



Infrastructure, environment, facilities

SEP 1 9 2007

Mr. James Hosch
Wisconsin Department of Natural Resources DNR - SUPERIOR Superior, WI 55480

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Subject:

Koppers Inc. Superior, WI Facility - Summary of Supplemental Groundwater Investigations

Dear Mr. Hosch:

This letter summarizes the scope and findings of supplemental groundwater investigation activities that were conducted by Beazer East, Inc. (Beazer) at the Koppers Inc. Superior, Wisconsin Facility (the Site) between October 2006 and June 2007. The scope of work for these investigations was presented in a letter from ARCADIS BBL to the Wisconsin Department of Natural Resources (WDNR) dated September 26, 2006¹, and included the following activities, which were discussed with and agreed to at a September 12, 2006 project meeting in Superior:

- Installation of six new A-zone monitoring wells
- Installation of one surface water gauge in the fire pond
- Two rounds of water-level measurements at the new and existing A-zone wells and the new surface water gauge
- Collection and laboratory analysis of two rounds of groundwater samples from the six new monitoring wells and five other existing wells

As discussed at the September 12, 2006 meeting, the purpose of these groundwater investigation activities was to supplement the groundwater natural attenuation investigation/evaluation activities conducted in 2004 and 2005², and to provide

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¹ Jim Hosch (WDNR) provided verbal approval of the September 26, 2006 Work Plan during a telephone conversation with Jeffrey Holden (ARCADIS BBL) on October 2, 2006.

² The 2004 and 2005 groundwater natural attenuation investigation/evaluation activities were summarized in a letter report submitted to the WDNR on January 24, 2006 ("Groundwater Natural Attenuation Evaluation Report").

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additional data to refine the delineation of certain constituents in shallow groundwater to further support WDNR's approval of a natural attenuation remedy for groundwater at the Site.

Monitoring Well Installation

Six new A-zone monitoring wells, W-35A through W-40A, were installed at the Site on October 11 and 12, 2007. The wells were drilled and installed by Boart Longyear Company (Boart Longyear) of Schofield, Wisconsin using hollow-stem augers. The wells were installed to depths of approximately 13 feet below grade, and are constructed of 2-inch diameter PVC casings with 10-foot long, 0.01-inch slotted PVC screens. Following installation, the wells were developed by pumping/bailing water from the wells and surging the well screens. In addition, the locations and measuring point (top of inner PVC casing) elevation of each new well were surveyed. The surveyed locations of the new and existing monitoring wells are show on Figure 1 and the surveyed coordinates and elevations are included on the boring/well construction logs in Attachment 1. With the exception of W-37A and W-39A, all of the new wells were installed in the locations proposed in the September 26, 2006 Work Plan. The proposed location of W-37A was inaccessible due to the presence of a building foundation, and the well location was moved approximately 60 feet to the southwest. The proposed location of W-39A was inaccessible due to the presence of thick brush and soft ground (low-lying/wetland area), and the well location was moved approximately 150 feet to the south/southeast.

Boring/well construction logs are provided in Attachment 1. In addition, WDNR Forms 4400-122 (Soil Boring Log Information), 4400-113A (Monitoring Well Construction), 4400-113B (Monitoring Well Development) and 4400-89 (Groundwater Monitoring Well Information) are provided in Attachment 2.

Surface Water Gauge Installation

The surface water gauge was installed in the fire pond on October 9, 2006. The gauge is a steel post driven into the bottom of the pond. Following installation, the location and measuring point (top of steel post) elevation of the surface water gauge were surveyed. The surveyed surface water gauge location is shown on Figure 1 and the measuring point elevation is provided in Table 1.

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Water-Level Monitoring

Water-level measurements were obtained at the new and existing A-zone monitoring wells and the new surface water gauge on October 22, 2006, April 11, 2007 and June 4, 2007. The water-level measurements and associated groundwater/surface water elevations are summarized in Table 1. Groundwater elevation contour maps created based on the April 11 and June 4, 2007 water-level data are provided as Figures 2 and 3, respectively. The October 22, 2006 water-level data were not contoured because water levels at certain of the new A-zone monitoring wells had not yet fully recovered following installation.

As indicated on Figures 2 and 3, and consistent with historical groundwater contour maps, the general A-zone groundwater flow direction at the Site is to the north (i.e., A-zone groundwater elevations at the northern end of the Site are consistently lower than elevations at the southern end of the Site). However, groundwater flow patterns in the A zone indicate localized variability to the overall northerly flow because of the combined effects of low hydraulic conductivity of the clay, perched groundwater, and interactions with surface-water drainage ditches. The localized A-zone groundwater flow patterns are also inconsistent over time.

Groundwater Sampling and Analysis

In accordance with the September 26, 2006 Work Plan, Field & Technical Services, LLC (FTS) collected two rounds of groundwater samples from the following new and existing monitoring wells: W-14A, W-16, W-17A, W-25A, W-26A, W-35A, W-36A, W-37A, W-38A, W-39A and W-40A (Figure 1). Sampling was conducted in October 2006, April 2007, and June 2007. During the October 2006 sampling event, wells W-35A and W-40A were dry and the sample collected from W-37A was mistakenly not analyzed by the lab; accordingly, these three wells were sampled in April and June 2007. The remaining wells were sampled in October 2006 and April 2007.

Groundwater samples were analyzed by Severn Trent Laboratories (STL) for benzene (Method 8021B), polycyclic aromatic hydrocarbons (PAH) and phenolics (Method 8270C), and/or polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (PCDDs/PCDFs; Method 8290). Table 2 summarizes the analytical scope of work for each well during each sampling event.

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The October 2006 to June 2007 supplemental analytical data are summarized in Table 3 (benzene, PAHs and phenolics) and Table 4 (PCDDs/PCDFs). Laboratory analytical data sheets and are provided in Attachment 3.

To help evaluate the data, Table 3 includes calculated values for total PAHs and total phenolics, and Table 4 includes calculated values for 2,3,7,8-TCDD toxicity equivalent (TEQ)³. The tables also compare the data to WDNR Preventive Action Limits (PALs) and Enforcement Standards (ESs). Based on the data presented in Tables 3 and 4, the following table summarizes the PAL and ES exceedances for the October 2006 to June 2007 supplemental groundwater sample data:

Constituent	PAL/ES (ug/L)	Wells Exceeding PAL/ES
Benzene	PAL: 0.5	W-16A
	ES: 5	W-16A
Benzo(a)pyrene	PAL: 0.02	W-17A, W-38A
	ES: 0.2	W-17A
Benzo(b)fluoranthene	PAL: 0.02	W-17A, W-36A, W-38A
	ES: 0.2	W-17A, W-38A
Chrysene	PAL: 0.02	W-17A, W-36A, W-38A, W-40A
	ES: 0.2	W-17A
Naphthalene	PAL: 10	W-17A
	ES: 100	None
Pentachlorophenol	PAL: 0.1	W-14A, W-36A, W-37A, W-40A
	ES: 1	W-14A, W-36A
2,3,7,8-TCDD TEQ ⁴	PAL: 0.000003	W-16A, W-25A, W-26A, W-35A, W-36A
	ES: 0.00003	W-16A, W-25A

To evaluate the delineation of constituents in shallow groundwater, isoconcentration maps were prepared for benzene, naphthalene, total PAHs, pentachlorophenol, and 2,3,7,8-TCDD TEQ using the maximum values detected in samples collected from A

³ 2,3,7,8-TCDD TEQs calculated using the World Health Organization (WHO) 2005 toxic equivalency factors (TEFs).

⁴ Note that the PAL and ES listed for 2,3,7,8-TCDD TEQ is actually for 2,3,7,8 TCDD; however, as previously requested by WDNR, 2,3,7,8-TCDD TEQ values are also being compared to the 2,3,7,8 TCDD PAL and ES. There were no detections of 2,3,7,8-TCDD in any of the October 2006 to June 2007 supplemental groundwater samples.

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zone wells between April 2004 and June 2007 (Table 5). The isoconcentration maps are provided as Figure 4 (benzene), Figure 5 (naphthalene), Figure 6 (total PAHs), Figure 7 (pentachlorophenol), and Figure 8 (2,3,7,8-TCDD TEQ). Each isoconcentration map is discussed below.

- Benzene (Figure 4) Benzene concentrations above the ES (5 ug/L) were detected at wells W-10AR2 and W-30A in the Closed Surface Impoundments Area and at well W-16A in the Former Treatment Area. In the Closed Surface Impoundments Area, benzene is delineated to the north (predominant downgradient direction), east, south and west by non-detect levels at wells W-26A, W-06A, W-04AR and W-12A, respectively. In the Former Treatment Area, benzene is delineated to the northeast and southwest by non-detect benzene levels at wells W-35A and W-26A, respectively.
- Naphthalene (Figure 5) Naphthalene concentrations above the ES (100 ug/L) were detected at wells W-10AR2 and W-30A in the Closed Surface Impoundments Area and at well W-16A in the Former Treatment Area. In the Closed Surface Impoundments Area, naphthalene is delineated to the north (predominant downgradient direction), east and west by non-detect naphthalene levels at wells W-26A, W-06A and W-12A, respectively, and to the south by a maximum naphthalene concentration of 0.14 ug/L at well W-04AR. In the Former Treatment Area, naphthalene is delineated to the northeast and southwest by non-detect naphthalene levels at wells W-35A and W-26A, respectively, and to the south by a maximum naphthalene concentration of 0.02 ug/L at well W-20AR.
- Total PAHs (Figure 6) Total PAH concentrations above 1 ug/L were detected at wells W-38A in the Straw Bales Area, wells W-14A and W-36A in the Former Unlined Landfill/Landfarm Area, wells W-10AR2 and W-30A in the Closed Surface Impoundments Area, and wells W-16A and W-17A in the Former Treatment Area. In the Straw Bales Area, total PAHs are delineated to the north (predominant downgradient direction) by a maximum total PAH concentration of 0.08 ug/L at well W-37A, and to the south by maximum total PAH concentrations of 0.87 ug/L, 0.12 ug/L and 0.13 ug/L at wells W-25A, W-38A and W-40A, respectively. In the Former Unlined Landfill/Landfarm Area, total PAHs are delineated to the northwest (predominant downgradient direction) by a maximum total PAH concentration of 0.4 ug/L at well W-04AR, and to the southwest by a maximum total PAH concentration of 0.08 ug/L at well W-37A. In the Closed Surface Impoundments Area, total PAHs are delineated to the north (predominant downgradient direction),

east, west and south by maximum PAH concentrations of 0.03 ug/L, 0.9 ug/L, 0.9 ug/L and 0.4 ug/L at wells W-26A, W-06A, W-12A and W-04AR, respectively. In the Former Treatment Area, total PAHs are delineated to the northeast, south and southwest by maximum total PAH concentrations of 0.08 ug/L, 0.19 ug/L and 0.03 ug/L at wells W-35A, W-20AR and W-26A, respectively.

- Pentachlorophenol (Figure 7) Pentachlorophenol concentrations above the ES (1 ug/L) were detected at well W-25A in the Straw Bales Area, wells W-14A and W-36A in the Former Unlined Landfill/Landfarm Area, well W-04AR between the Former Unlined Landfill/Landfarm Area and the Closed Surface Impoundments Area, and well W-10AR2 in the Closed Surface Impoundments Area. In the Straw Bales Area, pentachlorophenol is delineated to the north (predominant downgradient direction) and south by maximum pentachlorophenol concentrations of 0.93 ug/L and 0.44 ug/L at wells W-37A and W-40A, respectively, and to the northwest and southwest by non-detect levels of pentachlorophenol at wells W-38A and W-39A, respectively. In the Former Unlined Landfill/Landfarm Area, pentachlorophenol is delineated to the northwest (predominant downgradient direction) by well W-04AR (where the maximum pentachlorophenol concentration was 2.4 ug/L, but five the six samples collected in 2004 to 2007 were non-detect), and to the southwest by a maximum pentachlorophenol concentration of 0.93 ug/L at well W-37A. In the Closed Surface Impoundment Areas, pentachlorophenol is delineated to the north (predominant downgradient direction) and east by maximum pentachlorophenol concentrations of 0.24 ug/L and 0.1 ug/L at wells W-W-30A and W-6A, respectively, to the west by non-detect levels of pentachlorophenol at well W-12A, and to the south by well W-04AR (where the maximum pentachlorophenol concentration was 2.4 ug/L, but five the six samples collected in 2004 to 2007 were non-detect). Pentachlorophenol was not detected at any of the five wells sampled in the Former Treatment Area.
- 2,3,7,8-TCDD TEQ (Figure 8) 2,3,7,8-TCDD TEQs above the ES (3x10⁻⁵ ug/L) were detected at well W-25A in the Straw Bales Area, well W-30A in the Closed Surface Impoundments Area, and well W-16A in the Former Treatment Area. In the Straw Bales Area, PCDDs/PCDFs are delineated to the southwest, north (predominant downgradient direction) and northeast by maximum 2,3,7,8-TCDD TEQs of 2.7x10⁻⁷ ug/L, 3.0x10⁻⁹ ug/L and 7.9x10⁻⁷ ug/L at wells W-39A, W-04AR and W-14A, respectively. In the Closed Surface Impoundments Area, PCDDs/PCDFs are delineated to the north (predominant downgradient direction), east, south and west by 2,3,7,8-TCDD TEQs of 3.3x10⁻⁶ ug/L, 2.5x10⁻⁶ ug/L, 2.8x10⁻⁶ ug/L and 1.3x10⁻⁷ ug/L at wells W-26A, W-6A, W-10AR2 and W-12A,

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respectively. In the Former Treatment Area, PCDDs/PCDFs are delineated to the northeast and southwest by 2,3,7,8-TCDD TEQs of $4.6x10^{-6}$ ug/L and $3.3x10^{-6}$ ug/L at wells W-35A and W-26A, respectively.

Mann-Kendall trend analysis tests for well W-14A presented in the January 2006 Groundwater Natural Attenuation Evaluation Report indicated no trend/non-stable conditions for naphthalene and pentachlorophenol. In accordance with an April 27, 2006 letter the WDNR, the additional sample data collected at W-14A in October 2006 and April 2007 were used to further evaluate constituent trends at this well. The Mann-Kendall tests for the July 2004 through April 2007 dataset for naphthalene and pentachlorophenol at well W-14A are presented in Attachment 4 and indicate no trend/stable conditions for naphthalene and no trend/non-stable conditions for pentachlorophenol. Note that naphthalene has only been detected in one of the last six samples at W-14A, and the detected concentration of 0.3 ug/L is well below the PAL of 10 ug/L. To supplement the Mann-Kendal test for pentachlorophenol at W-14A, a concentration versus time plot was generated for the July 2004 through April 2007 dataset and is also included in Attachment 4. The linear regression line shown on the graph in Attachment 4 indicates a decreasing pentachlorophenol trend at W-14A. Regardless of the pentachlorophenol trend at W-14A, as shown on Figure 7 and as discussed above, the extent of pentachlorophenol above the ES (1 ug/L) in shallow groundwater at the Site has been delineated in the predominant downgradient direction.

Conclusions

The supplemental groundwater investigations conducted between October 2006 and June 2007 provided additional data to delineate the downgradient extents of benzene, PAHs, pentachlorophenol, and PCDDs/PCDFs in shallow groundwater at the Site. These data, combined with data from the groundwater natural attenuation investigation/evaluation activities conducted in 2004 and 2005 (which, based on concentration trends, geochemical indicator parameters, and microbiological indicator parameters, concluded that natural attenuation of constituents of potential concern in groundwater at the Site was occurring), provides a robust set of scientific data that supports the suitability of a natural attenuation remedy for groundwater at the Site.

Mr. James Hosch September 18, 2007

We trust that the information provided in this letter report, along with previous submittals, provides sufficient technical justification for WDNR's approval of the groundwater natural attenuation remedy presented in the Focused Corrective Measures Study (ARCADIS BBL, July 2007). If you have any questions or comments regarding the information presented herein, please contact Jeffrey Holden of ARCADIS BBL (860.645.1084, ext. 12) or Jane Patarcity of Beazer (412.208.8813).

Sincerely,

ARCADIS U.S., Inc.

Robert J. Anderson Vice President

WI PG-1037

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Tables

Table 1
Summary of A Zone Water-Level Measurements

	Top of Inner	October	22, 2006	April 1	1, 2007	June 4	, 2007
Well ID	Casing Elevation (feet AMSL)	Depth to Water (feet)	Water Elev. (feet AMSL)	Depth to Water (feet)	Water Elev. (feet AMSL)	Depth to Water (feet)	Water Elev. (feet AMSL)
W-04AR	676.24	6.05	670.19	3.35	672.89	4.08	672.16
W-06A	673.31	11.55	661.76	11.40	661.91	3.46	669.85
W-08A	676.05	8.13	667.92	3.07	672.98	2.91	673,14
W-10AR2	676.90	Not recorded		11.69	665.21	10.36	666.54
W-11A	676.45	5.38	671.07	7.67	668.78	4.62	671.83
W-12A	677.07	8.69	668.38	9.88	667.19	5.35	671.72
W-14A	676.60	5.57	671.03	6.11	670.49	4.62	671.98
W-16A	674.42	3.35	671.07	5.52	668.90	2.91	671.51
W-17A	674.29	2.32	671.97	Not measured - ice	present at 2.02 feet	1.85	672.44
W-19A	675.57	9.33	666.24	3.73	671.84	4.36	671.21
W-20AR	674.01	11.38	662.63	4.75	669.26	5.40	668.61
W-21A	673.85	11.50	662.35	7.44	666.41	3.94	669.91
W-25A	675.91	2.88	673.03	5.10	670.81	3.61	672.30
W-26A	673.49	10.39	663.10	11.86	661.63	3.38	670.11
W-29A	673.30	1.95	671.35	3.38	669.92	1.17	672.13
W-30A	676.40	8.55	667.85	7.20	669.20	3.99	672.41
W-35A	675.30	Dry		13.20	662.10	6.85	668.45
W-36A	678.59	4.57	674.02	8.38	670.21	4.65	673.94
W-37A	676.67	8.86	667.81	9.01	667.66	3.75	672.92
W-38A	676.90	10.30	666.60	6.92	669.98	3.38	673.52
W-39A	678.53	12.98	665.55	6.32	672.21	5.16	673.37
W-40A	676.94	17.73	659.21	6.71	670.23	3.59	673.35
Fire Pond*	675.44	3.35	672.09	2.70	672.74	3.02	672.42

Notes:

AMSL = above mean sea level

^{* =} surface water gauge

Table 3
Summary of 2006-2007 VOC and SVOC Supplemental Groundwater Sample Data

	WDNR	WDNR		W-14A	W-14A	W-16A	W-16A	W-17A	W-17A	W-26A	W-26A
Constituent	ES	PAL	Units	10/23/06	04/16/07	10/23/06	04/17/07	10/24/06	04/17/07	10/24/06	04/16/07
Benzene	5	0.5	ug/L	NA	NA	110	82.0	NA	NA	0.206 U	0.730 U
2,3,4,6-Tetrachlorophenol			ug/L	0.130 J	0.560 J	NA	NA	3.10 U	2.70 U	0.157 U	0.530 U
2,3,5,6-Tetrachlorophenol			ug/L	1.67 U	0.820 J	NA	NA	33.3 U	7.30 U	1.67 U	1.50 U
2,4,5-Trichlorophenol			ug/L	0.0320 J	0.370 U	NA	NA	2.03 U	1.80 U	0.0999 U	0.370 U
2,4,6-Trichlorophenol			ug/L	0.0833 U	0.0900 U	NA	NA	1.67 U	0.430 U	0.0833 U	0.0900 U
2,4-Dichlorophenol			ug/L	0.290 J	0.190 J	NA	NA	1.50 U	0.250 U	0.0733 U	0.0500 U
2,4-Dimethylphenol			ug/L	1.80 U	1.10 U	NA	NA	34.0 J	8.90	1.80 U	1.10 U
2,4-Dinitrophenol			ug/L	0.699 U	5.00 U	NA	NA	14.0 U	24.0 U	0.699 U	5.00 U
2-Chlorophenol			ug/L	0.0932 U	0.0530 U	NA	NA	1.90 U	0.270 U	0.0932 U	0.0530 U
2-Methylphenol			ug/L	1.50 U	0.470 U	NA	NA	120	14.0	1.50 U	0.470 U
2-Nitrophenol			ug/L	0.127 U	0.0870 U	NA	NA	2.50 U	0.430 U	0.127 U	0.0900 U
4,6-Dinitro-2-Methylphenol			ug/L	0.799 U	0.400 U	NA	NA	16.0 U	2.10 U	0.799 U	0.400 U
4-Chloro-3-Methylphenol			ug/L	0.0799 U	0.0700 U	NA	NA	1.63 U	0.370 U	0.0799 U	0.0700 U
4-Methylphenol			ug/L	1.27 U	0.530 U	NA	NA	190	5.70	1.27 U	0.530 U
4-Nitrophenol			ug/L	1.47 U	4.33 U	NA	NA	29.3 U	21.0 U	1.47 U	4.30 U
Pentachlorophenol	1	0.1	ug/L	0.660 J	1.90	NA	NA	4.00 U	1.50 U	0.203 U	0.300 U
Phenol	6,000	1,200	ug/L	0.0810 J	0.0930 U	NA	NA	170	2.00 J	0.183 U	0.0930 U
Total Phenolics			ug/L	1.19 J	3.47 J	NA	NA	514 J	30.6 J	ND	ND
Acenaphthene			ug/L	0.0250 J	0.0190 J	NA	NA	91.0 J	130	0.0699 U	0.0430 U
Acenaphthylene			ug/L	0.127 U	0.0290 J	NA	NA	2.53 U	2.30 J	0.127 U	0.0400 U
Anthracene	3,000	600	ug/L	0.260 J	0.390 J	NA	NA	7.00 J	7.20	0.0999 U	0.0300 J
Benzo(a)anthracene			ug/L	0.193 U	0.0490 J	NA	NA	4.00 U	2.00 J	0.193 U	0.120 U
Benzo(a)pyrene	0.2	0.02	ug/L	0.103 U	0.0770 U	NA	NA	2.06 U	0.720 J	0.103 U	0.0770 U
Benzo(b)fluoranthene	0.2	0.02	ug/L	0.127 U	0.130 U	NA	NA	2.50 U	0.980 J	0.127 U	0.130 U
Benzo(g,h,i)perylene			ug/L	0.0999 U	0.0390 J	NA	NA	2.00 U	0.150 J	0.0999 U	0.0730 U
Benzo(k)fluoranthene			ug/L	0.160 U	0.120 U	NA	NA	3.20 U	0.520 J	0.160 U	0.120 U
Chrysene	0.2	0.02	ug/L	0.0999 U	0.0670 U	NA	NA	2.00 U	2.00 J	0.0999 U	0.0670 U
Dibenzo(a,h)anthracene			ug/L	0.0633 U	0.0870 U	NA	NA	1.27 U	0.430 U	0.0633 U	0.0870 U
Fluoranthene	400	80	ug/L	0.230 J	0.110 J	NA	NA	7.60 J	21.0	0.110 U	0.0530 U
Fluorene	400	80	ug/L	0.0899 U	0.0190 J	NA	NA	38.0 J	40.0	0.0899 U	0.0370 U
Indeno(1,2,3-cd)pyrene			ug/L	0.0699 U	0.0290 J	NA	NA	1.40 U	0.150 J	0.0699 U	0.0470 U
Naphthalene	100	10	ug/L	0.0733 U	0.0770 U	NA	NA	79.0	7.30	0.0733 U	0.0770 U
Phenanthrene			ug/L	0.0470 J	0.0190 J	NA	NA	27.0 J	15.0	0.110 U	0.0500 U
Pyrene	250	50	ug/L	0.280 J	0.170 J	NA	NA	3.40 J	15.0	0.147 U	0.160 U
Total PAHs			ug/L	0.842 J	0.873 J	NA	NA	253 J	244 J	ND	0.0300 J

Table 3
Summary of 2006-2007 VOC and SVOC Supplemental Groundwater Sample Data

	WDNR	WDNR		W-35A	W-35A	W-36A	W-36A	W-37A	W-37A
Constituent	ES	PAL	Units	04/17/07	06/13/07	10/24/06	04/17/07	04/17/07	06/13/07
Benzene	5	0.5	ug/L	0.730 U	0.733 U [0.733 U]	NA	NA .	NA	NA
2,3,4,6-Tetrachlorophenol			ug/L	0.530 U	0.599 U [0.533 U]	3.40 J	22.0 J [34.0 J]	0.530 U	0.533 U
2,3,5,6-Tetrachlorophenol			ug/L	1.50 U	1.60 U [1.47 U]	3.33 U	4.70 J [5.10 J]	1.50 U	1.47 U
2,4,5-Trichlorophenol			ug/L	0.370 U	0.400 U [0.366 U]	0.240 J	3.70 U [2.20 J]	0.370 U	0.366 U
2,4,6-Trichlorophenol			ug/L	0.0900 U	0.0966 U [0.0899 U]	0.280 J	1.10 J [1.50 J]	0.0900 U	0.0899 U
2,4-Dichlorophenol			ug/L	0.0500 U	0.0533 U [0.0500 U]	1.30 J	0.500 U [0.500 U]	0.0500 U	0.0500 U
2,4-Dimethylphenol			ug/L	1.10 U	1.17 U [1.10 U]	3.66 U	11.0 U [11.0 U]	1.10 U	1.10 U
2,4-Dinitrophenol			ug/L	5.00 U	5.33 U [5.00 U]	1.40 U	50.0 U [50.0 U]	5.00 U	5.00 U
2-Chlorophenol			ug/L	0.0530 U	0.0566 U [0.0533 U]	0.230 J	0.530 U [0.530 U]	0.0530 U	0.0533 U
2-Methylphenol			ug/L	0.470 U	0.500 U [0.466 U]	3.00 U	4.70 U [4.70 U]	0.470 U	0.466 U
2-Nitrophenol			ug/L	0.0870 U	0.0932 U [0.0866 U]	0.0840 J	0.870 U [0.870 U]	0.0870 U	0.0866 U
4,6-Dinitro-2-Methylphenol			ug/L	0.400 U	0.433 U [0.400 U]	1.60 U	4.00 U [4.00 U]	0.400 U	0.400 U
4-Chloro-3-Methylphenol			ug/L	0.0700 U	0.0766 U [0.0699 U]	0.0590 J	0.700 U [0.700 U]	0.0700 U	0.0699 U
4-Methylphenol			ug/L	0.530 U	0.566 U [0.533 U]	2.53 U	5.30 U [5.30 U]	0.530 U	0.533 U
4-Nitrophenol			ug/L	4.30 U	4.66 U [4.33 U]	2.93 U	43.0 U [43.0 U]	4.30 U	4.33 U
Pentachlorophenol	1	0.1	ug/L	0.300 U	0.326 U [0.303 U]	31.0	190 [240]	0.930	0.303 U
Phenol	6,000	1,200	ug/L	0.0930 U	0.0999 U [0.0932 U]	0.130 J	0.930 U [0.930 U]	0.0930 U	0.0932 U
Total Phenolics			ug/L	ND	ND [ND]	36.7 J	218 J [283 J]	0.930	ND
Acenaphthene			ug/L	0.0430 U	0.0466 U [0.0433 U]	2.20 J	1.50 J [1.20 J]	0.0430 U	0.0433 U
Acenaphthylene			ug/L	0.0400 U	0.0433 U [0.0400 U]	0.160 J	0.400 U [0.400 U]	0.0400 U	0.0400 U
Anthracene	3,000	600	ug/L	0.0190 J	0.0500 U [0.0466 U]	0.930 J	0.200 J [0.290 J]	0.0200 J	0.0190 J
Benzo(a)anthracene			ug/L	0.120 U	0.133 U [0.123 U]	0.400 U	1.20 U [1.20 U]	0.120 U	0.123 U
Benzo(a)pyrene	0.2	0.02	ug/L	0.0770 U	0.0833 U [0.0766 U]	0.206 U	0.770 U [0.770 U]	0.0770 U	0.0766 U
Benzo(b)fluoranthene	0.2	0.02	ug/L	0.130 U	0.143 U [0.133 U]	0,160 J	1.30 U [1.30 U]	0.130 U	0.133 U
Benzo(g,h,i)perylene			ug/L	0.0730 U	0.0799 U [0.0733 U]	0.200 U	0.730 U [0.730 U]	0.0730 U	0.0733 U
Benzo(k)fluoranthene			ug/L	0.120 U	0.130 U [0.120 U]	0.320 U	1.20 U [1.20 U]	0.120 U	0.120 U
Chrysene	0.2	0.02	ug/L	0.0670 U	0.0733 U [0.0666 U]	0.190 J	0.670 U [0.670 U]	0.0670 U	0.0666 U
Dibenzo(a,h)anthracene			ug/L	0.0870 U	0.0932 U [0.0866 U]	0.127 U	0.870 U [0.870 U]	0.0870 U	0.0866 U
Fluoranthene	400	80	ug/L	0.0390 J	0.0220 J [0.0533 U]	1.00 J	0.200 J [0.290 J]	0.0530 U	0.0190 J
Fluorene	400	80	ug/L	0.0370 U	0.0400 U [0.0366 U]	1.20 J	0.370 U [0.370 U]	0.0370 U	0.0366 U
Indeno(1,2,3-cd)pyrene			ug/L	0.0470 U	0.0500 U [0.0466 U]	0.140 U	0.470 U [0.470 U]	0.0470 U	0.0190 J
Naphthalene	100	10	ug/L	0.0770 U	0.0799 U [0.0766 U]	0.560	0.770 U [0.770 U]	0.0770 U	0.0766 U
Phenanthrene			ug/L	0.0190 J	0.0533 U [0.0210 J]	0.490 J	0.500 U [0.500 U]	0.0500 U	0.0190 J
Pyrene	250	50	ug/L	0.160 U	0.170 U [0.157 U]	0.940 J	1.60 U [1.60 U]	0.160 U	0.157 U
Total PAHs			ug/L	0.0770 J	0.0220 J [0.0210 J]	7.83 J	1.90 J [1.78 J]	0.0200 J	0.0760 J

Table 3
Summary of 2006-2007 VOC and SVOC Supplemental Groundwater Sample Data

	WDNR	WDNR		W-38A	W-38A	W-39A	W-39A	W-40A	W-40A
Constituent	ES	PAL	Units	10/25/06	04/16/07	10/25/06	04/16/07	04/17/07	06/13/07
Benzene	5	0.5	ug/L	NA	NA	NA	NA	NA	NA
2,3,4,6-Tetrachlorophenol			ug/L	0.157 U	0.530 U	0.157 U	0.530 U	0.530 U	0.533 U
2,3,5,6-Tetrachlorophenol			ug/L	1.67 U	1.50 U	1.67 U	1.50 U	1.50 U	1.47 U
2,4,5-Trichlorophenol			ug/L	0.0999 U	0.370 U	0.0999 U	0.370 U	0.370 U	0.366 U
2,4,6-Trichlorophenol			ug/L	0.0833 U	0.0900 U	0.0833 U	0.0900 U	0.0900 U	0.0899 U
2,4-Dichlorophenol			ug/L	0.0733 U	0.0500 U	0.0733 U	0.0500 U	0.0500 U	0.0500 U
2,4-Dimethylphenol			ug/L	1.80 U	1.10 U	1.80 U	1.10 U	1.10 U	1.10 U
2,4-Dinitrophenol			ug/L	0.699 U	5.00 U	0.699 U	5.00 U	5.00 U	5.00 U
2-Chlorophenol			ug/L	0.0932 U	0.0530 U	0.0932 U	0.0530 U	0.0530 U	0.0533 U
2-Methylphenol			ug/L	1.50 U	0.470 U	1.50 U	0.470 U	0.470 U	0.466 U
2-Nitrophenol			ug/L	0.127 U	0.0870 U	0.127 U	0.0870 U	0.0870 U	0.0866 U
4,6-Dinitro-2-Methylphenol			ug/L	0.799 U	0.400 U	0.799 U	0.400 U	0.400 U	0.400 U
4-Chloro-3-Methylphenol			ug/L	0.0799 U	0.0700 U	0.0799 U	0.0700 U	0.0700 U	0.0699 U
4-Methylphenol			ug/L	1.27 U	0.530 U	1.27 U	0.530 U	0.530 U	0.533 U
4-Nitrophenol			ug/L	1.47 U	4.30 U	1.47 U	4.30 U	4.30 U	4.33 U
Pentachlorophenol	1	0.1	ug/L	0.203 U	0.303 U	0.203 U	0.300 U	0.300 U	0,440
Phenol	6,000	1,200	ug/L	0.0680 J	0.0930 U	0.183 U	0.0930 U	0.0930 U	0.0932 U
Total Phenolics			ug/L	0.0680 J	ND	ND	ND	ND	0.440
Acenaphthene			ug/L	0.0699 U	0.0430 U	0.0699 U	0.0190 J	0.0430 U	0.0433 U
Acenaphthylene			ug/L	0.127 U	0.0190 J	0.127 U	0.0400 U	0.0400 U	0.0400 U
Anthracene	3,000	600	ug/L	0.0540 J	0.0970 J	0.0999 U	0.0470 U	0.0470 U	0.0466 U
Benzo(a)anthracene			ug/L	0.193 U	0.140 J	0.193 U	0.120 U	0.120 U	0.123 U
Benzo(a)pyrene	0.2	0.02	ug/L	0.0730 J	0.170 J	0.103 U	0.0770 U	0.0770 U	0.0766 U
Benzo(b)fluoranthene	0.2	0.02	ug/L	0.210 J	0.510	0.127 U	0.130 U	0.130 U	0.133 U
Benzo(g,h,i)perylene			ug/L	0.0999 U	0.160 J	0.0999 U	0.0730 U	0.0730 U	0.0420 J
Benzo(k)fluoranthene			ug/L	0.0550 J	0.170 J	0.160 U	0.120 U	0.120 U	0.120 U
Chrysene	0.2	0.02	ug/L	U 0080.0	0.120 J	0.0999 U	0.0670 U	0.0670 U	0.0210 J
Dibenzo(a,h)anthracene			ug/L	0.0633 U	0.0390 J	0.0633 U	0.0870 U	0.0870 U	0.0310 J
Fluoranthene	400	80	ug/L	0.0790 J	0.170 J	0.110 U	0.0190 J	0.0530 U	0.0533 U
Fluorene	400	80	ug/L	0.0899 U	0.0370 U	0.0899 U	0.0190 J	0.0370 U	0.0366 U
Indeno(1,2,3-cd)pyrene			ug/L	0.0380 J	0.170 J	0.0699 U	0.0470 U	0.0470 U	0.0310 J
Naphthalene	100	10	ug/L	0.0733 U	0.0770 U	0.0733 U	0.0290 J	0.0770 U	0.0766 U
Phenanthrene			ug/L	0.110 U	0.0490 J	0.110 U	0.0290 J	0.0500 U	0.0500 U
Pyrene	250	50	ug/L	0.110 J	0.230 J	0.147 U	0.160 U	0.160 U	0.157 U
Total PAHs			ug/L	0.699 J	2.04 J	ND	0.115 J	ND	0.125 J

Table 3 Summary of 2006-2007 VOC and SVOC Supplemental Groundwater Sample Data

Koppers Inc. Facility Superior, Wisconsin

Notes:

VOCs = volatile organic compounds (Method 8021B)

SVOCs = semivolatile organic compounds (Method 8270C ion trap)

WDNR = Wisconsin Department of Natural Resources

ES = Enforcement Standard

PAL = Preventive Action Limit

ug/L = micrograms per liter

[] = duplicate result

U = constituent not detected; associated value is the laboratory quantitation limit

J = estimated result (less than the reporting limit)

NA = not analyzed

ND = non-detect

Light shading indicates result exceed the PAL

Dark shading indicated result exceeds ES

Table 4
Summary of 2006-2007 PCDD/PCDF Supplemental Groundwater Sample Data

	WDNR	WDNR		W-14A	W-14A	W-16A	W-16A	W-25A	W-25A	W-26A
Constituent	ES	PAL	Units	10/23/06	04/16/07	10/23/06	04/17/07	10/24/06	04/17/07	10/24/06
1,2,3,4,6,7,8-HpCDD			ug/L	0.000057 B	0.000053	0.0025	0.0025	0.0075 [0.01]	0.0041	0.00017 B
1,2,3,4,6,7,8-HpCDF			ug/L	0.00001 U	0.000011 U	0.00021	0.0002	0.0027 [0.0038]	0.0014	0.00004 JB
1,2,3,4,7,8,9-HpCDF			ug/L	0.0000021 J	0.000012 U	0.000021 J	0.000022 J	0.00037 [0.00052]	0.00018	0.0000043 U
1,2,3,4,7,8-HxCDD			ug/L	0.0000027 U	0.000019 U	0.0000095 J	0.0000091 JJA	0.000035 J [0.000055]	0.000019 JJA	0.0000028 U
1,2,3,4,7,8-HxCDF			ug/L	0.0000019 U	0.000016 U	0.000017 J	0.000018 J	0.0002 [0.00031]	0.00017	0.0000042 U
1,2,3,6,7,8-HxCDD			ug/L	0.0000026 U	0.000019 U	0.000053	0.000061	0.00037 [0.00055]	0.00022	0.0000048 JB
1,2,3,6,7,8-HxCDF			ug/L	0.0000018 U	0.000015 U	0.0000041 U	0.0000036 U	0.00013 [0.00016]	0.000057	0.0000022 U
1,2,3,7,8,9-HxCDD			ug/L	0.0000025 U	0.000018 U	0.00002 J	0.000056	0.0001 [0.00016]	0.000042 J	0.0000032 U
1,2,3,7,8,9-HxCDF			ug/L	0.0000022 U	0.000018 U	0.0000022 U	0.0000043 U	0.000025 J [0.000036 J]	0.000015 J	0.0000028 U
1,2,3,7,8-PeCDD			ug/L	0.0000046 U	0.000029 U	0.0000075 U	0.0000062 U	0.0000087 U [0.000017 U]	0.0000067 JJA	0.0000047 U
1,2,3,7,8-PeCDF			ug/L	0.0000022 U	0.000017 U	0.000003 U	0.0000044 U	0.000043 J [0.000063]	0.000025 J	0.0000021 U
2,3,4,6,7,8-HxCDF			ug/L	0.000002 U	0.000017 U	0.0000031 U	0.0000041 U	0.000061 [0.0001]	0.000033 J	0.0000025 U
2,3,4,7,8-PeCDF			ug/L	0.0000022 U	0.000017 U	0.000003 U	0.0000045 U	0.000022 J [0.000039 J]	0.000014 J	0.0000021 U
2,3,7,8-TCDD	0.00003	0.000003	ug/L	0.0000015 U	0.0000043 U	0.0000024 U	0.0000038 U	0.0000036 U [0.0000033 U]	0.0000027 U	0.000002 U
2,3,7,8-TCDF			ug/L	0.0000014 U	0.0000092 U	0.0000016 U	0.0000027 U	0.0000034 UCON [0.0000055 CON]	0.0000033 JJA	0.0000017 U
OCDD			ug/L	0.00063	0.00061	0.023	0.023 B	0.046 E [0.064 E]	0.025 B	0.0021
OCDF			ug/L	0.000041 BJ	0.000049	0.00091	0.001	0.005 [0.0069]	0.003	0.00015 B
TOTAL HpCDD			ug/L	0.00013	0.00013	0.0078	0.0085	0.011 [0.015]	0.0062	0.00031
TOTAL HpCDF			ug/L	0.000034	0.000012 U	0.001	0.00087	0.01 [0.015]	0.0052	0.00014
TOTAL HxCDD			ug/L	0.0000096	0.000019 U	0.0007	0.00078	0.00086 [0.0013]	0.00051	0.0000048
TOTAL HxCDF			ug/L	0.0000057	0.000018 U	0.00019	0.00018	0.0033 [0.0053]	0.002	0.000022
TOTAL PeCDD			ug/L	0.000017 U	0.000029 U	0.000011 U	0.000012 U	0.0000087 U [0.000017 U]	0.0000067	0.000013 U
TOTAL PeCDF			ug/L	0.000004 U	0.000017 U	0.0000036	0.0000045 U	0.00024 [0.00035]	0.00012	0.000003 U
TOTAL TCDD			ug/L	0.000002	0.0000043 U	0.0000035 U	0.0000038 U	0.0000036 U [0.0000033 U]	0.0000027 U	0.000002 U
TOTAL TCDF			ug/L	0.0000016	0.0000092 U	0.0000016 U	0.0000027 U	0.000013 [0.000019]	0.0000076	0.0000017 U
2,3,7,8-TCDD TEQ	0.00003	0.000003	ug/L	0.000000792	0.000000728	0.0000444	0.0000488	0.000221 [0.000316]	0.000133	0.00000326

