4,6-Tribromophenol	*56*	*30-121*
o-Terphenyl	*75*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-30A-011514**	Sampled:	1/15/14 14:09
Lab Sample ID:	**1401188-02**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**1600**	22	6.5	ug/L	1	USEPA-6010C	01/21/14 13:10	CKD	1400386
Manganese	**680**	9.3	2.8	ug/L	1	USEPA-6010C	01/21/14 13:10	CKD	1400386

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-30A-011514**	Sampled:	1/15/14 14:09
Lab Sample ID:	**1401188-02**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Nitrogen, Nitrate	**0.012**	**J**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2011	01/16/14 12:58	CAC	1400377
Alkalinity, Total	**550**		1.6	0.50	mg/L	1	SM 2320 B-2011	01/20/14 12:20	SKA	1400367
Sulfate	**62**		2.6	0.77	mg/L	2	USEPA-9038	01/22/14 12:45	LMA	1400504

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-02-011514**	Sampled:	1/15/14 14:50
Lab Sample ID:	**1401188-03**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	ND	U	0.48	0.14	ug/L	1	RSK-175	01/22/14 13:16	JMF	1400491

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-02-011514**	Sampled:	1/15/14 14:50		
Lab Sample ID:	**1401188-03**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/27/14 9:00	By:	LEW
Dilution Factor:	1	Analyzed:	1/27/14 18:56	By:	LEW
QC Batch:	1400738	Analytical Batch:	4A31015		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	1.1	0.32
91-20-3	Naphthalene	NDU	1.9	0.56

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*99*	*85-118*
1,2-Dichloroethane-d4	*98*	*87-122*
Toluene-d8	*96*	*85-113*
4-Bromofluorobenzene	*95*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-02-011514**	Sampled:	1/15/14 14:50		
Lab Sample ID:	**1401188-03**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/20/14 18:52	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A21024		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.17PB**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	NDU	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066

Continued on next page

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-02-011514**	Sampled:	1/15/14 14:50		
Lab Sample ID:	**1401188-03**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/20/14 18:52	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A21024		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*52*	*20-70*
Phenol-d6	*32*	*18-45*
Nitrobenzene-d5	*84*	*31-123*
2-Fluorobiphenyl	*64*	*25-113*
2,4,6-Tribromophenol	*62*	*30-121*
o-Terphenyl	*82*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-02-011514**	Sampled:	1/15/14 14:50
Lab Sample ID:	**1401188-03**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	01/21/14 13:13	CKD	1400386
Manganese	**2.9**	**J**	9.3	2.8	ug/L	1	USEPA-6010C	01/21/14 13:13	CKD	1400386

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-02-011514**	Sampled:	1/15/14 14:50
Lab Sample ID:	**1401188-03**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Nitrogen, Nitrate	ND	U	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2011	01/16/14 12:59	CAC	1400377
Alkalinity, Total	**0.99**	**J**	1.6	0.50	mg/L	1	SM 2320 B-2011	01/20/14 12:20	SKA	1400367
Sulfate	ND	U	1.3	0.39	mg/L	1	USEPA-9038	01/22/14 12:21	LMA	1400504

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-TB-02-011514**	Sampled:	1/15/14 14:50		
Lab Sample ID:	**1401188-04**	Sampled By:	TML		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/27/14 9:00	By:	LEW
Dilution Factor:	1	Analyzed:	1/27/14 19:23	By:	LEW
QC Batch:	1400738	Analytical Batch:	4A31015		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	1.1	0.32
91-20-3	Naphthalene	NDU	1.9	0.56

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*99*	*85-118*
1,2-Dichloroethane-d4	*98*	*87-122*
Toluene-d8	*96*	*85-113*
4-Bromofluorobenzene	*97*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-10AR2-011514**	Sampled:	1/15/14 16:25
Lab Sample ID:	**1401188-05**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**55**	0.97	0.29	ug/L	2	RSK-175	01/22/14 13:31	JMF	1400491

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-10AR2-011514**	Sampled:	1/15/14 16:25		
Lab Sample ID:	**1401188-05**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/24/14 15:00	By:	LEW
Dilution Factor:	1	Analyzed:	1/25/14 4:03	By:	LEW
QC Batch:	1400737	Analytical Batch:	4A31014		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	**1.2**	1.1	0.32
91-20-3	Naphthalene	**9.5**	1.9	0.56

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*98*	*85-118*
1,2-Dichloroethane-d4	*96*	*87-122*
Toluene-d8	*96*	*85-113*
4-Bromofluorobenzene	*100*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-10AR2-011514**	Sampled:	1/15/14 16:25		
Lab Sample ID:	**1401188-05**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/21/14 9:38	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A22003		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**21**	0.11	0.033
208-96-8	Acenaphthylene	**0.96**	0.057	0.017
120-12-7	Anthracene	**0.27**	0.20	0.062
56-55-3	Benzo(a)anthracene	**0.12J**	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	**0.060J**	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	**0.11J**	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	**2.6**	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.26B**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	**0.70**	0.21	0.063
86-73-7	Fluorene	**3.1**	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	**0.13J**	0.27	0.081
85-01-8	Phenanthrene	**0.33**	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	**0.60**	0.22	0.066

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ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-10AR2-011514**	Sampled:	1/15/14 16:25		
Lab Sample ID:	**1401188-05**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/21/14 9:38	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A22003		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*42*	*20-70*
Phenol-d6	*30*	*18-45*
Nitrobenzene-d5	*85*	*31-123*
2-Fluorobiphenyl	*62*	*25-113*
2,4,6-Tribromophenol	*52*	*30-121*
o-Terphenyl	*72*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-10AR2-011514**	Sampled:	1/15/14 16:25
Lab Sample ID:	**1401188-05**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**140**	22	6.5	ug/L	1	USEPA-6010C	01/21/14 13:16	CKD	1400386
Manganese	**570**	9.3	2.8	ug/L	1	USEPA-6010C	01/21/14 13:16	CKD	1400386

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-10AR2-011514**	Sampled:	1/15/14 16:25
Lab Sample ID:	**1401188-05**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Sulfate	**12**		1.3	0.39	mg/L	1	USEPA-9038	01/22/14 12:21	LMA	1400504
Alkalinity, Total	**540**		1.6	0.50	mg/L	1	SM 2320 B-2011	01/20/14 12:20	SKA	1400367
Nitrogen, Nitrate	**0.010**	**J**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2011	01/16/14 13:00	CAC	1400377

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-04AR2-011514**	Sampled:	1/15/14 11:20
Lab Sample ID:	**1401188-06**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	ND	U	0.48	0.14	ug/L	1	RSK-175	01/22/14 13:42	JMF	1400491

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-04AR2-011514**	Sampled:	1/15/14 11:20		
Lab Sample ID:	**1401188-06**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/24/14 15:00	By:	LEW
Dilution Factor:	1	Analyzed:	1/25/14 4:30	By:	LEW
QC Batch:	1400737	Analytical Batch:	4A31014		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	1.1	0.32
91-20-3	Naphthalene	NDU	1.9	0.56

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*98*	*85-118*
1,2-Dichloroethane-d4	*98*	*87-122*
Toluene-d8	*97*	*85-113*
4-Bromofluorobenzene	*99*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-04AR2-011514**	Sampled:	1/15/14 11:20		
Lab Sample ID:	**1401188-06**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/21/14 10:13	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A22003		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.20PB**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	NDU	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-04AR2-011514**	Sampled:	1/15/14 11:20		
Lab Sample ID:	**1401188-06**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/21/14 10:13	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A22003		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*50*	*20-70*
Phenol-d6	*31*	*18-45*
Nitrobenzene-d5	*78*	*31-123*
2-Fluorobiphenyl	*52*	*25-113*
2,4,6-Tribromophenol	*63*	*30-121*
o-Terphenyl	*73*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-04AR2-011514**	Sampled:	1/15/14 11:20
Lab Sample ID:	**1401188-06**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	01/21/14 13:19	CKD	1400386
Manganese	**58**		9.3	2.8	ug/L	1	USEPA-6010C	01/21/14 13:19	CKD	1400386

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-04AR2-011514**	Sampled:	1/15/14 11:20
Lab Sample ID:	**1401188-06**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Sulfate	**80**		6.4	1.9	mg/L	5	USEPA-9038	01/22/14 12:49	LMA	1400504
Alkalinity, Total	**400**		1.6	0.50	mg/L	1	SM 2320 B-2011	01/20/14 12:20	SKA	1400367
Nitrogen, Nitrate	**0.011**	**J**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2011	01/16/14 13:00	CAC	1400377

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-25A-011514**	Sampled:	1/15/14 13:45
Lab Sample ID:	**1401188-07**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	ND	U	0.48	0.14	ug/L	1	RSK-175	01/22/14 13:45	JMF	1400491

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-25A-011514**	Sampled:	1/15/14 13:45		
Lab Sample ID:	**1401188-07**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/24/14 15:00	By:	LEW
Dilution Factor:	1	Analyzed:	1/25/14 2:14	By:	LEW
QC Batch:	1400737	Analytical Batch:	4A31014		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	1.1	0.32
91-20-3	Naphthalene	NDU	1.9	0.56

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*98*	*85-118*
1,2-Dichloroethane-d4	*96*	*87-122*
Toluene-d8	*98*	*85-113*
4-Bromofluorobenzene	*99*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-25A-011514**	Sampled:	1/15/14 13:45		
Lab Sample ID:	**1401188-07**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/21/14 10:48	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A22003		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.19PB**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	NDU	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066

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ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-25A-011514**	Sampled:	1/15/14 13:45		
Lab Sample ID:	**1401188-07**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/21/14 10:48	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A22003		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*42*	*20-70*
Phenol-d6	*24*	*18-45*
Nitrobenzene-d5	*82*	*31-123*
2-Fluorobiphenyl	*59*	*25-113*
2,4,6-Tribromophenol	*63*	*30-121*
o-Terphenyl	*77*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-25A-011514**	Sampled:	1/15/14 13:45
Lab Sample ID:	**1401188-07**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	01/21/14 13:23	CKD	1400386
Manganese	**3.8**	**J**	9.3	2.8	ug/L	1	USEPA-6010C	01/21/14 13:23	CKD	1400386

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-25A-011514**	Sampled:	1/15/14 13:45
Lab Sample ID:	**1401188-07**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Sulfate	**42**	2.6	0.77	mg/L	2	USEPA-9038	01/22/14 12:49	LMA	1400504
Alkalinity, Total	**590**	1.6	0.50	mg/L	1	SM 2320 B-2011	01/20/14 12:20	SKA	1400367
Nitrogen, Nitrate	**0.035**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2011	01/16/14 13:05	CAC	1400377

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-36A-011514**	Sampled:	1/15/14 16:15
Lab Sample ID:	**1401188-08**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**280**	4.8	1.4	ug/L	10	RSK-175	01/22/14 14:23	JMF	1400491

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-36A-011514**	Sampled:	1/15/14 16:15		
Lab Sample ID:	**1401188-08**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/24/14 15:00	By:	LEW
Dilution Factor:	1	Analyzed:	1/25/14 2:41	By:	LEW
QC Batch:	1400737	Analytical Batch:	4A31014		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	1.1	0.32
91-20-3	Naphthalene	**0.56J**	1.9	0.56

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*96*	*85-118*
1,2-Dichloroethane-d4	*95*	*87-122*
Toluene-d8	*97*	*85-113*
4-Bromofluorobenzene	*101*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-36A-011514**	Sampled:	1/15/14 16:15		
Lab Sample ID:	**1401188-08**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	10	Analyzed:	1/21/14 13:44	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A22003		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	1.1	0.33
208-96-8	Acenaphthylene	NDU	0.57	0.17
120-12-7	Anthracene	NDU	2.0	0.62
56-55-3	Benzo(a)anthracene	NDU	1.5	0.45
50-32-8	Benzo(a)pyrene	NDU	1.3	0.40
205-99-2	Benzo(b)fluoranthene	NDU	1.9	0.58
207-08-9	Benzo(k)fluoranthene	NDU	2.0	0.60
191-24-2	Benzo(g,h,i)perylene	NDU	2.0	0.61
59-50-7	4-Chloro-3-methylphenol	NDU	3.8	1.2
95-57-8	2-Chlorophenol	NDU	0.89	0.27
218-01-9	Chrysene	NDU	1.5	0.45
53-70-3	Dibenz(a,h)anthracene	NDU	3.8	1.1
132-64-9	Dibenzofuran	**0.61J**	1.4	0.41
120-83-2	2,4-Dichlorophenol	**1.5J**	3.0	0.92
*84-66-2	Diethyl Phthalate	**1.3PB**	2.2	0.65
105-67-9	2,4-Dimethylphenol	NDU	5.6	1.7
534-52-1	4,6-Dinitro-2-methylphenol	NDU	34	10
51-28-5	2,4-Dinitrophenol	NDU	39	12
206-44-0	Fluoranthene	NDU	2.1	0.63
86-73-7	Fluorene	**0.71J**	1.4	0.41
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	2.7	0.80
95-48-7	2-Methylphenol	NDU	1.6	0.48
106-44-5	4-Methylphenol	NDU	1.9	0.57
100-02-7	4-Nitrophenol	NDU	42	12
88-75-5	2-Nitrophenol	NDU	1.6	0.48
87-86-5	Pentachlorophenol	**170**	2.7	0.81
85-01-8	Phenanthrene	NDU	1.4	0.43
108-95-2	Phenol	NDU	1.1	0.34
129-00-0	Pyrene	NDU	2.2	0.66

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ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-36A-011514**	Sampled:	1/15/14 16:15		
Lab Sample ID:	**1401188-08**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	10	Analyzed:	1/21/14 13:44	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A22003		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	**67**	12	3.7
935-95-5	2,3,5,6-Tetrachlorophenol	**6.9J**	7.1	2.1
88-06-2	2,4,6-Trichlorophenol	**9.2**	2.8	0.85
95-95-4	2,4,5-Trichlorophenol	**3.8**	3.3	0.99

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*34*	*20-70*
Phenol-d6	*25*	*18-45*
Nitrobenzene-d5	*46*	*31-123*
2-Fluorobiphenyl	*39*	*25-113*
2,4,6-Tribromophenol	*59*	*30-121*
o-Terphenyl	*71*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-36A-011514**	Sampled:	1/15/14 16:15
Lab Sample ID:	**1401188-08**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**120**	22	6.5	ug/L	1	USEPA-6010C	01/21/14 13:26	CKD	1400386
Manganese	**810**	9.3	2.8	ug/L	1	USEPA-6010C	01/21/14 13:26	CKD	1400386

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-36A-011514**	Sampled:	1/15/14 16:15
Lab Sample ID:	**1401188-08**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**480**		1.6	0.50	mg/L	1	SM 2320 B-2011	01/20/14 12:20	SKA	1400367
Nitrogen, Nitrate	**0.027**	**J**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2011	01/16/14 13:06	CAC	1400377
Sulfate	**34**		1.3	0.39	mg/L	1	USEPA-9038	01/22/14 12:24	LMA	1400504

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-M-99A-011514**	Sampled:	1/15/14 20:00
Lab Sample ID:	**1401188-09**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**320**	4.8	1.4	ug/L	10	RSK-175	01/22/14 14:33	JMF	1400491

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-M-99A-011514**	Sampled:	1/15/14 20:00		
Lab Sample ID:	**1401188-09**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/24/14 15:00	By:	LEW
Dilution Factor:	1	Analyzed:	1/25/14 3:08	By:	LEW
QC Batch:	1400737	Analytical Batch:	4A31014		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	1.1	0.32
91-20-3	Naphthalene	NDU	1.9	0.56

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*99*	*85-118*
1,2-Dichloroethane-d4	*96*	*87-122*
Toluene-d8	*98*	*85-113*
4-Bromofluorobenzene	*96*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-M-99A-011514**	Sampled:	1/15/14 20:00		
Lab Sample ID:	**1401188-09**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	10	Analyzed:	1/21/14 14:43	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A22003		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	1.1	0.33
208-96-8	Acenaphthylene	NDU	0.57	0.17
120-12-7	Anthracene	**0.71J**	2.0	0.62
56-55-3	Benzo(a)anthracene	NDU	1.5	0.45
50-32-8	Benzo(a)pyrene	NDU	1.3	0.40
205-99-2	Benzo(b)fluoranthene	NDU	1.9	0.58
207-08-9	Benzo(k)fluoranthene	NDU	2.0	0.60
191-24-2	Benzo(g,h,i)perylene	NDU	2.0	0.61
59-50-7	4-Chloro-3-methylphenol	NDU	3.8	1.2
95-57-8	2-Chlorophenol	NDU	0.89	0.27
218-01-9	Chrysene	NDU	1.5	0.45
53-70-3	Dibenz(a,h)anthracene	NDU	3.8	1.1
132-64-9	Dibenzofuran	**0.61J**	1.4	0.41
120-83-2	2,4-Dichlorophenol	**1.6J**	3.0	0.92
*84-66-2	Diethyl Phthalate	**4.1B**	2.2	0.65
105-67-9	2,4-Dimethylphenol	NDU	5.6	1.7
534-52-1	4,6-Dinitro-2-methylphenol	NDU	34	10
51-28-5	2,4-Dinitrophenol	NDU	39	12
206-44-0	Fluoranthene	NDU	2.1	0.63
86-73-7	Fluorene	**0.71J**	1.4	0.41
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	2.7	0.80
95-48-7	2-Methylphenol	NDU	1.6	0.48
106-44-5	4-Methylphenol	NDU	1.9	0.57
100-02-7	4-Nitrophenol	NDU	42	12
88-75-5	2-Nitrophenol	NDU	1.6	0.48
87-86-5	Pentachlorophenol	**170**	2.7	0.81
85-01-8	Phenanthrene	NDU	1.4	0.43
108-95-2	Phenol	NDU	1.1	0.34
129-00-0	Pyrene	NDU	2.2	0.66

Continued on next page

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ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-M-99A-011514**	Sampled:	1/15/14 20:00		
Lab Sample ID:	**1401188-09**	Sampled By:	Beazer		
Matrix:	Water	Received:	1/16/14 8:15		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	10	Analyzed:	1/21/14 14:43	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A22003		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	**65**	12	3.7
935-95-5	2,3,5,6-Tetrachlorophenol	**6.9J**	7.1	2.1
88-06-2	2,4,6-Trichlorophenol	**9.3**	2.8	0.85
95-95-4	2,4,5-Trichlorophenol	**4.2**	3.3	0.99

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*39*	*20-70*
Phenol-d6	*26*	*18-45*
Nitrobenzene-d5	*53*	*31-123*
2-Fluorobiphenyl	*41*	*25-113*
2,4,6-Tribromophenol	*64*	*30-121*
o-Terphenyl	*70*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-M-99A-011514**	Sampled:	1/15/14 20:00
Lab Sample ID:	**1401188-09**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**130**	22	6.5	ug/L	1	USEPA-6010C	01/21/14 13:29	CKD	1400386
Manganese	**930**	9.3	2.8	ug/L	1	USEPA-6010C	01/21/14 13:29	CKD	1400386

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401188**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-M-99A-011514**	Sampled:	1/15/14 20:00
Lab Sample ID:	**1401188-09**	Sampled By:	Beazer
Matrix:	Water	Received:	1/16/14 8:15

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Sulfate	**35**	2.6	0.77	mg/L	2	USEPA-9038	01/22/14 12:49	LMA	1400504
Alkalinity, Total	**470**	1.6	0.50	mg/L	1	SM 2320 B-2011	01/20/14 12:20	SKA	1400367
Nitrogen, Nitrate	**0.030**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2011	01/16/14 13:06	CAC	1400377

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401205**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-TB-03-011414**	Sampled:	1/16/14 0:00		
Lab Sample ID:	**1401205-01**	Sampled By:	TML		
Matrix:	Water	Received:	1/17/14 9:25		
Unit:	ug/L	Prepared:	1/24/14 15:00	By:	LEW
Dilution Factor:	1	Analyzed:	1/24/14 23:31	By:	LEW
QC Batch:	1400737	Analytical Batch:	4A31014		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	1.1	0.32
91-20-3	Naphthalene	NDU	1.9	0.56

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*98*	*85-118*
1,2-Dichloroethane-d4	*95*	*87-122*
Toluene-d8	*98*	*85-113*
4-Bromofluorobenzene	*99*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401205**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-16AR-011614**	Sampled:	1/16/14 11:17
Lab Sample ID:	**1401205-02**	Sampled By:	R. Stahl
Matrix:	Water	Received:	1/17/14 9:25

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	**130**	2.4	0.72	ug/L	5	RSK-175	01/22/14 14:41	JMF	1400491

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401205**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-16AR-011614**	Sampled:	1/16/14 11:17		
Lab Sample ID:	**1401205-02**	Sampled By:	R. Stahl		
Matrix:	Water	Received:	1/17/14 9:25		
Unit:	ug/L	Prepared:	1/27/14 9:00	By:	LEW
Dilution Factor:	20	Analyzed:	1/27/14 19:50	By:	LEW
QC Batch:	1400738	Analytical Batch:	4A31015		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	**42**	21	6.4
91-20-3	Naphthalene	**2800**	37	11

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*98*	*85-118*
1,2-Dichloroethane-d4	*97*	*87-122*
Toluene-d8	*96*	*85-113*
4-Bromofluorobenzene	*99*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401205**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-16AR-011614**	Sampled:	1/16/14 11:17		
Lab Sample ID:	**1401205-02**	Sampled By:	R. Stahl		
Matrix:	Water	Received:	1/17/14 9:25		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	4	Analyzed:	1/21/14 15:18	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A22003		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	**68**	0.44	0.13
208-96-8	Acenaphthylene	**0.69**	0.23	0.068
120-12-7	Anthracene	**0.86**	0.82	0.25
56-55-3	Benzo(a)anthracene	NDU	0.60	0.18
50-32-8	Benzo(a)pyrene	NDU	0.54	0.16
205-99-2	Benzo(b)fluoranthene	NDU	0.77	0.23
207-08-9	Benzo(k)fluoranthene	NDU	0.79	0.24
191-24-2	Benzo(g,h,i)perylene	NDU	0.81	0.24
59-50-7	4-Chloro-3-methylphenol	NDU	1.5	0.46
95-57-8	2-Chlorophenol	NDU	0.36	0.11
218-01-9	Chrysene	NDU	0.60	0.18
53-70-3	Dibenz(a,h)anthracene	NDU	1.5	0.45
132-64-9	Dibenzofuran	**25**	0.54	0.16
120-83-2	2,4-Dichlorophenol	NDU	1.2	0.37
*84-66-2	Diethyl Phthalate	**0.45PB**	0.87	0.26
105-67-9	2,4-Dimethylphenol	NDU	2.2	0.67
534-52-1	4,6-Dinitro-2-methylphenol	NDU	14	4.1
51-28-5	2,4-Dinitrophenol	NDU	15	4.6
206-44-0	Fluoranthene	**0.65J**	0.84	0.25
86-73-7	Fluorene	**4.6**	0.55	0.17
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	1.1	0.32
95-48-7	2-Methylphenol	NDU	0.63	0.19
106-44-5	4-Methylphenol	NDU	0.75	0.23
100-02-7	4-Nitrophenol	NDU	17	5.0
88-75-5	2-Nitrophenol	NDU	0.63	0.19
87-86-5	Pentachlorophenol	NDU	1.1	0.32
85-01-8	Phenanthrene	**16**	0.57	0.17
108-95-2	Phenol	NDU	0.45	0.13
129-00-0	Pyrene	**0.37J**	0.87	0.26

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401205**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-W-16AR-011614**	Sampled:	1/16/14 11:17		
Lab Sample ID:	**1401205-02**	Sampled By:	R. Stahl		
Matrix:	Water	Received:	1/17/14 9:25		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	4	Analyzed:	1/21/14 15:18	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A22003		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	4.9	1.5
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	2.8	0.85
88-06-2	2,4,6-Trichlorophenol	NDU	1.1	0.34
95-95-4	2,4,5-Trichlorophenol	NDU	1.3	0.40

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*35*	*20-70*
Phenol-d6	*19*	*18-45*
Nitrobenzene-d5	*44*	*31-123*
2-Fluorobiphenyl	*43*	*25-113*
2,4,6-Tribromophenol	*36*	*30-121*
o-Terphenyl	*44*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401205**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-16AR-011614**	Sampled:	1/16/14 11:17
Lab Sample ID:	**1401205-02**	Sampled By:	R. Stahl
Matrix:	Water	Received:	1/17/14 9:25

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result	LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	**240**	22	6.5	ug/L	1	USEPA-6010C	01/21/14 13:33	CKD	1400386
Manganese	**240**	9.3	2.8	ug/L	1	USEPA-6010C	01/21/14 13:33	CKD	1400386

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401205**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-W-16AR-011614**	Sampled:	1/16/14 11:17
Lab Sample ID:	**1401205-02**	Sampled By:	R. Stahl
Matrix:	Water	Received:	1/17/14 9:25

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**500**		1.6	0.50	mg/L	1	SM 2320 B-2011	01/28/14 12:41	SKA	1400660
Sulfate	**19**		1.3	0.39	mg/L	1	USEPA-9038	01/22/14 12:24	LMA	1400504
Nitrogen, Nitrate	ND	U	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2011	01/17/14 14:07	CAC	1400419

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401205**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-03-011614**	Sampled:	1/16/14 12:25
Lab Sample ID:	**1401205-03**	Sampled By:	R. Stahl
Matrix:	Water	Received:	1/17/14 9:25

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Methane	ND	U	0.48	0.14	ug/L	1	RSK-175	01/22/14 14:45	JMF	1400491

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401205**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-03-011614**	Sampled:	1/16/14 12:25		
Lab Sample ID:	**1401205-03**	Sampled By:	R. Stahl		
Matrix:	Water	Received:	1/17/14 9:25		
Unit:	ug/L	Prepared:	1/27/14 9:00	By:	LEW
Dilution Factor:	1	Analyzed:	1/27/14 18:02	By:	LEW
QC Batch:	1400738	Analytical Batch:	4A31015		

Volatile Organic Compounds by EPA Method 8260B

CAS Number	Analyte	Analytical Result	LOQ	LOD
71-43-2	Benzene	NDU	1.1	0.32
91-20-3	Naphthalene	NDU	1.9	0.56

Surrogates:	*% Recovery*	*Control Limits*
Dibromofluoromethane	*99*	*85-118*
1,2-Dichloroethane-d4	*95*	*87-122*
Toluene-d8	*96*	*85-113*
4-Bromofluorobenzene	*95*	*82-110*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401205**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-03-011614**	Sampled:	1/16/14 12:25		
Lab Sample ID:	**1401205-03**	Sampled By:	R. Stahl		
Matrix:	Water	Received:	1/17/14 9:25		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/21/14 13:08	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A22003		

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.11	0.033
208-96-8	Acenaphthylene	NDU	0.057	0.017
120-12-7	Anthracene	NDU	0.20	0.062
56-55-3	Benzo(a)anthracene	NDU	0.15	0.045
50-32-8	Benzo(a)pyrene	NDU	0.13	0.040
205-99-2	Benzo(b)fluoranthene	NDU	0.19	0.058
207-08-9	Benzo(k)fluoranthene	NDU	0.20	0.060
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.061
59-50-7	4-Chloro-3-methylphenol	NDU	0.38	0.12
95-57-8	2-Chlorophenol	NDU	0.089	0.027
218-01-9	Chrysene	NDU	0.15	0.045
53-70-3	Dibenz(a,h)anthracene	NDU	0.38	0.11
132-64-9	Dibenzofuran	NDU	0.14	0.041
120-83-2	2,4-Dichlorophenol	NDU	0.30	0.092
*84-66-2	Diethyl Phthalate	**0.12PB**	0.22	0.065
105-67-9	2,4-Dimethylphenol	NDU	0.56	0.17
534-52-1	4,6-Dinitro-2-methylphenol	NDU	3.4	1.0
51-28-5	2,4-Dinitrophenol	NDU	3.9	1.2
206-44-0	Fluoranthene	NDU	0.21	0.063
86-73-7	Fluorene	NDU	0.14	0.041
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.27	0.080
95-48-7	2-Methylphenol	NDU	0.16	0.048
106-44-5	4-Methylphenol	NDU	0.19	0.057
100-02-7	4-Nitrophenol	NDU	4.2	1.2
88-75-5	2-Nitrophenol	NDU	0.16	0.048
87-86-5	Pentachlorophenol	NDU	0.27	0.081
85-01-8	Phenanthrene	NDU	0.14	0.043
108-95-2	Phenol	NDU	0.11	0.034
129-00-0	Pyrene	NDU	0.22	0.066

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401205**		
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services		
Client Sample ID:	**SUPE-EB-03-011614**	Sampled:	1/16/14 12:25		
Lab Sample ID:	**1401205-03**	Sampled By:	R. Stahl		
Matrix:	Water	Received:	1/17/14 9:25		
Unit:	ug/L	Prepared:	1/17/14 7:50	By:	JBA
Dilution Factor:	1	Analyzed:	1/21/14 13:08	By:	ASC
QC Batch:	1400301	Analytical Batch:	4A22003		

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

CAS Number	Analyte	Analytical Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	1.2	0.37
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	0.71	0.21
88-06-2	2,4,6-Trichlorophenol	NDU	0.28	0.085
95-95-4	2,4,5-Trichlorophenol	NDU	0.33	0.099

Surrogates:	***% Recovery***	***Control Limits***
2-Fluorophenol	*48*	*20-70*
Phenol-d6	*28*	*18-45*
Nitrobenzene-d5	*88*	*31-123*
2-Fluorobiphenyl	*79*	*25-113*
2,4,6-Tribromophenol	*65*	*30-121*
o-Terphenyl	*86*	*42-125*

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401205**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-03-011614**	Sampled:	1/16/14 12:25
Lab Sample ID:	**1401205-03**	Sampled By:	R. Stahl
Matrix:	Water	Received:	1/17/14 9:25

Dissolved Metals by EPA 6000/7000 Series Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Iron	ND	U	22	6.5	ug/L	1	USEPA-6010C	01/21/14 13:36	CKD	1400386
Manganese	**2.9**	**J**	9.3	2.8	ug/L	1	USEPA-6010C	01/21/14 13:36	CKD	1400386

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TRIMATRIX LABORATORIES

ANALYTICAL REPORT

Client:	**Beazer East, Inc.**	Work Order:	**1401205**
Project:	Superior Quarterly MNA GW - WI Cert. #999472650	Description:	Laboratory Services
Client Sample ID:	**SUPE-EB-03-011614**	Sampled:	1/16/14 12:25
Lab Sample ID:	**1401205-03**	Sampled By:	R. Stahl
Matrix:	Water	Received:	1/17/14 9:25

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

Analyte	Analytical Result		LOQ	LOD	Unit	Dilution Factor	Method	Date Time Analyzed	By	QC Batch
Alkalinity, Total	**1.0**	**J**	1.6	0.50	mg/L	1	SM 2320 B-2011	01/28/14 12:41	SKA	1400660
Sulfate	ND	U	1.3	0.39	mg/L	1	USEPA-9038	01/22/14 12:24	LMA	1400504
Nitrogen, Nitrate	**0.010**	**J**	0.030	0.0089	mg/L	1	SM 4500-NO3 F-2011	01/17/14 14:13	CAC	1400419

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QUALITY CONTROL REPORT

Dissolved Gases in Water by RSK-175 Headspace Analysis

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1400491 Method-Specific Extraction/RSK-175									
Method Blank					Analyzed:	01/22/2014	By: JMF		
Unit: ug/L					Analytical Batch:	4A23012			
Methane			ND U			--		0.48	0.14
Laboratory Control Sample					Analyzed:	01/22/2014	By: JMF		
Unit: ug/L					Analytical Batch:	4A23012			
Methane		35.8	**28.8**	81	70-116	--		0.483	0.14

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QUALITY CONTROL REPORT

Volatile Organic Compounds by EPA Method 8260B

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1400737 5030B Aqueous Purge & Trap/USEPA-8260B									
Method Blank					Analyzed:		01/24/2014	By: LEW	
Unit: ug/L					Analytical Batch:		4A31014		
Benzene			ND U					1.1	0.32
Naphthalene			ND U			--		1.9	0.56
Surrogates:									
Dibromofluoromethane				*98*	*85-118*				
1,2-Dichloroethane-d4				*95*	*87-122*				
Toluene-d8				*97*	*85-113*				
4-Bromofluorobenzene				*99*	*82-110*				
Laboratory Control Sample					Analyzed:		01/24/2014	By: LEW	
Unit: ug/L					Analytical Batch:		4A31014		
Benzene		40.0	**38.2**	95	84-119	--		1.06	0.32
Naphthalene		40.0	**42.8**	107	65-125	--		1.86	0.56
Surrogates:									
Dibromofluoromethane				*95*	*85-118*				
1,2-Dichloroethane-d4				*91*	*87-122*				
Toluene-d8				*96*	*85-113*				
4-Bromofluorobenzene				*100*	*82-110*				
QC Batch: 1400738 5030B Aqueous Purge & Trap/USEPA-8260B									
Method Blank					Analyzed:		01/27/2014	By: LEW	
Unit: ug/L					Analytical Batch:		4A31015		
Benzene			ND U					1.1	0.32
Naphthalene			ND U			--		1.9	0.56
Surrogates:									
Dibromofluoromethane				*100*	*85-118*				
1,2-Dichloroethane-d4				*96*	*87-122*				

Continued on next page

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Volatile Organic Compounds by EPA Method 8260B (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1400738 (Continued) 5030B Aqueous Purge & Trap/USEPA-8260B									
Method Blank (Continued)					Analyzed:		01/27/2014	By: LEW	
Unit: ug/L					Analytical Batch:		4A31015		
Surrogates (Continued):									
Toluene-d8				*98*	*85-113*				
4-Bromofluorobenzene				*99*	*82-110*				
Laboratory Control Sample					Analyzed:		01/27/2014	By: LEW	
Unit: ug/L					Analytical Batch:		4A31015		
Benzene		40.0	**39.8**	99	84-119	--		1.06	0.32
Naphthalene		40.0	**41.7**	104	65-125	--		1.86	0.56
Surrogates:									
Dibromofluoromethane				*100*	*85-118*				
1,2-Dichloroethane-d4				*92*	*87-122*				
Toluene-d8				*98*	*85-113*				
4-Bromofluorobenzene				*101*	*82-110*				

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QUALITY CONTROL REPORT

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1400301 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank Analyzed: 01/20/2014 By: ASC

Unit: ug/L Analytical Batch: 4A21024

Acenaphthene	ND U		--	0.11	0.033
Acenaphthylene	ND U			0.057	0.017
Anthracene	ND U		--	0.20	0.062
Benzo(a)anthracene	ND U		--	0.15	0.045
Benzo(a)pyrene	ND U		--	0.13	0.040
Benzo(b)fluoranthene	ND U			0.19	0.058
Benzo(k)fluoranthene	ND U			0.20	0.060
Benzo(g,h,i)perylene	ND U			0.20	0.061
4-Chloro-3-methylphenol	ND U			0.38	0.12
2-Chlorophenol	ND U			0.089	0.027
Chrysene	ND U		--	0.15	0.045
Dibenz(a,h)anthracene	ND U			0.38	0.11
Dibenzofuran	ND U			0.14	0.041
2,4-Dichlorophenol	ND U			0.30	0.092
Diethyl Phthalate	**0.36**		--	0.22	0.065
2,4-Dimethylphenol	ND U			0.56	0.17
4,6-Dinitro-2-methylphenol	ND U			3.4	1.0
2,4-Dinitrophenol	ND U			3.9	1.2
Fluoranthene	ND U		--	0.21	0.063
Fluorene	ND U			0.14	0.041
Indeno(1,2,3-cd)pyrene	ND U			0.27	0.080
2-Methylphenol	ND U			0.16	0.048
4-Methylphenol	ND U			0.19	0.057
4-Nitrophenol	ND U			4.2	1.2
2-Nitrophenol	ND U			0.16	0.048
Pentachlorophenol	ND U			0.42	0.13
Phenanthrene	ND U		--	0.14	0.043
Phenol	ND U			0.11	0.034
Pyrene	ND U		--	0.22	0.066
2,3,4,6-Tetrachlorophenol	ND U			1.2	0.37
2,3,5,6-Tetrachlorophenol	ND U			0.71	0.21
2,4,6-Trichlorophenol	ND U			0.28	0.085
2,4,5-Trichlorophenol	ND U			0.33	0.099

Continued on next page

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD

QC Batch: 1400301 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C

Method Blank (Continued) Analyzed: 01/20/2014 By: ASC

Unit: ug/L Analytical Batch: 4A21024

Surrogates:							
2-Fluorophenol			*62*	*20-70*			
Phenol-d6			*40*	*18-45*			
Nitrobenzene-d5			*91*	*31-123*			
2-Fluorobiphenyl			*87*	*25-113*			
2,4,6-Tribromophenol			*64*	*30-121*			
o-Terphenyl			*98*	*42-125*			

Laboratory Control Sample Analyzed: 01/20/2014 By: ASC

Unit: ug/L Analytical Batch: 4A21024

Acenaphthene	10.0	**8.80**	88	53-126	--	0.110	0.033
Acenaphthylene	10.0	**8.78**	88	62-133	--	0.0569	0.017
Anthracene	10.0	**9.24**	92	64-130	--	0.205	0.062
Benzo(a)anthracene	10.0	**9.44**	94	63-129	--	0.151	0.045
Benzo(a)pyrene	10.0	**9.72**	97	59-131	--	0.134	0.040
Benzo(b)fluoranthene	10.0	**9.43**	94	58-133	--	0.193	0.058
Benzo(k)fluoranthene	10.0	**9.36**	94	59-132	--	0.198	0.060
Benzo(g,h,i)perylene	10.0	**9.96**	100	52-129	--	0.203	0.061
4-Chloro-3-methylphenol	10.0	**8.42**	84	53-120	--	0.383	0.12
2-Chlorophenol	10.0	**8.28**	83	44-121	--	0.0889	0.027
Chrysene	10.0	**9.16**	92	56-134	--	0.151	0.045
Dibenz(a,h)anthracene	10.0	**9.88**	99	57-130	--	0.376	0.11
Dibenzofuran	10.0	**8.88**	89	59-123	--	0.136	0.041
2,4-Dichlorophenol	10.0	**8.69**	87	51-122	--	0.305	0.092
Diethyl Phthalate	10.0	**9.09**	91	55-129	--	0.217	0.065
2,4-Dimethylphenol	10.0	**7.89**	79	35-112	--	0.559	0.17
4,6-Dinitro-2-methylphenol	10.0	**8.74**	87	25-139	--	3.40	1.0
2,4-Dinitrophenol	10.0	**7.30**	73	10-147	--	3.86	1.2
Fluoranthene	10.0	**8.55**	86	57-123	--	0.209	0.063
Fluorene	10.0	**9.04**	90	60-128	--	0.138	0.041
Indeno(1,2,3-cd)pyrene	10.0	**10.0**	100	57-129	--	0.266	0.080
2-Methylphenol	10.0	**7.34**	73	39-107	--	0.158	0.048
4-Methylphenol	10.0	**6.54**	65	33-122	--	0.188	0.057

Continued on next page

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Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analyte	Sample Conc.	Spike Qty.	Result	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
QC Batch: 1400301 (Continued) 3510C Liquid-Liquid Extraction/USEPA-8270C									
Laboratory Control Sample (Continued)					Analyzed:		01/20/2014	By: ASC	
Unit: ug/L					Analytical Batch:		4A21024		
4-Nitrophenol		10.0	**3.68 J**	37	17-70	--		4.16	1.2
2-Nitrophenol		10.0	**9.01**	90	44-128	--		0.158	0.048
Pentachlorophenol		10.0	**6.64**	66	21-124	--		0.420	0.13
Phenanthrene		10.0	**9.18**	92	63-126	--		0.142	0.043
Phenol		10.0	**4.07**	41	22-60	--		0.112	0.034
Pyrene		10.0	**9.95**	100	60-134	--		0.218	0.066
2,3,4,6-Tetrachlorophenol		10.0	**8.91**	89	45-125	--		1.24	0.37
2,3,5,6-Tetrachlorophenol		10.0	**8.23**	82	50-150	--		0.709	0.21
2,4,6-Trichlorophenol		10.0	**8.20**	82	47-128	--		0.283	0.085
2,4,5-Trichlorophenol		10.0	**9.12**	91	53-129	--		0.330	0.099

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TRIMATRIX LABORATORIES

QUALITY CONTROL REPORT

Dissolved Metals by EPA 6000/7000 Series Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Analyte: **Iron**/USEPA-6010C										
QC Batch: 1400386 (3010A Digestion)							Analyzed:	01/21/2014	By: CKD	
Method Blank			ND U	ug/L					22	6.5
Laboratory Control Sample		400	**367**	ug/L	92	80-120			21.7	6.5
1401174-02 [SUPE-W-37A-011414]										
Matrix Spike	ND	400	**371**	ug/L	93	75-125			21.7	6.5
Matrix Spike Duplicate	ND	400	**388**	ug/L	97	75-125	4	20	21.7	6.5
Analyte: **Manganese**/USEPA-6010C										
QC Batch: 1400386 (3010A Digestion)							Analyzed:	01/21/2014	By: CKD	
Method Blank			**2.9 J**	ug/L					9.3	2.8
Laboratory Control Sample		400	**374**	ug/L	94	80-120			9.26	2.8
1401174-02 [SUPE-W-37A-011414]										
Matrix Spike	3.70	400	**371**	ug/L	92	75-125			9.26	2.8
Matrix Spike Duplicate	3.70	400	**392**	ug/L	97	75-125	6	20	9.26	2.8

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QUALITY CONTROL REPORT

Physical/Chemical Parameters by EPA/APHA/ASTM Methods

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Analyte: **Alkalinity, Total**/SM 2320 B-2011										
QC Batch: 1400367 (General Inorganic Prep)							Analyzed:	01/20/2014	By: SKA	
Method Blank			**0.99 J**	mg/L					1.6	0.50
Laboratory Control Sample		238	**239**	mg/L	100	91-110			1.65	0.50
1401174-02 [SUPE-W-37A-011414]										
Matrix Spike	708	238	**943**	mg/L	99	82-121			1.65	0.50
Duplicate	708		**709**	mg/L			0.1	20	1.65	0.50
QC Batch: 1400660 (General Inorganic Prep)							Analyzed:	01/28/2014	By: SKA	
Method Blank			**1.0 J**	mg/L					1.6	0.50
Laboratory Control Sample		238	**239**	mg/L	100	91-110			1.65	0.50
1401205-02 [SUPE-W-16AR-011614]										
Matrix Spike	499	238	**739**	mg/L	101	82-121			1.65	0.50
Duplicate	499		**500**	mg/L			0.2	20	1.65	0.50
Analyte: **Nitrogen, Nitrate**/SM 4500-NO3 F-2011										
QC Batch: 1400306 (General Inorganic Prep)							Analyzed:	01/15/2014	By: CAC	
Method Blank			ND U	mg/L					0.030	0.0089
Laboratory Control Sample		0.500	**0.470**	mg/L	94	90-110			0.0296	0.0089
QC Batch: 1400377 (General Inorganic Prep)							Analyzed:	01/16/2014	By: CAC	
Method Blank			ND U	mg/L					0.030	0.0089
Laboratory Control Sample		0.500	**0.519**	mg/L	104	90-110			0.0296	0.0089
1401177-01 [SUPE-W-35A-011414]										
Matrix Spike	0.0241	0.500	**0.511**	mg/L	97	90-110			0.0296	0.0089
Matrix Spike Duplicate	0.0241	0.500	**0.552**	mg/L	106	90-110	8	20	0.0296	0.0089
QC Batch: 1400419 (General Inorganic Prep)							Analyzed:	01/17/2014	By: CAC	
Method Blank			ND U	mg/L					0.030	0.0089
Laboratory Control Sample		0.500	**0.501**	mg/L	100	90-110			0.0296	0.0089
1401205-02 [SUPE-W-16AR-011614]										
Matrix Spike	ND	0.500	**0.509**	mg/L	102	90-110			0.0296	0.0089
Matrix Spike Duplicate	ND	0.500	**0.507**	mg/L	101	90-110	0.4	20	0.0296	0.0089

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QUALITY CONTROL REPORT

Physical/Chemical Parameters by EPA/APHA/ASTM Methods (Continued)

QC Type	Sample Conc.	Spike Qty.	Result	Unit	Spike % Rec.	Control Limits	RPD	RPD Limits	LOQ	LOD
Analyte: **Sulfate**/USEPA-9038										
QC Batch: 1400342 (General Inorganic Prep)							Analyzed:	01/16/2014	By: LMA	
Method Blank			ND U	mg/L					1.3	0.39
Laboratory Control Sample		20.0	**19.3**	mg/L	96	85-115			1.29	0.39
1401174-02 [SUPE-W-37A-011414]										
Matrix Spike	38.0	20.0	**56.7**	mg/L	94	76-126			2.57	0.77
Matrix Spike Duplicate	38.0	20.0	**58.0**	mg/L	100	76-126	2	20	2.57	0.77
QC Batch: 1400504 (General Inorganic Prep)							Analyzed:	01/22/2014	By: LMA	
Method Blank			ND U	mg/L					1.3	0.39
Laboratory Control Sample		20.0	**19.5**	mg/L	98	85-115			1.29	0.39
1401188-01 [SUPE-W-26A-011514]										
Matrix Spike	41.1	20.0	**60.4**	mg/L	97	76-126			2.57	0.77
Matrix Spike Duplicate	41.1	20.0	**60.9**	mg/L	99	76-126	0.9	20	2.57	0.77

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COC #122184

VOC Rack #627R
RSK Rack #614R

WO #1401174

7.6

FTS Field & Technical Services, LLC

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 200291

Project Name:	Superior 2014 GW NA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0556-13	Address:	200 Third Avenue	Contact:	(724) 493-7070
Laboratory:	TRIM		Carnegie, PA 15106		dmorris.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	2014 Superior GW NA Sampling_001				

	Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8021B_Benzene_naphtha	8270C_PAH_Phenolics	Diss_Fe_Mn	Alk_Nitrate_Sulfate	RSK175-Methane											Notes:
					Preservative	HCL	None	HNO3	None	HCL											
					Total Bottle Count																
04	01/14/2014	1315	AQ	SUPE-W-35A-011414	8	2	2	1	1	2											Trip Blank & Equipment
05	01/14/2014	1610	AQ	SUPE-W-37A-011414	8	2	2	1	1	2											Blank made w/
06	01/14/2014	1800	AQ	SUPE-EB-01-011414	8	2	2	1	1	2											Store bought DI
	1/14/2014	—	DI	SUPE-TB-01-011414		2	2														due to lab DI breaking during shipping

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature:	Signature:	Signature:	☐ Rush
Printed Name: Dane Morris	Printed Name:	Printed Name:	
Firm: FTS	Firm:	Firm:	☒ Standard
Date/Time: 01/14/2014 1824	Date/Time:	Date/Time: 1.15.14 0900	

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TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: FTS · Beazer	Work Order #: 1401174
Receipt Record Page/Line #: 7.6	New / Add To; Project Chemist; Sample #s
Recorded by (initials/date): WC 1.15.14	☑ Cooler ☐ Box ☐ Other ___ Qty Received: 1
Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#___)	☐ See Additional Cooler Information Form

Cooler #: Tm 1852 Time: 0930	Cooler # Time	Cooler # Time	Cooler # Time
Custody Seals: ☑ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: (Dispersed) / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☑ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container

Recorded °C	Correction Factor °C	Actual °C	Recorded °C	Correction Factor °C	Actual °C	Recorded °C	Correction Factor °C	Actual °C	Recorded °C	Correction Factor °C	Actual °C
Temp Blank:	-	3.4	Temp Blank:			Temp Blank:			Temp Blank:		
TB location: (Representative) / Not Representative			TB location: Representative / Not Representative			TB location: Representative / Not Representative			TB location: Representative / Not Representative		
1 4.7	-	4.7	1			1			1		
2 5.2	-	5.2	2			2			2		
3 5.0	-	5.0	3			3			3		
	Average °C			Average °C			Average °C			Average °C	
☐ Cooler ID on COC?			☐ Cooler ID on COC?			☐ Cooler ID on COC?			☐ Cooler ID on COC?		
☐ VOC Trip Blank received?			☐ VOC Trip Blank received?			☐ VOC Trip Blank received?			☐ VOC Trip Blank received?		

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By ___
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other ___

COC Information

☐ TriMatrix COC ☑ Other ___

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: ___
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☑		Completed Sample Preservation Verification Form?
☐	☑	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☐	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☑	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☑ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☐	☐	☑	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
1.15.14 0900	1.15.14 0940	(Yes) / No

Log In Forms.xls - Receiving.Log-In_Checklist

revision: 3.4

SAMPLE PRESERVATION VERIFICATION FORM

page 1 of 1

Client	FTS Boozer	Work Order #	1401174
Receipt Log #	7.16	Completed By (initials/date)	WC 1.15.14
		Project Chemist	

COC ID # 122184 — Adjusted by: ____ Date: ____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Ph Strip Lot # HC378115

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2					✓		✓	
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

COC ID # ____ Adjusted by: ____ Date: ____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log in Forms.xls -- Sample_Preserve_Verification

version: 3.0

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TRIMATRIX LABORATORIES

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Grand Rapids, MI 49512
Phone (616) 975-4500 Fax (616) 942-7463
www.trimatrixlabs.com

Chain of Custody Record

COC No. 123584

Pg. ___ of ___

For Lab Use Only

Cart

VOA Rack/Tray

Receipt Log No.

Project Chemist

Work Order No. 1401177

Beazer East, Inc.

Address

City, State Zip

Phone/Fax

Email

Superior Quarterly MNA GW

Client Project No. / P.O. No.

Invoice To (●) Client ( ) Other (comments)

Contact/Report To

Analyses Requested

PRESERVATIVES
A NONE pH~7
B HNO_3 pH<2
C H_2SO_4 pH<2
D 1+1 HCl pH<2
E NaOH pH>12
F ZnAc/NaOH pH>9
G MeOH
H Other (note below)

Container Type (corresponds to Container Packing List): 2 3 15

Number of Containers Submitted

Schedule	Matrix Code	Sample Number		Field Sample ID	Cooler ID	Sample Date	Sample Time	COMP	GRAB	Matrix	2	3	15	Total	Sample Comments
		01	1	SUPE-W-35A-011414		1/14/2014	13:15				2	1	1	4	
		02	2	SUPE-W-37A-011414		1/14/2014	16:10				2			2	
		03	3	SUPE-EB-01-011414		1/14/2014	18:00					1	1	2	
			4												
			5												
			6												
			7												
			8												
			9												
			10												

Sampled By (print)

Sampler's Signature

Company

How Shipped? Hand ___ Carrier ___

Tracking No.

This COC was created by TriMatrix Laboratories for samples that were delivered a day late. The parent workorder is 1401174.

1. Relinquished By	Date	Time	2. Relinquished By	Date	Time	3. Relinquished By	Date	Time
1. Received By	Date	Time	2. Received By	Date	Time	3. Received For Lab By	Date	Time
							1/16/14	0815

ORIGINAL - LABORATORY COPY - FIELD/SAMPLER

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Beazer | Work Order #: 1401177
Receipt Record Page/Line #: 9.2 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): WC 1.16.14

Cooler ☑ / Box ☐ / Other ☐ | Qty Received: 1

Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) ☐ See Additional Cooler Information Form

Cooler # / Time	Cooler # / Time	Cooler # / Time	Cooler # / Time
Tm 2062 0900			
Custody Seals: ☐ None ☑ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact	Custody Seals: ☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom	Coolant Location: Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	Coolant/Temperature Taken Via: ☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via: ☑ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container	Alternate Temperature Taken Via: ☐ Temperature Blank (TB) ☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C	Recorded °C / Correction Factor °C / Actual °C
Temp Blank: – 2.6	Temp Blank:	Temp Blank:	Temp Blank:
TB location: (Representative) / Not Representative	TB location: Representative / Not Representative	TB location: Representative / Not Representative	TB location: Representative / Not Representative
1 3.0 – 3.0	1	1	1
2 3.7 – 3.7	2	2	2
3 3.4 – 3.4	3	3	3
Average °C 3.4	Average °C	Average °C	Average °C
☐ Cooler ID on COC? ☐ VOC Trip Blank received?	☐ Cooler ID on COC? ☐ VOC Trip Blank received?	☐ Cooler ID on COC? ☐ VOC Trip Blank received?	☐ Cooler ID on COC? ☐ VOC Trip Blank received?

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By WC
☑	☐	Received for Lab Signed/Date/Time?
☐	☐	Shipping document?
☐	☐	Other

COC Information

☑ TriMatrix COC ☐ Other

COC ID Numbers:

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☐	☐	Sample ID matches COC?
☐	☐	Sample Date and Time matches COC?
☐		Container type completed on COC?
☐	☐	All container types indicated are received?

Sample Condition Summary

N/A	Yes	No	
	☐	☐	Broken containers/lids?
	☐	☐	Missing or incomplete labels?
	☐	☐	Illegible information on labels?
	☐	☐	Low volume received?
	☐	☐	Inappropriate or non-TriMatrix containers received?
☐	☐	☐	VOC vials / TOX containers have headspace?
☐	☐	☐	Extra sample locations / containers not listed on COC?

Check Sample Preservation

N/A	Yes	No	
	☐	☐	Average sample temperature ≤6° C?
☐	☐	☐	Was thermal preservation required?
☐	☐		If "No", Project Chemist Approval Initials:
☐	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☐		Completed Sample Preservation Verification Form?
☐	☐	☐	Samples chemically preserved correctly?
☐	☐		If "No", added orange tag?
	☐	☐	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☐ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☐ RECEIVED, COCs TO LAB(S)

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
1.16.14 0815	1.16.14 0910	(Yes) / No

Log In Forms.xls - Receiving.Log-In_Checklist revision: 3.4

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SAMPLE PRESERVATION VERIFICATION FORM

page 1 of 1

Client	Beazer	Work Order #	1401177
Receipt Log #	9.2	Completed By (initials/date)	WC 1.16.14
		Project Chemist	

COC ID # 123584

Adjusted by: _____
Date: _____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1					✓		✓	
COC Line #2								
COC Line #3					✓		✓	
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Ph Strip Lot #
☑ HC378115
☐

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

COC ID #

Adjusted by: _____
Date: _____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms.xls -- Sample_Preserve_Verification

version: 3.0

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1401188 9-6 D

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 600277

Project Name:	Superior 2014 GW NA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0556-13	Address:	200 Third Avenue	Contact:	(412) 735-0793
Laboratory:	TRIM		Carnegie, PA 15106		RStahl.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	2014 Superior GW NA Sampling_001		Rack #'s 25, 95 Blue Cart 3		

	Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8021B_Benzene_naphtha	8270C_PAH_Phenolics	Diss_Fe_Mn	Alk_Nitrate_Sulfate	RSK175-Methane											Notes:
					Preservative	HCL	None	HNO3	None	HCL											
					Total Bottle Count																
01	01/15/2014	1131	AQ	SUPE-W-26A-011514	8	2	2	1	1	2											
02	01/15/2014	1409	AQ	SUPE-W-30A-011514	8	2	2	1	1	2											
03	01/15/2014	1450	AQ	SUPE-EB-02-011514	8	2	2	1	1	2											
04	01/15/2014	1450	AQ	SUPE-TB-02-011514	2	2	0	0	0	0											
05	01/15/2014	1625	AQ	SUPE-W-10AR2-011514	8	2	2	1	1	2											1-#2 Broken LR 1-16-14

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature:	Signature:	Signature: Lyn Romeyn	☐ Rush
Printed Name: Ryan Stahl	Printed Name:	Printed Name: Lyn Romeyn	
Firm FTS	Firm	Firm Trimatrix	☒ Standard
Date/Time: 01/15/2014 1727	Date/Time:	Date/Time: 1/16/14 0815	

Page 1 of 1

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1401188 9-6 (2)

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 200292

Project Name:	Superior 2014 GW NA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0556-13	Address:	200 Third Avenue	Contact:	(724) 493-7070
Laboratory:	TRIM		Carnegie, PA 15106		dmorris.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	2014 Superior GW NA Sampling_001				

	Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8021B_Benzene_naphtha	8270C_PAH_Phenolics	Diss_Fe_Mn	Alk_Nitrate_Sulfate	RSK175-Methane											Notes:
					Preservative	HCL	None	HNO3	None	HCL											
					Total Bottle Count																
06	01/15/2014	1120	AQ	SUPE-W-04AR-011514	8	2	2	1	1	2											
07	01/15/2014	1345	AQ	SUPE-W-25A-011514	8	2	2	1	1	2											
08	01/15/2014	1615	AQ	SUPE-W-36A-011514	8	2	2	1	1	2											
09	01/15/2014	2000	AQ	SUPE-M-99A-011514	8	2	2	1	1	2											

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature:	Signature:	Signature: Lyn Romeyn	☐ Rush
Printed Name: Dane Morris	Printed Name:	Printed Name: Lyn Romeyn	☒ Standard
Firm: FTS	Firm	Firm: Trimatrix	
Date/Time: 01/15/2014 1823	Date/Time:	Date/Time: 1/16/14 0815	

Page 1 of 1

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SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Berger | Work Order #: 1401188
Receipt Record Page/Line #: 9-6 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): LH 11/16/14
☑ Cooler ☐ Box ☐ Other _____ | Qty Received: 3
Thermometer Used: ☑ IR Gun (#202) ☐ Digital Thermometer (#54) ☐ Other (#_____) | ☐ See Additional Cooler Information Form

Cooler #	2624	2301	2822	
Time	1010	1021	1025	
Custody Seals:	☐ None ☑ Present / Intact ☐ Present / Not Intact	☐ None ☑ Present / Intact ☐ Present / Not Intact	☐ None ☑ Present / Intact ☐ Present / Not Intact	☐ None ☐ Present / Intact ☐ Present / Not Intact
Coolant Location:	(Dispersed) / Top / Middle / Bottom	(Dispersed) / Top / Middle / Bottom	(Dispersed) / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via:	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☑ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers ☐ Bagged Ice / Avg 2-3 containers ☐ Blue Ice / Avg 2-3 containers ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via:	☑ Temperature Blank (TB) ☐ 1 Container	☑ Temperature Blank (TB) ☐ 1 Container	☑ Temperature Blank (TB) ☐ 1 Container	☐ Temperature Blank (TB) ☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C				
Temp Blank:	— / 1.3	— / 1.6	— / 2.7	
TB location: (Representative) / Not Representative				Representative / Not Representative
1	2.7 — 2.7	2.4 - 2.4	3.2 - 3.2	
2	1.7 — 1.7	1.3 - 1.3	2.4 - 2.4	
3	2.6 — 2.6	2.3 - 2.2	1.9 - 1.9	
Average °C	2.3	2.0	2.5	
☐ Cooler ID on COC?				
☑ VOC Trip Blank received?				

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, initiated By _____
☑		Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other _____

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☑		Completed Sample Preservation Verification Form?
☐	☑	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☑ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☑	☐	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☐	☐	☑	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
11/16/14 0815	11/16/14 1045	Yes / No

Log In Forms.xls - Receiving.Log-In_Checklist revision: 3.4

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SAMPLE PRESERVATION VERIFICATION FORM

page ____ of ____

Client: Beazer | Work Order #: 1401188

Receipt Log #: 9-6 | Completed By (initials/date): DE 11/6/14 | Project Chemist:

COC ID #: 600277 | Adjusted by:_____ Date:_____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1					✓		✓	
COC Line #2					✓		✓	
COC Line #3					✓		✓	
COC Line #4								
COC Line #5					✓		✓	
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

COC ID #: 200292 | Adjusted by:_____ Date:_____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1					✓		✓	
COC Line #2					✓		✓	
COC Line #3					✓		✓	
COC Line #4					✓		✓	
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Ph Strip Lot #

☑ HC378115

☐ _____

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms.xls -- Sample_Preserve_Verification

version: 3.0

5560 Corporate Exchange Court SE ♦ Grand Rapids, MI 49512 ♦ 616.975.4500 ♦ Fax 616.942.7463 ♦ www.trimatrixlabs.com

Cooler# TM 1202 E 140205

11-1

CHAIN OF CUSTODY RECORD/LABORATORY ANALYSIS REQUEST FORM

REF.# 600279

5116,600 Red Cart 3

Project Name:	Superior 2014 GW NA Sampling	Company:	Field & Technical Services	Client:	Beazer East, Inc.
Project Number:	OM-0556-13	Address:	200 Third Avenue	Contact:	(412) 735-0793
Laboratory:	TRIM		Carnegie, PA 15106		RStahl.2006@f-ts.com
Shipment Method	FEDEX		(412) 279-3363		
Program:	2014 Superior GW NA Sampling_001				

	Sample Date	Sample Time	Matrix	Sample Identification	Analysis	8021B_Benzene_naphtha	8270C_PAH_Phenolics	Diss_Fe_Mn	Alk_Nitrate_Sulfate	RSK175-Methane											Notes:
					Preservative	HCL	None	HNO3	None	HCL											
					Total Bottle Count																
1.	01/16/2014	0000	AQ	SUPE-TB-03-011614	2	2	0	0	0	0											
2.	01/16/2014	1117	AQ	SUPE-W-16AR-011614	8	2	2	1	1	2											
3.	01/16/2014	1225	AQ	SUPE-EB-03-011614	8	2	2	1	1	2											

Relinquished by:	Relinquished by:	Relinquished by:	Turnaround Requirements
Signature:	Signature:	Signature:	☐ Rush
Printed Name: Ryan Stahl	Printed Name:	Printed Name: Lyn Romeyn	
Firm FTS	Firm	Firm Trimatrix	☒ Standard
Date/Time: 01/16/2014 1212	Date/Time:	Date/Time: 1/17/14 0925	

Page 1 of 1

TRIMATRIX LABORATORIES

TRIMATRIX LABORATORIES

SAMPLE RECEIVING / LOG-IN CHECKLIST

TRIMATRIX LABORATORIES

Client: Blazer | Work Order #: 1401205
Receipt Record Page/Line #: 11-1 | New / Add To | Project Chemist | Sample #s

Recorded by (initials/date): LR 11/17/14

Cooler ☑ | Box ☐ | Other ☐ | Qty Received: 1

Thermometer Used: IR Gun (#202) ☑ | Digital Thermometer (#54) ☐ | Other (#_____) ☐ | See Additional Cooler Information Form ☐

Cooler # / Time	Cooler 1	Cooler 2	Cooler 3	Cooler 4
Cooler #	1202			
Time	0943			
Custody Seals	☑ None; ☐ Present / Intact; ☐ Present / Not Intact	☐ None; ☐ Present / Intact; ☐ Present / Not Intact	☐ None; ☐ Present / Intact; ☐ Present / Not Intact	☐ None; ☐ Present / Intact; ☐ Present / Not Intact
Coolant Location	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom	Dispersed / Top / Middle / Bottom
Coolant/Temperature Taken Via	☑ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers	☐ Loose Ice / Avg 2-3 containers; ☐ Bagged Ice / Avg 2-3 containers; ☐ Blue Ice / Avg 2-3 containers; ☐ None / Avg 2-3 containers
Alternate Temperature Taken Via	☐ Temperature Blank (TB); ☐ 1 Container	☐ Temperature Blank (TB); ☐ 1 Container	☐ Temperature Blank (TB); ☐ 1 Container	☐ Temperature Blank (TB); ☐ 1 Container
Recorded °C / Correction Factor °C / Actual °C				
Temp Blank:				
TB location: Representative / Not Representative				
1	3.8 –	3.8		
2	2.2 –	2.2		
3	3.7 –	3.7		
Average °C		3.2		
Cooler ID on COC?	☐	☐	☐	☐
VOC Trip Blank received?	☑	☐	☐	☐

If any shaded areas checked, complete Sample Receiving Non-Conformance and/or Inventory Form

Paperwork Received

Yes	No	
☑	☐	Chain of Custody record(s)? If No, Initiated By _____
☑	☐	Received for Lab Signed/Date/Time?
☑	☐	Shipping document?
☐	☑	Other _____

COC Information

☐ TriMatrix COC ☑ Other 1600279

COC ID Numbers:

Check Sample Preservation

N/A	Yes	No	
	☑	☐	Average sample temperature ≤6° C?
☑	☐	☐	Was thermal preservation required?
☑	☐		If "No", Project Chemist Approval Intials: _____
☑	☐		If "Yes" Completed Non Con Cooler - Cont Inventory Form?
☐	☑		Completed Sample Preservation Verification Form?
☐	☑	☐	Samples chemically preserved correctly?
☑	☐		If "No", added orange tag?
	☐	☑	Received pre-preserved VOC soils? ☐ MeOH ☐ Na_2SO_4

Check COC for Accuracy

Yes	No	
☑	☐	Analysis Requested?
☑	☐	Sample ID matches COC?
☑	☐	Sample Date and Time matches COC?
☑		Container type completed on COC?
☑	☐	All container types indicated are received?