Table 4
Summary of 2006-2007 PCDD/PCDF Supplemental Groundwater Sample Data

	WDNR	WDNR		W-26A	W-35A	W-35A	W-36A	W-36A	W-39A	W-39A
Constituent	ES	PAL	Units	04/16/07	04/17/07	06/13/07	10/24/06	04/17/07	10/25/06	04/16/07
1,2,3,4,6,7,8-HpCDD			ug/L	0.000017 U	0.00029	0.00012 [0.000092]	0.00086 B	0.00076	0.00002 JB	0.000018 U
1,2,3,4,6,7,8-HpCDF			ug/L	0.00001 U	0.000061	0.000033 J [0.000024 J]	0.00013 B	0.00011	0.0000056 U	0.000013 U
1,2,3,4,7,8,9-HpCDF			ug/L	0.000011 U	0.0000044 U	0.0000032 J [0.0000026 J]	0.0000078 U	0.0000057 U	0.0000019 U	0.000014 U
1,2,3,4,7,8-HxCDD			ug/L	0.000017 U	0.0000042 U	0.0000007 U [0.00000063 U]	0.0000026 U	0.0000055 U	0.0000028 U	0.000022 U
1,2,3,4,7,8-HxCDF			ug/L	0.000013 U	0.0000034 U	0.0000036 J [0.0000028 J]	0.0000038 U	0.0000041 U	0.0000019 U	0.000019 U
1,2,3,6,7,8-HxCDD			ug/L	0.000016 U	0.000004 U	0.0000042 J [0.0000033 J]	0.000027 JB	0.000022 J	0.0000027 U	0.000022 U
1,2,3,6,7,8-HxCDF			ug/L	0.000012 U	0.0000032 U	0.0000011 J [0.00000062 U]	0.0000023 U	0.0000038 U	0.0000018 U	0.000018 U
1,2,3,7,8,9-HxCDD			ug/L	0.000015 U	0.0000038 U	0.0000012 U [0.0000011 J]	0.0000071 J	0.000005 U	0.0000026 U	0.000021 U
1,2,3,7,8,9-HxCDF			ug/L	0.000014 U	0.0000038 U	0.00000088 U [0.00000078 U]	0.0000028 U	0.0000046 U	0.0000022 U	0.000021 U
1,2,3,7,8-PeCDD	•		ug/L	0.000019 U	0.0000057 U	0.00000064 U [0.00000068 U]	0.0000035 U	0.0000071 U	0.0000037 U	0.000035 U
1,2,3,7,8-PeCDF			ug/L	0.000015 U	0.0000038 U	0.00000066 U [0.00000062 J]	0.0000021 U	0.0000044 U	0.0000021 U	0.000021 U
2,3,4,6,7,8-HxCDF			ug/L	0.000014 U	0.0000036 U	0.00000093 U [0.00000069 U]	0.0000025 U	0.0000044 U	0.000002 U	0.00002 U
2,3,4,7,8-PeCDF			ug/L	0.000015 U	0.0000038 U	0.00000053 U [0.00000053 J]	0.0000021 U	0.0000045 U	0.000002 U	0.000021 U
2,3,7,8-TCDD	0.00003	0.000003	ug/L	0.0000048 U	0.0000028 U	0.00000047 U [0.00000044 U]	0.0000016 U	0.0000036 U	0.0000016 U	0.0000087 U
2,3,7,8-TCDF			ug/L	0.0000082 U	0.0000026 U	0.00000071 U [0.00000065 U]	0.0000015 U	0.0000026 U	0.0000016 U	0.000004 U
OCDD	•		ug/L	0.00027	0.0031 B	0.0017 [0.0012]	0.0088	0.0083 B	0.00021	0.000065 JA
OCDF	•		ug/L	0.000026 U	0.00035	0.0001 J [0.000073 J]	0.00086 B	0.0009	0.000019 JB	0.000028 U
TOTAL HpCDD	-		ug/L	0.000017 U	0.0006	0.00027 [0.0002]	0.0016	0.0014	0.000044	0.000018 U
TOTAL HpCDF			ug/L	0.000011 U	0.00025	0.00014 [0.0001]	0.0007	0.00057	0.000012	0.000014 U
TOTAL HxCDD	-		ug/L	0.000017 U	0.0000055 U	0.000017 [0.0000096]	0.000095	0.000071	0.0000028 U	0.000022 U
TOTAL HxCDF	-		ug/L	0.000014 U	0.00003	0.000042 [0.000028]	0.000081	0.000051	0.0000022 U	0.000021 U
TOTAL PeCDD	1		ug/L	0.000019 U	0.0000057 U	0.00000096 U [0.00000083 U]	0.0000098 U	0.0000071 U	0.000012 U	0.000035 U
TOTAL PeCDF			ug/L	0.000015 U	0.0000038 U	0.00000066 U [0.0000012]	0.0000029 U	0.0000045 U	0.0000038 U	0.000021 U
TOTAL TCDD			ug/L		0.0000028 U	0.0000012 U [0.000001 U]	0.0000016 U	0.0000036 U	0.0000018 U	0.0000087 U
TOTAL TCDF			ug/L	0.0000082 U	0.0000026 U	0.00000071 U [0.00000065 U]	0.0000015 U	0.0000026 U		0.000004 U
2,3,7,8-TCDD TEQ	0.00003	0.000003	ug/L	0.000000081	0.00000455	0.00000299 [0.00000247]	0.0000162	0.0000137	0.000000269	0.0000000195

Table 4 Summary of 2006-2007 PCDD/PCDF Supplemental Groundwater Sample Data

Koppers Inc. Facility Superior, Wisconsin

Notes:

PCDDs/PCDFs = polychlorinated dibenzo-p-dioxins and dibenzofurans (Method 8290)

WDNR = Wisconsin Department of Natural Resources

ES = Enforcement Standard

PAL = Preventive Action Limit

ug/L = micrograms per liter

TEQ = toxicity equivalent (See Note 2)

[] = duplicate result

U = constituent not detected; associated value is the laboratory detection limit

J = estimated result (less than the reporting limit)

JA = constituent was positively identified, but the quantitiation is estimated

B = the associated method blank contains the constituent at a reportable level

E = estimated result (exceed calibration range)

CON = result obtained from confirmation analysis

Light shading indicates result exceed the PAL

Dark shading indicated result exceeds ES

- 1. At the request of WDNR, 2,3,7,8-TCDD TEQs compared to the PAL and ES for 2,3,7,8-TCDD.
- 2. 2,3,7,8-TCDD TEQs calculated using the following toxic equivalecy factors (TEFs; WHO 2005):

1,2,3,4,6,7,8-HpCDD	0.01
1,2,3,4,6,7,8-HpCDF	0.01
1,2,3,4,7,8,9-HpCDF	0.01
1,2,3,4,7,8-HxCDD	0.1
1,2,3,4,7,8-HxCDF	0.1
1,2,3,6,7,8-HxCDD	0.1
1,2,3,6,7,8-HxCDF	0.1
1,2,3,7,8,9-HxCDD	0.1
1,2,3,7,8,9-HxCDF	0.1
1,2,3,7,8-PeCDD	1
1,2,3,7,8-PeCDF	0.03
2,3,4,6,7,8-HxCDF	0.1
2,3,4,7,8-PeCDF	0.3
2,3,7,8-TCDD	1
2,3,7,8-TCDF	0.1
OCDD	0.0003
OCDF	0.0003

* Non-detect values excluded from TEQ calculation

Table 5
Summary of Maximum Groundwater Sample Concentrations (A-Zone Wells, 2004-2007)

	WDNR	WDNR										
Constituent	ES	PAL	Units	W-04AR	W-06A	W-10AR2	W-12A	W-14A	W-16A	W-17A	W-20AR	W-25A
Benzene	0.5	5	ug/L	ND	ND	54	ND	NA	110	NA	NA	NA
Pentachlorophenol	0.1	1	ug/L	2.4	0.096	42	ND	9.9	ND	ND	ND	14
Naphthalene	10	100	ug/L	0.14	ND	2100	ND	0.03	7100	79	0.02	0.03
Total PAHs			ug/L	0.4	0.9	2353	0.9	9.8	8323	253	0.19	0.87
2,3,7,8-TCDD TEQ	3.0E-05	3.0E-06	ug/L	3.0E-09	2.5E-06	2.8E-06	1.3E-07	7.9E-07	4.9E-05	NA	NA	3.2E-04

Notes:

WDNR = Wisconsin Department of Natural Resources

ES = Enforcement Standard

PAL = Preventive Action Limit

ug/L = micrograms per liter

ND = constituent not detected (2004-2007)

NA = constituent not analyzed for (2004-2007)

Light shading indicates result exceed the PAL

Dark shading indicated result exceeds ES

1. At the request of WDNR, 2,3,7,8-TCDD TEQs compared to the PAL and ES for 2,3,7,8-TCDD.

Table 5
Summary of Maximum Groundwater Sample Concentrations (A-Zone Wells, 2004-2007)

	WDNR	WDNR									
Constituent	ES	PAL	Units	W-26A	W-30A	W-35A	W-36A	W-37A	W-38A	W-39A	W-40A
Benzene	0.5	5	ug/L	ND	13	ND	NA	NA	NA	NA	NA
Pentachlorophenol	0.1	1	ug/L	ND	0.24 J	ND	240	0.93	ND	ND	0,44
Naphthalene	10	100	ug/L	ND	2,500	ND	0.56	ND	ND	0.03	ND
Total PAHs			ug/L	0.03	3023	0.08	7.8	80.0	2	0.12	0.13
2,3,7,8-TCDD TEQ	3.0E-05	3.0E-06	ug/L	3.3E-06	1.2E-04	4.6E-06	1.6E-05	NA	NA	2.7E-07	NA

Notes:

WDNR = Wisconsin Department of Natural Resources

ES = Enforcement Standard

PAL = Preventive Action Limit

ug/L = micrograms per liter

ND = constituent not detected (2004-2007)

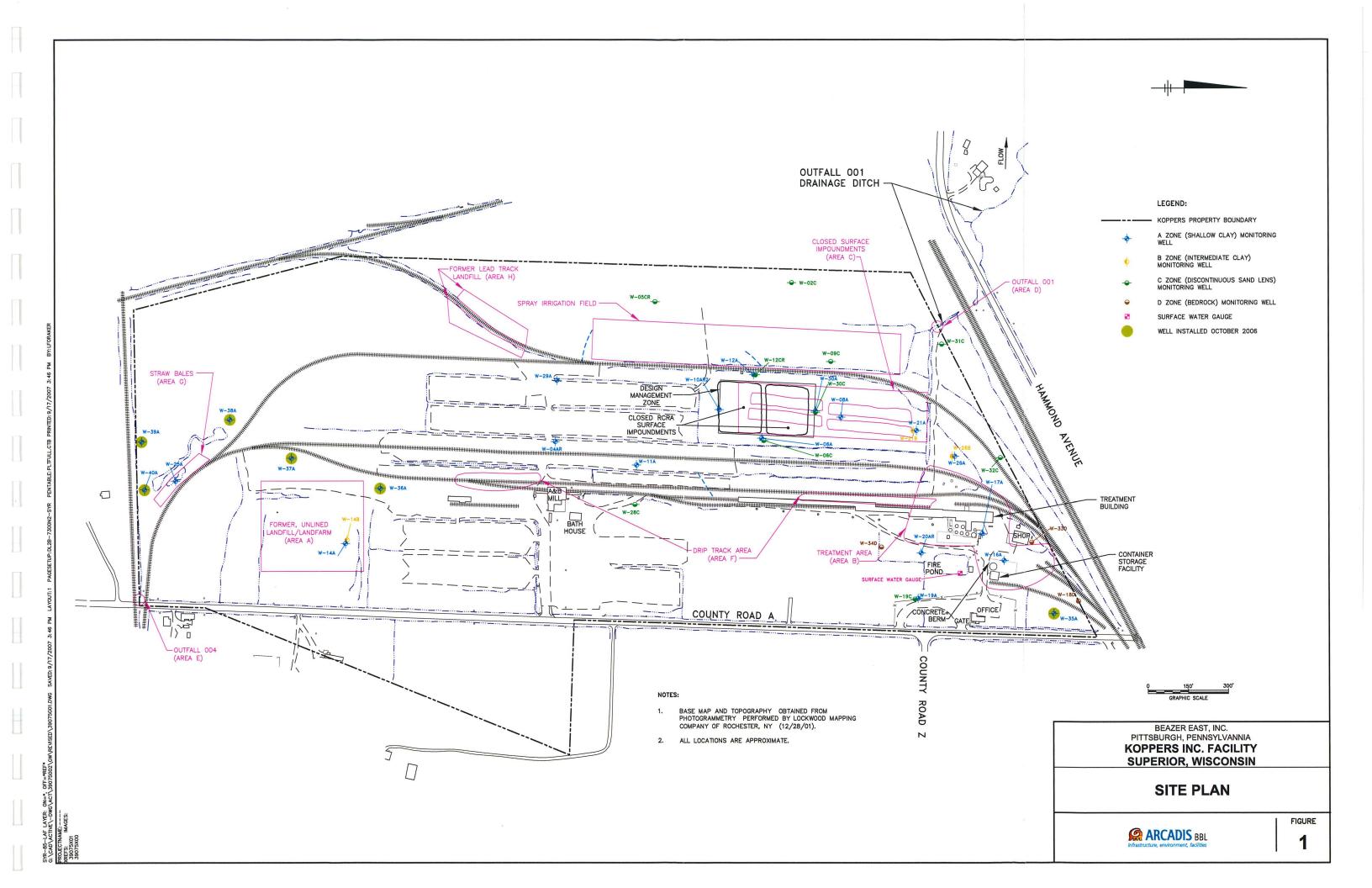
NA = constituent not analyzed for (2004-2007)

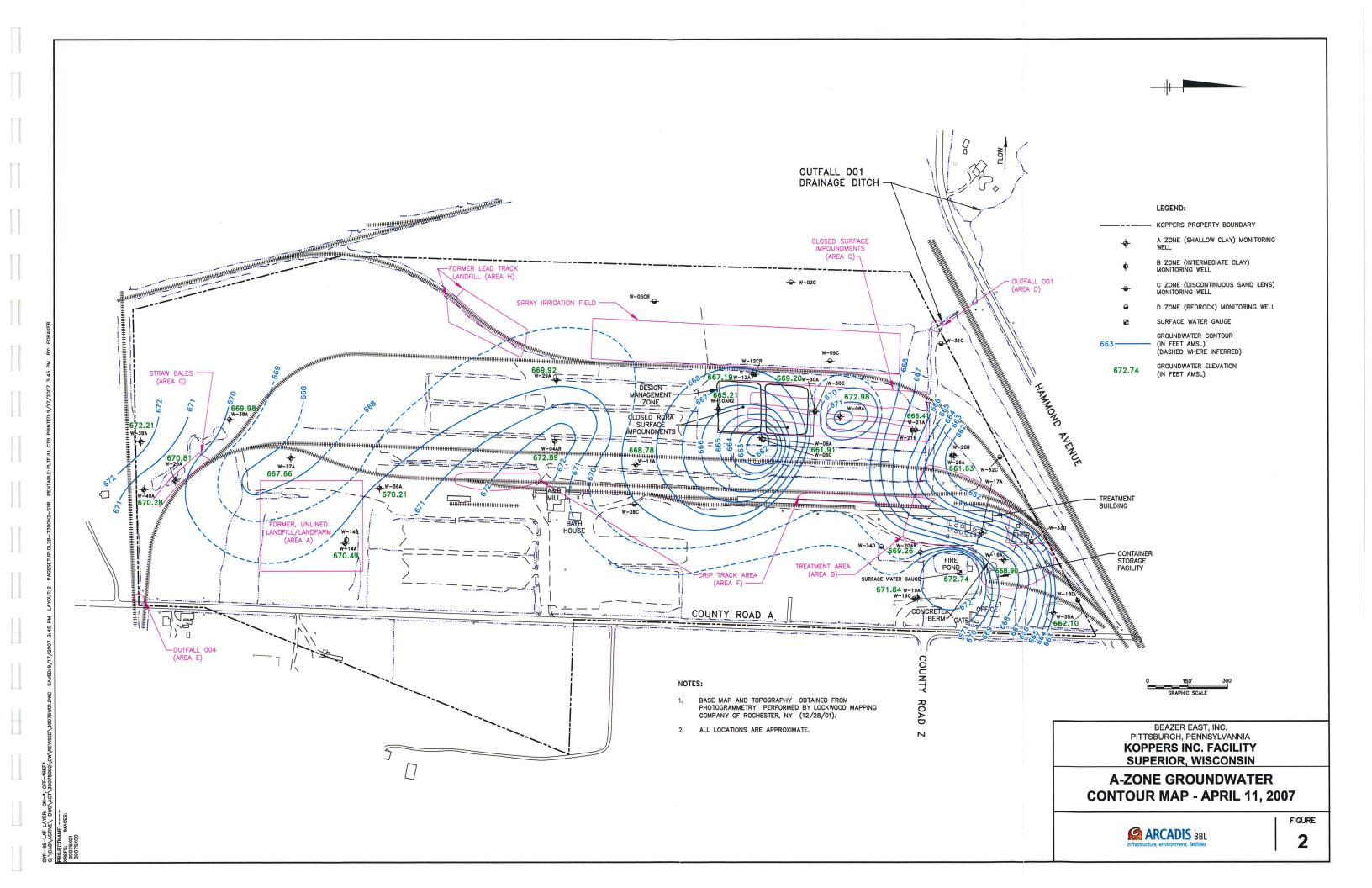
Light shading indicates result exceed the PAL

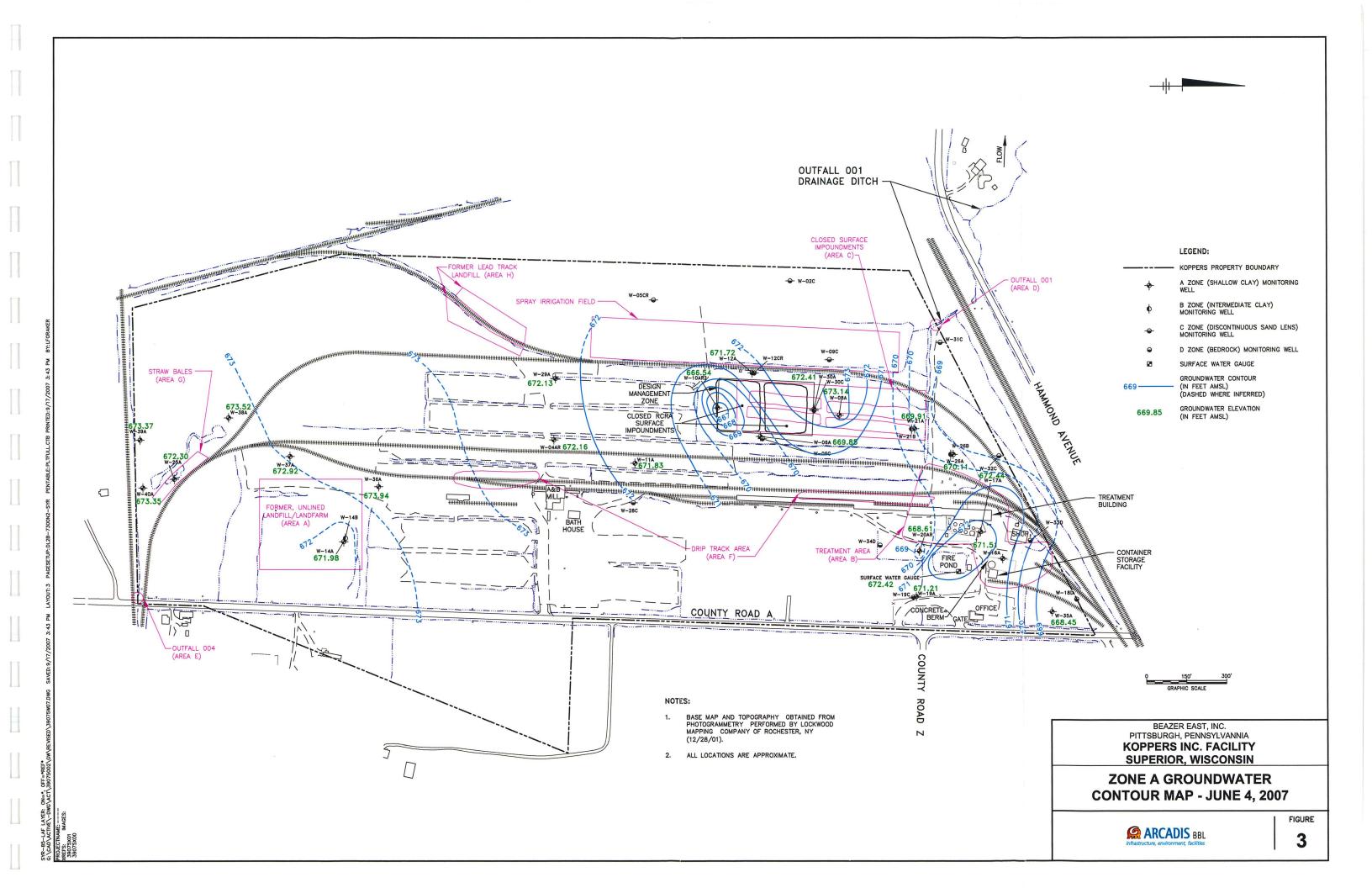
Dark shading indicated result exceeds ES

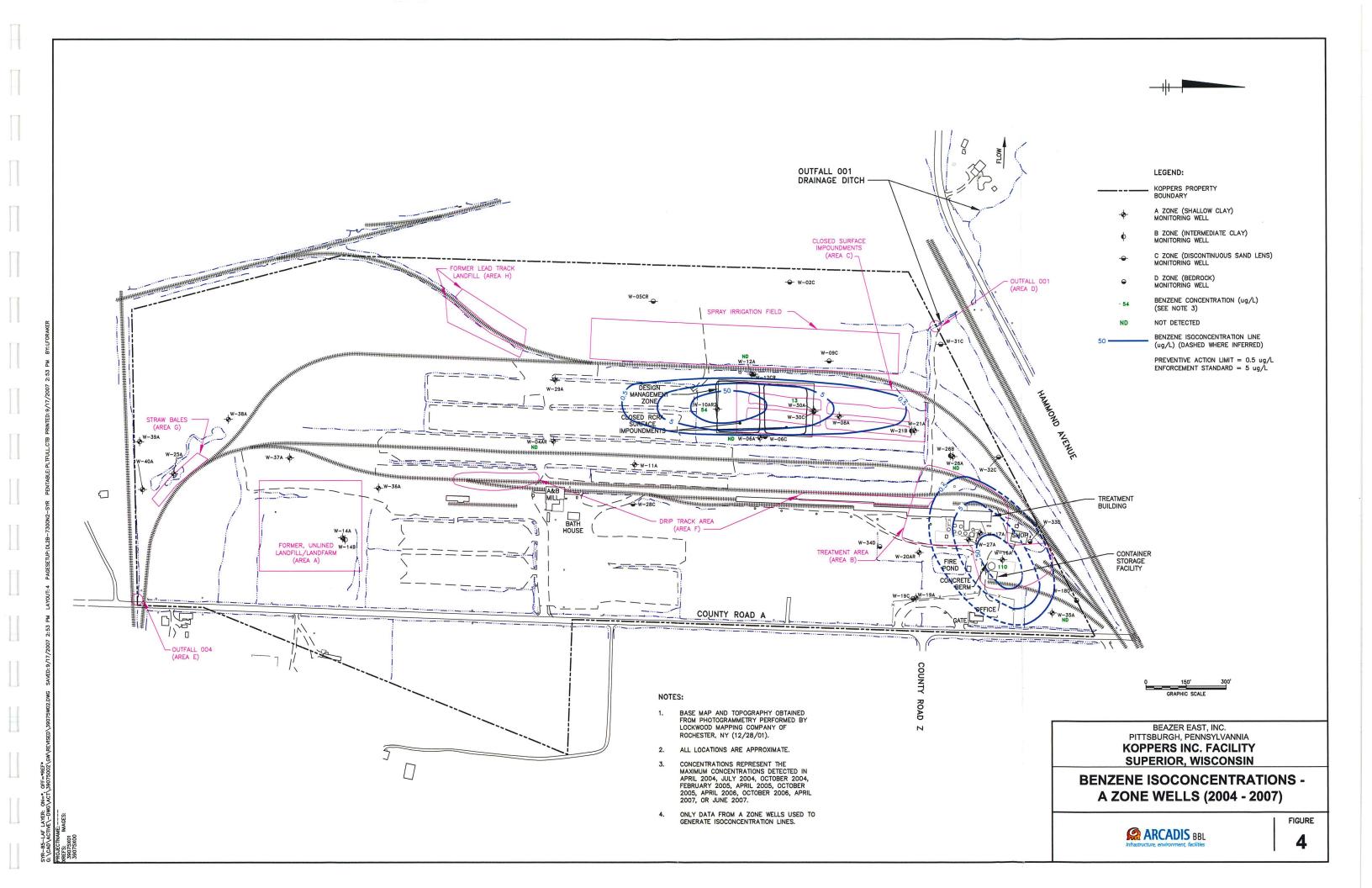
1. At the request of WDNR, 2,3,7,8-TCDD TEQs compared to the PAL and ES for 2,3,7,8-TCDD.

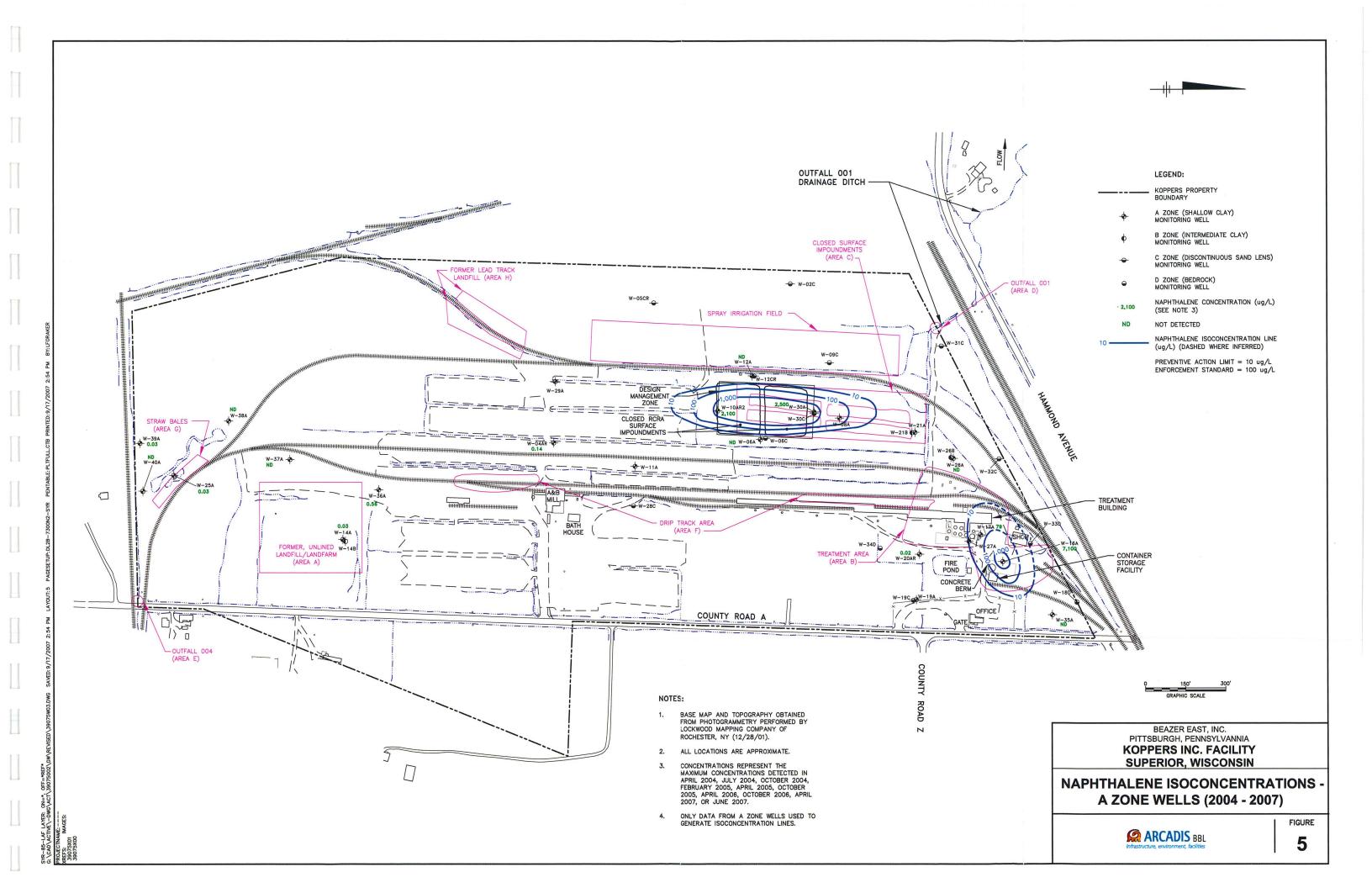
Figures

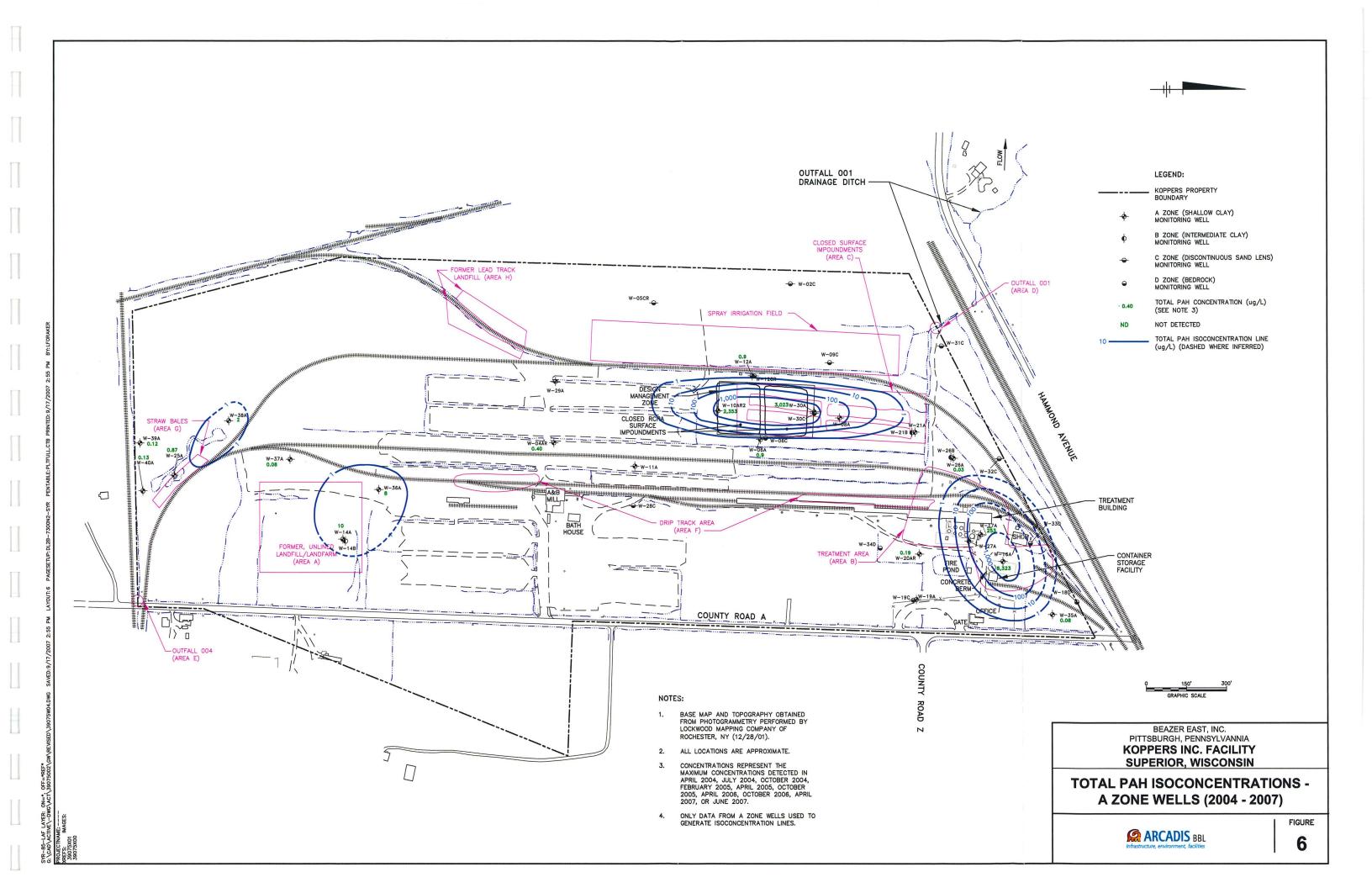


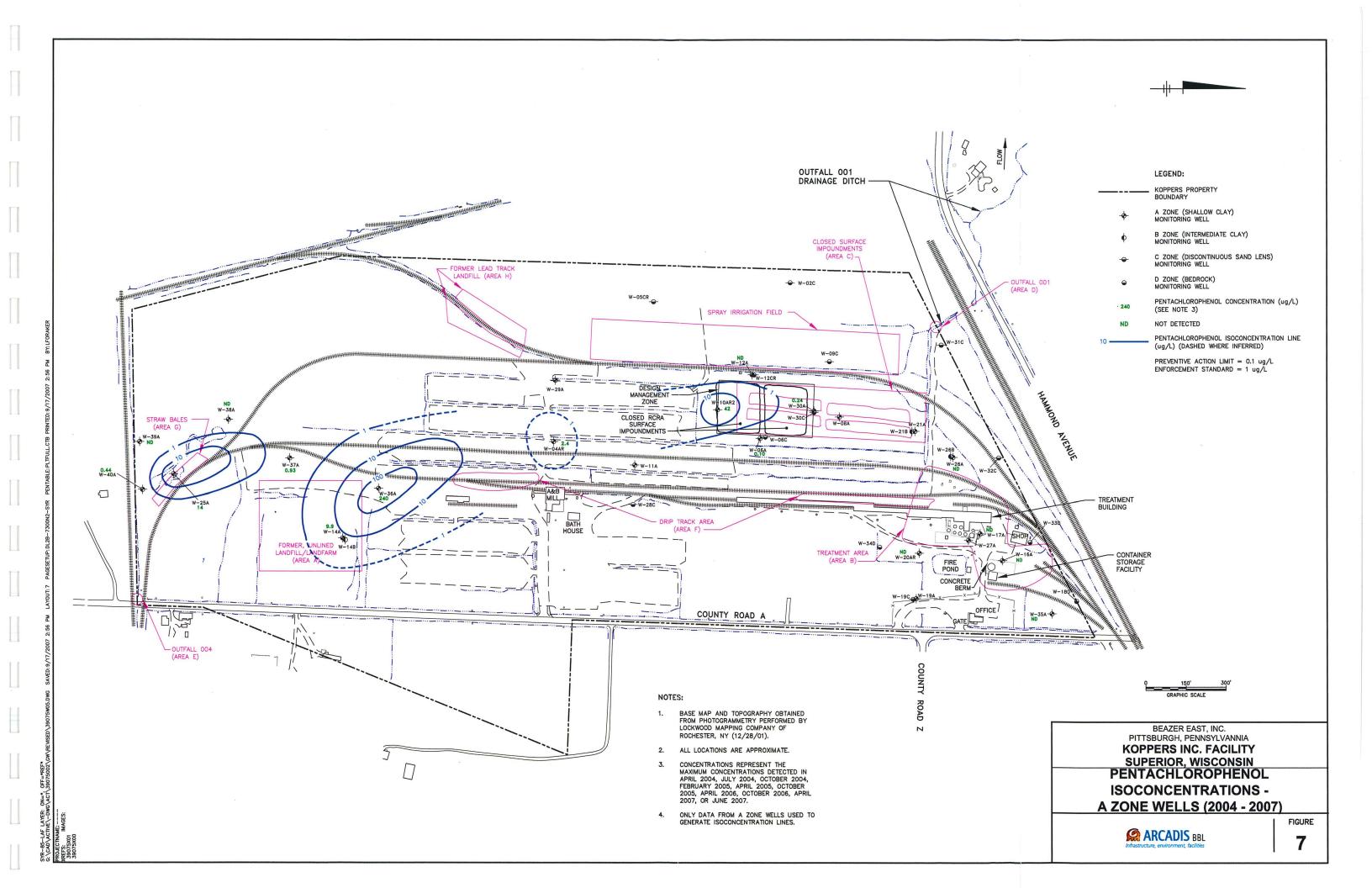












Attachments

Attachment 1

Boring/Well Construction Logs

Date Start/Finish: October 11, 2006 Drilling Company: Boart Longyear Driller's Name:

Drilling Method:

Gary Jones Hollow-stem Auger

Bit Size: Auger Size: Rig Type:

4.25-inch B-57 ORV 811 2-inches by 2-feet Sampling Method:

(split spoons)

Northing: Easting:

547310 1449487

Casing Elevation: 675.30 feet amsl

Borehole Depth: 13 feet bgs Surface Elevation: 672.53 feet amsl

David M. Mack Geologist:

Well/Boring ID: W-35A

Client:

Beazer East Inc.

Location:

3185 South County Road A

Superior, Wisconsin

	et)	ches	ce (ppm)	umi		Well/Boring
TH VATION	overy (fe	ws / 6 Inc	Headspac	logic Colt	Stratigraphic Description	Construction
DEP	Rec	Blo	PID	Geol		

675 -								
6/5 -	1				-		T	
Ī							1 -	4-inch diameter Protective Steel Casing
-								with Locking Cover
<u> </u>								(3 feet ags to 2 feet bgs)
-	-				-		1	
<u> </u>							10 10	
-			0.0	Red-brown and black SILT, some clay and organics, moist.				Concrete Pad (0 to 0.5 feet bgs)
_	NA	NA	0.0			Ħ	1	Hydrated Bentonite Seal
			0.0	Red-brown CLAY, little silt, moist.		Ė	Ŧ	(0.5 to 2.5 feet bgs)
-			0.0			上 -	Ħ	2-inch diameter PVC
}	2/2	3, 2, 3, 1	0.0				1	(2 feet ags to 3 feet bgs)
670 -					1		<u></u>	BB No. 7 Sand Pack
-			0.0		_	•		(2.5 to 2.75 feet bgs)
			0.0	Red-brown CLAY, little silt, trace coal fragments, moist.		`.≣		
			0.0	Red-brown CLAY, little silt, moist.		: ■		
	1.5/2	3, 8, 11, 11	0.0			. ⊨		•
-			0.0			· 🗏		
-5			0.0	Red-brown CLAY, little silt, moist.		•=	. 1	-
-				Neu-blown CLAT, fittle sitt, moist.	l	•	•	
	1/2	1, 1, 1, 1	0.0			· 📜	•]	-
_	1/2	', ', ', '	0.0	No recovery.		•=	•	
			0.0	Red-brown CLAY, some plyablity, trace medium sand, moist.	\neg	•.≡	•	
			0.0		_	:	1:+	No. 40 Sand Pack (2.75 to 13 feet bgs)
665 -			0.0	Red-brown CLAY, some plyability, moist.	_/	: <u>=</u>		(2.73 to 13 leet bgs)
-	2/2	2, 3, 3, 3	0.0	Red-brown plyable CLAY, moist.		·=		
-				Ded have Ol AV as a set to billion and to	\neg	•=	. 1	
 			0.0	Red-brown CLAY, some plyability, moist.	_	•:		-
_			0.0	Red-brown CLAY, some plyability, moist.		·]	$ \cdot $	
-10			0.0			•		
10	2/2	2, 2, 3, 4	0.0			· 🗏	٠.	2-inch diameter 0.010- inch slotted PVC Screen
-			0.0			:-		(3 to 13 feet bgs)
†			0.0	Red-brown CLAY, some plyability, moist.	\dashv	. :≡		
-			0.0	pydamy iaan				
-	2/2	2, 3, 3, 5				· =	.	
660 -	2,2	2, 0, 0, 0	0.0			• 🗏		
			0.0			· <u>'</u> =		



Remarks: bgs - below ground surface

amsl - above mean sea level

Split-spoons were driven using a 300 lb hammer.