Check for Short Hold-Time Prep/Analyses

☐ Bacteriological
☐ Air Bags
☐ EnCores / Methanol Pre-Preserved
☐ Formaldehyde/Aldehyde
☑ Green-tagged containers
☐ Yellow/White-tagged 1L ambers (SV Prep-Lab)

AFTER HOURS ONLY:
COPIES OF COC TO LAB AREA(S)
☐ NONE RECEIVED
☑ RECEIVED, COCs TO LAB(S)

Sample Condition Summary

N/A	Yes	No	
	☐	☑	Broken containers/lids?
	☐	☑	Missing or incomplete labels?
	☐	☑	Illegible information on labels?
	☐	☑	Low volume received?
	☐	☑	Inappropriate or non-TriMatrix containers received?
☐	☐	☑	VOC vials / TOX containers have headspace?
☐	☐	☑	Extra sample locations / containers not listed on COC?

Notes

☐ Trip Blank received ☐ Trip Blank not listed on COC

Cooler Received (Date/Time)	Paperwork Delivered (Date/Time)	≤1 Hour Goal Met?
11/17/14 0925	11/17/14 0951	(Yes) / No

Log In Forms.xls - Receiving Log-In_Checklist revision: 3.4

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SAMPLE PRESERVATION VERIFICATION FORM

page ____ of ___

Client	ETS-Beazer	Work Order #	1401205
Receipt Log #	11-1	Completed By (initials/date)	RL 11/12/14
		Project Chemist	

COC ID # 200279

Adjusted by:_____
Date:_____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2					✓		✓	
COC Line #3					✓		✓	
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Ph Strip Lot # HC378115

Aqueous Samples: For each sample and container type, check the box if pH is acceptable. If pH is not acceptable for any sample container, record pH in box, and note on Sample Receiving Checklist and on Sample Receiving Non-Conformance Form. If approved by Project Chemist, add acid or base to the sample to achieve the correct pH. Add up to, but do not exceed 2x the volume initially added at container prep (see table below for initial volumes used). Add orange pH tag to sample container and record information requested. Record adjusted pH on this form. Do not adjust pH for container types 3, 6, and 15.

COC ID #

Adjusted by:_____
Date:_____

DO NOT ADJUST pH FOR THESE CONTAINER TYPES

Container Type	5 / 23	4	13		3	6	15	
Tag Color	Lt. Blue	Blue	Brown		Green	Red	Red Stripe	
Preservative	NaOH	H_2SO_4	H_2SO_4		None	HNO_3	HNO_3	
Expected pH	>12	<2	<2		6-8	<2	<2	
COC Line #1								
COC Line #2								
COC Line #3								
COC Line #4								
COC Line #5								
COC Line #6								
COC Line #7								
COC Line #8								
COC Line #9								
COC Line #10								

Comments

Container Size (mL)	Original Vol. of Preservative (mL)
Container Type 5	NaOH
500	2.5
1000	5.0
Container Type 4	H_2SO_4
125	0.5
250	1.0
500	2.0
1000	4.0
Container Type 13	H_2SO_4
500	2.5

Log In Forms.xls -- Sample_Preserve_Verification

version: 3.0

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FTS, LLC

DATE: February 12, 2014

FROM: Kendra Chintella

SUBJECT: Superior Natural Attenuation GW

SAMPLE DELIVERY GROUP (SDG): 1401174/1401177/1401188/1401205

SAMPLES: SUPE-W-35A-011414, SUPE-W-37A-011414, SUPE-EB-01-011414, SUPE-W-26A-011514, SUPE-W-30A-011514, SUPE-EB-02-011514, SUPE-TB-02-011514, SUPE-W-10AR2-011514, SUPE-W-04AR2-011514, SUPE-W-25A-011514, SUPE-W-36A-011514, SUPE-M-99A-011514(W-36A), SUPE-TB-03-011414, SUPE-W-16AR-011614, SUPE-EB-03-011614

ANALYSES: Method 8260B (VOCs), 8270C (SVOCs), RSK-175 (Methane), 6010C (Dissolved Metals), 2320B (Total Alkalinity), 4500-NO3 (Nitrate Nitrogen), 9038 (Sulfate)

LABORATORY: Tri-Matrix Laboratories, Inc., Grand Rapids

The data contained in this SDG were evaluated with regard to the following parameters:

□ Data Completeness
Noncompliance: None

□ Holding Times
Noncompliance: None

□ Laboratory Blank Contamination
Noncompliance: Alkalinity, diethyl phthalate, and manganese were detectd in the method blank. See attached page for details.

□ Field Blank Contamination
Noncompliance: Alkalinity, diethyl phthalate, manganese, and nitrogen nitrate were detected in the equipment blanks. See attached page for details.

□ Field Duplicate Precision
Noncompliance: See attached page for details.

□ Surrogate Recoveries
Noncompliance: None

□ Laboratory Control Sample
Noncompliance: None

Laboratory Blank Contamination:

The following analytes were detected in the aqueous method blank at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
Alkalinity	1 J mg/l	5 mg/l
Diethyl phthalate	0.36 ug/l	1.8 ug/l
Manganese, dissolved	2.9 J ug/l	14.5 ug/l

An action level of 5X the maximum concentration was used to evaluate the sample data for laboratory blank contamination. Associated samples with concentrations below the blank action level were qualified "U" for laboratory blank contamination.

Field Blank Contamination:

The following analytes were detected in the aqueous equipment blank, SUPE-EB-01-011414, at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
Alkalinity	0.99 J mg/l	4.95 mg/l
Diethyl phthalate	0.23 ug/l	1.15 ug/l
Manganese, dissolved	2.9 J ug/l	14.5 ug/l
Nitrogen, nitrate	0.014 J mg/l	0.07 mg/l

The following analytes were detected in the aqueous equipment blank, SUPE-EB-02-011514, at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
Alkalinity	0.99 J mg/l	4.95 mg/l
Diethyl phthalate	0.17 ug/l	0.85 ug/l
Manganese, dissolved	2.9 J ug/l	14.5 ug/l

The following analytes were detected in the aqueous equipment blank, SUPE-EB-03-011614, at the following concentrations:

Analyte	Maximum Concentration	Blank Action Level
Alkalinity	1 J mg/l	5 mg/l
Diethyl phthalate	0.12 ug/l	0.6 ug/l
Manganese, dissolved	2.9 J ug/l	14.5 ug/l
Nitrogen, nitrate	0.01 J mg/l	0.05 mg/l

An action level of 5X the maximum concentration was used to evaluate the sample data for field blank contamination. Associated samples with concentrations below the blank action level were qualified "B" for field blank contamination.

Field Duplicate Precision:

FIELD DUPLICATE PRECISION					
ANALYTE	W-36A	QUAL	M-99A	QUAL	RPD
2,3,4,6-Tetrachlorophenol	67		65		3.03
2,3,5,6-Tetrachlorophenol	6.9	J	6.9	J	0
2,4,6-Trichlorophenol	9.2		9.3		1.08
2,4,5-Trichlorophenol	3.8		4.2		10
2,4-Dichlorophenol	1.5	J	1.6	J	6.45
Alkalinity	480		470		2.11
Anthracene	0.62	U	0.71	J	NC
Dibenzofuran	0.61	J	0.61	J	0
Diethyl phthalate	1.3		4.1		103.70*
Fluorene	0.71	J	0.71	J	0
Iron, dissolved	120		130		8.00
Manganese, dissolved	810		930		13.79
Methane	280		320		13.33
Naphthalene	0.56	J	0.56	U	NC
Nitrogen, nitrate	0.027	J	0.03		10.53
Pentachlorophenol	170		170		0
Sulfate	34		35		2.90

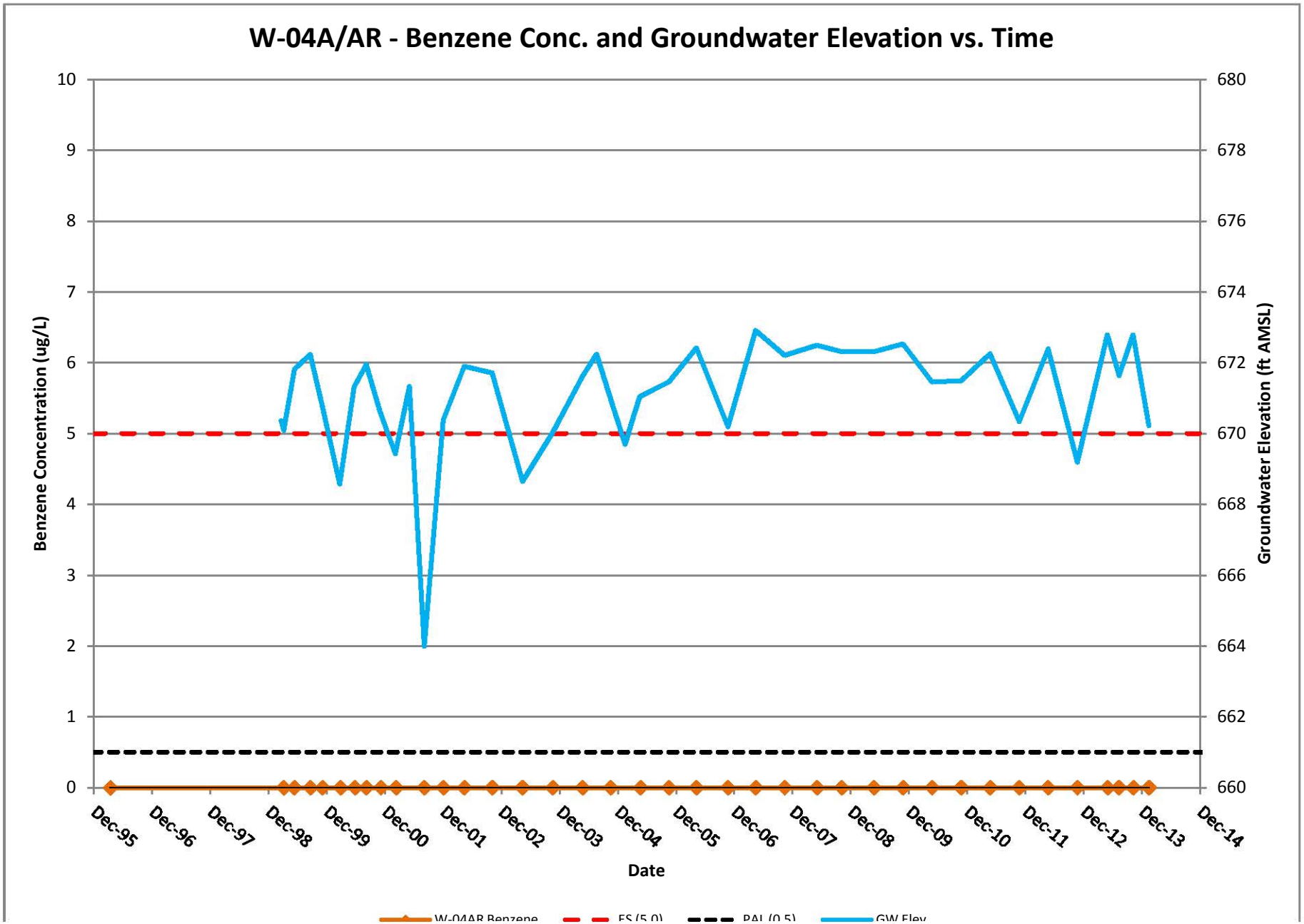
NC – not calculated due to non-detect result

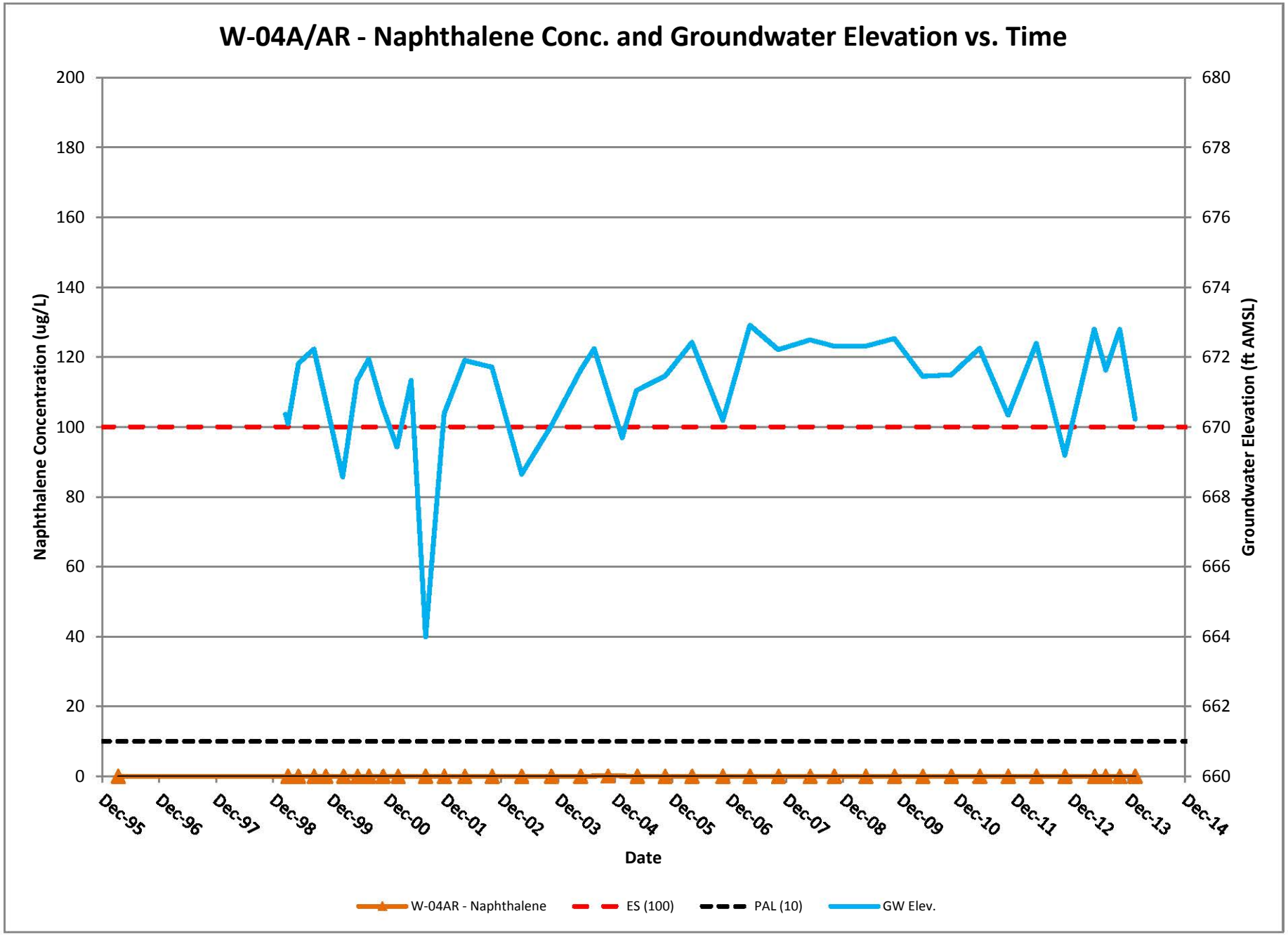
* - RPD is greater than 30%, associated samples are qualified as estimated, “J,” due to laboratory or field sampling imprecision

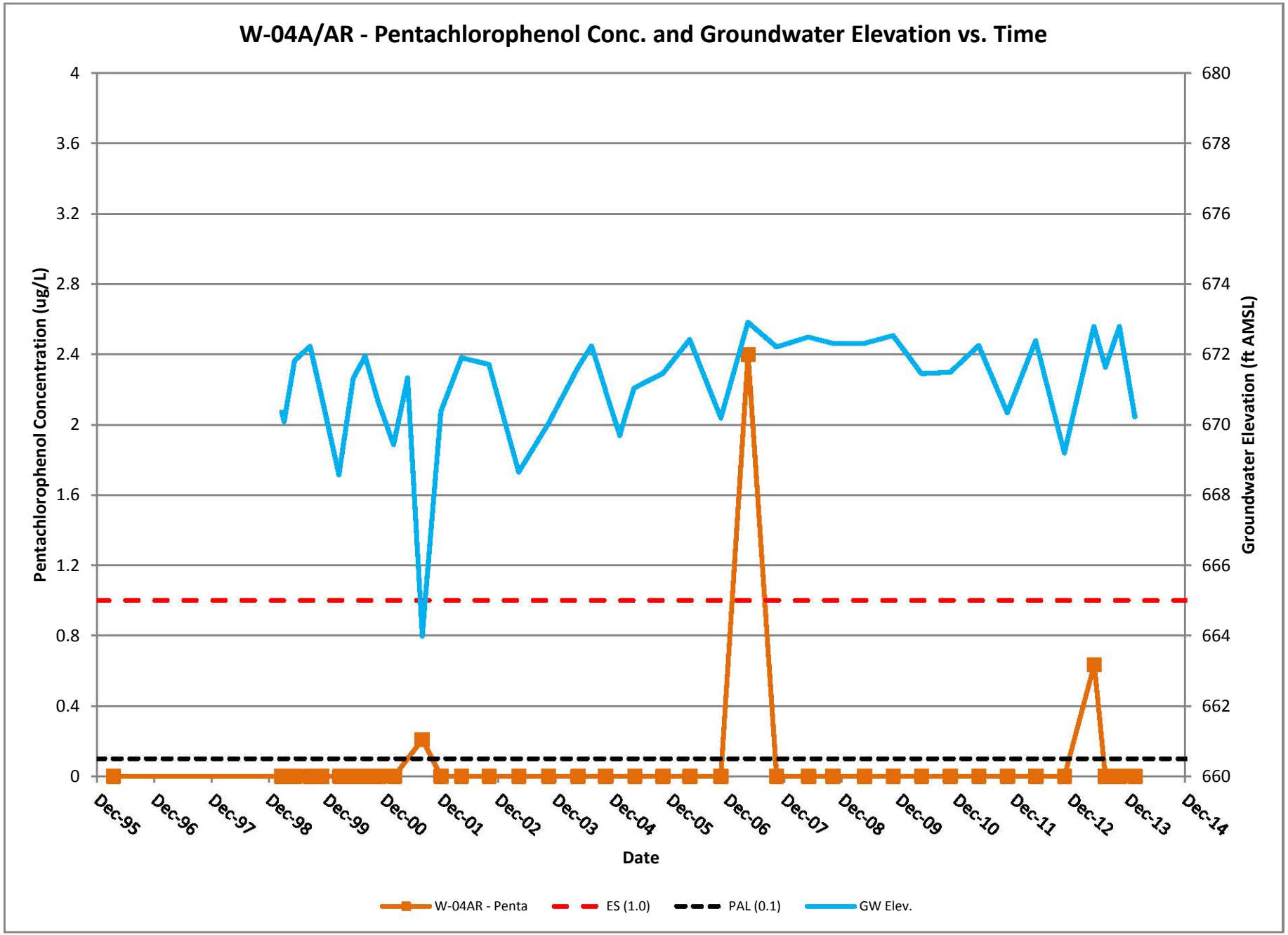
ARCADIS

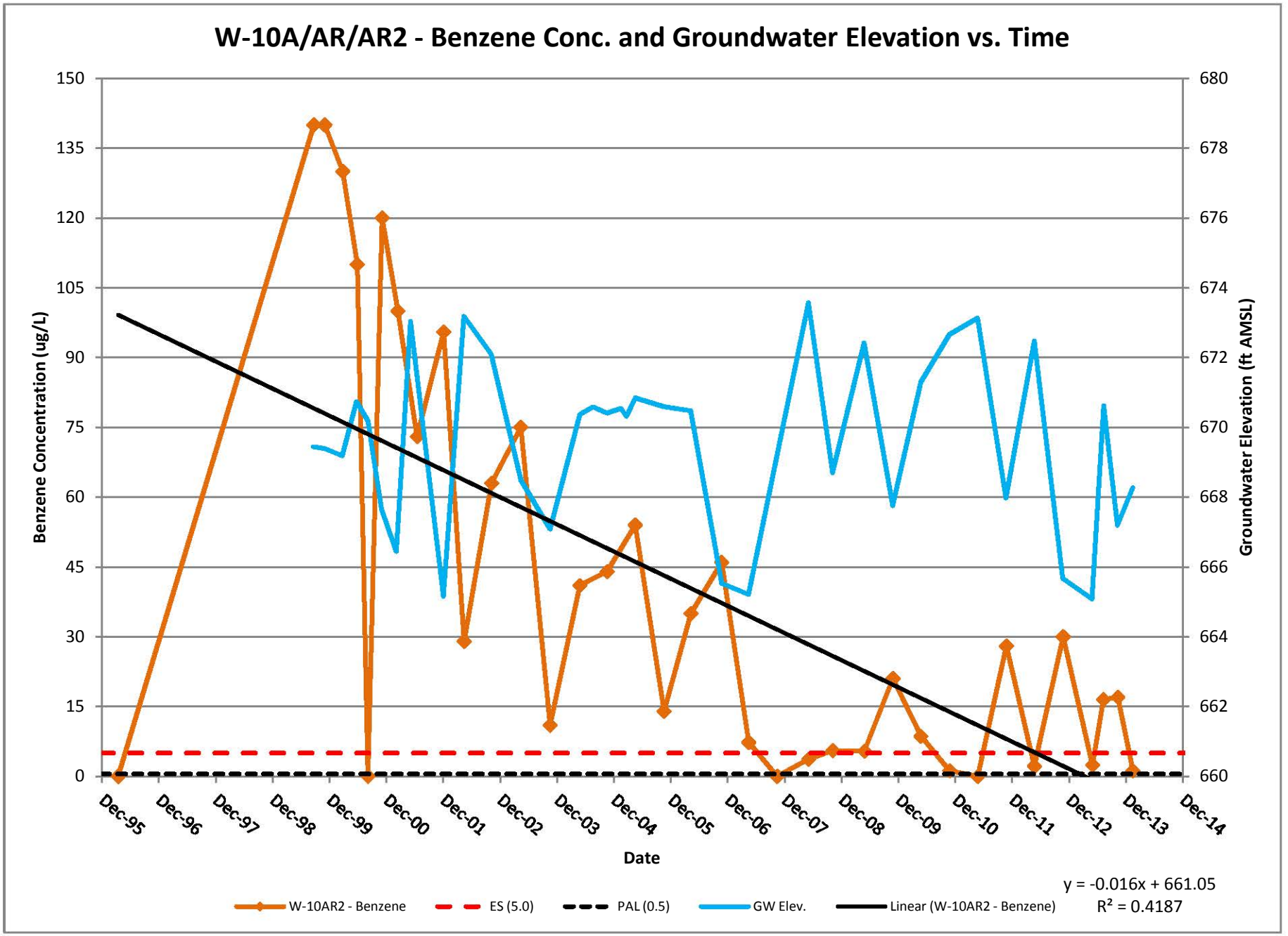
Appendix C

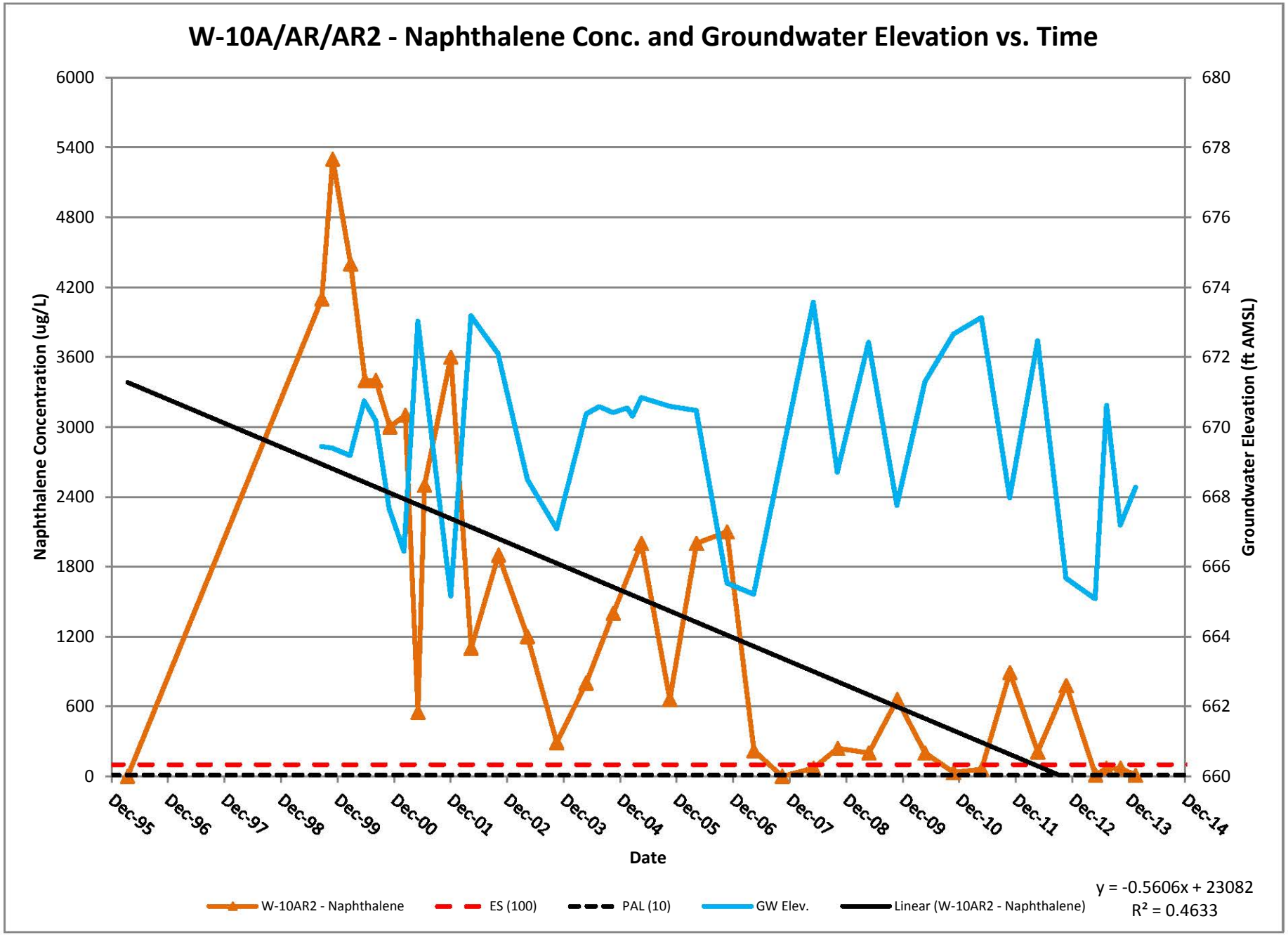
COPC Concentration vs. Time Graphs

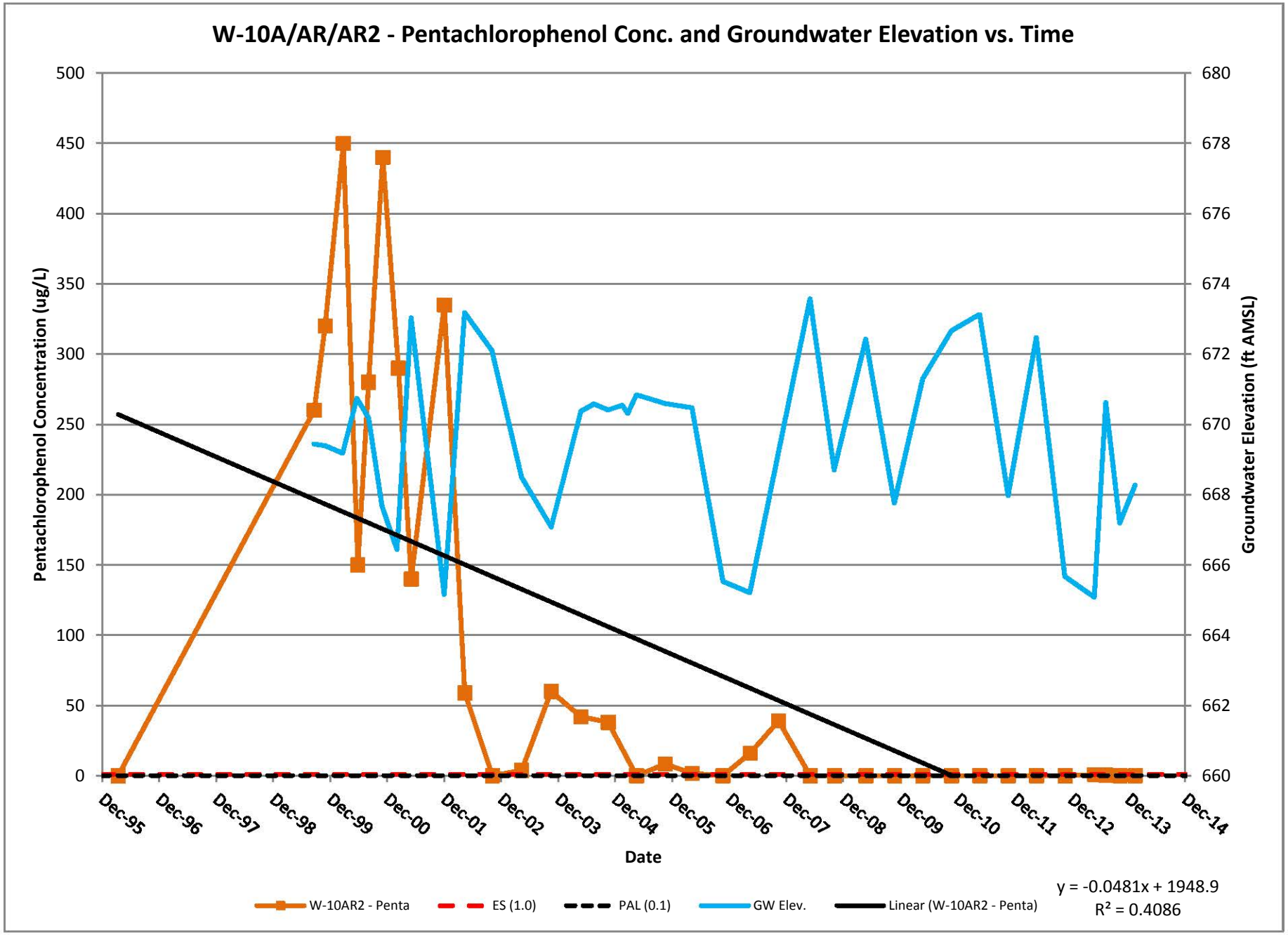

W-04A/AR - Benzene Conc. and Groundwater Elevation vs. Time
Benzene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
10
9
8
7
6
5
4
3
2
1
0
680
678
676
674
672
670
668
666
664
662
660
Dec-95
Dec-96
Dec-97
Dec-98
Dec-99
Dec-00
Dec-01
Dec-02
Dec-03
Dec-04
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-04AR Benzene
ES (5.0)
PAL (0.5)
GW Elev

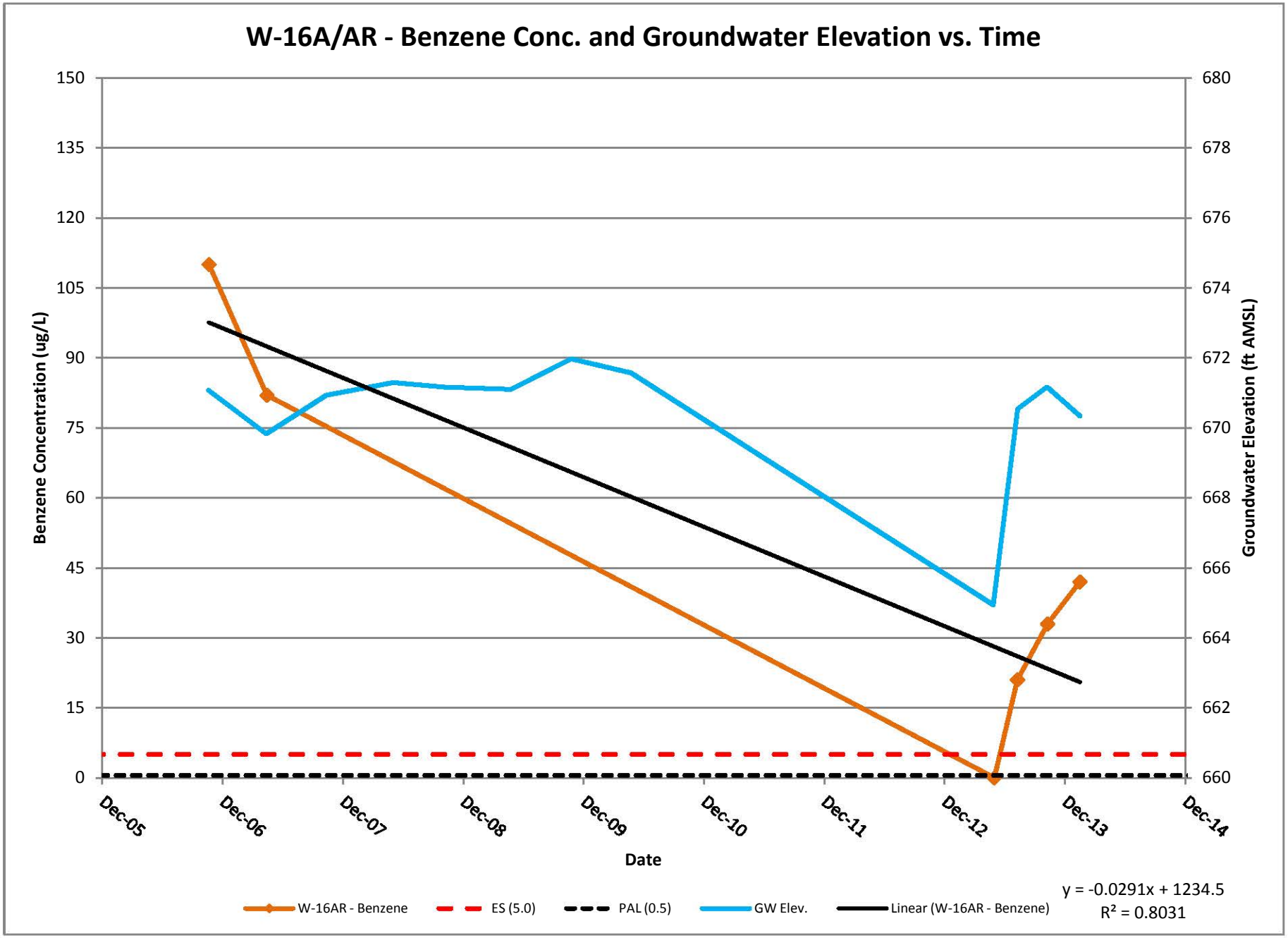

W-04A/AR - Naphthalene Conc. and Groundwater Elevation vs. Time
Naphthalene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
200
180
160
140
120
100
80
60
40
20
0
680
678
676
674
672
670
668
666
664
662
660
Dec-95
Dec-96
Dec-97
Dec-98
Dec-99
Dec-00
Dec-01
Dec-02
Dec-03
Dec-04
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-04AR - Naphthalene
ES (100)
PAL (10)
GW Elev.