Project: 39075.001 Data File:W-35A.dat Template:

Date: October 10, 2006

Date Start/Finish: October 11, 2006
Drilling Company: Boart Longyear
Driller's Name: Gary Jones

Driller's Name: Drilling Method: Gary Jones Hollow-stem Auger

Bit Size:

Auger Size: Rig Type: Sampling Method:

4.25-inch B-57 ORV 811 2-inches by 2-feet

(split spoons)

Northing: Easting:

Northing: 544792 Easting: 1449022 Casing Elevation: 678.59 feet amsl

Borehole Depth: 13 feet bgs Surface Elevation: 676.15 feet amsl

Geologist:

David M. Mack

Well/Boring ID: W-36A

Client:

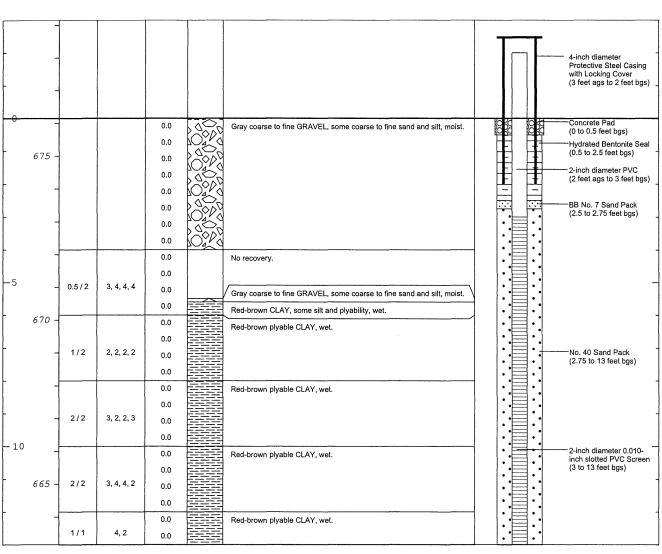
Beazer East Inc.

Location:

3185 South County Road A

Superior, Wisconsin

		S	(ppm)	.		
NOIL	əry (feet)	6 Inche	Headspace	ic Colum	Stratigraphic Description	Well/Boring Construction
DEPTH	Recove	Blows /	PID Hea	Geologi		





Remarks: bgs - below ground surface

amsl - above mean sea level

Split-spoons were driven using a 300 lb hammer.

Could not collect split-spoons from 0 to 4 feet bgs due to large gravel. Wet clay appears to be wet due to water in first 4 feet of overburden.

Project: 39075.002 Data File:W-36A.dat Template:

Date: October 10, 2006

Date Start/Finish: October 11, 2006 **Drilling Company:** Boart Longyear

Driller's Name: Gary Jones **Drilling Method:**

Bit Size: Auger Size: Rig Type:

4.25-inch B-57 ORV 811 Sampling Method:

Hollow-stem Auger

2-inches by 2-feet (split spoons)

Northing: Easting:

544461 1448910

Casing Elevation: 676.67 feet amsl

Borehole Depth: 13 feet bgs Surface Elevation: 674.25 feet amsl

David M. Mack Geologist:

Well/Boring ID: W-37A

Client:

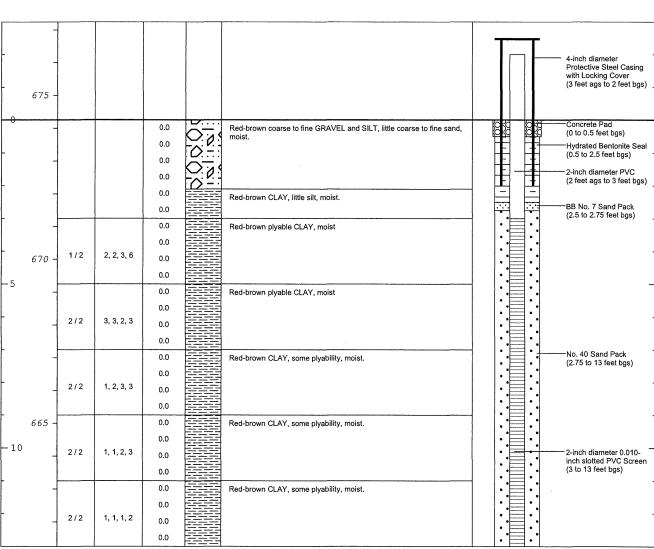
Beazer East Inc.

Location:

3185 South County Road A

Superior, Wisconsin

	eet)	ace (ppm)	lumn		Well/Boring
N N	ery (fer	adsba	රි	Stratigraphic Description	Construction
DEPTH	Recove Blows /	PID Hea	Geologic		





Remarks: bgs - below ground surface

amsl - above mean sea level

Split-spoons were driven using a 300 lb hammer.

Split-spoons could not be collected 0 to 3 feet bgs due to large gravel.

Project: 39075.002 Data File:W-37A.dat Template:

Date: October 10, 2006

Date Start/Finish: October 11, 2006
Drilling Company: Boart Longyear
Driller's Name: Gary Jones
Drilling Method: Hollow-stem Auger

Drilling Method: Bit Size:

Auger Size: 4.25-inch
Rig Type: B-57 ORV 811

Rig Type: B-57 ORV 811
Sampling Method: 2-inches by 2-feet (split spoons)

Northing: Easting: 544232 1448767

Casing Elevation: 676.90 feet amsl

Borehole Depth: 13 feet bgs Surface Elevation: 674.47 feet amsl

Geologist: David M. Mack

Well/Boring ID: W-38A

Client:

Beazer East Inc.

Location:

3185 South County Road A

Superior, Wisconsin

reet)	pace (ppm)	l e		Well/Boring	
DEPTH ELEVATION Recovery (I	PID Headspace	Geologic Co	Stratigraphic Description	Construction	

675	-					- 4-inch diameter Protective Steel Casing with Locking Cover (3 feet ags to 2 feet bgs)
0	-		0.0	 Red-brown and black SILT and CLAY, little organic matter moist.		Concrete Pad (0 to 0.5 feet bgs)
-			0.0	 No recovery.	-	—Hydrated Bentonite Seal (0.5 to 2.5 feet bgs)
	1		0.0	No recovery.		2-inch diameter PVC (2 feet ags to 3 feet bgs)
<u> </u>	0.66 / 2	2, 2, 3, 3	0.0			(E lock ago to a leek bigs)
			0.0	Red-brown CLAY, some plyability, moist.		BB No. 7 Sand Pack (2.5 to 2.75 feet bgs)
	4		0.0	Red-brown CLAY, some plyability, moist.	: :	
-	1.5/2	2, 2, 3, 3	0.0			_
670	1		0.0			
-5			0.0	Red-brown CLAY, some plyability, moist.	:	
			0.0			
	2/2	2, 2, 2, 2	0.0		:量:	
}			0.0	Red-brown CLAY, some plyability, moist.	┦ ╟┋┇	─No. 40 Sand Pack
	1		0.0	Too Bom OD II, come piyacimi, mood	:•冒:•	(2.75 to 13 feet bgs)
	2/2	2, 3, 3, 2	0.0	·		-
			0.0			
665	4		0.0	Red-brown CLAY, some plyability, moist.		
- 10	2/2	6, 6, 7, 7	0.0			2-inch diameter 0.010-
	1		0.0		:圖:	inch slotted PVC Screen (3 to 13 feet bgs)
			0.0	Red-brown plyable CLAY, moist.		
-	2/2	1, 1, 2, 1	0.0		: :	_
	- 412	1, 1, 2, 1	0.0		: :	
			0.0			l



Remarks: bgs - below ground surface

amsl - above mean sea level

Split-spoons were driven using a 300 lb hammer.

Project: 39075.002 Data File:W-38A.dat

Template:

Date: October 10, 2006

Date Start/Finish: Drilling Company: Boart Longyear Driller's Name: **Drilling Method:**

October 12, 2006 Gary Jones

Hollow-stem Auger

Bit Size:

Auger Size: Rig Type: Sampling Method:

4.25-inch B-57 ORV 811 2-inches by 2-feet (split spoons) Northing: Easting:

543900 1448849 Casing Elevation: 678.53 feet amsl

Borehole Depth: 13 feet bgs Surface Elevation: 675.77 feet amsl

David M. Mack Geologist:

Well/Boring ID: W-39A

Client:

Beazer East Inc.

Location:

3185 South County Road A

Superior, Wisconsin

eet)	ace (ppm)		Well/Boring		
DEPTH ELEVATION Recovery (fi	PID Headspa Geologic Colt	Stratigraphic Description	Construction		

-						4-inch diameter Protective Steel Casing with Locking Cover (3 feet ags to 2 feet bgs)
675 -			0.0	0.0	Gray and black coarse to fine GRAVEL and SILT, little coarse to fine sand, moist	Concrete Pad (0 to 0.5 feet bgs) Hydrated Bentonite Seal
-	0/2	2, 5, 6, 4	0.0 0.0 0.0		No recovery.	(0.5 to 2.5 feet bgs) 2-inch diameter PVC (2 feet ags to 3 feet bgs)
_			0.0 0.0 0.0		No recovery.	BB No. 7 Sand Pack (2.5 to 2.75 feet bgs)
-5	0.5/2	2, 2, 3, 4	0.0		Red-brown CLAY, some plyability, moist.	- -
670 -	0.5/2	2, 3, 2, 2	0.0 0.0 0.0		No recovery.	-
-	2/2	2, 3, 3, 4	0.0 0.0 0.0 0.0		Red-brown CLAY, some plyability, moist. Red-brown CLAY, some plyability, moist.	No. 40 Sand Pack (2.75 to 13 feet bgs)
-10			0.0 0.0 0.0		Red-brown CLAY, some plyability, moist.	-
665 -	2/2	1, 1, 2, 2	0.0		Red-brown CLAY, some plyability, moist.	2-inch diameter 0.010- inch slotted PVC Screen (3 to 13 feet bgs)
_	2/2	2, 2, 1, 3	0.0 0.0 0.0			



Remarks: bgs - below ground surface

amsl - above mean sea level

Split-spoons were driven using a 300 lb hammer.

Project: 39075.002 Data File:W39A.dat Template:

Date: October 10, 2006

Date Start/Finish: October 12, 2006 **Drilling Company:** Boart Longyear Driller's Name: **Gary Jones**

Drilling Method:

Hollow-stem Auger

Bit Size:

Auger Size: 4.25-inch Rig Type: Sampling Method:

B-57 ORV 811 2-inches by 2-feet (split spoons)

Northing: Easting:

543912 1449027 Casing Elevation: 676.94 feet amsl

Borehole Depth: 13 feet bgs Surface Elevation: 674.33 feet amsl

Geologist:

David M. Mack

Well/Boring ID: W-40A

Client:

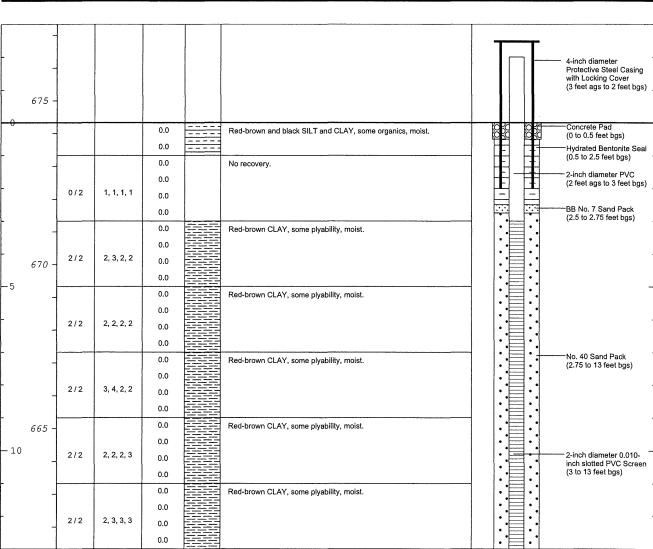
Beazer East Inc.

Location:

3185 South County Road A

Superior, Wisconsin

	SX	(mdd)	ın		
NO NO	y (feet)	eadsbace	Colum	Stratigraphic Description	Well/Boring Construction
DEPTH ELEVAT	Recover Blows /	PID Hea	Geologic		





Remarks: bgs - below ground surface amsi - above mean sea level

Split-spoons were driven using a 300 lb hammer.

Project: 39075.002 Data File:W-40A.dat Template:

Date: October 10, 2006

Attachment 2

WDNR Well Forms

SOIL BORING LOG INFORMATION

Form 4400-122

Rev. 5-97

			Ro	ute To:		Wastewater ☐ n/Redevelopment ☑'	Waste Other		gement	X							
					Remedianoi	n/ikedevelopment j æ j	Omer								-	~	0
Facility	v/Projec	et Nan	16				License	/Permit	/Monite	oring N	umber		Boring		ge 1	of	2
Kop	pers I	nc. F	acility							Ü					W-	35A	
Boring	Drille	l By (I	Firm nai	ne and n	iame of crew c	hief)	Date Dr	illing S	tarted		Da	te Drilli	ing Cor	npleted	i	Drill	ing Method
Boa	rt Lor	igyea	ır Com	ipany -	G. Jones				1/200				10/11/	2006		4	1/4" HSA
WI Un	íque W	'ell No),	DNR V	Well ID No.	Common Well Name	Final St				1	e Eleva		T	Bo		Diameter
Boring	Locati	on or	Local G	rid Origi	n (Checl	W-35A cif estimated: ()		Feet		***************************************	612	5 Fee	et MS Grid Lo	Location	(If appl		Inches
(State	Plane	473	10 N	1449	487E	S/C/O	Lat.			1	\$f -				4		□ E
5	C 1/4	of	SW	/4 of Sec	ction [2],	T 48N, R 141	Lon		0	1		X 2:37	Fee	t 🗆 8	5		Feet W
Facilit	y ID	. % \	6009		County Douglas		County C	oae	Supe		ну/ ог	Village					
San	ple	13.0	, , , , , , , , , , , , , , , , , , ,					T	1	1		<u> </u>	Soil	Prop	erties		
		S/C	*5		Soil/l	Rock Description						43					
, <u>p</u>	Att.	ount	n Fe			eologic Origin For				_		Ssive	<u>ن</u> بو		En .		ots
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet		Ee	ch Major Unit		scs	Graphic	Well Diagram	PID/FID	Compressive Strength	Moisture Confent	Liquid Limit	Plasticity Index	00	RQD/ Comments
Z H	Ze Le	ğ	_ ಗಿ	22.15	2212 Y 7 2 2 3 4 7 T	gganananas katalanga	······································	Ë	C drap	Well		S &	<u>× 8</u>	13 5	F F	P 200	<u>%</u> %
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			-1												na.		
1 5	18	2	F														
ss \√		2 2	-2							***							The state of the s
M		i.	E														S 000
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		11	E-4														
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Signati						172	art Long			anv	·····	······································		***************************************	···	Tel·	715-359-7090
	(<i>j</i> *	- V- V			101	Alderson	Street	Schofie	ld, WI	54476				······		715-355-5715

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completions of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

SOIL BORING LOG INFORMATION SUPPLEMENT Form 4400-122A Rev. 5-97

Boring Number	W-3	Use only as an attachment to Form 4400-	122.						Pa	ge 2	of	2
Sample								Soil	Prop			
\$ (ii) \$	eet	Soil/Rock Description					2					
ye y	In Fe	And Geologic Origin For	S	0	8	۵	essiv	5 ti		iţi.		ents
Number and Type Length Att. & Recovered (iii)	Depth In Feet	Each Major Unit	U	Graphic Log	Well Diagram	PID/CID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
	ĻĞ		Sin	Grap Log	<u>≱ ï</u>	盂	<u>ਹੱਲੋਂ</u>	ž ŏ	EE	<u>F</u> <u>F</u>	È.	<u> </u>
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		Well Set 13.0'										
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mirry depression of the management of the manage												

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SOIL BORING LOG INFORMATION

Form 4400-122

			<u>Ro</u>	ute To: Watershed/Wastewate Remediation/Redevelo	4	Waste Other	,	gement	IXI							
													Pa		of	2
Facilit Kor			ae acility	3		License	/Permi	/Monito	oring N	umber		Boring	Numb		36A	
				me and name of crew chief)	KUVALINI KIRANI ARIA ARIA MARIA ARIA MARIA ARIA MARIA ARIA	Date Dr	illing S	tarted	ujumuvamaji ma	Dε	ite Drill	ing Coi	npleted			ing Method
Boa	rt Lor	igyea	ır Con	npany - G. Jones				1/200				10/11/	2006		4	1/4" HSA
WI Un	ique W	ell No),	1	on Well Name W-36A	Final St		ater Lev MSL	el	1	e Eleva Z Fe		Γ,	Вс		Diameter Inches
Boring	Locati	on or	Local G	irid Origin (Check if estima		Lat.		0	1	11	Local	Grid Lo	cation			**************************************
The state of the s	Frame ≥ 1/4				N, R 17 W	1	g	<u> </u>	1	11			1 🗆 S	J.	į	□ E Feet □ W
Facilit		***************************************	***************************************	County Douglas	1	County Co 16	ode	Civil 1 Supe		ity/ or	Village					
San	nple	0	1000	18(0 Douglas		10		Joupe	1101			Soil	Prop	erties		
	. & (m)	ıts	eet	Soil/Rock Desc	-						o v					
ber Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	And Geologic Or Each Major			CS	hic	ram	9	Compressive Strength	fure	B +	icity		RQD/ Comments
Number and Type	L'eng Recc	Blov	Dept			***************************************	us	Graphic Log	Well Diagram	PID/FID	Com	Moisture Content	Liquid Limit	Plasticity Index	P 200	Com
:			E	Rock & Gravel FILL												
			Eı													
			<u></u>									***************************************				
			-													
			<u>-</u> 3	Red & Brn Moist CLAY	-											
	a \	2	-4													
ss \	24 6	3 4 4	F										***************************************			
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	2.4	_	-6													
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			E ₁₂													
		fy that	the info	ormation on this form is true and c	7447	·										
Signat	ure /	H	~ (C	let.		rt Long Alderson				54476						715-359-7090 715-355-5715

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SOIL BORING LOG INFORMATION SUPPLEMENT Form 4400-122A Rev. 5-97

Boring Number	W-3	Use only as an attachment to Form 4400	-122.						Pa	ge 2	of	2
Sample								Soil	Prop	erties		
% (ju) ss	i i	Soil/Rock Description					5					
oun Att	J L	And Geologic Origin For	8	່ນ	l e		essiv h	5 1		À		ents
Number and Type Length Att. & Recovered (in) Blow Counts	Depth In Feet	Each Major Unit	nscs	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plastícity Index	P 200	RQD/ Comments
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SOIL BORING LOG INFORMATION

Form 4400-122

Rev. 5-97

			<u>Ro</u>	ute To:	Watershed/V Remediation			Waste Other		gement	X							
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Facilit	y/Proje	ct Nan	ne					License	/Permi	t/Monito	oring N	umber	***************************************	Boring	Pa; Numb		01	<u> </u>
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Boring	; Drille	l By (I	Firm na	me and n	ame of crew cl	net)		Date Dr	riling S	started		Da	te Drill	ing Co	mpleted	1	Drill	ling Method
Boa	rt Lor	igyea	ır Com	ipany -	G. Jones					1/200					/2006		4	1/4" HSA
WIUr	iique W	'ell No	١.	DNR V	Well ID No.	Common V	Vell Name 37A	Final St		ater Lev MSL		1	e Eleva		r	Вс		Diameter
Boring	Locati	on or	Local G	rid Origii	n (Check	if estimated:		<u> </u>	reet	o MISIT		6/7.	3 Fee	Grid Lo	cation	(If appl		Inches
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San	ple		***************************************								Soil	Prop	erties	w				
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SOIL BORING LOG INFORMATION

Form 4400-122

Rev. 5-97

			Ro	ute To:		Wastewater ∐ 1/Redevelopme		Waste Other		gement	X							
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SOIL BORING LOG INFORMATION SUPPLEMENT Form 4400-122A Rev. 5-97

Borin	g Numl	er	W-3	38A. Use only as an attachment to Form 4400-	122.						Pa	ge 2	of	2
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SOIL BORING LOG INFORMATION

Form 4400-122

Rev. 5-97

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SOIL BORING LOG INFORMATION SUPPLEMENT Form 4400-122A Rev. 5-97

Boring Number	W-3	Use only as an attachment to Form 4400-	122.						Pa	ge 2	of	2.
Sample								Soil	Prop	erties		
Number and Type Length Att. & Recovered (in) Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	uscs	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
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SOIL BORING LOG INFORMATION

Form 4400-122

Rev. 5-97

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			acility Firm na		ame of crew cl	ief)	Date D	rilling S	Started	, and and and and and and and and and and	Di	ite Drill	ing Coi	mpleted		40A	ling Method
•						,											_
	irt Lor				G. Jones Well ID No.	Common Well Name	Final S		2/2000		Surfac	e Eleva		/2006			1/4" HSA Diameter
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San	nple				CallE	tock Description							Soil	Prop	erties T		
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SOIL BORING LOG INFORMATION SUPPLEMENT Form 4400-122A Rev. 5-97

Boring Number	W-4	Use only as an attachment to Form 4400-1	22.						Pa	ge 2	of	2
Sample								Soil	Prop			***************************************
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Number and Type Length Att. & Recovered (in) Blow Counts	Depth In Feet	Each Major Unit	scs	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	00	RQD/ Comments
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State of Wisconsin Department of Natural Resources Route To:	Watershed/Wastewater	Wests Mar	agement 🏿	MONITORING WELL CONSTI	RUCTION
Kimie 10.	Remediation/Redevelopm			Form 4400-113A Rev. 6-9	
Facility/Project Name	Local Grid Location of W	Vell	пъ	Well Name	
Koppers Inc. Facility	ft. S.	tt.	□w.	W-35A	
Facility License, Permit or Monitoring No.	Grid Origin Location Lat.	(Check	if estimated: [])	Wis. Unique Well No DNR Well	Number
Facility ID	1.at	Long.	or	Date Well Installed	
816009810	St. Plane <u>547310</u> Section Location of Wast	ft. N, <u>177978</u>	_ft. ES/C/(N)	10/10/2006	
Type of Well	Section Location of Wast	ic/Source	i DE		e and Firm
Well Code 11/mw	SE 1/4 of Sw 1/4 of Location of Well Relative	f Sec. 12. T. 78	N, R	G. Jones	
Distance Well Is From Waste/Source		s Sidegradient			77777
Boundary ft,	d Downgradient	······································		Boart Longyear Compan	
A. Protective pipe, top elevation		······································	. Cap and lock? . Protective cover		s 🗆 No
B. Well casing, top elevation 675.3	ft. MSL		a. Inside diamete		4.0 in.
C. Land surface elevation 672.5	ft. MSL		b. Length:		5.0 ft.
			c. Material:		⊠ 04
D. Surface seal, bottom ft. MSI			d. Additional pro	Other T. X	
12. USC classification of soil near screen: GP □ GM□ GC □ GW□ S'	WO SPO			e:	s ⊠ No
	r ch ch c			Bentonite	- П 30
Bedrock□		₩ \ `3	. Surface seal:	Concrete	
13. Sieve analysis attached? ☐ Yes	□No			Other	
The second secon	ry 🗆 5 0	`4	. Material between	well casing and protective pipe:	
Hollow Stem Aug	er ⊠41 er □ ⊒⊒			Bentonite Gravel Other	U 30
Om	er Design		A see selection and a sec	eal: a. Granular Bentonite	
15. Drilling fluid used: Water □ 0 2 A	ir 🗆 0 1			nud weight. Bentonite-sand slurry	
Drilling Mud □ 0 3 Nor	ne 🗆 9 9		cLbs/gal r	nud weight Bentonite slurry	□ 31
16. Drilling additives used? ☐ Yes	⊠ No			nite Bentonite-cement grout	
10. Dinning additives used: La 1 cs	23110			volume added for any of the above	
Describe			f. How installed	1: Tremie pumped	□ 01 □ 02
17. Source of water (attach analysis):				• •	□ 02
		8 8 6	. Bentonite seal:	a. Bentonite granules	
			b. □ 1/4 in. □	3/8 in. □ 1/2 in. Bentonite pellets	□ 32
E. Bentonite seal, top ft. MSL	or0.5 ft.			Other	
	25 0			al: Manufacturer, product name ar #7 Badger	id mesh siz
F. Fine sand, top ft. MSL	, or π.		a. Volume added	i tt ³	
G. Filter pack, top ft. MSL	or2.8 ft. \	8, \\		rial: Manufacturer, product name a	ind mesh si
-			a	#40 Badger	110
H. Screen joint, top ft. MSL	or3.0 ft.			dft³	
	12.0	7 🗐 🗸	. Well casing:	Flush threaded PVC schedule 40	
I. Well bottom ft. MSI	or15.0 ft.			Flush threaded PVC schedule 80	5 - 41 7
J. Filter pack, bottomft. MSL	or 14.0 ft	4圓1~10	. Screen material:	Other	
J. Pitter pack, bottom	7.07		a. Screen Type:		- <u> </u>
K. Borehole, bottom ft. MSL	or14.0 ft. <			Continuous slot	
		\		Other	
L. Borchole, diameter8.0 in.		VIIIII		Boart Longyear Company	0.010 in.
237 ·			c. Slot size:d. Slotted lengtl		10.0 ft.
M. O.D. well casing $\frac{2.37}{}$ in.		11			<u></u>
N. I.D. well easing 2.06 in.		~ -		• •	
					mericus de la companya de la company
I hereby certify that the information on this					
Signature	Firm Boa	irt Longyear Comp	anv	Tel: 715	-359-7090

Firm Boart Longyear Company
Tel: 715-359-7090
101 Alderson Street Schoffeld, WI 54476
Fax: 715-355-5715

Please complete both Forms 4400-1134 and 4400-113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personnally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Facility/Project Name	State of Wisconsin Department of Natural Resources _{Route To:}	Watershed/Wastewater	Waste Management 🙇	MONITORING WELL CONSTRUCTION
Content Cont	Assistant IV.	Remediation/Redevelopment 📈		Form 4400-113A Rev. 6-97
Facility ID Care Family of Mountering Mo. Ord Origin Location Lat Long Origin Care	Facility/Project Name	Local Grid Location of Well	ΠR	
S. Plane	Koppers Inc. Facility Facility License, Permit or Monitoring No.	Grid Origin Location	(Check if estimated:)	W-36A Wis. Unique Well No DNR Well Number
Section Color Section Sectio	TN., Sta., TTN	Lat. Lo	ong or	Data Wall Installed
Section Color Section Sectio	•	St. Plane <u>S 44/42</u> ft. N, 1	<u>1477027</u> ft. E. S/C/C	Date well histaned
Distance Well is From Waster/Source Gravity Gravit		Section Location of Waste/Sourc	e 12 14 DE	Well Installed By: (Person's Name and Firm
Distance Well is From WasterSource n	* *	1/4 of \rightarrow 1/4 of Sec. /	<u>- T. 78N, R. 1104W</u>	G. Jones
A. Protective pips, top elevation B. Well easing, top elevation B. M. S. C. M. L. Well bottom B. W. S. C. M. L. Well easing Concrete B. Outher B. Well easing Concrete B. Outher B. O	Distance Well Is From Waste/Source	u Upgradient s S	Bidegradient	
B. Well casing, top elevation 679.6 ft. MSL	, Yr•			
B. Well casing, top clevation		F 1		
C. Land surface elevation	B. Well casing, top elevation 678.6	ft. MSL/ ———		pipe: er:4.0_ in.
D. Surface seal, bottom	C. Land surface elevation 676.2	ft. MSL	b. Length:	5.0 ft.
12. USC classification of soil near sereen: G	D. Surface seal, bottom ft. MSI	or <u>0.5</u> ft.	c. Material:	
SM SC ML MH CL CH Bedtootk 3. Surface seal: Concrete 3.0 13. Sieve analysis attached? Yes No 14. Drilling method used: Rotary 5.5 Hollow Stem Auger 24.1 Other 2.5 15. Drilling fluid used: Water 0.2 Air 0.1 Drilling Mud 0.3 None 0.9 16. Drilling additives used? Yes 2.5 17. Source of water (attach analysis): E. Bentonite seal, top ft. MSL or 2.5 18. F. Fine sand, top ft. MSL or 3.0 19. F. Fine sand, top ft. MSL or 13.0 19. F. Fine sand, top ft. MSL or 13.0 19. F. Filter pack, top ft. MSL or 14.0 19. F. Filter pack, bottom ft. MSL or 14.0 19. Filter pack, bottom ft. MSL or 14.0 19. F. Filter pack, bottom ft. MSL or 14.0 19. F. Filter pack, bottom ft. MSL or 14.0 19. Mentonite Rotary Rotary Rotary Rotary 19. Mentonite Rotary Rotary Rotary 19. Well casing Flush threaded PVC schedule 80 2.4 19. Mentonite Rotary Rotary Rotary Rotary 10. Screen material: Manufacturer, product name and mesh size 10. Screen material: Manufacturer Boart Longyear Company 10. Screen material: PVC Rotary 10. Screen material: Rotary Rotary 10. Screen material: Rotary Rotary 10. Screen material: PVC Rotary 10. Screen material: Rotary 10. Screen material:	12. USC classification of soil near screen:	Sacra .	d. Additional pro	otection?
Sand Concrete South Conc			If yes, describ	
13. Sieve analysis attached? Yes			3. Surface seal:	
14. Drilling method used: Rotary 5 0 Hollow Stem Auger 3 0 Other 3 1	13. Sieve analysis attached?	□ No 🐰		
Hollow Stem Auger 24 1 Other 30 Sand Other 30	14. Drilling method used: Rotar	y □50	4. Material between	
15. Drilling fluid used: Water 0 2 Air 0 1 Drilling Mud 0 3 None 0 9 9	Hollow Stem Aug			Bentonite 30
15. Drilling fluid used: Water 0 2 Air 0 1 Drilling Mud 0 3 None 9 9 16. Drilling Mud 0 3 None 9 9 16. Drilling additives used? 17 yes 28 No 28 No 28 Do 25 Describe 17. Source of water (attach analysis): 16. Bentonite seal; op 16. MSL or 0.5 ft. 17 Fine sand, top 16. MSL or 2.5 ft. 17 Fine sand, top 16. MSL or 2.8 ft. 18. Filter pack, top 16. MSL or 13.0 ft. 14.0 ft. 19. Screen material: 19. MSL or 14.0 ft. 19. Screen material: 19. Screen Type: 19. Source Other 28. Slotted length: 19. Source of material: 19. Screen Type:	Oth			Sand Other 🗵 🚟
Drilling Mud	15 Drilling fluid used: Water 17.0.2 A	ir [] 0 1		
16. Drilling additives used?	7	1 821 1		
Describe				
Describe Tremie pumped 0 2 Gravity 0 8	16. Drilling additives used?	⊠ No	004	
17. Source of water (attach analysis): Gravity	Describe		f. How installed	
E. Bentonite seal, top	17. Source of water (attach analysis):			
b. 1/4 in. 3/8 in. 1/2 in. Bentonite pellets 3 2 c. Other 3 2 c. Other 3 2 c.			6. Bentonite seal:	•
F. Fine sand, top ft. MSL or 2.5 ft. 7. Fine sand material: Manufacturer, product name and mesh siz a. #7 Badger b. Volume added ft³ 8. Filter pack material: Manufacturer, product name and mesh siz a. #40 Badger b. Volume added ft³ 9. Well casing: Flush threaded PVC schedule 40 ≥ 23 Flush threaded PVC schedule 80 24 Flush threaded PVC schedule 80 24 Flush threaded PVC schedule 80 24 Continuous slot 01 Other Continuous slot 01 Other Boart Longyear Company c. Slot size: 0.010 in. M. O.D. well casing 2.37 in. Thereby certify that the information on this form is true and correct to the best of my knowledge.			b. □1/4 in. □	3/8 in. □ 1/2 in. Bentonite pellets □ 3 2
F. Fine sand, top ft. MSL or 2.5 ft. a. #7 Badger b. Volume added ft³ 8. Filter pack material: Manufacturer, product name and mesh si a. #40 Badger b. Volume added ft³ 9. Well casing: Flush threaded PVC schedule 40 2 2 3 Flush threaded PVC schedule 80 2 4 Flush threaded PVC schedule 80 2 1	E. Bentonite seal, top ft. MSL	or0.5 ft. \		
B. Volume added ft³ 6. Filter pack, top ft. MSL or 2.8 ft. 6. Filter pack, top ft. MSL or 3.0 ft. 7. Well bottom ft. MSL or 13.0 ft. 7. Filter pack, bottom ft. MSL or 14.0 ft. 8. Filter pack material: Manufacturer, product name and mesh si a. #40 Badger b. Volume added ft³ 9. Well casing: Flush threaded PVC schedule 40 ≥ 23 Flush threaded PVC schedule 80 □ 24 Flush threaded PVC sc	T T'	25 @	KX4 / /	#7 Radger
G. Filter pack, top ft. MSL or 2.8 ft. H. Screen joint, top ft. MSL or 3.0 ft. I. Well bottom ft. MSL or 13.0 ft. J. Filter pack, bottom ft. MSL or 14.0 ft. J. Filter pack, bottom ft. MSL or 14.0 ft. L. Borehole, diameter 8.0 in. M. O.D. well casing 2.37 in. I. Well casing 2.06 in. S. Filter pack material: Manufacturer, product name and mesh si a. #40 Badger b. Volume added ft³ 9. Well casing: Flush threaded PVC schedule 40 ≥ 23 Flush threaded PVC schedule 80 □ 24 Other □ 10. Screen material: PVC □ 10. Screen material:	r. Fine sand, top n. Mist.	/ / KWI	KXI / /	1 ft ³
H. Screen joint, top ft. MSL or 3.0 ft. I. Well bottom ft. MSL or 13.0 ft. J. Filter pack, bottom ft. MSL or 14.0 ft. J. Filter pack, bottom ft. MSL or 14.0 ft. L. Borehole, diameter 8.0 in. M. O.D. well casing 2.37 in. I. MSL or 2.06 in. D. Volume added ft³ 9. Well casing: Flush threaded PVC schedule 40 ≥ 23 Flush threaded PVC schedule 80 □ 24 Other □ 2.4 Other □ 2.4 A. Screen Type: Factory cut ≥ 11 Continuous slot □ 01 Other □ 2.4 A. Screen Type: Boart Longyear Company c. Slot size: 0.010 in. d. Slotted length: 10.0 ft. None ≥ 14 N. I.D. well casing 2.06 in. I hereby certify that the information on this form is true and correct to the best of my knowledge.	G. Filter pack, top ft. MSL	or2.8 ft.	8. Filter pack mate	rial: Manufacturer, product name and mesh si
I. Well bottom ft. MSL or 13.0 ft. Flush threaded PVC schedule 40	TT 0	30 0		
I. Well bottom ft. MSL or 13.0 ft. Other Dither pack, bottom ft. MSL or 14.0 ft. J. Filter pack, bottom ft. MSL or 14.0 ft. K. Borehole, bottom ft. MSL or 14.0 ft. L. Borehole, diameter 8.0 in. M. O.D. well casing 2.37 in. I. Backfill material (below filter pack): None 14.0 ft. I. Backfill material (below filter pack): None 14.0 ft. I. Backfill material (below filter pack): None 14.0 ft. I. Backfill material (below filter pack): None 14.0 ft. I. Backfill material (below filter pack): None 14.0 ft. I. Backfill material (below filter pack): None 14.0 ft. I. Backfill material (below filter pack): None 14.0 ft. I. Backfill material (below filter pack): None 14.0 ft. I. Backfill material (below filter pack): None 14.0 ft.	H. Screen joint, top II. MSL		0 Wall cocing	
A. Screen Type: Factory cut ☑ 1 1 Continuous slot □ 0 1 Other □ □ L. Borehole, diameter 8.0 in. M. O.D. well casing 2.37 in. N. I.D. well casing 2.06 in. a. Screen Type: Factory cut ☑ 1 1 Continuous slot □ 0 1 Manufacturer Boart Longyear Company c. Slot size:	I. Well bottom ft. MSL	or13.0_ ft. \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	7. Well casing,	
A. Screen Type: Factory cut ☑ 1 1 Continuous slot □ 0 1 Other □ □ L. Borehole, diameter 8.0 in. M. O.D. well casing 2.37 in. N. I.D. well casing 2.06 in. a. Screen Type: Factory cut ☑ 1 1 Continuous slot □ 0 1 Manufacturer Boart Longyear Company c. Slot size:			**************************************	Other 🗆 🔣
K. Borehole, bottom ft. MSL or 14.0 ft. Continuous slot □ 01 L. Borehole, diameter 8.0 in. M. O.D. well casing 2.37 in. N. I.D. well casing 2.06 in. Continuous slot □ 01 Other □ 22 b. Manufacturer Boart Longyear Company c. Slot size: 0.010 in. d. Slotted length: 11. Backfill material (below filter pack): None ⊠ 14 N. I.D. well casing 2.06 in.	J. Filter pack, bottom ft. MSL	or14.0 ft.		
L. Borehole, diameter 8.0 in. M. O.D. well casing 2.37 in. N. I.D. well casing 2.06 in. Manufacturer Boart Longyear Company	K Borehole bottom ft MSL	or 14.0 ft.	a, Screen Type:	· · · · · · · · · · · · · · · · · · ·
M. O.D. well casing 2.37 in. C. Slot size: d. Slotted length: 11. Backfill material (below filter pack): None ≥ 14 N. I.D. well casing 2.06 in. Thereby certify that the information on this form is true and correct to the best of my knowledge.	The potential of the state of t			Other 🗆 🔯
M. O.D. well casing 2.37 in. d. Slotted length: 10.0 ft. 11. Backfill material (below filter pack): None ≥ 14 Other □ □ I hereby certify that the information on this form is true and correct to the best of my knowledge.	L. Borehole, diameter in.	V(/////	\	
N. I.D. well casing 2.06 in. 11. Backfill material (below filter pack): None \(\text{None} \) 14 Other \(\text{Other} \) 14 Other \(\text{Other} \) 14	237			
N. I.D. well casing 2.06 in. Other Thereby certify that the information on this form is true and correct to the best of my knowledge.	m. O.D. wen casing m.			
	N. I.D. well casing 2.06 in.			
	I hereby certify that the information on this		t of my knowledge.	

Firm Boart Longyear Company
101 Alderson Street Schofield, WI 54476
Please complete both Forms 4400-113A and 4400-113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and condut involved. Personnally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin Department of Natural Resources Route To:	Watershed/Wastewater	Waste Management	MONITORING WELL CONSTRUCTION
	Remediation/Redevelopment		Form 4400-113A Rev. 6-97
Facility/Project Name	Local Grid Location of Well	L) E	Well Name
Koppers Inc. Facility	ft. S	n. □ E.	W-37A
Facility License, Permit or Monitoring No.	Grid Origin Location	(Check if estimated: []	Wis. Unique Well No DNR Well Number
Facility ID	Lat.	Long. or or	Date Well Installed
\$16009810	St. Plane <u>37761</u> ft. N	, 1948910 ft. E. S/C/Q	10/11/2006
Type of Well	Section Location of Waste/So	urce	Well Installed By: (Person's Name and Firm G. Jones
Well Code 11/mw	2E 1/4 of $2W 1/4$ of Sec Location of Well Relative to 3	2. 12, T. 70N, R. 1/20	G. Jones
Distance Well Is From Waste/Source	TEXPORTED OF THE PROPERTY OF TO	Sidegradient	164
Boundary ft.	d □ Downgradient n □		Boart Longyear Company
A. Protective pipe, top elevation	ft. MSL	1. Cap and lock?	⊠ Yes □ No
B. Well casing, top elevation 676	7 n. MSL	2. Protective cover	
	13 ft. MSL	b. Length:	
		c. Material;	Steel 🛮 04
D. Surface seal, bottom ft. MSI	or — ft.		Other 🗆
12. USC classification of soil near screen:	20000000	d. Additional pr	
	WO SPO		De:
Bedrock□		3. Surface seal:	Bentonite ⊠ 3 0 Concrete □ 0 1
13. Sieve analysis attached? ☐ Yes	□No		Other D
14. Drilling method used: Rotar	ry □50 🐰	4. Material betwee	n well casing and protective pipe:
Hollow Stem Aug			Bentonite 30
Oth	er 🗆 🏙 📗 🐰		Sand Other 🗵 💯
15. Drilling fluid used: Water □ 0 2 A	ir 🗆 0 1	5. Annular space s	
Drilling Mud 03 Nor	1 1220		mud weight. Rentonite-sand slurry 3 5
			mud weight Bentonite slurry 3 1 onite Bentonite-cement grout 5 0
16. Drilling additives used? ☐ Yes	⊠No		3 volume added for any of the above
Describe		f. How installe	•
17. Source of water (attach analysis):			Tremie pumped □ 0 2
17. Source of vitter (titation until sto).			Gravity ⊠ 08
			a. Bentonite granules ⊠ 3 3 3 3/8 in. □ 1/2 in. Bentonite pellets □ 3 2
E. Bentonite seal, topft. MSL	or 0.5 ft		Other Other
E. Bentonne seat, top R. Mat.	- OI II.		ial: Manufacturer, product name and mesh siz-
F. Fine sand, top ft. MSL	or2.5 ft. \	a	The second secon
		b. Volume adde	dft³
G. Filter pack, top ft. MSL	or <u>2.8</u> ft.	b. Volume adde 8. Filter pack mate	erial: Manufacturer, product name and mesh si
	20	a	#40 Badger
H. Screen joint, top ft. MSL	or ft.	b. Volume adde	
I. Well bottom ft. MSL	or 13.0 ft.	9. Well casing:	Flush threaded PVC schedule 40 ☐ 2 3 Flush threaded PVC schedule 80 ☐ 2 4
1. Well bottom 11. WISL	01 11.	10. Screen material	Other D
J. Filter pack, bottom ft. MSL	or 14.0 n.	10. Screen material	
		a. Screen Type	
K. Borehole, bottom ft. MSL	or 14.0 ft.		Continuous slot 🔲 0 1
			The Doart Longyear Company Other □ 🖺
L. Borehole, diameter8.0 in.	Natural Control of the Control of th	b. Manufacture c. Slot size:	f Boart Longyear Company 0.010 in.
M. O.D. well easing 2.37 in.		d. Slotted lengt	
III. W.D. WON VILINIE			ll (below filter pack): None ☑ 14
N. I.D. well casing 2.06 in.			Other Other
I hereby certify that the information on this	form is true and correct to the	best of my knowledge.	MALL COMPANY OF MANAGEMENT AND

Signature

Firm Boart Longyear Company

101 Alderson Street Schofield, WI 54476

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Tel: 715-359-7090

State of Wisconsin Department of Natural Resources Route To:	Watershed/Wastewater	Waste Management 🔀	MONITORING WELL CONSTRUCTION
The China Change and N.S.	Remediation/Redevelopment X [Local Grid Location of Well	Other	Form 4400-113A Rev. 6-97
Facility/Project Name	Local Grid Location of Well	ft. 🗆 E.	Well Name W-38A
Koppers Inc. Facility Facility License, Permit or Monitoring No.	Grid Origin Location	. (Check if estimated: \(\square\)	Wis. Unique Well No DNR Well Number
Tuesting saccounce, I amin or work to the	Lat Lor	ng. " or	Children Constant Con
Facility ID	St. Plane 544232 ft. N, J	-	Date Well Installed
816009810	Section Location of Waste/Source	· · · · · · · · · · · · · · · · · · ·	10/11/2006
Type of Well	SE 1/4 of Sw 1/4 of Sec. 12	The second secon	Well Installed By: (Person's Name and Firm
Well Code 11/mw	Location of Well Relative to Wast		G. Jones
Distance Well Is From Waste/Source Boundary ft.	u □ Upgradient s □ Si	degradient ot Known	Boart Longyear Company
A. Protective pipe, top elevation		1. Cap and lock?	⊠ Yes □ No
B. Well casing, top elevation 676.	9 ft. MSL ———————————————————————————————————	2. Protective cover	* `
2-72	ا ا ا	a. Inside diamete b. Length:	
		c. Material:	Steel 🗵 0 4
D. Surface seal, bottom ft. MSI	or <u>0.5</u> ft.		Other 🗆 💆
12. USC classification of soil near screen:	and it	d. Additional pro	otection?
GP GM GC GW S	W SP D	If yes, describ	e:
SM SC ML MHO C	ro cho	3. Surface seal:	Bentonite 🖂 3 0
		S. Gurraco scars	Concrete 🗵 0 1
13. Sieve analysis attached? Yes	I 🔯 🛭		Other 🗆 💆
14. Drilling method used: Rotar Hollow Stem Aug	y □50	4. Material between	n well casing and protective pipe: Bentonite 3 0
Oth-		8	Sand Other 🖂 🚟
		5. Annular space se	
	ir 🗆 0 1 📗 📓		nud weight. Bentonite-sand slurry 3 5
Drilling Mud □ 0 3 Nor	le □99 📓 🖁	cLbs/gal r	nud weight Bentonite slurry □ 3 1
16. Drilling additives used? ☐ Yes	⊠No		nite Bentonite-cement grout
Describe		f. How installed	
17. Source of water (attach analysis):			Tremie pumped 0 2
		()	Gravity ⊠ 0.8
The state of the s			a. Bentonite granules ⊠ 3 3 3/8 in. □ 1/2 in. Bentonite pellets □ 3 2
E. Bentonite seal, top ft. MSI.	or0.5_ ft. \	c	Other 🗆 🚉
F. Fine sand, topft. MSL	or 2.5 ft	7. Fine sand materi	al: Manufacturer, product name and mesh siz #7 Badger
•	\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \	to Madana and day	1
G. Filter pack, top ft. MSL	or <u>2.8</u> ft.	8. Filter pack mater	rial: Manufacturer, product name and mesh si #40 Badger
H. Screen joint, top ft. MSL	or <u>3.0</u> ft.	b. Volume added	1ft³
I. Well bottom ft. MSL	or 13.0 ft.	9. Well casing:	Flush threaded PVC schedule 40 \(\triangle 2 3\) Flush threaded PVC schedule 80 \(\triangle 2 4\)
J. Filter pack, bottom ft. MSL	or 14.0 ft.	10. Screen material:	
K. Borehole, bottomft. MSL	or 14.0 ft.	a. Screen Type:	Factory cut 🖾 1 1 Continuous slot 🗆 0 1
		was a second control of the second control o	Other Description Boart Longyear Company
L. Borehole, diameter 8.0 in.	Nantaviahirikalashir	b. Manufacturer c. Slot size:	Boart Longyear Company 0.010 in.
M. O.D. well casing 2.37 in.		d. Slotted length	10.0 ft.
N. I.D. well casing 2.06 in.			Other 🗆
I hereby certify that the information on this	Farm in true and assurates the best	of my Ironidade	
Signature Signature	144.		T 1 61 4 AAA TAA
John & Rich	Bourt Bong.	year Company Street Schofield, WI 54476	Tel: 715-359-7090 Fax: 715-355-5715

101 Alderson Street Schofield, WI 54476

Fax: 715-355-571

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State of Wisconsin Department of Natural Resources Route To:	Watershed/Wastewater	Waste Management 🕱	MONITORING WELL CONSTRUCTION
p 01 0 1	Remediation/Redevelopment	Other 🗆	Form 4400-113A Rev. 6-97
Facility/Project Name	Local Grid Location of Well	ft. DE.	Well Name
Koppers Inc. Facility Facility License, Permit or Monitoring No.	Grid Origin Location	(Check if estimated: \(\)	W-39A Wis. Unique Well No DNR Well Number
radincy execuse, coming of monthlying (vs.)		Long or	17 13. Onique Well Well Well Wallber
Facility ID	Ct Dlong 543900 ft N	, 1448849 R.E. S/C/D	Date Well Installed
816009810			
Type of Well	SETHOF SW THOF SON	12 T 48ND 14 DE	Well Installed By: (Person's Name and Firm
Well Code 11/mw	disocation of Well Relative to V	Waste/Source	G. Jones
Distance Well Is From Waste/Source Boundary ft.		Sidegradient Not Known	Boart Longyear Company
A. Protective pipe, top elevation	ft. MSL	1. Cap and lock?	
B. Well casing, top elevation 673.5	ft. MSL	2. Protective cover a. Inside diamete	• •
675.5	8 0.3400	b. Length:	5.0 ft.
C. Land surface elevation	II. MSL	c. Material:	Steel 🖾 0 4
D. Surface seal, bottom ft. MSI 12, USC classification of soil near screen:	or 0.5 ft.		Other 🗆 🕮
	1 \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	d. Additional pro	tection?
	WO SPO		7
Bedrock		3. Surface seal:	Bentonite 30
13. Sieve analysis attached? ☐ Yes	□No		Concrete
14. Drilling method used: Rotai	ry 🗆 5 0	4. Material between	well easing and protective pipe:
Hollow Stem Aug	er ⊠ <u>4 1</u>		Bentonite 30
Oth	er 🗆 🔯		Sand Other 🗵 🚉
15. Drilling fluid used: Water □ 0 2 A	ir 🗆 0 1		al: a. Granular Bentonite ⊠ 3 3
Drilling Mud 03 Nor			nud weight. Bentonite-sand slurry 3 5 nud weight Bentonite slurry 3 1
_			nite Bentonite-cement grout 50
16. Drilling additives used? ☐ Yes	⊠ No		volume added for any of the above
Describe		f. How installed	
17. Source of water (attach analysis):			Tremie pumped 0 2
		(D. A. M.	Gravity ⊠ 08
		6. Bentonne sear:	a. Bentonite granules ⊠ 3 3 3/8 in. □ 1/2 in. Bentonite pellets □ 3 2
E. Bentonite seal, top ft. MSL	or 0.5 ft.		Other C
		7. Fine sand materi	al: Manufacturer, product name and mesh siz
F. Fine sand, top ft. MSL	or	1 10017 /	#7 Badger
G. Filter pack, top ft. MSL	or <u>2.8</u> ft.		ial: Manufacturer, product name and mesh si
		a	#40 Badger
H. Screen joint, top ft. MSL	or3.0 ft.	b. Volume added	
	12.0	9. Well casing:	Flush threaded PVC schedule 40 🖂 23
I. Well bottom ft. MSL			Flush threaded PVC schedule 80 24
J. Filter pack, bottom ft. MSL	12.21	10. Screen material:	PVC Other D
J. I mer pack, content	10	a. Screen Type:	Factory cut 🗵 1 I
K. Borehole, bottom ft. MSL	or14.0 ft. \		Continuous slot 0 1
		//	Other 🗆 🔠
L. Borehole, diameter 8.0 in.			Boart Longyear Company
237		c. Slot size: d. Slotted length	$\frac{0.010}{10.0}$ in.
M. O.D. well casing $\frac{2.37}{}$ in.		_	(below filter pack): None 🗵 14
N. I.D. well casing 2.06 in.		A A A A A A A A A A A A A A A A A A A	Other D

I hereby certify that the information on this	(1) first name (1) for the first consecution of the first name (1) for the first name (1) f	best of my knowledge.	
Signature	Firm Boart Le	ongyear Company	Tel: 715-359-7090

Firm Boart Longyear Company
101 Alderson Street Schofield, WI 54476
Please complete both Forms 4400-113K and 4400-113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduit involved. Personnally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin Department of Natural Resources Route To:	Watershed/Wastewater	Waste Management 檱	MONITORING WELL CONSTRUCTION
No. of the control of	Remediation/Redevelopment	Other 🗆	Form 4400-113A Rev. 6-97
Facility/Project Name	Local Grid Location of Well	, D.E.	Well Name
Koppers Inc. Facility	Grid Origin Logation	Chack if actimated:	W-40A Wis. Unique Well No DNR Well Number
Facility License, Permit or Monitoring No.	Grid Origin Location	ong,oror	wis. Onique wen NolDink wen number
	Lat L	ong, or	[2] 60 XX/] [T
Facility ID	St. Plane 573912 ft. N.	1449027 A.E. S/C/C	Date Well Installed
816009810	Section Location of Waste/Sour	ce	10/12/2006
Type of Well	SE1/4 of SW 1/4 of Sec.	12 T. 48N.R. 14 DW	Well Installed By: (Person's Name and Firm G. Jones
Well Code 11/mw	ALOCALION OF WITH REPAIRE OF WA	asie/source	G. Jones
Distance Well Is From Waste/Source Boundary ft.	d □ Downgradient n □		Boart Longyear Company
A. Protective pipe, top elevation	ft. MSL	1. Cap and lock?	⊠ Yes □ No
	ft. MSL	2. Protective cover a. Inside diameter	· ·
Ç, I	3 ft. MSL <	b. Length:	5.0 ft.
C. Land surface elevation	rt. MSL	e. Material:	Steel 🗵 0 4
D. Surface seal, bottom ft. MSI	L or0.5_ ft	C. Waterial.	Other
12. USC classification of soil near screen:	2/20/20/2	d. Additional pro	
1	WD SPD	If yes describ	e:
			Bentonite 30
Bedrock□		3. Surface seal:	Concrete 🖾 01
13. Sieve analysis attached? ☐ Yes	□No 🔘		Other
		4 Material between	well easing and protective pipe:
14. Drilling method used: Rotan Hollow Stem Aug	ry □ 5 0	4. Material between	Bentonite 3 0
Oth			Sand Other S
- VIII			
15. Drilling fluid used: Water □ 0 2 A	ir 🗆 0 1		eal: a. Granular Bentonite 🖾 3 3
Drilling Mud □03 Nor			mud weight. Bentonite-sand slurry 3 5
Julia V J A CO.			nud weight Bentonite slurry 3 1
16. Drilling additives used? ☐ Yes	⊠ No		nite Bentonite-cement grout ☐ 50 volume added for any of the above
		f. How installed	
Describe		1. Flow instance	Tremie pumped 0 2
17. Source of water (attach analysis):			Gravity ⊠ 08
			•
			a. Bentonite granules ⊠ 3 3 3/8 in. □ 1/2 in. Bentonite pellets □ 3 2
m m m	0.5 %		Other D
E. Bentonite seal, top ft. MSL	, or rt.		al: Manufacturer, product name and mesh siz-
F. Fine sand, top ft. MSL	25 0	125N / /	
F. Fine sand, top ft. MSL	, or n.	a	1ft³
G. Filter pack, top ft. MSL	28 6		rial: Manufacturer, product name and mesh si
G. Filter pack, top ft. MSL	, or n.	a.	#40 Badger
H. Screen joint, top ft. MSL	or3.0 ft.	11	11t ³
		☐ 9. Well casing:	Flush threaded PVC schedule 40 🗵 23
I. Well bottom ft. MSL	or 13.0 ft.		Flush threaded PVC schedule 80 2 4
			Other 🗆 🏋
J. Filter pack, bottom ft. MSL	or14.0_ft.	10. Screen material:	PVC
,	1777	a. Screen Type:	Factory cut □ 1 1
K. Borehole, bottom ft. MSL	or <u>14.0</u> ft.		Continuous slot □ 0 1
		>	Other 🗆 🕮
L. Borehole, diameter 8.0 in.		b. Manufacturer	Boart Longyear Company
		c. Slot size:	<u>0.010</u> in.
M. O.D. well casing 2.37 in.		d. Slotted length	
			l (below filter pack): None ≥ 14
N. I.D. well casing 2.06 in.			Other □ 鐵
and a second sec			
I hereby certify that the information on this	form is true and correct to the be	st of my knowledge.	
Signature	1177	ngyear Company	Tel: 715-359-7090
John & Kirls		on Street Schofield, WI 54476	Fax: 715-355-5715

Please complete 19th Forms 4400-113A and 4400-113B and return to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and condut involved. Personnally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Koute to: Watershed/Wastew	,	Waste Management		
Remediation/Redev	velopment X	Other		
Facility/Project Name	County Name		Well Name	X
Koppers Inc.	Do	Wis. Unique Well N	W-3:	SA
Pacility License, Permit or Monitoring Number		Wis. Unique Well N	umber DNR We	ell ID Number
	<u> 1 b </u>	***************************************		
1. Can this well be purged dry?	□ No	11. Depth to Water		t After Development
2. Well development method surged with bailer and bailed surged with bailer and pumped surged with block and bailed surged with block and bailed surged with block and pumped surged with block, bailed and pumped compressed air bailed only pumped only pumped slowly	1 2 2 0 0 0	(from top of well casing) Date Time 12. Sediment in well bottom	c. 14:00 🗆 a.minches	<u>07</u> <u>01</u> 127/2007 y y m m d d y y y y 14:30
Other 7	^	13. Water clarity	Clear 💢 10 Turbid □ 15	Clear (x) 2 0 Turbid □ 2 5
3. Time spent developing well $\frac{3}{4}$. Depth of well (from top of well casising) $\frac{1}{4}$.	_		(Describe)	(Describe)
5. Inside diameter of well				
Volume of water in filter pack and well casing 7. Volume of water removed from well	-		ds were used and well is	at solid waste facility:
8. Volume of water added (if any)	gal.	solids		
9. Source of water added	***************************************	15. COD		mg/i
10. Analysis performed on water added? (If yes, attach results)	□ No	16. Well developed by First Name: Daw		m ne: Bessingpas
17. Additional comments on development:		TO THE STREET OF THE STREET O	- 	
Name and Address of Facility Contact/Owner/Responsible	Party	I hereby certify the	at the above information	is true and correct to the best
First Last Name: Name:		of my knowledge.		10 to the time to the to the time to the t
Facility/Firm:		Signature:	it Besseys	to the same
Street:	Oli ana caba da mangan ay capangan ay a gan ay a sa s		avid Bessi	
City/State/Zip:	·	Firm:	FREADIS F	3BL

Street:

City/State/Zip: __

MONITORING WELL DEVELOPMENT Form 4400-113B Rev. 7-98

<u>Route to:</u> Watershed/Wastewate	er 🔝	Waste Management			
Remediation/Redevel	opment 🔀	Other			
Facility/Project Name Co	ounty Name		Well Name	***************************************	
Koppers I'm.		Doverlas		h	1-36A
Facility License, Permit or Monitoring Number Co	Sunty Code	Wis. Unique Well Nu	imber		ll ID Number
1. Can this well be purged dry?	D No	11. Depth to Water	Before Dev	velopment	After Development
2. Well development method surged with bailer and bailed	<u>.</u> mín.	well casing) Date	b. 10/d	2/204 d y y y g a.m. p.m. inches	0 6 1 0 / 1 2 / 2 0 0 6 y y m m d d y y y y 1 a.m. □ a.m. □ p.m. □ inches Clear
4. Depth of well (from top of well casisng) ⊥ ∠ ≤ . ¬	Z ft.		***************************************		
5. Inside diameter of well Z O_ C	⊇ in.	7 · · · · · · · · · · · · · · · · · · ·			
6. Volume of water in filter pack and well casing 7. Volume of water removed from well 8. Volume of water added (if any)	Ż gal.	Fill in if drilling fluid 14. Total suspended solids			at solid waste facility:
9. Source of water added		15. COD	-	mg/l	,mg/l
10. Analysis performed on water added? (If yes, attach results)	□ No	16. Well developed by First Name: Day Firm: AP		Last Nam	ne: Mack
17. Additional comments on development:	***************************************			annakiria di Aliji a Millia di antara di antara di Aliji a Millia di Aliji a Millia di Aliji a Millia di Aliji	
Name and Address of Facility Contact/Owner/Responsible Pa	arty	Thombur and Co. A.	4 the object (
First Last Name: Name:	•	of my knowledge.		~	is true and correct to the best
Facility/Firm:	***************************************	Signature:	Det 1	Sessi	and the same

Print Name:_

Firm:

Route to: Watershed/Waster	water	Waste Management [XI		
Remediation/Rede	velopment [X]	Other []			
Pacility/Project Name	County Name		Well Name		***************************************
Facility License, Permit or Monitoring Number	1 1	Douglas		W-	36 A
Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Nu	mber	DNR Well	ID Number
1. Can this well be purged dry?	s 🕱 No	11. Depth to Water	***************************************	**************************************	After Development
surged with block and bailed 4 surged with block and pumped 5 surged with block, bailed and pumped 7 compressed air 2 bailed only 1 pumped only 5	1 2 2 0 0 0 1	well casing) Date	o. <u>ll 177</u> m m d d	.1 <u>200</u>	$- 5.20 \text{ ft.}$ $\frac{6}{y} \frac{11}{m} \frac{12212006}{\text{d}} \frac{9}{y} \frac{9}{y} \frac{9}{y}$ $09:300 \text{ p.m.}$ $ \text{ inches}$
pumped slowly 5		13. Water clarity	Clear 🗍 1	0 6	Clear □ 20
3. Time spent developing well 2	<u>S</u> min.	15. Water crafty	Turbid 2 1 : (Describe)	5 (Turbid Z(25 Describe)
4. Depth of well (from top of well casising) $\bot \bot \underline{\le}$			Very to	urbid	sightly turbed
5. Inside diameter of well	? <u>O</u> in.		Settle to the Control of the Control		
Volume of water in filter pack and well casing 7. Volume of water removed from well 5	, <u> </u>	Fill in if drilling fluid			solid waste facility:
8. Volume of water added (if any)	, gal.	solids	***************************************		
9. Source of water added		15. COD	***************************************	mg/l	
10. Analysis performed on water added? Ye (If yes, attach results)	s 🛭 No			Last Name:	Bessingpas
17. Additional comments on development:					
			·		
Name and Address of Facility Contact /Owner/Responsible First Last Name: Name:	Party	I hereby certify that of my knowledge.	the above info	ormation is	true and correct to the best
Facility/Firm:	**************************************	Signature:	<u>art Be</u>	وساخت	af fibritania
Street:		Print Name: Do	aud Be	<u> </u>	3.31<= >
City/State/Zip:	na andria da da	Firm: A	PCADIS	8/	37

Koute to: Watersned/Wastewater	Waste Management (4)
Remediation/Redevelopment 💢	Other
Facility/Project Name County Name County Name	Douglas Well Name W-37A
poppers Luc.	
Facility License, Permit or Monitoring Number County Code	Wis. Unique Well Number DNR Well ID Number
1. Can this well be purged dry? 2. Well development method surged with bailer and bailed surged with bailer and pumped surged with block and bailed surged with block and pumped surged with block and pumped surged with block, bailed and pumped contact No.	Before Development After Development 11. Depth to Water (from top of well casing) Date b. 10/12/2006 10/12/2006 mm d d d y y y y mm d d d y y y y a.m. a.m.
compressed air bailed only pumped only pumped slowly Other	Time c : p.m : p.m. 12. Sediment in well inches inches bottom 13. Water clarity Clear _ 10
3. Time spent developing wellmin.	(Describe) (Describe)
4. Depth of well (from top of well casising) 15.4 ft.	
5. Inside diameter of well	
6. Volume of water in filter pack and well casing	Fill in if drilling fluids were used and well is at solid waste facility: 14. Total suspended mg/l mg/l solids 15. COD mg/l mg/l 16. Well developed by: Name (first, last) and Firm First Name: Parid Last Name: Mack
10. Analysis performed on water added? Yes No (If yes, attach results)	
17. Additional comments on development:	Firm: AR(AD)S BBC
Name and Address of Facility Contact/Owner/Responsible Party First Last Name: Name:	I hereby certify that the above information is true and correct to the best of my knowledge.
Facility/Firm:	Signature: Dat Bessey
Street:	Print Name: David Bossingpos
City/State/Zip:	Firm: ARCADIS BBL

Route to: Watershed/Wastewater	Waste Management 🔀
Remediation/Redevelopment [5]	Other
Facility/Project Name County Name County Name	e Douglas Well Name W-37A
Facility License, Permit or Monitoring Number County Code	Wis. Unique Well Number DNR Well ID Number
1. Can this well be purged dry? 2. Well development method surged with bailer and bailed surged with bailer and pumped surged with block and bailed surged with block and pumped surged with block and pumped compressed air bailed only pumped only pumped clowly	Before Development After Development 11. Depth to Water (from top of well casing) Date b. 1 / 2 / 2 / 2 / 6 / 1 / 2 / 2 / 2 / 6 / 6 / 7 / 9 / 9 / 9 / 9 / 9 / 9 / 9 / 9 / 9
pumped slowly	13. Water clarity Clear 130 10 Clear 12√20 Turbid □ 15 Turbid □ 25
3. Time spent developing well	(Describe) (Describe)
4. Depth of well (from top of well casising) $\bot \bot 5. $ ft.	
5. Inside diameter of well	
6. Volume of water in filter pack and well casing gal. 7. Volume of water removed from well Z _ Sgal. 8. Volume of water added (if any) gal. 9. Source of water added	Fill in if drilling fluids were used and well is at solid waste facility: 14. Total suspended mg/l mg/l solids 15. COD mg/l mg/l 16. Well developed by: Name (first, last) and Firm
10. Analysis performed on water added? ☐ Yes ☐ No (If yes, attach results)	First Name: Dovid Last Name: Bessingpas Firm: A-RCADIS BBL
17. Additional comments on development:	,
Name and Address of Facility Contact/Owner/Responsible Party First Last Name: Name:	I hereby certify that the above information is true and correct to the best of my knowledge.
Facility/Firm:	Signature: Dat Bessingan
Street:	Print Name: David Bessingpas
City/State/Zip:	Firm: ARCADIS BBL

Route to: Watershed/ Wastewater	Waste Management X
Remediation/Redevelopment \[\subseteq \] Facility/Project Name County Name	Other Weil Name
Facility/Project Name Koppers Inc. County Name	Douglas W-38A
Facility License, Permit or Monitoring Number County Code	Wis. Unique Well Number DNR Well ID Number
16	
1. Can this well be purged dry?	Before Development After Development 11. Depth to Water
2. Well development method	(from top of $a = 9.50$ ft. PRI_{-} ft.
surged with bailer and bailed 💢 41	well casing)
surged with bailer and pumped G 61	
surged with block and bailed 4 2	Date $\begin{array}{c ccccccccccccccccccccccccccccccccccc$
surged with block and pumped \Box 62	mm ddyyyy mm ddyyyy
surged with block, bailed and pumped 70	
compressed air	Time c. $10: \ge 6 \square \text{ p.m.}$ $11: \ge 6 \square \text{ p.m.}$
bailed only	12. Sediment in well inches inches
pumped only 5 1 pumped slowly 5 5	12. Sediment in well inches inches
pumped slowly	13. Water clarity Clear 10 Clear 20
	Turbid (2.15 Turbid (2.25
3. Time spent developing well 3_ Omin.	(Describe) (Describe)
, ym, p	MANUFACTURE AND ASSESSMENT OF THE PROPERTY OF
4. Depth of well (from top of well casisng)	
5. Inside diameter of well	
6. Volume of water in filter pack and well	And the second s
casing gal.	PROPERTY AND A STANDARD AND A STANDA
8ai.	Fill in if drilling fluids were used and well is at solid waste facility:
7. Volume of water removed from well 3_ \(\triangle \) gal.	,
•	14. Total suspended mg/l
8. Volume of water added (if any) gal.	solids
9. Source of water added	15. COD mg/l mg/l
A Limited States of the Control of t	16. Well developed by: Name (first, last) and Firm
10. Analysis performed on water added? ☐ Yes ☐ No	First Name: David Last Name: 13essingpos
(If yes, attach results)	Firm: ARCADIS BBL
17. Additional comments on development:	Film: // /-C///// /3/3C
17. Estational commons of wordspirote.	
Name and Address of Facility Contact/Owner/Responsible Party	I hereby certify that the above information is true and correct to the best
First Last	of my knowledge.
Name: Name:	
Facility/Firm:	Signature: Dail Bearing
~ ************************************	A 1 D
Street:	Print Name: David Bessingpas
City/State/Zip:	Firm: ARCADIS BBL
And I seemed erethy	The state of the s

Route to: Watershed/Wastewater	Waste Management 🔀
Remediation/Redevelopment X	Other
Facility/Project Name Kappers Inc. County Name County Code	Douglas Well Name W-39A
Facility License, Permit or Monitoring Number County Code	Wis. Unique Well Number DNR Well ID Number
1. Can this well be purged dry?	Before Development After Development 11. Depth to Water
2. Well development method surged with bailer and bailed	(from top of well casing) Date b. 1 / Z Z / Z O O O D D Z Z O O O D D D D D D D D D
pumped slowly	bottom 13. Water clarity Clear 10 Clear 20
3. Time spent developing well	Turbid 🔀 1 5 Turbid 🛱 2 5 (Describe) (Describe)
4. Depth of well (from top of well casisng) $- \frac{1}{2} \frac{1}{2$	
5. Inside diameter of well 2.00 in.	
6. Volume of water in filter pack and well casing	Fill in if drilling fluids were used and well is at solid waste facility: 14. Total suspended mg/l mg/l solids
9. Source of water added	15. COD mg/l mg/l
10. Analysis performed on water added?	16. Well developed by: Name (first, last) and Firm First Name: David Last Name: 13e55ingpas Firm: ARCADIS 1313L
17. Additional comments on development:	
Name and Address of Facility Contact/Owner/Responsible Party First Last Name: Name:	I hereby certify that the above information is true and correct to the best of my knowledge.
Facility/Firm:	Signature: Dat Beargan
Street:	Signature: Dat Bessings Print Name: David Bessingpas
City/State/Zip:	Firm: ARCADIS BBL

Notice to: Watersned/ Wastewater []	waste Management [X]
Remediation/Redevelopment	Other
Facility/Project Name Koppers In(. County Name	Douglas Well Name W-40A
Facility License, Permit or Monitoring Number County Code	Wis. Unique Well Number DNR Well ID Number
16	
1. Can this well be purged dry?	Before Development After Development 11. Depth to Water
2. Well development method	(from top of a. 11.50 ft. $0R1$. ft.
surged with bailer and bailed 💢 41	well casing)
surged with bailer and pumped \(\bigcap 61	
surged with block and bailed 42	Date b. 11/22/2006 11/22/2006 mm d d y y y y
surged with block and pumped \(\square 62	•
surged with block, bailed and pumped 70	Time c. 10:00 p.m. 10:20 p.m.
compressed air	Time c. $\frac{10}{2}$: $\frac{6}{2}$ $\frac{1}{2}$ p.m. $\frac{10}{2}$: $\frac{20}{2}$ $\frac{1}{2}$ p.m.
bailed only	112. Sediment in well inches inches
pumped only	12. Sediment in well inches inches
pumped slowly \(\square\) 5 0 Other \(\square\) \(\square\)	13. Water clarity Clear 10 Clear 20
	Turbid X 15 Turbid X 25
3. Time spent developing well Z Cmin.	(Describe) (Describe)
	Westerlands down Conference of the Conference of
4. Depth of well (from top of well casisng)	
5. Inside diameter of well Z. O. Cin.	**************************************
The same and says	PERSONAL PROPERTY AND ADDRESS
6. Volume of water in filter pack and well	
casing gal.	
none prom	Fill in if drilling fluids were used and well is at solid waste facility:
7. Volume of water removed from well Z_ Sgal.	
8. Volume of water added (if any) gal.	14. Total suspended mg/l, mg/l solids
9. Source of water added	15. COD mg/l mg/l
	16. Well developed by: Name (first, last) and Firm
10. Analysis performed on water added? Yes No	First Name: Down Last Name: Bessing pas
(If yes, attach results)	Firm: APCADIS BBC
17. Additional comments on development:	
	•
Y I III CY WY	
Name and Address of Facility Contact/Owner/Responsible Party First Last	I hereby certify that the above information is true and correct to the best
Name: Name:	of my knowledge.
- 1////	+ 10
Facility/Firm:	Signature: Ort /Scholypa
Sireet:	Print Name: David Bessingpas
	100000000000000000000000000000000000000
City/State/Zip:	Firm: AR(ADIS BBC

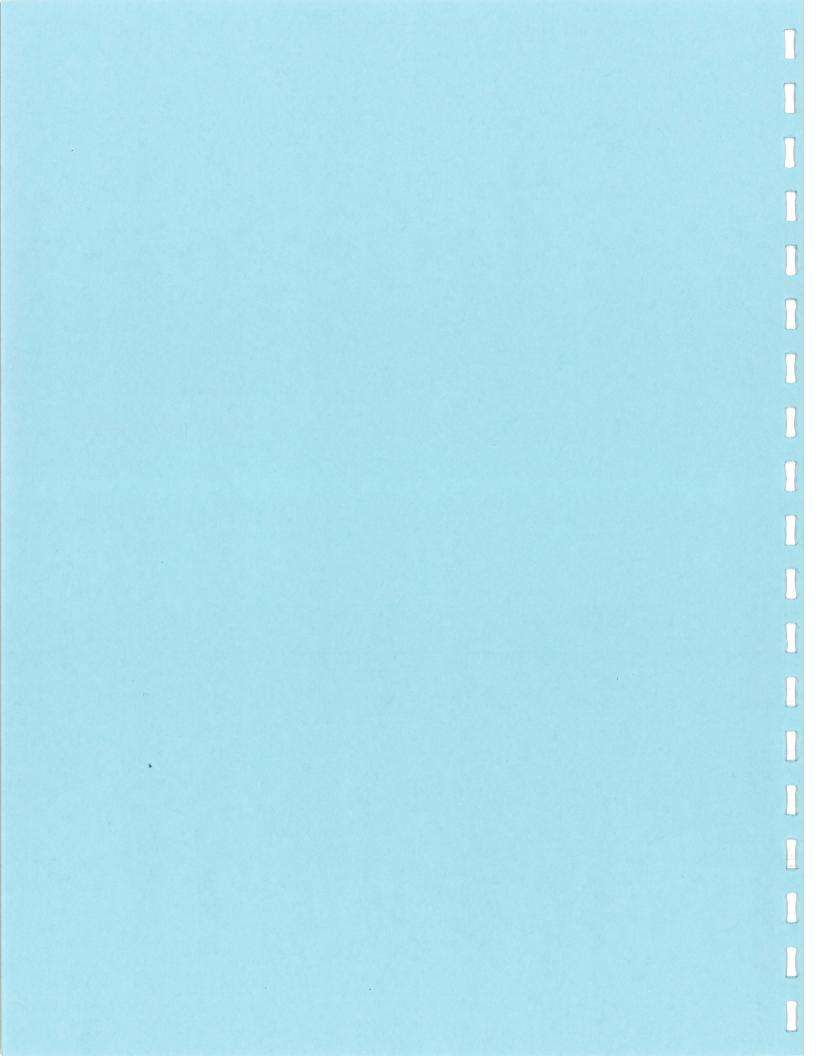
Facility	Vame					License	e, Perm	iit or Monitorin	g No. Date		\$ x	Complet	ted By (Name a	nd Firm)						
	OPPEV		<u>nc, 1</u>	, marini di mani	6009810	Tree 40 .	~ •	711	***************************************	/15		P^{α}	uid Bes	6.47,000	<u> </u>	RCA	<u> </u>	1.5	<u> 154</u>	
WI Unique	Well	DNR Well ID		Dir.	Duto	Well					rence	Soreen	Depths	Well	Screen	Well	Well	Enf.	Grad-	Distance
Well No	Name	Number	Well Location	N S E W	Date Established	Diam.	Туре	Top of Well Casing	Surface	MSL	Site Papum	Тор	Initial Groundwater	Depth	Length	Туре	Status	Stds.	ient	to Waste
	W-35A		547309.8 1449487	ν Ε	10/11/06	2	P	675.30				5,77	14.00	IS.77	lô	11/mw	A		Ś	0
	₩-36A		544791.7 1449 021		jo/nlo6	2	P	678. 59	676.15	X		5.44	4,55	15,44	ĺΟ	11/mi	A		5	0
***************************************	w-37A		544461.4 1448910	N E	ioliiles	2.	P	676.67	674.ZS	X		5,47	12.41	15,42	10	illmw	A		5	0
3*************************************	w-38A		544232.1 1448767		10/11/06	7	P	676.90	674,4 7	X		5.43	9,50	15,43	ίO	Mmw	A		5	0
	W-39A		543900.4 1448849		10/12/06	Z	P	678.53	615.77	Х		5.76	¥.60	15.76	lθ	Marw	Α		5	0
	W-40A		543911.6 1449027	Market Same	10/12/06	2	P	676.94	674.33	X		5.61	11.50	15.61	10	i) mir	A		5	0
***************************************			***************************************								***************************************									

**************									***************************************											Marie Marie Marie
																				and the same
⊠ Sta	Coordinat to Plane Co Norther Central	oordinate m l	Local Gri System	3	d Origin Locatio							emarks:					***************************************	***************************************		
	☐ Southe	m		St.	Plane	1	LN.	M-M-1	ft E. S/9	C/N 2	one _	*****************					************		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	KING THE PARTY.

ARCADIS BBL

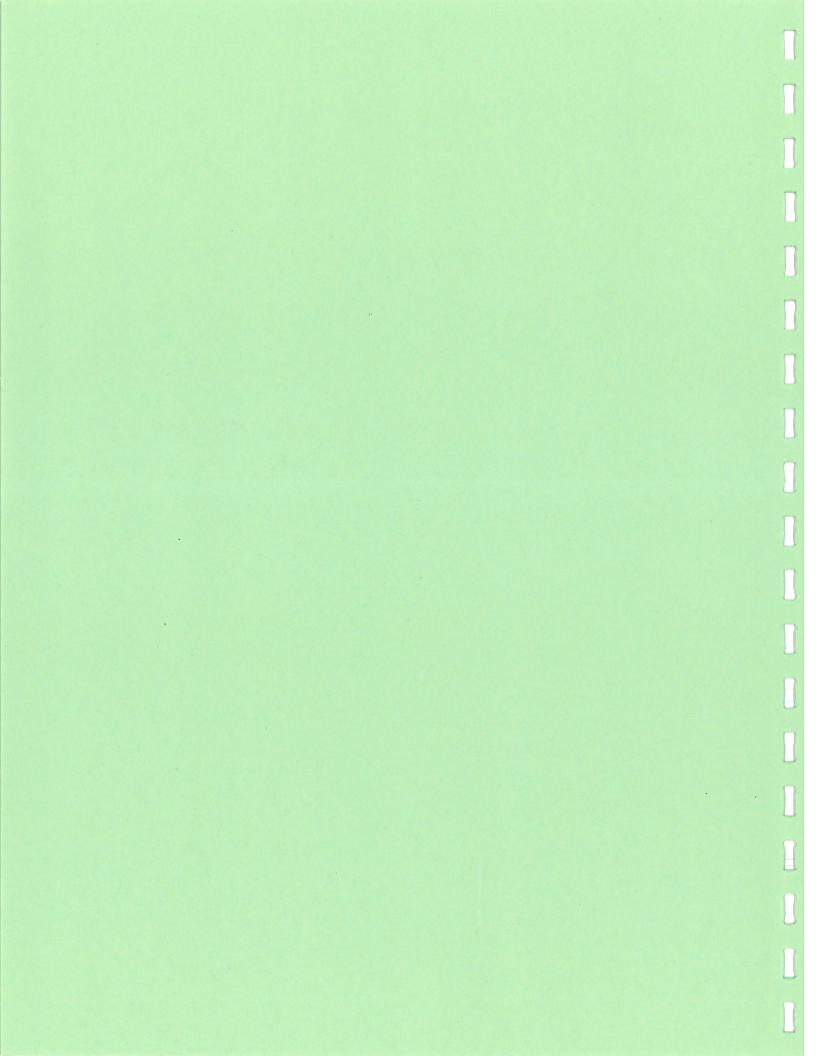
Attachment 3

Laboratory Analytical Data Sheets



ARCADIS BBL

VOCs and SVOCs





April 06, 2007

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, comprised of the following work order(s), for test samples received by TriMatrix Laboratories:

Work Order	Received	Description
0610522	10/27/2006	Laboratory Services
0610523	10/25/2006	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 Conference (NELAC); any qualifications of results, including sample acceptance requirements, are explained in the Statement of Data Qualifications.

Estimates of analytical uncertainties for the test results contained within this report are available upon request.

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

Sincerely,

Gary L. Wood Project Chemist

Enclosures(s)

The total number of pages in this report, including this page, is 16.



Client: Beaze

Beazer East, Inc.