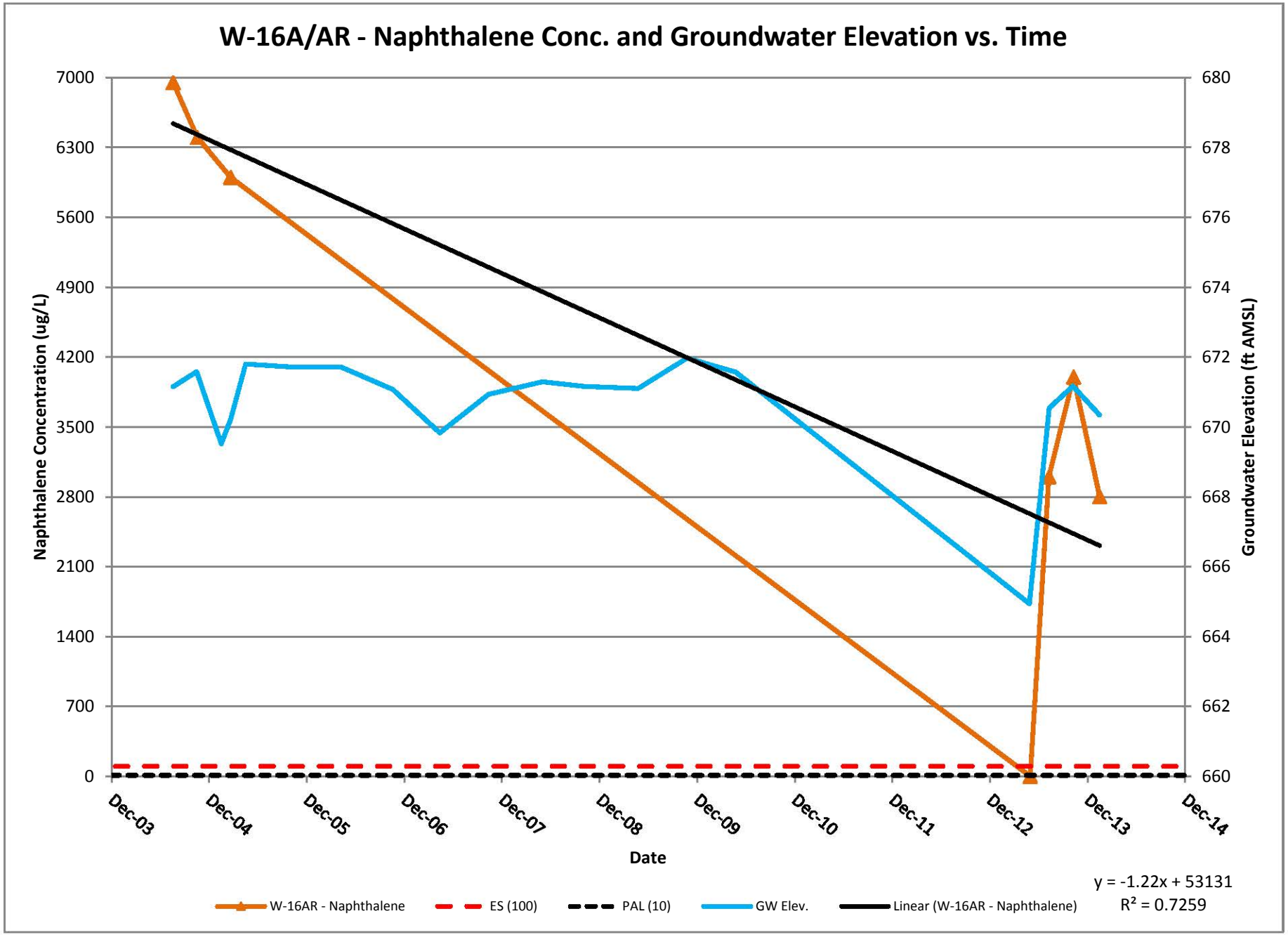

W-04A/AR - Pentachlorophenol Conc. and Groundwater Elevation vs. Time
Pentachlorophenol Concentration (ug/L)
Groundwater Elevation (ft AMSL)
4
3.6
3.2
2.8
2.4
2
1.6
1.2
0.8
0.4
0
680
678
676
674
672
670
668
666
664
662
660
Dec-95
Dec-96
Dec-97
Dec-98
Dec-99
Dec-00
Dec-01
Dec-02
Dec-03
Dec-04
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-04AR - Penta
ES (1.0)
PAL (0.1)
GW Elev.

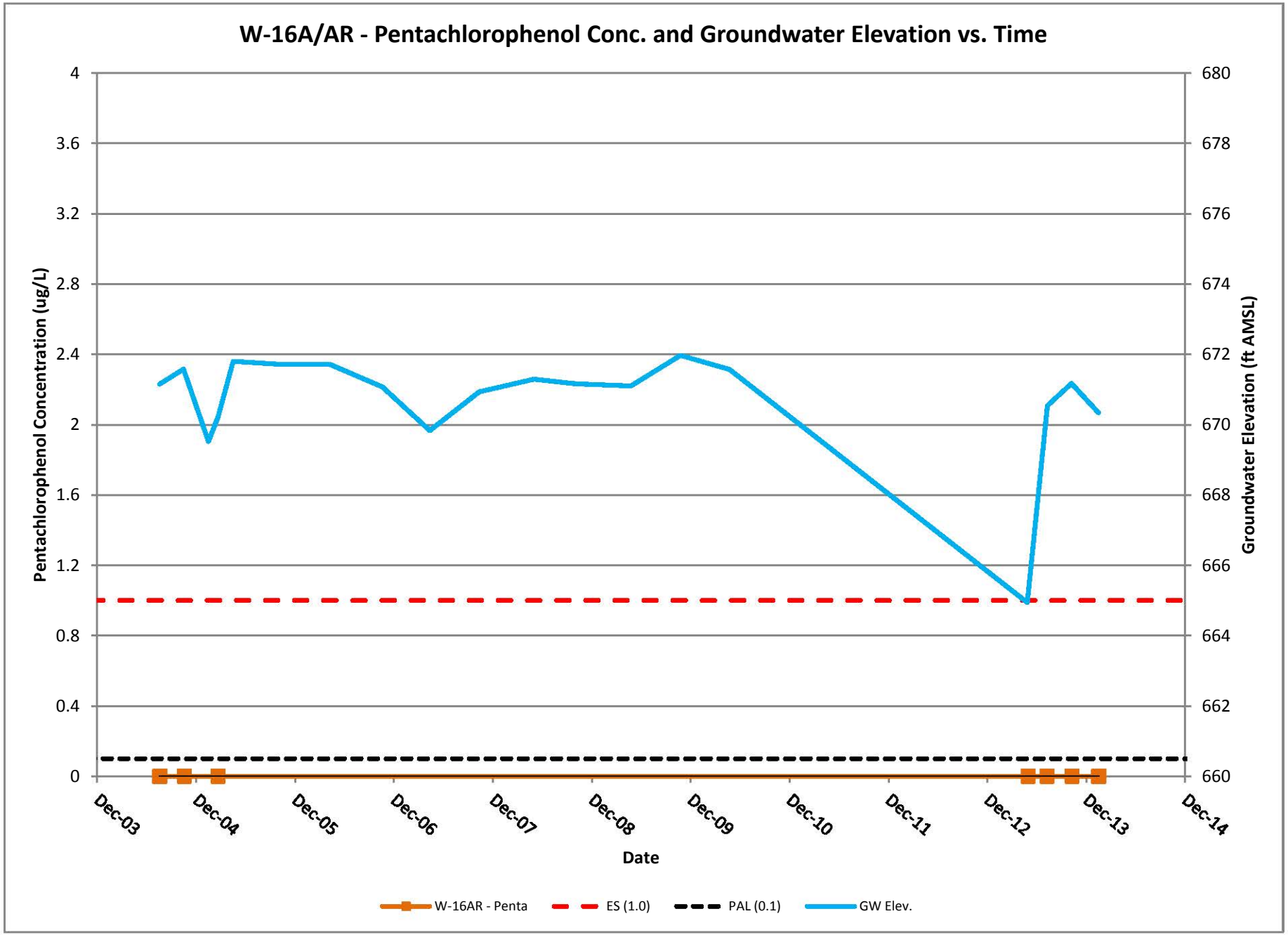

W-10A/AR/AR2 - Benzene Conc. and Groundwater Elevation vs. Time
Benzene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
150
135
120
105
90
75
60
45
30
15
0
680
678
676
674
672
670
668
666
664
662
660
Dec-95
Dec-96
Dec-97
Dec-98
Dec-99
Dec-00
Dec-01
Dec-02
Dec-03
Dec-04
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
y = -0.016x + 661.05
R² = 0.4187
W-10AR2 - Benzene
ES (5.0)
PAL (0.5)
GW Elev.
Linear (W-10AR2 - Benzene)

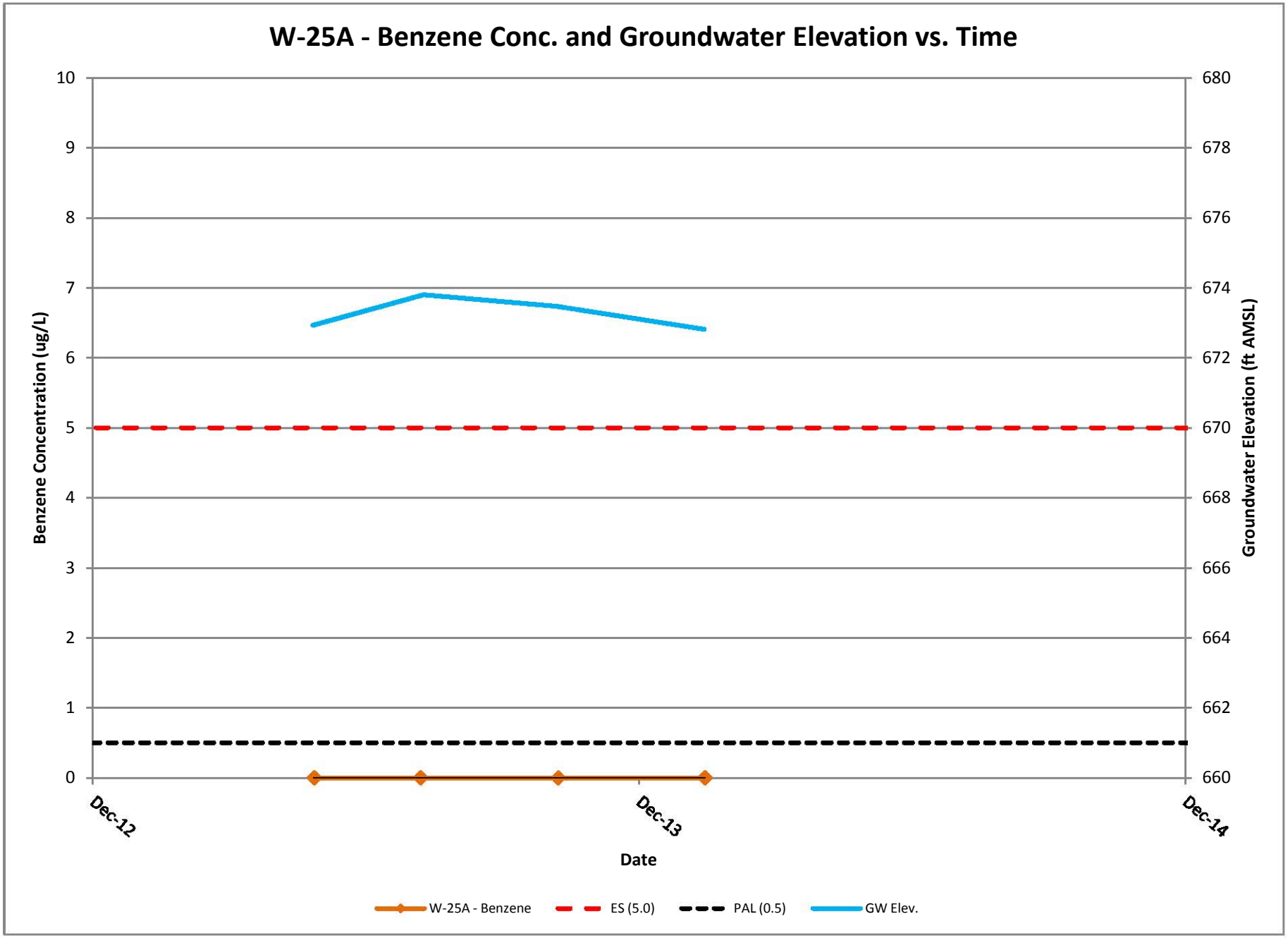

W-10A/AR/AR2 - Naphthalene Conc. and Groundwater Elevation vs. Time
Naphthalene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
6000
5400
4800
4200
3600
3000
2400
1800
1200
600
0
680
678
676
674
672
670
668
666
664
662
660
Dec-95
Dec-96
Dec-97
Dec-98
Dec-99
Dec-00
Dec-01
Dec-02
Dec-03
Dec-04
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-10AR2 - Naphthalene
ES (100)
PAL (10)
GW Elev.
Linear (W-10AR2 - Naphthalene)
y = -0.5606x + 23082
R² = 0.4633

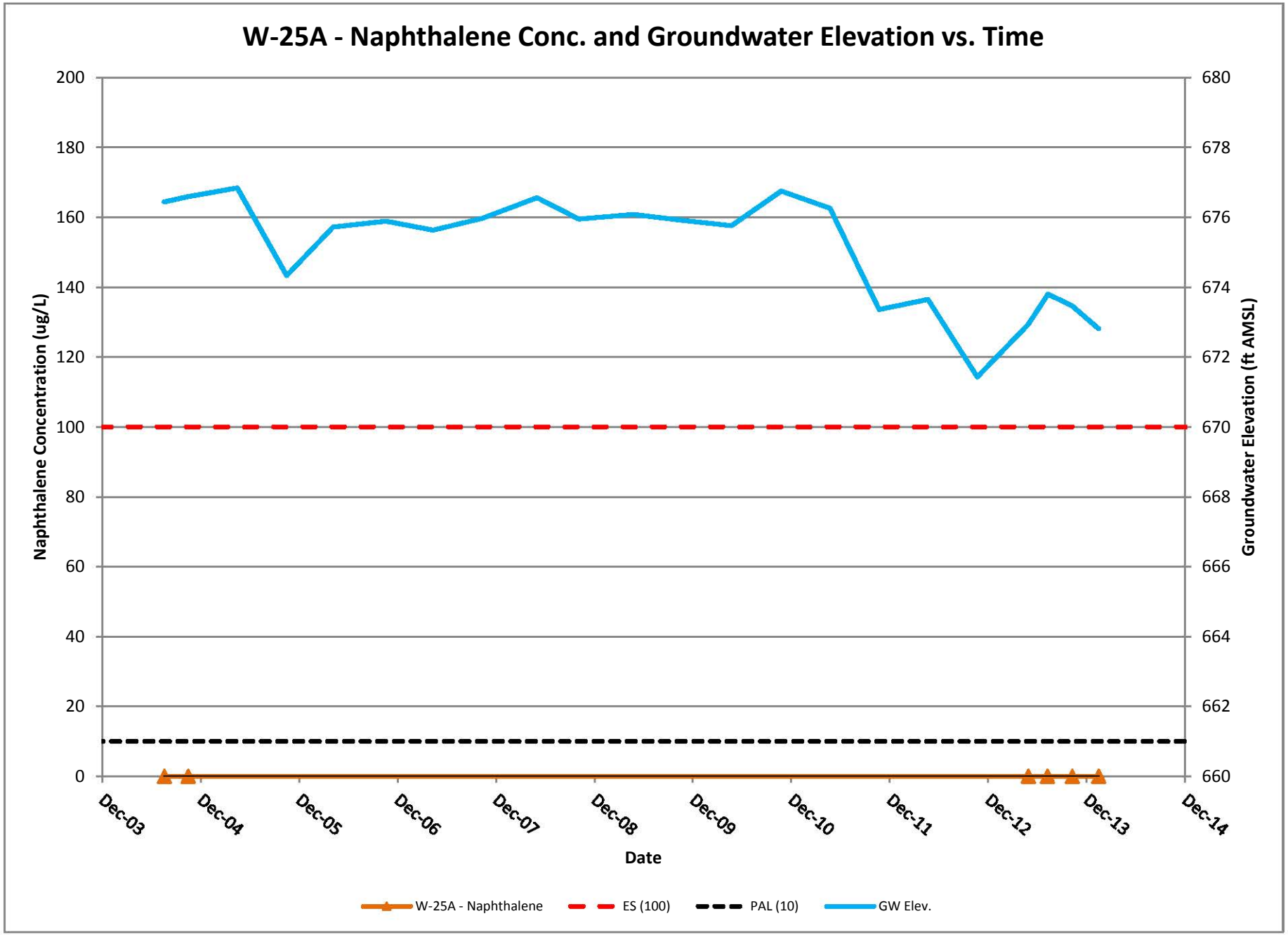

W-10A/AR/AR2 - Pentachlorophenol Conc. and Groundwater Elevation vs. Time
Pentachlorophenol Concentration (ug/L)
Groundwater Elevation (ft AMSL)
500
450
400
350
300
250
200
150
100
50
0
680
678
676
674
672
670
668
666
664
662
660
Dec-95
Dec-96
Dec-97
Dec-98
Dec-99
Dec-00
Dec-01
Dec-02
Dec-03
Dec-04
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-10AR2 - Penta
ES (1.0)
PAL (0.1)
GW Elev.
Linear (W-10AR2 - Penta)
y = -0.0481x + 1948.9
R² = 0.4086

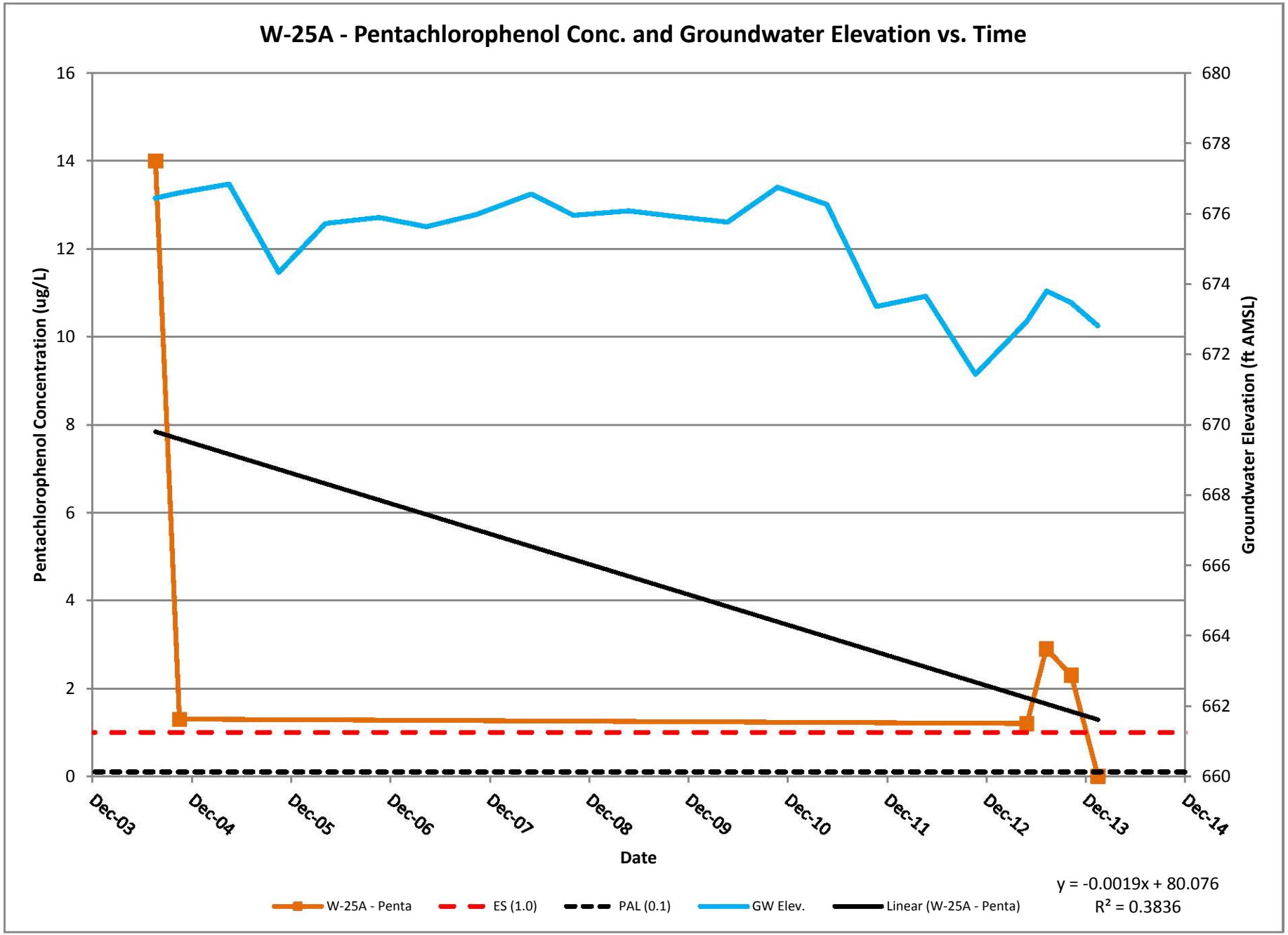

W-16A/AR - Benzene Conc. and Groundwater Elevation vs. Time
Benzene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
150
135
120
105
90
75
60
45
30
15
0
680
678
676
674
672
670
668
666
664
662
660
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-16AR - Benzene
ES (5.0)
PAL (0.5)
GW Elev.
Linear (W-16AR - Benzene)
y = -0.0291x + 1234.5
R² = 0.8031

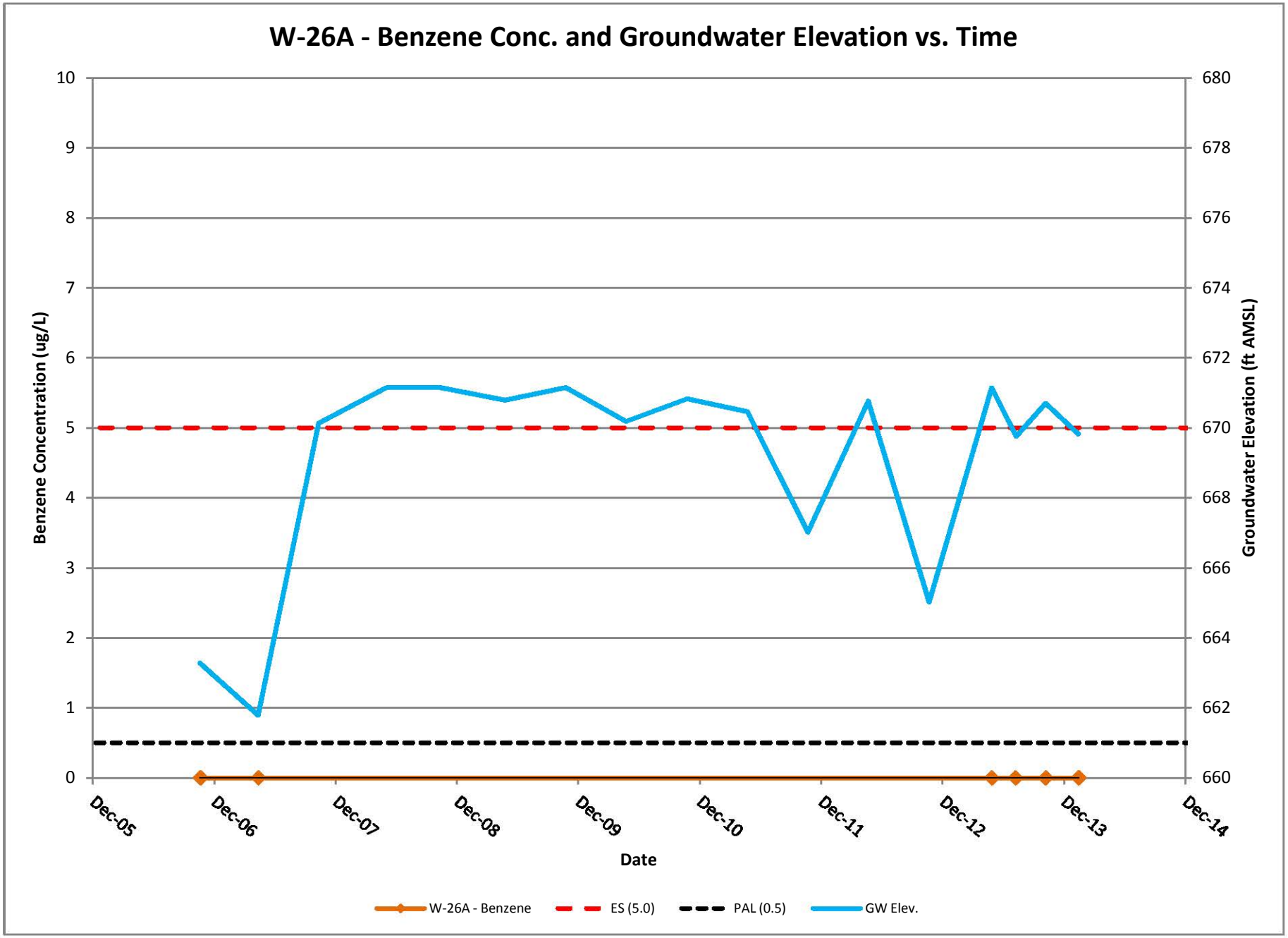

W-16A/AR - Naphthalene Conc. and Groundwater Elevation vs. Time
Naphthalene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
7000
6300
5600
4900
4200
3500
2800
2100
1400
700
0
680
678
676
674
672
670
668
666
664
662
660
Dec-03
Dec-04
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
y = -1.22x + 53131
R² = 0.7259
W-16AR - Naphthalene
ES (100)
PAL (10)
GW Elev.
Linear (W-16AR - Naphthalene)

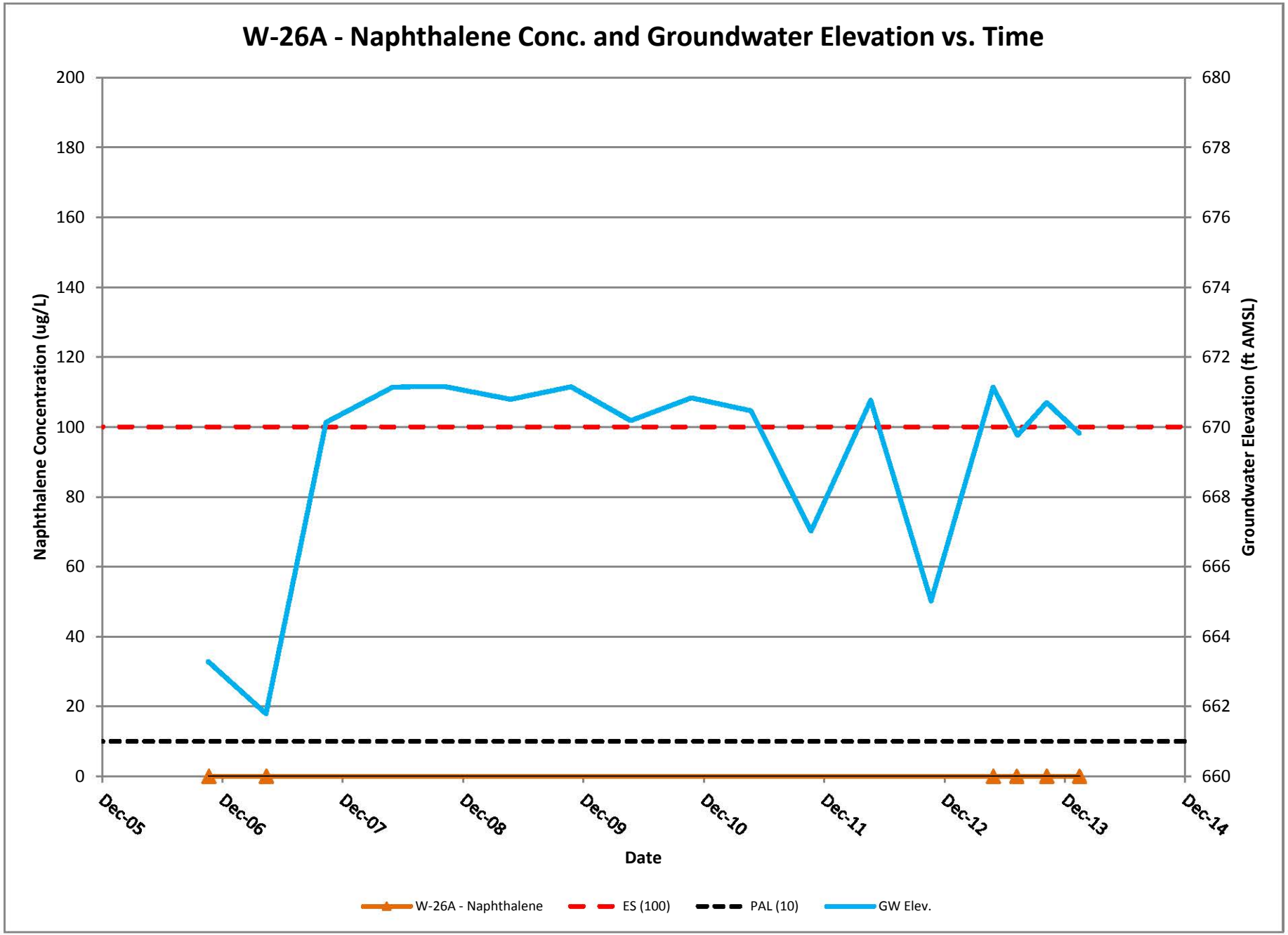

W-16A/AR - Pentachlorophenol Conc. and Groundwater Elevation vs. Time
Pentachlorophenol Concentration (ug/L)
Groundwater Elevation (ft AMSL)
4
3.6
3.2
2.8
2.4
2
1.6
1.2
0.8
0.4
0
680
678
676
674
672
670
668
666
664
662
660
Dec-03
Dec-04
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-16AR - Penta
ES (1.0)
PAL (0.1)
GW Elev.

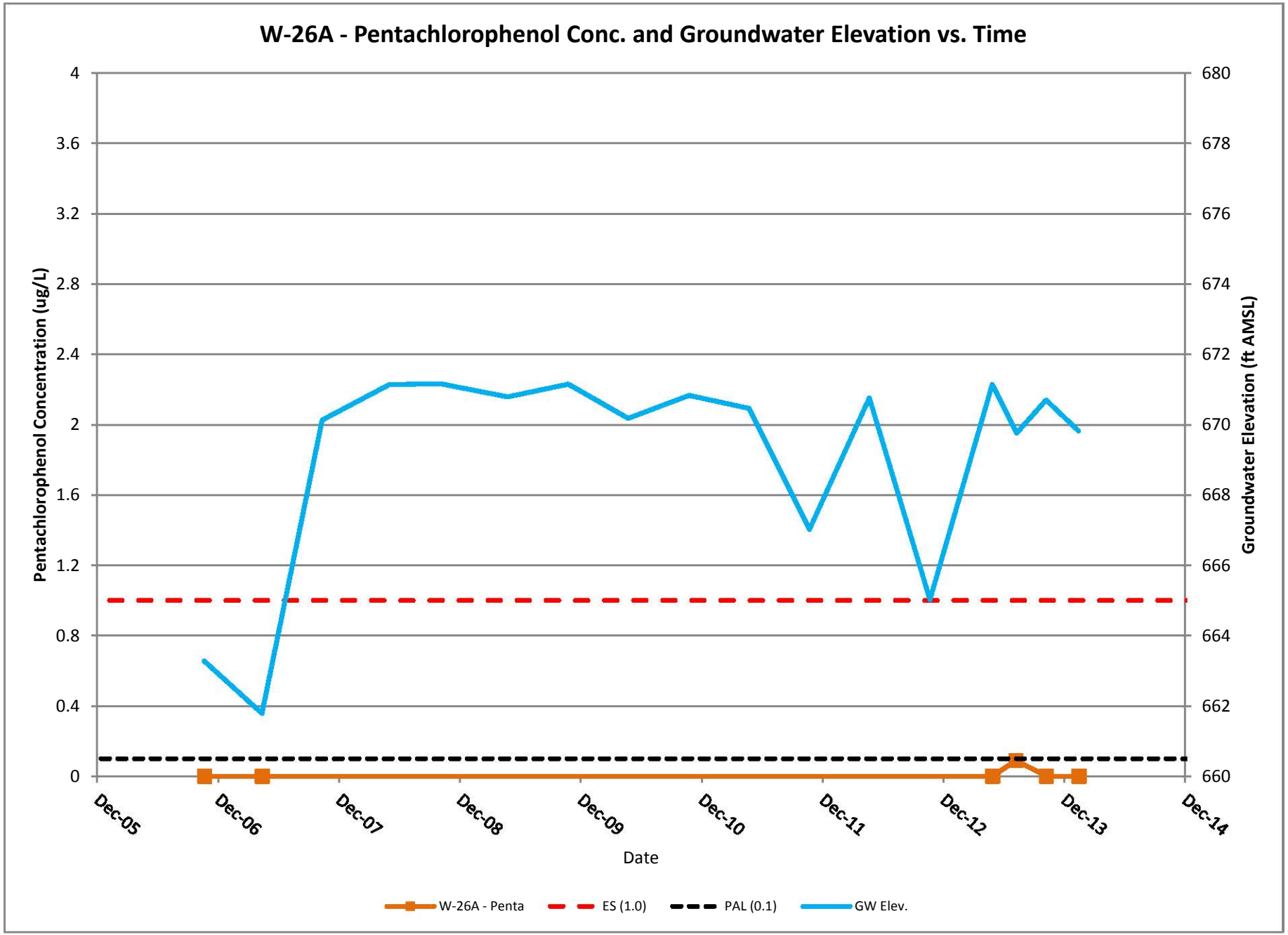

W-25A - Benzene Conc. and Groundwater Elevation vs. Time
Benzene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
10
9
8
7
6
5
4
3
2
1
0
680
678
676
674
672
670
668
666
664
662
660
Dec-12
Dec-13
Dec-14
Date
W-25A - Benzene
ES (5.0)
PAL (0.5)
GW Elev.

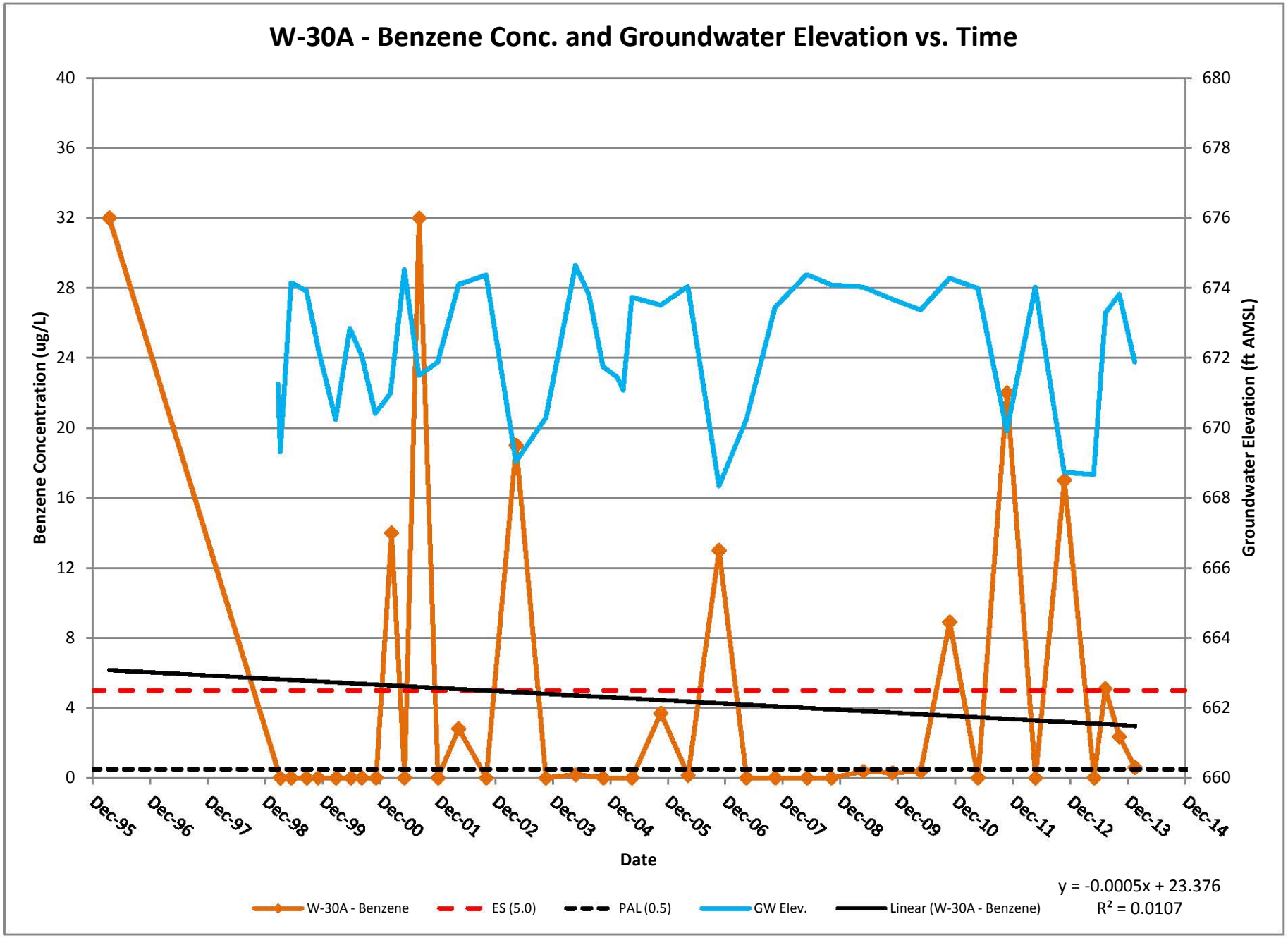

W-25A - Naphthalene Conc. and Groundwater Elevation vs. Time
Naphthalene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
200
180
160
140
120
100
80
60
40
20
0
680
678
676
674
672
670
668
666
664
662
660
Dec-03
Dec-04
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-25A - Naphthalene
ES (100)
PAL (10)
GW Elev.

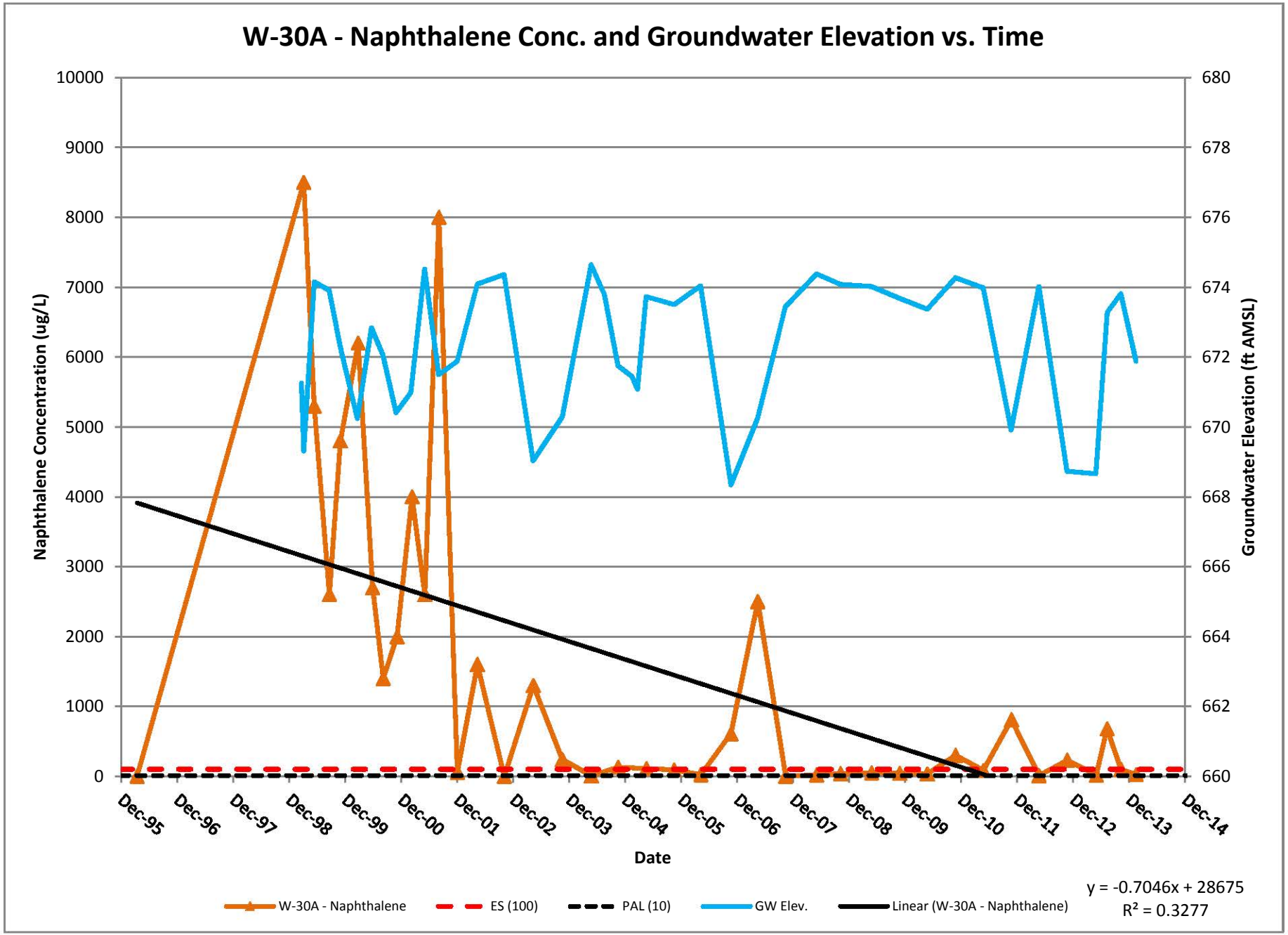

W-25A - Pentachlorophenol Conc. and Groundwater Elevation vs. Time
Pentachlorophenol Concentration (ug/L)
Groundwater Elevation (ft AMSL)
16
14
12
10
8
6
4
2
0
680
678
676
674
672
670
668
666
664
662
660
Dec-03
Dec-04
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
y = -0.0019x + 80.076
R² = 0.3836
W-25A - Penta
ES (1.0)
PAL (0.1)
GW Elev.
Linear (W-25A - Penta)

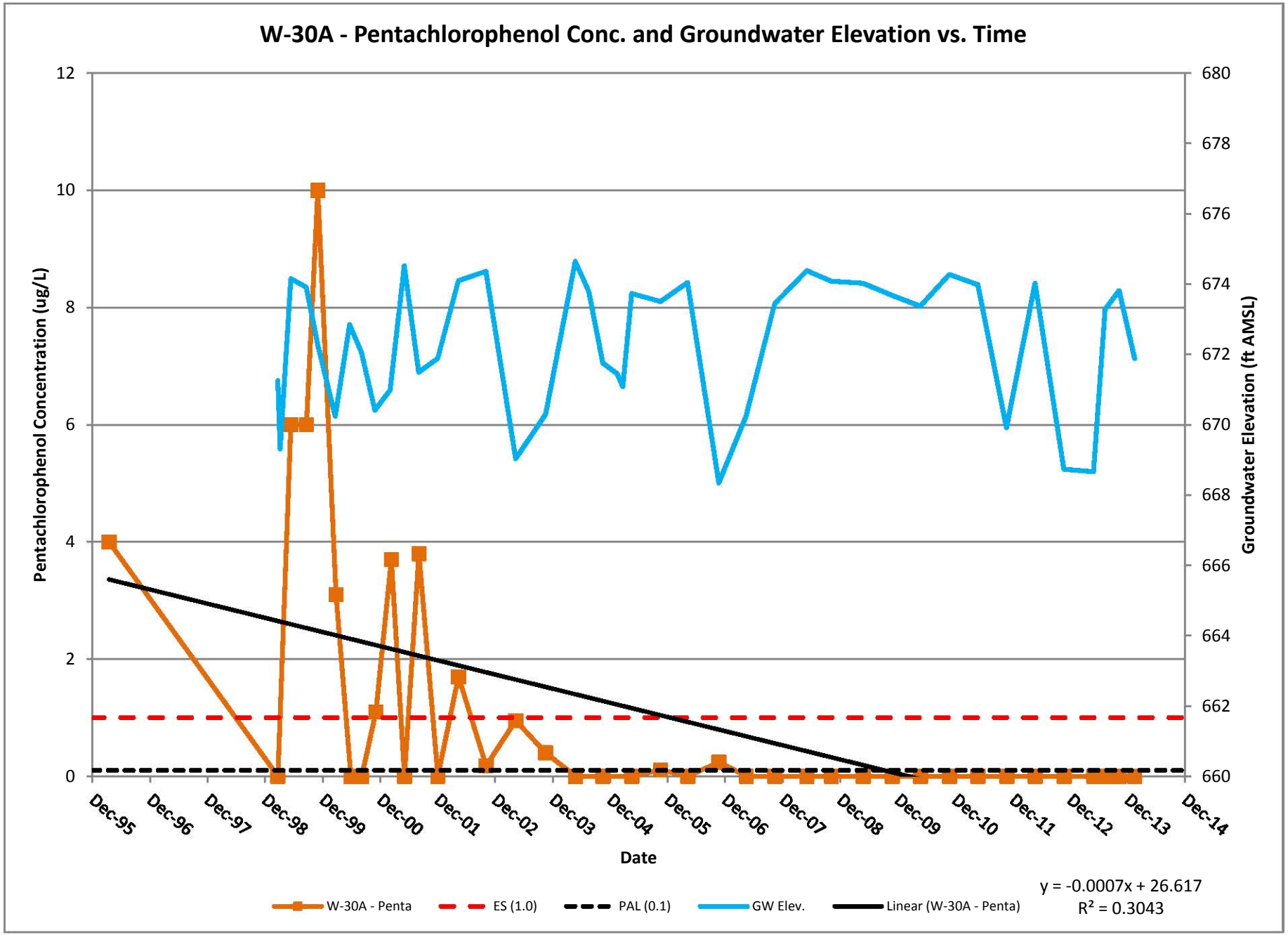

W-26A - Benzene Conc. and Groundwater Elevation vs. Time
Benzene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
10
9
8
7
6
5
4
3
2
1
0
680
678
676
674
672
670
668
666
664
662
660
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-26A - Benzene
ES (5.0)
PAL (0.5)
GW Elev.

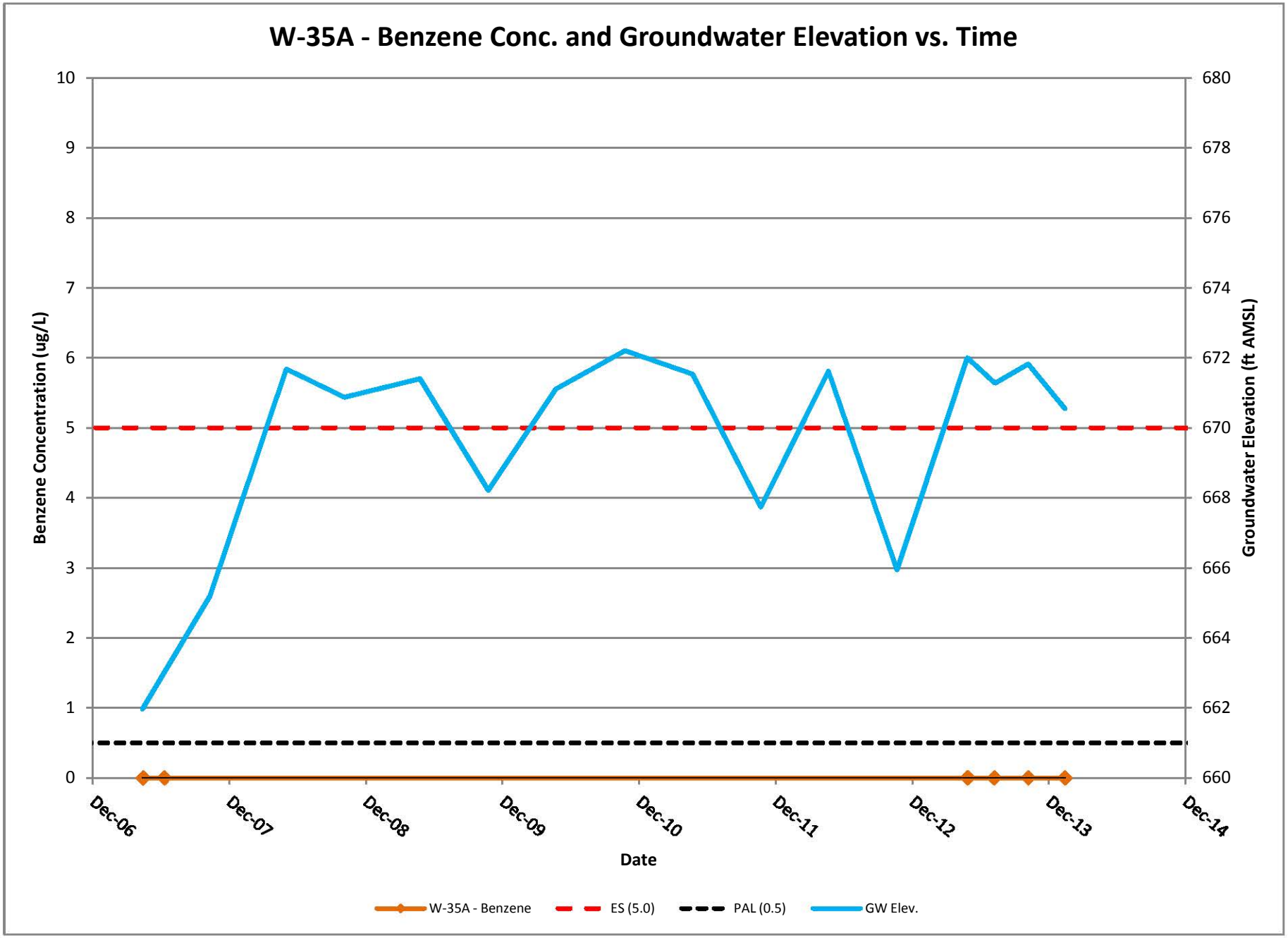

W-26A - Naphthalene Conc. and Groundwater Elevation vs. Time
Naphthalene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
200
180
160
140
120
100
80
60
40
20
0
680
678
676
674
672
670
668
666
664
662
660
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-26A - Naphthalene
ES (100)
PAL (10)
GW Elev.

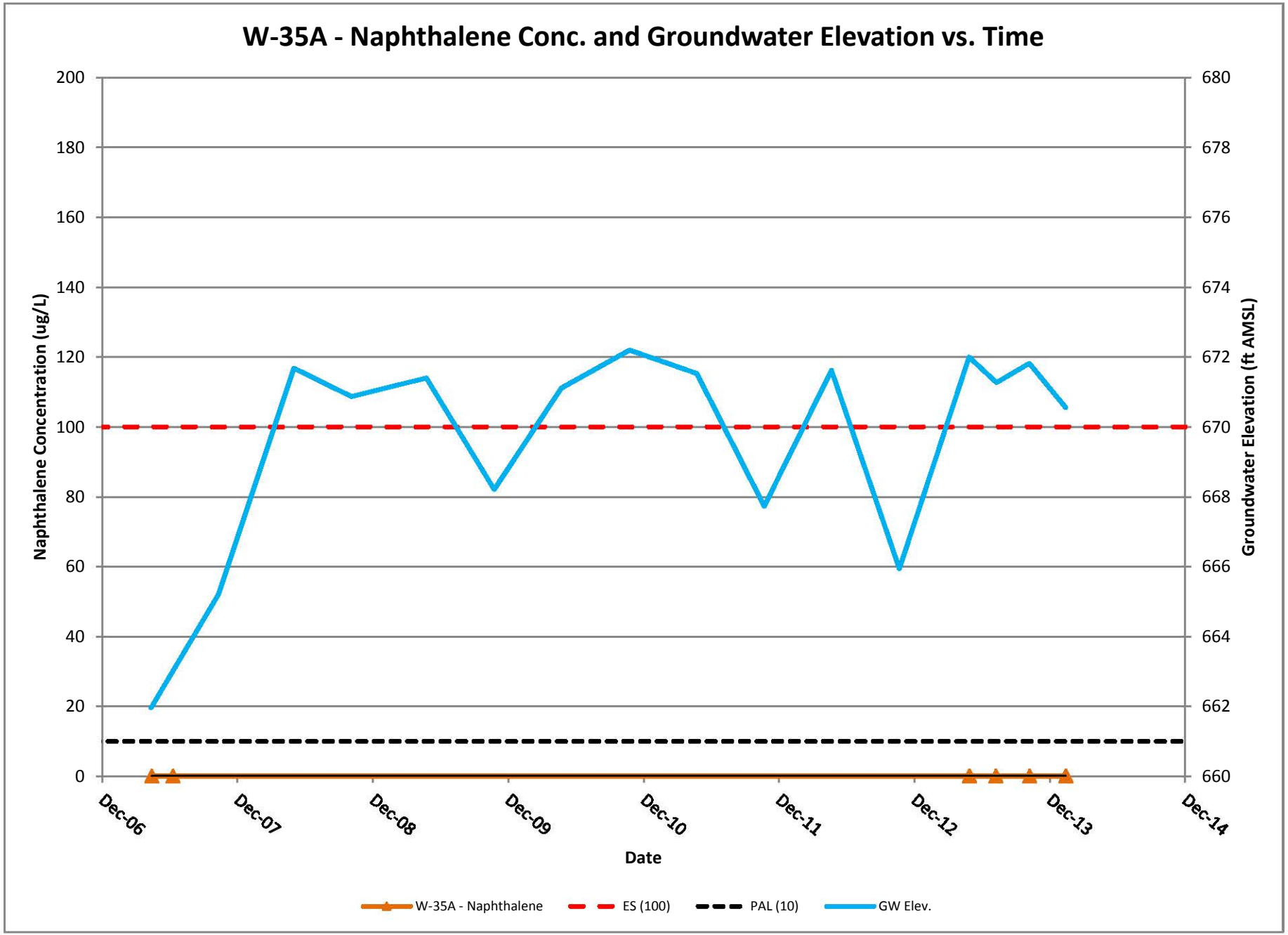

W-26A - Pentachlorophenol Conc. and Groundwater Elevation vs. Time
Pentachlorophenol Concentration (ug/L)
Groundwater Elevation (ft AMSL)
4
3.6
3.2
2.8
2.4
2
1.6
1.2
0.8
0.4
0
680
678
676
674
672
670
668
666
664
662
660
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-26A - Penta
ES (1.0)
PAL (0.1)
GW Elev.

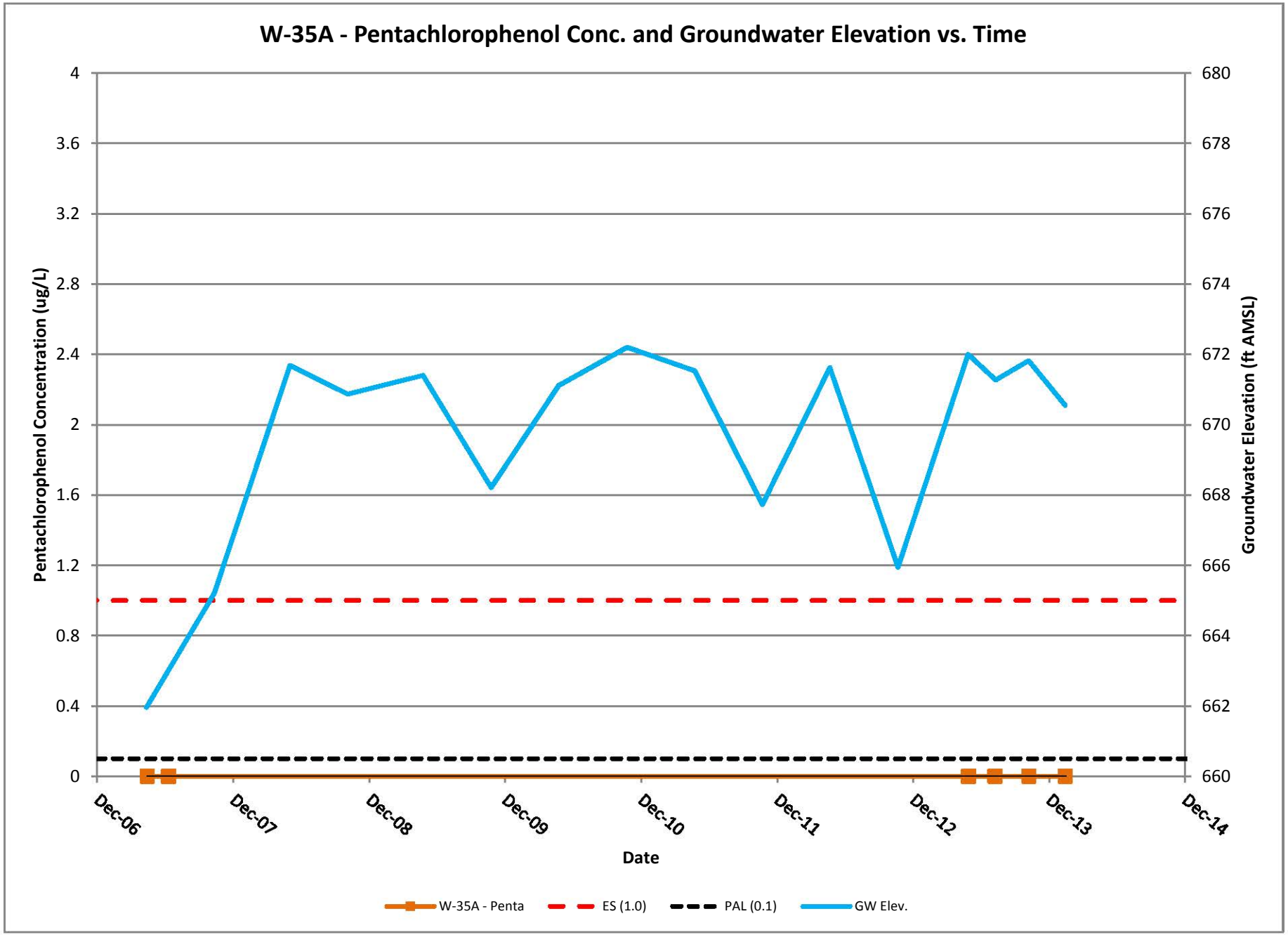

W-30A - Benzene Conc. and Groundwater Elevation vs. Time
Benzene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
40
36
32
28
24
20
16
12
8
4
0
680
678
676
674
672
670
668
666
664
662
660
Dec-95
Dec-96
Dec-97
Dec-98
Dec-99
Dec-00
Dec-01
Dec-02
Dec-03
Dec-04
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
y = -0.0005x + 23.376
R² = 0.0107
W-30A - Benzene
ES (5.0)
PAL (0.5)
GW Elev.
Linear (W-30A - Benzene)

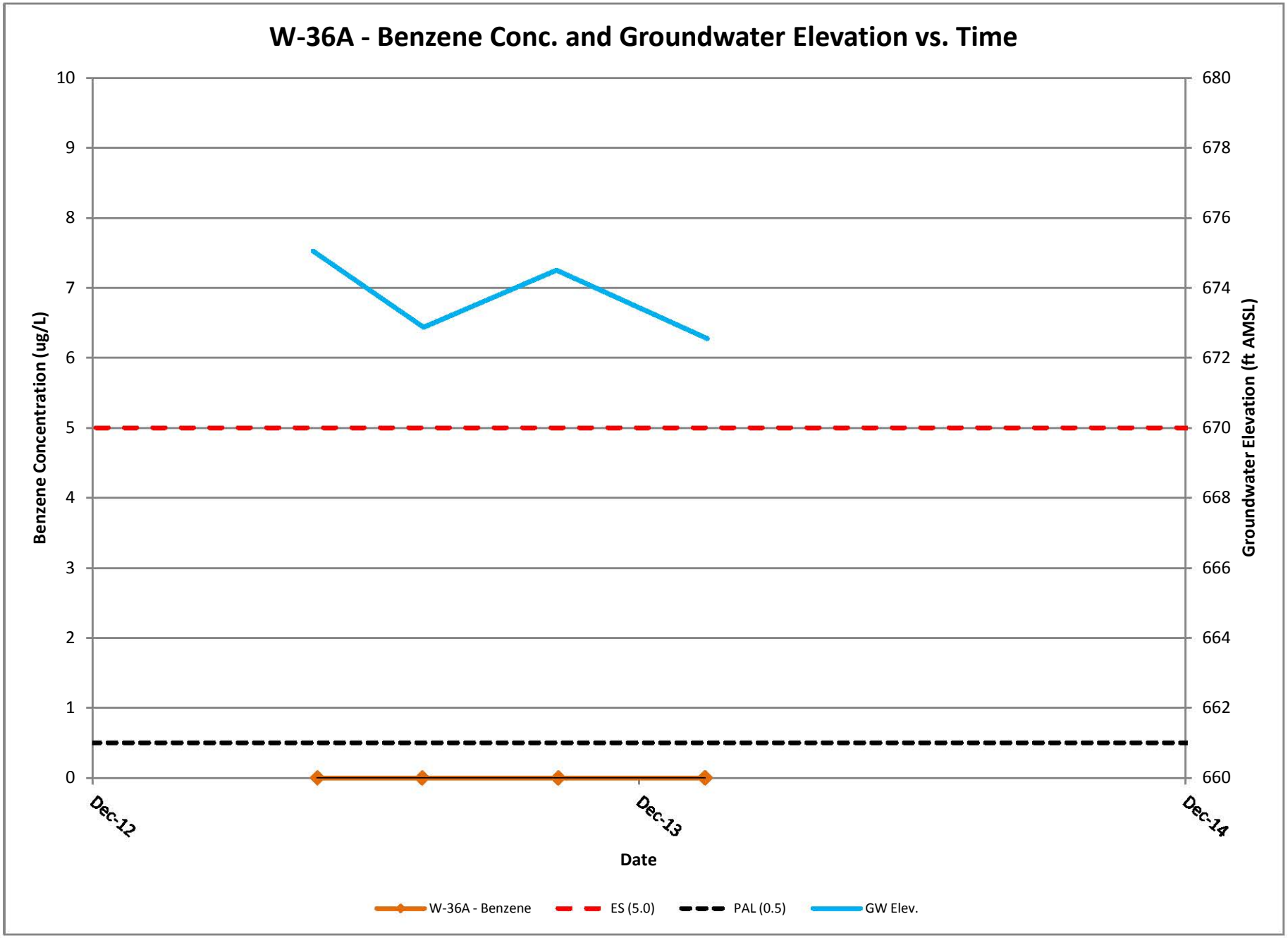

W-30A - Naphthalene Conc. and Groundwater Elevation vs. Time
Naphthalene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
680
678
676
674
672
670
668
666
664
662
660
Dec-95
Dec-96
Dec-97
Dec-98
Dec-99
Dec-00
Dec-01
Dec-02
Dec-03
Dec-04
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-30A - Naphthalene
ES (100)
PAL (10)
GW Elev.
Linear (W-30A - Naphthalene)
y = -0.7046x + 28675
R² = 0.3277