Work Order:

0610522

Project:

Superior GW - WI Cert. #999472650

Description: Sampled: Laboratory Services

Client Sample ID: W-39A

Sampled By:

10/25/06 10:00

Lab Sample ID:

0610522-03

Received:

F&T

Matrix:

Unit:

Water

Prepared:

10/27/06 08:45 10/30/06 By:

By: ASC

Dilution Factor:

ug/L

Prepared:
Date Analyzed:

11/02/06

By: DMC

QC Batch:

0612628

Analytical Batch:

6110265

5

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
	Analyto	Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.070	0.021
208-96-8	Acenaphthylene	NDU	0.13	0.038
120-12-7	Anthracene	ND U	0.099	0.030
56-55-3	Benzo(a)anthracene	ND U	0.19	0.058
50-32-8	Benzo(a)pyrene	ND U	0.10	0.031
205-99-2	Benzo(b)fluoranthene	ND U	0.12	0.038
207-08-9	Benzo(k)fluoranthene	ND U	0.16	0.048
191-24-2	Benzo(g,h,i)perylene	NDU	0.099	0.030
59-50-7	4-Chloro-3-methylphenol	NDU	0.081	0.024
95-57-8	2-Chlorophenol	NDU	0.094	0.028
218-01-9	Chrysene	ND U	0.099	0.030
53-70-3	Dibenz(a,h)anthracene	NDU	0.062	0.019
120-83-2	2,4-Dichlorophenol	ND U	0.074	0.022
105-67-9	2,4-Dimethylphenol	NDU	1.8	0.54
534-52-1	4,6-Dinitro-2-methylphenol	ND U	0.79	0.24
51-28-5	2,4-Dinitrophenol	ND U	0.69	0.21
206-44-0	Fluoranthene	ND U	0.11	0.033
86-73-7	Fluorene	ND U	0.089	0.027
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.069	0.021
91-57-6	2-Methylnaphthalene	ND U	0.074	0.022
90-12-0	1-Methylnaphthalene	ND U	0.092	0.028
95-48-7	2-Methylphenol	ND U	1.5	0.45
106-44-5	4-Methylphenol	ND U	1.3	0.38
91-20-3	Naphthalene	NDU	0.073	0.022
100-02-7	4-Nitrophenol	ND U	1.5	0.44
88-75-5	2-Nitrophenol	ND U	0.12	0.038
87-86-5	Pentachlorophenol	ND U	0.20	0.061
85-01-8	Phenanthrene	ND U	0.11	0.033
108-95-2	Phenol	ND U	0.18	0.055
129-00-0	Pyrene	ND U	0.14	0.044
58-90-2	2,3,4,6-Tetrachlorophenol	ND U	0.15	0.047
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Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: W-39A

Lab Sample ID:

0610522-03

Matrix:

Water

Unit: Dilution Factor:

ug/L 1

QC Batch:

0612628

Work Order:

0610522

Description:

Laboratory Services

Sampled:

10/25/06 10:00

Sampled By:

Received:

10/27/06 08:45

Prepared:

10/30/06

By: ASC

Date Analyzed:

11/02/06

By: DMC

Analytical Batch: 6110265

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

Analytical

CAS Number	Analyte	Result	LOQ	LOD			
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	1.7	0.50			
88-06-2	2,4,6-Trichlorophenol	NDU	0.083	0.025			
95-95-4	2,4,5-Trichlorophenol	NDU	0.100	0.030			

% Recovery	Control Limits
43	16-82
27	11-69
66	26-116
66	<i>26-116</i>
52	<i>37-123</i>
52	<i>37-123</i>
75	<i>32-127</i>
69	<i>30-119</i>
69	30-119
	43 27 66 66 52 52 75 69



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: W-38A

Lab Sample ID:

0610522-04

Matrix:

Water

Unit:

ug/L

Dilution Factor:

1

QC Batch:

0612628

Work Order:

0610522

Description:

Laboratory Services

Sampled:

10/25/06 09:00

Sampled By:

F&T

Received:

10/27/06 08:45

Prepared:

10/30/06

Date Analyzed:

By: ASC

11/02/06

By: DMC

Analytical Batch: 6110265

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	ND U	0.070	0.021
208-96-8	Acenaphthylene	ND U	0.13	0.038
120-12-7	Anthracene	0.054J	0.099	0.030
56-55-3	Benzo(a)anthracene	ND U	0.19	0.058
50-32-8	Benzo(a)pyrene	0.073J	0.10	0.031
205-99-2	Benzo(b)fluoranthene	0.21	0.12	0.038
207-08-9	Benzo(k)fluoranthene	0.0551	0.16	0.048
191-24-2	Benzo(g,h,i)perylene	ND U	0.099	0.030
59-50-7	4-Chloro-3-methylphenol	ND U	0.081	0.024
95-57-8	2-Chlorophen ol	ND U	0.094	0.028
218-01-9	Chrysene	0.080.0	0.099	0.030
53-70-3	Dibenz(a,h)anthracene	NDU	0,062	0.019
120-83-2	2,4-Dichlorophenol	ND U	0.074	0.022
105-67-9	2,4-Dimethylphenol	ND U	1.8	0.54
534-52-1	4,6-Dinitro-2-methylphenol	NDU	0.79	0.24
51-28-5	2,4-Dinitrophenol	ND U	0.69	0.21
206-44-0	Fluoranthene	0.0793	0.11	0.033
86-73-7	Fluorene	ND U	0.089	0.027
193-39-5	Indeno(1,2,3-cd)pyrene	0.038J	0.069	0.021
91-57-6	2-Methylnaphthalene	ND U	0.074	0.022
90-12-0	1-Methylnaphthalene	NDU	0.092	0.028
95-48-7	2-Methylphenol	NDU	1.5	0.45
106-44-5	4-Methylphenol	NDU	1.3	0.38
91-20-3	Naphthalene	NDU	0.073	0.022
100-02-7	4-Nitrophenol	NDU	1.5	0.44
88-75-5	2-Nitrophenol	ND U	0.12	0.038
87-86-5	Pentachlorophenol	NDU	0.20	0.061
85-01-8	Phenanthrene	NDU	0.11	0.033
108-95-2	Phenol	0.068J	0.18	0.055
129-00-0	Pyrene	0.11 J	0.14	0.044
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	0.15	0.047
on next page				

Continued on next page



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: W-38A

Lab Sample ID:

0610522-04

Matrix:

Unit:

Dilution Factor:

QC Batch:

ug/L

Water

1

0612628

Work Order:

0610522

Description:

Laboratory Services

Sampled:

10/25/06 09:00

Sampled By: Received:

F&T 10/27/06 08:45

10/30/06

By: ASC

Prepared: Date Analyzed:

11/02/06

By: DMC

Analytical Batch:

6110265

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
935-95-5	2,3,5,6-Tetrachlorophenol	ND U	1.7	0.50
88-06-2	2,4,6-Trichlorophenol	NDU	0.083	0.025
95-95-4	2,4,5-Trichlorophenol	ND U	0.100	0.030
Surrogates	% Recovery	Control Limits		
2-Fluorophenol	36	<i>16-82</i>		
Phenol-d6	26	<i>11-69</i>		
Nitrobenzene-d5	66	<i>26-116</i>		
Nitrobenzene-d5	66	<i>26-116</i>		
2-Fluorobiphenyl	52	<i>37-123</i>		
2-Fluorobiphenyl	52	<i>37-123</i>		
2,4,6-Tribromophenol	78	<i>32-127</i>		
o-Terphenyl	70	<i>30-119</i>		
o-Terphenyl	70	<i>30-119</i>		



Client: Beazer East, Inc.

Project: Superior GW - WI Cert. #999472650

Client Sample ID: **W-14A**Lab Sample ID: **0610523-09**

Matrix: Water Unit: ug/L

Dilution Factor: 1

QC Batch: 0612628

Work Order:

0610523

Description:

Laboratory Services

Sampled: Sampled By: 10/23/06 14:30 Dave Hreha

Received:

10/25/06 00:

Prepared:

10/25/06 08:30 10/30/06 By:

Date Analyzed:

10/30/06 By: ASC 11/01/06 By: DMC

Analytical Batch: 6110146

Semivolatile Organic Compounds by EPA Method 8270C

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
83-32-9	Acenaphthene	0.025J	0.070	0.021
208-96-8	Acenaphthylene	ND U	0.13	0.021
120-12-7	Anthracene	0.26	0.099	0.030
56-55-3	Benzo(a)anthracene	ND U	0.19	0.058
50-32-8	Benzo(a)pyrene	ND U	0.19	0.031
205-99-2	Benzo(b)fluoranthene	ND U	0.10	0.031
207-08-9	Benzo(k)fluoranthene	ND U	0.12	0.038
191-24-2	Benzo(g,h,i)perylene	ND U	0.099	0.048
59-50-7		ND U	0.099	0.030
	4-Chloro-3-methylphenol			
95-57-8	2-Chlorophenol	ND U	0.094	0.028
218-01-9	Chrysene	ND U	0.099	0.030
53-70-3	Dibenz(a,h)anthracene	ND U	0.062	0.019
120-83-2	2,4-Dichlorophenol	0.29	0.074	0.022
105-67-9	2,4-Dimethylphenol	ND U	1.8	0.54
534-52-1	4,6-Dinitro-2-methylphenol	ND U	. 0.79	0.24
51-28-5	2,4-Dinitrophenol	ND U	0.69	0.21
206-44-0	Fluoranthene	0.23	0.11	0.033
86-73-7	Fluorene	ND U	0.089	0.027
193-39-5	Indeno(1,2,3-cd)pyrene	ND U	0.069	0.021
91-57-6	2-Methylnaphthalene	ND U	0.074	0.022
90-12-0	1-Methylnaphthalene	NDU	0.092	0.028
95-48-7	2-Methylphenol	ND U	1.5	0.45
106-44-5	4-Methylphenol	NDU	1.3	0.38
91-20-3	Naphthalene	ND U	0.073	0.022
100-02-7	4-Nitrophenol	ND U	1.5	0.44
88-75-5	2-Nitrophenol	NDU	0.12	0.038
87-86-5	Pentachlorophenol	0.66	0.20	0.061
85-01-8	Phenanthrene	0.0473	0.11	0.033
108-95-2	Phenol	0.0813	0.18	0.055
129-00-0	Pyrene	0.28	0.14	0.044
58-90-2	2,3,4,6-Tetrachlorophenol	0.13 J	0.15	0.047
	•			

Continued on next page



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: W-14A Lab Sample ID:

Matrix:

0610523-09

Water

Unit:

ug/L 1

Dilution Factor:

QC Batch: 0612628 Work Order:

0610523

Description:

Laboratory Services

Sampled:

10/23/06 14:30

Sampled By:

Dave Hreha

Received:

10/25/06 08:30

Prepared:

10/30/06

By: ASC

Date Analyzed:

11/01/06

By: DMC

Analytical Batch: 6110146

3,5,6-Tetrachlorophenol 4,6-Trichlorophenol 4,5-Trichlorophenol	Result NDU NDU 0.0321	1.7 0.083	0.50 0.025
4,6-Trichlorophenol	ND U		
•		0.083	0.025
4,5-Trichlorophenol	0.0321		0.025
	0.0323	0.100	0.030
% Recovery	Control Limits		
43	<i>16-82</i>		
28	11-69		
74	<i>26-116</i>		
74	<i>26-116</i>		
73	<i>37-123</i>		
73	<i>37-123</i>		
71	32-127		
78	30-119		
78	30-119		
	% Recovery 43 28 74 74 73 73 73 71 78	% Recovery Control Limits 43 16-82 28 11-69 74 26-116 74 26-116 73 37-123 73 37-123 71 32-127 78 30-119	% Recovery Control Limits 43 16-82 28 11-69 74 26-116 74 26-116 73 37-123 73 37-123 71 32-127 78 30-119



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: W-16A Lab Sample ID:

Matrix:

0610523-10

Water

Unit:

ug/L 2 Dilution Factor:

QC Batch:

0613051

Work Order:

0610523

Description:

Laboratory Services

Sampled:

10/23/06 15:50

Sampled By:

Dave Hreha

Received:

10/25/06 08:30

Prepared:

11/06/06 By: LEW

Date Analyzed:

11/06/06 By: LEW

Analytical Batch:

6110649

Halogenated and Aromatic Volatiles by EPA Method 8021B

			Analytical		
CAS Number	Analyte		Result	LOQ	LOD
71-43-2	Benzene		110	0.41	0.12
Surrogates		% Recovery	Control Limits		
aaa-Trifluorotoluene		102	90-113		



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: W-17A Lab Sample ID:

0610523-11

Matrix:

Water

Unit:

ug/L

Dilution Factor:

20

QC Batch:

0612628

Work Order:

0610523

Description:

Laboratory Services

Sampled:

10/24/06 09:20

Sampled By:

Dave Hreha

Received:

10/25/06 08:30

Prepared:

10/30/06

By: ASC

Date Analyzed:

10/31/06

By: DMC

Analytical Batch: 6103146

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	91	1.4	0.43
208-96-8	Acenaphthylene	NDU	2.5	0.76
120-12-7	Anthracene	7.0	2.0	0.60
56-55-3	Benzo(a)anthracene	ND U	3.8	1.2
50-32-8	Benzo(a)pyrene	ND U	2.0	0.62
205-99-2	Benzo(b)fluoranthene	ND U	2.5	0.75
207-08-9	Benzo(k)fluoranthene	ND U	3.2	0.96
191-24-2	Benzo(g,h,i)perylene	ND U	2.0	0.60
59-50-7	4-Chloro-3-methylphenol	ND U	1.6	0.49
95-57-8	2-Chlorophenol	ND U	1.9	0.57
218-01-9	Chrysene	ND U	2.0	0.60
53-70-3	Dibenz(a,h)anthracene	NDU	1.2	0.38
120-83-2	2,4-Dichlorophenol	ND U	1.5	0.45
105-67-9	2,4-Dimethylphenol	34 Ј	36	11
534-52-1	4,6-Dinitro-2-methylphenol	ND U	16	4.8
51-28-5	2,4-Dinitrophenol	ND U	14	4.2
206-44-0	Fluoranthene	7.6	2.2	0.66
86-73-7	Fluorene	38	1.8	0.54
193-39-5	Indeno(1,2,3-cd)pyrene	ND U	1.4	0.42
91-57-6	2-Methylnaphthalene	0.67 J	1.5	0.45
90-12-0	1-Methylnaphthalene	41	1.8	0.56
95-48-7	2-Methylphenol	120	30	9.0
106-44-5	4-Methylphenol	190	25	7.6
91-20-3	Naphthalene	79	1.5	0.44
100-02-7	4-Nitrophenol	ND U	29	8.8
88-75-5	2-Nitrophenol	ND U	2.5	0.75
87-86-5	Pentachlorophenol	ND U	4.0	1.2
85-01-8	Phenanthrene	27	2.2	0.65
108-95-2	Phenol	170	3.6	1.1
129-00-0	Pyrene	3.4	2.9	0.88
58-90-2	2,3,4,6-Tetrachlorophenol	ND U	3.1	0.93
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^{*}See Statement of Data Qualifications



Project:

ANALYTICAL REPORT

Client: Beazer East, Inc.

Superior GW - WI Cert. #999472650

Client Sample ID: W-26A

Lab Sample ID: **0610523-12** Matrix: Water

Unit: ug/L
Dilution Factor: 1

QC Batch: 0612628

Work Order: 0610523

Description: Laboratory Services

Sampled: Sampled By: 10/24/06 11:30 Dave Hreha

Received: 10/25/06 08:30

Prepared: 10/30/06 By: ASC Date Analyzed: 11/01/06 By: DMC

Analytical Batch: 6110146

Semivolatile Organic Compounds by EPA Method 8270C

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
83-32-9	Acenaphthene	ND U	0.070	0.021
208-96-8	Acenaphthylene	ND U	0.070	0.021
120-12-7	Anthracene	ND U	0.13	0.030
		ND U	0.099	0.030
56-55-3	Benzo(a)anthracene			
50-32-8	Benzo(a)pyrene	NDU	0.10	0.031
205-99-2	Benzo(b)fluoranthene	ND U	0.12	0.038
207-08-9	Benzo(k)fluoranthene	ND U	0.16	0.048
191-24-2	Benzo(g,h,i)perylene	ND U	0.099	0.030
59-50-7	4-Chloro-3-methylphenol	ND U	0.081	0.024
95-57-8	2-Chlorophenol	ND U	0.094	0.028
218-01-9	Chrysene	NDU	0.099	0.030
53-70-3	Dibenz(a,h)anthracene	NDU	0.062	0.019
120-83-2	2,4-Dichlorophenol	NDU	0.074	0.022
105-67-9	2,4-Dimethylphenol	ND U	1.8	0.54
534-52-1	4,6-Dinitro-2-methylphenol	NDU	0.79	0.24
51-28-5	2,4-Dinitrophenol	ND U	0.69	0.21
206-44-0	Fluoranth ene	ND U	0.11	0.033
86-73-7	Fluorene	ND U	0.089	0.027
193-39-5	Indeno(1,2,3-cd)pyrene	ND U	0.069	0.021
91-57-6	2-Methylnaphthalene	ND U	0.074	0.022
90-12-0	1-Methylnaphthalene	NDU	0.092	0.028
95-48-7	2-Methylphenol	NDU	1.5	0.45
106-44-5	4-Methylphenol	ND U	1.3	0.38
91-20-3	Naphthalene	NDU	0.073	0.022
100-02-7	4-Nitrophenol	NDU	1.5	0.44
88-75-5	2-Nitrophenol	NDU	0.12	0.038
87-86-5	Pentachlorophenol	NDU	0.20	0.061
85-01-8	Phenanthrene	NDU	0.11	0.033
108-95-2	Phenol	ND U	0.18	0.055



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: W-26A

Lab Sample ID:

0610523-12

Matrix:

Water

Unit: Dilution Factor: ug/L 1

QC Batch:

0612628

Work Order:

0610523

Description:

Laboratory Services

Sampled:

10/24/06 11:30

Sampled By:

Dave Hreha

Received: Prepared: 10/25/06 08:30

Date Analyzed:

10/30/06 11/01/06 By: ASC

By: DMC

Analytical Batch: 6110146

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
129-00-0	Pyrene	NDU	0.14	0.044
58-90-2	2,3,4,6-Tetrachlorophenol	ND U	0.15	0.047
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	1.7	0.50
88-06-2	2,4,6-Trichlorophenol	NDU	0.083	0.025
95-95-4	2,4,5-Trichlorophenol	NDU	0.100	0.030
Surrogates	% Recovery	Control Limits		
2-Fluorophenol	41	16-82		
Phenol-d6	27	11-69		
Nitrobenzene-d5	63	26-116		
Nitrobenzene-d5	63	<i>26-116</i>		
2-Fluorobiphenyl	58	<i>37-123</i>		
2-Fluorobiphenyl	58	<i>37-123</i>		
2,4,6-Tribromophenol	75	<i>32-127</i>		
o-Terphenyl	75	30-119		
o-Terphenyl	75	<i>30-119</i>		



Dilution Factor:

2

ANALYTICAL REPORT

Client: Beazer East, Inc. Work Order: 0610523

Project: Superior GW - WI Cert. #999472650 Description: **Laboratory Services** Client Sample ID: W-36A Sampled: 10/24/06 13:45 Lab Sample ID: 0610523-13 Sampled By: Dave Hreha Matrix: Water Received: 10/25/06 08:30 Unit: ug/L Prepared: 10/31/06 By: ASC

QC Batch: 0612709 Analytical Batch: 6110146

Semivolatile Organic Compounds by EPA Method 8270C

Date Analyzed:

11/01/06

By: DMC

CAS Number	Analyte	Analytical Result	LOQ	LOD
83-32-9	Acenaphthene	2.2	0.14	0.043
208-96-8	Acenaphthylene	0.16J	0.25	0.076
120-12-7	Anthracene	0.93	0.20	0.060
56-55-3	Benzo(a)anthracene	NDU	0.38	0.12
50-32-8	Benzo(a)pyrene	NDU	0.20	0.062
205-99-2	Benzo(b)fluoranthene	0.16]	0.25	0.075
207-08-9	Benzo(k)fluorant hene	NDU	0.32	0.096
191-24-2	Benzo(g,h,i)perylene	NDU	0.20	0.060
59-50-7	4-Chloro-3-methylphenol	0.0593	0.16	0.049
95-57-8	2-Chlorophenol	0.23	0.19	0.057
218-01-9	Chrysene	0.19 J	0.20	0.060
53-70-3	Dibenz(a,h)anthracene	NDU	0.12	0.038
120-83-2	2,4-Dichlorophenol	1.3	0.15	0.045
105-67-9	2,4-Dimethylphenol	NDU	3.6	1.1
534-52-1	4,6-Dinitro-2-methylphenol	ND U	1.6	0.48
51-28-5	2,4-Dinitrophenol	ND U	1.4	0.42
206-44-0	Fluoranthene	1.0	0.22	0.066
86-73-7	Fluorene	1.2	0.18	0.054
193-39-5	Indeno(1,2,3-cd)pyrene	ND U	0.14	0.042
91-57-6	2-Methylnaphthalene	1.4	0.15	0.045
90-12-0	1-Methylnaphthalene	2.4	0.18	0.056
95-48-7	2-Methylphenol	ND U	3.0	0.90
106-44-5	4-Methylphenol	ND U	2.5	0.76
91-20-3	Naphthalene	0.56	0.15	0.044
100-02-7	4-Nitrophenol	ND U	2.9	0.88
88-75-5	2-Nitrophenol	0.0843	0.25	0.075
87-86-5	Pentachlorophenol	31	0.40	0.12
85-01-8	Phenanthrene	0.49	0.22	0.065
108-95-2	Phenol	0.13J	0.36	0.11
129-00-0	Pyrene	0.94	0.29	0.088
58-90-2	2,3,4,6-Tetrachlorophenol	3.4	0.31	0.093

Continued on next page

Page 14 of 16

^{*}See Statement of Data Qualifications



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: W-36A Lab Sample ID:

0610523-13

Matrix:

Water

Unit:

ug/L

Dilution Factor:

2

QC Batch:

0612709

Work Order:

0610523

Description:

Laboratory Services

Sampled:

10/24/06 13:45

Sampled By:

Dave Hreha

Received:

10/25/06 08:30

Prepared:

10/31/06

By: ASC

Date Analyzed:

11/01/06 By: DMC

Analytical Batch: 6110146

	Analytical		
Analyte	Result	LOQ	LOD
2,3,5,6-1 etrachlorophenol	NDU	3.3	1.0
2,4,6-Trichlorophenol	0.28	0.17	0.050
2,4,5-Trichlorophenol	0.24	0.20	0.061
% Recovery	Control Limits		
36	16-82		
25	11-69		
60	26-116		
60	<i>26-116</i>		
39	<i>37-123</i>		
39	<i>37-123</i>		
58	<i>32-127</i>		
52	30-119		
52	30-119		
	2,3,5,6-Tetrachlorophenol 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol % Recovery 36 25 60 60 39 39 39 58 52	Analyte Result 2,3,5,6-Tetrachlorophenol NDU 2,4,6-Trichlorophenol 0.28 2,4,5-Trichlorophenol 0.24 ** Recovery Control Limits 36 16-82 25 11-69 60 26-116 39 37-123 39 37-123 39 37-123 58 32-127 52 30-119	Analyte Result LOQ 2,3,5,6-Tetrachlorophenol NDU 3.3 2,4,6-Trichlorophenol 0.28 0.17 2,4,5-Trichlorophenol 0.24 0.20 % Recovery Control Limits 36 16-82 25 11-69 60 26-116 39 37-123 39 37-123 39 37-123 58 32-127 52 30-119



STATEMENT OF DATA QUALIFICATIONS

Semivolatile Organic Compounds by EPA Method 8270C

Qualification: The MS or MSD recovery, but not both, was outside the control limit. The RPD is within the control

limit. The unspiked sample result is not qualified.

Analysis: USEPA-8270C

Sample/Analyte: 0610523-13 W-36A Pentachlorophenol

Qualification: 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: 0610523-11 W-17A 4-Methylphenol



April 30, 2007

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, comprised of the following work order(s), for test samples received by TriMatrix Laboratories:

Work Order	Received	Description
0704333	04/17/2007	2007-Annual New Wells
0704334	04/18/2007	2007-Annual New Wells

This report relates only to the sample(s), as received. Test results are in compliance with the requirements of the National Environmental Laboratory Accreditation Conference (NELAC); any qualifications of results, including sample acceptance requirements, are explained in the Statement of Data Qualifications.

Estimates of analytical uncertainties for the test results contained within this report are available upon request.

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

Sincerely,

Gary L. Wood Project Chemist

Enclosures(s)



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID:

W-26A

Lab Sample ID: Matrix:

0704333-01 Water

Unit:

ug/L

Dilution Factor:

QC Batch:

0704254

Work Order:

0704333

Description:

2007-Annual New Wells

Sampled:

04/16/07 09:50

Sampled By: Received:

Dave Hreha 04/17/07 09:00

Prepared:

04/20/07

By: LEW

Date Analyzed:

04/20/07

By: LEW

Analytical Batch:

7042338

Halogenated and Aromatic Volatiles by EPA Method 8021B

		Analytical		
Analyte		Result	LOQ	LOD
Benzene		ND U	0.73	0.22
	% Recovery	Control Limits		
	101	90-113		
		Benzene % Recovery	Analyte Result Benzene NDU **Recovery Control Limits**	Analyte Result LOQ Benzene NDU 0.73 **Recovery Control Limits**



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

W-26A 0704333-01

Matrix:

Water

Unit:

ug/L Dilution Factor: 1

QC Batch:

0704161

Work Order:

0704333

Description:

2007-Annual New Wells

Sampled:

04/16/07 09:50

Sampled By:

Dave Hreha

Received: Prepared: 04/17/07 09:00

04/20/07 Date Analyzed:

By: RRH ву: ЈМК

04/23/07

Analytical Batch: 7042347

Semivolatile Organic Compounds by EPA Method 8270C

Analytical CAS Number LOQ LOD Analyte Result 83-32-9 Acenaphthene NDU 0.013 0.042 208-96-8 Acenaphthylene NDU 0.040 0.012 120-12-7 Anthracene 0.030J 0.045 0.014 56-55-3 Benzo(a)anthracene NDU 0.12 0.037 50-32-8 Benzo(a)pyrene NDU 0.077 0.023 205-99-2 Benzo(b)fluoranthene NDU 0.13 0.040 207-08-9 Benzo(k)fluoranthene NDU 0.12 0.036 NDU 0.072 191-24-2 Benzo(g,h,i)perylene 0.022 59-50-7 4-Chloro-3-methylphenol NDU 0.071 0.021 95-57-8 2-Chlorophenol NDU 0.053 0.016 218-01-9 NDU 0.067 0.020 Chrysene 53-70-3 Dibenz(a,h)anthracene NDU 0.086 0.026 120-83-2 2,4-Dichlorophenol NDU 0.050 0.015 105-67-9 2,4-Dimethylphenol NDU 0.33 1.1 534-52-1 4,6-Dinitro-2-methylphenol NDU 0.41 0.12 51-28-5 2,4-Dinitrophenol NDU 4.8 1.5 206-44-0 Fluoranthene NDU 0.052 0.016 86-73-7 Fluorene NDU 0.035 0.011 193-39-5 NDU Indeno(1,2,3-cd)pyrene 0.046 0.014 2-Methylnaphthalene NDU 91-57-6 0.050 0.015 95-48-7 2-Methylphenol NDU 0.48 0.14 106-44-5 4-Methylphenol NDU 0.52 0.16 91-20-3 Naphthalene NDU 0.075 0.023 4-Nitrophenol 100-02-7 NDU 4.2 1.3 88-75-5 2-Nitrophenol NDU 0.087 0.026 87-86-5 Pentachlorophenol NDU 0.30 0.091 85-01-8 Phenanthrene NDU 0.050 0.015 108-95-2 Phenol NDU 0.091 0.028 129-00-0 Pyrene NDU 0.16 0.047



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID: W-26A

Matrix:

0704333-01

Unit:

Water ug/L

Dilution Factor:

1

QC Batch:

0704161

Work Order:

0704333

Description:

2007-Annual New Wells

Sampled:

04/16/07 09:50

Sampled By:

Date Analyzed:

Dave Hreha

Received: Prepared: 04/17/07 09:00

04/20/07 E

By: RRH

04/23/07

/07 _{Ву:} ЈМК

Analytical Batch: 7042347

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	ND U	0.54	0.16
38-90-2	, , , , , ,	NDU	0.54	0.16
935-95-5	2,3,5,6-Tetrachlorophenol	ND U	1.5	0.44
88-06-2	2,4,6-Trichlorophenol	NDU	0.088	0.027
95-95-4	2,4,5-Trichlorophenol	ND U	0.36	0.11
Surrogates	% Recovery	Control Limits		
2-Fluorophenol	45	16-69		
Phenol-d6	28	11-49		
Nitrobenzene-d5	72	26-116		
2-Fluorobiphenyl	59	<i>37-123</i>		
2,4,6-Tribromophenol	71	<i>32-127</i>		
o-Terphenyl	79	30-119		



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID:

W-39A

Lab Sample ID:

0704333-02

Matrix: Unit:

Water

Dilution Factor:

1

QC Batch:

ug/L

0704161

Work Order:

0704333

Description:

2007-Annual New Wells

Sampled:

04/16/07 13:05

Sampled By:

Dave Hreha 04/17/07 09:00

Received: Prepared:

04/20/07

Date Analyzed:

By: RRH

04/23/07

ву: ЈМК

Analytical Batch: 7042347

Semivolatile Organic Compounds by EPA Method 8270C

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
83-32-9	Acenaphthene	0.0193	0,042	0.013
208-96-8	Acenaphthylene	ND U	0.040	0.012
120-12-7	Anthracene	NDU	0.045	0.014
56-55-3	Benzo(a)anthracene	ND U	0.12	0.037
50-32-8	Benzo(a)pyrene	ND U	0.077	0.023
205-99-2	Benzo(b)fluoranthene	ND U	0.13	0.040
207-08-9	Benzo(k)fluoranthene	ND U	0.12	0.036
191-24-2	Benzo(g,h,i)perylene	ND U	0.072	0.022
59-50-7	4-Chloro-3-methylphenol	NDU	0.071	0.021
95-57-8	2-Chlorophenol	NDU	0.053	0.016
218-01-9	Chrysene	NDU	0.067	0.020
53-70-3	Dibenz(a,h)anthracene	NDU	0.086	0.026
120-83-2	2,4-Dichlorophenol	ND U	0.050	0.015
105-67-9	2,4-Dimethylphenol	ND U	1.1	0.33
534-52-1	4,6-Dinitro-2-methylphenol	NDU	0.41	0.12
51-28-5	2,4-Dinitrophenol	NDU	4.8	1.5
206-44-0	Fluoranthene	0.019 J	0.052	0.016
86-73-7	Fluorene	0.019 J	0.035	0.011
193-39-5	Indeno(1,2,3-cd)pyrene	ND U	0.046	0.014
91-57-6	2-Methylnaphthalene	ND U	0.050	0.015
95-48-7	2-Methylphenol	ND U	0.48	0.14
106-44-5	4-Methylphenol	ND U	0.52	0.16
91-20-3	Naphthalene	0.029 J	0.075	0.023
100-02-7	4-Nitrophenol	NDU	4.2	1.3
88-75-5	2-Nitrophenol	ND U	0.087	0.026
87-86-5	Pentachlorophenol	ND U	0.30	0.091
85-01-8	Phenanthrene	0.029 J	0.050	0.015
108-95-2	Phenol	ND U	0.091	0.028
129-00-0	Pyrene	ND U	0.16	0.047
58-90-2	2,3,4,6-Tetrachlorophenol	ND U	0.54	0.16
935-95-5	2,3,5,6-Tetrachlorophenol	ND U	1.5	0.44



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID: W-39A

Matrix:

0704333-02 Water

Unit:

ug/L 1

0704161

Dilution Factor:

dution ractor.

QC Batch:

c. V

Work Order:

0704333

Description:

2007-Annual New Wells

Sampled:

04/16/07 13:05

Sampled By: Received: Dave Hreha 04/17/07 09:00

Prepared:

04/20/07

By: RRH

Date Analyzed:

04/23/07

By: JMK

Analytical Batch:

7042347

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
88-06-2	2,4,6-Trichlorophenol	ND U	0.088	0.027
95-95-4	2,4,5-Trichlorophenol	ND U	0.36	0.11
Surrogates	% Recover	ry Control Limits		
2-Fluorophenol	47	16-69		
Phenol-d6	27	11-49		
Nitrobenzene-d5	71	26-116		
2-Fluorobiphenyl	58	<i>37-123</i>		
2,4,6-Tribromophenol	71	<i>32-127</i>		
o-Terphenyl	77	<i>30-119</i>		



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID:

W-14A

Lab Sample ID:

0704333-03

Matrix:

Water

Unit:

ug/L 1

Dilution Factor:

QC Batch:

0704161

Work Order:

0704333

Description:

2007-Annual New Wells

Sampled:

04/16/07 14:25

Sampled By: Received:

Dave Hreha

04/17/07 09:00

Prepared:

04/20/07

By: RRH By: JMK

Date Analyzed: Analytical Batch: 04/23/07 7042347

Semivolatile Organic Compounds by EPA Method 8270C

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
83-32-9	Acenaphthene	0.019]	0.042	0.013
208-96-8	Acenaphthylene	0.029 J	0.040	0.012
120-12-7	Anthracene	0.39	0.045	0.014
56-55-3	Benzo(a)anthracene	0.049 J	0.12	0.037
50-32-8	Benzo(a)pyrene	ND U	0.077	0.023
205-99-2	Benzo(b)fluoranthene	ND U	0.13	0.040
207-08-9	Benzo(k)fluoranthene	NDU	0.12	0.036
191-24-2	Benzo(g,h,i)perylene	0.039 J	0.072	0.022
59-50-7	4-Chloro-3-methylphenol	ND U	0.071	0.021
95-57-8	2-Chlorophenol	ND U	0.053	0.016
218-01-9	Chrysene	ND U	0.067	0.020
53-70-3	Dibenz(a,h)anthracene	ND U	0.086	0.026
120-83-2	2,4-Dichlorophenol	0.19	0.050	0.015
105-67-9	2,4-Dimethylphenol	ND U	1.1	0.33
534-52-1	4,6-Dinitro-2-methylphenol	ND U	0.41	0.12
51-28-5	2,4-Dinitrophenol	ND U	4.8	1.5
206-44-0	Fluoranthene	0.11	0.052	0.016
86-73-7	Fluorene	0.019 J	0.035	0.011
193-39-5	Indeno(1,2,3-cd)pyrene	0.029 J	0.046	0.014
91-57-6	2-Methylnaphthalene	0.0193	0.050	0.015
95-48-7	2-Methylphenol	ND U	0.48	0.14
106-44-5	4-Methylphenol	ND U	0.52	0.16
91-20-3	Naphthalene	ND U	0.075	0.023
100-02-7	4-Nitrophenol	ND U	4.2	1.3
88-75-5	2-Nitrophenol	ND U	0.087	0.026
87-86-5	Pentachlorophenol	1.9	0.30	0.091
85-01-8	Phenanthrene	0.019 J	0.050	0.015
108-95-2	Phenol	ND U	0.091	0.028
129-00-0	Pyrene	0.17	0.16	0.047
58-90-2	2,3,4,6-Tetrachlorophenol	0.56	0.54	0.16
935-95-5	2,3,5,6-Tetrachlorophenol	0.82J	1.5	0.44



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

0704333-03

W-14A

Matrix: Unit:

Water ug/L

Dilution Factor:

QC Batch: 0704161 Work Order:

0704333

Description:

2007-Annual New Wells

Sampled:

04/16/07 14:25 Dave Hreha

Sampled By: Received:

04/17/07 09:00

Prepared:

04/20/07

By: RRH

Date Analyzed:

04/23/07

By: JMK

Analytical Batch: 7042347

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
88-06-2	2,4,6-Trichlorophenol	ND U	0.088	0.027
95-95-4	2,4,5-Trichlorophenol	NDU	0.36	0.11
Surrogates	% Recover	y Control Limits		
2-Fluorophenol	45	16-69		
Phenol-d6	28	<i>11-49</i>		
Nitrobenzene-d5	67	<i>26-116</i>		
2-Fluorobiphenyl	53	<i>37-123</i>		
2,4,6-Tribromophenol	71	32-127		
o-Terphenyl	68	<i>30-119</i>		



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID:

W-38A

Lab Sample ID:

0704333-04

Matrix:

Unit:

Water

Dilution Factor:

QC Batch:

ug/L 1

0704161

Work Order:

0704333

Description:

2007-Annual New Wells

Sampled:

04/16/07 15:45

Sampled By:

Dave Hreha 04/17/07 09:00

Received: Prepared:

04/20/07

By: RRH

Date Analyzed:

04/23/07

ву: ЈМК

Analytical Batch: 7042347

Semivolatile Organic Compounds by EPA Method 8270C

		Analytical			
CAS Number	Analyte	Result	LOQ	LOD	
83-32-9	Acenaphthene	ND U	0.042	0.013	
208-96-8	Acenaphthylene	0.019]	0.040	0.012	
120-12-7	Anthracene	0.097	0.045	0.014	
56-55-3	Benzo(a)anthracene	0.14	0.12	0.037	
50-32-8	Benzo(a)pyrene	0.17	0.077	0.023	
205-99-2	Benzo(b)fluoranthene	0.51	0.13	0.040	
207-08-9	Benzo(k)fluoranthene	0.17	0.12	0.036	
191-24-2	Benzo(g,h,i)perylene	0.16	0.072	0.022	
59-50-7	4-Chloro-3-methylphenol	NDU	0.071	0.021	
95-57-8	2-Chlorophenol	NDU	0.053	0.016	
218-01-9	Chrysene	0.12	0.067	0.020	
53-70-3	Dibenz(a,h)anthracene	0.039 J	0.086	0.026	
120-83-2	2,4-Dichlorophenol	ND U	0.050	0.015	
105-67-9	2,4-Dimethylphenol	ND U	1.1	0.33	
534-52-1	4,6-Dinitro-2-methylphenol	NDU	0.41	0.12	
51-28-5	2,4-Dinitrophenol	ND U	4.8	1.5	
206-44-0	Fluoranthene	0.17	0.052	0.016	
86-73-7	Fluorene	NDU	0.035	0.011	
193-39-5	Indeno(1,2,3-cd)pyrene	0.17	0.046	0.014	
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015	
95-48-7	2-Methylphenol	ND U	0.48	0.14	
106-44-5	4-Methylphenol	ND U	0.52	0.16	
91-20-3	Naphthalene	NDU	0.075	0.023	
100-02-7	4-Nitrophenol	ND U	4.2	1.3	
88-75-5	2-Nitrophenol	NDU	0.087	0.026	
87-86-5	Pentachlorophenol	ND U	0.30	0.091	
85-01-8	Phenanthrene	0.049 J	0.050	0.015	
108-95-2	Phenol	ND U	0.091	0.028	
129-00-0	Pyrene	0.23	0.16	0.047	
58-90-2	2,3,4,6-Tetrachlorophenol	ND U	0.54	0.16	
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	1.5	0.44	



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

W-38A 0704333-04

Matrix:

Water

Unit:

ug/L

Dilution Factor:

QC Batch:

0704161

Work Order:

0704333

Description:

2007-Annual New Wells

Sampled:

04/16/07 15:45

Sampled By:

Dave Hreha

Received: Prepared: 04/17/07 09:00

04/20/07

By: RRH

Date Analyzed:

04/23/07

By: JMK

Analytical Batch:

7042347

			Analytical		
CAS Number	Analyte		Result	LOQ	LOD
88-06-2	2,4,6-Trichlorophenol		ND U	0.088	0.027
95-95-4	2,4,5-Trichlorophenol		ND U	0.36	0.11
Surrogates		% Recovery	Control Limits		
2-Fluorophenol		37	16-69		
Phenol-d6		24	11-49		
Nitrobenzene-d5		60	26-116		
2-Fluorobiphenyl	ė,	51	<i>37-123</i>		
2,4,6-Tribromophenol		56	32-127		
o-Terphenyl		57	30-119		



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID:

FB001-041607

Lab Sample ID:

0704333-05

Matrix:

Water

Unit:

ug/L

Dilution Factor:

QC Batch:

0704254

Work Order:

0704333

Description:

2007-Annual New Wells

Sampled:

04/16/07 14:45

Sampled By:

Dave Hreha

Received: Prepared:

Date Analyzed:

04/17/07 09:00 04/20/07

By: LEW

By: LEW

04/20/07

Analytical Batch: 7042338

Halogenated and Aromatic Volatiles by EPA Method 8021B

Analytical LOQ LOD **CAS Number** Analyte Result 71-43-2 Benzene NDU 0.73 0.22 Surrogates Control Limits % Recovery aaa-Trifluorotoluene 102 90-113



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID: FB001-041607 0704333-05

Matrix:

Water

Unit:

ug/L

Dilution Factor:

:

QC Batch: 0704161

1

1

Work Order:

0704333

Description:

2007-Annual New Wells

Sampled:

04/16/07 14:45

Sampled By:

Dave Hreha

Received:

04/17/07 09:00

Prepared:

04/20/07

By: RRH

Date Analyzed:

04/23/07

ву: ЈМК

Analytical Batch:

l Batch: 7042347

Semivolatile Organic Compounds by EPA Method 8270C

	Analytical					
CAS Number	Analyte	Result	LOQ	LOD		
83-32-9	Acenaphthene	NDU	0.042	0.013		
208-96-8	Acenaphthylene	ND U	0.040	0.012		
120-12-7	Anthracene	ND U	0.045	0.014		
56-55-3	Benzo(a)anthracene	ND U	0.12	0.037		
50-32-8	Benzo(a)pyrene	ND U	0.077	0.023		
205-99-2	Benzo(b)fluoranthene	ND U	0.13	0.040		
207-08-9	Benzo(k)fluoranthene	ND U	0.12	0.036		
191-24-2	Benzo(g,h,i)perylene	ND U	0.072	0.022		
59-50-7	4-Chloro-3-methylphenol	ND U	0.071	0.021		
95-57-8	2-Chlorophenol	ND U	0.053	0.016		
218-01-9	Chrysene	ND U	0.067	0.020		
53-70-3	Dibenz(a,h)anthracene	NDU	0.086	0.026		
120-83-2	2,4-Dichlorophenol	NDU	0.050	0.015		
105-67-9	2,4-Dimethylphenol	NDU	1.1	0.33		
534-52-1	4,6-Dinitro-2-methylphenol	NDU	0.41	0.12		
51-28-5	2,4-Dinitrophenol	NDU	4.8	1.5		
206-44-0	Fluoranthene	ND U	0.052	0.016		
86-73-7	Fluorene	ND U	0.035	0.011		
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.046	0.014		
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015		
95-48-7	2-Methylphenol	ND U	0.48	0.14		
106-44-5	4-Methylphenol	ND U	0.52	0.16		
91-20-3	Naphthalene	ND U	0.075	0.023		
100-02-7	4-Nitrophenol	ND U	4.2	1.3		
88-75-5	2-Nitrophenol	ND U	0.087	0.026		
87-86-5	Pentachlorophenol	ND U	0.30	0.091		
85-01-8	Phenanthrene	ND U	0.050	0.015		
108-95-2	Phenol	ND U	0.091	0.028		
129-00-0	Pyrene	ND U	0.16	0.047		



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID:

FB001-041607

Lab Sample ID:

0704333-05

Matrix:

Water

Unit:

ug/L

2-Fluorobiphenyl

o-Terphenyl

2,4,6-Tribromophenol

Dilution Factor: QC Batch:

0704161

Work Order:

0704333

Description:

2007-Annual New Wells

Sampled:

04/16/07 14:45

Sampled By:

Dave Hreha

Received: Prepared: 04/17/07 09:00

04/20/07

By: RRH

Date Analyzed:

04/23/07

ву: ЈМК

Analytical Batch:

7042347

37-123

32-127

30-119

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	0.54	0.16
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	1.5	0.44
88-06-2	2,4,6-Trichlorophenol	ND U	0.088	0.027
95-95-4	2,4,5-Trichlorophenol	ND U	0.36	0.11
Surrogates	% Recovery	Control Limits		
2-Fluorophenol	45	16-69		
Phenol-d6	27	11-49		
Nitrobenzene-d5	73	<i>26-116</i>		

56

68

74



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID:

Trip Blank TM1383

Lab Sample ID: Matrix:

QC Batch:

0704333-06

Unit:

Water ug/L

Dilution Factor:

0704254

Work Order:

0704333

Description:

2007-Annual New Wells

Sampled:

04/16/07 00:00

Sampled By:

Received: Prepared: 04/17/07 09:00

By: LEW

04/20/07

By: LEW

Date Analyzed:

04/20/07

Analytical Batch:

7042338

Halogenated and Aromatic Volatiles by EPA Method 8021B

CAS Number	Analyte		Result	LOQ	LOD
71-43-2	Benzene		ND U	0.73	0.22
Surrogates		% Recovery	Control Limits		
aaa-Trifluorotoluene		102	90-113		



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

W-36A 0704334-01

Matrix:

Water

Unit:

ug/L

Dilution Factor:

10 0704263 QC Batch:

Work Order:

0704334

Description: Sampled:

2007-Annual New Wells

04/17/07 09:55

Sampled By: Received:

Dave Hreha 04/18/07 08:55

Prepared:

04/24/07

By: ASC

Date Analyzed:

04/24/07

ву: ЈМК

Analytical Batch: 7042557

Semivolatile Organic Compounds by EPA Method 8270C

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
83-32-9	Acenaphthene	1.5	0.42	0.13
208-96-8	Acenaphthylene	ND U	0.40	0.12
120-12-7	Anthracene	0.20 J	0.45	0.14
56-55-3	Benzo(a)anthracene	NDU	1.2	0.37
50-32-8	Benzo(a)pyrene	NDU	0.77	0.23
205-99-2	Benzo(b)fluoranthene	ND U	1.3	0.40
207-08-9	Benzo(k)fluoranthene	NDU	1.2	0.36
191-24-2	Benzo(g,h,i)perylene	ND U	0.72	0.22
59-50-7	4-Chloro-3-methylphenol	NDU	0.71	0.21
95-57-8	2-Chlorophenol	ND U	0.53	0.16
218-01-9	Chrysene	NDU	0.67	0.20
53-70-3	Dibenz(a,h)anthracene	ND U	0.86	0.26
120-83-2	2,4-Dichlorophenol	ND U	0.50	0.15
105-67-9	2,4-Dimethylphenol	ND U	11	3.3
534-52-1	4,6-Dinitro-2-methylphenol	ND U	4.1	1.2
51-28-5	2,4-Dinitrophenol	ND U	48	15
206-44-0	Fluoranthene	0.20 J	0.52	0.16
86-73-7	Fluorene	ND U	0.35	0.11
193-39-5	Indeno(1,2,3-cd)pyrene	ND U	0.46	0.14
91-57-6	2-Methylnaphthalene	ND U	0.50	0.15
95-48-7	2-Methylphenol	ND U	4.8	1.4
106-44-5	4-Methylphenol	ND U	5.2	1.6
91-20-3	Naphthalene	ND U	0.75	0.23
100-02-7	4-Nitrophenol	ND U	42	13
88-75-5	2-Nitrophenol	ND U	0.87	0.26
87-86-5	Pentachlorophenol	190	3.0	0.91
85-01-8	Phenanthrene	ND U	0.50	0.15
108-95-2	Phenol	ND U	0.91	0.28
129-00-0	Pyrene	ND U	1.6	0.47
58-90-2	2,3,4,6-Tetrachlorophenol	22	5.4	1.6
935-95-5	2,3,5,6-Tetrachlorophenol	4.73	15	4.4



Client:

Beazer East, Inc.