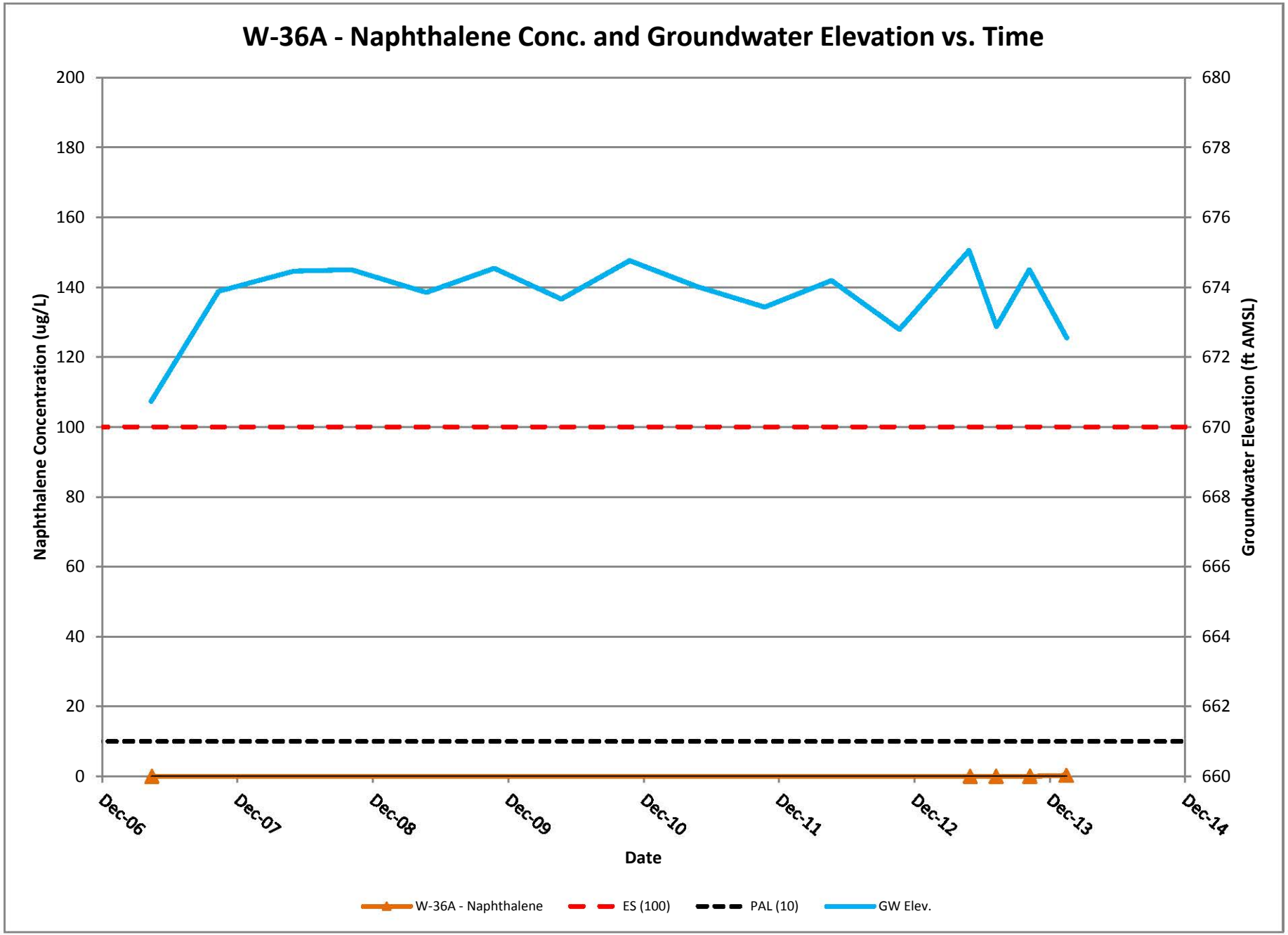

W-30A - Pentachlorophenol Conc. and Groundwater Elevation vs. Time
Pentachlorophenol Concentration (ug/L)
Groundwater Elevation (ft AMSL)
12
10
8
6
4
2
0
680
678
676
674
672
670
668
666
664
662
660
Dec-95
Dec-96
Dec-97
Dec-98
Dec-99
Dec-00
Dec-01
Dec-02
Dec-03
Dec-04
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-30A - Penta
ES (1.0)
PAL (0.1)
GW Elev.
Linear (W-30A - Penta)
y = -0.0007x + 26.617
R² = 0.3043

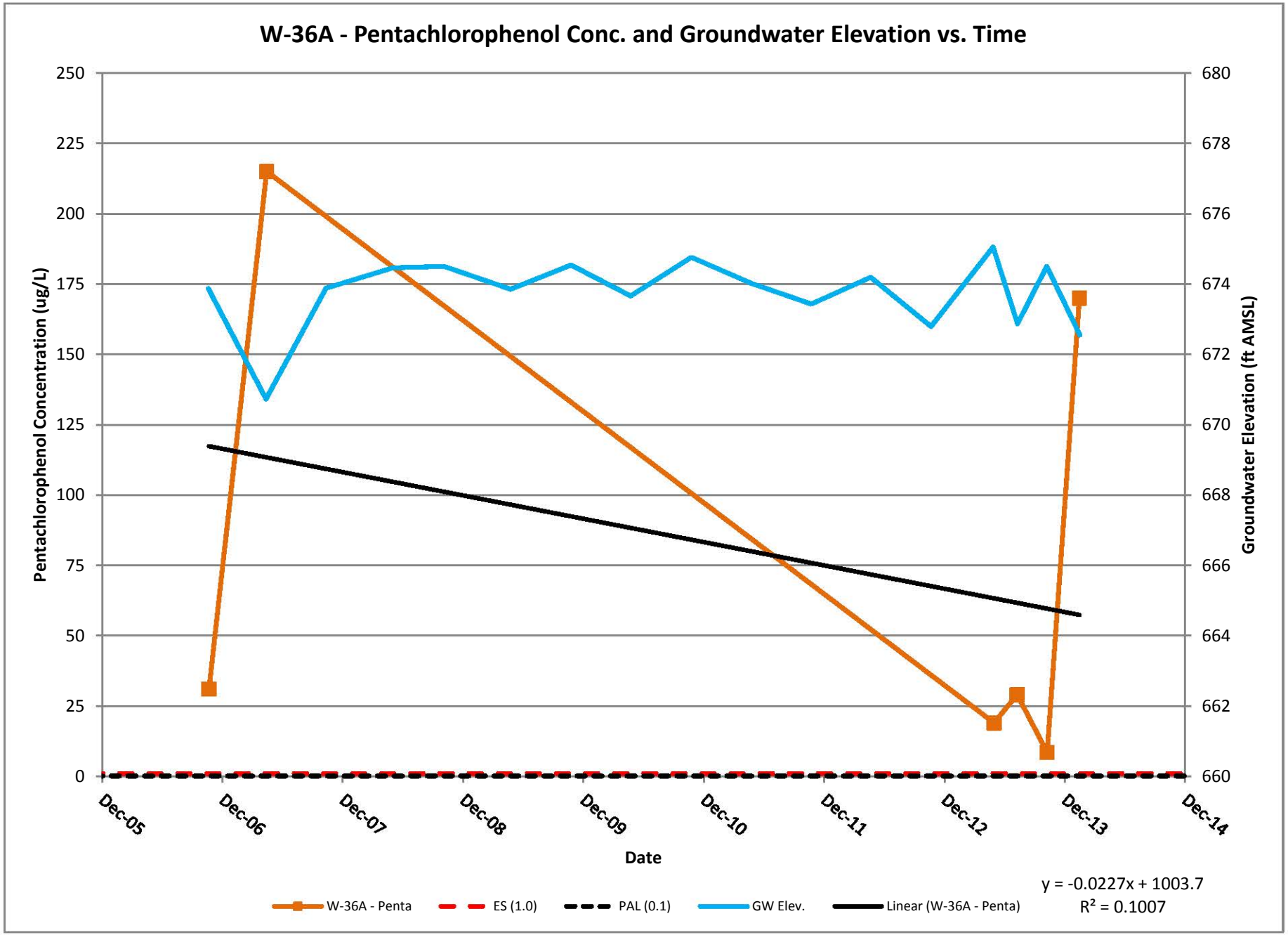

W-35A - Benzene Conc. and Groundwater Elevation vs. Time
Benzene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
10
9
8
7
6
5
4
3
2
1
0
680
678
676
674
672
670
668
666
664
662
660
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-35A - Benzene
ES (5.0)
PAL (0.5)
GW Elev.

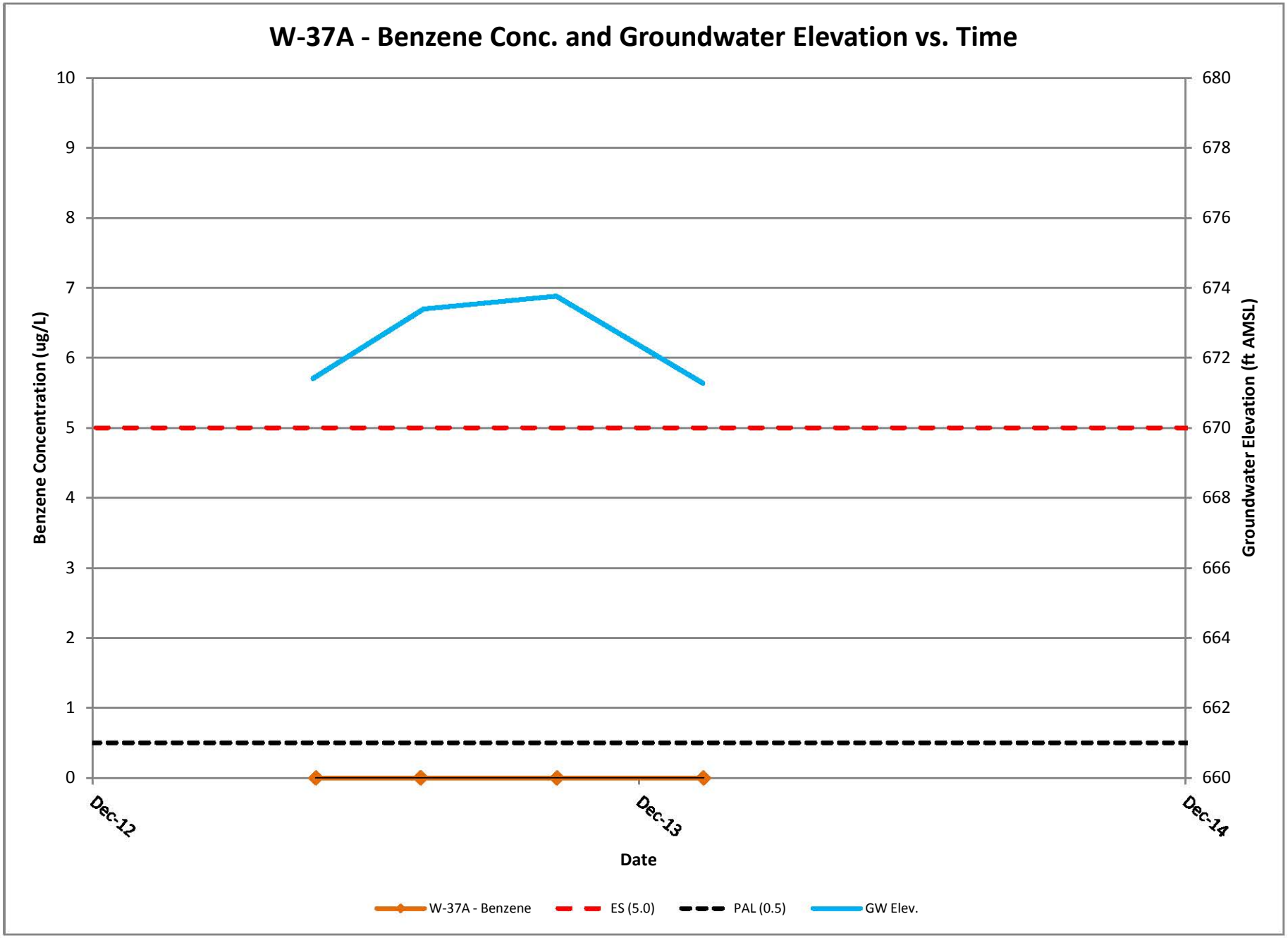

W-35A - Naphthalene Conc. and Groundwater Elevation vs. Time
Naphthalene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
200
180
160
140
120
100
80
60
40
20
0
680
678
676
674
672
670
668
666
664
662
660
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-35A - Naphthalene
ES (100)
PAL (10)
GW Elev.

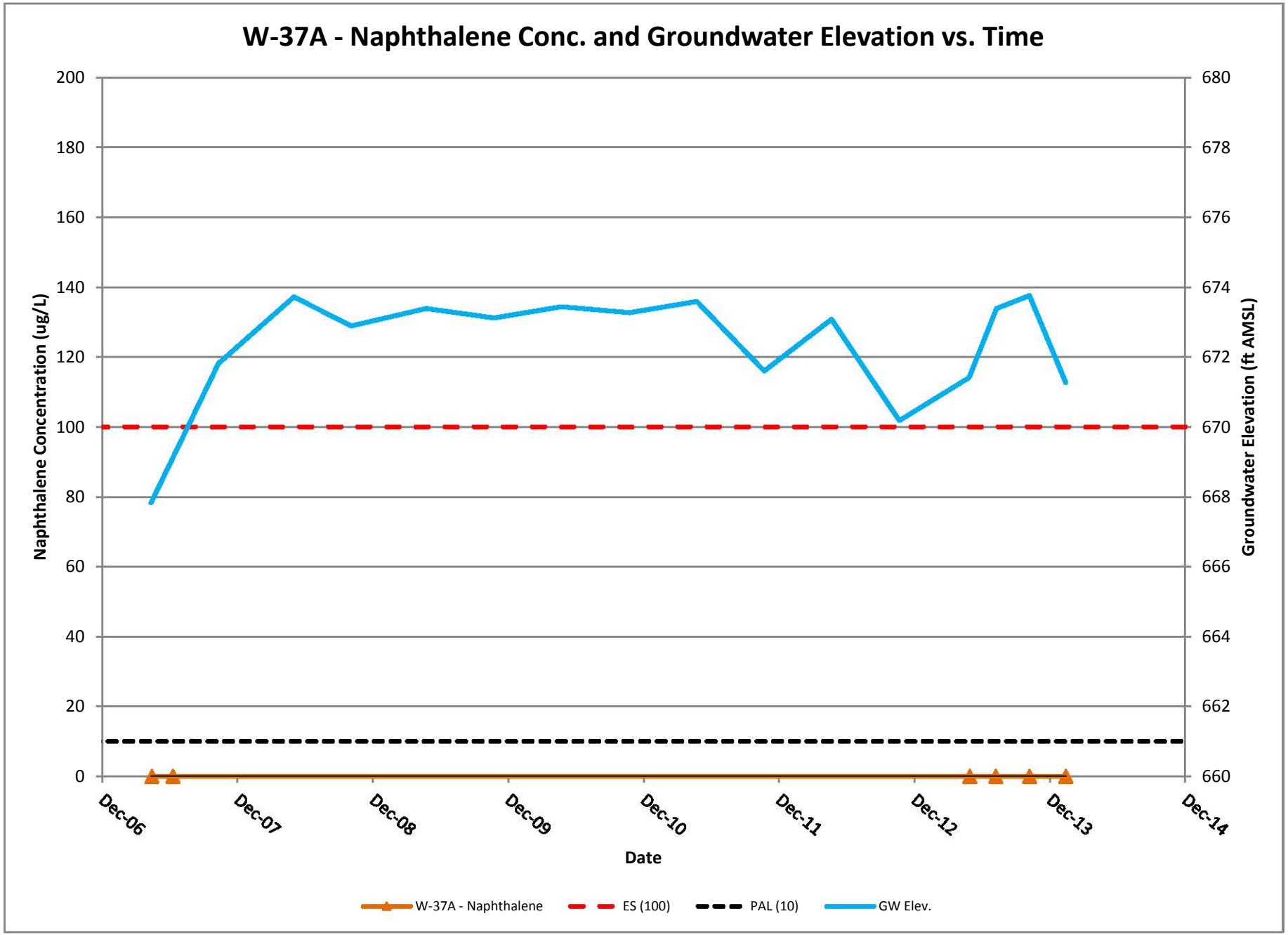

W-35A - Pentachlorophenol Conc. and Groundwater Elevation vs. Time
Pentachlorophenol Concentration (ug/L)
Groundwater Elevation (ft AMSL)
4
3.6
3.2
2.8
2.4
2
1.6
1.2
0.8
0.4
0
680
678
676
674
672
670
668
666
664
662
660
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-35A - Penta
ES (1.0)
PAL (0.1)
GW Elev.

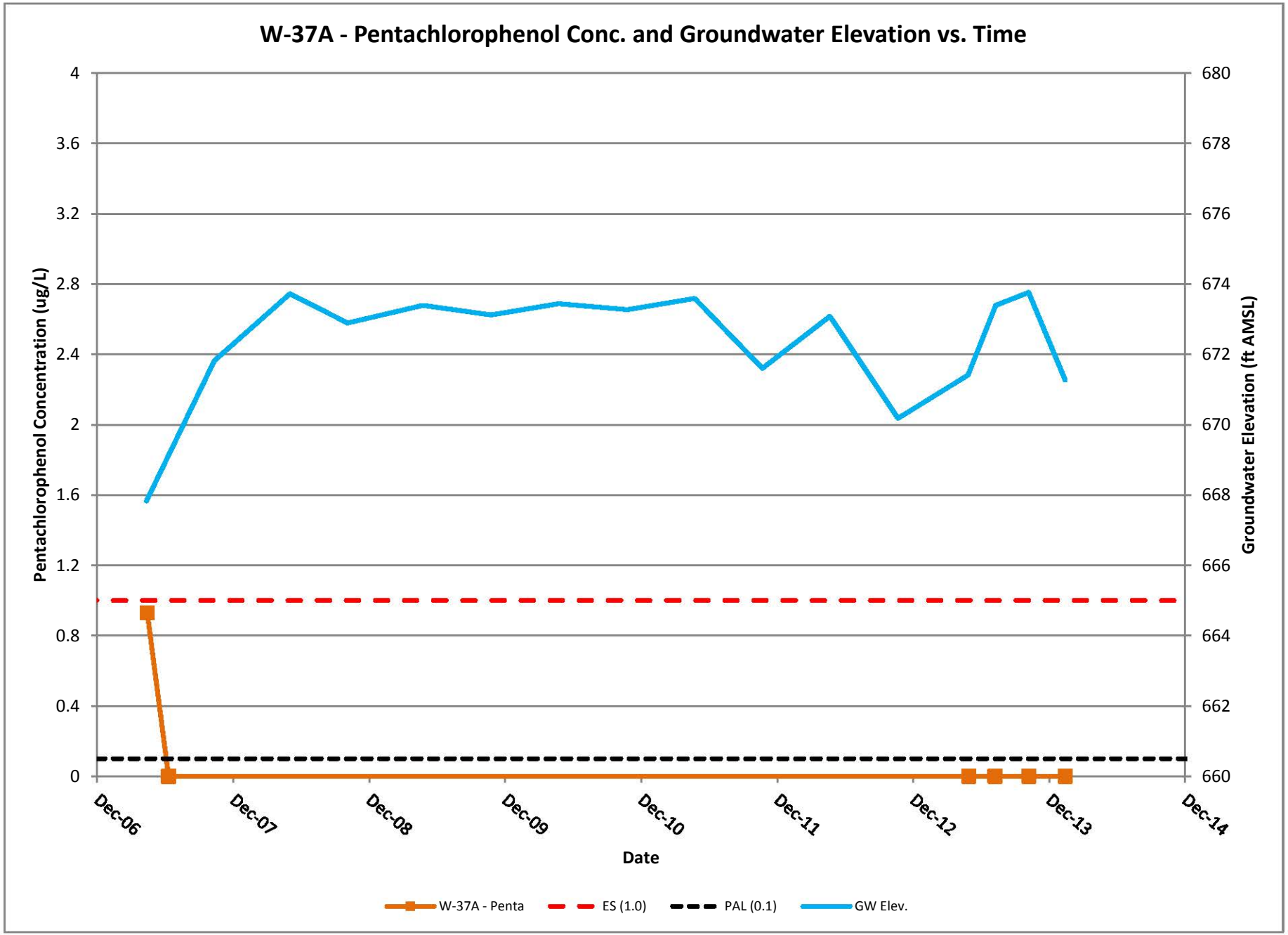

W-36A - Benzene Conc. and Groundwater Elevation vs. Time
Benzene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
10
9
8
7
6
5
4
3
2
1
0
680
678
676
674
672
670
668
666
664
662
660
Dec-12
Dec-13
Dec-14
Date
W-36A - Benzene
ES (5.0)
PAL (0.5)
GW Elev.


W-36A - Naphthalene Conc. and Groundwater Elevation vs. Time
Naphthalene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
200
180
160
140
120
100
80
60
40
20
0
680
678
676
674
672
670
668
666
664
662
660
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-36A - Naphthalene
ES (100)
PAL (10)
GW Elev.


W-36A - Pentachlorophenol Conc. and Groundwater Elevation vs. Time
Pentachlorophenol Concentration (ug/L)
Groundwater Elevation (ft AMSL)
250
225
200
175
150
125
100
75
50
25
0
680
678
676
674
672
670
668
666
664
662
660
Dec-05
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
y = -0.0227x + 1003.7
R² = 0.1007
W-36A - Penta
ES (1.0)
PAL (0.1)
GW Elev.
Linear (W-36A - Penta)


W-37A - Benzene Conc. and Groundwater Elevation vs. Time
Benzene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
10
9
8
7
6
5
4
3
2
1
0
680
678
676
674
672
670
668
666
664
662
660
Dec-12
Dec-13
Dec-14
Date
W-37A - Benzene
ES (5.0)
PAL (0.5)
GW Elev.

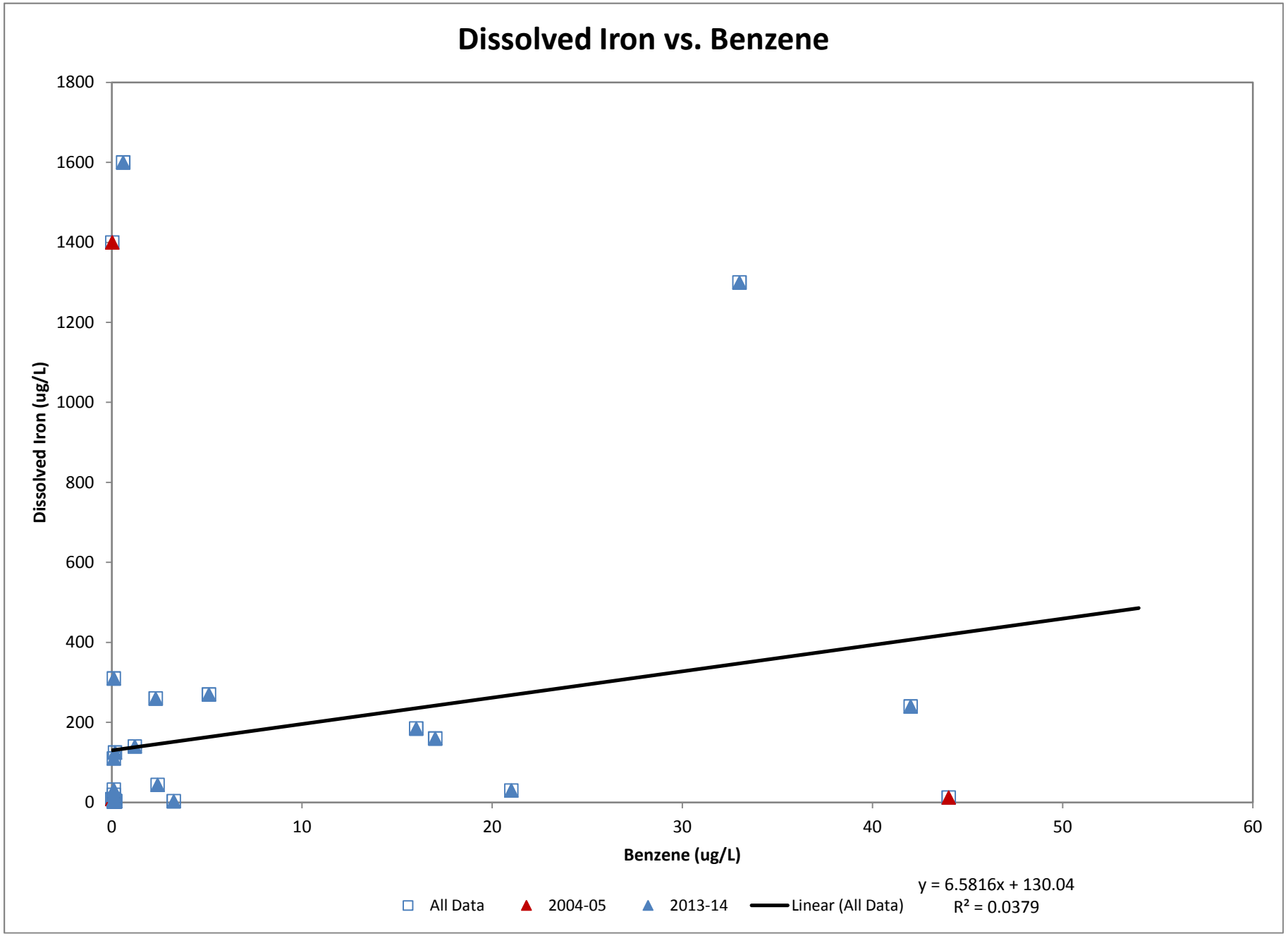

W-37A - Naphthalene Conc. and Groundwater Elevation vs. Time
Naphthalene Concentration (ug/L)
Groundwater Elevation (ft AMSL)
200
180
160
140
120
100
80
60
40
20
0
680
678
676
674
672
670
668
666
664
662
660
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-37A - Naphthalene
ES (100)
PAL (10)
GW Elev.

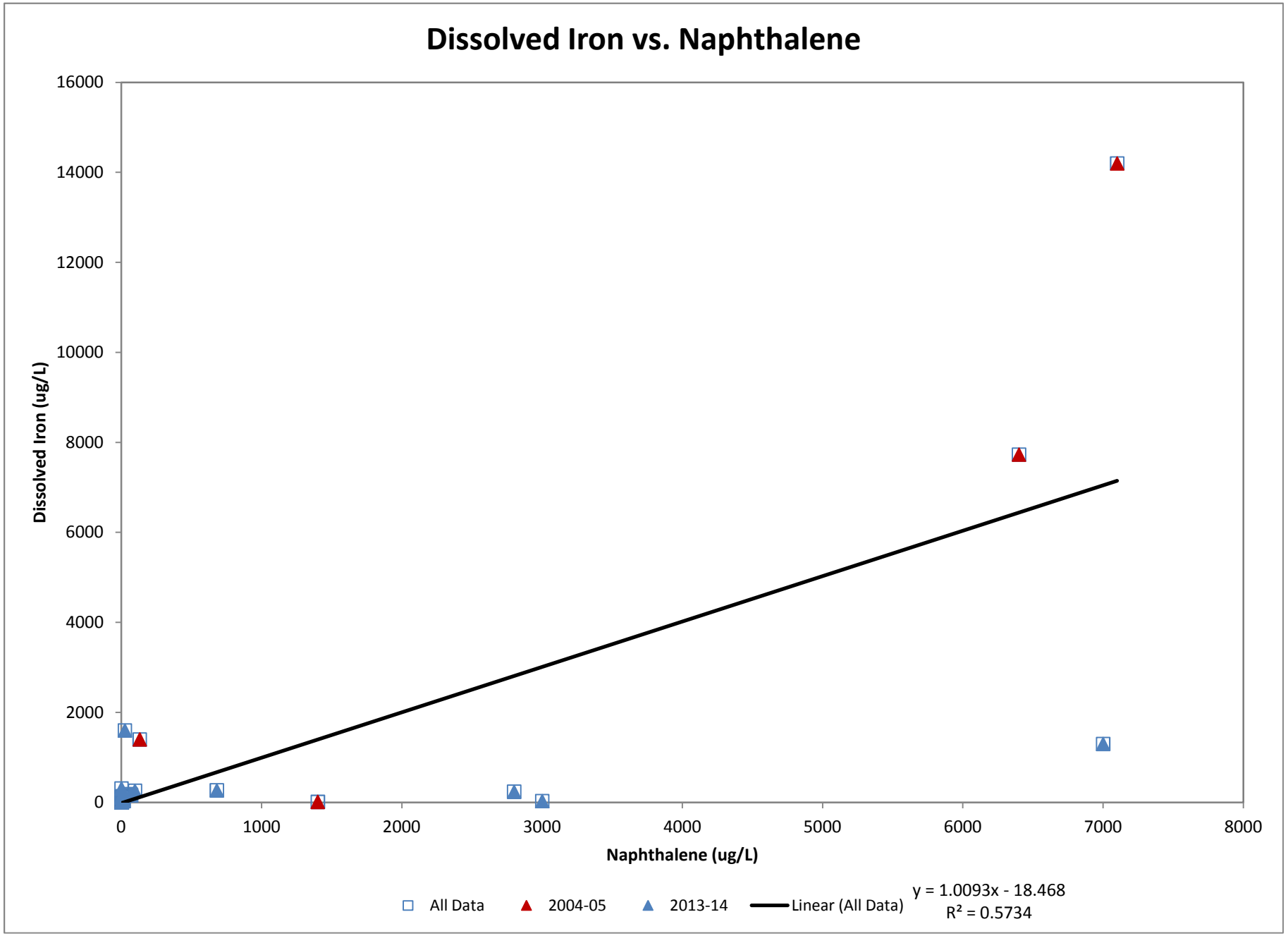

W-37A - Pentachlorophenol Conc. and Groundwater Elevation vs. Time
Pentachlorophenol Concentration (ug/L)
Groundwater Elevation (ft AMSL)
4
3.6
3.2
2.8
2.4
2
1.6
1.2
0.8
0.4
0
680
678
676
674
672
670
668
666
664
662
660
Dec-06
Dec-07
Dec-08
Dec-09
Dec-10
Dec-11
Dec-12
Dec-13
Dec-14
Date
W-37A - Penta
ES (1.0)
PAL (0.1)
GW Elev.

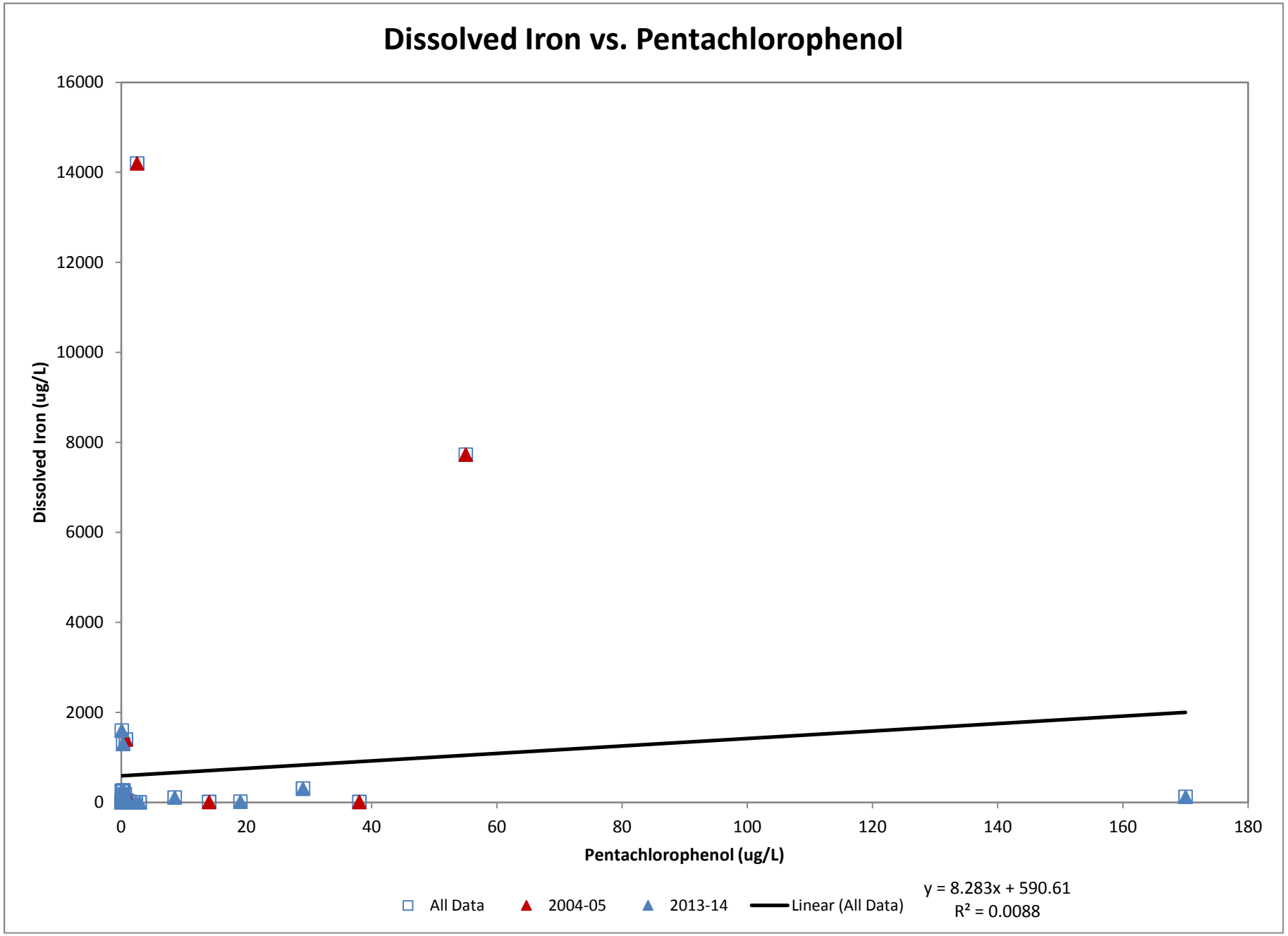
ARCADIS

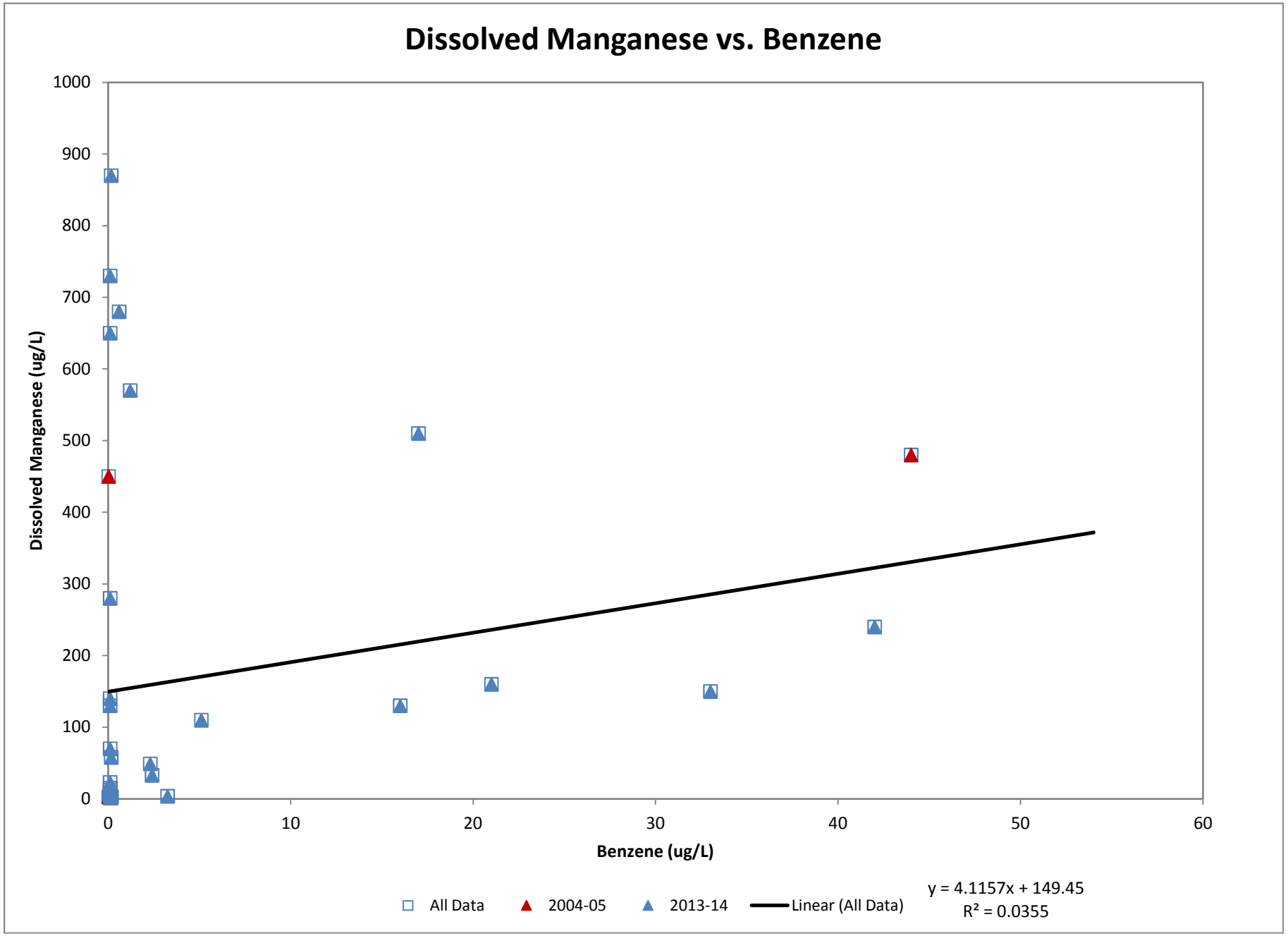
Appendix D

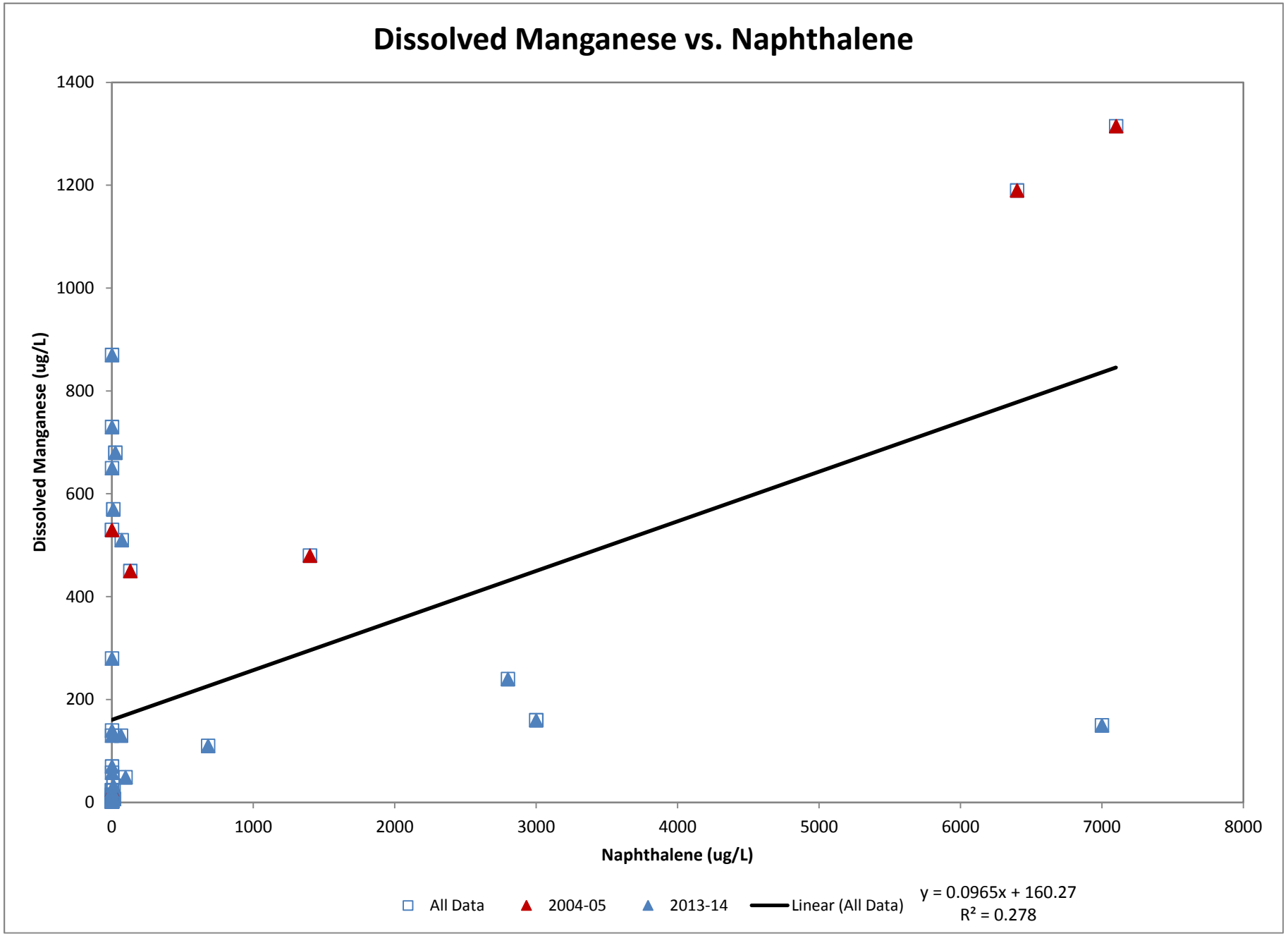
Geochemical Indicator Parameter vs. COPC Graphs

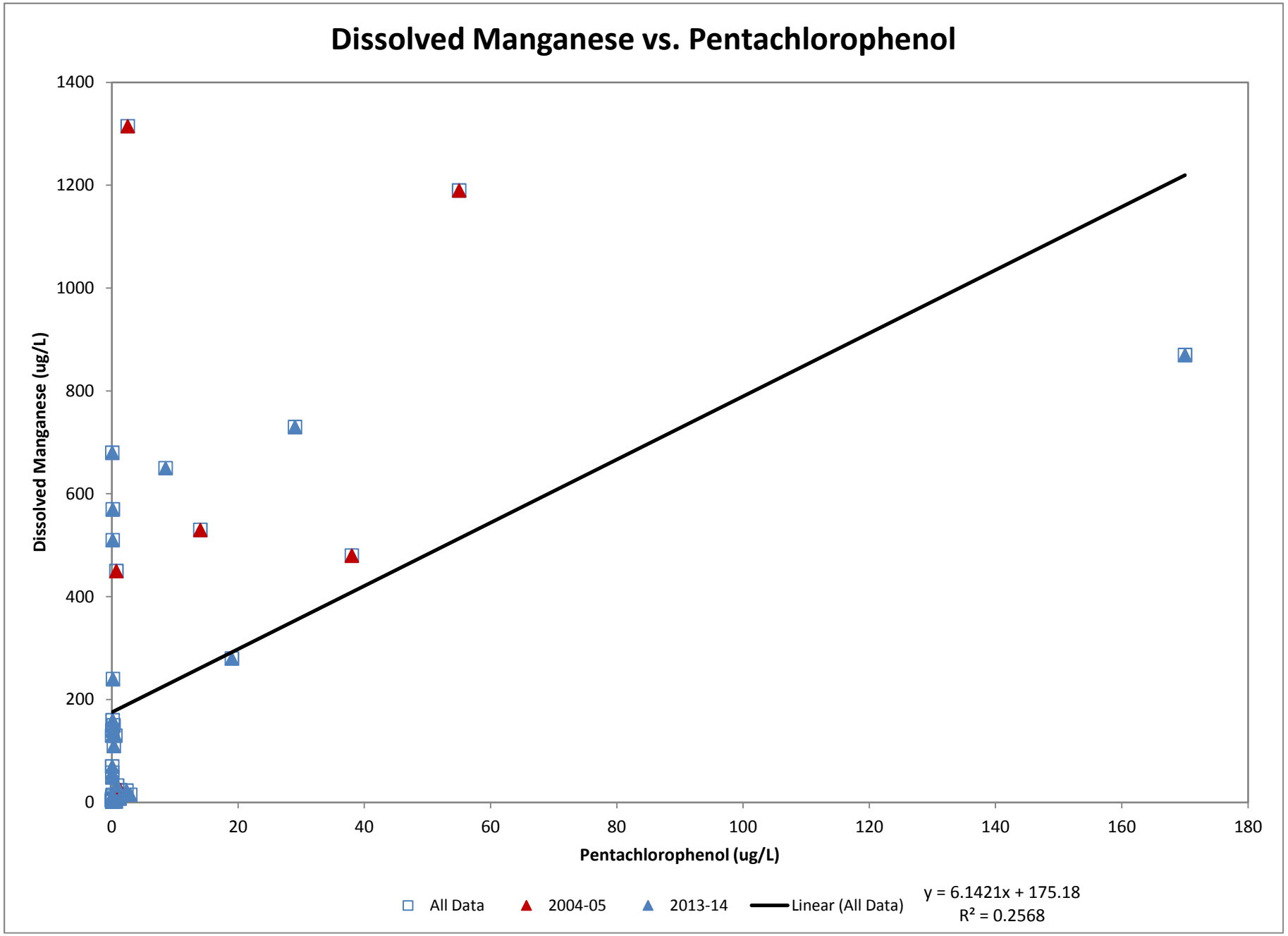

Dissolved Iron vs. Benzene
Dissolved Iron (ug/L)
1800
1600
1400
1200
1000
800
600
400
200
0
0
10
20
30
40
50
60
Benzene (ug/L)
All Data
2004-05
2013-14
Linear (All Data)
y = 6.5816x + 130.04
R² = 0.0379

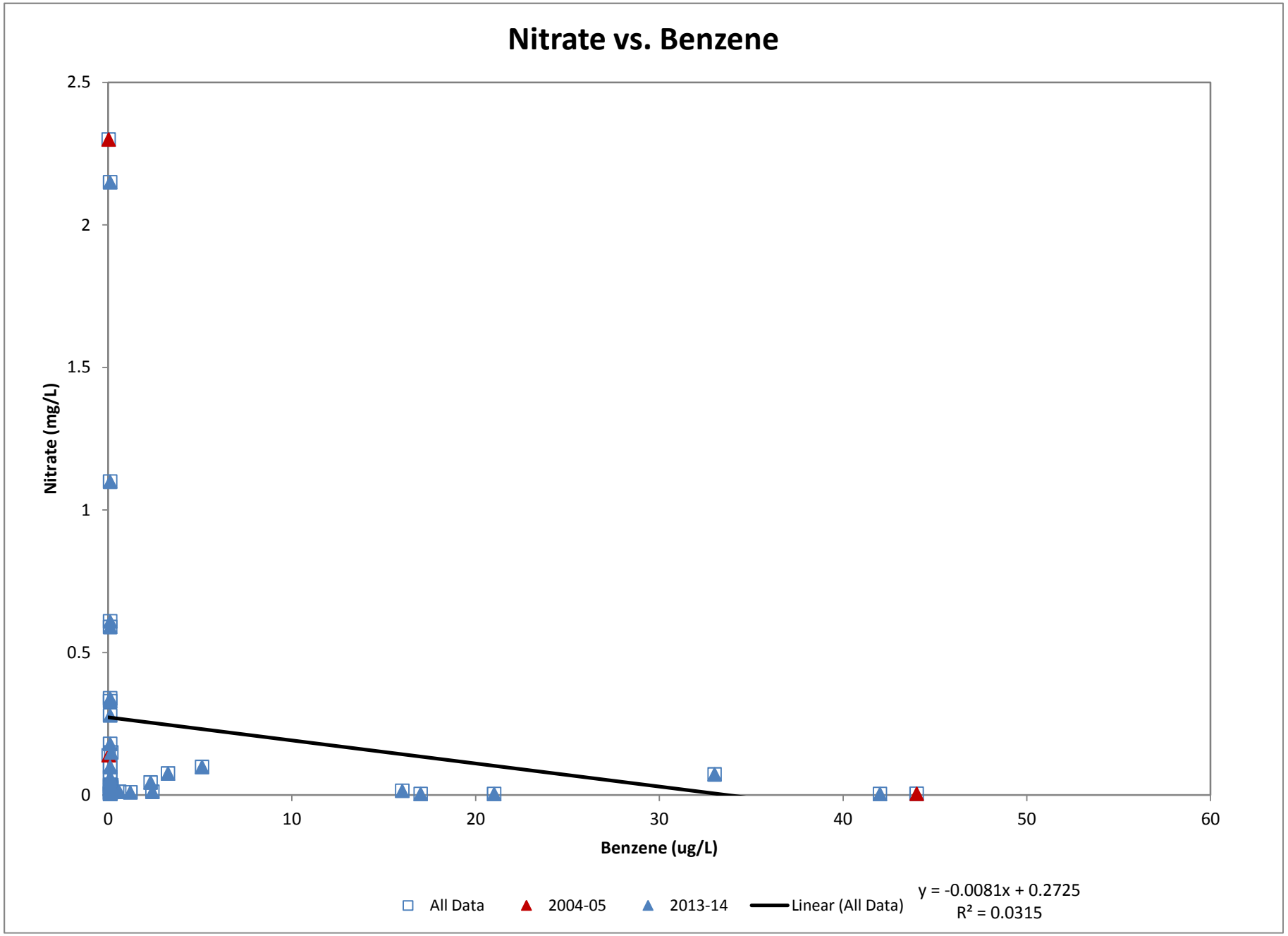

Dissolved Iron vs. Naphthalene
Dissolved Iron (ug/L)
16000
14000
12000
10000
8000
6000
4000
2000
0
0
1000
2000
3000
4000
5000
6000
7000
8000
Naphthalene (ug/L)
All Data
2004-05
2013-14
Linear (All Data)
y = 1.0093x - 18.468
R² = 0.5734

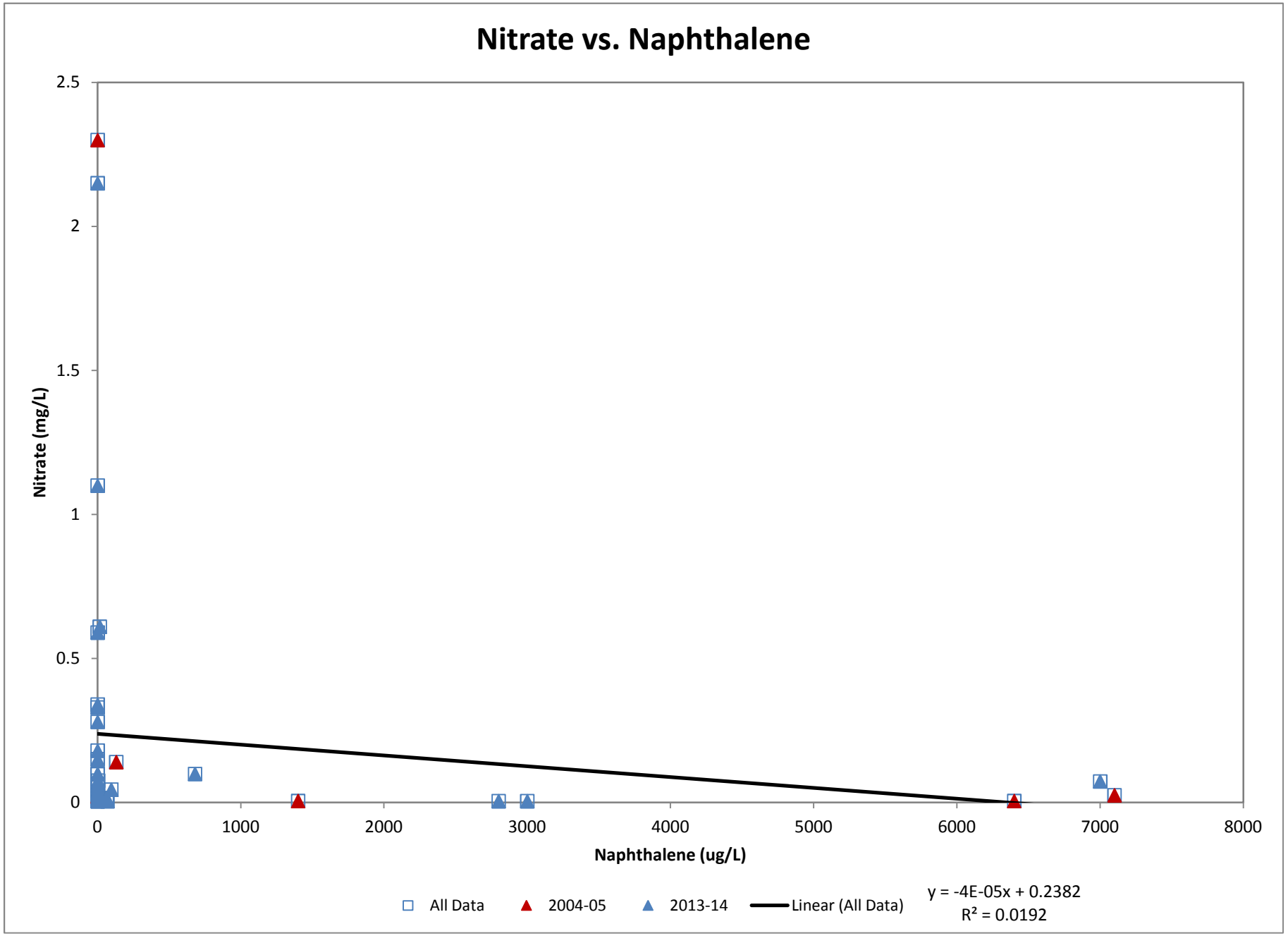

Dissolved Iron vs. Pentachlorophenol
Dissolved Iron (ug/L)
16000
14000
12000
10000
8000
6000
4000
2000
0
0
20
40
60
80
100
120
140
160
180
Pentachlorophenol (ug/L)
All Data
2004-05
2013-14
Linear (All Data)
y = 8.283x + 590.61
R² = 0.0088

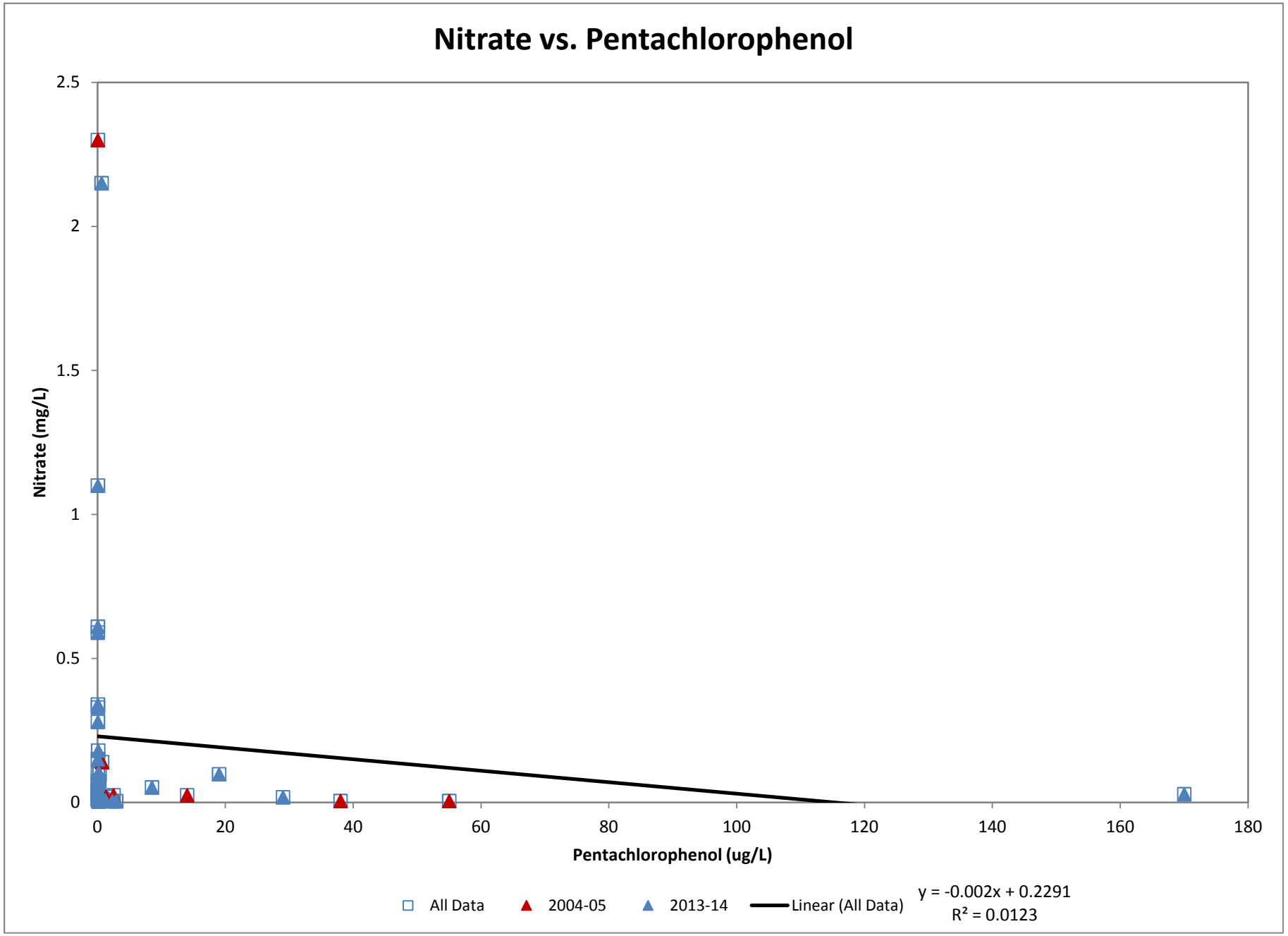

Dissolved Manganese vs. Benzene
Dissolved Manganese (ug/L)
1000
900
800
700
600
500
400
300
200
100
0
0
10
20
30
40
50
60
Benzene (ug/L)
All Data
2004-05
2013-14
Linear (All Data)
y = 4.1157x + 149.45
R² = 0.0355

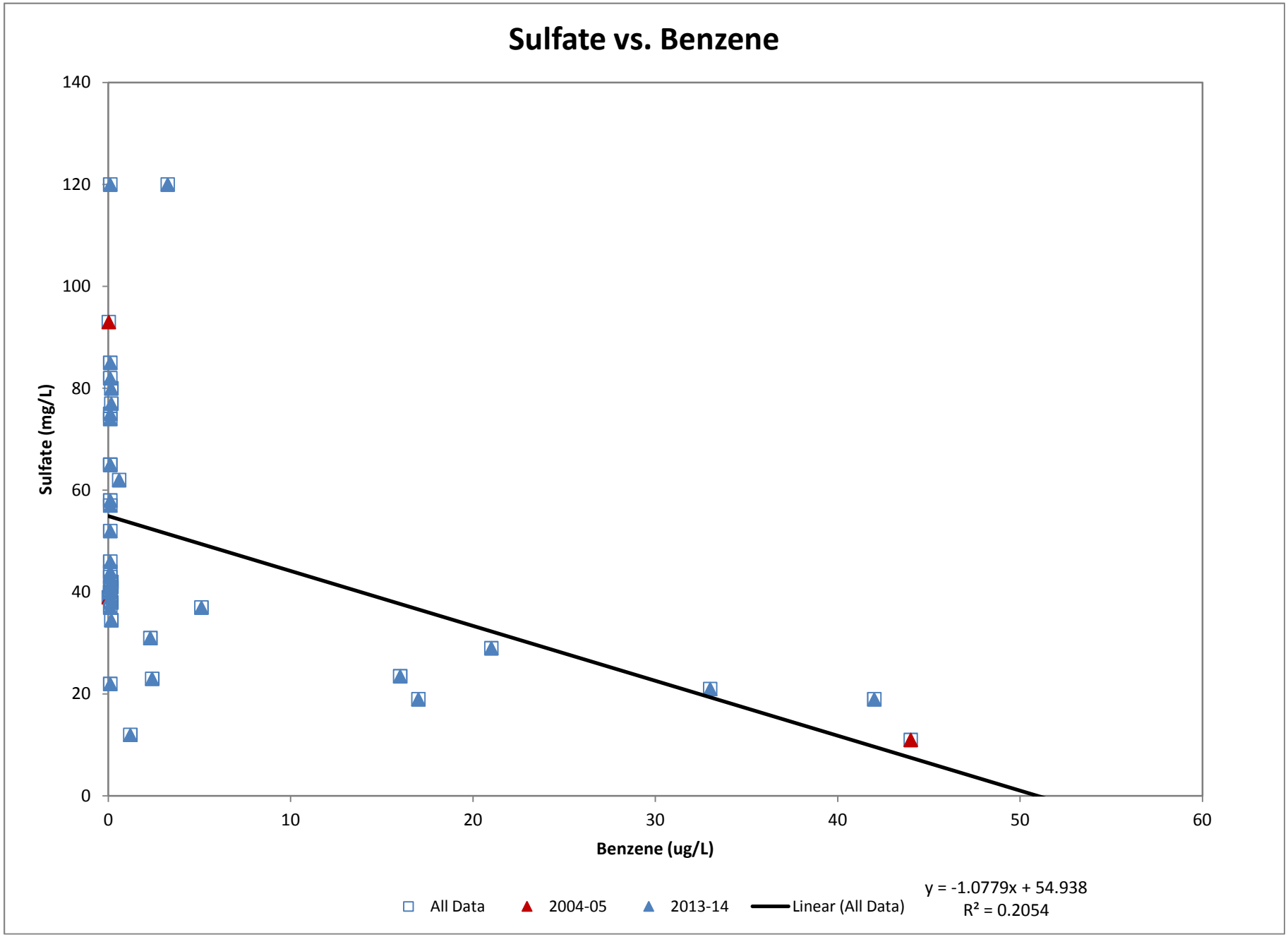

Dissolved Manganese vs. Naphthalene
Dissolved Manganese (ug/L)
1400
1200
1000
800
600
400
200
0
0
1000
2000
3000
4000
5000
6000
7000
8000
Naphthalene (ug/L)
All Data
2004-05
2013-14
Linear (All Data)
y = 0.0965x + 160.27
R² = 0.278