Project: Client Sample ID: Superior GW - WI Cert. #999472650

Lab Sample ID:

W-36A 0704334-01

Matrix:

Water

Unit:

ug/L 10

Dilution Factor: QC Batch:

0704263

Work Order:

0704334

Description:

2007-Annual New Wells

Sampled:

04/17/07 09:55

Sampled By:

Dave Hreha

Received:

04/18/07 08:55

Prepared:

04/24/07

By: ASC

Date Analyzed:

04/24/07

ву: ЈМК

Analytical Batch:

7042557

		Analytical		
CAS Number	Analyte	Result	rog	LOD
88-06-2	2,4,6-Trichlorophenol	1.1	0.88	0.27
95-95-4	2,4,5-Trichlorophenol	ND U	3.6	1.1
Surrogates	% Recovery	Control Limits		
2-Fluorophenol	27	16-69		
Phenol-d6	22	<i>11-49</i>		
Nitrobenzene-d5	44	<i>26-116</i>		
2-Fluorobiphenyl	41	<i>37-123</i>		
2,4,6-Tribromophenol	37	32-127		
o-Terphenyl	52	30-119		



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID:

W-37A

Lab Sample ID:

0704334-02

Matrix: Unit:

ug/L

1

Dilution Factor:

QC Batch:

Water

0704263

Work Order:

0704334

Description:

2007-Annual New Wells

Sampled:

04/17/07 11:00

Sampled By:

Dave Hreha 04/18/07 08:55

Received: Prepared:

04/24/07

By: ASC

Date Analyzed:

04/24/07

By: JMK

Analytical Batch:

7042540

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	rođ	LOD
83-32-9	Acenaphthene	ND U	0.042	0.013
208-96-8	Acenaphthylene	ND U	0.040	0.012
120-12-7	Anthracene	0.020 J	0.045	0.014
56-55-3	Benzo(a)anthracene	ND U	0.12	0.037
50-32-8	Benzo(a)pyrene	ND U	0.077	0.023
205-99-2	Benzo(b)fluoranthene	ND U	0.13	0.040
207-08-9	Benzo(k)fluoranthene	ND U	0.12	0.036
191-24-2	Benzo(g,h,i)perylene	NDU	0.072	0.022
59-50-7	4-Chloro-3-methylphenol	NDU	0.071	0.021
95-57-8	2-Chlorophenol	ND U	0.053	0.016
218-01-9	Chrysene	ND U	0.067	0.020
53-70-3	Dibenz(a,h)anthracene	NDU	0.086	0.026
120-83-2	2,4-Dichlorophenol	NDU	0.050	0.015
105-67-9	2,4-Dimethylphenol	ND U	1.1	0.33
534-52-1	4,6-Dinitro-2-methylphenol	NDU	0.41	0.12
51-28-5	2,4-Dinitrophenol	NDU	4.8	1.5
206-44-0	Fluoranthene	NDU	0.052	0.016
86-73-7	Fluorene	NDU	0.035	0.011
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.046	0.014
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015
95-48-7	2-Methylphenol	ND U	0.48	0.14
106-44-5	4-Methylphenol	NDU	0.52	0.16
91-20-3	Naphthalene	NDU	0.075	0.023
100-02-7	4-Nitrophenol	NDU	4.2	1.3
88-75-5	2-Nitrophenol	ND U	0.087	0.026
87-86-5	Pentachlorophenol	0.93	0.30	0.091
85-01-8	Phenanthrene	NDU	0.050	0.015
108-95-2	Phenol	NDU	0.091	0.028
129-00-0	Pyrene	ND U	0.16	0.047
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	0.54	0.16
935-95-5	2,3,5,6-Tetrachlorophenol	ND U	1.5	0.44



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

W-37A 0704334-02

Matrix:

Water

Unit:

ug/L 1

Dilution Factor:

QC Batch:

0704263

Work Order:

0704334

Description:

2007-Annual New Wells

Sampled:

04/17/07 11:00

Sampled By:

Dave Hreha 04/18/07 08:55

Received: Prepared:

04/24/07

By: ASC

Date Analyzed:

By: JMK

04/24/07

Analytical Batch: 7042540

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
88-06-2	2,4,6-Trichlorophenol	ND U	0.088	0.027
95-95-4	2,4,5-Trichlorophenol	ND U	0.36	0.11
Surrogates	% Recovery	Control Limits		
2-Fluorophenol	43	16-69		
Phenol-d6	27	11-49		
Nitrobenzene-d5	69	26-116		
2-Fluorobiphenyl	58	<i>37-123</i>		
2,4,6-Tribromophenol	69	<i>32-127</i>		
o-Terphenyl	76	30-119		



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID:

W-16A

Lab Sample ID:

0704334-03

Matrix: Unit: Water ug/L

Dilution Factor:

2

QC Batch:

0704255

Work Order:

0704334

Description:

2007-Annual New Wells

Sampled:

04/17/07 11:25

Sampled By:

Dave Hreha

Received:

04/18/07 08:55

Prepared:

04/25/07

By: LEW

Date Analyzed:

04/26/07

By: LEW

Analytical Batch:

7042640

Halogenated and Aromatic Volatiles by EPA Method 8021B

			Analytical		
CAS Number	Analyte		Result	LOQ	LOD
71-43-2	Benzene		82	1.5	0.44
Surrogates		% Recovery	Control Limits		
aaa-Trifluorotoluene		103	90-113		



Client: Beazer East, Inc.

Superior GW - WI Cert. #999472650 Project:

Client Sample ID: Lab Sample ID:

0704334-04

W-40A

Matrix: Water Unit: ug/L

Dilution Factor:

QC Batch: 0704263 Work Order: 0704334

2007-Annual New Wells

Sampled: Sampled By: 04/17/07 12:10 Dave Hreha

Received:

Description:

Prepared:

04/18/07 08:55 04/24/07

By: ASC

Date Analyzed:

04/24/07

ву: ЈМК

Analytical Batch: 7042540

Semivolatile Organic Compounds by EPA Method 8270C

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
83-32-9	Acenaphthene	ND U	0.042	0.013
208-96-8	Acenaphthylene	NDU	0.040	0.013
120-12-7	Anthracene	NDU	0.045	0.012
56-55-3	Benzo(a)anthracene	NDU	0.12	0.017
50-32-8	Benzo(a)pyrene	NDU	0.077	0.023
205-99-2	Benzo(b)fluoranthene	NDU	0.13	0.040
207-08-9	Benzo(k)fluoranthene	NDU	0.12	0.036
191-24-2	Benzo(g,h,i)perylene	NDU	0.072	0.022
59-50-7	4-Chloro-3-methylphenol	NDU	0.071	0.022
95-57-8	2-Chlorophenol	NDU	0.053	0.021
218-01-9	Chrysene	NDU	0.067	0.020
53-70-3	Dibenz(a,h)anthracene	NDU	0.086	0.026
120-83-2	2,4-Dichlorophenol	NDU	0.050	0.025
105-67-9	2,4-Dimethylphenol	NDU	1.1	0.33
534-52-1	4,6-Dinitro-2-methylphenol	NDU	0.41	0.12
51-28-5	2,4-Dinitrophenol	NDU	4.8	1.5
206-44-0	Fluoranthene	NDU	0.052	0.016
86-73-7	Fluorene	ND U	0.035	0.011
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.046	0.014
91-57-6	2-Methylnaphthalene	ND U	0.050	0.015
95-48-7	2-Methylphenol	ND U	0.48	0.14
106-44-5	4-Methylphenol	ND U	0.52	0.16
91-20-3	Naphthalene	ND U	0.075	0.023
100-02-7	4-Nitrophenol	ND U	4.2	1.3
88-75-5	2-Nitrophenol	ND U	0.087	0.026
87-86-5	Pentachlorophenol	NDU	0.30	0.091
85-01-8	Phenanthrene	ND U	0.050	0.015
108-95-2	Phenol	ND U	0.091	0.028
129-00-0	Pyrene	NDU	0.16	0.047
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	0.54	0.16
935-95-5	2,3,5,6-Tetrachlorophenol	ND U	1.5	0.44



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID:

W-40A

Lab Sample ID:

0704334-04

Matrix:

Water

Unit:

Dilution Factor: 1

QC Batch:

ug/L

0704263

Work Order:

0704334

Description:

2007-Annual New Wells

Sampled:

04/17/07 12:10

Sampled By:

Dave Hreha 04/18/07 08:55

Received: Prepared:

04/24/07

04/24/07

By: ASC ву: ЈМК

Date Analyzed:

Analytical Batch: 7042540

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
88-06-2	2,4,6-Trichlorophenol	ND U	0.088	0.027
95-95-4	2,4,5-Trichlorophenol	ND U	0.36	0.11
Surrogates	% Recovery	Control Limits		
2-Fluorophenol	43	16-69		
Phenol-d6	25	11-49		
Nitrobenzene-d5	67	<i>26-116</i>		
2-Fluorobiphenyl	55	<i>37-123</i>		
2,4,6-Tribromophenol	66	<i>32-127</i>		
o-Terphenyl	74	30-119		



Client: Project: Beazer East, Inc.

Client Sample ID: W-35A

Lab Sample ID:

0704334-05 Water

Matrix: Unit:

ug/L

Dilution Factor:

QC Batch:

1 0704255

Superior GW - WI Cert. #999472650

Work Order:

0704334

Description:

2007-Annual New Wells

Sampled:

04/17/07 12:35

Sampled By: Received:

Dave Hreha 04/18/07 08:55

Prepared:

04/25/07

By: LEW

Date Analyzed:

04/26/07

By: LEW

Analytical Batch:

7042640

Halogenated and Aromatic Volatiles by EPA Method 8021B

			Analytical		
CAS Number	Analyte		Result	LOQ	LOD
71-43-2	Benzene		NDU	0.73	0.22
Surrogates		% Recovery	Control Limits		
aaa-Trifluorotoluene		109	90-113		



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

Matrix:

0704334-05 Water

Unit:

ug/L

QC Batch:

Dilution Factor:

1 0704263 Work Order:

0704334

Description:

2007-Annual New Wells

Sampled:

04/17/07 12:35

Sampled By:

Dave Hreha

Received: Prepared: 04/18/07 08:55

04/24/07

By: ASC

Date Analyzed:

04/24/07

ву: ЈМК

Analytical Batch: 7042540

Amalutical

Semivolatile Organic Compounds by EPA Method 8270C

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
83-32-9	Acenaphthene	ND U	0.042	0.013
208-96-8	Acenaphthylene	NDU	0.040	0.012
120-12-7	Anthracene	0.0193	0.045	0.014
56-55-3	Benzo(a)anthracene	NDU	0.12	0.037
50-32-8	Benzo(a)pyrene	NDU	0.077	0.023
205-99-2	Benzo(b)fluoranthene	NDU	0.13	0.040
207-08-9	Benzo(k)fluoranthene	NDU	0.12	0.036
191-24-2	Benzo(g,h,i)perylene	NDU	0.072	0.022
59-50-7	4-Chloro-3-methylphenol	NDU	0.071	0.021
95-57-8	2-Chlorophenol	NDU	0.053	0.016
218-01-9	Chrysene	NDU	0.067	0.020
53-70-3	Dibenz(a,h)anthracene	NDU	0.086	0.026
120-83-2	2,4-Dichlorophenol	NDU	0.050	0.015
105-67-9	2,4-Dimethylphenol	NDU	1.1	0.33
534-52-1	4,6-Dinitro-2-methylphenol	NDU	0.41	0.12
51-28-5	2,4-Dinitrophenol	ND U	4.8	1.5
206-44-0	Fluoranthene	0.039 J	0.052	0.016
86-73-7	Fluorene	NDU	0.035	0.011
193-39-5	Indeno(1,2,3-cd)pyrene	NDU	0.046	0.014
91-57-6	2-Methylnaphthalene	ND U	0.050	0.015
95-48-7	2-Methylphenol	NDU	0.48	0.14
106-44-5	4-Methylphenol	NDU	0.52	0.16
91-20-3	Naphthalene	ND U	0.075	0.023
100-02-7	4-Nitrophenol	NDU	4.2	1.3
88-75-5	2-Nitrophenol	NDU	0.087	0.026
87-86-5	Pentachlorophenol	NDU	0.30	0.091
85-01-8	Phenanthrene	0.0193	0.050	0.015
108-95-2	Phenol	ND U	0.091	0.028
129-00-0	Pyrene	ND U	0.16	0.047



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

W-35A 0704334-05

Matrix:

Water

Unit:

Dilution Factor:

QC Batch:

ug/L

0704263

Work Order:

0704334

Description:

2007-Annual New Wells

Sampled:

04/17/07 12:35

Sampled By: Received:

Dave Hreha 04/18/07 08:55

Prepared:

04/24/07

By: ASC

Date Analyzed:

04/24/07

By: JMK

Analytical Batch: 7042540

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
n	22467			
58-90-2	2,3,4,6-Tetrachlorophenol	ND U	0.54	0.16
935-95-5	2,3,5,6-Tetrachlorophenol	ND U	1.5	0.44
88-06-2	2,4,6-Trichlorophenol	ND U	0.088	0.027
95-95-4	2,4,5-Trichlorophenol	ND U	0.36	0.11
Surrogates	% Recovery	Control Limits		
2-Fluorophenol	42	16-69		
Phenol-d6	25	11-49		
Nitrobenzene-d5	. 68	26-116		
2-Fluorobiphenyl	54	<i>37-123</i>		
2,4,6-Tribromophenol	68	<i>32-127</i>		
o-Terphenyl	74	<i>30-119</i>		



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID:

W-17A

Lab Sample ID:

0704334-06

Matrix:

Water

ug/L Unit: Dilution Factor:

QC Batch:

5 0704263 Work Order:

0704334

Description:

2007-Annual New Wells

Sampled:

04/17/07 14:00

Sampled By:

Dave Hreha 04/18/07 08:55

Received: Prepared:

04/24/07

By: ASC

Date Analyzed:

04/25/07

ву: ЈМК

Analytical Batch:

7042645

Semivolatile Organic Compounds by EPA Method 8270C

		Analytical		
CAS Number	Analyte	Result	rod	LOD
83-32-9	Acenaphthene	130	0.21	0.064
208-96-8	Acenaphthylene	2.3	0.20	0.060
120-12-7	Anthracene	7.2	0.22	0.068
56-55-3	Benzo(a)anthracene	2.0	0.62	0.19
50-32-8	Benzo(a)pyrene	0.72	0.39	0.12
205-99-2	Benzo(b)fluoranthene	0.98	0.65	0.20
207-08-9	Benzo(k)fluoranthene	0.52J	0.60	0.18
191-24-2	Benzo(g,h,i)perylene	0.15 J	0.36	0.11
59-50-7	4-Chloro-3-methylphenol	NDU	0.35	0.11
95-57-8	2-Chlorophenol	ND U	0.27	0.080
218-01-9	Chrysene	2.0	0.34	0.10
53-70-3	Dibenz(a,h)anthracene	ND U	0.43	0.13
120-83-2	2,4-Dichlorophenol	ND U	0.25	0.075
105-67-9	2,4-Dimethylphenol	8.9	5.4	1.6
534-52-1	4,6-Dinitro-2-methylphenol	NDU	2.0	0.62
51-28-5	2,4-Dinitrophenol	ND U	24	7.3
206-44-0	Fluoranthene	21	0.26	0.080
86-73-7	Fluorene	40	0.18	0.054
193-39-5	Indeno(1,2,3-cd)pyrene	0.15 J	0.23	0.069
91-57-6	2-Methylnaphthalene	0.88	0.25	0.076
95-48-7	2-Methylphenol	14	2.4	0.72
106-44-5	4-Methylphenol	5.7	2.6	0.78
91-20-3	Naphthalene	7.3	0.37	0.11
100-02-7	4-Nitrophenol	NDU	21	6.4
88-75-5	2-Nitrophenol	ND U	0.43	0.13
87-86-5	Pentachlorophenol	ND U	1.5	0.46
85-01-8	Phenanthrene	15	0.25	0.076
108-95-2	Phenol	2.0	0.46	0.14
129-00-0	Pyrene	15	0.78	0.24
58-90-2	2,3,4,6-Tetrachlorophenol	ND U	2.7	0.82
935-95-5	2,3,5,6-Tetrachlorophenol	ND U	7.3	2.2



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

W-17A 0704334-06

Matrix:

Water

Unit:

ug/L

Dilution Factor:

QC Batch:

5

0704263

Work Order:

0704334

Description:

2007-Annual New Wells

Sampled:

04/17/07 14:00

Sampled By:

Dave Hreha

Received: Prepared: 04/18/07 08:55

By: ASC

Date Analyzed:

04/24/07 04/25/07

ву: ЈМК

Analytical Batch:

7042645

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
88-06-2	2,4,6-Trichlorophenol	ND U	0.44	0.13
95-95-4	2,4,5-Trichlorophenol	ND U	1.8	0.54
Surrogates	% Recovery	Control Limits		
2-Fluorophenol	42	16-69		
Phenol-d6	25	11-49		
Nitrobenzene-d5	54	<i>26-116</i>		
2-Fluorobiphenyl	51	<i>37-123</i>		
2,4,6-Tribromophenol	69	<i>32-127</i>		
o-Terphenyl	65	30-119		



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

Duplicate 002 0704334-07

Matrix:

Water

Unit: Dilution Factor: ug/L 10

QC Batch:

0704263

Work Order:

0704334

Description:

2007-Annual New Wells

Sampled:

04/17/07 00:00

Sampled By:

Dave Hreha

Received:

04/18/07 08:55

Prepared:

04/24/07

By: ASC

Date Analyzed:

04/25/07

ву: ЈМК

Analytical Batch: 7042645

Semivolatile Organic Compounds by EPA Method 8270C

		Analytical		
CAS Number	Analyte	Result	rod	LOD
83-32-9	Acenaphthene	1.2	0.42	0.13
208-96-8	Acenaphthylene	ND U	0.40	0.12
120-12-7	Anthracene	0.29 J	0.45	0.14
56-55-3	Benzo(a)anthracene	NDU	1.2	0.37
50-32-8	Benzo(a)pyrene	NDU	0.77	0.23
205-99-2	Benzo(b)fluoranthene	NDU	1.3	0.40
207-08-9	Benzo(k)fluoranthene	NDU	1.2	0.36
191-24-2	Benzo(g,h,i)perylene	ND U	0.72	0.22
59-50-7	4-Chloro-3-methylphenol	NDU	0.71	0.21
95-57-8	2-Chlorophenol	ND U	0.53	0.16
218-01-9	Chrysene	ND U	0.67	0.20
53-70-3	Dibenz(a,h)anthracene	ND U	0.86	0.26
120-83-2	2,4-Dichlorophenol	ND U	0.50	0.15
105-67-9	2,4-Dimethylphenol	ND U	11	3.3
534-52-1	4,6-Dinitro-2-methylphenol	ND U	4.1	1.2
51-28-5	2,4-Dinitrophenol	ND U	48	15
206-44-0	Fluoranthene	0.29 J	0.52	0.16
86-73-7	Fluorene	ND U	0.35	0.11
193-39-5	Indeno(1,2,3-cd)pyrene	ND U	0.46	0.14
91-57-6	2-Methylnaphthalene	NDU	0.50	0.15
95-48-7	2-Methylphenol	ND U	4.8	1.4
106-44-5	4-Methylphenol	ND U	5.2	1.6
91-20-3	Naphthalene	ND U	0.75	0.23
100-02-7	4-Nitrophenol	ND U	42	13
88-75-5	2-Nitrophenol	ND U	0.87	0.26
87-86-5	Pentachlorophenol	240	3.0	0.91
85-01-8	Phenanthrene	ND U	0.50	0.15
108-95-2	Phenol	NDU	0.91	0.28
129-00-0	Pyrene	ND U	1.6	0.47
58-90-2	2,3,4,6-Tetrachlorophenol	34	5.4	1.6
935-95-5	2,3,5,6-Tetrachlorophenol	5.13	15	4.4



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

Duplicate 002 0704334-07

Matrix:

Water

Unit:

ug/L 10

QC Batch:

Dilution Factor:

0704263

Work Order:

0704334

Description:

2007-Annual New Wells

Sampled:

04/17/07 00:00

Sampled By:

Dave Hreha

Received:

04/18/07 08:55

Prepared: Date Analyzed: 04/24/07

By: ASC ву: ЈМК

04/25/07

Analytical Batch: 7042645

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
88-06-2	2,4,6-Trichlorophenol	1.5	0.88	0.27
95-95-4	2,4,5-Trichlorophenol	2.23	3.6	1.1
Surrogates	% Recovery	Control Limits		
2-Fluorophenol	40	16-69		
Phenol-d6	20	<i>11-49</i>		
Nitrobenzene-d5	65	<i>26-116</i>		
2-Fluorobiphenyl	55	<i>37-123</i>		
2,4,6-Tribromophenol	60	<i>32-127</i>		
o-Terphenyl	66	<i>30-119</i>		



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

FB002-041707 0704334-08

Matrix:

Water

Unit:

Dilution Factor: 1

QC Batch:

ug/L

0704255

Work Order:

0704334

Description: Sampled:

2007-Annual New Wells 04/17/07 14:30

Sampled By:

Dave Hreha

Received:

04/18/07 08:55

Prepared:

04/25/07

By: LEW

Date Analyzed:

04/25/07

By: LEW

Analytical Batch:

7042640

Halogenated and Aromatic Volatiles by EPA Method 8021B

Analytical LOQ LOD **CAS Number** Analyte Result 71-43-2 Benzene NDU 0.73 0.22 Surrogates Control Limits % Recovery aaa-Trifluorotoluene 90-113 104



Client:

Beazer East, Inc.

Project: Client Sample ID: Superior GW - WI Cert. #999472650

Lab Sample ID:

FB002-041707 0704334-08

Matrix:

Water

Unit:

ug/L

Dilution Factor: QC Batch:

1

0704263

Work Order:

0704334

Description:

2007-Annual New Wells

Sampled:

04/17/07 14:30

Sampled By:

Dave Hreha

Received: Prepared: 04/18/07 08:55 04/24/07

By: ASC

Date Analyzed:

04/24/07

ву: ЈМК

Analytical Batch: 7042557

Semivolatile Organic Compounds by EPA Method 8270C

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
83-32-9	Acenaphthene	ND U	0.042	0.013
208-96-8	Acenaphthylene	ND U	0.040	0.012
120-12-7	Anthracene	NDU	0.045	0.014
56-55-3	Benzo(a)anthracene	ND U	0.12	0.037
50-32-8	Benzo(a)pyrene	ND U	0.077	0.023
205-99-2	Benzo(b)fluoranthene	ND U	0.13	0.040
207-08-9	Benzo(k)fluoranthene	ND U	0.12	0.036
191-24-2	Benzo(g,h,i)perylene	ND U	0.072	0.022
59-50-7	4-Chloro-3-methylphenol	NDU	0.071	0.021
95-57-8	2-Chlorophenol	ND U	0.053	0.016
218-01-9	Chrysene	ND U	0.067	0.020
53-70-3	Dibenz(a,h)anthracene	ND U	0.086	0.026
120-83-2	2,4-Dichlorophenol	ND U	0.050	0.015
105-67-9	2,4-Dimethylphenol	ND U	1.1	0.33
534-52-1	4,6-Dinitro-2-methylphenol	ND U	0.41	0.12
51-28-5	2,4-Dinitrophenol	ND U	4.8	1.5
206-44-0	Fluoranthene	ND U	0.052	0.016
86-73-7	Fluorene	ND U	0.035	0.011
193-39-5	Indeno(1,2,3-cd)pyrene	ND U	0.046	0.014
91-57-6	2-Methylnaphthalene	ND U	0.050	0.015
95-48-7	2-Methylphenol	ND U	0.48	0.14
106-44-5	4-Methylphenol	ND U	0.52	0.16
91-20-3	Naphthalene	ND U	0.075	0.023
100-02-7	4-Nitrophenol	ND U	4.2	1.3
88-75-5	2-Nitrophenol	ND U	0.087	0.026
87-86-5	Pentachlorophenol	ND U	0.30	0.091
85-01-8	Phenanthrene	ND U	0.050	0.015
108-95-2	Phenol	ND U	0.091	0.028
129-00-0	Pyrene	ND U	0.16	0.047

Continued on next page



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID: FB002-041707 0704334-08

Matrix:

Water

Unit:

ug/L 1

QC Batch:

Dilution Factor:

0704263

Work Order:

0704334

Description:

2007-Annual New Wells

Sampled:

04/17/07 14:30

Sampled By: Received: Dave Hreha 04/18/07 08:55

Prepared:

04/24/07

By: ASC By: JMK

Date Analyzed:

04/24/07

255

Analytical Batch: 7042557

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	ND U	0.54	0.16
935-95-5	2,3,5,6-Tetrachlorophenol	NDU	1.5	0.44
88-06-2	2,4,6-Trichlorophenol	NDU	0.088	0.027
95-95-4	2,4,5-Trichlorophenol	ND U	0.36	0.11
Surrogates	% Recovery	Control Limits		
2-Fluorophenol	43	16-69		

Surrogates	% Recovery	Control Limits
2-Fluorophenol	43	16-69
Phenol-d6	29	11-49
Nitrobenzene-d5	73	26-116
2-Fluorobiphenyl	58	<i>37-123</i>
2,4,6-Tribromophenol	65	32-127
o-Terphenyl	75	<i>30-119</i>



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

Trip Blank 002 0704334-09

Matrix:

Unit:

ug/L

Dilution Factor:

1 QC Batch:

Water

0704255

Work Order:

0704334

Description:

2007-Annual New Wells

Sampled:

04/17/07 08:00

Sampled By: Received:

Dave Hreha 04/18/07 08:55

Prepared:

04/25/07

By: LEW

Date Analyzed:

04/26/07

By: LEW

Analytical Batch: 7042640

Halogenated and Aromatic Volatiles by EPA Method 8021B

			Analytical		
CAS Number	Analyte		Result	LOQ	LOD
71-43-2	Benzene		ND U	0.73	0.22
Surrogates		% Recovery	Control Limits		
aaa-Trifluorotoluene		106	90-113		



STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program. No Qualifications required.



June 25, 2007

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, comprised of the following work order(s), for test samples received by TriMatrix Laboratories:

Work Order

Received

Description

0706301

06/14/2007

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 Conference (NELAC); any qualifications of results, including sample acceptance requirements, are explained in the Statement of Data Qualifications.

Estimates of analytical uncertainties for the test results contained within this report are available upon request.

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

Sincerely,

Gary L. Wood Project Chemist

Enclosures(s)



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

0706301-01

Matrix:

Water

0706667

Unit:

ug/L 1

Dilution Factor:

QC Batch:

W-37A

Sampled By: Received:

0706301

Laboratory Services 06/13/07 08:30

David Griffin

06/14/07 09:15

Prepared:

Work Order:

Description:

Sampled:

06/18/07

BJH By:

Date Analyzed:

06/22/07

By: JMK

Analytical Batch: 7062253

Semivolatile Organic Compounds by EPA Method 8270C

Analytical LOQ LOD **CAS Number** Analyte Result 83-32-9 Acenaphthene NDU 0.042 0.013 208-96-8 Acenaphthylene NDU0.040 0.012 120-12-7 Anthracene 0.019 J 0.045 0.014 56-55-3 Benzo(a)anthracene NDU 0.12 0.037 50-32-8 0.077 0.023 Benzo(a)pyrene NDU 205-99-2 Benzo(b)fluoranthene NDU 0.13 0.040 207-08-9 Benzo(k)fluoranthene NDU 0.12 0.036 0.072 191-24-2 Benzo(g,h,i)perylene 0.022 NDU 59-50-7 4-Chloro-3-methylphenol NDU 0.071 0.021 95-57-8 2-Chlorophenol NDU 0.053 0.016 218-01-9 0.067 0.020 Chrysene NDU 53-70-3 0.086 0.026 Dibenz(a,h)anthracene NDU 120-83-2 2,4-Dichlorophenol NDU 0.050 0.015 105-67-9 2,4-Dimethylphenol NDU 0.33 1.1 534-52-1 4,6-Dinitro-2-methylphenol NDU 0.41 0.12 1.5 51-28-5 2.4-Dinitrophenol NDU 4.8 206-44-0 Fluoranthene 0.0193 0.052 0.016 86-73-7 Fluorene NDU 0.035 0.011 193-39-5 Indeno(1,2,3-cd)pyrene 0.0191 0.046 0.014 91-57-6 2-Methylnaphthalene NDU 0.050 0.015 95-48-7 2-Methylphenol NDU 0.48 0.14 0.16 4-Methylphenol NDU 0.52 106-44-5 Naphthalene NDU 0.075 0.023 91-20-3 100-02-7 4-Nitrophenol NDU 4.2 1.3 88-75-5 2-Nitrophenol NDU 0.087 0.026 87-86-5 Pentachlorophenol NDU 0.30 0.091 Phenanthrene 0.050 0.015 85-01-8 0.0193 108-95-2 Phenol NDU 0.091 0.028 129-00-0 Pyrene NDU 0.16 0.047 58-90-2 NDU 0.54 2,3,4,6-Tetrachlorophenol 0.16 935-95-5 2,3,5,6-Tetrachlorophenol NDU 1.5 0.44

Continued on next page



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

W-37A

Matrix:

0706301-01 Water

Unit:

ug/L 1

Dilution Factor:

QC Batch:

0706667

Work Order:

0706301

Description:

Laboratory Services

Sampled:

06/13/07 08:30

Sampled By: Received:

David Griffin 06/14/07 09:15

Prepared:

06/18/07

BJH

Date Analyzed:

06/22/07

ву: ЈМК

Analytical Batch:

7062253

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

			Analytical		
CAS Number	Analyte	·	Result	LOQ	LOD
88-06-2	2,4,6-Trichlorophenol		ND U	0.088	0.027
95-95-4	2,4,5-Trichlorophenol		ND U	0.36	0.11
Surrogates	% Rec	covery	Control Limits		
2-Fluorophenol	45	5	16-69		
Phenol-d6	31	1	11-49		
Nitrobenzene-d5	84	1	26-116		
2-Fluorobiphenyl	79	9	<i>37-123</i>		
2,4,6-Tribromophenol	80	0	32-127		
o-Terphenyl	. 89	9	30-119		



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID:

W-35A

Lab Sample ID:

0706301-02

Matrix:

Water

Unit:

ug/L Dilution Factor: 1

QC Batch:

0706835

Work Order:

0706301

Description: Sampled:

Laboratory Services 06/13/07 09:40

Sampled By:

David Griffin

Received:

06/14/07 09:15

Prepared:

06/19/07

By: LEW By: LEW

Date Analyzed:

06/20/07

Analytical Batch: 7062159

Halogenated and Aromatic Volatiles by EPA Method 8021B

			Analytical			
CAS Number	Analyte		Result	LOQ	LOD	
71-43-2	Benzene		NDU	0.73	0.22	
Surrogates		% Recovery	Control Limits			
aaa-Trifluorotoluene		108	90-113			



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

W-35A 0706301-02

Matrix:

Water

Unit:

ug/L 1

Dilution Factor:

QC Batch:

0706667

Work Order:

0706301

Description:

Laboratory Services

Sampled:

06/13/07 09:40

Sampled By: Received:

David Griffin

Prepared:

06/14/07 09:15 06/18/07

Bv: BJH

Date Analyzed:

06/22/07

By: JMK

Analytical Batch: 7062253

Semivolatile Organic Compounds by EPA Method 8270C

CAS Number	Analyte	Analytical Result	гоб	LOD
83-32-9	Acenaphthene	ND U	0.045	0.014
208-96-8	Acenaphthylene	ND U	0.043	0.013
120-12-7	Anthracene	ND U	0.048	0.015
56-55-3	Benzo(a)anthracene	ND U	0.13	0.040
50-32-8	Benzo(a)pyrene	ND U	0.083	0.025
205-99-2	Benzo(b)fluoranthene	ND U	0.14	0.043
207-08-9	Benzo(k)fluoranthene	ND U	0.13	0.039
191-24-2	Benzo(g,h,i)perylene	ND U	0.078	0.024
59-50-7	4-Chloro-3-methylphenol	ND U	0.076	0.023
95-57-8	2-Chlorophenol	ND U	0.057	0.017
218-01-9	Chrysene	ND U	0.072	0.022
53-70-3	Dibenz(a,h)anthracene	ND U	0.093	0.028
120-83-2	2,4-Dichlorophenol	ND U	0.053	0.016
105-67-9	2,4-Dimethylphenol	ND U	1.2	0.35
534-52-1	4,6-Dinitro-2-methylphenol	ND U	0.44	0.13
51-28-5	2,4-Dinitrophenol	ND U	5.2	1.6
206-44-0	Fluoranthene	0.0223	0.056	0.017
86-73-7	Fluorene	ND U	0.038	0.012
193-39-5	Indeno(1,2,3-cd)pyrene	ND U	0.049	0.015
91-57-6	2-Methylnaphthalene	ND U	0.054	0.016
95-48-7	2-Methylphenol	ND U	0.51	0.15
106-44-5	4-Methylphenol	ND U	0.56	0.17
91-20-3	Naphthalene	ND U	0.081	0.024
100-02-7	4-Nitrophenol	ND U	4.5	1.4
88-75-5	2-Nitrophenol	ND U	0.093	0.028
87-86-5	Pentachlorophenol	ND U	0.32	0.098
85-01-8	Phenanthrene	ND U	0.054	0.016
108-95-2	Phenol	ND U	0.098	0.030
129-00-0	Pyrene	ND U	0.17	0.051

Continued on next page



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID:

W-35A Lab Sample ID: 0706301-02

Matrix:

Unit:

ug/L 1

> 88-06-2 95-95-4

Dilution Factor:

QC Batch:

Water

0706667

Work Order:

0706301

Description:

Laboratory Services

Sampled:

06/13/07 09:40

Sampled By:

David Griffin

Received: Prepared: 06/14/07 09:15

06/18/07

Date Analyzed:

06/22/07

ву: взн ву: ЈМК

0.095

0.39

0.029

0.12

Analytical Batch:

7062253

NDU

NDU

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
58-90-2	2,3,4,6-Tetrachlorophenol	ND U	0.58	0.18
935-95-5	2,3,5,6-Tetrachlorophenol	ND U	1.6	0.48

Surrogates	% Recovery	Control Limits
2-Fluorophenol	47	16-69
Phenol-d6	33	11-49
Nitrobenzene-d5	84	26-116
2-Fluorobiphenyl	78	<i>37-123</i>
2,4,6-Tribromophenol	82	32-127
o-Terphenyl	89	30-119

2,4,6-Trichlorophenol

2,4,5-Trichlorophenol



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

W-40A 0706301-03

Matrix:

Unit:

Water ug/L

Dilution Factor: QC Batch:

1 0706667 Work Order:

0706301

Description:

Laboratory Services

Sampled:

06/13/07 11:05 David Griffin

Sampled By: Received:

06/14/07 09:15

Prepared:

06/18/07

ву: взн Bv: JMK

Date Analyzed:

06/21/07

Analytical Batch: 7062248

Semivolatile Organic Compounds by EPA Method 8270C

Analytical CAS Number LOQ LOD Analyte Result 83-32-9 NDU 0.042 0.013 Acenaphthene 208-96-8 Acenaphthylene NDU 0.040 0.012 120-12-7 NDU 0.045 0.014 Anthracene 56-55-3 Benzo(a)anthracene NDU 0.12 0.037 50-32-8 NDU 0.077 0.023 Benzo(a)pyrene 205-99-2 Benzo(b)fluoranthene NDU 0.13 0.040 207-08-9 Benzo(k)fluoranthene NDU 0.12 0.036 0.042J 0.072 0.022 191-24-2 Benzo(g,h,i)perylene 4-Chloro-3-methylphenol 0.071 0.021 59-50-7 NDU 95-57-8 2-Chlorophenol NDU 0.053 0.016 218-01-9 0.0213 0.067 0.020 Chrysene 53-70-3 0.031J 0.086 0.026 Dibenz(a,h)anthracene 120-83-2 2,4-Dichlorophenol NDU 0.050 0.015 105-67-9 2,4-Dimethylphenol NDU 0.33 1.1 534-52-1 4,6-Dinitro-2-methylphenol NDU 0.41 0.12 51-28-5 2,4-Dinitrophenol NDU 4.8 1.5 206-44-0 Fluoranthene NDU 0.052 0.016 86-73-7 Fluorene NDU 0.035 0.011 193-39-5 0.031J Indeno(1,2,3-cd)pyrene 0.046 0.014 91-57-6 2-Methylnaphthalene NDU 0.050 0.015 95-48-7 2-Methylphenol NDU 0.48 0.14 4-Methylphenol NDU 0.52 106-44-5 0.16 NDU 0.075 0.023 91-20-3 Naphthalene NDU 100-02-7 4-Nitrophenol 4.2 1.3 88-75-5 2-Nitrophenol NDU 0.087 0.026 87-86-5 Pentachlorophenol 0.44 0.30 0.091 85-01-8 Phenanthrene 0.050 0.015 NDU 108-95-2 Phenol NDU 0.091 0.028 129-00-0 Pyrene $\mathsf{ND}\,\mathsf{U}$ 0.16 0.047 58-90-2 NDU 0.54 2,3,4,6-Tetrachlorophenol 0.16 935-95-5 2,3,5,6-Tetrachlorophenol NDU 1.5 0.44

Continued on next page



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID:

W-40A Lab Sample ID:

Matrix:

0706301-03

Unit:

ug/L

Dilution Factor:

QC Batch:

Water

1 0706667 Work Order:

0706301

Description:

Laboratory Services

Sampled:

06/13/07 11:05

Sampled By:

David Griffin

Received:

06/14/07 09:15

Prepared:

06/18/07

Date Analyzed:

06/21/07

ву: взн By: JMK

Analytical Batch:

7062248

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
88-06-2	2,4,6-Trichlorophenol	ND U	0.088	0.027
95-95-4	2,4,5-Trichlorophenol	ND U	0.36	0.11
Surrogates	% Recovery	Control Limits		
2-Fluorophenol	44	16-69		
Phenol-d6	31	<i>11-49</i>		
Nitrobenzene-d5	84	26-116		
2-Fluorobiphenyl	71	<i>37-123</i>		
2,4,6-Tribromophenol	76	32-127		
o-Terphenyl	84	30-119		



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID: DUP01

Matrix:

0706301-04

Unit:

ug/L

Dilution Factor:

QC Batch:

1

Water

0706835

Work Order:

0706301

Description:

Laboratory Services

Sampled:

06/13/07 00:00

Sampled By:

David Griffin 06/14/07 09:15

Received: Prepared:

06/19/07

By: LEW

Date Analyzed:

06/20/07

By: LEW

Analytical Batch: 7062159

Halogenated and Aromatic Volatiles by EPA Method 8021B

		Analytical		
Analyte		Result	LOQ	LOD
Benzene		NDU	0.73	0.22
	% Recovery	Control Limits		
	107	90-113		
		Benzene % Recovery	Analyte Result Benzene NDU **Recovery Control Limits**	Analyte Result LOQ Benzene NDU 0.73 **Recovery Control Limits**



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

DUP01 0706301-04

Matrix:

Water

Unit:

ug/L

Dilution Factor:

QC Batch:

1

0706667

Work Order:

0706301

Description:

Laboratory Services

Sampled:

06/13/07 00:00

Sampled By:

David Griffin

Received: Prepared: 06/14/07 09:15 06/18/07

ву: ВЈН

Date Analyzed:

06/21/07

By: JMK

Analytical Batch:

7062248

Semivolatile Organic Compounds by EPA Method 8270C

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
83-32-9	Acenaphthene	NDU	0.042	0.013
208-96-8	Acenaphthylene	ND U	0.040	0.012
120-12-7	Anthracene	ND U	0.045	0.014
56-55-3	Benzo(a)anthracene	ND U	0.12	0.037
50-32-8	Benzo(a)pyrene	ND U	0.077	0.023
205-99-2	Benzo(b)fluoranthene	ND U	0.13	0.040
207-08-9	Benzo(k)fluoranthene	ND U	0.12	0.036
191-24-2	Benzo(g,h,i)perylene	ND U	0.072	0.022
59-50-7	4-Chloro-3-methylphenol	ND U	0.071	0.021
95-57-8	2-Chlorophenol	ND U	0.053	0.016
218-01-9	Chrysene	ND U	0.067	0.020
53-,70-3	Dibenz(a,h)anthracene	ND U	0.086	0.026
120-83-2	2,4-Dichlorophenol	ND U	0.050	0.015
105-67-9	2,4-Dimethylphenol	ND U	1.1	0.33
534-52-1	4,6-Dinitro-2-methylphenol	ND U	0.41	0.12
51-28-5	2,4-Dinitrophenol	ND U	4.8	1.5
206-44-0	Fluoranthene	NDU	0.052	0.016
86-73-7	Fluorene	ND U	0.035	0.011
193-39-5	Indeno(1,2,3-cd)pyrene	, ND U	0.046	0.014
91-57-6	2-Methylnaphthalene	ND U	0.050	0.015
95-48-7	2-Methylphenol	NDU	0.48	0.14
106-44-5	4-Methylphenol	ND U	0.52	0.16
91-20-3	Naphthalene	ND U	0.075	0.023
100-02-7	4-Nitrophenol	ND U	4.2	1.3
88-75-5	2-Nitrophenol	ND U	0.087	0.026
87-86-5	Pentachlorophenol	ND U	0.30	0.091
85-01-8	Phenanthrene	0.0213	0.050	0.015
108-95-2	Phenoi	ND U	0.091	0.028
129-00-0	Pyrene	ND U	0.16	0.047

Continued on next page



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

Field Blank 0706301-06

Matrix:

Water

Unit:

QC Batch:

ug/L

Dilution Factor:

0706667

Work Order:

0706301

Description:

Laboratory Services

Sampled:

06/13/07 14:00

Sampled By:

David Griffin

Received:

06/14/07 09:15

Prepared:

06/18/07

ву: взн By: JMK

Date Analyzed:

06/21/07

Analytical Batch:

7062248

Semivolatile Organic Compounds by EPA Method 8270C

	Analytical						
CAS Number	Analyte	Result	LOQ	LOD			
83-32-9	Acenaphthenc	ND U	0.042	0.013			
208-96-8	Acenaphthylene	NDU	0.040	0.012			
120-12-7	Anthracene	ND U	0.045	0.014			
56-55-3	Benzo(a)anthracene	NDU	0.12	0.037			
50-32-8	Benzo(a)pyrene	ND U	0.077	0.023			
205-99-2	Benzo(b)fluoranthene	ND U	0.13	0.040			
207-08-9	Benzo(k)fluoranthene	NDU	0.12	0.036			
191-24-2	Benzo(g,h,i)perylene	ND U	0.072	0.022			
59-50-7	4-Chloro-3-methylphenol	ND U	0.071	0.021			
95-57-8	2-Chlorophenol	ND U	0.053	0.016			
218-01-9	Chrysene	ND U	0.067	0.020			
53-70-3	Dibenz(a,h)anthracene	NDU	0.086	0.026			
120-83-2	2,4-Dichlorophenol	ND U	0.050	0.015			
105-67-9	2,4-Dimethylphenol	NDU	1.1	0.33			
534-52-1	4,6-Dinitro-2-methylphenol	ND U	0.41	0.12			
51-28-5	2,4-Dinitrophenol	ND U	4.8	1.5			
206-44-0	Fluoranthene	ND U	0.052	0.016			
86-73-7	Fluorene	ND U	0.035	0.011			
193-39-5	Indeno(1,2,3-cd)pyrene	ND U	0.046	0.014			
91-57-6	2-Methylnaphthalene	NDU	0.050	0.015			
95-48-7	2-Methylphenol	ND U	0.48	0.14			
106-44-5	4-Methylphenol	ND U	0.52	0.16			
91-20-3	Naphthalene	ND U	0.075	0.023			
100-02-7	4-Nitrophenol	ND U	4.2	1.3			
88-75-5	2-Nitrophenol	ND U	0.087	0.026			
87-86-5	Pentachlorophenol	ND U	0.30	0.091			
85-01-8	Phenanthrene	ND U	0.050	0.015			
108-95-2	Phenol	ND U	0.091	0.028			
129-00-0	Pyrene	NDU	0.16	0.047			
58-90-2	2,3,4,6-Tetrachlorophenol	NDU	0.54	0.16			
935-95-5	2,3,5,6-Tetrachlorophenol	ND U	1.5	0.44			

Continued on next page



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

Field Blank 0706301-06

Matrix:

Water

Unit:

ug/L 1 Dilution Factor:

QC Batch:

0706667

Work Order:

0706301

Description:

Laboratory Services

Sampled:

06/13/07 14:00

Sampled By:

David Griffin

Received:

06/14/07 09:15

Prepared:

06/18/07

Date Analyzed:

06/21/07

ву: взн ву: ЈМК

Analytical Batch:

7062248

Semivolatile Organic Compounds by EPA Method 8270C (Continued)

		Analytical		
CAS Number	Analyte	Result	LOQ	LOD
88-06-2	2,4,6-Trichlorophenol	ND U	0.088	0.027
95-95-4	2,4,5-Trichlorophenol	ND U	0.36	0.11
Surrogates	% Recovery	Control Limits		
2-Fluorophenol	52	16-69		
Phenol-d6	36	<i>11-49</i>		
Nitrobenzene-d5	86	<i>26-116</i>		
2-Fluorobiphenyl	82	<i>37-123</i>		
2,4,6-Tribromophenol	87	32-127		
o-Terphenyl	93	30-119		



Client:

Beazer East, Inc.

Project:

Superior GW - WI Cert. #999472650

Client Sample ID: Lab Sample ID:

Trip Blank TM1704

Matrix:

0706301-07

Unit:

Water ug/L

Dilution Factor:

1 QC Batch:

0706835

Work Order:

0706301

Description:

Laboratory Services

Sampled:

06/13/07 00:00

Sampled By:

Date Analyzed:

Received: Prepared: 06/14/07 09:15

By: LEW

06/19/07

By: LEW

06/20/07

Analytical Batch: 7062159

Halogenated and Aromatic Volatiles by EPA Method 8021B

		Analytical		
Analyte		Result	rod	LOD
Benzene		NDU	0.73	0.22
	% Recovery	Control Limits		
	107	90-113		
		Benzene % Recovery	Analyte Result Benzene ND U **Recovery Control Limits**	Analyte Result LOQ Benzene NDU 0.73 **Recovery Control Limits**



STATEMENT OF DATA QUALIFICATIONS

All analyses have been validated and comply with our Quality Control Program. No Qualifications required.

Client Sample ID: W-26A

Trace Level Organic Compounds

Lot-Sample #...: G6J250266-004 Work Order #...: JG74G1AA Matrix.....: WATER

Date Sampled...: 10/24/06 Date Received..: 10/25/06
Prep Date....: 11/09/06 Analysis Date..: 11/12/06

Prep Batch #...: 6314281

Dilution Factor: 1

		DETECTION		
PARAMETER	RESULT	LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	2.0	pg/L	SW846 8290
Total TCDD	ND	2.0	pg/L	SW846 8290
1,2,3,7,8-PeCDD	ND	4.7	pg/L	SW846 8290
Total PeCDD	ND	13	pg/L	SW846 8290
1,2,3,4,7,8-HxCDD	ND	2.8	pg/L	SW846 8290
1,2,3,6,7,8-HxCDD	4.8 J,B		pg/L	SW846 8290
1,2,3,7,8,9-HxCDD	ND	3.2	pg/L	SW846 8290
Total HxCDD	4.8		pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDD	170 B		pg/L	SW846 8290
Total HpCDD	310		pg/L	SW846 8290
OCDD	2100		pg/L	SW846 8290
2,3,7,8-TCDF	ND	1.7	pg/L	SW846 8290
Total TCDF	ND	1.7	pg/L	SW846 8290
1,2,3,7,8-PeCDF	ND	2.1	pg/L	SW846 8290
2,3,4,7,8-PeCDF	ND	2.1	pg/L	SW846 8290
Total PeCDF	ND	3.0	pg/L	SW846 8290
1,2,3,4,7,8-HxCDF	ND	4.2	pg/L	SW846 8290
1,2,3,6,7,8-HxCDF	ND	2.2	pg/L	SW846 8290
2,3,4,6,7,8-HxCDF	ND	2.5	pg/L	SW846 8290
1,2,3,7,8,9-HxCDF	ND	2.8	pg/L	SW846 8290
Total HxCDF	22		pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDF	40 J,B		pg/L	SW846 8290
1,2,3,4,7,8,9-HpCDF	ND	4.3	pg/L	SW846 8290
Total HpCDF	140		pg/L	SW846 8290
OCDF	150 B		pg/L	SW846 8290
	PERCENT	RECOVERY		
INTERNAL STANDARDS	RECOVERY	LIMITS		
13C-2,3,7,8-TCDD	84	(40 - 135))	
13C-1,2,3,7,8-PeCDD	89	(40 - 135))	
13C-1,2,3,6,7,8-HxCDD	83	(40 - 135))	
13C-1,2,3,4,6,7,8-HpCDD	97	(40 - 135))	
13C-OCDD	92	(40 - 135))	
13C-2,3,7,8-TCDF	88	(40 - 135))	
13C-1,2,3,7,8-PeCDF	85	(40 - 135))	
13C-1,2,3,4,7,8-HxCDF	76	(40 - 135))	
13C-1,2,3,4,6,7,8-HpCDF	93	(40 - 135))	

J Estimated result. Result is less than the reporting limit.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: DUPLICATE 002

Trace Level Organic Compounds

Lot-Sample #...: G6J250266-005 Work Order #...: JG74J2AA Matrix.....: WATER

Date Sampled...: 10/24/06 Date Received..: 10/25/06 Prep Date....: 11/21/06 Analysis Date..: 11/24/06

Prep Batch #...: 6326561

Dilution Factor: 1

		DETECTION	1	
PARAMETER	RESULT	LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	3.3	pg/L	SW846 8290
Total TCDD	ND	3.3	pg/L	SW846 8290
1,2,3,7,8-PeCDD	ND	17	pg/L	SW846 8290
Total PeCDD	ND	17	pg/L	SW846 8290
1,2,3,4,7,8-HxCDD	55		pg/L	SW846 8290
1,2,3,6,7,8-HxCDD	550		pg/L	SW846 8290
1,2,3,7,8,9-HxCDD	160		pg/L	SW846 8290
Total HxCDD	1300		pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDD	10000		pg/L	SW846 8290
Total HpCDD	15000		pg/L	SW846 8290
OCDD	64000 E		pg/L	SW846 8290
2,3,7,8-TCDF	ND CON	5.5	pg/L	SW846 8290
Total TCDF	19		pg/L	SW846 8290
1,2,3,7,8-PeCDF	63		pg/L	SW846 8290
2,3,4,7,8-PeCDF	39 J		pg/L	SW846 8290
Total PeCDF	350		pg/L	SW846 8290
1,2,3,4,7,8-HxCDF	310		pg/L	SW846 8290
1,2,3,6,7,8-HxCDF	160		pg/L	SW846 8290
2,3,4,6,7,8-HxCDF	100		pg/L	SW846 8290
1,2,3,7,8,9-HxCDF	36 J		pg/L	SW846 8290
Total HxCDF	5300		pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDF	3800		pg/L	SW846 8290
1,2,3,4,7,8,9-HpCDF	520		pg/L	SW846 8290
Total HpCDF	15000		pg/L	SW846 8290
OCDF	6900		pg/L	SW846 8290
	PERCENT	RECOVERY		
INTERNAL STANDARDS	RECOVERY	LIMITS		
13C-2,3,7,8-TCDD	90	(40 - 139	5)	
13C-1,2,3,7,8-PeCDD	87	(40 - 13		
13C-1,2,3,6,7,8-HxCDD	67	(40 - 13	5)	
13C-1,2,3,4,6,7,8-HpCDD	76	(40 - 13	5)	
13C-OCDD	86	(40 - 135		
13C-2,3,7,8-TCDF	90	(40 - 13		
13C-1,2,3,7,8-PeCDF	90	(40 - 13!	5)	
13C-1,2,3,4,7,8-HxCDF	71	(40 - 13		
13C-1,2,3,4,6,7,8-HpCDF	71	(40 - 13		
Your (a)				

NOTE(S):

CON Confirmation analysis.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than the reporting limit.

Client Sample ID: W-36A

Trace Level Organic Compounds

Lot-Sample #...: G6J250266-006 Work Order #...: JG74K1AA Matrix....: WATER

Date Sampled...: 10/24/06 Date Received..: 10/25/06 Prep Date....: 11/09/06 Analysis Date..: 11/12/06

Prep Batch #...: 6314281

Dilution Factor: 1

		DETECTIO		
PARAMETER	RESULT	LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	1.6	pg/L	SW846 8290
Total TCDD	ND	1.6	pg/L	SW846 8290
1,2,3,7,8-PeCDD	ND	3.5	pg/L	SW846 8290
Total PeCDD	ND	9.8	pg/r	SW846 8290
1,2,3,4,7,8-HxCDD	ND	2.6	pg/L	SW846 8290
1,2,3,6,7,8-HxCDD	27 J,B		pg/L	SW846 8290
1,2,3,7,8,9-HxCDD	7.1 J		pg/L	SW846 8290
Total HxCDD	95		pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDD	860 B		pg/L	SW846 8290
Total HpCDD	1600		pg/L	SW846 8290
OCDD	8800		pg/L	SW846 8290
2,3,7,8-TCDF	ND	1.5	pg/L	SW846 8290
Total TCDF	ND	1.5	pg/L	SW846 8290
1,2,3,7,8-PeCDF	ND	2.1	pg/L	SW846 8290
2,3,4,7,8-PeCDF	ND	2.1	pg/L	SW846 8290
Total PeCDF	ND	2.9	pg/L	SW846 8290
1,2,3,4,7,8-HxCDF	ND	3.8	pg/L	SW846 8290
1,2,3,6,7,8-HxCDF	ND	2.3	pg/L	SW846 8290
2,3,4,6,7,8-HxCDF	ИD	2.5	pg/L	SW846 8290
1,2,3,7,8,9-HxCDF	ND	2.8	pg/L	SW846 8290
Total HxCDF	81		pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDF	130 B		pg/L	SW846 8290
1,2,3,4,7,8,9-HpCDF	ND	7.8	pg/L	SW846 8290
Total HpCDF	700		pg/L	SW846 8290
OCDF	860 B		pg/L	SW846 8290
	PERCENT	RECOVERY	?	
INTERNAL STANDARDS	RECOVERY	LIMITS		
13C-2,3,7,8-TCDD	92	(40 - 13	(5)	
13C-1,2,3,7,8-PeCDD	91	(40 - 13	•	
13C-1,2,3,6,7,8-HxCDD	81	(40 - 13	55)	
13C-1,2,3,4,6,7,8-HpCDD	102	(40 - 13	(5)	
13C-OCDD	100	(40 - 13	15)	
13C-2,3,7,8-TCDF	91	(40 - 13	55)	
13C-1,2,3,7,8-PeCDF	87	(40 - 13	35)	
13C-1,2,3,4,7,8-HxCDF	82	(40 - 13	35)	
13C-1,2,3,4,6,7,8-HpCDF	90	(40 - 13	(5)	

J Estimated result. Result is less than the reporting limit.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: FB102406

Trace Level Organic Compounds

Lot-Sample #...: G6J250266-007 Work Order #...: JG75L1AA Matrix.....: WATER

 Date Sampled...:
 10/24/06
 Date Received..:
 10/25/06

 Prep Date.....:
 11/09/06
 Analysis Date..:
 11/12/06

Prep Batch #...: 6314281

Dilution Factor: 1

		DETECTIO		
PARAMETER	RESULT	LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	1.6	pg/L	SW846 8290
rotal TCDD	ND	1.6	pg/L	SW846 8290
1,2,3,7,8-PeCDD	ND	3.5	pg/L	SW846 8290
Total PeCDD	ND	6.3	pg/L	SW846 8290
1,2,3,4,7,8-HxCDD	ND	2.3	pg/L	SW846 8290
1,2,3,6,7,8-HxCDD	ND	2.2	pg/L	SW846 8290
1,2,3,7,8,9-HxCDD	ND	2.2	pg/L	SW846 8290
Total HxCDD	ND	2.3	pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDD	ND	3.3	pg/L	SW846 8290
Total HpCDD	ИD	3.3	pg/L	SW846 8290
OCDD	22 J		pg/L	SW846 8290
2,3,7,8-TCDF	ND	1.2	pg/L	SW846 8290
Total TCDF	ND	1.2	pg/L	SW846 8290
1,2,3,7,8-PeCDF	ND	1.9	pg/L	SW846 8290
2,3,4,7,8-PeCDF	ND	1.9	pg/L	SW846 8290
Total PeCDF	ND	2.6	pg/L	SW846 8290
1,2,3,4,7,8-HxCDF	ND	1.8	pg/L	SW846 8290
1,2,3,6,7,8-HxCDF	ND	1.7	pg/L	SW846 8290
2,3,4,6,7,8-HxCDF	ND	1.9	pg/L	SW846 8290
1,2,3,7,8,9-HxCDF	ND	2.1	pg/L	SW846 8290
Total HxCDF	ND	2,1	pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDF	ND	2.2	pg/L	SW846 8290
1,2,3,4,7,8,9-HpCDF	1.8 J		pg/L	SW846 8290
Total HpCDF	1.8		pg/L	SW846 8290
OCDF	ND	3.6	pg/L	SW846 8290
	PERCENT	RECOVERY	7.	
INTERNAL STANDARDS	RECOVERY	LIMITS		
13C-2,3,7,8-TCDD	88	(40 - 13	15)	
13C-1,2,3,7,8-PeCDD	86	(40 - 13	35)	
13C-1,2,3,6,7,8-HxCDD	81	(40 - 13	35)	
13C-1,2,3,4,6,7,8-HpCDD	96	(40 - 13	35)	
13C-OCDD	89	(40 - 13	35)	
13C-2,3,7,8-TCDF	88	(40 - 13	35)	
13C-1,2,3,7,8-PeCDF	82	(40 - 13		
13C-1,2,3,4,7,8-HxCDF	81	(40 - 13	35)	
13C-1,2,3,4,6,7,8-HpCDF	89	(40 - 13) E \	

J Estimated result. Result is less than the reporting limit.



STL Sacramento 880 Riverside Parkway West Sacramento, CA 95605

Tel: 916 373 5600 Fax: 916 372 1059 www.stl-inc.com

November 28, 2006

STL SACRAMENTO PROJECT NUMBER: G6J260255

PO/CONTRACT: 00556-6101

Angie Gatchie Field & Technical Services, LL 200 Third Avenue Carnegie, PA 15106

Dear Ms. Gatchie,

This report contains the analytical results for the sample received under chain of custody by STL Sacramento on October 26, 2006. This sample is associated with your Beazer - Superior GW Sampling project.

The test results in this report meet all NELAC requirements for parameters that accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The case narrative is an integral part of this report.

If you have any questions, please feel free to call me at (916) 374-4384.

Sincerely,

Karen Dahl

Project Manager

1 Lehl

CASE NARRATIVE

STL SACRAMENTO PROJECT NUMBER G6J260255

WATER, 8290, Dioxins/Furans

Per Wisconsin requirements, samples and quality control samples have been written up to levels that fall below the lower calibration limits. The method blank contains many positive results that fall below the lower calibration limit. Any results for these analytes in the associated samples have been flagged with 'B' qualifiers. No corrective action was performed since the levels in the method blank were below the lower calibration limit.

The laboratory control sample showed a high recovery for 1,2,3,6,7,8-HxCDD. Since the associated sample results were 'ND' for this analyte, no corrective action was performed.

There were no other anomalies associated with this project.

Sample Summary G6J260255

WO# JHCDC Sample #

Client Sample ID

W-39A

Sampling Date

Received Date

10/25/2006 10:00 AM10/26/2006 09:10 AM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory. Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight

Client Sample ID: W-39A

Trace Level Organic Compounds

Lot-Sample #...: G6J260255-001 Work Order #...: JHCDC1AA Matrix.....: WATER

Date Sampled...: 10/25/06 Date Received..: 10/26/06 Prep Date....: 11/09/06 Analysis Date..: 11/12/06

Prep Batch #...: 6314281

Dilution Factor: 1

		DETECTIO	N.	
PARAMETER	RESULT	LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	1.6	pg/L	SW846 8290
Total TCDD	ND	1.8	pg/L	SW846 8290
1,2,3,7,8-PeCDD	ND	3.7	pg/L	SW846 8290
Total PeCDD	ND	12	pg/L	SW846 8290
1,2,3,4,7,8-HxCDD	ND	2.8	pg/L	SW846 8290
1,2,3,6,7,8-HxCDD	ND	2.7	pg/L	SW846 8290
1,2,3,7,8,9-HxCDD	ND	2.6	pg/L	SW846 8290
Total HxCDD	ND	2,8	pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDD	20 J,B		pg/L	SW846 8290
Total HpCDD	44		pg/L	SW846 8290
OCDD	210		pg/L	SW846 8290
2,3,7,8-TCDF	ND	1.6	pg/L	SW846 8290
Total TCDF	ND	1.6	pg/L	SW846 8290
1,2,3,7,8-PeCDF	ND	2.1	pg/L	SW846 8290
2,3,4,7,8-PeCDF	ND	2.0	pg/L	SW846 8290
Total PeCDF	ND	3.8	pg/L	SW846 8290
1,2,3,4,7,8-HxCDF	ND	1.9	pg/L	SW846 8290
1,2,3,6,7,8-HxCDF	ND	1.8	pg/L	SW846 8290
2,3,4,6,7,8-HxCDF	ND	2.0	pg/L	SW846 8290
1,2,3,7,8,9-HxCDF	ND	2.2	pg/L	SW846 8290
Total HxCDF	ND	2.2	pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDF	ND	5.6	pg/L	SW846 8290
1,2,3,4,7,8,9-HpCDF	ND	1.9	pg/L	SW846 8290
Total HpCDF	12		pg/L	SW846 8290
OCDF	19 J,B		pg/L	SW846 8290
	PERCENT	RECOVERY	:	
INTERNAL STANDARDS	RECOVERY	LIMITS		
13C-2,3,7,8-TCDD	90	(40 - 13	35)	
13C-1,2,3,7,8-PeCDD	90	(40 - 13	35)	
13C-1,2,3,6,7,8-HxCDD	84	(40 - 13	35)	
13C-1,2,3,4,6,7,8-HpCDD	99	(40 - 13	35)	
13C-OCDD	88	(40 - 13	35)	
13C-2,3,7,8-TCDF	93	(40 - 13	35)	
13C-1,2,3,7,8-PeCDF	86	(40 - 13	35)	
13C-1,2,3,4,7,8-HxCDF	84	(40 - 13	35)	
13C-1,2,3,4,6,7,8-HpCDF	94	(40 - 13	35)	
Yoma (a)				

J Estimated result. Result is less than the reporting limit.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

STL Sacramento 880 Riverside Parkway West Sacramento, CA 95605

Tel: 916 373 5600 Fax: 916 372 1059 www.stl-inc.com

May 3, 2007

STL SACRAMENTO PROJECT NUMBER: G7D190255

PO/CONTRACT: pending

Angie Gatchie Field & Technical Services, LL 200 Third Avenue Carnegie, PA 15106

Dear Ms. Gatchie,

This report contains the analytical results for the samples received under chain of custody by STL Sacramento on April 18th & 19th, 2007. These samples are associated with your Beazer - Superior Supplemental project.

The test results in this report meet all NELAC requirements for parameters that accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The case narrative is an integral part of this report.

If you have any questions, please feel free to call me at (916) 374-4384.

Sincerely,

Karen Dahl

Project Manager

K Len

CASE NARRATIVE

STL SACRAMENTO PROJECT NUMBER G7D190255

General Comments

The samples were received at 1 degrees C.

WATER, 8290, Dioxins/Furans

Sample(s): 1, 2, 3, 3MS, 3MSD, 4, 5, 6, Method Blank, Laboratory Control Sample The ending continuing calibration verification showed a high %D for OCDF (-21%). An average relative response factor (calculated from beginning and ending standards) was used to quantitate any positive results for this analyte in the associated samples.

Sample(s): 1

The 1,2,3,7,8-PeCDD, 1,2,3,4,7,8-HxCDD, & 2,3,7,8-TCDF results for this sample have been flagged with 'JA' qualifiers since their ion ratios did not meet acceptance criteria. These results have been reported as 'estimated maximum possible concentrations' since their quantitation was based on theoretical ion ratios.

Sample(s): 3

The 1,2,3,4,7,8-HxCDD result for this sample has been flagged with a 'JA' qualifier since its ion ratio did not meet acceptance criteria. This result has been reported as an 'estimated maximum possible concentration' since its quantitation was based on a theoretical ion ratio.

Sample(s): 5

The OCDF result for this sample has been flagged with a 'JA' qualifier since its ion ratio did not meet acceptance criteria. This result has been reported as an 'estimated maximum possible concentration' since its quantitation was based on a theoretical ion ratio.

Sample(s): 1, 2, 3, 4, 5, 6

The matrix spikes, which were performed on sample 3, showed several recoveries outside control limits due to possible matrix interferences. Since the laboratory control sample showed acceptable recoveries, no corrective action was performed.

There were no other anomalies associated with this project.

Sample Summary G7D190255

WO#	Sample #	Client Sample ID	Sampling Date	Received Date
JT8XR	1	W-25A		4/18/2007 09:20 AM
JT8XW	2	W-36A	,	4/18/2007 09:20 AM
JT8X0	3	W-16A		4/18/2007 09:20 AM
JT8X2	4	W-35A	4/17/2007 12:35 PM	4/19/2007 09:05 AM
JT8X5	5	FB002-041707	4/17/2007 02:30 PM	4/19/2007 09:05 AM
JT8X7	6	DUPLICATE 002	4/17/2007	4/18/2007 09:20 AM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight

Client Sample ID: W-25A

Trace Level Organic Compounds

Lot-Sample #...: G7D190255-001 Work Order #...: JT8XR1AA Matrix.....: WATER

Date Sampled...: 04/17/07 Date Received..: 04/18/07
Prep Date....: 04/25/07 Analysis Date..: 04/27/07

Prep Batch #...: 7116503

Dilution Factor: 1

		DETECTION	1	
PARAMETER	RESULT	LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	2.7	pg/L	SW846 8290
Total TCDD	ND	2.7	pg/L	SW846 8290
1,2,3,7,8-PeCDD	6.7 J,JA		pg/L	SW846 8290
Total PeCDD	6.7		pg/L	SW846 8290
1,2,3,4,7,8-HxCDD	19 J,JA		pg/L	SW846 8290
1,2,3,6,7,8-HxCDD	220		pg/L	SW846 8290
1,2,3,7,8,9-HxCDD	42 J		pg/L	SW846 8290
Total HxCDD	510		pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDD	4100		pg/L	SW846 8290
Total HpCDD	6200		pg/L	SW846 8290
OCDD	25000 B		pg/L	SW846 8290
2,3,7,8-TCDF	3.3 J,JA		pg/L	SW846 8290
Total TCDF	7.6		pg/L	SW846 8290
1,2,3,7,8-PeCDF	25 J		pg/L	SW846 8290
2,3,4,7,8-PeCDF	14 J		pg/L	SW846 8290
Total PeCDF	120		pg/L	SW846 8290
1,2,3,4,7,8-HxCDF	170		pg/L	SW846 8290
1,2,3,6,7,8-HxCDF	57		pg/L	SW846 8290
2,3,4,6,7,8-HxCDF	33 J		pg/L	SW846 8290
1,2,3,7,8,9-HxCDF	15 J		pg/L	SW846 8290
Total HxCDF	2000		pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDF	1400		pg/L	SW846 8290
1,2,3,4,7,8,9-HpCDF	180		pg/L	SW846 8290
Total HpCDF	5200		pg/L	SW846 8290
OCDF	3000		pg/L	SW846 8290
	PERCENT	RECOVERY		
INTERNAL STANDARDS	RECOVERY	LIMITS		
13C-2,3,7,8-TCDD	92	(40 - 135	5)	
13C-1,2,3,7,8-PeCDD	102	(40 - 135	5)	
13C-1,2,3,6,7,8-HxCDD	90	(40 - 135		
13C-1,2,3,4,6,7,8-HpCDD	97	(40 - 135	5)	
13C-OCDD	120	(40 - 135	5)	
13C-2,3,7,8-TCDF	81	(40 - 135	5)	
13C-1,2,3,7,8-PeCDF	94	(40 - 135	5)	
13C-1,2,3,4,7,8-HxCDF	89	(40 - 135	5)	
13C-1,2,3,4,6,7,8-HpCDF	84	(40 - 135	5)	

J Estimated result. Result is less than the reporting limit.

JA The analyte was positively identified, but the quantitation is an estimate.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: W-36A

Trace Level Organic Compounds

Lot-Sample #...: G7D190255-002 Work Order #...: JT8XW1AA Matrix.....: WATER

Date Sampled...: 04/17/07 Date Received..: 04/18/07 Prep Date....: 04/25/07 Analysis Date..: 04/27/07

Prep Batch #...: 7116503

Dilution Factor: 1

		DETECTION		
PARAMETER	RESULT	LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	3.6	pg/L	SW846 8290
Total TCDD	ND	3.6	pg/L	SW846 8290
1,2,3,7,8-PeCDD	ND	7.1	pg/L	SW846 8290
Total PeCDD	ND	7.1	pg/L	SW846 8290
1,2,3,4,7,8-HxCDD	ND	5.5	pg/L	SW846 8290
1,2,3,6,7,8-HxCDD	22 J		pg/L	SW846 8290
1,2,3,7,8,9-HxCDD	ND	5.0	pg/L	SW846 8290
Total HxCDD	71		pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDD	760	•	pg/L	SW846 8290
Total HpCDD	1400		pg/L	SW846 8290
OCDD	8300 B		pg/L	SW846 8290
2,3,7,8-TCDF	ND	2.6	pg/L	SW846 8290
Total TCDF	ND	2.6	pg/L	SW846 8290
1,2,3,7,8-PeCDF	ND	4.4	pg/L	SW846 8290
2,3,4,7,8-PeCDF	ND	4.5	pg/L	SW846 8290
Total PeCDF	ND	4.5	pg/L	SW846 8290
1,2,3,4,7,8-HxCDF	ND	4.1	pg/L	SW846 8290
1,2,3,6,7,8-HxCDF	ND	3.8	pg/L	SW846 8290
2,3,4,6,7,8-HxCDF	ND	4.4	pg/L	SW846 8290
1,2,3,7,8,9-HxCDF	ND	4.6	pg/L	SW846 8290
Total HxCDF	51		pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDF	110		pg/L	SW846 8290
1,2,3,4,7,8,9-HpCDF	ND	5.7	pg/L	SW846 8290
Total HpCDF	570		pg/L	SW846 8290
OCDF	900		pg/L	SW846 8290
	PERCENT	RECOVERY		
INTERNAL STANDARDS	RECOVERY	LIMITS		
13C-2,3,7,8-TCDD	92	(40 - 135))	
13C-1,2,3,7,8-PeCDD	100	(40 - 135))	
13C-1,2,3,6,7,8-HxCDD	89	(40 - 135))	
13C-1,2,3,4,6,7,8-HpCDD	96	(40 - 135))	
13C-OCDD	115	(40 - 135))	
13C-2,3,7,8-TCDF	83	(40 - 135))	
13C-1,2,3,7,8-PeCDF	87	(40 - 135))	
13C-1,2,3,4,7,8-HxCDF	94	(40 - 135))	
13C-1,2,3,4,6,7,8-HpCDF	82	(40 - 135))	

J Estimated result. Result is less than the reporting limit.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: W-16A

Trace Level Organic Compounds

Lot-Sample #...: G7D190255-003 Work Order #...: JT8X01AA Matrix.....: WATER

Date Sampled...: 04/17/07 Date Received..: 04/18/07
Prep Date....: 04/25/07 Analysis Date..: 04/27/07

Prep Batch #...: 7116503

Dilution Factor: 1

		DETECTIO	N	
PARAMETER	RESULT	LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	3.8	pg/L	SW846 8290
Total TCDD	ND	3.8	pg/L	SW846 8290
1,2,3,7,8-PeCDD	ND	6.2	pg/L	SW846 8290
Total PeCDD	ND	12	pg/L	SW846 8290
1,2,3,4,7,8-HxCDD	9.1 J,JA		pg/L	SW846 8290
1,2,3,6,7,8-HxCDD	61		pg/L	SW846 8290
1,2,3,7,8,9-HxCDD	56		pg/L	SW846 8290
Total HxCDD	780		pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDD	2500		pg/L	SW846 8290
Total HpCDD	8500		pg/L	SW846 8290
OCDD	23000 B		pg/L	SW846 8290
2,3,7,8-TCDF	ND	2.7	pg/L	SW846 8290
Total TCDF	ND	2.7	pg/L	SW846 8290
1,2,3,7,8-PeCDF	ND	4.4	pg/L	SW846 8290
2,3,4,7,8-PeCDF	ND	4.5	pg/L	SW846 8290
Total PeCDF	ND	4.5	pg/L	SW846 8290
1,2,3,4,7,8-HxCDF	18 J		pg/L	SW846 8290
1,2,3,6,7,8-HxCDF	ND	3.6	pg/L	SW846 8290
2,3,4,6,7,8-HxCDF	ND	4.1	pg/L	SW846 8290
1,2,3,7,8,9-HxCDF	ИD	4.3	pg/L	SW846 8290
Total HxCDF	180		pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDF	200		pg/L	SW846 8290
1,2,3,4,7,8,9-HpCDF	22 J		pg/L	SW846 8290
Total HpCDF	870		pg/L	SW846 8290
OCDF	1000		pg/L	SW846 8290
	PERCENT	RECOVERY		
INTERNAL STANDARDS	RECOVERY	LIMITS		
13C-2,3,7,8-TCDD	94	(40 - 13	5)	
13C-1,2,3,7,8-PeCDD	114	(40 - 13	5)	
13C-1,2,3,6,7,8-HxCDD	84	(40 - 13	5)	
13C-1,2,3,4,6,7,8-HpCDD	91	(40 - 13	5)	
13C-OCDD	111	(40 - 13	5)	
13C-2,3,7,8-TCDF	84	(40 - 13	5)	
13C-1,2,3,7,8-PeCDF	98	(40 - 13		
13C-1,2,3,4,7,8-HxCDF	87	(40 - 13	5)	
13C-1,2,3,4,6,7,8-HpCDF	76	(40 - 13	5 \	

J Estimated result. Result is less than the reporting limit.