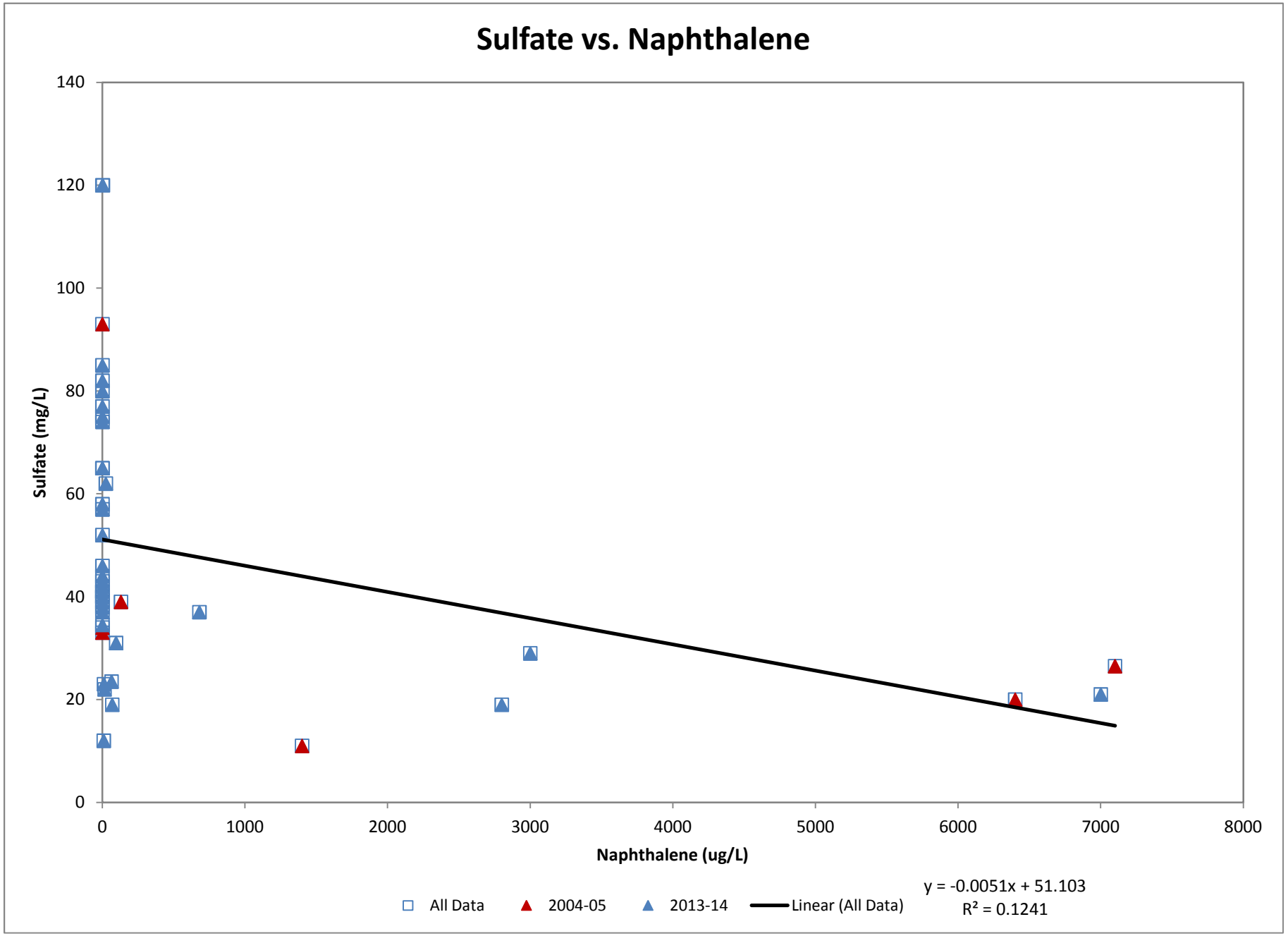

Dissolved Manganese vs. Pentachlorophenol
Dissolved Manganese (ug/L)
1400
1200
1000
800
600
400
200
0
0
20
40
60
80
100
120
140
160
180
Pentachlorophenol (ug/L)
All Data
2004-05
2013-14
Linear (All Data)
y = 6.1421x + 175.18
R² = 0.2568

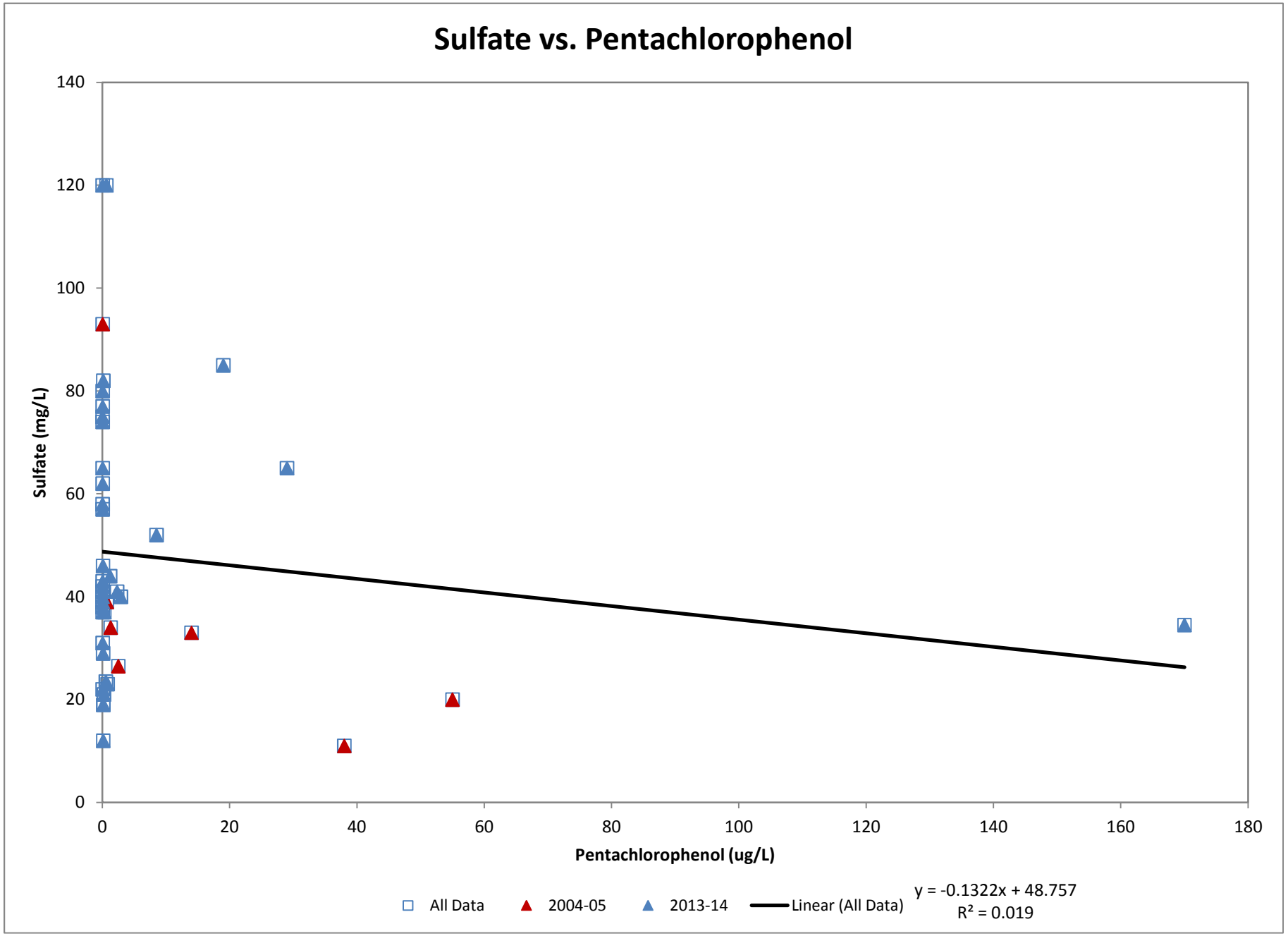

Nitrate vs. Benzene
Nitrate (mg/L)
2.5
2
1.5
1
0.5
0
0
10
20
30
40
50
60
Benzene (ug/L)
All Data
2004-05
2013-14
Linear (All Data)
y = -0.0081x + 0.2725
R² = 0.0315

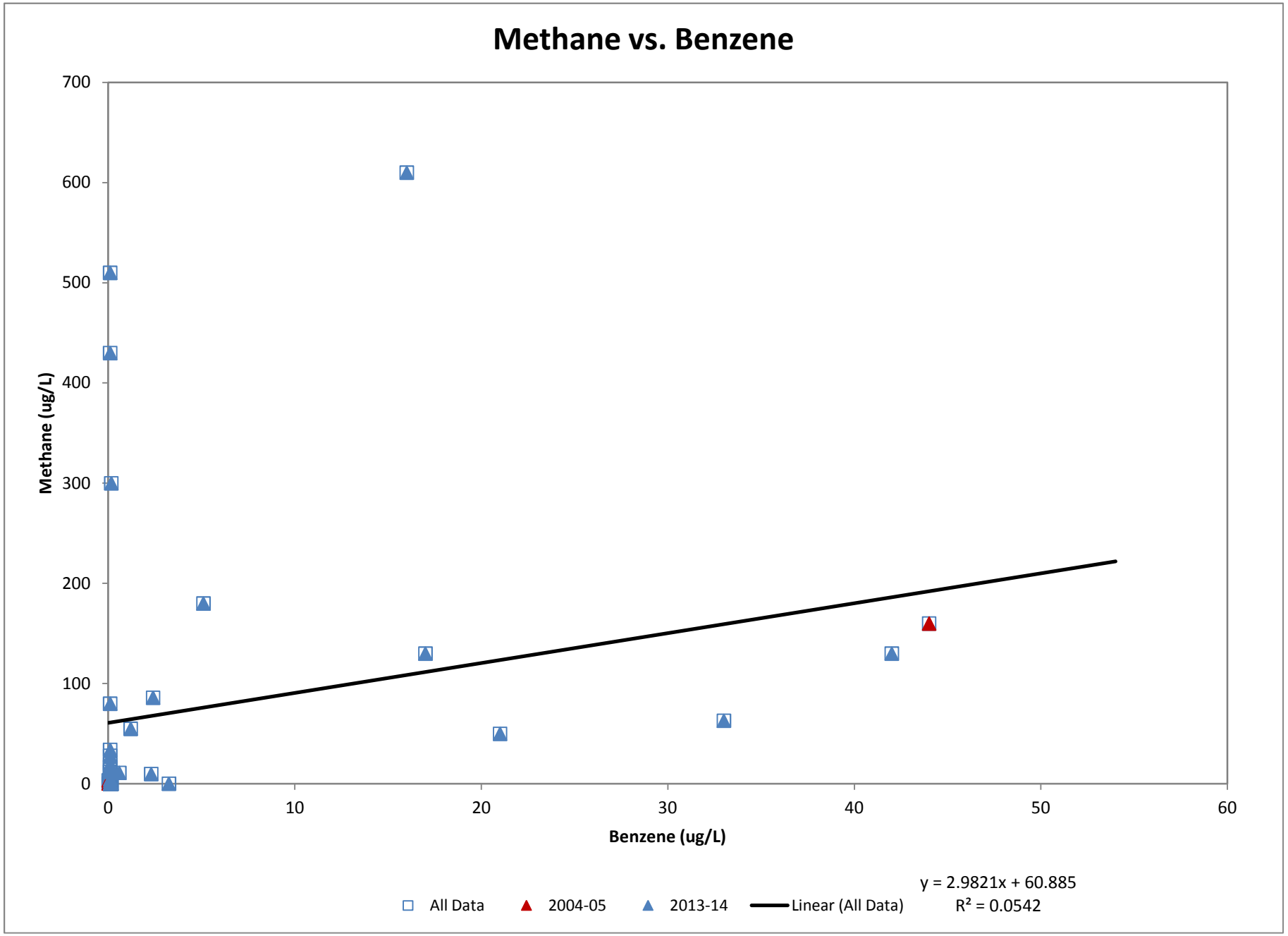

Nitrate vs. Naphthalene
Nitrate (mg/L)
2.5
2
1.5
1
0.5
0
0
1000
2000
3000
4000
5000
6000
7000
8000
Naphthalene (ug/L)
All Data
2004-05
2013-14
Linear (All Data)
y = -4E-05x + 0.2382
R² = 0.0192

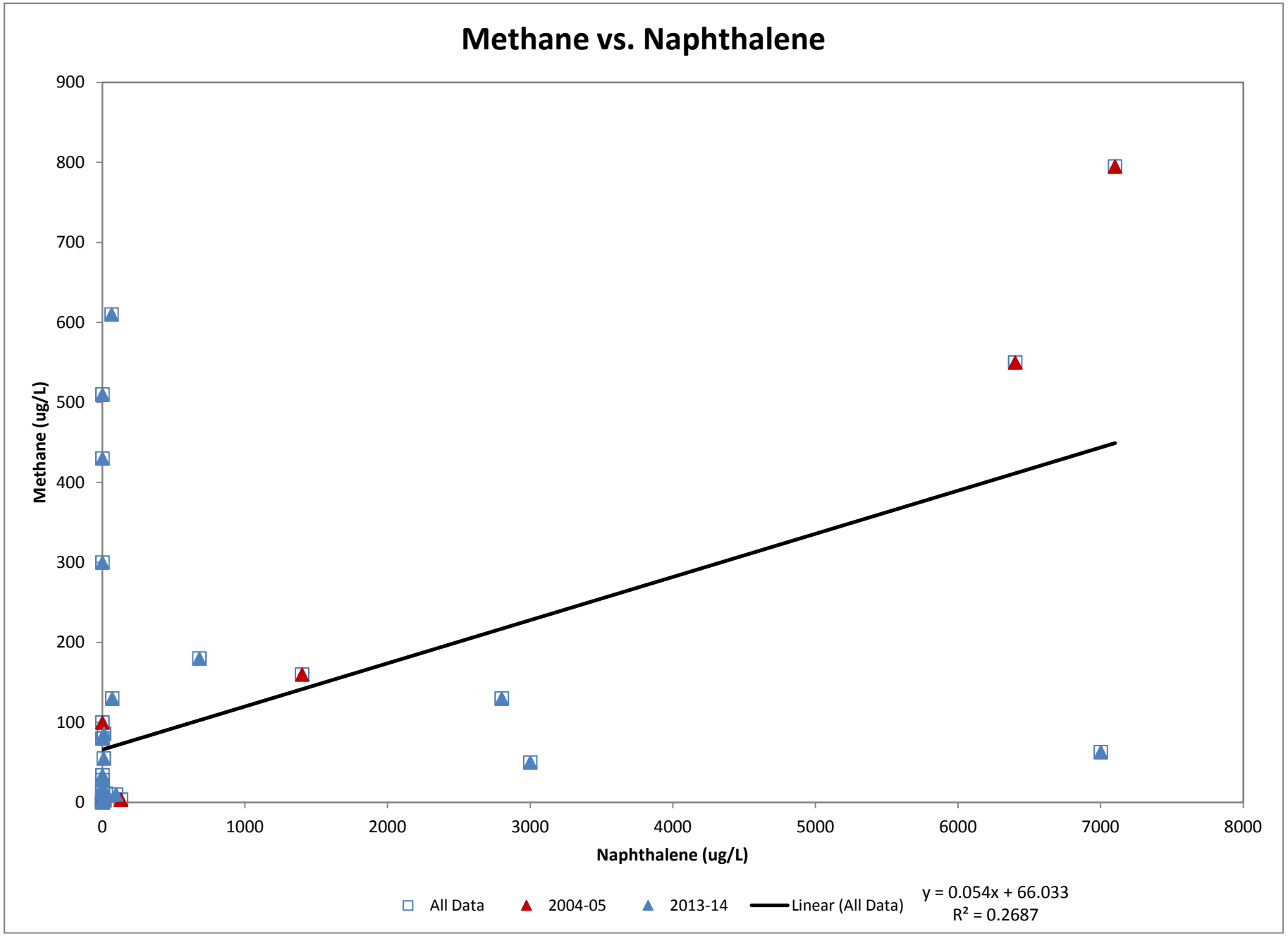

Nitrate vs. Pentachlorophenol
Nitrate (mg/L)
2.5
2
1.5
1
0.5
0
0
20
40
60
80
100
120
140
160
180
Pentachlorophenol (ug/L)
All Data
2004-05
2013-14
Linear (All Data)
y = -0.002x + 0.2291
R² = 0.0123

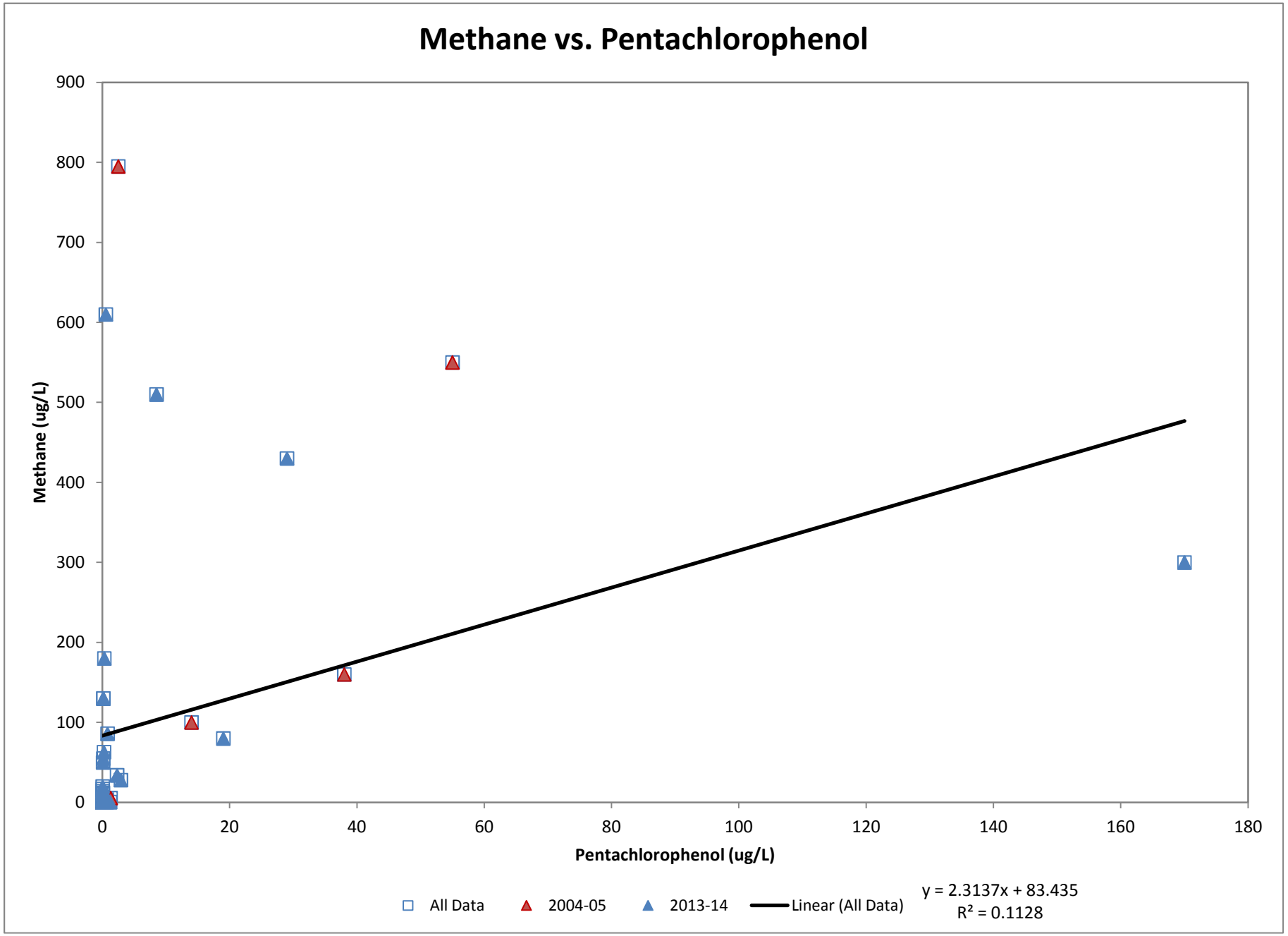

Sulfate vs. Benzene
Sulfate (mg/L)
Benzene (ug/L)
0
20
40
60
80
100
120
140
0
10
20
30
40
50
60
All Data
2004-05
2013-14
Linear (All Data)
y = -1.0779x + 54.938
R² = 0.2054

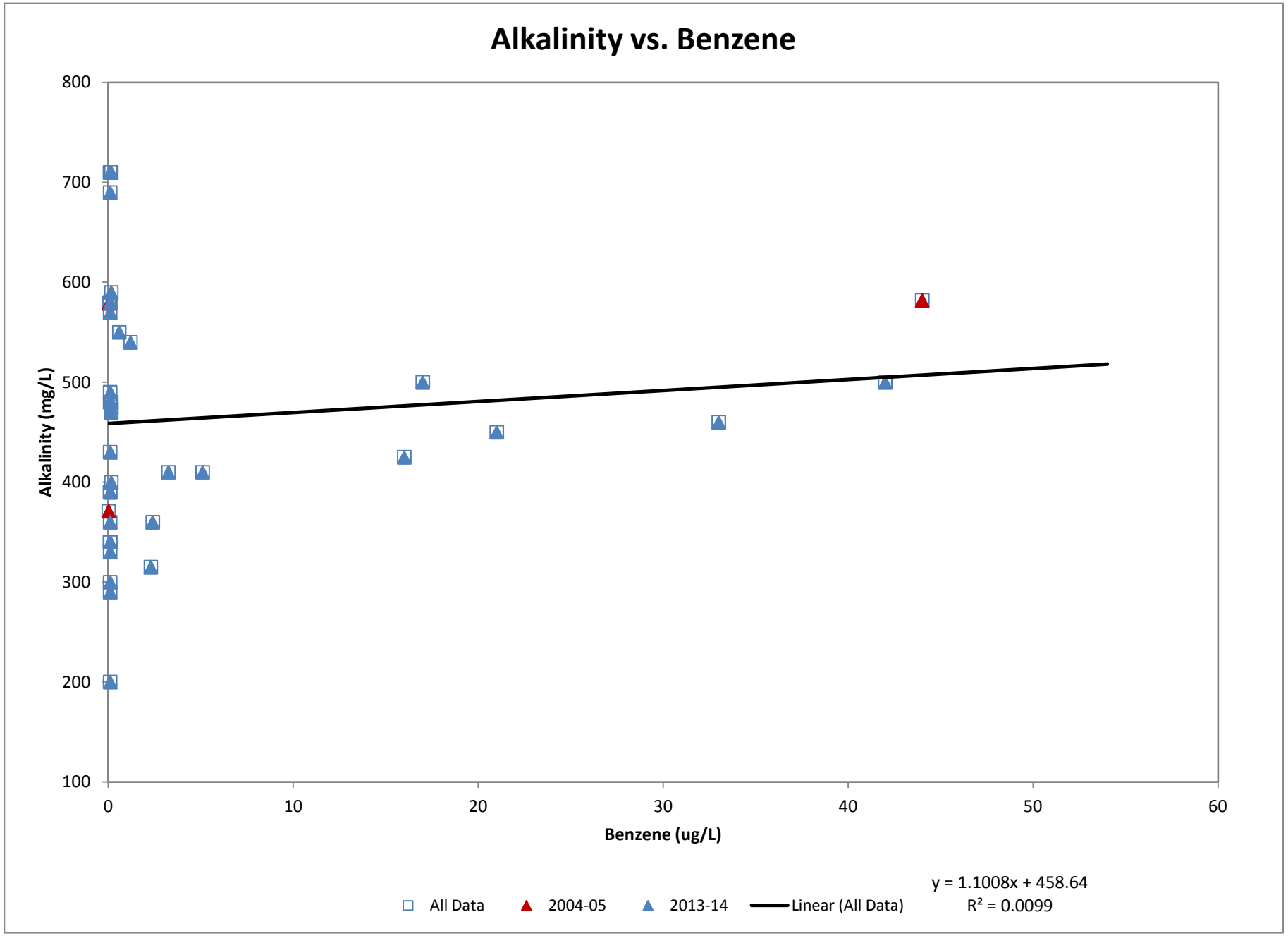

Sulfate vs. Naphthalene
Sulfate (mg/L)
Naphthalene (ug/L)
0
20
40
60
80
100
120
140
0
1000
2000
3000
4000
5000
6000
7000
8000
All Data
2004-05
2013-14
Linear (All Data)
y = -0.0051x + 51.103
R² = 0.1241

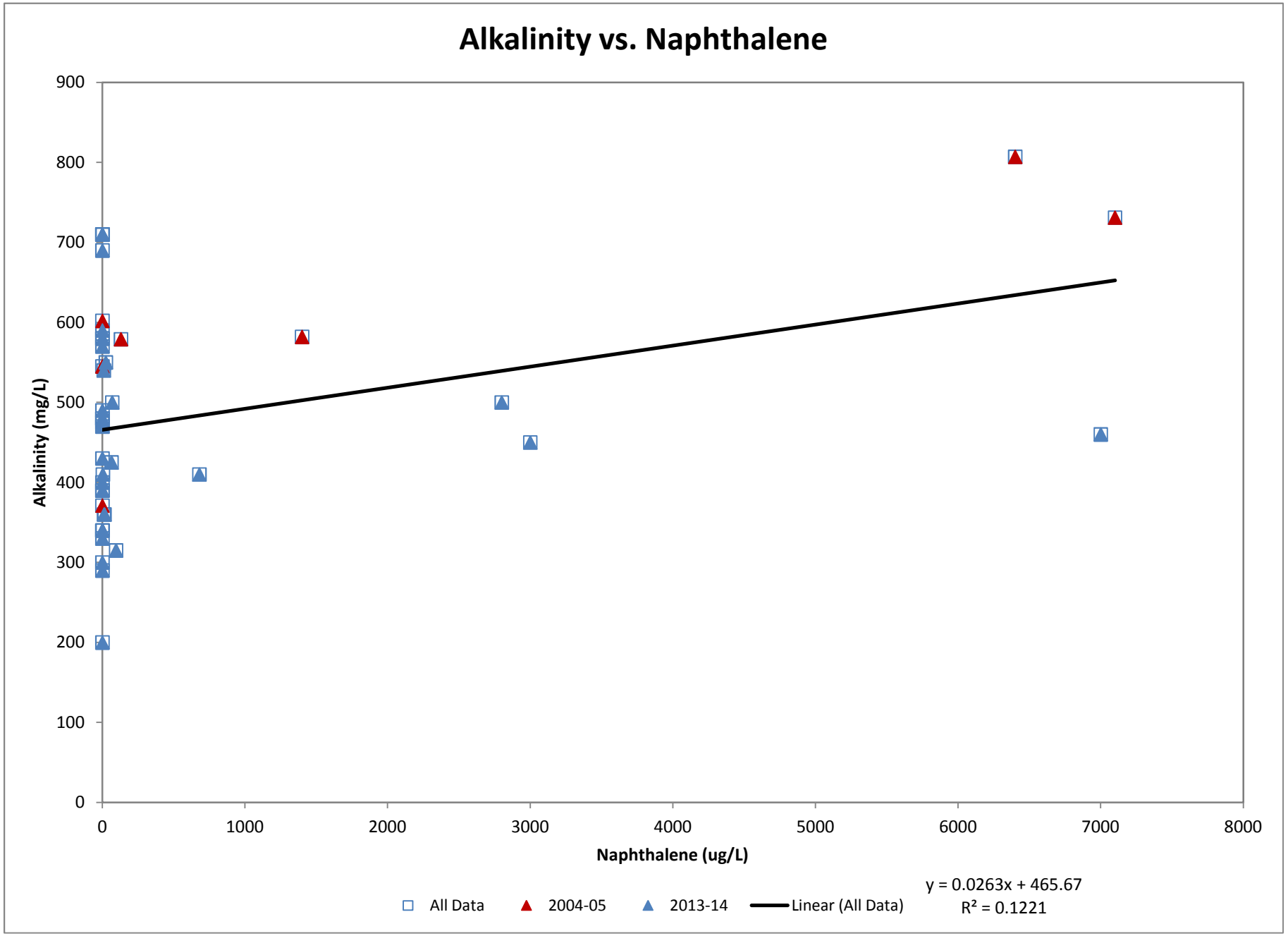

Sulfate vs. Pentachlorophenol
Sulfate (mg/L)
0
20
40
60
80
100
120
140
Pentachlorophenol (ug/L)
0
20
40
60
80
100
120
140
160
180
All Data
2004-05
2013-14
Linear (All Data)
y = -0.1322x + 48.757
R² = 0.019

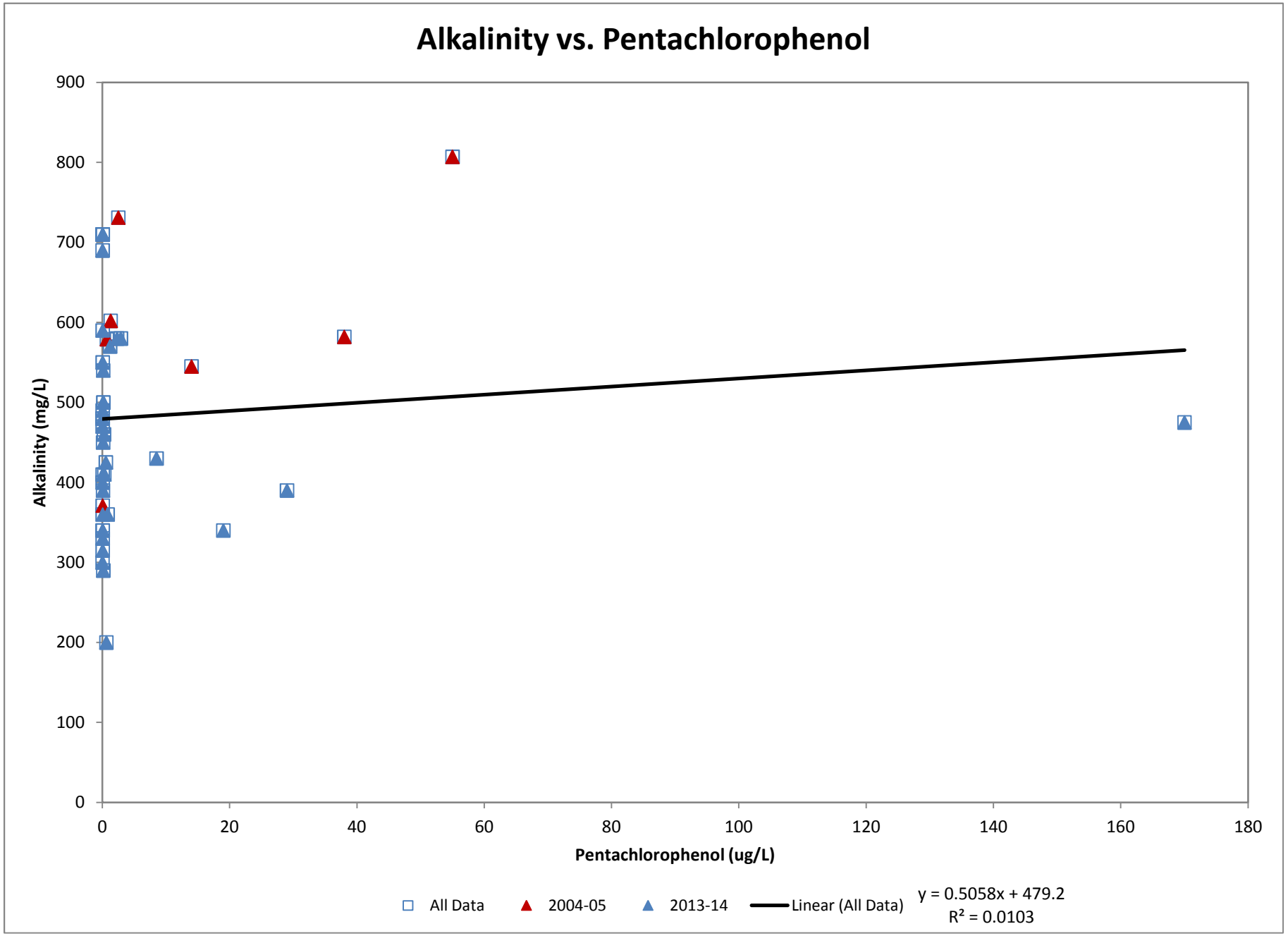

Methane vs. Benzene
Methane (ug/L)
Benzene (ug/L)
0
100
200
300
400
500
600
700
0
10
20
30
40
50
60
All Data
2004-05
2013-14
Linear (All Data)
y = 2.9821x + 60.885
R² = 0.0542


Methane vs. Naphthalene
Methane (ug/L)
Naphthalene (ug/L)
0
100
200
300
400
500
600
700
800
900
0
1000
2000
3000
4000
5000
6000
7000
8000
All Data
2004-05
2013-14
Linear (All Data)
y = 0.054x + 66.033
R² = 0.2687


Methane vs. Pentachlorophenol
Methane (ug/L)
900
800
700
600
500
400
300
200
100
0
0
20
40
60
80
100
120
140
160
180
Pentachlorophenol (ug/L)
All Data
2004-05
2013-14
Linear (All Data)
y = 2.3137x + 83.435
R² = 0.1128


Alkalinity vs. Benzene
Alkalinity (mg/L)
800
700
600
500
400
300
200
100
0
10
20
30
40
50
60
Benzene (ug/L)
y = 1.1008x + 458.64
R² = 0.0099
All Data
2004-05
2013-14
Linear (All Data)


Alkalinity vs. Naphthalene
Alkalinity (mg/L)
900
800
700
600
500
400
300
200
100
0
0
1000
2000
3000
4000
5000
6000
7000
8000
Naphthalene (ug/L)
All Data
2004-05
2013-14
Linear (All Data)
y = 0.0263x + 465.67
R² = 0.1221


Alkalinity vs. Pentachlorophenol
Alkalinity (mg/L)
900
800
700
600
500
400
300
200
100
0
0
20
40
60
80
100
120
140
160
180
Pentachlorophenol (ug/L)
All Data
2004-05
2013-14
Linear (All Data)
y = 0.5058x + 479.2
R² = 0.0103