JA The analyte was positively identified, but the quantitation is an estimate.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: W-35A

Trace Level Organic Compounds

Lot-Sample #...: G7D190255-004 Work Order #...: JT8X21AA Matrix.....: WATER

Date Sampled...: 04/17/07 Date Received..: 04/19/07 Prep Date....: 04/25/07 Analysis Date..: 04/27/07

Prep Batch #...: 7116503

Dilution Factor: 1

PARAMETER	RESULT	DETECTION			
		LIMIT	UNITS	METHOD	
2,3,7,8-TCDD	ND	2.8	pg/L	SW846 8290	
Total TCDD	ND	2.8	pg/L	SW846 8290	
1,2,3,7,8-PeCDD	ND	5.7	pg/L	SW846 8290	
Total PeCDD	ND	5.7	pg/L	SW846 8290	
1,2,3,4,7,8-HxCDD	ND	4.2	pg/L	SW846 8290	
1,2,3,6,7,8-HxCDD	ND	4.0	pg/L	SW846 8290	
1,2,3,7,8,9-HxCDD	ND	3.8	pg/L	SW846 8290	
Total HxCDD	ND	5.5	pg/L	SW846 8290	
1,2,3,4,6,7,8-HpCDD	290		pg/L	SW846 8290	
Total HpCDD	600		pg/L	SW846 8290	
OCDD	3100 B		pg/L	SW846 8290	
2,3,7,8-TCDF	ND	2.6	pg/L	SW846 8290	
Total TCDF	ND	2.6	pg/L	SW846 8290	
1,2,3,7,8-PeCDF	ND	3.8	pg/L	SW846 8290	
2,3,4,7,8-PeCDF	ND	3.8	pg/L	SW846 8290	
Total PeCDF	ND	3.8	pg/L	SW846 8290	
1,2,3,4,7,8-HxCDF	ND	3.4	pg/L	SW846 8290	
1,2,3,6,7,8-HxCDF	ND	3.2	pg/L	SW846 8290	
2,3,4,6,7,8-HxCDF	ND	3.6	pg/L	SW846 8290	
1,2,3,7,8,9-HxCDF	ND	3.8	pg/L	SW846 8290	
Total HxCDF	30		pg/L	SW846 8290	
1,2,3,4,6,7,8-HpCDF	61		pg/L	SW846 8290	
1,2,3,4,7,8,9-HpCDF	ND	4.4	pg/L	SW846 8290	
Total HpCDF	250		pg/L	SW846 8290	
OCDF	350		pg/L	SW846 8290	
	PERCENT	RECOVERY			
INTERNAL STANDARDS	RECOVERY	LIMITS			
13C-2,3,7,8-TCDD	98	(40 - 13			
13C-1,2,3,7,8-PeCDD	108	(40 - 135)			
13C-1,2,3,6,7,8-HxCDD	92	(40 - 13			
13C-1,2,3,4,6,7,8-HpCDD	91	(40 - 13			
13C-OCDD	112	(40 - 13	5)		
13C-2,3,7,8-TCDF	82	(40 - 135)			
13C-1,2,3,7,8-PeCDF	94	(40 - 13	•		
13C-1,2,3,4,7,8-HxCDF	90	(40 - 13			
13C-1,2,3,4,6,7,8-HpCDF	76	(40 - 135)			

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Client Sample ID: FB002-041707

Trace Level Organic Compounds

Lot-Sample #...: G7D190255-005 Work Order #...: JT8X51AA Matrix..... WATER

Date Sampled...: 04/17/07 Date Received..: 04/19/07
Prep Date....: 04/25/07 Analysis Date..: 04/27/07

Prep Batch #...: 7116503

Dilution Factor: 1

		DETECTION				
PARAMETER	RESULT	LIMIT	UNITS	METHOD		
2,3,7,8-TCDD	ND	3.8	pg/L	SW846 8290		
Total TCDD	ND	3.8	pg/L	SW846 8290		
L,2,3,7,8-PeCDD	ND	7.9	pg/L	SW846 8290		
Total PeCDD	ND	7.9	pg/L	SW846 8290		
L,2,3,4,7,8-HxCDD	ND	5.4	pg/L	SW846 8290		
L,2,3,6,7,8-HxCDD	ND	5.2	pg/L	SW846 8290		
L,2,3,7,8,9-HxCDD	ND	5.0	pg/L	SW846 8290		
Total HxCDD	ND	5.4	pg/L	SW846 8290		
L,2,3,4,6,7,8-HpCDD	ND	5.2	pg/L	SW846 8290		
Total HpCDD	ND	5.2	pg/L	SW846 8290		
OCDD	19 J,B		pg/L	SW846 8290		
2,3,7,8-TCDF	ND	3.1	pg/L	SW846 8290		
Total TCDF	ND	3.1	pg/L	SW846 8290		
L,2,3,7,8-PeCDF	ND	4.6	pg/L	SW846 8290		
2,3,4,7,8-PeCDF	ND	4.7	pg/L	SW846 8290		
Total PeCDF	ND	4.7	pg/L	SW846 8290		
1,2,3,4,7,8-HxCDF	ND	4.2	pg/L	SW846 8290		
L,2,3,6,7,8-HxCDF	ND	3.9	pg/L	SW846 8290		
2,3,4,6,7,8-HxCDF	ND	4.5	pg/L	SW846 8290		
L,2,3,7,8,9-HxCDF	ND	4.7	pg/L	SW846 8290		
Cotal HxCDF	ND	4.7	pg/L	SW846 8290		
L,2,3,4,6,7,8-HpCDF	1 1 J		pg/L	SW846 8290		
L,2,3,4,7,8,9-HpCDF	ND	3.9	pg/L	SW846 8290		
Total HpCDF	11		pg/L	SW846 8290		
OCDF	22 J,JA		pg/L	SW846 8290		
	PERCENT RECOVERY		•			
INTERNAL STANDARDS	RECOVERY	LIMITS				
L3C-2,3,7,8-TCDD	88	(40 - 135)				
L3C-1,2,3,7,8-PeCDD	93	(40 - 135)				
13C-1,2,3,6,7,8-HxCDD	89	(40 - 135)				
L3C-1,2,3,4,6,7,8-HpCDD	90	(40 - 135)				
L3C-OCDD	104	(40 - 135)				
L3C-2,3,7,8-TCDF	76	(40 - 135)				
L3C-1,2,3,7,8-PeCDF	80	(40 - 135)				
		(40 - 135)				
L3C-1,2,3,4,7,8-HxCDF	82	(4 0 - 13	(40 - 135)			

J Estimated result. Result is less than the reporting limit.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

JA The analyte was positively identified, but the quantitation is an estimate.

Client Sample ID: DUPLICATE 002

Trace Level Organic Compounds

Lot-Sample #...: G7D190255-006 Work Order #...: JT8X71AA Matrix..... WATER

Date Sampled...: 04/17/07 Date Received..: 04/18/07
Prep Date....: 04/25/07 Analysis Date..: 04/27/07

Prep Batch #...: 7116503

Dilution Factor: 1

PARAMETER		DETECTION			
	RESULT	LIMIT_	UNITS	METHOD	
2,3,7,8-TCDD	ND	3.7	pg/L	SW846 8290	
Total TCDD	ND	3.7	pg/L	SW846 8290	
1,2,3,7,8-PeCDD	ND	7.3	pg/L	SW846 8290	
Total PeCDD	ND	7.3	pg/L	SW846 8290	
1,2,3,4,7,8-HxCDD	ND	6.6	pg/L	SW846 8290	
1,2,3,6,7,8-HxCDD	21 J		pg/L	SW846 8290	
1,2,3,7,8,9-HxCDD	ND	6.0	pg/L	SW846 8290	
Total HxCDD	70		pg/L	SW846 8290	
1,2,3,4,6,7,8-HpCDD	750		pg/L	SW846 8290	
Total HpCDD	1400		pg/L	SW846 8290	
OCDD	8400 B		pg/L	SW846 8290	
2,3,7,8-TCDF	ND	2.9	pg/L	SW846 8290	
Total TCDF	ND	2.9	pg/L	SW846 8290	
1,2,3,7,8-PeCDF	ND	5.1	pg/L	SW846 8290	
2,3,4,7,8-PeCDF	ND	5.2	pg/L	SW846 8290	
Total PeCDF	ND	5.2	pg/L	SW846 8290	
1,2,3,4,7,8-HxCDF	ND	4.9	pg/L	SW846 8290	
1,2,3,6,7,8-HxCDF	ND	4.5	pg/L	SW846 8290	
2,3,4,6,7,8-HxCDF	ND	5.2	pg/L	SW846 8290	
1,2,3,7,8,9-HxCDF	ND	5.4	pg/L	SW846 8290	
Total HxCDF	60		pg/L	SW846 8290	
1,2,3,4,6,7,8-HpCDF	110		pg/L	SW846 8290	
1,2,3,4,7,8,9-HpCDF	ND	5.8	pg/L	SW846 8290	
Total HpCDF	550		pg/L	SW846 8290	
OCDF	860		pg/L	SW846 8290	
	PERCENT	RECOVERY			
INTERNAL STANDARDS	RECOVERY	LIMITS			
13C-2,3,7,8-TCDD	89	(40 - 13			
13C-1,2,3,7,8-PeCDD	100	(40 - 135)			
13C-1,2,3,6,7,8-HxCDD	88	(40 - 135)			
13C-1,2,3,4,6,7,8-HpCDD	97	(40 - 135)			
13C-OCDD	99	(40 - 135)			
13C-2,3,7,8-TCDF	80	(40 - 135)			
13C-1,2,3,7,8-PeCDF	81	(40 - 135)			
13C-1,2,3,4,7,8-HxCDF	87	(40 - 13	35)		
13C-1,2,3,4,6,7,8-HpCDF	83	(40 - 13	35)		

J Estimated result. Result is less than the reporting limit.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

STL Sacramento 880 Riverside Parkway West Sacramento, CA 95605

Tel: 916 373 5600 Fax: 916 372 1059 www.stl-inc.com

May 7, 2007

STL SACRAMENTO PROJECT NUMBER: G7D170312

PO/CONTRACT: pending

Angie Gatchie Field & Technical Services, LL 200 Third Avenue Carnegie, PA 15106

Dear Ms. Gatchie,

This report contains the analytical results for the samples received under chain of custody by STL Sacramento on April 17, 2007. These samples are associated with your Beazer - Superior Supplemental project.

The test results in this report meet all NELAC requirements for parameters that accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The case narrative is an integral part of this report.

If you have any questions, please feel free to call me at (916) 374-4384.

Sincerely,

Karen Dahl

Project Manager

K Llhe

CASE NARRATIVE

STL SACRAMENTO PROJECT NUMBER G7D170312

General Comments

The samples were received at -2 degrees Celsius, but did not appear to be frozen.

WATER, 8290, Dioxins/Furans

Sample(s): 1, 2, 3, 4, Method Blank, Laboratory Control Sample
The ending continuing calibration verification showed a high %D for 1,2,3,4,7,8-HxCDD (-22%). An average relative response factor (calculated from beginning and ending standards) was used to quantitate any positive results for this analyte in the associated samples.

Sample(s): 2

The OCDD result for this sample has been flagged with a 'JA' qualifier since its ion ratio did not meet acceptance criteria. This result has been reported as an 'estimated maximum possible concentration' since its quantitation was based on a theoretical ion ratio.

There were no other anomalies associated with this project.

Sample Summary G7D170312

<u>WO#</u>	Sample #	Client Sample ID	Sampling Date	Received Date
JT3W1	1	W-26A	4/16/2007 09:50 AM	4/17/2007 09:10 AM
JT3X0	2	W-39A	4/16/2007 01:05 PM	4/17/2007 09:10 AM
JT3X1	3	W-14A	4/16/2007 02:25 PM	4/17/2007 09:10 AM
JT3X4	4	FB001-041607	4/16/2007 02:55 PM	4/17/2007 09:10 AM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.

 Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight

Client Sample ID: W-26A

Trace Level Organic Compounds

Lot-Sample #...: G7D170312-001 Work Order #...: JT3W11AA Matrix....: WATER

Date Sampled...: 04/16/07 Date Received..: 04/17/07 Prep Date....: 04/21/07 Analysis Date..: 04/29/07

Prep Batch #...: 7111225

Dilution Factor: 1

		DETECTION		
PARAMETER	RESULT	LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	4.8	pg/L	SW846 8290
Total TCDD	ND	4.8	pg/L	SW846 8290
1,2,3,7,8-PeCDD	ND	19	pg/L	SW846 8290
Total PeCDD	ИД	19	pg/L	SW846 8290
1,2,3,4,7,8-HxCDD	ND	17	pg/L	SW846 8290
1,2,3,6,7,8-HxCDD	ND	16	pg/L	SW846 8290
1,2,3,7,8,9-HxCDD	ND	15	pg/L	SW846 8290
Total HxCDD	ND	17	pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDD	ND	17	pg/L	SW846 8290
Total HpCDD	ND	17	pg/L	SW846 8290
OCDD	270		pg/L	SW846 8290
2,3,7,8-TCDF	ND	8.2	pg/L	SW846 8290
Total TCDF	ND	8.2	pg/L	SW846 8290
1,2,3,7,8-PeCDF	ND	15	pg/L	SW846 8290
2,3,4,7,8-PeCDF	ND	15	pg/L	SW846 8290
Total PeCDF	ND	15	pg/L	SW846 8290
1,2,3,4,7,8-HxCDF	ND	13	pg/L	SW846 8290
1,2,3,6,7,8-HxCDF	ND	12	pg/L	SW846 8290
2,3,4,6,7,8-HxCDF	ND	14	pg/L	SW846 8290
1,2,3,7,8,9-HxCDF	ND	14	pg/L	SW846 8290
Total HxCDF	ND	14	pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDF	ND	10	pg/L	SW846 8290
1,2,3,4,7,8,9-HpCDF	ND	11	pg/L	SW846 8290
Total HpCDF	ND	11	pg/L	SW846 8290
OCDF	ND	26	pg/L	SW846 8290
	PERCENT	RECOVERY	Y	
INTERNAL STANDARDS	RECOVERY	LIMITS		
13C-2,3,7,8-TCDD	90	(40 - 13	35)	
13C-1,2,3,7,8-PeCDD	87	(40 - 13	35)	
13C-1,2,3,6,7,8-HxCDD	99	(40 - 13)	35)	
13C-1,2,3,4,6,7,8-HpCDD	94	(40 - 13	35)	
13C-OCDD	96	(40 - 13	35)	
13C-2,3,7,8-TCDF	92	(40 - 13	35)	
			\	

13C-1,2,3,7,8-PeCDF

13C-1,2,3,4,7,8-HxCDF

13C-1,2,3,4,6,7,8-HpCDF

92

95

103

(40 - 135)

(40 - 135)

(40 - 135)

Client Sample ID: W-39A

Trace Level Organic Compounds

Lot-Sample #...: G7D170312-002 Work Order #...: JT3X01AA Matrix.....: WATER

Date Sampled...: 04/16/07 Date Received..: 04/17/07
Prep Date....: 04/21/07 Analysis Date..: 04/29/07

Prep Batch #...: 7111225

Dilution Factor: 1

		DETECTIO	N		
PARAMETER	RESULT	LIMIT	UNITS	METHOD	
2,3,7,8-TCDD	ND	8.7	pg/L	SW846 8290	
Total TCDD	ND	8.7	pg/L	SW846 8290	
1,2,3,7,8-PeCDD	ND	35	pg/L	SW846 8290	
Total PeCDD	ND	35	pg/r	SW846 8290	
1,2,3,4,7,8-HxCDD	ND	22	pg/L	SW846 8290	
1,2,3,6,7,8-HxCDD	ND	22	pg/L	SW846 8290	
1,2,3,7,8,9-HxCDD	ND	21	pg/L	SW846 8290	
Total HxCDD	ND	22	pg/L	SW846 8290	
1,2,3,4,6,7,8-HpCDD	ND	18	pg/L	SW846 8290	
Total HpCDD	ND	18	pg/L	SW846 8290	
OCDD	65 JA		pg/L	SW846 8290	
2,3,7,8-TCDF	ND	4.0	pg/L	SW846 8290	
Total TCDF	ND	4.0	pg/L	SW846 8290	
1,2,3,7,8-PeCDF	ND	21	pg/L	SW846 8290	
2,3,4,7,8-PeCDF	ND	21	pg/L	SW846 8290	
Total PeCDF	ND	21 .	pg/L	SW846 8290	
1,2,3,4,7,8-HxCDF	ND	19	pg/L	SW846 8290	
1,2,3,6,7,8-HxCDF	ND	18	pg/L	SW846 8290	
2,3,4,6,7,8-HxCDF	ND	20	pg/L	SW846 8290	
1,2,3,7,8,9-HxCDF	ND	21	pg/L	SW846 8290	
Total HxCDF	ND	21	pg/L	SW846 8290	
1,2,3,4,6,7,8-HpCDF	ND	13	pg/L	SW846 8290	
1,2,3,4,7,8,9-HpCDF	ND	14	pg/L	SW846 8290	
Total HpCDF	ND	14	pg/L	SW846 8290	
OCDF	ND	28	pg/L	SW846 8290	
	PERCENT	RECOVERY	•		
INTERNAL STANDARDS	RECOVERY	LIMITS			
13C-2,3,7,8-TCDD	92	(40 - 13	5)		
13C-1,2,3,7,8-PeCDD	84	(40 - 13	5)		
13C-1,2,3,6,7,8-HxCDD	98	(40 - 13	5)		
13C-1,2,3,4,6,7,8-HpCDD	94	(40 - 13	5)		
13C-OCDD	99	(40 - 13	5)		
13C-2,3,7,8-TCDF	87	(40 - 13	5)		
13C-1,2,3,7,8-PeCDF	86	(40 - 13			
13C-1,2,3,4,7,8-HxCDF	82	(40 - 13			
13C-1,2,3,4,6,7,8-HpCDF	100	(40 - 13	•		

NOTE(S):

JA The analyte was positively identified, but the quantitation is an estimate.

Client Sample ID: W-14A

Trace Level Organic Compounds

Lot-Sample #...: G7D170312-003 Work Order #...: JT3X11AA Matrix....: WATER

Date Sampled...: 04/16/07 Date Received..: 04/17/07 Prep Date....: 04/21/07 Analysis Date..: 04/29/07

Prep Batch #...: 7111225

Dilution Factor: 1

		DETECTION		
PARAMETER	RESULT	LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	4.3	pg/L	SW846 8290
Total TCDD	ND	4,3	pg/L	SW846 8290
1,2,3,7,8-PeCDD	ND	29	pg/L	SW846 8290
Total PeCDD	ND	29	pg/L	SW846 8290
1,2,3,4,7,8-HxCDD	ND	19	pg/L	SW846 8290
1,2,3,6,7,8-HxCDD	ND	19	pg/L	SW846 8290
1,2,3,7,8,9-HxCDD	ND	18	pg/L	SW846 8290
Total HxCDD	ND	19	pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDD	53		pg/L	SW846 8290
Total HpCDD	130		pg/L	SW846 8290
OCDD	610		pg/L	SW846 8290
2,3,7,8-TCDF	ND	9.2	pg/L	SW846 8290
Total TCDF	ND	9.2	pg/L	SW846 8290
1,2,3,7,8-PeCDF	ND	17	pg/L	SW846 8290
2,3,4,7,8-PeCDF	ND	17	pg/L	SW846 8290
Total PeCDF	ND	17	pg/L	SW846 8290
1,2,3,4,7,8-HxCDF	ND	16	pg/L	SW846 8290
1,2,3,6,7,8-HxCDF	ND	15	pg/L	SW846 8290
2,3,4,6,7,8-HxCDF	ND	17	pg/L	SW846 8290
1,2,3,7,8,9-HxCDF	ND	18	pg/L	SW846 8290
Total HxCDF	ND	18	pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDF	ND	11	pg/L	SW846 8290
1,2,3,4,7,8,9-HpCDF	ND	12	pg/L	SW846 8290
Total HpCDF	ND	12	pg/L	SW846 8290
OCDF	49		pg/L	SW846 8290

	PERCENT	RECOVERY
INTERNAL STANDARDS	RECOVERY	LIMITS
13C-2,3,7,8-TCDD	94	(40 - 135)
13C-1,2,3,7,8-PeCDD	86	(40 - 135)
13C-1,2,3,6,7,8-HxCDD	105	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDD	99	(40 - 135)
13C-OCDD	102	(40 - 135)
13C-2,3,7,8-TCDF	98	(40 - 135)
13C-1,2,3,7,8-PeCDF	98	(40 - 135)
13C-1,2,3,4,7,8-HxCDF	100	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDF	119	(40 - 135)

Client Sample ID: FB001-041607

Trace Level Organic Compounds

Lot-Sample #...: G7D170312-004 Work Order #...: JT3X41AA

Date Sampled...: 04/16/07

Date Received..: 04/17/07 Analysis Date..: 04/29/07

Prep Date....: 04/21/07 Prep Batch #...: 7111225

Dilution Factor: 1

DE	TEC	TI	ON

Matrix..... WATER

PARAMETER	RESULT	LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	6.8	pg/L	SW846 8290
Total TCDD	ND	6.8	pg/L	SW846 8290
1,2,3,7,8-PeCDD	ND	11	pg/L	SW846 8290
Total PeCDD	ND	11	pg/L	SW846 8290
1,2,3,4,7,8-HxCDD	ND	8.3	pg/L	SW846 8290
1,2,3,6,7,8-HxCDD	ND	8.2	pg/L	SW846 8290
1,2,3,7,8,9-HxCDD	ND	7.7	pg/L	SW846 8290
Total HxCDD	ND	8.3	pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDD	ND	8.8	pg/L	SW846 8290
Total HpCDD	ND	8.8	pg/L	SW846 8290
OCDD	ND	12	pg/L	SW846 8290
2,3,7,8-TCDF	ND	3.7	pg/L	SW846 8290
Total TCDF	ND	3,7	pg/L	SW846 8290
1,2,3,7,8-PeCDF	ND	5.7	pg/L	SW846 8290
2,3,4,7,8-PeCDF	ND	5.7	pg/L	SW846 8290
Total PeCDF	ND	5.7	pg/L	SW846 8290
1,2,3,4,7,8-HxCDF	ND	5.9	pg/L	SW846 8290
1,2,3,6,7,8-HxCDF	ND	5.6	pg/L	SW846 8290
2,3,4,6,7,8-HxCDF	ND	6.4	pg/L	SW846 8290
1,2,3,7,8,9-HxCDF	ND	6.5	pg/L	SW846 8290
Total HxCDF	ND	6,5	pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDF	ND	5.0	pg/L	SW846 8290
1,2,3,4,7,8,9-HpCDF	ND	5.7	pg/L	SW846 8290
Total HpCDF	ND	5.7	pg/L	SW846 8290
OCDF	ND	11	pg/L	SW846 8290

	PERCENT	RECOVERY
INTERNAL STANDARDS	RECOVERY	LIMITS
13C-2,3,7,8-TCDD	84	(40 - 135)
13C-1,2,3,7,8-PeCDD	85	(40 - 135)
13C-1,2,3,6,7,8-HxCDD	90	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDD	91	(40 - 135)
13C-OCDD	92	(40 - 135)
13C-2,3,7,8-TCDF	90	(40 - 135)
13C-1,2,3,7,8-PeCDF	95	(40 - 135)
13C-1,2,3,4,7,8-HxCDF	94	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDF	101	(40 - 135)

SIL

STL Sacramento 880 Riverside Parkway West Sacramento, CA 95605

Tel: 916 373 5600 Fax: 916 372 1059 www.stl-inc.com

June 27, 2007

STL SACRAMENTO PROJECT NUMBER: G7F140368

PO/CONTRACT: Pending

Angie Gatchie Field & Technical Services, LL 200 Third Avenue Carnegie, PA 15106

Dear Ms. Gatchie,

This report contains the analytical results for the samples received under chain of custody by STL Sacramento on June 14, 2007. These samples are associated with your Beazer - Superior GW project.

The test results in this report meet all NELAC requirements for parameters that accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The case narrative is an integral part of this report.

If you have any questions, please feel free to call me at (916) 374-4384.

Sincerely,

For

Karen Dahl

Project Manager

Qui Kelmam

CASE NARRATIVE

STL SACRAMENTO PROJECT NUMBER G7F140368

General Comments

The samples were received at the lab at 1 degree Celsius, with wet ice used as the cooling agent.

WATER, 8290, Dioxins/Furans, HRGC/HRMS

Sample(s): 1, 2, 3

The laboratory control sample (LCS) associated with this extraction batch has recoveries for 2,3,4,6,7,8-HxCDF and 1,2,3,7,8,9-HxCDF above the established control limits indicating a possible high bias. As these samples are non-detect for these compounds there is no adverse impact upon the data.

There were no other anomalies associated with this project.

Sample Summary G7F140368

<u>WO#</u>	Sample #	Client Sample ID	Sampling Date	Received Date
J02T2	1	W-35A	6/13/2007 09:40 AM	6/14/2007 09:40 AM
J02VA	2	DUP01	6/13/2007	6/14/2007 09:40 AM
J02VG	3	EQ BLANK	6/13/2007 01:30 PM	6/14/2007 09:40 AM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight

Client Sample ID: W-35A

Trace Level Organic Compounds

Lot-Sample #...: G7F140368-001 Work Order #...: J02T21AA Matrix..... WATER

Date Sampled...: 06/13/07 Date Received..: 06/14/07
Prep Date....: 06/15/07 Analysis Date..: 06/21/07

Prep Batch #...: 7169278

Dilution Factor: 1

		DETECTIO	И	
PARAMETER	RESULT	LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	0.47	pg/L	SW846 8290
Total TCDD	ND	1.2	pg/L	SW846 8290
1,2,3,7,8-PeCDD	ND	0.64	pg/L	SW846 8290
Total PeCDD	ND	0.96	pg/L	SW846 8290
1,2,3,4,7,8-HxCDD	ND	0.70	pg/L	SW846 8290
1,2,3,6,7,8-HxCDD	4.2 J		pg/L	SW846 8290
1,2,3,7,8,9-HxCDD	ND	1,2	pg/L	SW846 8290
Total HxCDD	17		pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDD	120		pg/L	SW846 8290
Total HpCDD	270		pg/L	SW846 8290
OCDD	1700		pg/L	SW846 8290
2,3,7,8-TCDF	ND	0.71	pg/L	SW846 8290
Total TCDF	ND	0.71	pg/L	SW846 8290
1,2,3,7,8-PeCDF	ND	0.66	pg/L	SW846 8290
2,3,4,7,8-PeCDF	ND	0.53	pg/L	SW846 8290
Total PeCDF	ND	0.66	pg/L	SW846 8290
1,2,3,4,7,8-HxCDF	3.6 J		pg/L	SW846 8290
1,2,3,6,7,8-HxCDF	1.1 J		pg/L	SW846 8290
2,3,4,6,7,8-HxCDF	ND	0.93	pg/L	SW846 8290
1,2,3,7,8,9-HxCDF	ND	0.88	pg/L	SW846 8290
Total HxCDF	42	*****	pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDF	33 J		pg/L	SW846 8290
1,2,3,4,7,8,9-HpCDF	3.2 J		pg/L	SW846 8290
Total HpCDF	140		pg/L	SW846 8290
OCDF	100 J		pg/L	SW846 8290
	PERCENT	RECOVERY		
INTERNAL STANDARDS	RECOVERY	LIMITS		
13C-2,3,7,8-TCDD	86	(40 - 13	5)	
13C-1,2,3,7,8-PeCDD	104	(40 - 13)		
13C-1,2,3,6,7,8-HxCDD	87	(40 - 13	5)	
13C-1,2,3,4,6,7,8-HpCDD	98	(40 - 13)		
13C-OCDD	99	(40 - 13	5)	
13C-2,3,7,8-TCDF	82	(40 - 13	5)	
13C-1,2,3,7,8-PeCDF	90	(40 - 13	•	
13C-1,2,3,4,7,8-HxCDF	82	(40 - 13	•	
13C-1,2,3,4,6,7,8-HpCDF	92	(40 - 13		

NOTE(S):

J Estimated result. Result is less than the reporting limit.

Client Sample ID: DUP01

Trace Level Organic Compounds

Lot-Sample #...: G7F140368-002 Work Order #...: J02VA1AA Matrix..... WATER

Date Sampled...: 06/13/07 Date Received..: 06/14/07 Prep Date....: 06/15/07 Analysis Date..: 06/21/07

Prep Batch #...: 7169278

Dilution Factor: 1

		DETECTIO	N	
PARAMETER	RESULT	LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	0.44	pg/L	SW846 8290
Total TCDD	ND	1.0	pg/L	SW846 8290
1,2,3,7,8-PeCDD	ND	0.68	pg/L	SW846 8290
Total PeCDD	ND	0.83	pg/L	SW846 8290
1,2,3,4,7,8-HxCDD	ND	0.63	pg/L	SW846 8290
1,2,3,6,7,8-HxCDD	3.3 J		pg/L	SW846 8290
1,2,3,7,8,9-HxCDD	1.1 J		pg/L	SW846 8290
Total HxCDD	9.6		pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDD	92		pg/L	SW846 8290
Total HpCDD	200		pg/L	SW846 8290
OCDD	1200		pg/L	SW846 8290
2,3,7,8-TCDF	ND	0.65	pg/L	SW846 8290
Total TCDF	ND	0.65	pg/L	SW846 8290
1,2,3,7,8-PeCDF	0.62 J		pg/L	SW846 8290
2,3,4,7,8-PeCDF	0.53 J		pg/L	SW846 8290
Total PeCDF	1.2		pg/L	SW846 8290
1,2,3,4,7,8-HxCDF	2.8 J		pg/L	SW846 8290
1,2,3,6,7,8-HxCDF	ND	0.62	pg/L	SW846 8290
2,3,4,6,7,8-HxCDF	ND	0.69	pg/L	SW846 8290
1,2,3,7,8,9-HxCDF	ND	0.78	pg/L	SW846 8290
Total HxCDF	28		pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDF	24 J		pg/L	SW846 8290
1,2,3,4,7,8,9-HpCDF	2.6 J		pg/L	SW846 8290
Total HpCDF	1.00		pg/L	SW846 8290
OCDF	73 J		pg/L	SW846 8290
	PERCENT	RECOVERY		
INTERNAL STANDARDS	RECOVERY	LIMITS		
13C-2,3,7,8-TCDD	84	(40 - 13	5)	
13C-1,2,3,7,8-PeCDD	102	(40 - 13	5)	
13C-1,2,3,6,7,8-HxCDD	82	(40 - 13	5)	
13C-1,2,3,4,6,7,8-HpCDD	93	(40 - 13	5)	
13C-OCDD	91	(40 - 13	5)	
13C-2,3,7,8-TCDF	81	(40 - 13		
13C-1,2,3,7,8-PeCDF	89	(40 - 13	5)	
13C-1,2,3,4,7,8-HxCDF	78	(40 - 13	-	•
13C-1,2,3,4,6,7,8-HpCDF	86	(40 - 13	•	

J Estimated result. Result is less than the reporting limit.

NOTE(S):

Client Sample ID: EQ BLANK

Trace Level Organic Compounds

Lot-Sample #...: G7F140368-003 Work Order #...: J02VG1AA Matrix.....: WATER

Date Sampled...: 06/13/07 Date Received..: 06/14/07
Prep Date....: 06/15/07 Analysis Date..: 06/21/07

Prep Batch #...: 7169278

Dilution Factor: 1

		DETECTIO	ON	
PARAMETER	RESULT	LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	0.45	pg/L	SW846 8290
Total TCDD	ND	1.1	pg/L	SW846 8290
1,2,3,7,8-PeCDD	ND	0.64	pg/L	SW846 8290
Total PeCDD	ND	0.80	pg/L	SW846 8290
1,2,3,4,7,8-HxCDD	ND	0.52	pg/L	SW846 8290
1,2,3,6,7,8-HxCDD	ND	0.48	pg/L	SW846 8290
1,2,3,7,8,9-HxCDD	ND	0.44	pg/L	SW846 8290
Total HxCDD	ND	0.96	pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDD	2.1 J		pg/L	SW846 8290
Total HpCDD	2.1		pg/L	SW846 8290
OCDD	15 J		pg/L	SW846 8290
2,3,7,8-TCDF	NIO	0.69	pg/L	SW846 8290
Total TCDF	ND	0.69	pg/L	SW846 8290
1,2,3,7,8-PeCDF	ND	0.37	pg/L	SW846 8290
2,3,4,7,8-PeCDF	ND	0.37	pg/L	SW846 8290
Total PeCDF	ND	0.37	pg/L	SW846 8290
1,2,3,4,7,8-HxCDF	ND	0.48	pg/L	SW846 8290
1,2,3,6,7,8-HxCDF	ND	0.41	pg/L	SW846 8290
2,3,4,6,7,8-HxCDF	ND	0.48	pg/L	SW846 8290
1,2,3,7,8,9-HxCDF	ND	0.56	pg/L	SW846 8290
Total HxCDF	ND	0.56	pg/L	SW846 8290
1,2,3,4,6,7,8-HpCDF	ND	0.66	pg/L	SW846 8290
1,2,3,4,7,8,9-HpCDF	ND	0.46	pg/L	SW846 8290
Total HpCDF	0.99		pg/L	SW846 8290
OCDF	ND	1.2	pg/L	SW846 8290
	PERCENT	RECOVERY	•	
INTERNAL STANDARDS	RECOVERY	LIMITS		
13C-2,3,7,8-TCDD	89	(40 - 13	5)	
13C-1,2,3,7,8-PeCDD	107	(40 - 13	5)	
13C-1,2,3,6,7,8-HxCDD	82	(40 - 13	5)	
13C-1,2,3,4,6,7,8-HpCDD	99	(40 - 13	5)	
13C-OCDD	97	(40 - 13	5)	
13C-2,3,7,8-TCDF	86	(40 - 13	5)	
13C-1,2,3,7,8-PeCDF	94	(40 - 13	5)	
13C-1,2,3,4,7,8-HxCDF	83	(40 - 13	5)	
13C-1,2,3,4,6,7,8-HpCDF	92	(40 - 13	5)	
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NOTE(S):

J Estimated result. Result is less than the reporting limit.

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Attachment 4

W-14A Data Trends

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State of Wisconsin

Department of Natural Resources

Remediation and Redevelopment Program

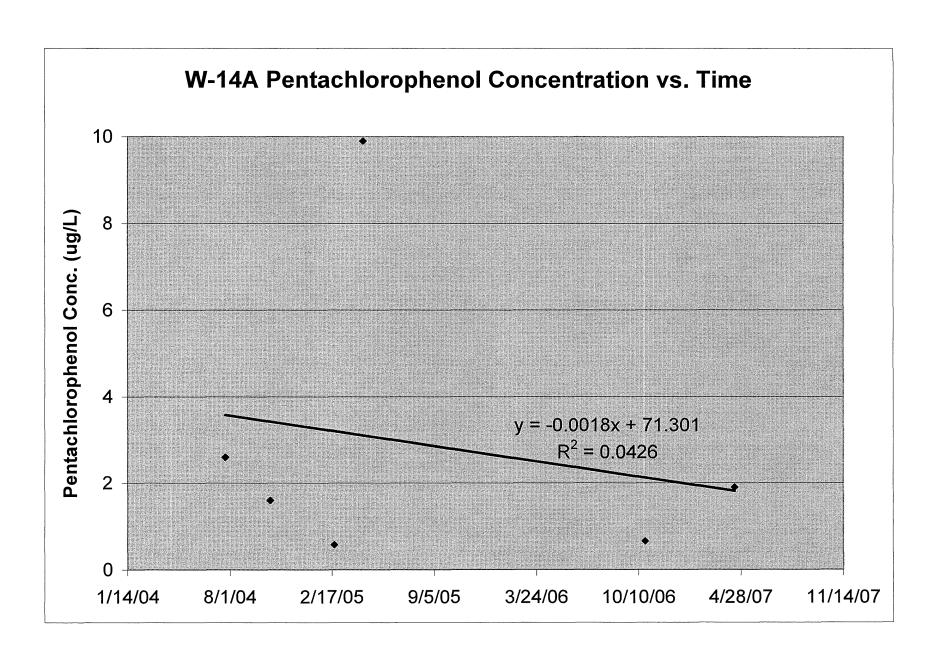
Mann-Kendall Statistical Test Form 4400-215 (2/2001)

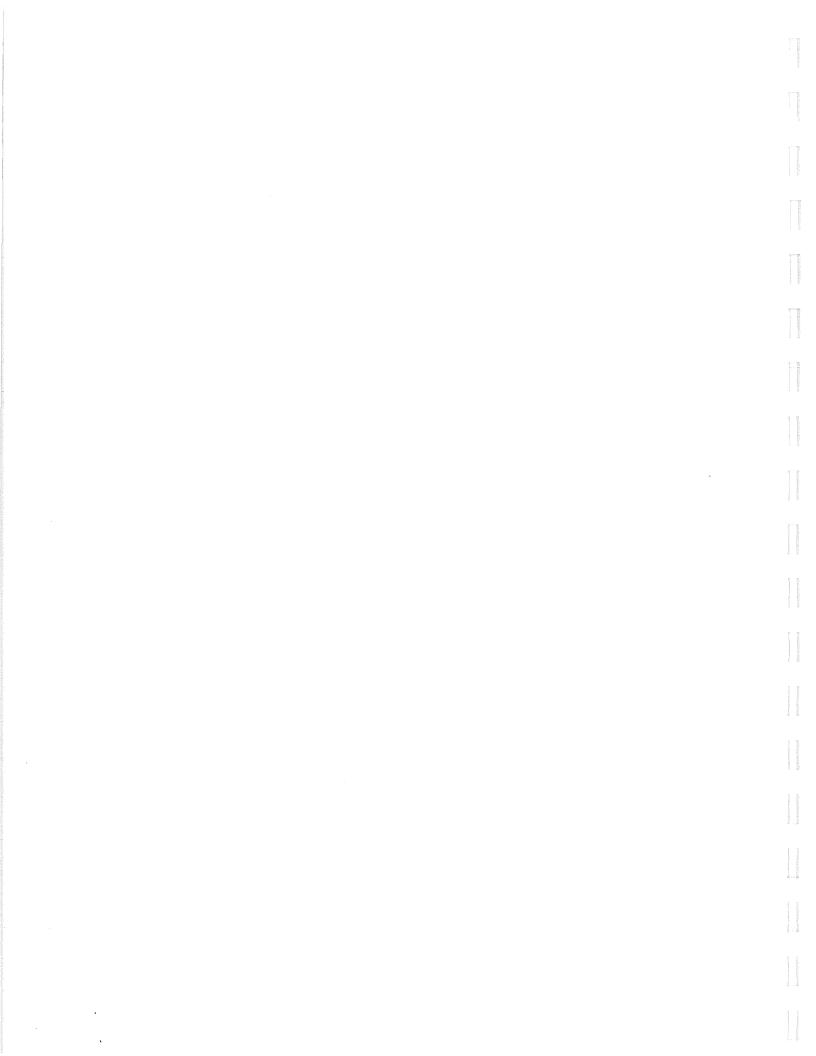
Notice: This form is the DNR supplied spreadsheet referenced in Appendices A of Comm 46 and NR 746, Wis. Adm. Code. It is provided to consultants as an optional tool for groundwater contaminant trend analysis to support site closure requests under s. Comm 46.07, Comm 46.08, NR 746.07, NR 746.08, Wis. Adm. Code. Use this form or a manual method when seeking case closure under those rules. Earlier versions of this form should not be used.

Instructions: Do not change formulas or other information in cells with a blue background, only cells with a yellow background are used for data entry. To use the spreadsheet, provide at least four rounds and not more than ten rounds of data that is not seasonally affected. Use consistent units. The spreadsheet contains several error checks, and a data entry error may cause "DATA ERR" or "DATE ERR" to be displayed. Dates that are not consecutive will show an error message and will not display the test results. The spreadsheet tests the data for both increasing and decreasing trends at both 80 percent and 90 percent confidence levels. If a declining trend is present at 80 percent but not at 90 percent, a site is still eligible for closure under Comm 46 and NR 746 provided that other conditions in those rules are met. If an increasing or decreasing trend is not present, an additional coefficient of variation test is used to test for stability, as proposed by Wiedemeier et al, 1999. For additional information, refer to the Interim Guidance on Natural Attenuation for Petroleum Releases, dated October 1999. Refer to the guidance for recommendations on data entry for non-detect values.

Site Name : Koppers Superior, WI Facility				BRRTS No. =		Well Number = '	W-14A
	Compound ->	Naphthalene Concentration	Penta Concentration	Concentration	Concentration	Concentration	Concentration
Event	 B. E. Princelle, and M. D. Princelle, and A. D. Princelle, and A. E. Princelle, and A. D. Princelle,	(leave blank	(leave blank		(leave blank		(leave blank
Number		if no data)	if no data)	if no data)	if no data)	if no data)	if no data)
1	23-Jul-04	0.02	2.60				
2		0.02	1.60				
3	22-Feb-05	0.02	0.58				
4	19-Apr-05	0.03	9.90				
5	23-Oct-06	0.02	0.66				
6	16-Apr-07	0.02	1.90				
7							
8							
9							
10							
	Mann Kendall Statistic (S) =	1.0	-1.0	0.0	0.0	0.0	0.0
	Number of Rounds (n) =	6	6	0	0	0	- (0
	Average =	0.02	2.87	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
	Standard Deviation =	0.004	3.526	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
3.005 (4.006)	Coefficient of Variation(CV)=	0.188	1.227	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Error Check	k, Blank if No Errors Detected			n<4	n<4	n<4	n<4
Trend ≥ 80	% Confidence Level	No Trend	No Trend	n<4	n<4	n<4	n<4
Trend ≥ 90	% Confidence Level	No Trend	No Trend	n<4	n<4	n≤4	n<4
Stability Test, If No Trend Exists at		CV <= 1	CV > 1	n<4	n<4	n<4	n<4
80% Conf	idence Level	STABLE	NON-STABLE	n<4	n<4	n<4	n<4
	Data Entry By = 1	D.B.	Date =	15-Jun-07	Checked By =	D.B.	

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